



BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO

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IN THE MATTER OF BASIN 37) Docket No.
ADMINISTRATIVE PROCEEDING) AA-WRA-2021-001
_____)

VOLUME I
(Pages 1-264)

BEFORE

HEARING OFFICER: GARY SPACKMAN

Date: June 7, 2021 - 9:01 a.m.

Location: Idaho Department of Water Resources
322 East Front Street
Boise, Idaho

REPORTED BY:

JEFF LaMAR, C.S.R. No. 640

Notary Public

APPEARANCES:

For South Valley Ground Water District:

BARKER, ROSHOLT & SIMPSON LLP

BY MR. ALBERT P. BARKER

MR. TRAVIS L. THOMPSON

1010 West Jefferson, Suite 102

Post Office Box 2139

Boise, Idaho 83701-2139

apb@idahowaters.com

tlt@idahowaters.com

For Galena Ground Water District:

LAWSON LASKI CLARK, PLLC

BY MR. JAMES R. LASKI

MS. HEATHER E. O'LEARY

Post Office Box 3310

Ketchum, Idaho 83340-3310

jrl@lawsonlaski.com

heo@lawsonlaski.com

For Big Wood Canal Company:

FLETCHER LAW OFFICE

BY MR. W. KENT FLETCHER

Post Office Box 248

Burley, Idaho 83318

wkf@pmt.org

APPEARANCES (Continued):

For Big Wood and Little Wood Water Users Association:

RIGBY, ANDRUS & RIGBY, CHARTERED

BY MR. JERRY RIGBY

MR. CHASE T. HENDRICKS

25 North Second East

Rexburg, Idaho 83340

jrigby@rex-law.com

chendricks@rex-law.com

For Idaho Department of Fish and Game:

OFFICE OF ATTORNEY GENERAL

BY MR. OWEN E. MORONEY

Post Office Box 83720

Boise, Idaho 83720-0010

owen.moroney@ag.idaho.gov

For Sun Valley Company:

MCHUGH BROMLEY, PLLC

BY MR. CHRIS M. BROMLEY

380 South Fourth Street, Suite 103

Boise, Idaho 83702

cbromley@mchughbromley.com

///

///

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APPEARANCES (Continued):

For City of Hailey:

GIVENS PURSLEY LLP

BY MR. MICHAEL P. LAWRENCE

601 West Bannock Street

Boise, Idaho 83702

mpl@givenspursley.com

For Idaho Power Company:

BARKER, ROSHOLT & SIMPSON LLP

BY MR. JOHN K. SIMPSON

1010 West Jefferson, Suite 102

Post Office Box 2139

Boise, Idaho 83701-2139

jks@idahowaters.com

For Idaho Department of Water Resources:

OFFICE OF ATTORNEY GENERAL

IDAHO DEPARTMENT OF WATER RESOURCES

BY MS. MEGHAN CARTER

MR. GARRICK BAXTER

322 East Front Street

Boise, Idaho 83720

meghan.carter@idwr.idaho.gov

garrick.baxter@idwr.idaho.gov

///

APPEARANCES (Continued):

For Eagle Creek Irrigation Company:

PARSONS BEHLE & LATIMER

BY MR. NORMAN M. SEMANKO

800 West Main Street, Suite 1300

Boise, Idaho 83702

nsemanko@parsonsbehle.com

For City of Ketchum:

WHITE, PETERSON, GIGRAY & NICHOLS, P.A.

BY MR. BRIAN T. O'BANNON

5700 East Franklin Road, Suite 200

Nampa, Idaho 83687-7901

bobannon@whitepeterson.com

For Sun Valley Water and Sewer District, Eccles Window

Rock Ranch LLC, and Picabo Livestock Inc.:

ROBERTSON & SLETTE PLLC

BY MR. J. EVAN ROBERTSON

Post Office Box 1906

Twin Falls, Idaho 83303

erobertson@rsidaholaw.com

Also Present:

Megan Jenkins, IDWR Staff

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1 THE HEARING OFFICER: All right. The appointed
2 hour has arrived. Thanks, everyone, for being here.
3 Great to see everybody in full face. And I hope we're
4 not sponsoring a super spreader here, but I am
5 encouraged. So we will try to accommodate you as best
6 we can today. Let's go on the record.

7 Are we on, Jeff?

8 THE COURT REPORTER: Yes.

9 THE HEARING OFFICER: And are we running, Megan?

10 MS. JENKINS: Yes.

11 THE HEARING OFFICER: Okay. Well, this is the
12 time and place for an administrative hearing. And this
13 particular contested case springs out of an
14 administrative proceeding that I initiated pursuant to
15 Idaho Code Section 42-237a.g.

16 And the focus of this particular hearing is
17 the impacts of pumping within the Bellevue Triangle as
18 shown on a map that was distributed, and groundwater
19 pumping and depletions that may be caused by that
20 pumping on surface water flows of the -- of Silver
21 Creek and its tributaries, both upstream and
22 downstream. I know some people have raised questions
23 about that. That's the scope of the hearing today.

24 So we need to -- and previously I've
25 defined the order of presentation of testimony. And

1 the Department witnesses will be on the witness stand
2 today or in the witness chair and will be questioned by
3 Department -- excuse me, deputies attorney general
4 assigned to the Department of Water Resources. So they
5 will be questioned briefly, and certainly not
6 extensively. And then we'll start with examination or
7 cross-examination.

8 Before we do that -- and we'll talk a
9 little bit about the way in which that examination will
10 proceed -- we have some pending motions today. And
11 maybe before we get to those, we ought to have an
12 introduction of counsel and parties today. And I think
13 that will be helpful for the court reporter. So -- and
14 we'll also introduce Department staff.

15 So again, I'm Gary Spackman, Director of
16 the Idaho Department of Water Resources. And let's
17 just go in a counterclockwise direction.

18 Megan.

19 MS. JENKINS: My name is a Meghan Jenkins. I'm
20 Gary's assistant. And I will be doing part of the
21 recording today, along with the court reporter.

22 MS. CARTER: Meghan Carter, deputy attorney
23 general for the Department of Water Resources.

24 MR. VINCENT: I'm Sean Vincent, hydrology
25 section manager at IDWR.

1 MR. FLETCHER: Kent Fletcher, attorney for Big
2 Wood Canal Company.

3 MR. HENDRICKS: Chase Hendricks, Big Wood and
4 Little Wood Water Users Association.

5 MR. RIGBY: Jerry Rigby, Rigby, Andrus & Rigby,
6 also representing Big Wood and Little Wood Water Users
7 Association. And actually, the particular members
8 within their -- that have filed.

9 MR. BROMLEY: Hi. Chris Bromley, McHugh
10 Bromley. I represent Sun Valley Company, as well as
11 City of Bellevue today. My partner, Candice McHugh,
12 hopefully will be back tomorrow from her out-of-country
13 vacation. Thank you.

14 MR. SULLIVAN: I'm Greg Sullivan for Spronk
15 Water Engineers. And I'm here for Bellevue, Hailey,
16 Ketchum, and Sun Valley Company.

17 MR. LAWRENCE: I'm Mike Lawrence with Givens
18 Pursley on behalf of City of Hailey.

19 MR. BARKER: Albert Barker for the South Valley
20 Ground Water District.

21 MR. THOMPSON: Travis Thompson, South Valley
22 Ground Water District.

23 MR. LASKI: Jim Laski for the Galena Ground
24 Water District.

25 MS. O'LEARY: Heather O'Leary, also for the

1 Galena Ground Water District.

2 MR. MORONEY: Owen Moroney, deputy attorney
3 general representing the Idaho Department of Fish and
4 Game.

5 THE HEARING OFFICER: And then let's start back
6 here just for everybody.

7 Mr. Arkoosh.

8 MR. JOHN ARKOOSH: I'm John Arkoosh. I'm
9 president of the Big Wood and Little Wood Water Users
10 Board.

11 MR. BILL ARKOOSH: Bill Arkoosh.

12 THE HEARING OFFICER: Thank you.

13 MR. ROBERTSON: Evan Robertson for the
14 Sun Valley Water and Sewer District, Eccles Window Rock
15 Ranch, LLC.

16 MR. SEMANKO: Morning. Norm Semanko for Eagle
17 Creek Irrigation Company.

18 THE HEARING OFFICER: Mr. Simpson.

19 MR. SIMPSON: Morning, John Simpson for Idaho
20 Power Company.

21 THE HEARING OFFICER: And then the back row.

22 MR. SHAW: Dave Shaw with ERO Resources.

23 MR. O'BANNON: Brian O'Bannon for City of
24 Ketchum.

25 THE HEARING OFFICER: Thank you.

1 MR. BLANKENAU: Phil Blankenau,
2 evapotranspiration analyst for IDWR.

3 THE HEARING OFFICER: Okay. Oh, I'm sorry I
4 missed you, Eric.

5 MR. MILLER: That's all right. Eric Miller with
6 Yellowstone Earth Science, representing Big Wood and
7 Little Wood Water Users and Big Wood Canal Company.

8 THE HEARING OFFICER: All right. Now, have we
9 missed anyone?

10 Okay. We have people listening through
11 Zoom, I think we're connected through Zoom.

12 MS. CARTER: Yes.

13 THE HEARING OFFICER: And at least previously I
14 stated that for purposes of presenting testimony today
15 and examining witnesses people needed to be here in
16 person. I wouldn't accommodate any of that questioning
17 and answering by Zoom. But folks are welcome to listen
18 in, but there's not an opportunity to directly
19 participate.

20 So if there are witnesses who are parties
21 who are listening in today that want to testify,
22 they'll need to be here and coordinate with counsel or
23 with the Hearing Officer or staff.

24 Now, one of the other points that I want to
25 remind everybody of before we start in is I will

1 implore you honestly, and I'll actively ask and
2 interrupt if I think that you're not speaking up
3 enough. So if all of you will use your auditorium
4 voices, please, because Jeff needs to hear, the
5 reporter needs to hear, and we need to pick it up on
6 the microphones. We have a couple of microphones here.
7 I think one for the witness and let's see.

8 MS. JENKINS: There's one on the podium.

9 THE HEARING OFFICER: One on the podium. So if
10 you are examining, I would ask the attorneys to step to
11 the podium today, if that's okay. I think it will
12 accommodate, then, the recording, as well as being
13 close to the court reporter. And we have enough
14 attorneys in the gallery here that if you're examining
15 from a distance, it will create difficulty.

16 All right. I am ready to start talking
17 about motions.

18 Are there any other matters we need to talk
19 about as preliminary matters before we talk about the
20 motions prior to hearing?

21 Okay. I received three motions in limine.
22 And I'll ask counsel how you want to approach these
23 motions. I received one from a group of attorneys. I
24 also received one from South Valley Ground Water
25 District, and then one from the surface water users.

1 So how do we want to approach these?

2 And let me just say that I see some real
3 similarities in all three of these motions. So
4 maybe -- maybe I should -- yes, Mr. Rigby.

5 MR. RIGBY: Mr. Director, may I address one that
6 I think will then resolve that particular motion?

7 THE HEARING OFFICER: Okay.

8 MR. RIGBY: Thank you, Mr. Director. What I'm
9 approaching or addressing is the file -- the filing by
10 South Valley Ground Water District and Galena Ground
11 Water District as to the motion in limine excluding
12 testimony of three of the surface -- senior surface
13 water users that we represent.

14 Although we believe that the pumping in the
15 Galena -- or the Bellevue Triangle certainly impacts
16 and injures them, in order to facilitate -- rather than
17 argue that issue before the Director, just to say that
18 we were somewhat confused as to just exactly how this
19 would be approached by the Director, trying to
20 interpret what your language said, in order to
21 facilitate moving on with this, we will acknowledge
22 that those three, although they are impacted by the --
23 or at least we maintain that they're impacted by the
24 groundwater pumping within the Triangle, they do
25 receive their water from the Big Wood. And for that

1 reason we will acknowledge and remove them from any
2 further testimony before the Director.

3 THE HEARING OFFICER: Thank you, Mr. Rigby. So
4 your statement, Mr. Rigby, goes to the motion to
5 exclude testimony or exclude three of the individuals
6 who filed an intent to participate?

7 MR. RIGBY: And perhaps I should name them.

8 THE HEARING OFFICER: That would be helpful, for
9 the record.

10 MR. RIGBY: It would be Martin Sabala, Nick
11 Westendorf, and David Hults.

12 THE HEARING OFFICER: Okay. And so based on
13 your stipulation, Mr. Rigby, and agreement that you
14 have with the -- at least with South Valley and the
15 other attorneys, you're willing to remove them as
16 parties to this matter?

17 MR. RIGBY: Do I need --

18 THE HEARING OFFICER: No, you're fine.

19 MR. RIGBY: Yes, we are.

20 THE HEARING OFFICER: Okay. Thank you.

21 So your statement, Mr. Rigby, resolves a
22 certain portion of these motions, but certainly doesn't
23 address the remainder.

24 How does -- how does counsel want to
25 approach these motions? I'll ask again, with at least

1 my expression of sentiment that I don't want a lot of
2 oral argument. I've read the motions themselves. One
3 of the reasons that we needed some time this morning is
4 because there was very little time for anyone to
5 respond to the motions.

6 And so I'm more interested in asking right
7 now whether there is anybody that wants to argue
8 against the motions that have been filed.

9 MR. FLETCHER: Director.

10 THE HEARING OFFICER: Yes.

11 MR. FLETCHER: I suggest that -- we filed ours
12 first, perhaps we could go forward, let the other sides
13 address theirs and respond to ours, and then we could
14 respond if necessary to that.

15 THE HEARING OFFICER: That's fine, if that's
16 what counsel wants to do. Again, I'll encourage some
17 brevity in the presentations.

18 MR. FLETCHER: Would you like us to go forward
19 now?

20 THE HEARING OFFICER: Sure. That would be fine.

21 MR. FLETCHER: Thank you. Do you still want us
22 to go up to the podium?

23 THE HEARING OFFICER: Please.

24 MR. FLETCHER: Because the moved the microphones
25 away.

1 THE HEARING OFFICER: Well, I think it's right
2 there in front of Mr. Bromley. And I'm not sure why it
3 was moved.

4 MS. JENKINS: It's -- it's just not working. It
5 was, and then it just turned off. So I'm trying to
6 figure out...

7 THE HEARING OFFICER: Do you need a moment?

8 MS. JENKINS: Possibly, yeah.

9 Sorry, guys.

10 THE HEARING OFFICER: Let's go off the record
11 just for a minute, Jeff.

12 (Recess.)

13 THE HEARING OFFICER: Back on. Thanks, Jeff.

14 Mr. Fletcher.

15 MR. FLETCHER: Thank you, your Honor.

16 We filed a joint motion in limine. It's a
17 pretty simple motion. It's based primarily upon the
18 wording of the Director's notices and orders.

19 Basically, the notice defined the potential area of
20 impact -- or excuse me, potential area of curtailment
21 to be the Bellevue Triangle. That was further defined
22 by subsequent notices and orders. And the pre-hearing
23 order classified those outside the Bellevue Triangle
24 but within Basin 37 as a third-party group.

25 Pertaining to that group, the Director

1 stated, "Director reserves the right to limit any
2 testimony or cross-examination that is duplicative,
3 repetitive or irrelevant."

4 The cities and Sun Valley Company have ID'd
5 fact witnesses to talk about their use of water.
6 They've also identified an expert witness, and they
7 listed a litany of matters that he wants to testify to.

8 It's our position that the -- this -- first
9 of all, the testimony of the fact witnesses would be
10 irrelevant. It doesn't matter how Sun Valley, Hailey,
11 or the other cities use their water for the purposes of
12 this proceeding, since they are outside the area of
13 curtailment. And secondly, it's our position that the
14 testimony of another witness in this case, South Valley
15 and Galena, have already identified three, would be
16 duplicative and representative.

17 And even though he may have a different
18 position than the other experts, I don't think the
19 purpose of this hearing is just to have a multitude of
20 experts give their opinions, particularly when their
21 clients have no risk.

22 Those outside the Bellevue Triangle have no
23 risk of curtailment, and yet they believe they're
24 allowed to come in here and attack the seniors' case
25 for those affected by irrigation within the Bellevue

1 Triangle.

2 It's our position the Director has limited
3 this testimony. There are plenty of senior water users
4 that aren't at the table today because of the
5 limitations in the Director's order. We're not
6 bringing them in to testify, and it would be
7 inequitable and unjust to allow people outside the
8 Bellevue Triangle to come forward and testify about the
9 use of water and have their witness testify to whatever
10 he wants to testify to.

11 So in an attempt to limit the extent of
12 this hearing and to keep the issues focused on what the
13 order in the notices state, we're asking that the Court
14 exclude anyone outside the Bellevue Triangle from
15 calling any witnesses or producing evidence in this
16 action.

17 Thank you.

18 THE HEARING OFFICER: Thank you, Mr. Fletcher.

19 Response, Mr. Bromley, are you the
20 spokesperson?

21 MR. BROMLEY: I am. Yeah, I am. Thank you,
22 Director.

23 Chris Bromley on behalf of Sun Valley
24 Company, City of Bellevue, and then also signed on to a
25 joint motion with City of Ketchum and City of Hailey.

1 I'll be very brief.

2 We don't know right now, sitting here
3 today, at this point in time and as the hearing goes
4 forward whether anybody, be them seniors or the
5 groundwater districts, may point up valley and say
6 pumping in the upper valley has some effect on Silver
7 Creek and tributaries.

8 If that happens, we need to be in a
9 position to rebut that testimony. We believe it's
10 outside the scope. We don't think anybody ought to be
11 able to point the finger up valley. That's part of our
12 motion.

13 The other piece of our motion, though, is
14 whatever happens in this proceeding, we have serious
15 and legitimate concern about being preclusive and
16 binding against our clients in future proceedings. An
17 example of that will be the model is going to be
18 discussed. Probably very well probed, would be my
19 guess. Uncertainty, how efficiencies are modeled.
20 These are things that will be decided, we think, in
21 this proceeding that then may be used against our
22 clients in the future.

23 So the reason that we filed our motion was
24 to say if in fact this case is limited to pumping in
25 the Triangle and its effects on Silver Creek and

1 tributaries, then that's correct, we don't have a risk
2 of curtailment.

3 However, issues like the model, and then we
4 don't know if there's going to be testimony that's
5 going to point the finger up valley to pumping in the
6 upper valley that may have effects on flows
7 downgradient.

8 So to the extent if that happens, we have
9 to be entitled to put on testimony and evidence through
10 Greg Sullivan, through fact witnesses. So that was the
11 purpose of our motion in limine was to say "Okay,
12 great. If the notice means what it means, then let's
13 have an order saying that, and that it's only for the
14 2021 irrigation season and that's it." And that could
15 satisfy our interests.

16 But we have no control over what the other
17 parties are going to do in this proceeding. So that's
18 my response to Mr. Fletcher.

19 Thank you.

20 THE HEARING OFFICER: Thank you, Mr. Bromley.

21 Are there other responses?

22 MR. THOMPSON: Travis Thompson for the South
23 Valley Ground Water District.

24 Are we just talking about the seniors'
25 motion now?

1 THE HEARING OFFICER: Yes.

2 MR. THOMPSON: Yeah, we would oppose that, I
3 guess, in the sense that if there is evidence and
4 expert testimony to come in that would assist the
5 Director on making that decision, we think it's worth
6 considering. Just because they're not at risk of
7 curtailment for this season doesn't mean they don't
8 have evidence, don't have expert testimony that would
9 be relevant to this proceeding.

10 So we would oppose that motion.

11 THE HEARING OFFICER: Okay. Thank you,
12 Mr. Thompson.

13 Others?

14 Okay. I think I will reserve ruling on
15 this motion until we hear the rest of them, because I
16 think there are substantial similarities.

17 So let's see. I have two more, then.

18 Mr. Barker, maybe yours is the appropriate
19 one to come next. Do you want to present anything
20 regarding your motion in limine?

21 MR. THOMPSON: I think we took care of that.

22 MR. BARKER: That was the one that Mr. -- sorry.

23 THE HEARING OFFICER: Oh, I thought it was more
24 extensive than that. I apologize.

25 MR. BARKER: So just -- yeah, just briefly, we

1 did have a second facet to it, but we think the whole
2 thing is moot by the agreement of the Big Wood/Little
3 Wood water user and individuals to withdraw those three
4 names, so we have nothing further to ask.

5 THE HEARING OFFICER: Okay.

6 MR. RIGBY: Mr. Director.

7 THE HEARING OFFICER: Yes.

8 MR. RIGBY: If I may, Mr. Hendricks reminded me
9 that actually, rather than remove them as parties, they
10 should be in group three, as per their motion as well.

11 Is that okay?

12 MR. BARKER: I'm not going to argue against my
13 motion.

14 MR. RIGBY: Just wondering.

15 THE HEARING OFFICER: Yeah. Thanks for the
16 clarification. And I should have recognized that their
17 change would just place them in a different group --

18 MR. RIGBY: Correct.

19 THE HEARING OFFICER: -- as we had previously
20 identified.

21 Okay. And then we have a remaining motion.

22 Mr. Bromley, are you the spokesperson again
23 for the joint motion?

24 MR. BROMLEY: I can be, Director. And I
25 don't -- excuse me, I don't have anything else to add.

1 I think I kind of addressed it through comments to
2 Mr. Fletcher. You've read the motions. You understand
3 them. I don't want to take up time arguing something
4 that I know you've read and considered.

5 So thank you.

6 THE HEARING OFFICER: Thank you.

7 Okay. Are there any responses to
8 Mr. Bromley's motion?

9 Mr. Fletcher.

10 MR. FLETCHER: Just briefly, part of their
11 motion was to strike part of the staff memos. You
12 know, I hope that this hearing will not exclude
13 testimony about the total water supply to the various
14 people. Obviously, in any hearing the Director wants
15 to know about the total water supply. The staff memo
16 addresses that.

17 We intend on testifying about a total water
18 supply, but we're not seeking injury to those supplies
19 that are not affected by the Bellevue Triangle, and I
20 think that's what the nature of this hearing is all
21 about, at least that's my understanding of it. That
22 wasn't addressed by Mr. Bromley, but we would
23 definitely oppose striking any of the staff memos.
24 Otherwise, I think we've talked about the other issues
25 they've presented.

1 Thank you.

2 THE HEARING OFFICER: Thank you.

3 MR. BROMLEY: If I might just reply very
4 quickly, Director.

5 THE HEARING OFFICER: Sure.

6 MR. BROMLEY: Mr. Fletcher's use of, you know,
7 the phrase "total water supply," that's exactly the
8 concern that we have. It's -- we understood that the
9 notice was limited only to pumping in the Bellevue
10 Triangle. Mr. Fletcher now is talking about -- and
11 this has been our concern -- total water supply, which
12 who knows what that means? That's the concern. That
13 was the reason for the motion in limine.

14 If we see testimony of this variety going
15 outside of the Triangle, that exceeds the scope of the
16 notice, and we will be objecting. And we would like to
17 have Mr. Sullivan, then, in a position to be able to
18 rebut any testimony that might come in to that point.

19 Thank you.

20 THE HEARING OFFICER: Thank you.

21 All right. So let me rule on the motions
22 in limine or those various motions we've discussed thus
23 far.

24 So let me pick out the easy one that I
25 think and start from the last argument and then go to

1 the front end.

2 So with respect to the proposal to strike
3 out -- and I think it was primarily, if not
4 exclusively, strike out portions of Tim Luke's staff
5 memorandum. I read through and looked at the strikeout
6 proposals, and I can tell you that the strikeouts
7 proposed, in my opinion, are much too broad for me to
8 just collectively throw out.

9 There are portions of those strikeouts that
10 I think are relevant. And one of those areas I'll just
11 point out is there's a proposal to strike out the whole
12 discussion about the Milner/Gooding Canal and the
13 delivery of water through the Milner/Gooding Canal.
14 And I think that's -- that is very relevant to this
15 matter. And I think, honestly, assists the
16 respondents, as well as those who are senior water
17 right holders.

18 And so I think it's too comprehensive. I
19 think it's too large. And furthermore, I -- I view Tim
20 Luke's narrative as being similar to a vicinity map, a
21 narrative that explains the basin itself and the
22 hydrology in it and really doesn't draw any conclusions
23 about whether a junior water right holder should be
24 curtailed or not. And so I think it's beneficial in a
25 number of ways.

1 And so I'll deny the motion to at least
2 strike out Mr. Luke's testimony.

3 And then in a large sense, I will also deny
4 the motions in limine, all of them, because I want to
5 have the ability to listen to testimony. And I'll
6 allow the attorneys to object freely to the
7 presentation of testimony, if they feel that that
8 testimony is not relevant to the focus of this hearing.

9 And the focus of this hearing is whether
10 groundwater users within the Bellevue Triangle, as
11 identified, should be curtailed to then supply water to
12 senior water right holders from Silver Creek and its
13 tributaries.

14 And if it's not relevant to that particular
15 subject, then I will exclude it from testimony. But I
16 don't want at this point to grant a motion to limit
17 testimony that will frustrate the ability of the
18 Director to take testimony that I think is important in
19 reaching a conclusion.

20 Now, let's see. There was one other -- oh,
21 there was one other point.

22 Mr. Bromley, I think you were seeking a
23 ruling that this hearing is only focused on the
24 irrigation season in 2021. And I will also deny that
25 particular motion. I think this hearing can have and

1 facts that are delivered and the ultimate decision can
2 have a bearing on future decisions about a curtailment
3 in the Bellevue Triangle. I don't want to -- I don't
4 want to repeat this exercise next year again.

5 Okay. Have I missed something?

6 MR. FLETCHER: Director.

7 THE HEARING OFFICER: Yeah.

8 MR. FLETCHER: Just for clarification, they
9 actually proposed strikeouts to all the staff memos,
10 not just Mr. Luke's.

11 THE HEARING OFFICER: Yeah, I don't -- I don't
12 remember seeing those. But I will -- I will deny their
13 motion to strike --

14 MR. FLETCHER: Thank you.

15 THE HEARING OFFICER: -- the staff memorandums.

16 And certainly if there's information as the
17 witness is examined that the attorneys feel is not
18 relevant, is not pertinent to the subjects that we've
19 identified, then I'll encourage attorneys to object.

20 Okay. Now, I have some other motions. I
21 think there are three more. Let me collect myself just
22 for a minute.

23 Maybe the next one we ought to address is
24 the motion from Fish and Game.

25 And, Mr. Moroney, do you want to argue this

1 motion?

2 MR. MORONEY: Good morning. Owen Moroney for
3 the Idaho Department of Fish and Game.

4 To not take up too much of anyone's time,
5 our motion just really deals with excluding three
6 nonconsumptive Fish and Game fish propagation rights
7 from this proceeding and asking the Director for that
8 relief.

9 If there are any questions -- do you have
10 any questions?

11 THE HEARING OFFICER: Well, I have read the
12 motion, and I've read the supporting affidavit. And
13 certainly the water rights state that the use is
14 supposed to be nonconsumptive.

15 And so I guess I want to ask the other --
16 the other parties. Do the other parties object to this
17 motion? Is there any objection?

18 MR. FLETCHER: Director, we just wanted some
19 clarification. It's my understanding that one of the
20 water rights does not state that it's nonconsumptive on
21 its face. And I don't know what the Department's
22 records show concerning whether these are consumptive
23 or not. There's been no evidence addressing it.

24 So I -- we don't have an objection to the
25 nonconsumptive use, the nonconsumptive rights, to the

1 extent they're nonconsumptive, being excluded from this
2 proceeding.

3 THE HEARING OFFICER: And so, Mr. Moroney, based
4 on Mr. Fletcher's statement and based on my own look at
5 the motion and the supporting affidavit, I'm not
6 certain that the use by Fish and Game is
7 nonconsumptive, and consequently I'll deny the motion
8 and ask you to presented evidence regarding the use of
9 water at the fish hatchery.

10 Okay. All right. I have two more. One is
11 a motion to take official notice pursuant to Rule 602
12 of the Rules Of Procedure. And this was filed by Laird
13 Stone on behalf of Dean Rogers.

14 And based on some filings late last week, I
15 understood that perhaps Mr. Stone would not be here
16 today and that Mr. Rogers would be perhaps represented,
17 at least his interests, through your presentation and
18 your representation, Mr. Barker. But I wasn't sure
19 whether you were actually representing Mr. Rogers.

20 MR. BARKER: Thank you, your Honor -- or,
21 Mr. Director.

22 We have not had direct communications with
23 Mr. Stone about whether or not he wanted us to argue
24 this motion on his behalf. I think what -- his motion
25 to withdraw said he would rely upon the presentation of

1 the South Valley, so we don't have any position one way
2 or the other on official notice. I think it might
3 actually be subsumed in Mr. Lawrence and Mr. Bromley's
4 motion for official notice of other records.

5 But I think he was just asking for notice
6 of Mr. Rogers' rights, which as far as we were
7 concerned, we were not going to put on evidence of
8 every member of the Ground Water District's individual
9 rights.

10 THE HEARING OFFICER: Okay.

11 MR. BARKER: So I guess -- I guess I don't have
12 anything to say either in support or against that
13 motion filed by -- on behalf of Mr. Rogers.

14 THE HEARING OFFICER: Any other comment on this
15 particular motion?

16 MR. FLETCHER: Your Honor -- excuse me,
17 Mr. Director.

18 THE HEARING OFFICER: Yes.

19 MR. FLETCHER: I would just suggest that we wait
20 until he's called and see exactly what he wants to
21 testify to. I think he wants the Department to take
22 notice of measurement records and different things that
23 I believe he has taken himself. But I'm not -- it's
24 not clear to me from what he filed. So I would just
25 suggest you reserve that.

1 THE HEARING OFFICER: Thank you.

2 I was confused by the document that came in
3 to me. It actually asked me to take notice of water
4 measurement records of the South Valley Ground Water
5 District. And then there's some tabular information
6 with numbers in it.

7 I'm assuming that those may be records of
8 Water District 37, although I'm not sure. And so I
9 really don't have the information that's necessary even
10 to rule favorably on the motion. And so I'll deny the
11 motion today, because I think it needs to be -- that
12 evidence needs to come in with some foundational
13 information about where they came from and what those
14 numbers actually mean, whether they're water
15 measurement numbers and data, I just don't know that
16 without going back through the Black Books of the Water
17 District. I can't establish it today. So I'll deny
18 the motion.

19 Now, Mr. Bromley, I'm to No. 6. If
20 you're -- or if you want to pick on somebody else here.
21 Mr. Lawrence. I have several requests, I guess, for
22 the Director to take official notice of the documents.

23 MR. LAWRENCE: That's correct, Mr. Director.
24 Thank you.

25 There really are three categories of

1 documents that we're requesting the Director take
2 official notice of. The first are agenda notes and
3 minutes from the Advisory Committee meetings for the
4 Big Wood Groundwater Management Area. As you know,
5 this proceeding that we're in right now sprang from
6 those meetings, essentially. And so we believe that
7 those documents are -- are or may be relevant to this
8 proceeding and should be available for the parties. It
9 would be helpful if the parties had access to those and
10 they were admitted into the record.

11 The second category similarly are agenda,
12 notes, minutes, and other terms from the Modeling
13 Technical Advisory Committee, the Wood River Valley
14 Model Advisory Committee. We expect that the model is
15 going to be, as Mr. Bromley put it, probed quite
16 heavily in this proceeding. We believe that it would
17 be helpful to the parties and the Department if those
18 records were available in the record.

19 And then finally, the third category are
20 documents, files, backfiles in the Department's records
21 for all of the water rights listed on Tim Luke's
22 Attachment A to his May 17th staff memo. It's fairly
23 commonplace in proceedings that I've been involved with
24 with the Department for the Hearing Officer to take
25 official notice of the Department's own files on water

1 rights that are relevant to the proceeding.

2 So that, in a nutshell, is our request for
3 official notice. Thank you.

4 THE HEARING OFFICER: Thank you, Mr. Lawrence.

5 Any responses?

6 Mr. Fletcher.

7 MR. FLETCHER: We don't really have any
8 objection to the Advisory Committee meeting notes,
9 other than there was some negotiation that took place
10 there -- settlement negotiation. And so I -- I can
11 leave it -- I believe we can leave it up to the
12 Director to sift through that and determine what's
13 relevant to this proceeding.

14 As far as the agenda notes from the
15 modeling and the backfiles to the water rights, I don't
16 believe we have any objection to those.

17 THE HEARING OFFICER: Okay. Mr. Rigby.

18 MR. RIGBY: Mr. Director, only to add to that,
19 again, I wasn't at those. And Director was for -- as I
20 understand it, for the most part, or at least a lot of
21 that. And I, too, am concerned about anything that
22 would have been stated or said in negotiations versus
23 part of the committee assignment.

24 Other than that, I agree with Kent that as
25 long as the Director recognizes that and sifts through

1 that which is negotiation versus the assignment of the
2 committee, then I have no objection as well.

3 THE HEARING OFFICER: Any other commentary?

4 Mr. Barker.

5 MR. BARKER: Thank you, Director.

6 I think one of the things that I'd be
7 concerned about is just a procedural matter. All of
8 this stuff is fairly broad. Certainly if an expert
9 wants to refer to something that was in the modeling
10 meeting minutes, they ought to be -- or the Modeling
11 Technical Advisory Committee minutes, they ought to be
12 able to refer to that.

13 But if the documents start coming into
14 evidence, it would be nice to have some kind of notice
15 of which one of these documents, this fairly massive
16 group of materials, is going to be actually introduced
17 into evidence that people are going to discuss at the
18 hearing.

19 And the second thing I'll say about the
20 discussions at the Advisory Committee meeting is these
21 are not 402 settlement discussions. They're simply not
22 protected. And so whatever people said or didn't say
23 about their position is certainly not off the table at
24 all.

25 THE HEARING OFFICER: Okay. All right. Let me

1 start from the back end again. And I agree with
2 Mr. Lawrence that the documents, files, and back-files
3 in the Department's records for water rights listed in
4 Attachment A, Tim Luke's staff memorandum, those water
5 right files should be a part of the record. And so the
6 Director will take official notice of those water right
7 files.

8 The agenda, notes, minutes, and meeting
9 materials in the Wood River Valley Modeling Technical
10 Advisory Committee, I don't even know what those might
11 be, how extensive they are. My -- my inclination is to
12 say if somebody thinks something's important in those,
13 refer to it and bring it forward. So I'll at least
14 deny the motion. And I want some specific reference, I
15 think, as Mr. Barker was asking for so that we know or
16 exactly what it is that people want to bring into the
17 record.

18 And it's not that those modeling minutes
19 and meeting materials are unimportant. Certainly I --
20 I think that technical committee and the inputs there
21 from the various people who participate should be
22 important for the record.

23 Now, the last one, I guess, I want to talk
24 about is the meetings of the Advisory Committee for the
25 Big Wood Groundwater Management Area. And I'm on the

1 fence on this particular question.

2 What do the parties want to do?

3 And I have some disclosure in this I want
4 to be up front about. I attended every one of those
5 meetings. And the reason that I attended them -- I
6 didn't want to, but the reason that I attended those is
7 because the public meeting law requires that either a
8 member of the committee or the agency head attend. And
9 in the middle of the pandemic, we weren't having
10 anybody meet in person. So we were not requiring
11 anybody from the committee to attend in person.

12 And so as a result, the deputies attorney
13 general and the Department told me that we might be in
14 trouble under the public meetings laws if I did not
15 attend. So I attended those. I honestly don't think
16 there is much in the way of discussion in those
17 meetings about settlement negotiations.

18 But what do the parties want to do with
19 respect to those notes? Any objections? Anybody?

20 MR. BARKER: No objection here.

21 THE HEARING OFFICER: All right. I'll take
22 notice of those, but I'll also view them with a certain
23 level of suspicion. But there was good information
24 that came in.

25 I'm also, Mr. Rigby, concerned about your

1 concern, and that is that all of the parties who are
2 participating in this proceeding did not participate in
3 those meetings. And so again, I would encourage if
4 there is something in those documents that people want
5 to present or want to dwell on in this hearing, I'd ask
6 that counsel bring that document forward and offer it
7 as evidence. So that's a soft taking of notice, I'd
8 characterize it as.

9 Okay. Have we worked through all the
10 motions?

11 All right. Let's talk briefly about the
12 order of presentation of testimony and the order of
13 examination. So as I mentioned earlier, deputies
14 attorney general for the Department of Water Resources
15 will examine those Department staff members who
16 prepared staff memorandums. And I expect that the
17 examination will be brief and that the entire content
18 of the staff memorandums will not be covered in the
19 examination. You have them in your possession.

20 And the examination, I think, is more for
21 the purpose of laying a foundation with that witness,
22 and then creating some level of comfort before they're
23 subjected to cross-examination. I find that's helpful
24 in bringing Department staff in the witness chair.

25 And then I think it would be helpful if we

1 follow -- unless counsel has another idea, if we follow
2 the order of Mr. Fletcher and Mr. Rigby, you can then
3 examine the witnesses as well. And then I want to wrap
4 around.

5 And, Mr. Barker, it seems to me that South
6 Valley, as well as Galena to some extent, have the
7 primary interest in this particular matter. And I'd
8 ask you to cross-examine, either you or Mr. Thompson
9 first, and then Galena second.

10 And then I think we have a couple of other
11 parties. Let me -- well, let's establish that as we
12 go. I don't want to take time.

13 And then once we finish with group one and
14 group two, then I'll come to group three, and we'll see
15 if you have additional questions. Okay?

16 And of course group four is excluded from
17 examining. And then we'll go back through and have
18 another round of rebuttal questions after we finish.

19 Is that acceptable?

20 Now, that will be today's proceeding.
21 We'll need to consider how to present testimony from
22 surface water users and how that testimony then is
23 presented. I think one of the issues that always comes
24 up, and will come up in this proceeding is -- and I
25 think more as we get into group two, how you want to

1 present your testimony and whether each of the
2 attorneys wants to protect their own presentation or
3 whether we have a full presentation from a particular
4 witness. And I don't know whether there are some
5 witnesses that might be called twice.

6 I would prefer, particularly with the
7 expert witnesses, if we could call them to testify and
8 then have them in the chair once and then dismiss them
9 and not call them back. But certainly they could be
10 held in reserve, particularly for rebuttal. But we
11 don't have to resolve that today. Let's think about
12 it.

13 Mr. Barker, Mr. Laski, Ms. O'Leary, I think
14 that would be your decision primarily. Let's see where
15 it goes. But I want to protect your ability to put on
16 your case and not have it diluted somehow through other
17 examination. So I'll depend on you to tell me how you
18 want to proceed.

19 Okay. Other questions?

20 All right. We'll all see how our endurance
21 is.

22 Ready to call the first witness?

23 MS. CARTER: Yes.

24 THE HEARING OFFICER: Ms. Carter.

25 MS. CARTER: I call Sean Vincent.

1 THE HEARING OFFICER: If you'll come forward,
2 Mr. Vincent. Raise your right hand.

3
4 SEAN VINCENT,
5 having been called as a witness by the Department and
6 first duly sworn, testified as follows:

7
8 THE HEARING OFFICER: Thank you.
9 Please be seated.

10
11 DIRECT EXAMINATION

12 BY MS. CARTER:

13 Q. Good morning. Please state your full name
14 and spell it for the record.

15 A. Sean Vincent. That's S-e-a-n,
16 V-i-n-c-e-n-t.

17 Q. You are an employee of the Idaho Department
18 of Water Resources; correct?

19 A. Correct.

20 Q. What is your current job title?

21 A. I am the hydrology section manager.

22 Q. And what are your responsibilities in this
23 position?

24 A. I manage a group of hydrologists,
25 hydrogeologists, and water resource engineers. We do

1 data collection, data analysis, surface and groundwater
2 modeling, oftentimes in support of decision-making by
3 the Director and the Idaho Water Resource Board.

4 A big part of my role is to review the work
5 products of hydrology section staff, including
6 presentations and reports. I from time to time serve
7 as an expert witness for the Department. I've done
8 that for the A & B Irrigation delivery call matter, as
9 well as for the M3 water right application proceeding.

10 And I manage a number of joint funding
11 agreements. These are essentially contracts between
12 the Department of Water Resources and the U.S.
13 Geological Survey to have the Geological Survey provide
14 technical services. The largest of those are stream
15 gaging agreements, which includes stream gaging
16 services across the state. But there's ten continuous
17 stream gages currently in the Wood River Valley that
18 are part of that agreement, and also the stream gage
19 below Magic Reservoir is a part of that agreement,
20 which is outside of Wood River Valley.

21 Q. So what specifically are your
22 responsibilities related to water supply data?

23 A. Well, I follow the water supply, as do most
24 hydrology section staff. I attend water supply
25 committee meetings, which are run by David Hoekema,

1 who's a member of the hydrology section.

2 We also do put out reports which status
3 different groundwater management areas and critical
4 groundwater areas across the state looking at
5 water-level trends through time.

6 Q. How long have you worked in your current
7 position?

8 A. It will be 16 years at the end of July.

9 Q. And what did you do prior to working for
10 the Department?

11 A. I had a brief stint with an environmental
12 consulting firm in Meridian called Kleinfelder where I
13 worked as a project manager on environmental projects.

14 Prior to that I worked for 15 years with
15 Morrison Knudsen Corporation, which later was bought
16 out by Washington Group International. I started as a
17 quantitative hydrogeologist with them. I did also
18 manage some projects.

19 One project involved capture zone
20 delineation work, modeling essentially, in support of
21 the source water assessment program, which is the
22 public water supply systems in Idaho.

23 And then finally I also, towards the end of
24 my tenure, managed the geoscience group at MK, which is
25 similar to my current role here.

1 Q. Thank you.

2 What is your college education?

3 A. I have a bachelor of science in geology and
4 a bachelor of arts in geology, both from the University
5 of Kansas, and a master's in hydrology with a
6 groundwater emphasis from the University of Idaho.

7 Q. And what professional credentials do you
8 have?

9 A. I am registered in Idaho as a professional
10 geologist.

11 Q. Okay. Did you prepare a memo discussing
12 methods of predicting surface water supplies in the
13 Wood River Basin?

14 A. I did.

15 MS. CARTER: May I?

16 THE HEARING OFFICER: Yes.

17 MS. CARTER: I have copies if anybody needs
18 them.

19 Q. I have just handed you a memo marked IDWR
20 Exhibit 1.

21 Is that the memo that you prepared?

22 A. It is.

23 Q. And why did you prepare this memo?

24 A. It was in response to the Director's
25 request for staff memoranda dated May 11, 2021.

1 Q. And in this memo you describe different
2 methods for predicting surface water supplies.

3 What were those methods you discussed?

4 A. I considered three: The Surface Water
5 Supply Index, which is a product from the Natural
6 Resources Conservation Service. I also looked at the
7 predictive model that was developed by Dr. Kendra
8 Kaiser at Boise State University for the Wood River
9 Water Collaborative.

10 And then finally, I looked at the Northwest
11 River Forecast Center ensemble streamflow prediction
12 model.

13 Q. And which of those methods did you select
14 for your analysis?

15 A. I chose the Surface Water Supply Index, or
16 SWSI, as it's sometimes referred.

17 Q. And why did you select that method?

18 A. Well, I've outlined reasons in the
19 memorandum. But I guess generally it's designed to
20 look at irrigation water supplies. It's specific to
21 the irrigation season, and it allows hydrologists,
22 water users, water managers to put the projected water
23 supply in an historical context.

24 Q. And the memo was looking at the upcoming
25 2021 irrigation season, which we are now in.

1 What were the predictions for Basin 37?

2 A. This was as of April 1, the forecast that I
3 looked at, and it was for a -- what I'd call a poor
4 water supply year.

5 Q. So there was -- the analog years showed a
6 poor water supply year for this year?

7 A. Yes. Based on the NRCS forecast, the water
8 supply outlook was not good for the 2021 irrigation
9 season.

10 Q. Okay. And you just mentioned analog years.
11 What's the purpose of selecting analog
12 years? How do those work?

13 A. Well, again, I think it's helpful for water
14 users, water managers, hydrologists to be able to put
15 the forecast in an historical context. And the analog
16 years are the years with the closest water supply
17 volumes to the forecast.

18 MS. CARTER: Okay. Thank you.

19 Your Honor, I move to admit Exhibit 1 into
20 evidence.

21 THE HEARING OFFICER: Thank you.

22 Any objections?

23 MR. BARKER: No objection.

24 MR. RIGBY: No.

25 THE HEARING OFFICER: Okay. The document that's

1 been marked as IDWR 1 is received into evidence.

2 (IDWR Exhibit 1 received.)

3 Q. (BY MS. CARTER): After you wrote your memo
4 were there any updates to the water supply forecast?

5 A. Yeah. So the NRCS puts out a new SWSI
6 table, I'll call it, monthly. And I used the April
7 forecast, that was the latest one that had been
8 published at the time I authored the memorandum. But
9 since then they've published a May SWSI table. And I
10 believe it was just over this weekend they published a
11 June table as well.

12 Q. Did you have a chance to review those?

13 A. I did yesterday look at the June table.

14 Q. Let's see. I just handed you what is
15 marked as IDWR Exhibit 5.

16 Could you tell us what that is.

17 A. So this is the SWSI table for the Big Wood
18 River at Hailey gaging station for the June through
19 September forecast.

20 Q. And what does that table tell you?

21 A. Well, in general terms, it tells me that
22 the water supply outlook went from poor to much worse.
23 In fact, it looks like this may be a historically bad
24 year.

25 Q. Okay. Is there anything else that you

1 noted on this table when you were reviewing it?

2 A. If you look, the forecasts are put out for
3 different exceedance forecast values. There's a
4 10 percent, 30 percent, 50, 70, and 90 percent
5 exceedance forecast. And then the measured historical
6 values are also provided.

7 And you can see where the different
8 exceedance forecasts relate to the historical years.
9 And when I look at this table, I note that the
10 50 percent exceedance forecast, which is the most
11 likely, is less than the worst water supply for the
12 June through September time frame going back 30 years
13 to 1991. So it looks like this year is going to be
14 worse than any in the preceding 30 years, at least for
15 the June through September time frame.

16 MS. CARTER: Thank you.

17 I move to admit IDWR Exhibit 5 into the
18 record.

19 MR. RIGBY: No objection.

20 THE HEARING OFFICER: Parties?

21 Mr. Bromley?

22 MR. BROMLEY: No objection.

23 THE HEARING OFFICER: Lawrence?

24 MR. LAWRENCE: No objection.

25 THE HEARING OFFICER: Mr. Laski?

1 MR. LASKI: No objection.

2 THE HEARING OFFICER: Mr. Barker?

3 MR. BARKER: No objection.

4 THE HEARING OFFICER: Okay.

5 (IDWR Exhibit 5 received.)

6 MS. CARTER: Those are all the questions I have
7 for now.

8 THE HEARING OFFICER: Okay. All right.

9 And I'm sorry, Mr. Moroney, I did not --

10 MR. MORONEY: No objection.

11 THE HEARING OFFICER: Thank you. I'm trying to
12 get all the way around the horn here. I'll get used to
13 it.

14 Okay. Thank you for that introduction,
15 Ms. Carter.

16 Mr. Rigby or Mr. Fletcher, one of you.

17 MR. RIGBY: I'll begin.

18 THE HEARING OFFICER: Thank you.

19 MR. RIGBY: Thank you, Mr. Director.

20

21 CROSS-EXAMINATION

22 BY MR. RIGBY:

23 Q. Good morning. How are you?

24 A. Good morning.

25 Q. If you don't mind, let's start with where

1 you just left off, which is the latest predictions.

2 According to Exhibit IDWR 5, the most
3 recent June 1 -- or June prediction, or June NRCS
4 prediction, is that what best to call it?

5 A. I call it the June SWSI table.

6 Q. Very good. You indicated that the most
7 likely use of it would be the 50 percent exceedance
8 forecast.

9 Why?

10 A. That's the most likely outcome. There are
11 a couple of forecasts for the 10 percent and 30 percent
12 exceedance values that are higher than 1994, which is
13 the year with the lowest water supply for June to
14 September time frame. And it -- that's what the NRCS
15 prediction is, that the 50 percent exceedance forecast
16 is less than was observed in 1994 for that time frame.
17 In other words, there's a greater than 50 percent
18 chance that the 2021 volume for that time period will
19 be less than observed in 1994, which was 44,000
20 acre-feet at the Hailey gage.

21 Q. And you say that that would be worst in the
22 last 30 years.

23 Why 30 years? Why pick the 30 years?
24 What's the significance of that?

25 A. Well, that's typical when looking at water

1 supplies and historical periods. You go too much
2 further than 30 years, then you start getting changes
3 in irrigation practices and a lot of other things that
4 can affect it. So typically, we look at 30 years
5 historical periods when, for example, looking at
6 snow-water equivalent maps, also the SWSI index. But
7 you can go back further in time.

8 Q. As a result of the newest forecast by
9 Exhibit IDWR 5, what would you, if you were to
10 re-create your memo, what major significance would it
11 play in an update of your memo?

12 A. Well, I think that it paints a bleaker
13 water supply outlook than when I wrote my memo and that
14 it would result in the selection of different analog
15 years.

16 Q. Do you have any in mind? And I realize
17 this is on the fly. We're all trying to catch this up
18 in this time frame. But do you have any in mind?

19 A. Well, the year with the measured streamflow
20 at the Hailey gage that is most similar to the
21 50 percent chance exceedance forecast is 1994. So that
22 might be an analog year.

23 Q. In fact, 1994 has been used.

24 Was it in your memo or Mr. Luke's or
25 Ms. Sukow's? I recognize one of them dealt with it.

1 Do you recall?

2 A. I don't -- I don't recall.

3 Q. Very good. Again, getting back to the
4 three methodologies that were out there or that
5 potentially could be used, what are some of the
6 weaknesses that you saw in the other two as -- and why
7 you chose the SWSI for this particular one? I
8 recognize one of your reasons was the forecast for the
9 current year; is that correct?

10 A. Well, I -- I don't know that I would say
11 that the other two options are -- are weak. I guess I
12 would say that the SWSI has really been developed with
13 irrigation water supplies in mind. The way the output
14 of the table has the historical values and the
15 exceedance forecasts are positioned in relationship to
16 those historical values for the preceding 30 years is
17 very convenient. And the Department has used SWSI
18 tables and continues to use SWSI tables. There's a
19 level of comfort there, just familiarity. I think
20 there's widespread acceptance both inside IDWR and
21 outside.

22 Q. Do you know anyone else that's run the
23 other two and would have a prediction significantly
24 different than what you supplied?

25 A. We did -- and I think I described this in

1 the memo -- run the Wood River Water Collaborative
2 Model. It's an R script. And as I mentioned in my
3 deposition, you have to have the right libraries loaded
4 in order to run an R script. And so there's some time
5 spent there and -- but mostly in talking with
6 Dr. Kaiser it sounded like there was still some
7 modifications being made to the model. So we didn't
8 choose that.

9 The other one, the Northwest River Forecast
10 Center ensemble prediction model, again, it's just not
11 as convenient for my purposes and I'm not as familiar
12 with it. But I don't have anything bad to say about
13 the forecast model.

14 Q. Do you have any reason to believe that any
15 of the other two runs wouldn't result in a
16 significantly different result than what you came up
17 with in SWSI?

18 MR. BARKER: Objection. Lack of foundation.

19 THE HEARING OFFICER: Well, I'll overrule the
20 objection. I think this is a little bit foundational
21 anyway.

22 Go ahead.

23 THE WITNESS: The bottom line for me is it's
24 going to be a very bad water supply year in 2021.

25 Q. (BY MR. RIGBY): In your staff memo -- and

1 I apologize, I don't have the exhibit number for that.

2 THE HEARING OFFICER: It's 1.

3 MR. RIGBY: Is it 1?

4 THE HEARING OFFICER: 1.

5 MR. RIGBY: Okay.

6 Q. In Exhibit 1, page 3, you indicate that --
7 again, dealing with the SWSI and why it's a better
8 choice for predicting the water supply in the Wood
9 River Valley -- "as well as downstream users that don't
10 have access to the Magic River -- Magic Reservoir but
11 instead divert from Silver Creek and Little Wood."

12 Is that significant in using the SWSI? Is
13 it a better prediction for those downstream users, in
14 your opinion?

15 A. Than the alternatives or --

16 Q. I guess what I'm saying is, did it work for
17 what you were attempting to do?

18 A. Well, I spoke of this a little bit in my
19 deposition, but when I first -- when the focus first
20 shifted over to the Little Wood and Silver Creek water
21 users, I -- I realized that there wasn't a SWSI for
22 Silver Creek. And so I had to satisfy myself that
23 there was a correlation between the SWSI for the
24 at-Hailey gage and the observed flows in Silver Creek.

25 And so I did a regression analysis and

1 looked both at the coefficient of determination and the
2 chart that was -- compared those two things, and saw
3 that there was a strong correlation between them, the
4 flow in Silver Creek during the April through September
5 time frame and the flow at the at-Hailey gage.

6 Q. So the results that were produced as a
7 result of SWSI, for the purpose of the seniors
8 downstream from -- in Silver Creek and Little Wood, you
9 still maintain that, notwithstanding the new prediction
10 or otherwise, that your analysis is correct; correct?

11 A. I believe that because the at-Hailey gage
12 is pretty well correlated with the flows in Silver
13 Creek during the irrigation season, the fact that there
14 is a poor water supply year predicted for the at-Hailey
15 gage would extend to Silver Creek. It's not a perfect
16 correlation, but...

17 Q. Do you know of any other methodology out
18 there or another way of addressing that if it's not
19 perfect? Is there one that's better?

20 A. I suppose a different model could be
21 developed, one that relied entirely on water levels in
22 wells, for example. But I did not do that.

23 Q. As far as the modeling itself, and of
24 course the model 1.1, we've heard testimony from
25 others, is it the best science that we have right now?

1 MR. THOMPSON: Objection. We haven't heard from
2 anybody yet.

3 MR. RIGBY: You're right.

4 Q. I'll represent to you that there are those
5 who -- let me just ask you this. Strike that.

6 Is it the best science we have to deal with
7 for the Wood River Valley at this given time?

8 MR. BROMLEY: Objection. What is "it"?

9 MR. RIGBY: The model 1.1.

10 MR. BARKER: So I think that's a problem,
11 because that's not what Mr. Vincent's talking about.
12 He's talking about the SWSI projections, not the model.

13 MR. RIGBY: I'm asking him about the model.
14 I'll lay foundation.

15 Q. Are you familiar with the model 1.1?

16 A. I am familiar with the Wood River Valley
17 groundwater flow model.

18 Q. And have you -- what's your familiarity
19 with it?

20 A. Well, Jennifer Sukow is in the hydrology
21 section, and I manage the hydrology section. And I
22 also facilitate meetings of the Wood River Valley
23 Modeling Technical Advisory Committee.

24 Q. So is that the extent of your review of the
25 model?

1 A. I reviewed the reports that have been
2 generated for the model.

3 Q. Go to your memo, please, page 2, item
4 No. 4, "Method Selection." And it says -- and I hope
5 I'm quoting it correctly -- "The SWSI tables also
6 include an estimate of the adequate water supply volume
7 which can be used to determine if the current year will
8 have a shortage or surplus of irrigation water."

9 Is that what it says?

10 A. That's item 4?

11 Q. Yes.

12 A. I believe that's what it says, yes.

13 Q. So has an adequate water supply volume in
14 acre-feet been established for water users in the
15 Little Wood/Silver Creek drainage, to your knowledge?

16 A. I believe that the adequate water supply
17 volume is for the Wood River Valley. And so that's a
18 slightly different area than we're concerned with in
19 this proceeding.

20 Q. Larger than what we're dealing with right
21 here?

22 A. Well, larger and less extensive, both.
23 It's different.

24 Q. How so?

25 A. Silver Creek is within the Wood River

1 Valley, but then we're also concerned about the water
2 as it -- after it's flowed to past Picabo and is
3 outside the Wood River Valley.

4 Q. So again, to your knowledge, has there been
5 any -- is there any way to establish the -- what that
6 water supply volume being adequate for the Little
7 Wood/Silver Creek drainage for water users?

8 A. The -- I spoke with Ron Abramovich, who was
9 involved in the development of the adequate water
10 supply volumes when he was with the NRCS. He has since
11 retired. And I asked him about the adequate water
12 supply value for the above-Hailey gage, is how it's
13 referred to.

14 And he mentioned that he had developed that
15 by discussing the water years with the Water District
16 37 watermaster, Kevin Lakey, and that he had reviewed
17 data and had conversations with Mr. Lakey, and that
18 they had arrived at this number based on those
19 conversations and his review of gage data. But again,
20 it applies to the Wood River Valley, that volume.

21 Q. One of the reasons for my inquiry as to
22 this is that again on page 3, your last paragraph
23 talking about the potential analog years for the Wood
24 River Valley, this paragraph, as well as the staff
25 memo, bases conclusions on the availability of 2021

1 irrigation season on the adequate water supply volume.
2 And that's why I think it's important to know just
3 what, if any, analysis or development of that
4 determination as to definition or data is involved.

5 A. That's a fair question. In my
6 conversations with Kevin Lakey and Ron Abramovich, I
7 learned that there is essentially an above-Magic
8 adequate water supply volume and a below-Magic adequate
9 water supply volume. And I'm not sure that either of
10 those really captures the area of concern for this
11 proceeding.

12 Q. Why?

13 A. Because Silver Creek is the main focus in
14 terms of water supply. And it's -- it heads in the
15 Wood River Valley, but then it flows out of the Wood
16 River Valley. So I'm just not sure that either Ron or
17 Kevin had that area in mind when they developed this
18 adequate water supply volume.

19 Q. But as far as you know, the two of them are
20 the ones that have, quote, "developed" the adequate
21 water supply for purposes of your addressing it within
22 your memo?

23 A. It -- yes, I believe there were others. I
24 just remember that Ron mentioned Kevin as being one of
25 the people that he had worked with when developing that

1 number. And it's intended as a general guideline.
2 It's kind of an inexact number, I think.

3 MR. RIGBY: Understood. I have no further
4 questions.

5 Kent.

6 THE HEARING OFFICER: Thank you, Mr. Rigby.

7 Mr. Fletcher.

8 MR. FLETCHER: Thank you. I have very few
9 questions.

10
11 CROSS-EXAMINATION

12 BY MR. FLETCHER:

13 Q. Based upon your exhibit -- oh, I'm Kent
14 Fletcher, by the way, Mr. Vincent. I represent Big
15 Wood Canal Company.

16 Based upon your Exhibit 5, is it fair to
17 say there is no analog year meeting the conditions of
18 this year?

19 A. I would say 1994 is very similar to the
20 50 percent chance -- well, maybe not very similar.
21 It's similar. If I had to choose one year in the
22 previous 30, it would be 1994. But you're right, 1994
23 has a higher projected June through September forecast
24 than the measured volume -- or scratch that.

25 1994 has a higher measured streamflow value

1 for the period June through September than the
2 50 percent chance exceedance forecast for 2021. There
3 is still some probability that we will exceed the 1994
4 measured volume, obviously. And this, I should
5 emphasize, is only for the period June through
6 September. It's not for the entire irrigation season.

7 Q. And 1994, to reiterate, is the worst year
8 on record in the last 30 years?

9 A. In the last 30. We do have historical data
10 going back to 1917, which I provided to Tim Luke and
11 got from the NRCS. And there are worse years than 1994
12 going back that far.

13 MR. FLETCHER: Thank you.

14 THE HEARING OFFICER: Thank you, Mr. Fletcher.

15 Mr. Barker.

16 MR. BARKER: Thank you, Mr. Director.

17
18 CROSS-EXAMINATION

19 BY MR. BARKER:

20 Q. Albert Barker on behalf of South Valley
21 Ground Water District.

22 Sean, how are you? Having fun?

23 A. Been better. I'm doing all right.

24 Q. So you came here with some not-so-great
25 news for us this morning; right?

1 A. That's true.

2 Q. The -- I want to follow up on something
3 that you just said about -- you just emphasized that
4 this is June to September SWSI forecast, correct,
5 compared to the June to September runoff periods in the
6 previous 30 years?

7 A. That's correct.

8 Q. Okay. And so this chart doesn't take into
9 account the water supply that was available in March
10 April and May?

11 A. Yeah. We're typically focused on April
12 through September. It doesn't include April or May,
13 the flow past the Hailey gage, during that time frame.

14 Q. And during those periods of time, there was
15 greater flow than was shown on the current 2021 SWSI?

16 A. There was flow obviously, yes.

17 Q. Okay. So the adequate water supply that
18 you discussed, we don't have any number for an adequate
19 water supply for the Big Wood -- or sorry, the Little
20 Wood and Silver Creek water users; is that correct?

21 A. That's correct. I don't.

22 Q. You mentioned when you first started that
23 you were in charge of the stream gaging or you were at
24 least in charge of the agreements with USGS on stream
25 gaging?

1 A. That's correct.

2 Q. And are there stream gages on the Little
3 Wood in addition to the ones that are monitored by the
4 USGS?

5 A. There is a stream gage at Station 10 and
6 one at Station 54. There are gages upstream from the
7 confluence of Silver Creek as well. There's one at
8 Carrie, and I believe upstream from that even is
9 another gage.

10 Q. All right. And are those gages within your
11 purview?

12 A. I believe the USGS gage at Carrie may be
13 sponsored by the Department, but I -- I don't recall.

14 Q. And do you have any information about the
15 gage at Station 10? Well, let me stop for a second.

16 Is that gage at Station 10 managed by IDWR?

17 A. It is currently monitored by a contractor
18 under contract from Water District 37. We have
19 installed equipment here recently, we're trying to
20 improve the gaging that's done at Station 10.

21 Q. Okay. So why is it necessary to improve
22 the gaging at Station 10? What's wrong with it?
23 What's there now?

24 A. I'm perhaps not the best person to ask
25 that. I know that Jennifer Sukow has been looking into

1 the data there.

2 Q. Okay. But suffice it to say, the
3 Department's not satisfied with the data that they're
4 getting out of the readings from Station 10?

5 A. There are some concerns, yes.

6 Q. You mentioned earlier that you found a very
7 strong correlation between flows at Hailey on the Big
8 Wood and flows in Silver Creek?

9 A. Reasonably strong. I'm not sure what
10 adjective I used, but it's fairly strong.

11 Q. Maybe you used an adjective.
12 But you did use the word "strong"; right?

13 A. Fairly strong.

14 Q. Okay. And so how you do you identify what
15 it means when you say there's a strong correlation
16 between the flows up above the Triangle at Hailey and
17 the flows in Silver Creek?

18 A. Well, as I mentioned, I looked at the flow
19 measured at the Sportsman's Access gage in Silver Creek
20 going back in time for the period April through
21 September, and compared that to the flows observed at
22 the at-Hailey gage April through September going back
23 in time. And I plotted those up, and visually I saw a
24 fairly strong correlation. And I did a regression
25 analysis and came up with an R-squared value for

1 different time frames.

2 Q. Okay. So can you recall the R-squared
3 value that you found?

4 A. I remember that for the most recent ten
5 years, the R-squared was above .8. And it was a little
6 bit less than that if you go back 20 years and 30
7 years. But there's a reasonable correlation indicated
8 by that. It means that the variation is explained,
9 let's say the correlation -- or the coefficient of
10 determination, or R-squared value is .8. It means that
11 80 percent of the variation is explained by the
12 variation observed at Hailey.

13 Q. And so the higher the R-squared value -- it
14 can't get above 1.0; right?

15 A. 1.0 would be perfect.

16 Q. Okay. So the higher it is, the stronger
17 the correlation; is that how that works?

18 A. Yes.

19 Q. And an R-squared value of .6, for example,
20 would be less strong of a correlation?

21 A. That's -- that's correct.

22 Q. Okay. Is there a stream gage on Silver
23 Creek at Ragsdale? Are you familiar with that?

24 A. I am not familiar with it.

25 Q. Okay. I'm getting past your -- all right.

1 That's fine.

2 So both Ms. Carter and Mr. Rigby referred
3 to you providing analysis. And I thought when we
4 talked the other day in your deposition you simply said
5 what you were doing was reporting the analysis that had
6 been provided by NRCS in the SWSI tables and not doing
7 your own analysis of the flows.

8 Is that right?

9 A. I believe what I said was that the analysis
10 that I did was to look at the correlation between the
11 at-Hailey gage flows and the flows at Silver Creek.
12 And then based on the observed correlation -- that was
13 my analysis -- I used the NRCS forecast.

14 Q. So your analysis was to say that the Hailey
15 gage is the best measure of what the SWSI -- or sorry,
16 what the 2021 water year would look like in the Big
17 Wood?

18 A. That's correct.

19 Q. Okay. And then you also mentioned that you
20 could go back to earlier years.

21 Didn't you ask NRCS for SWSI values going
22 back into the '20s and '30s?

23 A. Back to 1917.

24 Q. Okay. So did you, for purposes of your
25 memo, consider comparing SWSI values with years outside

1 of that 30-year period that is in table IDWR Exhibit 5?

2 A. I didn't feel that that would be necessary,
3 and it's not in keeping with standard practice to go
4 too far beyond 30 years. It can be done. And it's
5 informative to see what the flows were. The gage is
6 long established, but I didn't feel like it was
7 important for my analysis, though.

8 Q. And Mr. Rigby asked you some questions
9 about the Wood River Valley model 1.1.

10 You were in charge of the -- or at least
11 supervised the MTAC meetings for that process; correct?

12 A. That's correct.

13 Q. Did you have anything to do with the
14 uncertainty analysis that Allan Wylie prepared for
15 that -- or reporting on the uncertainty analysis in
16 model 1.1?

17 A. I reviewed the report, but the uncertainty
18 analysis was not something I personally participated
19 in, no.

20 Q. And did you -- did you disagree with his
21 conclusions about any uncertainty report?

22 A. I did not.

23 MR. BARKER: Thank you, Mr. Director.

24 Thank you, Sean.

25 THE HEARING OFFICER: Thank you.

1 Galena? Mr. Laski?

2 MR. LASKI: We have no questions.

3 THE HEARING OFFICER: No questions?

4 MR. LASKI: No.

5 THE HEARING OFFICER: Okay. Group three?

6 And I will just mention at this point that
7 there are two other individuals in -- well, I'm
8 belated, I guess, in doing this. But there are two
9 other individuals in group one who are not here, I
10 don't think.

11 And then in group two -- let me just ensure
12 that we're okay.

13 So, Mr. Robertson, you're representing
14 Sun Valley Water and Sewer District. That would be in
15 group three as well, even though I have it in group
16 two.

17 MR. ROBERTSON: Yes, sir.

18 THE HEARING OFFICER: And I think Jim Speck has
19 filed documentation stating that he would rely on
20 others today.

21 So I think we're into group three now,
22 Mr. Bromley. Sorry for the cleanup, as I look at who's
23 representing whom.

24 MR. THOMPSON: Mr. Director, can I interrupt?

25 THE HEARING OFFICER: Yeah.

1 MR. THOMPSON: Who else is in group one? Sorry.
2 You said --

3 THE HEARING OFFICER: Okay. I, at least in my
4 list, so there's a large group of users that Jerry
5 Rigby and Joe James represent. I didn't ask Chase.

6 Chase, are you with the Rigby law firm or
7 are you Joe James?

8 MR. RIGBY: He's with me, sorry to say.

9 THE HEARING OFFICER: He's associated with you.
10 That's what I assumed.

11 And then Kent Fletcher is representing Big
12 Wood Canal Company and in group one. Lawrence Schoen
13 and City of Gooding, Brendan Ash, I don't think he's
14 here today. So that's group one.

15 Were you wanting more information than
16 that?

17 MR. THOMPSON: No, that's fine.

18 THE HEARING OFFICER: Thanks, Travis.

19 MR. MORONEY: Mr. Director.

20 THE HEARING OFFICER: Yes.

21 MR. MORONEY: Just to clarify, Fish and Game's
22 in group two; correct?

23 THE HEARING OFFICER: That is correct.

24 So do you have questions? I'm sorry,
25 Mr. Moroney.

1 MR. MORONEY: No questions for Mr. Vincent.

2 THE HEARING OFFICER: Oh, and now I'm sorry.
3 This summary I have does not include you, and it
4 should.

5 Okay. Mr. Bromley.

6 MR. BROMLEY: Great. Just a few.

7

8 CROSS-EXAMINATION

9 BY MR. BROMLEY:

10 Q. Hi, Sean.

11 A. Morning.

12 Q. Let me just ask a quick question.

13 Did you say that the SWSI for the Big Wood
14 above Hailey does not predict flows in Silver Creek and
15 tributaries?

16 A. No, it's not -- the forecast is for flow at
17 the -- at the at-Hailey gage.

18 Q. And that was the correlation, then, that
19 you were --

20 A. That's right.

21 Q. That was the linkage?

22 A. That's correct.

23 Q. Okay. Thank you.

24 Mr. Vincent, are you familiar with the
25 rules for conjunctive management?

1 A. Somewhat, yes.

2 Q. Aware that they exist?

3 A. I am.

4 Q. And when you put together your staff memo,
5 did you look at all at the Conjunctive Management
6 Rules?

7 A. Not as part of this, no.

8 Q. Okay. Thank you.

9 When you were preparing your staff memo,
10 Sean, did you do any analysis of changes in irrigation
11 practices during the SWSI -- this 30-year period from
12 1991 to 2021?

13 A. I did not do that specifically,
14 Mr. Bromley.

15 Q. And, Mr. Vincent, you were testifying a
16 little bit earlier about the model, the Big Wood model;
17 is that correct?

18 A. I was asked a question about it. I don't
19 recall specifically what it was.

20 Q. And that you have some general familiarity
21 with the model?

22 A. I do. I do.

23 Q. Are you aware of what the calibration dates
24 were within the model?

25 A. We updated the model, let's see, in 2019 we

1 put out version 1.1. And if I'm not mistaken, the
2 calibration period extends through 2014. But Jennifer
3 Sukow would be a better one to ask about that.

4 Q. I was curious if you recalled when that
5 calibration date started. So it's gone on through
6 2014. My understanding is that the calibration started
7 in 1995.

8 A. I believe it was about that time frame.
9 There was a model warm-up period, too, in the first few
10 years. And so the model during that time period isn't
11 actually calibrating to those initial values. So I'm
12 not -- the calibration period is a little different
13 than the total simulation period.

14 Q. Okay. So if the model was -- if the start
15 date of the calibration was 1995, then you'd agree that
16 the 1994 SWSI that you're looking at predates that
17 period?

18 A. If that's the case, I would agree with
19 that.

20 Q. Okay. Thank you.

21 Have you analyzed the surface water supply
22 that was available in 1994?

23 A. Only to look at the measured runoff volumes
24 that are reported by the U.S. Geological Survey.

25 Q. Okay. And so then not diversions by river

1 users or pumping by groundwater users?

2 A. I did not do that, no.

3 MR. BROMLEY: Okay. That's all I have.

4 THE HEARING OFFICER: Okay.

5 MR. BROMLEY: Thank you.

6 THE HEARING OFFICER: Thank you.

7 Others in group three?

8 Mr. Simpson, I think I missed you once as
9 we went through. Do you have questions for
10 Mr. Vincent?

11 MR. SIMPSON: No questions.

12 THE HEARING OFFICER: Are there others in group
13 three?

14 Mr. Robertson?

15 MR. ROBERTSON: No questions.

16 THE HEARING OFFICER: No questions.

17 Mr. Semanko?

18 All right. Let me check my list again.

19 Let's see. Did I pick up -- and I'm not sure my notes
20 are good. I have Brian O'Bannon from the City of
21 Ketchum.

22 MR. O'BANNON: Yes.

23 THE HEARING OFFICER: Yes, I thought you were
24 here. Do you have questions?

25 MR. O'BANNON: No questions.

1 THE HEARING OFFICER: All right. Thank you,
2 Brian.

3 All right. Very good. Let's come back
4 around. Redirect.

5 Ms. Carter.

6 MS. CARTER: Just one clarification. Did we
7 admit Exhibit 5 into the evidence?

8 THE HEARING OFFICER: Yeah, I wondered the same
9 thing.

10 Mr. LaMar, can you tell us, or is there
11 somebody who can tell?

12 THE COURT REPORTER: Yes, it has.

13 THE HEARING OFFICER: It's been admitted?

14 THE COURT REPORTER: It has.

15 THE HEARING OFFICER: Okay. That's what I
16 thought. Thank you.

17 MS. CARTER: That's all I have.

18 THE HEARING OFFICER: Okay. Thank you.

19 Any other questions within the scope of
20 redirect?

21 Okay. I have one question for Mr. Vincent.

22

23 EXAMINATION

24 BY THE HEARING OFFICER:

25 Q. In Exhibit 5 you've been talking about a

1 streamflow volume. And I'm assuming that you are
2 looking at the column "Streamflow June through
3 September."

4 Is that correct?

5 A. Correct.

6 Q. And will you just, for the record, clarify
7 what the units are there and what those numbers
8 represent.

9 A. Yes. Those are -- the units is thousand
10 acre-feet at the upper right next to the red "1991 to
11 2020," just to the right of that. It says "30 years"
12 and then "Units KAF." It stands for thousand
13 acre-feet.

14 Q. Okay.

15 A. What was the second part of your question?

16 Q. Well, I think you've answered the question
17 because I wanted to know not only what it represented,
18 but then what -- so in terms of units, so whether it
19 was acre-feet or whether it was cubic feet per second.
20 And then I wanted to know what the number represented,
21 which is KAF or a thousand acre-feet. So I think
22 you've answered the question.

23 So these numbers, both the streamflow and
24 streamflow plus reservoir sum, those are both in
25 thousands of acre-feet?

A. That's correct.

THE HEARING OFFICER: Okay. All right. Thank you.

Any other questions for Mr. Vincent?

Thank you, Sean. And you may be excused, subject to possible recall, but I don't think that will happen.

All right. Do we want to take a break for ten minutes? I think our next witness will be in the chair for a while. Let's break for ten.

(Recess .)

THE HEARING OFFICER: Let's go back on the record. We are recording after a short morning break.

Ms. Carter, next witness.

MS. CARTER: Jennifer Sukow.

THE HEARING OFFICER: Ms. Sukow, if you'll come forward, please and raise your right hand.

JENNIFER SUKOW,
having been called as a witness by the Department and
first duly sworn, testified as follows:

THE HEARING OFFICER: Thank you. Please be seated.

Ms. Carter, you may examine the witness.

1 MS. CARTER: Thank you.

2
3 DIRECT EXAMINATION

4 BY MS. CARTER:

5 Q. Would you please state your full name and
6 spell it for the record.

7 A. Jennifer Sue Sukow, J-e-n-n-i-f-e-r, S-u-e,
8 S-u-k-o-w.

9 Q. And you are an employee of the Idaho
10 Department of Water Resources; correct?

11 A. Correct.

12 Q. What is your current job title?

13 A. My job title is Technical Engineer II.

14 Q. And what are your responsibilities in this
15 position?

16 A. I work in the hydrology section. And I
17 work primarily with groundwater flow models, the model
18 interaction of groundwater and surface water. I also
19 do other various hydrologic and hydrogeologic analyses
20 that come up from time to time.

21 Q. And how long have you worked in this
22 position?

23 A. About 10 years. Or excuse me, 11 years.

24 Q. And prior to this position what other
25 positions did you hold?

1 A. I was a senior water engineer with a
2 consulting firm called SPF Water Engineering for about
3 six years prior to this position.

4 Q. And what did you do in that position?

5 A. I did design and permitting primarily for
6 public water systems. I designed public-water-supply
7 wells and pumping stations and pressure reducing
8 stations and other appurtenances for the water systems.

9 Q. And did I ask you how long you were in that
10 position?

11 A. I don't think you did, but I think I said
12 six years in my previous answer.

13 Q. That's fine.

14 A. Sorry.

15 Q. That's okay. What is your college
16 education?

17 A. I have a bachelor of science degree from
18 University of North Dakota in environmental geology and
19 technology, and a master's degree in civil engineering
20 from the -- or excuse me, Utah State University.

21 Q. And what professional credentials do you
22 have?

23 A. I am registered as a professional engineer
24 with the State of Idaho and the State of Oregon. And
25 I'm registered as a professional geologist with the

1 State of Idaho.

2 Q. Okay. Did you prepare a memo discussing
3 predicted hydrologic response in Silver Creek and the
4 Little Wood Rivers?

5 A. Yes.

6 Q. Okay. I've just handed you a memo marked
7 IDWR Exhibit 2.

8 Is this that memo?

9 A. Yes.

10 Q. And why did you prepare this memo?

11 A. I prepared this in response to a request
12 for staff memoranda from the Director.

13 Q. Okay. Then I'm going to hand you a copy of
14 the Director's scheduling order. On page 5 of the
15 order, there is a mention of a correction to your staff
16 memo and an attached graph.

17 Do you recognize that correction?

18 A. Yes.

19 Q. And what is that correction?

20 A. In the original staff memo in Figure 14, I
21 pasted the incorrect graph in there. And the
22 correction is the corrected graph.

23 Q. Okay. Are there any other corrections to
24 your memo that we need to be aware of?

25 A. I think I also mentioned in here, in the

1 attachment, that the original memorandum said the well
2 logs were in Attachment A, and they're actually in
3 Attachment C. That was the other correction.

4 Q. Okay. Thank you.

5 So regarding the hydrogeology of the Wood
6 River Basins, let's focus on Silver Creek, what is the
7 connection between Silver Creek and its tributaries to
8 the aquifer system?

9 A. So Silver Creek and its tributaries, their
10 primary source of supply is the Wood River Valley
11 aquifer system. They do get some -- seasonally get
12 some smaller contributions of water from snowmelt
13 runoff or direct infiltration or precipitation, but
14 their headwaters is -- is in the aquifer and it is
15 discharged from the aquifer. They are directly
16 connected to the unconfined aquifer. The confined
17 aquifer, which is also part of the system, is connected
18 to the unconfined aquifer. And so for all practical
19 purposes, they're all connected to Silver Creek.

20 Q. And how does a low water year affect the
21 aquifer?

22 A. So there is a number of factors that
23 affect -- well, aquifer water level affects the amount
24 of discharge to Silver Creek, and there's a number of
25 factors that affect aquifer water levels. So there's

1 multiple sources of aquifer stress that affect water
2 level. Those include incidental recharge of surface
3 water applied in excess of crop water needs and canal
4 seepage. It includes natural recharge from tributary
5 underflow and the infiltration of precipitation. And
6 it includes groundwater withdrawals for irrigation and
7 also natural discharge directly from the aquifer
8 through evapotranspiration in wetlands and riparian
9 areas.

10 During a year with a low water supply, we
11 tend to have less recharge, both from natural recharge
12 and from canal seepage and incidental irrigation water,
13 plus we have the double whammy of tending to have
14 higher groundwater withdrawals for irrigation, and also
15 maybe potentially higher discharge from wetlands and ET
16 for a hot and dry year.

17 Q. All right. Let's talk about the
18 groundwater flow model.

19 What is the purpose of the model?

20 A. The primary purpose of the model is to
21 be -- serve as a tool to evaluate the interaction of
22 groundwater and surface water, and to that end to serve
23 as a tool for the conjunctive management and
24 conjunctive administration of water in the -- in the
25 model area.

1 Q. And what information do you get out of the
2 model?

3 A. Well, and again, the model is -- the
4 calibration of the model is optimized to look at the
5 interaction between groundwater and surface water. The
6 biggest advantages of the model are we can put -- you
7 know, we can put a large amount of available data into
8 the model and then be able to use the model to predict
9 and separate out the impacts of those various types of
10 aquifer stresses that I talked about previously.

11 So we could separate out the impacts of
12 groundwater pumping on streamflow from the impacts of
13 changes in incidental recharge from irrigation or
14 changes in natural recharge on the streamflow.

15 Q. And what is the uncertainty of the model?

16 A. Well, like all groundwater flow models, the
17 model is a simplification of the system, and there is
18 inherently uncertainty in the model predictions. It's
19 also not really possible to put a single number, as far
20 as a plus-or-minus error bar, on -- on the groundwater
21 flow model and all the predictions that it might make.

22 Allan Wylie did do uncertainty analysis for
23 the most recent version of the model, version 1.1, and
24 looked at the uncertainty associated with five specific
25 predictions. And those are discussed briefly in my

1 staff memo.

2 Q. And how does that general uncertainty
3 compare to other groundwater flow models?

4 A. I could compare it to the Eastern Snake
5 Plain Aquifer model. I just recently published an
6 uncertainty analysis for version 2.2 of the ESPA
7 aquifer model. The numeric uncertainty in the analysis
8 is lower for some predictions that Allan looked at and
9 higher for others. But Allan was also looking at a
10 simulated impact of a ten-month simulation and looking
11 at a prediction from that.

12 In the ESPA, the ESPA predictive
13 uncertainty analysis, we're looking at mostly
14 steady-state predictions, and then we also looked at
15 some that were a five-year simulation of the impacts of
16 a managed recharge.

17 So numerically the predictions in the ESPA
18 range -- the uncertainty ranged from very low to up to
19 plus or minus 9 percent. And with the five predictions
20 Allan looked at for this model, they ranged from very
21 low at plus or minus .5 percent to plus or minus
22 22 percent, but given the shorter time frame, that's
23 actually reasonably good for the model.

24 MR. RIGBY: I'm sorry, I didn't catch that.

25 Q. (BY MS. CARTER): He didn't catch your last

1 couple...

2 A. I said that it's reasonably good for the
3 short time frame of the simulation.

4 MR. RIGBY: Thank you. Sorry.

5 Q. (BY MS. CARTER): And would you say that
6 the Wood River model is the best available science?

7 A. Yes, I -- I said that in my staff memo, or
8 perhaps I quoted Allan Wylie stating that in the model
9 documentation for the report. Also, his uncertainty
10 analysis documents that it is a better tool than any
11 available analytical methods that we could apply to
12 make such a prediction.

13 And that's important because it
14 incorporates -- it incorporates -- doing a numerical
15 flow model allows you to incorporate a large number of
16 data, whereas if you use an analytical method, you're
17 doing more of a simplification and using a smaller
18 amount of data.

19 Q. So in terms of this proceeding, how did you
20 use the model?

21 A. I did two simulations of curtailment of
22 groundwater pumping, which would -- which is adjusting
23 the model stress or the aquifer stresses to -- or
24 adjusting the model input to ask the question of what
25 would have happened if there hadn't been any

1 groundwater pumping in a given area over a given time
2 frame. And I used 2002 -- the year 2002 as a baseline
3 dry year for these simulations.

4 Q. Okay. And why did you use 2002?

5 A. At the time that I started working on this,
6 we were still using the March 1 SWSI prediction. And
7 2002 was one of the analog years, the closest year to
8 the 50 percent exceedance at that time.

9 Q. Okay. Do you by chance know how that
10 compares to what is looking like a much drier year?

11 A. It is now looking like -- yeah, every SWSI
12 prediction that's come out since then, and there's been
13 an April one, a May one, and a June one, and it has
14 gotten -- the streamflow prediction at Hailey has
15 gotten worse every time. So we're looking at a drier
16 year than 2002 at this point, it's looking like.

17 Q. And how would that -- do you know how that
18 would affect the model runs, if you were to do them
19 again today?

20 A. I would expect that the -- the supplemental
21 water use -- supplemental groundwater use in the
22 Triangle would likely be higher than it was in 2002,
23 because for those users that do have surface water
24 supplies, they will likely run out of surface water
25 earlier in the season and -- or a lot of them will,

1 except for maybe the very most senior ones will run out
2 of water earlier in the season, which would mean
3 they'll pump more groundwater than they did in 2002,
4 most likely.

5 Q. So you mentioned that you ran two different
6 simulations.

7 What were they?

8 A. I did one simulation of curtailing
9 groundwater pumping over the entire model domain, and a
10 second one which simulated curtailment over a reduced
11 area, which includes most of the model area south of
12 Glendale Bridge.

13 Q. And why did you choose those two areas?

14 A. In the Director's request for staff
15 memoranda, I was asked to do model simulations for the
16 entire model domain and then to identify areas that had
17 minimal predicted influence on Silver Creek, and run
18 another model simulation that excluded those areas.

19 Q. And what did you learn from the curtailment
20 runs of the first area?

21 A. So the curtailment runs of the first area,
22 if we look at Attachment B of the staff memo, that
23 summarizes the results of the simulations that I did.

24 And just to summarize with respect to
25 Silver Creek, what I learned from the first simulation

1 is that there is a predicted significant increase in
2 streamflow in Silver Creek at the Sportsman's Access
3 gage if groundwater pumping is curtailed.

4 Q. And what did you learn from curtailment
5 runs of the second area?

6 A. So the curtailment run of the second area
7 also shows significant responses in increased
8 streamflow in Silver Creek if groundwater pumping is
9 curtailed, and shows that we could expect to realize
10 about 99 percent of the benefit to increased streamflow
11 in Silver Creek with that reduced area. So it shows
12 that the areas that are in the model domain but outside
13 of that reduced area that I ran in the second set of
14 simulations is indeed minimal.

15 Q. So how did the results of your curtailment
16 runs relate to the focus of this hearing?

17 A. Well, they give the predicted response at
18 Silver Creek to curtailing pumping.

19 MS. CARTER: Thank you.

20 I move to admit IDWR Exhibit 2 into the
21 record?

22 THE HEARING OFFICER: Mr. Rigby?

23 MR. RIGBY: No objection, your Honor.

24 THE HEARING OFFICER: Mr. Fletcher?

25 MR. FLETCHER: No.

1 THE HEARING OFFICER: Mr. Barker or Thompson?

2 MR. BARKER: No objection.

3 MR. THOMPSON: No objection.

4 THE HEARING OFFICER: Mr. Laski?

5 MR. LASKI: No objection.

6 THE HEARING OFFICER: Okay. And then group
7 three, Mr. Bromley or Lawrence?

8 MR. BROMLEY: No objection.

9 THE HEARING OFFICER: Mr. Simpson?

10 MR. SIMPSON: None.

11 THE HEARING OFFICER: And, Mr. O'Bannon, is that
12 correct? No objection.

13 Okay. Have I asked everybody now?

14 The document marked as IDWR Exhibit 2 is
15 received into evidence.

16 (IDWR Exhibit 2 received.)

17 MS. CARTER: And that is all the questions I
18 have for the witness, your Honor.

19 THE HEARING OFFICER: Okay. Thank you,
20 Ms. Carter.

21 Mr. Rigby or Mr. Fletcher.

22

23 DIRECT EXAMINATION

24 BY MR. RIGBY:

25 Q. Good morning, Ms. Sukow. Jerry Rigby for

1 the senior water -- surface water users known as the
2 Big Wood/Little Wood Surface Water -- excuse me, Big
3 Wood/Little Wood Water Users Association. It's a long
4 name.

5 Let me start first of all on -- asking
6 concerning the years that were modeled and used. You
7 indicated that in fact in your 2019 curtailment study
8 you addressed using the year 2007, and in 2021 you've
9 indicated 2002. And then Mr. Vincent just a moment ago
10 or a few minutes ago indicated 2004.

11 Is there any -- as a result of the
12 Exhibit No. 5, IDWR's Exhibit No. 5 that addresses the
13 current -- if you can look at that, the current
14 prediction.

15 I guess what I'm asking is, what year would
16 you, if you were modeling it now, what year would you
17 use?

18 A. Well, so out of the years that are closest
19 to the 50 percent exceedance now, you know, the
20 model -- the model simulation doesn't start -- the
21 model dataset doesn't start until January 1, 1995. So
22 we don't have 1992 or 1994 available to use as baseline
23 years. Based on looking at this now, I would probably
24 use 2001 or 2007.

25 Q. And why?

1 A. Just because they're closer to the
2 50 percent exceedance forecast.

3 Q. In your report -- obviously you indicated
4 the -- especially in the 2021 report, page 4,
5 paragraph 1, you address that during years of low water
6 supply there's a combination of factors. And obviously
7 some of those factors are precipitation itself. But I
8 want to obviously address the aquifer discharge to the
9 streams issue.

10 And I guess my question on that one is, you
11 indicated a few moments ago that this year, being a
12 drought year, that another factor that's added to and
13 exacerbated it is the additional pumping that's going
14 on.

15 Why is that?

16 A. Because a number of -- in the Triangle, a
17 large percentage of the irrigated area is mixed-source.
18 So they have both surface water and groundwater
19 supplies available to them to irrigate. A lot of those
20 are conditioned as supplemental, and they should be
21 using the surface water first if it's available. But
22 once the surface water runs out, they would
23 understandably turn to their groundwater and --
24 earlier, and then would likely pump more during the
25 irrigation season.

1 Q. And according to your modeling, would that
2 also then reduce the flows in the Silver Creek and
3 Little Wood Stream?

4 A. Yes, the additional groundwater pumping
5 would reduce aquifer head, and that would in turn
6 reduce discharge to Silver Creek and its tributaries.

7 Q. As to your report in 2021, page 16,
8 Figure 14, if you could turn to that, please. It's
9 titled "Volume of curtailed consumptive use simulated
10 in Sukow (2019)."

11 A. Yes. And that is the one that's corrected
12 in the schedule.

13 Q. Understood.

14 A. Okay.

15 Q. Were the values represented in this figure
16 used as the basis for your 2021 analysis of the '21
17 Basin 37 administrative proceeding?

18 A. I used 2002 as a baseline year, so the 2002
19 curtailed consumptive use that's shown in corrected
20 Figure 14 was used, except that I should note that this
21 is an annual volume that includes April through
22 October, and we only looked at -- you know, the
23 curtailment runs done in the -- done for this analysis
24 started May 1, June 1, July 1, August 1. So the
25 volumes are lower than the ones that started in April 1

1 in Figure 14, or corrected Figure 14.

2 Q. So I'm just trying to determine generally
3 how these values were established.

4 Is your explanation part of what you just
5 gave?

6 A. How which values were established?

7 Q. The values represented in that figure, in
8 Figure 14?

9 A. These values in Figure 14 were established
10 in the model simulations done for the two -- my 2019
11 curtailment scenario report.

12 Q. So the value for Figure 14 for 2002 appears
13 to be approximately 45,000 acre-feet for the entire
14 domain.

15 Would you agree that that still is
16 applicable?

17 A. Well, that's -- that's the original
18 Figure 14, which includes the exempt domestic. So it's
19 lower in the corrected Figure 14. It's, I believe,
20 closer to 40,000 acre-feet.

21 Q. So it's gone down?

22 A. Well, again, the Figure 14 in the original
23 memo was -- I put the wrong graph in there. That graph
24 includes -- it says its "Volume of curtailed
25 consumptive use," but I put the wrong graph in. And

1 that includes consumptive use by exempt domestic water
2 users and some groundwater use that's already mitigated
3 by nonuse of surface water and already managed in
4 priority with the surface water.

5 So the corrected Figure 14 is the actual
6 volume of curtailed consumptive use that was simulated
7 in 2019 and would have been simulated on a monthly
8 basis in this simulation, because I also did not -- I
9 also did not include the exempt domestic or things that
10 were already managed in priority.

11 Q. As a result of any current further drought,
12 would that impact that further?

13 A. Well, again, if surface water supplies are
14 lower this summer than they were in 2002, which it
15 looks like they're going to be, you could arguably
16 expect more consumptive use of groundwater if pumping
17 continues throughout the irrigation season.

18 Q. And therefore, wouldn't you agree that the
19 groundwater pumping in the potential area of
20 curtailment does reduce streamflow discharge in the
21 Little Wood/Silver Creek drainage, even though your
22 numbers may have been modified?

23 A. Yes, I agree, whatever -- whatever volume
24 of groundwater pumping there is in a given year will
25 reduce the streamflow, yeah, to some extent.

1 Q. And according to your curtailment -- and
2 you testified a curtailment would significantly
3 increase -- I think your term was significantly
4 increase the volume or the flow?

5 A. In Silver Creek, yes.

6 Q. In Silver Creek, sorry.

7 Back to your memo on page 22, last
8 sentence. This sentence seems to imply that the
9 consumptive use in the area of curtailment to the area
10 south of the Glendale Bridge represents 70 percent of
11 the consumptive use for the entire domain.

12 Can you explain that, or do you agree with
13 that, continue to agree to that?

14 A. Yes. Can you tell me where you're --

15 Q. I'm on page --

16 A. Oh, bottom of the page.

17 Q. Sorry. Last sentence, page 22.

18 A. Yes. So of the consumptive use, the
19 groundwater water use that we estimated with the
20 model -- and this is just from looking at the volume
21 curtailed in Attachment B for the two different runs,
22 so the volume curtailed in the area south of Glendale
23 Bridge is 70 percent of the volume curtailed in the
24 model runs that I did for the entire model domain.

25 Q. So if it's 70 percent -- and of course, I

1 was doing the math for 45,000. 70 percent of 45,000
2 would equate to about 31,500, and of course that would
3 be lower if you go with the 40,000 as opposed to the
4 45. However, the lower table on B1 of your 2021 staff
5 memo shows a curtailed consumptive use volume of 22,611
6 for May 1.

7 And so I'm trying to reconcile at that time
8 what would have been the 8,000 almost 9,000 acre-foot
9 difference.

10 A. And the difference, again, is that the
11 tables in Attachment B for the May 1 run show the
12 volume that was curtailed from May 1 to September 30th.
13 The volumes shown in corrected Figure 14 is a volume
14 curtailed from April 1 to October 31st. So it's a
15 longer time period. And they had a -- there are some
16 groundwater users that don't have any surface water
17 that, you know, all their irrigation pumping is from
18 groundwater.

19 So there is -- if there is any irrigation
20 need in April or October, they -- they would be pumping
21 groundwater during that time. So it's just -- the
22 difference is just the time frame. There's more months
23 included in Figure 14 than in Attachment B.

24 Q. Okay. So in your mind, then, there is no
25 inconsistency there, it's just, as your explanation,

1 it's a different time frame, as opposed to -- with the
2 two?

3 A. That's correct.

4 Q. Okay. Referring again to the Sukow staff
5 memo, page B-3 and B-4.

6 Would you agree that if the curtailed
7 consumptive use volume for your analysis for 2021
8 Basin 37 administrative proceeding were higher than
9 22,611 -- and of course, that's the number that has now
10 been modified -- then your predicted responses for
11 Silver Creek would be proportionally higher? So in
12 other words, take the number, your new adjusted number,
13 and say that -- I mean would it be proportionally
14 higher, regardless of your concluding number?

15 A. If the -- if the volume of consumptive use
16 of groundwater is higher than what was estimated in
17 this model run, then the response at Silver Creek would
18 be higher than the response predicted by this model
19 run, yes.

20 Q. And response in what way? Higher or lower
21 in volume? Excuse me. In stream.

22 A. If the -- if the consumptive use were
23 higher, then the predicted response to curtailing that
24 consumptive use would also be higher.

25 Q. Very good. Thank you.

1 In establishing the volume for consumptive
2 use for the analysis for 2021 Basin 37 administrative
3 proceeding, did you consider the volume of historic
4 withdrawals for the 2021 irrigation season, historic
5 withdrawals, the volume of historic withdrawals?

6 A. I don't understand that question.

7 Q. I guess let me just ask you, then, what
8 kind of -- what did you use as your source to determine
9 the consumptive use?

10 A. Consumptive use is -- in the model
11 consumptive use was calculated from irrigation demand,
12 which was calculated from evapotranspiration and
13 precipitation data, irrigated lands delineations, what
14 water rights show about water source; if the water
15 source was only groundwater, then the calculation's
16 pretty simple. If the water source is only surface
17 water, then obviously there's no groundwater
18 consumptive use.

19 If there's mixed-source, then we had to
20 take into account surface water availability. And we
21 used Water District diversion records for the various
22 canal service areas to determine how much surface water
23 was available, and then we had to make estimates of
24 canal seepage and the irrigation efficiency for the
25 surface water. And then we would have a residual

1 irrigation demand that was left over that needed to be
2 provided from the groundwater.

3 Now, in some cases we did have some
4 groundwater pumping data, but for most of the Triangle
5 for most of the model calibration period we had very
6 little groundwater pumping data.

7 Q. Since the creation of this model, have you
8 seen anything that would argue to you or imply that
9 perhaps your percentage of consumptive use is either
10 too high or too low?

11 A. I think it's a little bit difficult to
12 compare because the years that had reasonably --
13 appeared to have reasonably complete pumping data since
14 the Water District started comparing pumping are 2016
15 through -- well, during the Advisory Committee I looked
16 at 2016 through 2019, and those compared reasonably
17 well to our consumptive use estimates, with the
18 exception of 2012 through 2014, which did appear to
19 look a little bit high compared to those pumping data.
20 But at the same time those pumping data, I believe, are
21 from -- are not from the drier end of the years that
22 we're looking at, you know, so they may not -- the
23 pumping data that we've seen so far may not be that
24 comparable to what we're looking at for this year.

25 Q. I believe that you've testified that --

1 well, let me ask you this.

2 In your analysis of 2021 Basin 37
3 administrative proceeding in determining that
4 consumptive use, did you consider the volume historical
5 withdrawals for 2020 irrigation season?

6 A. No.

7 Q. Okay. And why?

8 A. I don't -- I didn't have that data, and
9 also I don't have -- in order to do the model
10 simulation, I need to go back to a year where we've
11 developed the entire dataset, because we don't use this
12 model in what we call superposition mode, which means
13 we have to have data for all the other recharge
14 components for this -- for a given time period to be
15 able to run that model. So that's why we're running it
16 with a baseline year that was included in the model
17 simulation period is because we have the entire dataset
18 for everything that's going on in the aquifer for that
19 year. We don't have that for 2020.

20 Q. Can you describe how you calculated return
21 flows, how they're -- excuse me, how they're calculated
22 within the model itself, if you know?

23 A. Maybe you should define for me what you
24 mean by "return flow," because that means different
25 things to different people.

1 Q. Well, within the model is return flows
2 determined or a calculation that's entered into the
3 model itself?

4 A. Are we talking about a return flow to the
5 stream or a return flow to the aquifer?

6 Q. Return flow to the stream. I apologize.

7 A. A return flow to the stream. Where we had
8 known return flows to the stream, they are accounted
9 for in the calculation of aquifer recharge and
10 discharge. The return flows that we have records of
11 are wastewater treatment plant discharge to the river,
12 the fish hatcheries discharge to the creek. I think
13 there may have been a couple others, but there aren't
14 very many known return flows to the streams.

15 Q. So same question, then, as to the aquifer,
16 which obviously the issue then becomes when it gets
17 into the stream.

18 A. Well, but what some people call return flow
19 to the aquifer is what I call the net aquifer recharge,
20 so --

21 Q. Understood.

22 A. -- we're calculating that from the same --
23 all the same data we used to calculate the pumping
24 withdrawals, you know, we're also using those surface
25 water diversions, the ET, the precipitation, all that

1 data to calculate recharge to the aquifer.

2 Q. And again, that -- how is it being
3 computed? Just by those particular items that you've
4 addressed?

5 A. How is what being computed?

6 Q. The recharge to the aquifer.

7 A. So recharge to the aquifer is computed
8 by -- well, there's natural recharge from tributary
9 underflow; we had a method for computing that. There's
10 infiltration of precipitation; we had a method for
11 computing that. There's the canal seepage and
12 incidental recharge from surface water; there's a
13 method of computing that.

14 There is -- because it's a three-layer
15 model, we do -- we do model pumping and then model
16 some -- some portion of that is recharge to the
17 aquifer, and then the remaining portion is the
18 consumptive use we look at here.

19 And we have wetlands discharge -- wetland
20 and riparian area discharge that is calculated again
21 from ET precipitation data, so...

22 Q. Very good. Again, your Sukow staff memo
23 2021, page 17, paragraph 2. This paragraph indicates
24 that the effects of the curtailment were simulated with
25 the model for a period of approximately 12 years.

1 Do you have those 12 years? Were they
2 consecutive? Were they -- what 12 years were used?

3 A. So the years I had the dataset for. So we
4 started in 2002. The dataset for the model goes
5 through the end of December 2014, so that's the
6 approximately 12 years that I'm talking about.

7 MR. RIGBY: Very good.

8 I believe -- I think that's all the
9 questions I have. Oh, wait a minute. No. That's
10 good. Thanks.

11 MR. FLETCHER: I don't have any questions.

12 THE HEARING OFFICER: No questions,
13 Mr. Fletcher?

14 All right. Mr. Barker or Mr. Thompson?

15 MR. BARKER: Thank you, Mr. Director.

16

17 CROSS-EXAMINATION

18 BY MR. BARKER:

19 Q. Albert Barker on behalf of the South Valley
20 Ground Water District.

21 Okay if I call you "Jennifer"?

22 A. It's okay.

23 Q. Okay. Jennifer, when you were -- received
24 your assignment in this project, was one of your
25 assignments to determine what the average annual rate

1 of recharge of the aquifer was?

2 A. No.

3 Q. So nothing in what you did here today is a
4 determination of whether or not pumping in the Triangle
5 exceeds the average annual rate of recharge?

6 A. No.

7 Q. And the water supply for the Triangle, I
8 think you mentioned primary water supply -- sorry,
9 water supply for Silver Creek, you said the primary
10 water supply was from the Wood River Aquifer; is that
11 right?

12 A. Yes.

13 Q. So what's the water supply for the Wood
14 River Aquifer?

15 A. Well, ultimately snowpack in the Wood River
16 Basin.

17 Q. Okay. So how does the snowpack in the Wood
18 River Basin get into the aquifer under the Triangle?

19 A. There is underflow from the aquifer north
20 of the Triangle which comes from tributary underflow
21 and --

22 Q. So can I just stop you right there.

23 Is that something that's measured in the
24 model?

25 A. It's something that's computed in the

1 model.

2 Q. Sorry. Computed. All right. And is there
3 a percentage of contribution to that -- of that
4 tributary underflow to the Triangle aquifer?

5 A. I have not -- I have not calculated that in
6 the model.

7 Q. Okay.

8 A. Or extracted that data from the model.

9 Q. Okay. And so what other sources of water,
10 then, are there for the aquifer in the Triangle?

11 A. There is seepage of streamflow from the Big
12 Wood River, there is incidental recharge associated
13 with surface water diversions from the Big Wood River
14 to the Triangle, and there is direct infiltration of
15 snowmelt and precipitation.

16 Q. Okay. And is canal seepage part of the
17 source of water supply for the groundwater in the
18 Triangle?

19 A. Yes, that would be part of what I'm calling
20 the incidental recharge associated with the surface
21 water diversions.

22 Q. And we talked about this, I think earlier
23 in your deposition, but is there a calculation of how
24 much water gets into the Wood River Aquifer from canal
25 seepage in the Triangle?

1 A. I'm sorry. Can you ask that again?

2 Q. Is there a calculation for output of the
3 model that will tell you how much water supply to the
4 aquifer there is from canal seepage in the Triangle?

5 A. So there is a calculation for each stress
6 period in the model of how much of the surface water
7 diverted is -- is put into the -- yes, put into aquifer
8 recharge as canal seepage.

9 Q. And you said "stress period"; is that the
10 word you used --

11 A. Yes.

12 Q. -- the phrase you used?

13 A. Yes.

14 Q. Okay. What does that mean?

15 A. A stress period is just a time period in
16 the model. In the case of the Wood River Valley Model,
17 it's a month.

18 Q. And do you know today what those -- what
19 that contribution is?

20 A. It's in the data files, but I have not
21 extracted that or summarized it.

22 Q. So there was a little bit of a conversation
23 that you had with Mr. Rigby about assuming that there
24 would be additional pumping in the Triangle in 2021
25 compared to your model run year of 2020; right?

1 A. I did not do a model run of 2020.

2 Q. I'm sorry. 2000 -- I am sorry. I had my
3 numbers transposed there. I'm a little dyslexic.

4 A. Yes.

5 Q. 2002, not 2020.

6 A. Yes.

7 Q. Okay. And so you said it might be
8 something you could assume that there would be more
9 pumping this year because the surface water wouldn't be
10 on as long; is that right?

11 A. Yes.

12 Q. Do you know if pumping is taking place
13 right now?

14 A. I do not.

15 Q. Do you have any understanding of what that
16 additional amount of pumping might be?

17 A. For the -- if we go back to look at 2002
18 where we have the ET data and -- and the -- we could go
19 back at that and look and say, well, if they ran out of
20 surface water earlier to meet that same routine, they
21 would need X amount of additional pumping.

22 Q. And that's not something that you've done?

23 A. That is not something that I did.

24 Q. And so I'm going to use the word
25 "speculate."

1 But you're just speculating that there may
2 be more pumping this year than there was in 2002?

3 A. Yes. I mean there -- they could -- they
4 could voluntarily choose to reduce their ET and then
5 not have additional pumping. I mean that could happen.

6 Q. So do you know what changes have been made
7 in irrigation practices in the Triangle between 2002
8 and 2021?

9 A. No.

10 Q. And so have there been some that could have
11 changed the amount of pumping that would be extracted
12 in 2021 compared to 2002?

13 A. Well, if they increased their efficiency,
14 that might change the amount of pumping, but it would
15 not reduce the amount of consumptive use. So the
16 impact would therefore be the same.

17 Q. Okay. So what consumptive use did you
18 presume in 2002?

19 A. The consumptive use was calculated from the
20 actual METRIC evapotranspiration data and precipitation
21 data.

22 Q. And that was -- you used an 85 percent
23 efficiency?

24 A. No. The 85 percent efficiency was not used
25 in the model simulations.

1 Q. Okay. So is there a figure that could be
2 back-calculated or that has been back-calculated to
3 show what the efficiency was in 2002?

4 A. The only efficiency that's used is the
5 surface water efficiency that was used to calculate the
6 groundwater demand. And then the irrigate -- the
7 irrigation efficiency for that, each entity, was also
8 applied to the groundwater.

9 Q. Okay. And so what's an irrigation entity
10 in the model?

11 A. It's an area over which diversions and
12 consumptive use are aggravated.

13 Q. And is it -- for example, there's a
14 District 45, Wood River Valley Irrigation District 45
15 irrigation district, is there a consumptive use
16 characterized over -- or sorry, used for that entire
17 irrigation district?

18 A. So if -- yes. For areas that have one
19 diversion heading that serves an entire area, we only
20 have the data for what they divert from the river, so
21 we have to aggregate over that area.

22 Q. And do you know what the surface
23 efficiencies were calculated at for the Wood River
24 Valley Irrigation District 45?

25 A. Not off the top of my head, no.

1 Q. Do you know what the surface-water
2 irrigation efficiencies were generally in the model?

3 A. They generally ranged from -- the
4 calibration bounds were 50 percent to 90 percent, I
5 believe.

6 Q. All right. And based upon what factors
7 were they calibrated to those different percentages?

8 A. They're -- the calibration can come up with
9 any number in that allowable range, and it's trying to
10 make a best fit to all of the observations that it's
11 trying to match. So those would be aquifer head and
12 reach gains in the streams.

13 Q. Okay. So I'm sorry, I may have lost you.
14 I thought you were calculating efficiencies for the
15 surface water deliveries.

16 A. Yes.

17 Q. So what does aquifer head have to do with
18 the efficiencies of the surface water deliveries?

19 A. So the efficiency of the surface water
20 deliveries is used to calculate the infiltration of --
21 the infiltration of the recharge of excess surface
22 water delivered to irrigation fields, and it's used to
23 calculate the groundwater demand and the pumping. So
24 what the model sees are those aquifer stresses that we
25 calculate from that surface water efficiency. It

1 applies those stresses within the model, and then tries
2 to match, as best it can, the aquifer head observations
3 and the stream reach gain observations.

4 And it's doing -- during calibration doing
5 an iterative process, and it goes back, and trial and
6 error adjusts that range of efficiency and determines
7 whether or not it has an effect. And if it does, it
8 will adjust it accordingly.

9 Q. And so this model calibration you're
10 talking about, that is -- that was done with data
11 between 2010 and 2014; right?

12 A. No, that's not correct.

13 Q. The update for 1.1 wasn't done?

14 A. 1.1 included data from January of 1995
15 through December of 2014.

16 Q. Okay. And the initial model stopped at
17 2010?

18 A. Correct.

19 Q. So 1.1 added information between 2010 and
20 2014?

21 A. That's correct.

22 Q. And it's true that there's no significant
23 information in this model calibration about the amount
24 of pumping that took place in the Triangle between
25 2000 -- or between 1995 and 2014, no actual data?

1 A. Well, I wouldn't say there's no
2 information. I mean there's -- there's some measured
3 data, first off. We did have measured data for about,
4 over the entire model domain, I think about 20 percent
5 of the groundwater diversions.

6 Q. I'm talking about the diversions in the
7 Triangle.

8 A. And in the Triangle we have measured
9 diversions for some of the wells as well.

10 Q. You have very few measured diversions for
11 wells in the Triangle in the model calibration?

12 A. That -- yes, but I wouldn't say there's no
13 information.

14 Q. I didn't say --

15 A. We have the information from the
16 evapotranspiration and precipitation. We know there
17 was irrigation demand. We know there's some limit on
18 the surface water supply. So there is some
19 information.

20 Q. I don't think I said "no information." I
21 said there's no measured pumping levels, pumping from
22 the pumps in the Triangle, with the exception of a very
23 small number of wells for that entire model calibration
24 period?

25 A. With the exception of the exchange wells

1 and a few others, there are not measured -- there are
2 not measured pumping volumes for most of the
3 calibration.

4 Q. And those exchange wells and a few others,
5 what's the total amount of volume of pumping that you
6 have for those?

7 A. I -- I'm not sure off the top of my head.
8 Some of the exchange wells are fairly large, so it's
9 not --

10 Q. But compared to the overall amount of
11 pumping in the Triangle.

12 A. It's relatively small.

13 Q. Thank you.

14 So do you have water-level readings, actual
15 water-level readings from groundwater levels in the
16 Triangle that is included in the model calibration?

17 A. Yes.

18 Q. Okay. Where did you get those?

19 A. Some of them are from U.S. Geological
20 Survey, some of them were measured by IDWR staff, some
21 were measured by the Nature Conservancy.

22 And sorry, did you just ask in the
23 Triangle?

24 Q. In the Triangle.

25 A. Yeah.

1 Q. Yeah. So in the Triangle isn't it the case
2 that you -- that the modelers would like to see
3 significantly more water-level data in order to confirm
4 the model?

5 A. That was the case as of the 2010
6 calibration. But one of the purposes of doing the
7 recalibration that's in version 1.1 was to include data
8 collected between 2011 and 2014, which did include a
9 significant expansion of the IDWR water-level
10 monitoring network.

11 Q. So but isn't it true that one of the
12 recommendations of the 1.1 model run was to increase
13 the amount of information for water-level data and
14 pumping data in the Triangle?

15 A. I believe the recommendation was to
16 continue the level of monitoring that had been -- the
17 increased level of monitoring that had been expanded
18 prior to the calibration of 1.1.

19 Q. Okay. And that would be in the model
20 report?

21 A. Yes.

22 Q. And as we discussed before, I think the
23 model report recognized that there were significant
24 data gaps in the information available in the Triangle?

25 A. I believe we discussed that was the wording

1 Allan used in his report and that I disagree with that
2 characterization.

3 Q. You disagree with that characterization?

4 A. [No audible response.]

5 Q. Today?

6 A. I think I disagreed with it in my
7 deposition as well.

8 Q. Did you disagree with Allan at the time he
9 wrote his report in 2019?

10 A. I don't recall that I focused very much on
11 his wording. I agree with the recommendations to
12 continue that monitoring, and we have been continuing
13 that monitoring.

14 Q. So the answer is no, you did not tell Allan
15 Wylie that there were not significant data gaps in the
16 1.1 model?

17 A. I honestly don't recall. That was a couple
18 years ago.

19 Q. Okay. And there's nothing in his report
20 that suggests that you did tell him that; right?

21 A. No.

22 Q. And on page 2 of your memo, staff report --
23 you got that? You say here that "Wylie" -- in the
24 second full paragraph about two-thirds of the way down,
25 "Wylie concluded there had been a long-term groundwater

1 level decline since '68 but water-level trends appear
2 to be stabilized since the formation of the BWRGWMA in
3 1991."

4 So would you agree that, that the
5 water-level trends have stabilized since 1991?

6 A. I agree that the overall trend has
7 stabilized since 1991.

8 Q. Okay. And that is because of what? To
9 what do you attribute that stabilization?

10 A. One possibility is that it's because the
11 groundwater management area formation basically put a
12 stop to approval of new groundwater uses for
13 consumptive use. So groundwater pumping has continued
14 but at a similar level averaged year over year. I mean
15 we expect that it's higher in low water supply years
16 and less in good water supply years for the surface
17 water. But overall it averages out to be about the
18 same, whereas prior to 1991 consumptive use of
19 groundwater would have been -- or was, you know,
20 increasing as new water rights continued to be
21 approved.

22 Q. And as water rights -- new water rights
23 stopped being approved, except -- well, let me back up
24 a step.

25 Is it true that there is no new water

1 rights for groundwater since 1991?

2 A. My understanding is that there should not
3 be new consumptive use of groundwater. So there might
4 be new water rights for nonconsumptive uses or new
5 water rights if they are mitigated somehow.

6 Q. Okay. So how does -- how do you know as a
7 modeler whether those new rights have been mitigated?

8 A. Well, that's a -- that's a water right
9 condition.

10 Q. It doesn't factor into your calculation --
11 your running of the model, whether or not those new
12 rights are adequately mitigated or not?

13 A. I don't think that's really -- I mean it --
14 in the model it would be -- it would be reflected in
15 the recorded surface water diversions that we use in
16 the model. But I don't need to know about it directly,
17 because I'm using the diversion -- surface water
18 diversion data.

19 Q. And I think you said that some -- when we
20 talked last at your deposition, you didn't know whether
21 or not the source of the mitigation water was from Big
22 Wood or from Silver Creek for these new wells?

23 A. I -- I'm not sure. I'd have to go back and
24 look at the data.

25 Q. And so to the extent that there was

1 mitigation from the Big Wood River, that would -- what
2 effect would that have on the groundwater in the
3 Triangle, if you mitigated from a right -- for a right
4 by using surface water out of -- or by not using
5 surface water in the Big Wood and pumping out of the
6 ground, what effect would that have on the groundwater?

7 A. Well, I mean the idea with water rights
8 that are able to be mitigated that way is that the well
9 is so close to the river that its -- its -- that its
10 depletions are actually coming directly from the river
11 within a short period of time.

12 Q. And --

13 A. And so really in the scheme of the -- you
14 know, the regional aquifer, there's not -- there
15 shouldn't be an impact on the aquifer, basically.

16 Q. And you didn't analyze the wells with
17 mitigation to determine if that was in fact the case?

18 A. I did not personally do that, no.

19 Q. On page 4 of your staff report you discuss
20 these four wells that you use to compare groundwater
21 trends with Silver Creek trends.

22 And I think you identified that there were
23 two of them that were of primary interest to you in
24 trying to determine that correlation; right?

25 A. I -- I determined there were two of them

1 that had sufficient records of measurement between 1995
2 and 2014, which is the same time period we have the
3 reach gains calculated for the model dataset.

4 Q. So there's only four wells in the entire
5 Triangle that have data that goes back to 1995?

6 A. Well, there may be some others that have a
7 small number of data points that -- that go back that
8 far. I'm not sure.

9 Q. And then of the four, you discarded two of
10 them, the Stalker Creek and the Picabo wells, because
11 there was insufficient data between '95 and 2012, it
12 looks like; right?

13 A. Well, I didn't do the correlation with
14 them.

15 Q. And you didn't do the correlation with them
16 because?

17 A. Because there's not a -- I didn't think
18 there were enough records of measurement during the
19 same time period as I had in the Silver Creek reach
20 gain.

21 Q. Okay. And then you did a correlation
22 between groundwater levels in those two wells.

23 If I look at Silver Creek on Figure 9 on
24 page 9, that's your R-squared values --

25 A. Yes.

1 Q. -- right?

2 And so explain to me what the R-squared
3 value of .64 for this -- which well is the one in
4 purple. Is that the Stalker Creek well? No, that's
5 the Baseline well, right, the unconfined aquifer well?

6 A. It's the -- yeah, that's the Baseline well.

7 Q. Okay. And then the other well, that's over
8 by Willow Creek?

9 A. The other well is the Heart Rock Ranch
10 well.

11 Q. Okay. I want to ask this question now, and
12 I'm going to follow up with this other topic a little
13 later, but did you have do a response function analysis
14 on the Heart Rock Ranch well?

15 A. Yes, I did response functions for all of
16 the model cells that had irrigation PODs in them. I
17 did points of diversions in them.

18 Q. Okay. Do you remember what the response
19 function was for the Heart Rock Ranch well?

20 A. I believe it was, for the confined aquifer
21 represented by layer three, I believe it was between 20
22 and 30 percent, somewhere in there.

23 Q. 20 and 30 percent?

24 A. Yeah. And that's the amount that accrues
25 to Silver Creek between May 1 and September 30th. So

1 there would be additional water that would accrue to
2 Silver Creek later in time.

3 Q. So Mr. Vincent testified today that the
4 streamflows response function were at .8 between the
5 Hailey gage readings and the Silver Creek readings at
6 Sportsman's.

7 And that's a higher confidence level or a
8 higher correlation than what you've got in these two
9 well numbers; right?

10 A. Well, Sean didn't testify about response
11 functions.

12 Q. I'm not asking you about response
13 functions.

14 A. I thought you said "response functions."
15 Sorry.

16 Q. I'm asking you about the R-squared values.
17 He said that he did a correlation between the flows at
18 Hailey --

19 A. Right.

20 Q. -- and the discharge at Silver Creek.

21 A. Yes.

22 Q. And you did the same thing. You did an
23 R-squared value between the depth to water in these two
24 wells?

25 A. Yes.

1 Q. He found a higher correlation between the
2 flows at Hailey than you found in these two wells;
3 right?

4 A. That may be true.

5 Q. And is there a reason for that?

6 A. Well --

7 Q. If -- go ahead.

8 A. Discharge in Silver Creek is related to
9 aquifer water levels. It's also related to the
10 discharge in Hailey. It's all related.

11 Q. And did you do -- attempt a correlation
12 between the deliveries at the 45 or the Baseline canals
13 and the flows at Silver Creek?

14 A. There are a number of irrigation diversions
15 in the Triangle. There's no reason I would have
16 focused on one particular diversion, so no.

17 Q. No. Even though the 45 is by far the
18 largest in the Triangle?

19 A. Well, it's represented in the -- the
20 diversions in the District 45 and all of the other
21 surface water diversions are represented in the model.
22 So in the model you're incorporating all of that data,
23 not just the District 45. So there's no reason to look
24 at District 45 in the model.

25 Q. So is it true that the groundwater levels

1 that you've got from these two wells are represented in
2 the model?

3 A. Yes, they are.

4 Q. Okay. So it's important to represent
5 those -- that correlation here, but not the other
6 correlations that I just discussed, the 45 deliveries
7 and the Hailey gage deliveries?

8 A. That was the decision I made when I wrote
9 the memo, yes.

10 Q. And you decided not to include other
11 correlations but just these groundwater levels?

12 A. I did not consider doing any other
13 correlations.

14 Q. So turn over to page 15 of your report.
15 And you addressed this a little bit with Ms. Carter
16 earlier in your testimony, at the beginning of your
17 testimony, about how there's uncertainty in all
18 groundwater model predictions. And you said here in
19 your memo that you have predictive uncertainty of .054
20 [sic] to plus or minus 22 percent in the target reach.

21 So the .54 percent uncertainty represents
22 what kind of information?

23 A. I -- can you rephrase that? I'm not sure
24 what you're asking.

25 Q. So what does .54 percent uncertainty mean

1 in respect --

2 A. It means that a 95 percent confidence --
3 that the uncertainty analysis that Allan did indicates
4 that a 95 percent confidence interval the prediction
5 could be .54 percent higher or lower than the predicted
6 value.

7 Q. Okay. And this prediction is at a
8 location, your memo says, north of Hailey; right?

9 A. Yes.

10 Q. And you -- can you explain why that
11 uncertainty at the area north of Hailey is less than a
12 percent?

13 A. The predictive uncertainty at the location
14 north of Hailey -- and the target reach there is the
15 Big Wood River above Hailey is inherently lower to
16 begin with because of the geometry of the aquifer and
17 the -- it's a relatively narrow valley at that point.
18 And the location of the cell we applied the stress in
19 is fairly close to the river, and there aren't other
20 outlets for the water very -- in close proximity to
21 that -- the location we applied the stress.

22 Q. Okay. And then there are three locations
23 in the Triangle south of Bellevue that were included in
24 this uncertainty analysis?

25 A. That's correct.

1 Q. And you got between 15-and-a-half plus or
2 minus to 22-and-a-half plus or minus uncertainty at
3 those locations.

4 So the uncertainty percentages, they mean
5 it's uncertain as to where the water goes, how long it
6 takes to get there, and how much? Does uncertainty
7 bring in all those factors?

8 A. Yes.

9 Q. Okay. And so it's higher in the area south
10 of Bellevue.

11 Why is that?

12 A. Again, because of the geometry of the
13 aquifer and the outlets for water storage, so the --
14 the uncertainty based on that is higher to begin with
15 than it is in the narrow valley to the north. So in
16 other words, as Allan would put it, if you were doing
17 an analytical solution, your analytical solution in the
18 Triangle would have a much higher uncertainty than your
19 analytical solution in the narrow valley to the north.

20 And even though doing the numerical model
21 allows you to lower that uncertainty to something less
22 than what you would have with an analytical solution,
23 it still is, you know, likely going to be higher in the
24 Triangle no matter how much data you're able to put
25 into the model because of that geometry of the system.

1 Q. Is there something in your staff memo where
2 you recommend how to deal with this uncertainty?

3 A. No.

4 Q. Does the Department have any guidelines on
5 how it should deal with model uncertainty?

6 A. Not -- not specific guidelines. There have
7 been previous -- previous administrative proceedings
8 involving -- involving the ESPA model that have dealt
9 with that subject.

10 Q. Yeah. I thought you said -- and maybe it's
11 here in your memo. But I thought you said that as
12 we -- that this uncertainty prediction for the location
13 south of Bellevue was 22 percent, but it would be
14 higher in -- in looking at the three-month time period
15 you're looking at here in this curtailment run than it
16 would be for the ten-month period that Allan Wylie ran
17 it for his uncertainty analysis; is that right?

18 A. I said that it may be higher.

19 Q. And is there any way to -- for you to know
20 how much higher?

21 A. We would have to do another uncertainty
22 analysis specific to the prediction we're looking at
23 here, and unfortunately that's -- it's not something
24 we're able to do in the limited time frame that we have
25 for this proceeding.

1 Q. So how long would it take you to do that
2 uncertainty analysis for a shortened period of time,
3 given the fact you've already got an uncertainty
4 analysis for a ten-month period?

5 A. I -- I'm not sure.

6 Q. Is that something you could do?

7 A. If given enough time, yes.

8 Q. On page 16 of your memo, you're referring
9 here to the curtailments in 2007 and 2012 simulation.

10 But that's for that curtailment over the
11 entire model period from '99 to 2014?

12 A. I'm sorry. Can you ask that again?

13 Q. Yeah. That was a terrible question.

14 So the curtailment scenario you ran in 2019
15 was for that entire model period of '99 to 2014?

16 A. I did three simulations --

17 Q. Okay.

18 A. -- in the 2019 report. That was one of
19 them.

20 Q. Okay. And then the other two were what?

21 A. The effects of curtailing groundwater use
22 for a single irrigation season during the water year of
23 2007, and then also a single irrigation season during
24 2012.

25 Q. Okay. And so what was the -- what was the

1 different outcomes of those three model simulations?

2 A. So the continuous curtailment simulation
3 from 1995 through 2014 shows the effects of -- the
4 cumulative effects of groundwater use year to year. So
5 it shows, you know, if you curtail for one year, you
6 have some -- some water still remaining in aquifer
7 storage at the beginning of next irrigation season. So
8 when you curtail the next irrigation season, you're
9 building from a little bit higher baseline, and it
10 creates a cumulative effect.

11 And looking at the 1995 to 2014, it shows
12 you -- it gives you a prediction of what that
13 cumulative effect is and how much impact that has.
14 Looking at just a single year shows you what the
15 response would be if you just, you know, start now and
16 go forward for one year.

17 Q. And so if you have a 2017 water year,
18 that's going to skew the analysis, because it's such a
19 big water year, of the long-term effects?

20 A. Well, and that's another thing the 1995
21 through 2014 simulation can help you look at. We don't
22 have 2017 in that dataset, but we did have other very
23 wet water years in that dataset.

24 So for example, on the SWSI 1995 had a June
25 through September flow that was greater than 2017, and

1 that is in the model simulation. And then '97 -- 1997
2 and 1998 and 2011, for example, are also wet years.
3 And yes, you will have different -- different predicted
4 impacts in those years than in the dry years.

5 Q. So when you did your task to compare
6 curtailment runs in 20 -- sorry, curtailment runs for
7 2021 in this proceeding, you chose 2002 as your
8 comparable year; right?

9 A. That's what I used as a baseline year.

10 Q. Okay. And then what you found is you did
11 curtailments for four different time steps, May 1,
12 June 1, July 1, and August 1?

13 A. Four different starting dates for the
14 curtailment, yes.

15 Q. Okay. And those time steps are done on a
16 monthly basis; right?

17 A. Well --

18 Q. So let me ask the question better.

19 A. Okay.

20 Q. Or try to ask the question better.

21 So the model would give you an output as of
22 the end of the month of May if you started on May 1?

23 A. Well, the model will give you whatever
24 output you ask it for, but I like -- I collected the
25 output at the end of the month.

1 Q. So when you run your model, it doesn't tell
2 you -- let's just use the July 1 time date.

3 It's not going to tell you how much water
4 will accrue to the stream on July 1 with a curtailment?

5 A. You could run it that way, but I would
6 recommend against that because it was calibrated to
7 monthly -- with monthly stress periods.

8 Q. So what your report tells us is that if you
9 curtail on July 1 that this will be the cumulative
10 effect over the course of the month --

11 A. Correct.

12 Q. -- right?

13 And not necessarily what happens as that --
14 what kind of curve there is in terms of what additional
15 flows accrue during what period of time?

16 A. That's correct.

17 Q. And so one of the things you found when you
18 did the model runs was that there was a significant
19 portion, two-thirds of the curtailed water, that stayed
20 in the aquifer after October 1st; right?

21 A. That's correct.

22 Q. And that's with a -- if we're curtailing
23 just in the Triangle, that's with a plus or minus
24 22 percent -- well, plus or minus 22 percent, so it
25 could be as much as 80 percent of the water would stay

1 in the aquifer on October 1; right?

2 A. Yeah. The volume remaining in the aquifer
3 October 1 could be -- the uncertainty goes both ways.
4 It could be more; it could be less.

5 Q. And I think you said that there's some kind
6 of Department experience in how to deal with those
7 efficiencies -- those predictive error -- or not
8 predictive errors, but the predictive uncertainty?

9 A. I said -- I think I said there's been
10 some -- may be some direction in previous proceedings.

11 Q. Do you know what that is?

12 A. That's kind of getting into the legal --
13 maybe the legal burdens of proof, which is a bit out of
14 my area.

15 Q. So the answer is you don't know what those
16 guidance are?

17 A. I not -- I can't really speak to that, no.

18 Q. I think you said earlier in response to
19 some questions from Ms. Carter that the aquifer
20 uncertainty calculations in the ESPAM 2.2 were
21 somewhere between minimal and 9 percent?

22 A. Yes, for a steady state or five-year
23 analysis.

24 Q. And you think that -- for a steady-state
25 analysis.

1 So what kind of model is this?

2 A. This is a transient analysis.

3 Q. Okay. So do transient analyses tend to
4 have higher uncertainty factors?

5 A. Yes. And in the -- in the ESPAM there were
6 some steady-state and there were some transient
7 analyses for a five-year time frame. And the transient
8 analyses had somewhat higher uncertainty than the
9 steady-state analyses.

10 Q. And so I thought you said that because the
11 time period was longer in the ESPAM model compared to
12 the ten-month period that Allan Wylie used it, those
13 numbers were comparable, the 22 percent and the
14 9 percent?

15 A. I don't know if they're comparable. But I
16 was just saying that I thought 22 percent was -- was
17 probably a reasonable expectation for a shorter time
18 period.

19 Q. Okay. And then as we get even shorter into
20 the three-month time period, that expectation of the
21 uncertainty would go up?

22 A. Probably.

23 Q. And no one's asked you to make that
24 determination of what that uncertainty would be for the
25 time period that we're dealing with here?

1 A. No.

2 Q. So let's talk about the model, the
3 boundaries for your area of simulated curtailment.
4 First let's discuss the southwest around Willow Creek.
5 We're looking at pages 22 and 23.

6 A. Yes.

7 Q. So tell me how you adjusted the model
8 boundary in the southwest around Willow Creek? What
9 did you do?

10 A. I used the modeled extent of the confined
11 aquifer in that area.

12 Q. So anything in the unconfined aquifer was
13 excluded, anything in the confined aquifer was
14 included?

15 A. Yes.

16 Q. And you made that decision because what?

17 A. Because pumping in the unconfined aquifer
18 in the Willow Creek drainage area does not have a
19 significant impact on Silver Creek. Pumping in the
20 unconfined aquifer in that area primarily impacts
21 discharge to Willow Creek and the Wood River below the
22 dry bed.

23 Q. Okay. And so is there a response function
24 for the wells in this confined aquifer in the southwest
25 corner that you looked at?

1 A. Yes.

2 Q. And what was that?

3 A. Again, I think it was in the range of 20 to
4 30 percent.

5 Q. On your map you've got some -- a number of
6 wells to the west of the dry bed below the boundary
7 line?

8 A. Yes.

9 Q. Are those included in the curtailment area,
10 or not?

11 A. In the area south of Glendale Bridge?

12 Q. Yes.

13 A. The ones to the left of the orange line are
14 not included.

15 Q. The ones to the -- so there's -- I see
16 one -- oh, there's a couple. All right. So those are
17 not included.

18 Why are they not included?

19 A. Because the model does not extend the
20 confined aquifer to that location.

21 Q. Okay. But if I am going up above the area
22 where the model extent of the confined aquifer is,
23 there's a dry beds area that's highlighted in yellow,
24 there are -- I don't know -- a dozen or so well points
25 or points of diversion that are located west of the dry

1 beds and outside the confined aquifer?

2 A. Yes.

3 Q. So are those in the area of potential
4 curtailment?

5 A. Yes.

6 Q. Okay. So how did you decide to include
7 those in the area of potential curtailment?

8 A. So again, I looked at and provided
9 transient response functions for layer one of the model
10 and layer three of the model for every location that
11 had an irrigation point of diversion from groundwater.

12 And in the unconfined aquifer there are
13 significant impacts to Silver Creek if you are --
14 unless you are in the area that's basically contained
15 within the Willow Creek drainage area in the Big Wood
16 below the dry bed. So unless you're right in that
17 area, there is a significant impact.

18 So it was based on that analysis of the
19 response function that helped guide where the areas
20 that -- that had a minimal impact on Silver Creek were.

21 Q. So did you select the response function
22 that was -- you thought was enough for there to be a
23 significant impact on Silver Creek?

24 A. Not explicitly.

25 Q. So how did you decide that these areas to

1 the west had a response function high enough to include
2 them?

3 A. Well, in the northern boundary I used
4 the -- the beginning of the dry bed at Glendale Bridge
5 to draw the northern boundary. So it was not based
6 explicitly on a response function cutoff.

7 On the southwest, the ones I've excluded on
8 the southwest and the southeast are very, very low
9 response functions, and they jump to a very, very low
10 response function in the confined aquifer as soon as
11 you move into that Willow Creek drainage area and the
12 lower -- you know, the Big Wood River below Heart Rock
13 Ranch drainage area.

14 Q. So what I was trying to ask you about was
15 the area west of the dry beds and inside the model
16 boundary and south of the boundary that's drawn here.

17 A. Uh-huh.

18 Q. And so if what I'm trying to understand is
19 how those wells were sorted to include -- to be
20 included in the potential area of curtailment?

21 A. Well, I didn't do a direct cutoff based on
22 a response function percentage, but I can see from the
23 response functions that if I -- if I excluded those, I
24 would not have -- if I had started excluding things
25 that had that level of response function, I would not

1 be achieving the 99 percent volume of response at
2 Silver Creek.

3 Q. Okay. So south of the line there's no --
4 there's no response function cutoff that you used to
5 decide whether a well should be or shouldn't be
6 included?

7 A. Well, once you get -- I mean as you get
8 south of the line, the response functions -- I'm not
9 sure what your question is.

10 Q. So they vary -- the response functions can
11 vary anywhere from a percent all the way to 60 percent,
12 70 percent.

13 So what -- did you look at those response
14 functions and say these wells are included and these
15 wells are not, or did you just say everything below the
16 line, with the exception of Willow Creek, is included?

17 A. Well, I looked at the response functions,
18 and they are -- and there aren't -- it's not like if
19 you go -- until you get down into Willow Creek or down
20 by Picabo your response functions aren't going down. I
21 mean it's not like I have a -- it's not like I have
22 some point down here in the middle where their response
23 function is suddenly 1 percent when everything else
24 around it is higher. I'm not sure what your...

25 Q. So what was the response function that you

1 thought was sufficient to include a well in the area of
2 curtailment?

3 A. Again, I didn't set a number. I looked at
4 what could be excluded. And the ones that are excluded
5 in the southwest and the southeast I believe are --
6 they're very low. I believe they're around a percent
7 or less.

8 Q. So what is it about the geology in the
9 southeast around Picabo that leads you to exclude some
10 of those wells to the -- in the area of Picabo?

11 A. Well, down -- so the Silver Creek and its
12 tributaries are directly hydraulically connected to the
13 aquifer upstream of the Sportsman's Access gage. Below
14 the Sportsman's Access gage Silver Creek becomes
15 perched above the aquifer. And, you know, if you're
16 still -- you could be downstream of Sportsman's Access
17 gage and still have impacts on Silver Creek, but at
18 some point you get far enough away into that perched
19 aquifer that your impacts become pretty minimal. And
20 that's what's happening down in the vicinity of Picabo.
21 Their impacts are primarily to -- it's not that they
22 don't have impacts, but the impacts of the pumping
23 primarily reduce aquifer outflow to the Eastern Snake
24 Plain Aquifer.

25 Q. So that line you drew just to the west of

1 Picabo is further east than where the modeled extent of
2 the confined aquifer is? So I'll try to ask the
3 question again.

4 Is there a response function that you used
5 to draw that line?

6 A. No. Again, on the -- the only place
7 there's that significant difference between the
8 unconfined -- or that distinction between the confined
9 and unconfined aquifer is in the immediate drainage
10 area of Willow Creek and the Big Wood River below Heart
11 Rock Ranch, because that's the area where pumping in
12 the unconfined primarily impacts Willow Creek and the
13 Big Wood River below the dry bed. Everywhere else --
14 everywhere else -- well, except for the southeast, then
15 it primarily impacts groundwater flow to the ESPA, and
16 that's why that's excluded.

17 Q. And so what I'm trying to understand is how
18 you drew that orange line just to the west of Picabo.

19 What factors did you use to determine that
20 wells on one side of the line were going to be
21 curtailed and wells on the other side of the line were
22 not?

23 A. Well, you can see there's quite a bit of
24 distance between wells there, but the -- I drew the
25 line to include these wells that have very low response

1 functions to Silver Creek. So they're -- they're zero
2 to 1 percent, I believe, if I recall correctly.

3 Q. And is this map on Figure 17, does that
4 include every well in the Triangle?

5 A. It includes all of the irrigation and
6 municipal points of diversion.

7 Q. But not the domestic? That's the only
8 thing that's excluded?

9 A. It doesn't include the domestic, and I
10 don't believe it shows the fish propagation wells
11 either.

12 Q. On page 23 of your memo you say that you're
13 going to -- your simulated curtailment south of
14 Glendale would affect water supply for 23,000 acres of
15 land; is that right?

16 A. Yes, approximately.

17 Q. Okay. And that's determined based upon
18 what information?

19 A. Well, that's determined -- I determined
20 that from the model files. And that information was
21 based on a combination of water right places of use and
22 the water source, and also the irrigated lands
23 delineation that I used with the curtailment scenario.

24 Q. And were you asked to determine what the --
25 let me rephrase this.

1 Did you know what the impact of curtailing
2 those 23,000 acres of land would be starting on July 1?

3 A. No.

4 Q. Have you looked at the irrigation places of
5 use and the crop mix to determine whether or not that
6 would have an adverse effect on the ability to grow
7 crops in that area?

8 A. I have not been asked to look at the
9 effects of the curtailment.

10 Q. And have you been asked to look at the
11 benefits that would flow to the downstream water users
12 as a result of this curtailment?

13 A. Only to the extent that it's to predict the
14 volume of water that would -- but nothing other than
15 that.

16 Q. And you don't know how many acres would
17 benefit from this?

18 A. No.

19 Q. Or what their crop needs are?

20 A. No.

21 Q. So turn to page 26. The second full
22 paragraph I think you -- hold on a second. Let me ask
23 you to look at the third paragraph. You say that the
24 seepage losses between Sportsman's Access gage above
25 Picabo and Station 10 are between 20 to 37 percent of

1 the inflow?

2 Do you see you report that?

3 A. Yes.

4 Q. What's that number? What are those
5 calculations based on?

6 A. They are based on the USGS streamflow
7 measurements at the Sportsman's Access gage, Water
8 District 37 records of the Little Wood River at
9 Station 10 gage, and Water District 37 records of 30
10 diversions from Silver Creek that occur between those
11 locations and two inflows to Silver Creek that occur
12 between those two locations.

13 Q. Who did these calculations or these
14 estimates?

15 A. I did the calculations.

16 Q. Okay. And how do you get a range of 20 to
17 37 percent? Does that just depend on the year?

18 A. Well, I actually did them by -- I did the
19 average monthly, used average monthly data. So there's
20 a different value for each month.

21 Q. So is it you got greater losses with less
22 flow or greater losses with greater flow?

23 A. You might note in my report that there's --
24 I think there's a lot of uncertainty in these
25 measurements. But in this case percentagewise we got a

1 lower percentage loss with lower flows.

2 Q. Okay. And so the 20 to 37, what months
3 does that -- what months do those -- does that range
4 stretch over?

5 A. May 2020 through August 2020.

6 Q. And so which -- does it go -- which way
7 does it go? Is May 20 percent and August 37 percent?

8 A. From Table 3 on page 28 of the report,
9 August is 20 percent, May is 36 percent.

10 Q. Okay. And I think Sean directed us to you
11 to -- for some questions about the Department's
12 concerns about the gage at Station 10.

13 Do you have -- do you know of any
14 Department concerns about the accuracy of the gage at
15 Station 10?

16 A. A little bit. And I'm not sure -- are you
17 referring to our gage or are you referring to the
18 watermaster's gage.

19 Q. So I don't know. Are there two different
20 gages at the same location?

21 A. There are two different sensors at this
22 location, yes.

23 Q. Okay. So is there a difference between the
24 Department's numbers and the watermaster's numbers?

25 A. Well, that's not really the concern at this

1 point. The main concern at this point is that there
2 have not been -- there haven't been -- I think the main
3 concern is that there haven't been adequate -- an
4 adequate number of manual measurements made to
5 calibrate the rating curve.

6 And there are also, my understanding, some
7 concerns about the different sensors. And the
8 Department's sensor, we originally put that sensor in
9 because we wanted to get wintertime data to collect
10 seepage measurements for input into the Eastern Snake
11 Plain Aquifer model.

12 The sensor that was put in there was put
13 out in the stream. We've had a lot of problems with it
14 freezing, and we're not getting the data for the
15 winter, which is really what we wanted for the ESPA
16 model, and is something that would have been helpful to
17 see here to be able to look at seepage rates without
18 having the uncertainty associated with all those --
19 with those, you know, 32 diversions and inflows to
20 the -- to the reach.

21 But unfortunately -- and the Department has
22 been -- we have a staff member who's been working with
23 Kevin Lakey's consultant to try and improve our gaging
24 there. And he has just recently started making -- he's
25 making periodic or much closer together manual

1 measurements there, and he's going to be making them
2 this winter to improve the rating curve particularly
3 for low flows.

4 Q. So do you know if there's a difference
5 between what the Water District's ratings or
6 measurements show and what the Department's
7 measurements show? Are they both consistent with one
8 another?

9 A. Well, up until just this last -- our staff
10 had not been making manual measurements. We had been
11 using the Water District's manual measurements and
12 their rating curve to apply to our sensor.

13 And again, the main issue was that they
14 haven't been making as many manual measurements as we
15 would like to have. So we're starting doing that with
16 our own staff.

17 Q. And you also, then, report that there's
18 losses between Sportsman's Access and downstream of the
19 bridge, the 93 bridge, on page 29 of your memo.

20 THE HEARING OFFICER: Could I ask you to speak
21 up as you question, Mr. Barker.

22 MR. BARKER: I'll do my best.

23 THE HEARING OFFICER: As well as Ms. Sukow.

24 MR. BARKER: We both can just whisper and --
25 sorry.

1 Q. So my question is, on page 29 there's a
2 reference to seepage losses between Sportsman's Access
3 and the bridge. And there's a figure of between 7 and
4 15 cfs.

5 Do you see that?

6 A. That is -- where is it on the page here?
7 Oh, okay. There I am just quoting from one of the
8 meeting minutes of the Big Wood River Groundwater
9 Management Area Advisory Committee, where, as far as
10 I'm concerned, this is anecdotal. I have not seen any
11 of the measurement data that support this.

12 But the comment was made in that meeting
13 that seepage losses in the vicinity of the Highway 95
14 bridge have been identified by water users as a
15 concern, and that somebody claimed that Water
16 District 37 has measured losses in the range of 7 to
17 15 cfs.

18 I requested data from Kevin Lakey. He did
19 provide me coordinates of the location that he's
20 measuring above the bridge and then further downstream
21 at the Ragsdale site, which is below a few other
22 diversions, but -- and I requested that he send me the
23 measurement data from that, but he has not sent that to
24 me as of the date of this memo or as of today.

25 MR. BARKER: Mr. Director, I have a couple of

1 exhibits that I would like to share with the witness,
2 if I may.

3 Or do you want to take a short --

4 THE HEARING OFFICER: We're well into the lunch
5 hour. How much longer, Mr. Barker? Do you want to
6 wait and come back?

7 MR. BARKER: We could take a quick break, a
8 lunch break, if that's okay with you.

9 THE HEARING OFFICER: Everybody else?

10 MR. BARKER: Take a half an hour or more.

11 THE HEARING OFFICER: Is this an appropriate
12 time?

13 Okay. Let's come back at two o'clock.

14 (Lunch recess.)

15 THE HEARING OFFICER: On the record. We're back
16 on the record after the lunch recess.

17 Mr. Barker, you may continue to examine
18 Ms. Sukow.

19 MR. BARKER: Thank you, Mr. Director.

20 Q. I hope everybody had a chance to catch
21 their breath, particularly you, Jennifer. Thank you
22 for your time this morning and afternoon.

23 Would you pull out your staff report,
24 please, and look at page 21. Do you have that -- if
25 I've got the right page, the predicted responses and

1 curtailment within the entire model boundary?

2 A. Yes.

3 Q. That's the right one? Okay. So what I
4 want you to do is look at the heading "Big Wood Above
5 Dry Bed."

6 And that refers to a response at what
7 location on the river? Is that Glenwood Bridge? Is
8 that somewhere further upstream? Where is that
9 measured?

10 A. It's Glendale Bridge.

11 Q. And that's a modeled response; right?

12 A. Yes.

13 Q. And you've got -- if you did a curtailment,
14 you would have somewhere -- you'd have
15 10-and-a-half cfs in the river on a daily basis in
16 July, 15.8 in August, 14.0 in September; right?

17 A. That would be the monthly average.

18 Q. Okay. The monthly average. But -- so we
19 talked in your deposition about this idea that if
20 there's water available in the river to be diverted
21 into the Triangle by the canal system, that that water
22 would allow the surface water rights to stay on longer;
23 right?

24 A. Correct.

25 Q. So if there were this much additional water

1 at Glendale Bridge, there would be the ability to
2 divert that much water either into the 45 or the
3 Baseline canal systems?

4 A. Well, not necessarily. There's other
5 canals, and they might have -- you know, there's canals
6 that go to Poverty Flats. There's other canals that
7 might have more senior rights that might get that
8 water.

9 Q. And you didn't look at what those senior
10 rights might be and where that water might be used if
11 it were available in the river; right?

12 A. I did not.

13 Q. Okay. And if water is diverted into those
14 canals, it would allow the surface water to stay on
15 longer; right?

16 A. Correct.

17 Q. And that would also mean, in contrast to
18 what you said earlier about turning wells on earlier,
19 those wells might be able to stay off longer?

20 A. Well, in the curtailment scenario, those
21 wells in the Triangle are already curtailed, so there's
22 no effect.

23 Q. If there's additional surface water
24 available to the water users, that would allow them to
25 keep their wells off -- or not turn their wells on as

1 soon; right?

2 A. Well --

3 Q. Forget about the curtailment. Just as a
4 general proposition?

5 A. If -- so you if curtail above Glendale
6 Bridge and not with below Glendale Bridge and not in
7 the Triangle, then yes.

8 Q. Okay. And when we talked, you -- there's
9 also the ability to provide canal seepage from water
10 that is diverted into the Triangle; right? That adds
11 water to the source, to the groundwater, to the
12 aquifer?

13 A. If there is more water diverted into the
14 Triangle, yes, there would be more canal seepage.

15 Q. And if there's more canal seepage, there's
16 more water in the aquifer?

17 A. Temporarily, yes.

18 Q. Okay. And -- but your temporary answer is
19 always the case, right, whether it's canal seepage or
20 any other source of water to the aquifer? There's
21 nothing --

22 A. Yes. Any other stress there, yes.

23 Q. Okay. And so when we talked, I asked
24 you -- at your deposition I asked you if you had any
25 information about what those canal seepage rates were,

1 and you referred me to Appendix G to the 2010 USGS
2 report.

3 Do you remember that?

4 A. Yes.

5 Q. Okay. And I didn't -- I didn't make an
6 exhibit or copies for everybody, but I just want to
7 read you a statement, and then I can show you this
8 statement in the Appendix G. It says, "Large seepage
9 losses. 60 percent are assigned to the District and
10 Baseline bypass canal systems, based on Brockway and
11 Grover 1978, and Merritt 1997."

12 And do you want to see if I accurately
13 portrayed that?

14 A. I think I can take your word on that.

15 Q. Well, here.

16 A. If you'd like, I can look at it.

17 Q. Here. Just take a look. Yeah, you can
18 look at it.

19 So is that 60 percent conveyance loss or
20 seepage loss part of what is included in the model?

21 A. Yes. For the model calibration, there is a
22 60 percent loss on those two canal systems. There's
23 other canal systems that have different seepage rates.

24 Q. And you didn't -- you didn't change those
25 numbers for the 45 and the Baseline bypass -- or bypass

1 for the 2014 model calibration; right?

2 A. No, we did not.

3 Q. Okay. Don't worry. It's not as bad as it
4 looks. You have a binder with a yellow paper on the
5 spine and on the front page. You have that? If you
6 would turn to Exhibits 13 --

7 A. Uh-oh.

8 Q. Oh, did that fall apart?

9 A. This thing's going to be a mess. I'll get
10 it.

11 Q. You got it?

12 A. No, no, no. I'll get it.

13 Q. Okay. Exhibit 13. I don't know whether
14 you've ever seen this presentation that Greg Tesch made
15 to the water users in January of last year.

16 A. Not that I recall.

17 Q. Okay. Turn to -- let's see. It doesn't
18 have page numbers on it. So just turn until you get to
19 the Big Wood.

20 Do you see there's a hydrograph for the Big
21 Wood?

22 A. Yes.

23 Q. Okay. Have you ever seen those hydrographs
24 before?

25 A. I don't specifically recall.

1 Q. Okay. Well, if you don't remember them,
2 then we'll pass over.

3 Turn to Exhibit 14.

4 Do you have Exhibit 14 in front of you?

5 A. Yes.

6 Q. And this is the final report on the
7 version 1.1 of the Wood River Valley Aquifer System
8 Model; right?

9 A. Yes.

10 Q. And you're an author of this report?

11 A. I am listed as a co-author. I'm not the
12 primary author.

13 Q. Okay. So what does a co-author mean?

14 A. In this case it means that Allan wanted to
15 put our names on this report because we, myself and the
16 other two co-authors, provided quite a bit of support
17 in developing version 1.1 of the model, and then we
18 also provided review of the report.

19 Q. Okay. Turn to page 26, the conclusion
20 page.

21 Are you there?

22 A. Yes.

23 Q. So the last paragraph on that page -- and
24 I'll read this -- "Despite these enhancements our
25 understanding of the WRV Aquifer System remains

1 imperfect and more work needs to be done. Several
2 significant gaps in data or in the understanding of the
3 underlying hydrologic system have become apparent
4 during this project."

5 Did I read that correct?

6 A. Yes.

7 Q. Okay. And it says this is based on "our
8 understanding."

9 So that would be the understanding of the
10 authors of the report?

11 A. That's what it says, is "our."

12 Q. Okay.

13 A. I don't know who he is referring to
14 specifically.

15 Q. Okay. And you'd agree that your
16 understanding of the aquifer system remains imperfect?

17 A. Yes.

18 Q. And you would agree that more work needs to
19 be done?

20 A. I would agree that the model can be
21 improved with additional data collection and
22 incorporating that additional data into the model.

23 Q. But it doesn't say it would be nice to do.
24 It says, "more work needs to be done";
25 right?

1 A. That's what he says.

2 Q. Okay. And you didn't -- again, you didn't
3 disagree with that?

4 A. I -- I don't think I would have worded it
5 that way.

6 Q. Well, you had the chance when you reviewed
7 the report, didn't you?

8 A. Just because I made a review comment does
9 not mean that the primary author would be required to
10 incorporate it into the report.

11 Q. Okay.

12 A. He doesn't need my -- every co-author's
13 permission for every comment he makes in his report.

14 Q. So are you telling me you made a comment to
15 ask him to change that?

16 A. I'm telling you I don't recall.

17 Q. Okay. And he also says in your report that
18 "Several significant gaps in data have become
19 apparent."

20 And so those gaps in data are information
21 about the water levels in the wells in Wood River
22 Valley; is that right? That's one of them?

23 A. Well, primarily a lot of these he was -- I
24 know he was really concerned about not having enough
25 data in the tributaries in the Valley north of Hailey.

1 And so that -- one of his comments is that he wanted to
2 install more -- or install transducers in tributary
3 valley wells to the extent possible.

4 Q. Okay. So where --

5 A. And he started doing seepage surveys to
6 look at the interaction between Trail Creek and Warm
7 Springs Creek, which aren't directly explicitly
8 modeled.

9 Q. So where are the observation wells that are
10 referred to in (g)?

11 A. In (g)?

12 Q. Subpart (g).

13 A. Those are throughout the model area, and he
14 had established the expanded monitoring network. He's
15 just recommending that we continue monitoring that
16 expanded network.

17 Q. Right. But you had only information that
18 was up to 2014, so you didn't have very much
19 information from any of these 45 observation wells at
20 the time?

21 A. We only had a few years' worth of data.
22 And I agree that the model could be improved if it were
23 recalibrated in the future with more years of data from
24 those wells.

25 Q. Okay. And so what are the significant gaps

1 in understanding of the hydrologic system that became
2 apparent during the project?

3 A. Again, the things I remember Allan being
4 particularly concerned about with version 1.1 was the
5 lack of explicitly representing aquifer interaction
6 with Trail Creek and possibly Warm Springs Creek, and
7 with not being able to have enough measurements to
8 better represent the tributary valleys in the upper end
9 of the model.

10 Q. And that's not all that's listed in this
11 additional future work that's necessary, is it?

12 A. Well, again, it's -- it's -- I think it's
13 what's listed that's new. The other things he listed
14 are to continue the monitoring that had already been
15 begun.

16 Q. Yeah. I don't want to beat a dead horse,
17 but he does say, and you agree as a co-author, that
18 more work needs to be done, including finding out
19 information about those water levels?

20 A. What I said is that incorporating
21 additional water-level data into another recalibration
22 of the model would improve it.

23 Q. Okay.

24 A. Allan also says in the next paragraph that
25 "It's the best available tool for evaluating

1 interaction between groundwater and surface water in
2 the Wood River Valley," and concludes that "calibration
3 statistics indicate a good fit to observed data,
4 providing confidence that the updated model provides an
5 acceptable representation of the hydrologic system in
6 the Wood River Valley."

7 Q. Okay. And you didn't have observed data
8 from most of the groundwater wells at the time in 2014?

9 A. I don't think that's true. I think we had
10 observed data from 2012 through 2014 for many of them.

11 Q. I thought you told me earlier today that
12 only a very small number of wells in the Triangle you
13 had observed data for for pumping?

14 A. For -- he's not talking about pumping.
15 He's talking about the observation wells. He's talking
16 about the model and the measurements.

17 Q. I'm talking about the pumping wells. You
18 had very little information about wells -- water
19 pumping and water-level data from the wells that were
20 pumping in the valley because --

21 A. He's --

22 Q. -- that information had not been included
23 in the update.

24 A. He's talking about observed water levels,
25 not pumping data. Pumping data is not an observation

1 in the model. It is an input to the model.

2 Q. Okay. And you didn't have that information
3 for the wells in the Triangle; yes or no?

4 A. Yes. I already answered that.

5 Q. Okay. Thank you.

6 Turn to Exhibit 15, please.

7 Do you recognize Exhibit -- oh, wait a
8 minute. I'm sorry. I needed to do two things.

9 I would move the introduction of
10 Exhibit 14.

11 MR. BROMLEY: Point of clarification, Director.

12 THE HEARING OFFICER: Mr. Bromley.

13 MR. BROMLEY: If we might just make sure that --
14 these are the South Valley Ground Water District
15 exhibits that you're talking about No. 14 -- we've
16 already been using numbers. So I'm just wanting to
17 make sure on the record when somebody goes back to read
18 the transcript that we all know which exhibits, Al,
19 you're talking about.

20 These are your exhibits; correct?

21 MR. BARKER: Yes.

22 MR. BROMLEY: So I don't have them in front of
23 us, Al. You've just been using numbers. I'm just
24 wanting to make sure the record is clear as to what
25 we're looking at.

1 MR. BARKER: Okay. Well, we shared all the
2 exhibits with everybody, Chris, and so --

3 MR. BROMLEY: Al, that's not what I'm saying.
4 I'm saying --

5 MR. BARKER: Okay. Fine. Fine. South Valley
6 Ground Water District/Galena Ground Water District
7 Exhibit No. 14, we move the admission of that exhibit.

8 THE HEARING OFFICER: Any objections?

9 MR. RIGBY: No objection.

10 MR. FLETCHER: No.

11 MR. BROMLEY: None.

12 MR. LASKI: No.

13 MR. MORONEY: No objection.

14 THE HEARING OFFICER: Any objections from the
15 gallery?

16 Mr. Robertson?

17 MR. ROBERTSON: No, none.

18 THE HEARING OFFICER: And Mr. O'Bannon?

19 MR. O'BANNON: None, Director.

20 MR. BARKER: Okay.

21 THE HEARING OFFICER: Okay. The document that's
22 been marked -- let me try, SVGWD space GGWD Exhibit 14
23 is received into evidence.

24 (SVGWD GGWD Exhibit 14 received.)

25 MR. BARKER: Thank you, Mr. Director.

1 Q. So, Ms. Sukow, would you turn to SVGWD GGWD
2 Exhibit 15, please.

3 Got that?

4 A. Yes.

5 Q. Okay. And then I'm asking you to look at
6 page 15 of that exhibit. Okay. And then if you look
7 under Table 3 at the top of the page, there's some -- a
8 description of the -- or a narrative that talks about
9 the Mann-Kendall analysis for Wood River Valley wells.

10 Have you seen this before?

11 A. Yes.

12 Q. Okay. So I'm going to try and interpret
13 this, and you can tell me where I get it wrong.

14 So what it appears to me to be saying is
15 that since 1991 that the factors under this
16 Mann-Kendall statistical analysis show that all of the
17 factors are positive indicating rising groundwater
18 levels in the -- in the Wood River Groundwater
19 Management Area Aquifer; is that right?

20 A. Well, they're all positive, but most of
21 them are not statistically significant.

22 Q. Okay. So the language of the narrative
23 says, "These factors are all positive, indicating
24 rising groundwater levels. However p is only
25 statistically significant at the 95 percent confidence

1 level interval for the April data."

2 Isn't that what it says?

3 A. That's what it says.

4 Q. Okay. And so it also says that the April
5 groundwater increase is about 0.18 feet per year.

6 Is that consistent with your -- the
7 information that you have about the groundwater levels
8 in the area, in the groundwater management area?

9 A. I have not done a separate analysis apart
10 from what Allan did. I've just read what Allan did.

11 Q. So -- and that's -- that is over a 30-year
12 period since 1991?

13 A. Not quite. This report was published in --

14 Q. 2019.

15 A. -- 2019. So it would be a few years less
16 than 30 years.

17 Q. Right. So if I do math right, I don't know
18 if he included 2019 data, but if he did, it would be 28
19 years?

20 A. If he did, it would be -- well, he may not
21 have had data for all of the years, but the total time
22 period -- the total time span would be about that.

23 Q. Okay. So that's a little bit more than
24 2 inches rise a year over that time period?

25 A. Yeah, that's about right.

1 Q. So that's almost like a 5-foot increase
2 over 28 to 30 years?

3 A. For --

4 Q. For April.

5 A. For just April.

6 Q. All right. At the beginning of the
7 irrigation season; right?

8 A. I haven't done the math, but that sounds
9 about right.

10 MR. RIGBY: Okay. So, Mr. Director, I move the
11 admission of SVGWD GGWD Exhibit 15.

12 THE HEARING OFFICER: Any objections?

13 Mr. Fletcher?

14 MR. FLETCHER: No objection.

15 THE HEARING OFFICER: Mr. Rigby?

16 MR. RIGBY: No.

17 THE HEARING OFFICER: Mr. Laski?

18 MR. LASKI: No.

19 THE HEARING OFFICER: Mr. Bromley?

20 MR. BROMLEY: No.

21 THE HEARING OFFICER: Mr. Simpson?

22 MR. SIMPSON: No.

23 THE HEARING OFFICER: Mr. Robertson?

24 MR. ROBERTSON: No.

25 THE HEARING OFFICER: Mr. Semanko?

1 MR. SEMANKO: No.

2 MR. MORONEY: No.

3 THE HEARING OFFICER: I got to pick you out from
4 behind the witness. I'm sorry. No objection from Fish
5 and Game. No objection from anyone.

6 The document marked as South Valley and
7 Galena Exhibit 15 is received into evidence.

8 (SVGWD GGWD Exhibit 15 received.)

9 Q. (BY MR. BARKER): Would you next turn to
10 Exhibit 16, please.

11 So, Jennifer, this is the uncertainty
12 analysis that Allan Wylie performed on version 1.1 that
13 we talked about earlier; is that correct?

14 A. Yes.

15 Q. And just for the record, SVGWD GGWD
16 Exhibit 16; right?

17 A. [No audible response.]

18 Q. And you're familiar with this uncertainty
19 analysis report?

20 A. Yes.

21 Q. So when an uncertainty analysis is done, is
22 it -- what types of uncertainty are considered in the
23 analysis? Is it simply probability uncertainty, or is
24 there more to it than that?

25 A. It's calibration parameter uncertainty.

1 Q. Okay.

2 A. So it's looking at to what extent the model
3 could have been similarly well calibrated to match the
4 observation data with different values for the unknown
5 parameters that it adjusts and how -- and then looking
6 at how much difference that would make in the result
7 for a specific prediction.

8 Q. So were you involved at all in assisting
9 Mr. Wylie in doing this uncertainty analysis?

10 A. No.

11 Q. Or looking at the different parameters that
12 he looked at to determine what levels of uncertainty
13 there are?

14 A. No.

15 Q. Did -- does this report explain the --
16 let's see if I can ask this question right. You
17 probably will tell me I'm not asking it right.

18 But with the different types of
19 uncertainties, do they all flow into the predictive
20 uncertainty, or is there a different uncertainty, for
21 example, on the model boundary that should be
22 identified and said we're concerned about our
23 uncertainty at the model boundary of plus or minus
24 10 percent?

25 A. I don't understand what you're asking

1	there.
---	--------

2 Q. Okay. What I'm asking is, you said that
3 there are other types of uncertainty rather than
4 predictive uncertainty.

5 And what I'm asking is, is the uncertainty
6 analysis, should it have identified the levels of
7 uncertainty at those other types of areas where there
8 were uncertainty, rather than just in predictive
9 uncertainty?

10 A. Well, other types of uncertainty, like, you
11 know, involving questions of whether -- whether the --
12 we had constructed the model differently. For example,
13 if Trail Creek were explicitly represented as being
14 hydraulically connected to the aquifer, and would
15 that -- would that or would that not have any impact on
16 model predictions is not something that you can
17 numerically assign a number to. So it's not really
18 possible to include that in this type of quantitative
19 predictive uncertainty analysis.

20 Q. Okay. So the three -- the five examples
21 that we used -- sorry. Go ahead.

22 The five locations that were used to
23 evaluate uncertainty were from three areas in the
24 Triangle and two areas up above.

25 Do you have any understanding as to how

1 those were selected?

2 A. In a vague sense. I mean he was trying to
3 explore the predictive uncertainty in different areas
4 of the model domain.

5 Q. So go to page 6. And I want to call your
6 attention to Table 1.

7 Have you seen this table before?

8 A. Yes.

9 Q. And so you were talking about comparing an
10 analytical model with the calibrated model and how much
11 better off the calibrated model is than the analytical
12 model, and I think you've explained that earlier. But
13 what I want to ask or draw your attention to is the
14 difference between the calibrated model and the Wood
15 River 1.0, which I guess was the original model.

16 Do you see that difference?

17 A. Yes.

18 Q. So it dropped in the Silver Creek above
19 Sportsman's from 25 and 26 to 22 percent?

20 A. Yes.

21 Q. And the Hailey-Stanton Crossing dropped
22 either 21 or 11 percent -- or 21 to 15 or 11 to 11.

23 So is there -- would you have expected to
24 see greater decline -- well, let me say this right.

25 Would you have expected to see this number

1 drop on Wood River No. 1 from 25 to 22 after the
2 calibration has been done?

3 A. Well, the uncalibrated was 51 percent.

4 Q. No, no, no. I'm not talking about
5 uncalibrated.

6 A. Yeah.

7 Q. I'm talking about the difference between
8 what the model predicted when it was 2010, and then
9 after 2014 when it was calibrated with additional data.

10 A. Well, I didn't go into this with any
11 expectations. I just saw the results after Allan
12 completed the analysis. So I think it shows what it
13 shows, and I'm not -- I'm not really -- I didn't have
14 any expectations.

15 Q. I'm sorry?

16 A. I didn't have any expectations.

17 Q. Okay. Were you surprised that the numbers
18 weren't greater, the differences weren't greater?

19 A. Again, I didn't have any expectation. So
20 no, I wasn't surprised one way or the other.

21 MR. BARKER: So, Mr. Director, I move the
22 exhibit -- or move the admission of SVGWD GGWD
23 Exhibit 16.

24 THE HEARING OFFICER: Mr. Fletcher?

25 MR. FLETCHER: No objection.

1 THE HEARING OFFICER: Mr. Rigby?

2 MR. RIGBY: No objection.

3 THE HEARING OFFICER: Mr. Laski?

4 MR. LASKI: No objection.

5 THE HEARING OFFICER: Mr. Moroney?

6 MR. MORONEY: No objection.

7 THE HEARING OFFICER: Mr. Bromley?

8 MR. BROMLEY: No.

9 THE HEARING OFFICER: Mr. Lawrence?

10 MR. LAWRENCE: No objection.

11 THE HEARING OFFICER: And, Mr. Simpson?

12 MR. SIMPSON: No objection.

13 THE HEARING OFFICER: Mr. Robertson?

14 MR. ROBERTSON: No, sir.

15 THE HEARING OFFICER: Mr. Semanko?

16 MR. SEMANKO: None.

17 THE HEARING OFFICER: Mr. O'Bannon?

18 MR. O'BANNON: No objection.

19 THE HEARING OFFICER: Great. The document
20 marked as Exhibit No. 16 -- I'm sorry, South Valley and
21 Galena Exhibit 16 is received into evidence to the
22 extent that any of us understand it.

23 (SVGWD GGWD Exhibit 16 received.)

24 Q. (BY MR. BARKER): So we're almost -- well,
25 I say "we." We are almost done. You're probably not.

1 Sorry about that. I have one more area I wanted to
2 talk to you about.

3 And that was when we -- when we went
4 through your deposition, you indicated you didn't
5 remember when you first started work on this process.
6 And before I go into that, one of the things that we
7 talked about earlier this afternoon was if you were to
8 try and do a new predictive uncertainty analysis on the
9 three-month period as opposed to a ten-month period,
10 you said it could be done.

11 Do you have any understanding of how long
12 it would take for you or somebody else to do that?

13 A. Well, you know, really if you want to do a
14 predictive uncertainty analysis specific for the
15 prediction we're making here, you should look at, you
16 know, a three month or five month, whichever one you're
17 looking at, you know, you should look at that time
18 period. And we should also look at the stress applied
19 in the curtailment scenario. So that would be the
20 pumping stress for either the entire model domain or
21 the area south of Glendale Bridge.

22 And I did put a little bit of thought into
23 whether or not that was something I could do in a short
24 amount of time. And looking into it, really I think
25 the most efficient way to do that would be to convert

1 the model to MODFLOW 6 first so you could use a
2 separate .wel file, because one of the things that's
3 difficult about doing that is that every iteration that
4 it does when it tests the change, that a change in a
5 parameter makes, it rewrites the .wel -- the baseline
6 .wel file, and it also needs to rewrite the .wel file
7 with the curtailment. And that's not a -- that's not a
8 trivial task, because there's so many model cells. And
9 it's a lot more difficult to run with this model than
10 with, for example, the ESPA model, which we can run in
11 superposition because we can just build a separate,
12 static .wel file for the -- for the scenario part of
13 it.

14 So I -- it would either require doing that
15 or requiring a lot of coding to automate a rebuilding
16 the scenario .wel file. And that's not something I
17 have the capability to do in a short amount of time.
18 And I think we'd be looking at something on the order
19 of months to look at that.

20 Q. Okay. So backing up to where I started
21 just a minute ago, on the question of when you began to
22 have -- to start your work on this project, you said I
23 could find that information out from the files that you
24 provided. It's not in your report, but in the files
25 that were made available as part of our request for

1 information.

2 A. There are supporting files in there. And
3 it would -- somebody who knows which -- you know, which
4 ones are the results of the models would need to look
5 at it, but you could tell from that, yes.

6 Q. Okay. Well, I can't -- I can't assert that
7 I'm one of those people. But we did find some e-mails
8 from you that we did not mark as exhibits, but we would
9 like to ask you about.

10 And I would propose that we add this as our
11 next exhibit, Exhibit 35.

12 MR. THOMPSON: 36.

13 MR. BARKER: 36. And let me just show you this
14 set of e-mails.

15 THE HEARING OFFICER: These have been marked?

16 MR. BARKER: They have not. They have not been
17 previously marked.

18 THE HEARING OFFICER: Do we have a set of
19 stickers for marking?

20 MR. BARKER: I don't know. I didn't bring one.
21 I hope somebody else has a sticker we could borrow.

22 MS. CARTER: I forgot them. I'll go grab them.

23 MR. BARKER: Do you need one, Jeff? Do you have
24 a sticker?

25 THE COURT REPORTER: It's going to be different

1 than your other stickers, but yeah.

2 MR. BARKER: That's okay.

3 THE HEARING OFFICER: Oh, so Jeff actually
4 brought some.

5 THE COURT REPORTER: I got all kinds of
6 stickers.

7 THE HEARING OFFICER: I should have asked him.

8 MR. BARKER: I don't know if I could put
9 SVGWD --

10 THE HEARING OFFICER: Yeah, is there enough room
11 for the acronyms on those?

12 THE COURT REPORTER: Probably not.

13 MR. BARKER: But I will use the same one, I
14 promise.

15 We're going to mark this as Exhibit 36; is
16 that right?

17 (SVGWD GGWD Exhibit 36 marked.)

18 MR. RIGBY: Mr. Director, I just want to comment
19 that this has not been produced to us until now, fully
20 recognizing that all of us have been in a mad dash to
21 get our exhibits to each other. I just want to know
22 that the same leeway would be given to all sides when
23 and if that becomes an issue.

24 THE HEARING OFFICER: And I was anticipating an
25 objection.

1 MR. BARKER: Well, I will say that this was part
2 of the information that was produced by the Department
3 in response to the request for materials. So it's not
4 like we hid it. It came from the Department.

5 MR. RIGBY: I understand that.

6 THE HEARING OFFICER: All you want is due
7 consideration?

8 MR. RIGBY: I want due consideration.

9 MR. BARKER: You got it.

10 THE HEARING OFFICER: All right. We got the
11 official blue. So we got two markings, I guess. All
12 right.

13 Q. (BY MR. BARKER): Okay. So if you would
14 turn to the second page. This is an e-mail from you to
15 the Director and several other people in the Department
16 about Wood River water administration, March 24, 2021.

17 And in this you are responding and saying
18 that you "could generate response functions aka
19 depletion functions with the model."

20 So what were you looking for to -- what was
21 the reason that you were looking to generate response
22 functions from the model and what were you going to
23 look at?

24 A. I was asked if I could generate response
25 functions from the model.

1 Q. And do you know why, what you were going to
2 use -- what you would use them for?

3 A. I knew it was -- I knew it was related to
4 this -- the previous e-mail, which was asking about the
5 possibility of initiating conjunctive water
6 administration in the Wood River Basin during the
7 irrigation season of 2021.

8 Q. Okay. So "response functions" and
9 "depletion functions" you're using interchangeably in
10 this e-mail?

11 A. Yes.

12 Q. And so if I understand what this means is
13 you're able to model the response of a particular point
14 of diversion in the model?

15 A. A response function commonly is used to
16 talk about, yeah, modeling the response at a specific
17 reach to a stress in a specific model cell.

18 Q. And so it would tell you from if -- if a
19 well was curtailed what -- which way the water would
20 go? Would it go to the Big Wood? Would it go to
21 Silver Creek?

22 A. It will tell you, if you apply a stress in
23 a model cell, to which river reaches the impact will
24 propagate.

25 Q. So what were you looking at doing in terms

1 of response functions? Were you going to model the
2 entire basin? Were you going to pick certain wells
3 out? What were you planning on doing with this
4 response back to the Director?

5 A. Well, my e-mail is in response to the
6 previous e-mail in which the question was asked, "Is
7 there a possibility of establishing a trim line that
8 would separate groundwater diversions primarily
9 affecting the Big Wood River flows from groundwater
10 diversions primarily affecting Silver Creek?"

11 Q. Okay. So how were you going to use
12 response functions to establish a trim line?

13 A. Well, again, I looked at the response
14 functions. And the extent I ended up using them is
15 discussed in my staff memo. And I did also provide
16 those response function files. So I don't really have
17 anything new to add there.

18 Q. Okay. So you offer in item No. 1 under
19 this to run a few test cells to get a preliminary idea
20 how big a difference you're looking at.

21 Did you do that?

22 A. I did.

23 Q. Okay. And what areas did you select for
24 test cells?

25 A. They were a sampling of the cells that are

1 in the version -- so the version that I sent out with
2 the supporting files has all the cells. The test cells
3 were just a smaller sampling of those that I ran first
4 just to get an idea what they were going to look like.

5 Q. So I'm not sure I understood your
6 explanation.

7 But were there a few test cells selected in
8 particular geographic locations that you were going to
9 run the depletion analysis on?

10 A. I spread them out over the area, over the
11 Triangle.

12 Q. Did you go --

13 A. Over the Triangle.

14 Q. Just in the Triangle?

15 A. Yeah. I mean I went north of what we're
16 now considering the area of potential curtailment, but
17 I did not go very far north of the Triangle.

18 Q. Up to Bellevue?

19 A. I'd have to look at the map that's in the
20 supporting files.

21 Q. So go up to your e-mail above this dated
22 April 1st. And on the second page of this exhibit
23 there's a statement in the first full paragraph that
24 starts "As expected."

25 Do you see that?

1 It says -- well, I'll just read it, "As
2 expected, the confining unit has a significant effect,
3 and there are significant differences in the depletion
4 to Silver Creek from pumping in the confined and
5 unconfined aquifers."

6 Is that an accurate statement --

7 A. Yes.

8 Q. -- in your view, after having run the
9 model?

10 A. Yes.

11 Q. Okay. And what are those significant
12 differences in depletions?

13 A. In the -- as I discussed in my staff memo,
14 in the southwest area we have significant contribution
15 or significant impacts to Silver Creek from pumping in
16 the confined aquifer, but within the Willow Creek
17 drainage area, pumping in the unconfined aquifer would
18 not have significant impacts to Silver Creek. The
19 impacts are largely to the Willow Creek and the Big
20 Wood below the dry bed.

21 Q. Okay. So this doesn't mean -- you're just
22 talking here about Willow Creek and the confined
23 aquifer there, you're not talking about two wells side
24 by side, one in the confined aquifer and one in the
25 unconfined aquifer somewhere in the middle of the

1 Triangle?

2 A. If you're -- if you're further east in the
3 Triangle, there are still differences between the
4 percentage of the impacts that propagate to Silver
5 Creek within the, for example, the July 1 curtailment,
6 within the three-month time period.

7 And I guess for the response functions, I
8 ran May 1 through September 30th. So those are the
9 percentages that are in the response function.

10 So there are places further east where both
11 the unconfined and confined aquifers, most of their
12 response propagates to Silver Creek, but the amount
13 that remains in storage at the -- as of October 1st is
14 greater in one aquifer than the other.

15 Q. And that greater is in the confined
16 aquifer; right?

17 A. I think that depends on the location. And
18 I think there's some locations on the edge where it may
19 actually be the opposite.

20 Q. Are there --

21 A. But you'd have to look at each individual
22 location.

23 Q. Did you do that?

24 A. I did at one time. I don't recall every --
25 I don't have them all committed to memory.

1 Q. Did you run a scenario where you could
2 tease out the differences between the impacts of the
3 wells in the confined aquifer and the wells in the
4 unconfined aquifer?

5 A. Not other than the response functions. I
6 did not do a larger scenario in that manner.

7 Q. So the next sentence in the paragraph below
8 that where we were just looking at says you "can
9 discuss timing of model predictions and how you'd like
10 the model results to be evaluated."

11 What were you referring to there?

12 A. I think, again, at the time I was asked
13 if -- if there was a possibility of looking at response
14 functions and looking at the idea of, you know,
15 delineating an area that -- that impacted Silver Creek
16 and areas that didn't. And that's -- it was a
17 pretty -- I think a somewhat vague assignment at the
18 time. And I was just saying that we could discuss
19 further what -- I was looking for further direction on
20 any other analysis that they wanted.

21 Q. So are your questions about timing of model
22 predictions mean timing of the dates of curtailment
23 which you ultimately did, or does it refer to something
24 else?

25 A. Oh, I see what you're -- so it was about,

1 yes, the -- what time frame they might want to be
2 included in a curtailment scenario.

3 Q. Okay. And did you discuss with anyone at
4 the Department about running a curtailment scenario
5 that was limited to the unconfined aquifer to see what
6 the results there would be?

7 A. No, I did not.

8 Q. And in the paragraph at the top of the page
9 that begins on the page before, there's another
10 discussion of uncertainty that we've talked about at
11 some length today.

12 And I don't want to rehash that, but I do
13 want to ask you, since you brought up to the Department
14 the uncertainty in model predictions, was there some
15 discussion about how you or someone else in the
16 Department would handle the impact of that uncertainty
17 in the model predictions?

18 A. Well, you know, my opinion on the model
19 uncertainty is that while we acknowledge that there's
20 model uncertainty, the best prediction we have is the
21 model prediction.

22 Q. Okay.

23 A. We acknowledge there's some uncertainty.
24 In my opinion as a scientist, I think it would be best
25 to use the model prediction. I think from a legal

1 perspective there are other perspectives on uncertainty
2 and who should -- if a party is going to benefit from
3 uncertainty, which party that should be. And that's
4 beyond my -- you know, my opinion. My opinion would be
5 to use the most likely value or the best prediction we
6 have, which I believe is the model prediction.

7 Q. The model plus or minus 22 percent on
8 either side?

9 A. Well, you know, that predictive uncertainty
10 analysis is based on a normal distribution, which is a
11 bell-shaped curve. So in a normal distribution you're
12 going way out into the tails to get to 95 percent. So
13 your most likely value is still closer to your central
14 prediction.

15 Q. Okay. So I want to go back to the question
16 I asked you before you wanted to tell me about your
17 view of model uncertainty.

18 My question was, did you have discussions
19 with anyone in the Department about how the Department
20 was going to handle model uncertainty in this
21 proceeding?

22 A. No.

23 Q. Yeah. Thank you.

24 Okay. Now, just one more area. Can you
25 take that purple book -- oh, wait a minute.

1 I would like to offer into evidence
2 SVGWD GGWD 36.

3 THE HEARING OFFICER: Mr. Fletcher?

4 MR. FLETCHER: No objection.

5 THE HEARING OFFICER: Mr. Rigby?

6 MR. RIGBY: No objection.

7 THE HEARING OFFICER: Mr. Laski?

8 MR. LASKI: No objection.

9 THE HEARING OFFICER: And then the same crowd --
10 oh, Mr. Moroney?

11 MR. MORONEY: No objection.

12 MR. BROMLEY: No objection.

13 THE HEARING OFFICER: Mr. Bromley?

14 Mr. Lawrence?

15 Mr. Simpson?

16 Mr. Robertson?

17 MR. SIMPSON: No.

18 MR. ROBERTSON: No.

19 THE HEARING OFFICER: Mr. Semanko?

20 MR. SEMANKO: No.

21 THE HEARING OFFICER: Mr. O'Bannon.

22 MR. O'BANNON: No.

23 THE HEARING OFFICER: Thank you.

24 The document marked as -- and this is
25 combined or just South Valley?

1 MR. BARKER: Well, I put both on the --

2 THE HEARING OFFICER: Okay. My label isn't
3 correct.

4 MR. BARKER: -- label.

5 MS. CARTER: Sorry.

6 THE HEARING OFFICER: Well, let's figure out
7 which one is the actual exhibit.

8 MR. BARKER: Here. Let's use this one.

9 MR. FLETCHER: I thought the order said to put
10 the attorney's name on there.

11 THE HEARING OFFICER: I think that's true.

12 MR. BARKER: There's too many attorneys.

13 THE HEARING OFFICER: Is that an objection,
14 Mr. Fletcher?

15 MR. BARKER: Can't fit all of those on there
16 either.

17 MR. FLETCHER: What's that?

18 THE HEARING OFFICER: Is that an objection?

19 MR. FLETCHER: No. Just a comment.

20 MR. BARKER: You would have to have stickers
21 this big [indicating].

22 THE HEARING OFFICER: I'll grant you due
23 consideration.

24 (SVGWD GGWD Exhibit 36 received.)

25 MR. FLETCHER: Mr. Barker has a point, there's a

1 lot of attorneys on that side, so it would be hard to
2 get all those names on there.

3 Q. (BY MR. BARKER): So I put in front of you
4 what is identified as the Picabo Livestock exhibits.
5 And this is a report that was prepared by Dr. Chuck
6 Brockway in 2017.

7 And I don't know, have you seen this report
8 before?

9 A. Yes, I have.

10 Q. Okay. So would you turn to page 5. And
11 right above where there's a conclusion, Dr. Brockway
12 says that "The Big Wood model was not modified to
13 reflect the actual nature of separation between layer
14 and -- layer two and layer three, as this would require
15 a significant effort to rework a section of the model."

16 Do you agree with that statement?

17 A. This report is referring to version 1 -- or
18 the -- excuse me, the USGS original version of the
19 model that was published in 2016. This report was
20 written before the model was recalibrated and the -- to
21 the extent that I would agree with their statements in
22 here, Allan Wylie did revise the calibration of the
23 confining unit in version 1.1 of the model to correct
24 the deficiencies that were identified in this report,
25 and it is no longer applicable to the current model.

1 Q. Okay. So you said to the extent you agree
2 it was modified.

3 So tell me to what extent you don't agree
4 and how it was not modified.

5 A. I'm not sure specifically. It's been
6 awhile since I've looked at it. But Allan recalibrated
7 the model to be consistent with -- with Moreland's 1977
8 USGS delineation of the extent of the confined aquifer
9 and the confining unit, and it does extend considerably
10 further east than it did in this report.

11 If I recall correctly, I think they may
12 imply in this report that the confining layer should
13 have extended even further east. And I -- I -- if they
14 did, I would disagree with that.

15 Q. Okay. And I think the ultimate conclusion
16 of Dr. Brockway is that these three Picabo wells that
17 are identified -- Picabo Livestock wells that are
18 identified do not have an impact on flows in Silver
19 Creek because they are -- obtain their water from the
20 basalt layer below and they are cased into the basalt
21 layer so they don't pick up the water from the layers
22 above them.

23 And do you agree or disagree with that
24 conclusion?

25 A. I disagree with their conclusion, because

1 their conclusion was just based on that the vertical --
2 or the hydraulic conductivity of layer two was too high
3 in the first version of the model in the vicinity of
4 those wells, and they therefore assumed that the impact
5 would also -- would be two orders of magnitude less
6 because the conductivity was two orders of magnitude
7 too high. And that was not a valid assumption. So the
8 recalibrated model does represent that much lower
9 vertical hydraulic conductivity in layer two and still
10 shows that there's an impact to Silver Creek.

11 And the flaw in their reasoning there is
12 that they're assuming that the only way for pumping in
13 the confined aquifer to impact the unconfined aquifer,
14 and hence Silver Creek, is through transmission
15 directly vertically through the confining unit.

16 And that logic is flawed because the
17 confining layer has a limited extent, and these wells
18 are relatively close to the edge of it. And they --
19 their impacts propagate upgradient to where the
20 confined layer peters out and the unconfined aquifer's
21 connected directly to the confined aquifer.

22 So that's -- that's why even though we've
23 recalibrated the model to address their concerns about
24 having too high a conductance in layer two in that
25 area, you still do see the impacts to Silver Creek.

1 Q. Did you do a response function analysis on
2 these wells?

3 A. Yes, I did.

4 Q. What was the number that you found when
5 you -- that was just recently; right?

6 A. That was back in April sometime apparently,
7 March or April.

8 Q. Do you remember what the --

9 A. I don't remember that. We'd have to look
10 in the files --

11 Q. Was it --

12 A. -- for the specific POD.

13 Q. -- more than 1 percent?

14 A. Oh, yes.

15 Q. More than 10 percent?

16 A. I think so.

17 Q. More than 25 percent?

18 A. I don't think so.

19 MR. BARKER: Jennifer, thank you. You've been
20 more than patient with me today.

21 No further questions of the witness.

22 THE HEARING OFFICER: All right. Thank you,
23 Mr. Barker.

24 Mr. Laski or Ms. O'Leary, you're next.

25 ///

1 CROSS-EXAMINATION

2 BY MS. O'LEARY:

3 Q. Good afternoon, Ms. Sukow. My name's
4 Heather O'Leary. I am one of the attorneys for the
5 Galena Ground Water District, and I just have a few
6 questions for you this afternoon.

7 Mr. Barker asked you some questions about
8 the curtailment area identified in the memo that you
9 submitted to the Department earlier this year.

10 Do you recall that?

11 A. Yes.

12 Q. Okay. My understanding is that the
13 curtailment area identified in Figure 17 in your
14 memorandum is different than the curtailment area that
15 was originally identified in the Department's notice,
16 that May 4th, 2021 Notice of Administrative Proceeding.

17 Would you agree with that?

18 A. Yes.

19 Q. For instance, one of the changes would be
20 that the northern boundary line for the proposed
21 curtailment area was adjusted; right?

22 A. Yes.

23 Q. Can you explain to me why that boundary
24 line was changed.

25 A. I explained in my staff memo the rationale

1 for the boundary that I used. I was not involved in
2 drawing that other boundary, so I can't explain to you
3 why that was drawn where it was.

4 Q. Okay. And can you explain the rationale
5 for the reason why you drew the northern boundary line
6 in your Figure 17?

7 A. Yes. It was drawn at the location of the
8 model cell where Glendale Bridge crosses the Big Wood
9 River, which is the start of the dry bed, which is a
10 hydrologic feature where the riverbed is perched above
11 the aquifer.

12 Q. And what significance does that have?

13 A. The significance of that is that -- and
14 this isn't absolute, but north of that line groundwater
15 or aquifer stresses tend to -- the impact of aquifer
16 stresses tends to propagate to the Big Wood River above
17 the dry bed, whereas south of that line they tend to
18 propagate more to Silver Creek or the Big Wood River
19 below the dry bed.

20 Q. And is that conclusion based on research
21 that you've conducted?

22 A. That conclusion is based on -- it's based
23 primarily on model simulations.

24 MS. O'LEARY: May I approach, Director?

25 THE HEARING OFFICER: Sure.

1 Q. (BY MS. O'LEARY): Ms. Sukow, I'm going to
2 hand you -- I do believe you have this in your binder,
3 but for simplicity purposes, I'll represent this is
4 Exhibit 18 of the South Valley Ground Water District
5 and Galena Ground Water District's joint exhibits.

6 If you could just take a look at that map.
7 And I want to direct your attention to that northern
8 boundary line. And I'm just wondering, if you look at
9 two of the water rights specifically in the middle,
10 37-2557T and 37-2557D.

11 Do you see those two?

12 A. Uh-huh, yes.

13 Q. Can you explain to me if you performed any
14 type of analysis to determine the different impacts
15 that either of those water rights may have.

16 A. I did run -- as I mentioned earlier, I did
17 run transient response functions for layer one and
18 layer three for all of the cells in the Triangle that
19 have irrigation points of diversion, so those would
20 have been included in that group.

21 Q. Correct. And I understand that.

22 A. Yeah.

23 Q. I'm just wondering if there was a
24 difference between these two particular cells that has
25 any significance as to why one was included and one was

1 excluded from the proposed curtailment area. They look
2 like they're right next to each other.

3 A. They are very close. You know, the one
4 that's further south has a slightly higher response to
5 Silver Creek. But they -- the line -- I didn't draw
6 that line by looking at those response functions. I
7 drew the line at the model cell that includes Glendale
8 Bridge, and I drew a -- I just included all the model
9 cells in that row and went south from there. So that's
10 how the line was drawn.

11 Q. Do you recall what the difference in the
12 response function was between these two particular
13 cells?

14 A. No.

15 MS. O'LEARY: Director, I'd like to move to have
16 our South Valley Ground Water District and Galena
17 Ground Water District Exhibit 18 admitted.

18 THE HEARING OFFICER: And this is the map that
19 she's referring to?

20 MS. O'LEARY: Yes.

21 THE HEARING OFFICER: Okay. Any objection,
22 Mr. Fletcher?

23 MR. FLETCHER: No.

24 THE HEARING OFFICER: Mr. Rigby?

25 MR. RIGBY: No.

1 THE HEARING OFFICER: Mr. Barker?

2 MR. BARKER: No objection.

3 THE HEARING OFFICER: And Mr. Bromley and
4 Mr. Lawrence?

5 MR. BROMLEY: No.

6 MR. LAWRENCE: None.

7 THE HEARING OFFICER: Mr. Simpson?

8 MR. SIMPSON: No.

9 THE HEARING OFFICER: Mr. Moroney?

10 MR. MORONEY: No.

11 THE HEARING OFFICER: All right. Mr. Robertson?

12 MR. ROBERTSON: No, sir.

13 THE HEARING OFFICER: Mr. Semanko?

14 MR. SEMANKO: No.

15 THE HEARING OFFICER: Mr. O'Bannon?

16 MR. O'BANNON: No.

17 THE HEARING OFFICER: All right. The document
18 marked as -- is this a combined, then, South Valley and
19 Galena exhibit?

20 MS. O'LEARY: Yes, Director.

21 THE HEARING OFFICER: Numbered?

22 MS. O'LEARY: 18.

23 THE HEARING OFFICER: No. 18 is received into
24 evidence.

25 (SVGWD GGWD Exhibit 18 received.)

1 Q. (BY MS. O'LEARY): Ms. Sukow, I believe
2 that you testified earlier today through questioning
3 from Mr. Barker that you performed two simulations on
4 the model; is that correct?

5 A. I performed simulations for two different
6 areas. There are actually four simulations for each.
7 Sorry.

8 Q. Thank you for the clarification, yes.

9 A. Yes.

10 Q. You also mentioned a 99 percent benefit in
11 streamflow under that second simulated area; is that
12 right?

13 A. Yes.

14 Q. Okay. Were you instructed to look for a
15 99 percent benefit?

16 A. Not specifically.

17 Q. Can you elaborate on what you mean by "not
18 specifically."

19 A. I was asked to -- I was asked to delineate
20 areas that had minimal impact on Silver Creek, and run
21 a scenario without -- you know, that excluded those
22 areas. And I was not given any specific numeric
23 direction. And I decided that -- that approximately
24 99 percent was a good result, so that was what I did.

25 Q. And good in comparison to what?

1 A. Again, I wasn't given much direction, and
2 that's -- that was the way I chose to look at it. So
3 obviously, you know, you could run different areas and
4 come up with a lower percentage than that, or you could
5 try to get closer to 100 percent. That was just what
6 I -- what I decided to run with the -- with the little
7 direction I had.

8 Q. I'd like to direct your attention back, I
9 believe you have this in the binder -- or actually,
10 this is what Mr. Barker just had admitted as
11 Exhibit 36. It's the South Valley Ground Water
12 District and Galena Ground Water District Exhibit 36.
13 I believe it's that top piece of paper.

14 A. Oh, the e-mail, uh-huh.

15 Q. The e-mail. The first page, that last
16 sentence in the first paragraph -- this is from an
17 e-mail from you to Mr. Spackman and Mr. Baxter, dated
18 April 5th, 2021.

19 Do you see that?

20 A. Yes.

21 Q. Okay. The last sentence of the first
22 paragraph reads, "For what it's worth, curtailing just
23 within South Valley GWD boundaries would yield about
24 98 percent of the total in-season depletions to Silver
25 Creek."

1 Do you see that there?

2 A. Yes.

3 Q. We talked about your adjustment or your
4 particular choosing of where to put that northern
5 boundary line for the proposed curtailment area.

6 Was your particular placement of that
7 boundary line impacted at all by the goal of achieving
8 a 99 percent benefit, as opposed to the original
9 98 percent yield that you mentioned in your April 5th
10 e-mail?

11 A. Well, the April 5th e-mail was not --
12 achieving 98 percent wasn't a goal. That was just I --
13 at one point I had looked at, you know, whether or not
14 the South Valley Ground Water District boundary would
15 lend itself to, you know, being a -- a reasonable
16 boundary to use in a modeling scenario, because it's
17 already, you know, an administrative boundary for the
18 groundwater district. So it seemed like that would be
19 convenient.

20 Unfortunately, after I reviewed where the
21 boundary was drawn, it's very hard to justify, from a
22 modeling and hydrogeologic standpoint, using the
23 groundwater district boundary because of the shape of
24 the groundwater district boundary and because it
25 includes -- South Valley Ground Water District includes

1 a couple of outages from Galena Ground Water District
2 that are, you know, separate shapes. So they're not --
3 there's parts of the South Valley Ground Water District
4 that are not contiguous with the rest of it. So that
5 made it pretty hard to try to justify that that made
6 any sense at all from a modeling or scientific
7 standpoint.

8 Q. Okay. So you didn't run any simulations,
9 then, is it accurate to say, of just the South Valley
10 Ground Water District boundary area?

11 A. I did back in early April, it looks like,
12 is when I did that. And then I threw it out because I
13 didn't think I could -- that I could justify using that
14 from a scientific standpoint.

15 Q. Can you turn to the second-to-last page of
16 this document. It's labeled as page 3. This is an
17 e-mail from Gary Spackman to you, amongst other
18 Department staff, and it's dated Wednesday, March 24,
19 2021.

20 Are you with me?

21 A. Yes.

22 Q. Okay. The last sentence in this particular
23 e-mail says, "Also Tim, can we identify just those
24 water users who do not hold any AFRD No. 2 storage?"
25 And I understand that this sentence is prefaced towards

1 Tim, I'm assuming Tim Luke, but I'm just wondering if
2 you attempted to do any type of analysis as requested
3 in this sentence here?

4 A. No, I did not review anything about the
5 water users, with or without AFRD No. 2 storage.

6 Q. You've testified about various items
7 regarding response functions within the proposed
8 curtailment area today.

9 And I believe that you testified -- correct
10 me if I'm wrong -- that you calculated the response
11 functions for each well within the curtailment area; is
12 that correct?

13 A. For each model cell that had an irrigation
14 POD, I did a response function for both layer one and
15 layer three.

16 Q. Okay.

17 A. If they were -- if both those layers were
18 present.

19 Q. And that information was included in the
20 .shp files that you produced; is that correct?

21 A. It was included in the supporting files.

22 Q. Okay.

23 A. And there are .shp files within that, yes.

24 Q. Okay. You might have already touched on
25 this, and if you did, I apologize if I missed it, but

1 what time frame were the response functions in that
2 data? Was it a three-month response function?

3 A. No. Those were, I believe, a five-month,
4 May 1 to September 30th.

5 Q. Okay. So that -- those response functions
6 weren't the total response to river reaches over the
7 entire model time period, then?

8 A. No, they were just -- they were just what
9 would accrue at the end of five months, so that there's
10 still a significant amount of water left in aquifer
11 storage, and there would be additional increases in
12 reach gains to Silver Creek that occur after October 1.

13 Q. And when you're saying that you did the
14 response function for each model cell, do you know
15 which of those cells are connected to Galena Ground
16 Water members versus South Valley Ground Water members?

17 A. I -- no. I just did them based on where
18 there were irrigation water right points of diversion.
19 I did not look at which groundwater district they were
20 in, and I don't have any idea who's actually a member
21 or not a member either.

22 Q. Okay. Did you perform any type of analysis
23 on whether the response function decreases the further
24 north you are in the Bellevue Triangle?

25 A. The -- there is a response function .shp

1 file in the supporting files. And yes, generally
2 speaking, the response to Silver Creek decreases --
3 you're talking about north of -- maybe I should back up
4 and -- you're talking about at the north boundary or...

5 Q. Well, within the Bellevue Triangle.

6 A. Oh, okay.

7 Q. You start at the southern end of and move
8 your way north.

9 A. Oh, okay.

10 Q. I'm staying within the curtailment area.

11 My question is, is the further north you go
12 in that proposed curtailment area, does the response
13 function decrease?

14 A. Not if you -- if you start at the south
15 boundary, it gets more complicated than that, because
16 there's -- you know, depending on where you are on the
17 south end, it varies, and then you'll end up with a
18 place where it's increasing as you go north and then
19 starts decreasing in kind of a general sense, so...

20 Q. Do you know where that decrease starts? Is
21 there any geographic landmark that you could reference?

22 A. I don't know what you -- well, I mean
23 the -- the decrease occurs over a large area, so I'm
24 not sure what exactly you're referring to there.

25 Q. Sure. And maybe if you want to look at

1 that Exhibit 18 -- our Exhibit 18 --

2 A. Which is this [indicating]?

3 Q. -- on the front top of that table that we
4 were looking at earlier.

5 A. Okay.

6 Q. Just for point of reference, this grouping
7 of water rights within the curtailment area, just below
8 that northern boundary line, do you recall what the
9 response functions were for any of those particular
10 groundwater rights?

11 A. Not off the top of my head. But in this
12 area they are generally decreasing as you go northward.

13 Q. And so that means that these -- the less
14 response function, the less of an impact these rights
15 would have on Silver Creek; is that correct?

16 A. Well, within the five-month time frame. So
17 we haven't looked at what would happen if we ran it out
18 longer. You know, some of them as you go further
19 north, you have more water retained in storage. But
20 then you also have more impacts to the Big Wood River
21 above the dry bed. But within the -- within the time
22 period of looking at May 1st and what accrues through
23 September 30th, the ones that are further north have
24 less impact to Silver Creek.

25 Q. Okay. You were asked about gages at

1 Station 10 earlier today, and I believe you said that
2 there were two gages; is that correct?

3 A. There are -- my understanding is there are
4 two sensors there currently, yes.

5 Q. Okay.

6 A. Well, actually, there's three now, because
7 our staff just installed a new one last -- last week, I
8 think.

9 Q. Okay.

10 A. So...

11 Q. So you have the new Department.

12 And then what are the other two sensors?

13 A. There's the old Department one, which I
14 think we're -- ultimately the plan is to abandon that,
15 but it does have a temperature sensor that I think
16 we're planning to leave in there.

17 And then the other one is owned -- or the
18 other one is operated by Water District 37's
19 contractor. And I -- it's a different type of sensor,
20 and I don't recall the details on that.

21 Q. Okay. Now, correct me if I'm wrong. I
22 thought you testified that you had some concerns with
23 those sensors, and that one of the concerns you had was
24 that there were not adequate manual measurements to
25 calibrate; is that correct?

1 A. That's correct.

2 Q. Okay. So is it accurate to say that those
3 sensors are not calibrated, then?

4 A. Well, it's not that the sensors aren't
5 calibrated. It's that the sensors sense stage in the
6 river, so the height of the water. And then you need
7 manual measurements to develop what they call a rating
8 curve, which is basically an equation that says well,
9 if I have this height of water, this stage, how much
10 flow do I have. And since this is a rated section,
11 we're doing that by making frequent manual measurements
12 that you have a flow, and then you develop a
13 relationship between the flow and the stage.

14 And you have to have -- you know, the more
15 manual measurements you have, the better you're able to
16 quantify that relationship. And my understanding is,
17 particularly at low flows, there haven't been very many
18 manual measurements made at the Station 10 location.

19 Q. Okay. And that's why you're saying that
20 there's an inadequate amount of -- to calibrate?

21 A. Yeah. I guess, you know, I'm calling the
22 rated section the calibration, yes.

23 Q. Okay. And my question is -- and maybe I
24 took a roundabout way of getting there, but what I'm
25 trying to figure out is, is it standard for the

1 Department to rely upon uncalibrated measurements?

2 A. No. And I think I expressed in my staff
3 memo that I felt that the attempt to calculate seepage
4 losses between Sportsman's Access and Station 10 was --
5 I think the terminology I used was frustrated by the --
6 by, you know, measurement uncertainty at the --
7 particularly at the Station 10 gage location.

8 Q. Okay. But we are relying on those
9 measurements for this proceeding; is that not right?

10 A. I -- I am not -- I'm not sure what will be
11 relied on, I guess, out of that data. But that was the
12 best estimate I could come up with of seepage losses
13 with the data that was available.

14 Q. Okay. I mean there's no other data that's
15 been presented; right?

16 A. Right, yeah.

17 MS. O'LEARY: Okay. Director, those are all the
18 questions I have.

19 Thank you.

20 THE HEARING OFFICER: Thank you, Ms. O'Leary.

21 Mr. Moroney, you may question Ms. Sukow.

22

23 CROSS-EXAMINATION

24 BY MR. MORONEY:

25 Q. Good afternoon, Ms. Sukow. I'm Owen

1 Moroney, here representing the Idaho Department of Fish
2 and Game.

3 I wanted to start with some questions about
4 your staff memo, IDWR Exhibit 2.

5 Did the curtailment scenario you conducted
6 in that memo consider only consumptive groundwater
7 rights?

8 A. Yes.

9 Q. So curtailment of nonconsumptive rights was
10 specifically excluded from your analysis; correct?

11 A. That's correct.

12 Q. So in that memo, when I go to page 16, it
13 talks about only analyzing consumptive rights, it
14 doesn't mention nonconsumptive rights.

15 But the import of that should be that we're
16 not considering nonconsumptive rights; correct?

17 A. Correct.

18 Q. Are you generally familiar with the Idaho
19 Department of Fish and Game's fish production rights at
20 Hayspur Hatchery?

21 A. I am somewhat familiar with them.

22 Q. In your curtailment scenario, did you
23 specifically omit analyzing those nonconsumptive, those
24 rights, those fish production rights?

25 A. So in the Baseline run for the curtailment

1 scenario, which is the same as the model calibration
2 run, they are included, so there's pumping -- there's
3 groundwater pumping, and then there is return flow to
4 the creek that's included in the -- in the reach gain
5 calculations that offsets that. And we're assuming
6 that the same amount that's pumped is returned to the
7 creek.

8 And if they're truly nonconsumptive, then
9 there really is no impact in the curtailment scenario.
10 So no, they're not -- they're not modeled as being
11 curtailed.

12 Q. Okay. So thank you.

13 In general, when water is short and the
14 Department makes priority cuts, are nonconsumptive
15 priority rights included in those cuts?

16 A. I'm not the best person to ask that
17 question.

18 Q. All right. I understand that.

19 A. I don't usually -- yeah.

20 Q. So now turning to Fish and Game's specific
21 rights. I wanted to have you look at a couple of Fish
22 and Game's exhibits. They're in the black binders
23 behind the Director.

24 THE HEARING OFFICER: Well, I have several black
25 binders.

1 MR. MORONEY: I think all three of them,
2 actually.

3 MS. CARTER: They're separate.

4 Q. (BY MR. MORONEY): So you just said that
5 you're generally familiar with Fish and Game's fish
6 production rights at Hayspur Hatchery; correct?

7 A. Yes.

8 Q. If I have you turn to Exhibit 4, you should
9 see Water Right 37-08271.

10 Could you take a look at this right and let
11 me know if it's consumptive or nonconsumptive on the
12 face of the right.

13 A. It says, "Use shall be nonconsumptive."

14 MR. MORONEY: I move to admit IDFG Exhibit 4
15 into the record, Director.

16 THE HEARING OFFICER: Okay. Mr. Moroney, I'm
17 looking at this particular document, and at least the
18 label in the lower-right corner says IDFG 0239.

19 Is that a page number?

20 MR. MORONEY: That was our Bates numbers for the
21 exhibit. But I guess I'm referring to it by the tabs,
22 which should be tab No. 4.

23 THE HEARING OFFICER: Well, the document needs
24 to be marked, it seems to me, as Exhibit 4, IDFG
25 Exhibit 4. Do we have a label?

1 And while we're preparing the label, it
2 will be marked as Exhibit 4.

3 (IDFG Exhibit 4 marked.)

4 THE HEARING OFFICER: Mr. Fletcher, any
5 objection?

6 MR. FLETCHER: No, your Honor.

7 THE HEARING OFFICER: Mr. Rigby?

8 MR. RIGBY: No, your Honor.

9 THE HEARING OFFICER: Mr. Barker or
10 Mr. Thompson?

11 MR. THOMPSON: No.

12 THE HEARING OFFICER: Mr. Laski or O'Leary?

13 MR. LASKI: No.

14 THE HEARING OFFICER: Mr. Bromley?

15 MR. BROMLEY: No.

16 THE HEARING OFFICER: Mr. Lawrence?

17 MR. LAWRENCE: No.

18 THE HEARING OFFICER: Mr. Simpson?

19 Mr. Robertson?

20 MR. ROBERTSON: Well, my client's here now
21 seeing me in action while I've been sitting here all
22 day, and he thinks I ought to object to something. But
23 I'm not taking his advice. I have no objection.

24 THE HEARING OFFICER: Mr. Semanko?

25 MR. SEMANKO: None.

1 THE HEARING OFFICER: Mr. O'Bannon, if he's
2 still here? There he is.

3 Mr. Robertson, since your client is now
4 here, I want to call you out for not appearing in
5 proper attire today, along with the rest of us. And
6 we'll deal with some level of sanctions.

7 MR. ROBERTSON: I didn't want to put him to
8 shame, my client, that is, so I did not dress.

9 THE HEARING OFFICER: All right. The document
10 marked as IDFG No. 4 is received into evidence.

11 (IDFG Exhibit 4 received.)

12 THE HEARING OFFICER: Mr. Moroney.

13 Q. (BY MR. MORONEY): All right. Ms. Sukow,
14 next turning to the second of Fish and Game's three
15 groundwater rights at Hayspur. I have it tabbed as
16 Exhibit 6. It is Water Right No. 37-08331, Bates
17 numbered IDFG 0318.

18 Could you look at that right and tell me
19 whether it is consumptive or nonconsumptive on the face
20 of the right?

21 A. Yes. There is a condition that says,
22 "Shall be nonconsumptive."

23 MR. MORONEY: Director, could I move that IDFG
24 Exhibit 6 be admitted to the record.

25 THE HEARING OFFICER: We'll mark it as

1 Exhibit 6.

2 (IDFG Exhibit 6 marked.)

3 THE HEARING OFFICER: Mr. Fletcher?

4 MR. FLETCHER: No objection.

5 THE HEARING OFFICER: Mr. Rigby?

6 MR. RIGBY: No objection.

7 THE HEARING OFFICER: How about -- how about
8 just saying does anybody object? Let's move.

9 MR. RIGBY: Much better.

10 THE HEARING OFFICER: Does anybody object? I've
11 learned your names.

12 All right. The document marked as
13 Exhibit 6 received into evidence.

14 (IDFG Exhibit 6 received.)

15 THE HEARING OFFICER: Mr. Moroney.

16 Q. (BY MR. MORONEY): All right, Ms. Sukow.
17 Showing you the final, the third of Fish and Game's
18 groundwater rights at Hayspur Hatchery. I have it
19 marked as IDFG Exhibit 2. It's on Bates stamp page
20 IDFG 0118. The Water Right No. is 37-07038. So this
21 right I'm not going to ask you whether it has a
22 nonconsumptive use condition on its face, because it
23 doesn't.

24 But if I was to represent to you that this
25 right is commingled with the other two rights and used

1 in the same fish hatchery in the exact same way, would
2 you say it would be fair to say -- to assume that it
3 should also be labeled as nonconsumptive?

4 A. Yes, that was the assumption I made for
5 the -- for processing the model calibration inputs.

6 Q. So you specifically considered this right
7 as nonconsumptive in modeling curtailment?

8 A. Yeah, for modeling purposes. The only
9 purpose of use listed on it is fish propagation.

10 MR. MORONEY: All right, Director. Those are
11 all my questions for Ms. Sukow.

12 THE HEARING OFFICER: So do you wish to offer --

13 MR. MORONEY: Oh --

14 THE HEARING OFFICER: -- the exhibit?

15 MR. MORONEY: -- yes.

16 I move to admit IDFG Exhibit 2 into the
17 record.

18 THE HEARING OFFICER: Okay. It is so marked.

19 (IDFG Exhibit 2 marked.)

20 THE HEARING OFFICER: Does anyone object to this
21 water right or this document representing a Fish and
22 Game water right into the record?

23 Hearing none, it's received into evidence.
24 Thank you.

25 (IDFG Exhibit 2 received.)

1 THE HEARING OFFICER: Thank you, Mr. Moroney.

2 Now, we have -- we have now concluded the
3 cross-examination by group two, and we're ready to
4 start in with group three.

5 Is it an appropriate time for an afternoon
6 break, or should I wait until the start of the swing
7 shift because we're behind?

8 THE WITNESS: I could really use a bathroom
9 break, for what it's worth.

10 THE HEARING OFFICER: All right. Let's break
11 now for ten minutes. Come back at approximately
12 quarter to, a little after.

13 (Recess.)

14 THE HEARING OFFICER: Let's go back on the
15 record. We're back recording after the afternoon
16 break.

17 And based on our conversation,
18 Mr. Lawrence, you may examine Ms. Sukow, please.

19 MR. LAWRENCE: Thank you, Mr. Director.

20

21 CROSS-EXAMINATION

22 BY MR. LAWRENCE:

23 Q. Good afternoon, Ms. Sukow. My name is Mike
24 Lawrence. I'm an attorney for the City of Hailey.
25 Thank you for hanging in there with everybody this

1 afternoon. I know it's been long, and I'll try to be
2 brief.

3 Ms. Sukow, in your dialogue with Mr. Barker
4 earlier, to characterize or paraphrase what you said,
5 would it be fair to say that if you had more time that
6 you could refine or update the analysis in your
7 May 17th staff memo?

8 A. I think he was asking me specifically about
9 Allan Wylie's predictive uncertainty analysis. So no,
10 I wasn't talking about the analysis I did in my staff
11 memo.

12 Q. If I recall correctly, Mr. Barker asked you
13 if you could conduct an uncertainty analysis for your
14 specific curtailment runs described in your memo.

15 Do I recall that correctly?

16 A. Yes.

17 Q. And I recall you testifying that if you had
18 a few months, perhaps, you could do that?

19 A. Yes.

20 Q. And is it also correct that you have not
21 updated your analysis with any new information based on
22 Mr. Vincent's SWSI testimony that he gave this morning,
23 that there was a new SWSI update for June; is that
24 correct?

25 A. That's correct.

1 Q. And how long would it take for you to
2 update your model runs to find different analog years
3 based on the updated SWSI?

4 A. That would not take very long. We could do
5 a different analog year. And that analysis could be
6 done in a day.

7 Q. Have you been asked to do that?

8 A. No.

9 Q. Ms. Sukow, I'd like to turn to your
10 Figure 14, which is on page 16 of your staff memo. And
11 I recognize that Figure 14 in the memo itself is not
12 the correct version and that there is a different
13 version attached to the Director's pre-hearing order
14 and scheduling order.

15 Is that correct?

16 A. That's correct.

17 Q. Ms. Sukow, do you have a copy of the
18 updated table, Figure 14, in front of you?

19 A. Yes.

20 Q. Ms. Sukow, first, I noticed a difference
21 between the Figure 14 in your memo -- well, several
22 differences, but one that stuck out between it and the
23 one attached to the Director's order, and there's a
24 dot -- a legend that says, quote, "Simulated increase
25 in recharge" in the updated Figure 14.

1 Can you describe with a "Simulated increase
2 in recharge" means.

3 A. Well, a simulated curtailed consumptive use
4 is equivalent to simulating an increase in net
5 recharge.

6 Q. Okay. So is it safe to say that simulated
7 increase in recharge is the same as the volume of
8 curtailed consumptive use?

9 A. Yes.

10 Q. Okay. Thank you.

11 Sticking with Figure 14 briefly, I would
12 like to point your attention to the updated SWSI
13 information that was entered into the record as the
14 Department's Exhibit 5, IDWR 5. And I was wondering,
15 Ms. Sukow -- and I'll represent to you that the years
16 2012 and 2014 on your Figure 14, and when you look at
17 IDWR 5, those years have higher SWSIs than the 2002
18 year that you used.

19 Do you recognize that?

20 A. That is correct.

21 Q. However, on your Figure 14 there's a higher
22 volume of curtailed consumptive use in 22 -- 2012 and
23 2014, than in 2002, even though, based on the SWSI,
24 they should have had greater surface water supplies; is
25 that an accurate characterization?

1 A. That is true.

2 Q. Can you explain why there's higher
3 consumptive use volume for those years in your
4 Figure 14 than for Figure 2002 even though they
5 evidently were supposed to have better surface water
6 supplies.

7 A. I can explain some possible reasons that
8 that might have occurred. There -- you know, there
9 could have been changes in irrigation practices. There
10 could have been -- also, you know, there's the water
11 supply side, which the SWSI predicts, but SWSI doesn't
12 predict the water demand side, which is partly driven
13 by -- I mean it's partly driven by crops people grow,
14 but it's also partly driven by the weather during the
15 summer and how much evapotranspiration demand there is.

16 So -- so you might have -- you might have
17 years that have the same water supply, but one of them
18 might have a higher irrigation demand because -- either
19 because of the weather or because of the type of crops
20 people are growing.

21 Another difference between those years is
22 the type of data we had for evapotranspiration. And
23 that was one of the reasons I wanted to use -- I liked
24 using 2002 as a baseline year was that we do have
25 METRIC evapotranspiration data for 2002, which is what

1 we generally consider to be the best, most refined of
2 the evapotranspiration data sources we have.

3 2012 and -- well, 2014 we had ET derive --
4 evapotranspiration derived from NDVI, the Normalized
5 Difference Vegetation Index, which is considered to be
6 good but not as good as METRIC.

7 And 2012, if I recall correctly, involved
8 some more -- might have involved some more
9 interpolation methods to estimate the
10 evapotranspiration. So the datasets might also come
11 into play there on what the model computed the
12 consumptive use was.

13 Q. You mentioned that a factor may be the
14 irrigation practices, different irrigation practices
15 between the years?

16 A. That could be, yes.

17 Q. Have you examined those irrigation
18 practices and the differences between 2002, 2012, and
19 2014?

20 A. Not directly. To the extent that they --
21 you know, to the extent that they impact the diversions
22 and -- the surface water diversions and the
23 evapotranspiration data, that is hopefully reflected in
24 our dataset. But I have not inspected that at a
25 different level.

1 Q. Have you compared the irrigation practices
2 during those years with irrigation practices in 2021?

3 A. No.

4 Q. And you mentioned differences in water
5 demand perhaps being a factor as to why those years
6 have different volumes of consumptive use on your
7 Figure 14; is that correct?

8 A. That's a possibility, yes.

9 Q. And have you analyzed the differences in
10 water demand between those years?

11 A. No, I have not, not other than is reflected
12 in our evap- -- I mean that is probably what our
13 evapotranspiration dataset is -- is showing. But other
14 than -- other than processing those data, no.

15 Q. And have you analyzed those years versus
16 water demands in 2021?

17 A. No.

18 Q. You mentioned that 2002 used METRIC data;
19 is that correct?

20 A. Yes.

21 Q. And there is some level of uncertainty with
22 METRIC data, isn't that correct?

23 A. Yes.

24 Q. Do you have any idea what level of
25 uncertainty the METRIC data has?

1 A. I don't have a specific number for that,
2 no.

3 Q. And you also mentioned the NDVI, it also
4 has some uncertainty?

5 A. Yes.

6 Q. And any idea of the level of uncertainty?

7 A. No.

8 Q. Ms. Sukow, did you analyze whether water
9 resulting from curtailment of groundwater rights would
10 be available for diversion at the points of diversion
11 of any specific senior water rights?

12 A. No.

13 Q. And if -- would the model tell you that if
14 you asked it?

15 A. The model only tells you what accrues to
16 the -- the increase in reach gains above Sportsman's
17 Access. No, it does not tell you about conveyance
18 downstream or which surface water rights are next in
19 priority.

20 Q. Turning to the model uncertainty, I know
21 that's been discussed a lot today, and I believe you
22 testified that the Wylie report concluded that in the
23 Bellevue Triangle we're looking at plus or minus
24 22 percent uncertainty; is that correct?

25 A. That is correct for the specific locations

1 he analyzed.

2 Q. And those locations -- that uncertainty
3 analysis is based on two points within the Bellevue
4 Triangle; is that correct?

5 A. There was a third point that I think I
6 would have characterized as also being in the Bellevue
7 Triangle.

8 Q. Whether it's two or three points in the
9 Bellevue Triangle, are those -- those are called stress
10 points, I believe? Is that how you'd characterize
11 them?

12 A. They are the point at which he applied
13 stress in his simulation, yes.

14 Q. Would the relatively -- sorry, uncertainty
15 analysis conducted at those points correspond to all
16 other points within the Bellevue Triangle?

17 A. No. Each prediction is specific to that
18 individual prediction.

19 Q. So we know, based on two or three points in
20 or near the Bellevue Triangle, uncertainty of
21 22 percent plus or minus at those specific points?

22 A. Well, there were two points that were plus
23 or minus 22 percent and one that was plus or minus, I
24 believe, 15 percent.

25 Q. And those values are -- relate only to

1 those specific points and not everywhere within the
2 Bellevue Triangle; correct?

3 A. Correct.

4 Q. And do we know what the uncertainty is at
5 every other point within the Bellevue Triangle?

6 A. No.

7 Q. You mentioned that the difference between
8 Mr. Wylie's analysis that there's 22 percent plus or
9 minus predictive uncertainty is based on the
10 ten-month -- ten-month dataset or a ten-month model
11 run -- I don't know how you say it -- but you did only
12 a three-month simulation; is that correct?

13 A. For the curtailment scenarios beginning
14 July 1st, yes, those are a three-month simulation.

15 Q. And your three-month simulation you said
16 may have higher uncertainty than plus or minus
17 22 percent?

18 A. It may.

19 Q. Okay. And just to clarify, does that mean
20 the information in your Tables 1 and 2 in your memo
21 where you lay out your simulations for full model
22 curtailment and also the curtailment in the smaller
23 area, that means that those values in those tables can
24 be off by 22 percent or more; is that correct?

25 A. With a 95 percent confidence interval,

1 which actually is a fairly high bar, yes.

2 Q. So you're 95 percent confident that those
3 figures are within 22 percent plus or minus?

4 A. Again, we can't necessarily apply that
5 22 percent to that prediction, because those are for
6 the specific predictions Allan ran. But if they were,
7 yeah, that would be what we were saying.

8 Q. I understand. Earlier you and Mr. Barker
9 were talking about seepage losses between Sportsman's
10 Access gage and Little Wood River gage Station No. 10,
11 and I believe your report states that those may range
12 from 20 percent to 37 percent of the inflow to the
13 reach; is that right?

14 A. Yes.

15 Q. So I understand, then, does that mean that
16 up to 30 percent of the water entering that reach from
17 curtailing groundwater pumping might be lost to seepage
18 and never be available for diversion by surface water
19 users?

20 A. Well, that depends on where the surface
21 water users are, because some of them are -- some of
22 the surface water users on Silver Creek are upstream of
23 where those losses occur. So up until Sportsman's
24 Access it's gaining, between Sportsman's Access and
25 Highway 20 the measurements we've collected during

1 model development suggest that there's not any
2 significant loss in that reach. The measured gains and
3 losses have been less than the measurement error of the
4 streamflow measurements.

5 So -- so based on the information
6 available, and we all think the losses are occurring
7 somewhere between Highway 20 and Station 10. So water
8 users that are upstream of those losses might have all
9 of that available to them. Water users that are
10 further down, to deliver water to them might incur up
11 to that, you know, 30-ish percent loss rate.

12 Q. So depending where a point of diversion is
13 along that reach, there may be losses of up to
14 37 percent before it reaches that point of diversion?

15 A. There may be, yes, if they're down
16 Station 10 or below.

17 Q. And therefore, say an acre-foot of
18 groundwater pumping or consumptive use curtailed to
19 supply that right, would be diminished by 37 percent,
20 perhaps up to 37 percent, before it made it to one of
21 those points of diversion?

22 A. The amount of water that accrues to the
23 Silver Creek reach gain could be reduced by up to
24 37 percent before it reaches the downstream water user.

25 Q. Ms. Sukow, did your analysis look at how

1 groundwater pumping inside or outside the potential
2 area of curtailment affects any particular water
3 rights?

4 A. I didn't -- I looked at reach gains not
5 specific water rights.

6 Q. So you have not analyzed -- I think I've
7 already asked this, perhaps -- whether groundwater
8 pumping -- water resulting from curtailed groundwater
9 pumping would benefit any particular senior water
10 right?

11 A. No.

12 Q. So is it fair to say that you did not
13 analyze actual or material injury to any particular
14 water rights?

15 A. It's fair to say that.

16 Q. Did you analyze whether in 2021 any water
17 rights will use water efficiently and without waste?

18 A. No.

19 Q. Did you analyze the amount of water that
20 actually will be available in 2021 and the source from
21 which a water right is diverted?

22 A. No.

23 Q. Did you analyze the effort or expense of
24 the holder of a water right to divert water from their
25 source in 2021?

1 A. No.

2 Q. Did you analyze whether the exercise of
3 junior-priority groundwater rights, individually or
4 collectively, affects the quantity and timing of water
5 available to any particular senior-priority surface or
6 ground water right in 2021?

7 A. I analyzed whether they collectively
8 affected the amount of water available in the river
9 reach, but not to specific water right, senior water
10 rights.

11 Q. And did you analyze whether the exercise of
12 a junior-priority groundwater right, individually or
13 collectively, will affect the cost of exercising any
14 particular senior surface or groundwater right?

15 A. No.

16 Q. Did you analyze for the 2021 irrigation
17 season the rate of diversion compared to the acreage of
18 lands served by any senior-priority irrigation rights?

19 A. No.

20 Q. Or for the '21 -- 2021 irrigation season,
21 did you analyze the volume of water diverted by any
22 senior-priority irrigation right?

23 A. No.

24 Q. And same for the 2021 irrigation season,
25 did you analyze the system diversion or conveyance

1 efficiency of any senior-priority irrigation rights?

2 A. No.

3 Q. And again, have you analyzed the method of
4 irrigation water application by any senior-priority
5 water rights?

6 A. No.

7 Q. Did you for the 2021 irrigation season
8 analyze the amount of water being diverted and used
9 compared to the water rights?

10 A. I'm sorry. Repeat that.

11 Q. For the 2021 irrigation season, did you
12 compare the amount of water being -- actually being
13 diverted and used compared to the water rights?

14 A. No.

15 Q. And did you analyze the existence of water
16 measuring and recording devices?

17 A. No.

18 Q. And for this 2021 irrigation season, did
19 you analyze the extent to which a senior-priority water
20 right could be met with the user's existing facilities
21 and water supplies by employing reasonable diversion
22 conveyance efficiency and conservation practices?

23 A. No.

24 Q. And finally, for the 2021 irrigation
25 seasonal, did you analyze the extent to which the

1 requirements of senior-priority surface water rights
2 could be met using alternate reasonable means of
3 diversion or alternate points of diversion?

4 A. No.

5 MR. LAWRENCE: That's all my questions.
6 Appreciate it. Thank you, Ms. Sukow.

7 THE HEARING OFFICER: Thank you, Mr. Lawrence.

8 Mr. Simpson, do you have questions?

9 MR. SIMPSON: No questions.

10 THE HEARING OFFICER: Mr. Robertson?

11 MR. ROBERTSON: No.

12 THE HEARING OFFICER: Mr. Semanko?

13 MR. SEMANKO: No.

14 THE HEARING OFFICER: Mr. O'Bannon?

15 MR. O'BANNON: No.

16 THE HEARING OFFICER: Redirect.

17 Ms. Carter?

18 MS. CARTER: I have nothing.

19 THE HEARING OFFICER: Nothing on redirect.

20 Now, this brings us, I guess, to a
21 particular juncture. These were Department witnesses.
22 And I suppose Ms. Sukow could be subject to being
23 recalled, Mr. Fletcher, Mr. Rigby or others. So we
24 could either allow some redirect of her if you have a
25 desire or -- now or we could wait.

1 What's your preference?

2 MR. RIGBY: I just have a few.

3 THE HEARING OFFICER: Mr. Fletcher, do you have
4 questions?

5 MR. FLETCHER: I don't think so.

6 THE HEARING OFFICER: All right. Let's go one
7 more round. Let's try -- let's try combining if we can
8 to get through this witness.

9 Mr. --

10 MR. RIGBY: Combining?

11 THE HEARING OFFICER: Well, what I'm saying is
12 that we could separate and she could be recalled.

13 MR. RIGBY: Got it.

14 THE HEARING OFFICER: But let's combine it all
15 together, if we can.

16 So, Mr. Rigby, redirect.

17 MR. RIGBY: Thank you, Mr. Director.

18

19 REDIRECT EXAMINATION

20 BY MR. RIGBY:

21 Q. Ms. Sukow, a great number of questions have
22 been asked of you concerning the uncertainty of the
23 model and an uncertainty analysis; correct?

24 A. Correct.

25 Q. My question to you is, there's clearly

1 uncertainty with all models; correct?

2 A. Correct.

3 Q. And therefore, in fact when we talk about
4 the uncertainty, whatever percentage that might be,
5 it's a plus or minus; correct?

6 A. Correct.

7 Q. Meaning that it could actually be more
8 impactful to the flows in the river than what you've
9 predicted, as well as less impactful; correct?

10 A. Correct.

11 Q. I can skip all that.

12 Furthermore, it's -- the question was asked
13 of you of more work to be done.

14 Isn't that, again, very true of every model
15 you've worked with?

16 A. Yes.

17 Q. Models are an ever-evolving system and
18 process, are they not?

19 A. Yes.

20 Q. There's also the question asked of you,
21 stabilization of the aquifer from '91 by Mr. Barker.

22 Do you recall that line of questioning?

23 A. Yes.

24 Q. Well, isn't it correct to say by that
25 stabilization, that that stabilization took into

1 account the junior pumping that has occurred, and if it
2 were conjunctive management, would be out of priority,
3 meaning that they are pumping and impacting the
4 seniors?

5 A. Yes. I mean the -- the stabilization of
6 the water levels does not in any way mean that there is
7 not an impact of the junior groundwater pumping.

8 Q. Thank you. That was going to be my next
9 question.

10 So in other words, that really isn't
11 relevant to the issue we have before us, is it?

12 A. It's not -- it's not relevant to predicting
13 the hydrologic response in Silver Creek to a
14 curtailment of groundwater use. That's -- you know,
15 that's what we designed the model to do, and clearly
16 the model shows there is an impact, even though the
17 model is using water level -- those water-level data,
18 you know, from that same time period, so yeah.

19 Q. And again, getting back only because
20 there's been so much -- so many questions concerning
21 uncertainties and percentages and everything else, I
22 believe your testimony was, especially this particular
23 year and because of the drought, and this is the year
24 we're focusing on, that the curtailment would cause
25 significant increase in flows say at the Sportsman

1 Access; correct?

2 A. That is what the model predicts, yes.

3 Q. And therefore, even though -- just assume
4 for a moment we add some more percentages to the
5 uncertainty, doesn't the fact that this particular
6 year, with this particular drought, cause you to feel
7 even more secure in saying that it will in fact and
8 indeed impact the flows significantly?

9 A. Yes.

10 Q. So again, for another year or for a
11 long-term issue to be resolved, the model needs to be
12 worked on, the model needs to be -- there needs to be
13 more input? For this particular purpose that's why I
14 ask this question. Is that correct? I mean do you
15 understand it the same way?

16 A. I guess I'm not sure what the question is.

17 Q. Yeah, you're right. That was a -- I
18 didn't -- I was making a statement or I was testifying.

19 The fact that for this particular year and
20 this particular drought that we're involved with, then
21 this -- the percentages of what you could narrow in the
22 future by adding to the model, by improving the model
23 doesn't change the outcome of a significant impact to
24 the river?

25 A. I mean I guess my -- you know, my point on

1 that about the comment that more work needs to be done,
2 it -- we can certainly improve a future version of the
3 model by recalibrating with additional data that we've
4 been collecting since 2014. But I think Allan's
5 conclusion -- and I would agree with it -- is that the
6 current model is -- is the best available tool we have
7 to make a prediction for this year, and that it is good
8 enough to use for that purpose.

9 Q. And therefore, a curtailment based upon the
10 model, in your estimation, if that were done, do you
11 think that would be justified?

12 MR. BARKER: Objection. Calls for a legal
13 conclusion. She hasn't had any ability to testify
14 about injury or anything other than what the impact of
15 curtailment would have on the flows in Silver Creek.

16 THE HEARING OFFICER: Sustained.

17 Q. (BY MR. RIGBY): Concerning the lack of the
18 manual measurements for the Station 10 that you
19 testified to, are there ranges of flow that are more
20 representative than others, and are the majority of
21 flows anticipated to occur in these ranges? Do you
22 understand the question? So if there -- because you
23 don't have the manual measurements for Station 10,
24 would there be different ranges within those flows that
25 would be more representative and be able to be better

1 for your analysis, and would most of those flows that
2 would be representative occur in those other ranges?

3 A. I don't think so. My personal opinion is I
4 think the data -- the dataset is pretty poor at this
5 point.

6 Q. Pretty part?

7 A. Pretty poor.

8 Q. Pretty poor.

9 A. The dataset.

10 Q. Okay. So your analysis to date, though, is
11 based upon, again, what? Because you don't have the
12 actual physical measurements.

13 A. Well, so my analysis here was based on the
14 watermaster's record of Station 10, which is, to my
15 knowledge, based on the rating curve established by his
16 contractor with what measurements he has taken. And I
17 have not personally reviewed those.

18 The measurements at Silver Creek at
19 Sportsman's Access, that's a USGS gage. They have a
20 very good QA/QC program and a good program of making
21 the manual measurements to make the rating curves
22 there, so I have more confidence in that. There is
23 still gage error. There always is.

24 Then we also have the large number of
25 diversions that occur between those two points. I

1 don't really have any idea what measurement error might
2 be associated with those particular measurements,
3 generally.

4 MR. RIGBY: Very good. Thank you. Appreciate
5 it.

6 THE HEARING OFFICER: Thank you, Mr. Rigby.

7 Mr. Fletcher, questions?

8 MR. FLETCHER: No, thank you.

9 THE HEARING OFFICER: Okay. Mr. Barker,
10 questions?

11 MR. BARKER: I'll pass.

12 THE HEARING OFFICER: Ms. O'Leary?

13 MS. O'LEARY: No, Director.

14 THE HEARING OFFICER: And Mr. Moroney?

15 MR. MORONEY: No, Director.

16 THE HEARING OFFICER: Mr. Lawrence?

17 MR. LAWRENCE: Nothing. Thank you.

18 THE HEARING OFFICER: Any others?

19 All right. Thank you, Jennifer. And I
20 want to personally thank you for the long time sitting
21 in the witness chair and a grueling experience that it
22 is, you're becoming more and more seasoned. So --

23 MR. BARKER: Does she get tomorrow off?

24 THE HEARING OFFICER: Thank you.

25 Pardon me, Mr. Robertson.

1 MR. ROBERTSON: I said yes, I agree.

2 THE HEARING OFFICER: Yeah, I personally am glad
3 to have competent, scientific people who I rely on a
4 great deal.

5 Thank you, Jennifer.

6 Okay. Ms. Carter.

7 MS. CARTER: Phil Blankenau.

8 THE HEARING OFFICER: Is Phil here? Oh, he is
9 in the back.

10 Phil, if you'll come forward, please.
11 Raise your right hand if you would.

12
13 PHILIP BLANKENAU,
14 having been called as a witness by the Department and
15 first duly sworn, testified as follows:

16
17 THE HEARING OFFICER: Please be seated.

18 And far as I know this is the first
19 opportunity for Phil Blankenau to testify as an expert
20 witness for the Department, at least I'll characterize
21 him that way.

22 So take the gloves off, folks.

23 MR. RIGBY: Take them off?

24 THE HEARING OFFICER: Yeah, sure.

25 All right. Ms. Carter.

1 DIRECT EXAMINATION

2 BY MS. CARTER:

3 Q. Please state your full name and spell it
4 for the record.5 A. Full name is Philip Blankenau, P-h-i-l-i-p,
6 Blankenau is spelled B-l-a-n-k-e-n-a-u.7 Q. And you are an employee of the Department
8 of Water Resources; correct?

9 A. Correct.

10 Q. And what is your current job title?

11 A. Evapotranspiration analyst.

12 Q. And what are your responsibilities in this
13 position?14 A. Primarily modeling ET and interpreting ET
15 data, and then I also do remote sensing work for the
16 Department.17 Q. And how long have you worked in this
18 position?

19 A. About a year and nine months.

20 Q. And prior to your current position at the
21 Department, what position did you hold?22 A. I worked as a research engineer at the
23 University of Nebraska in Lincoln.

24 Q. And what did you do in this position?

25 A. I primarily worked on the METRIC remote

1 sensing ET model. And it was a different version of
2 the model than is used here, but very similar. And I
3 worked with actually the developer of METRIC,
4 Dr. Richard Allen.

5 Q. How long did you work in that position?

6 A. I worked in that position for about two
7 years.

8 Q. And what is your college education?

9 A. I have a bachelor's and master's in civil
10 engineering from the University of Nebraska.

11 Q. And do you have any particular emphasis in
12 your civil engineering education?

13 A. Water resources, focus in water resources.

14 Q. What professional credentials do you have?

15 A. I'm an engineer in training. So I've
16 passed my fundamentals exam.

17 Q. And do you have any publications that are
18 relevant to our discussions today?

19 A. I do have a publication in the field of ET,
20 a peer-reviewed publication.

21 Q. Okay. And did you prepare a memo
22 discussing evapotranspiration in the Wood River Basin?

23 A. Yes.

24 Q. I am going to hand you what's labeled IDWR
25 Exhibit 3.

1 Is Exhibit 3 the memo that you prepared?

2 A. It is.

3 Q. And why did you prepare this memo?

4 A. I prepared this memo in response to the
5 Director's request for staff memoranda, and in
6 particular item 10B, which, paraphrasing, requested
7 that ET for water right places of use be examined for
8 years of adequate water supply and years of reduced
9 water supply.

10 Q. And in your memo you start out by
11 mentioning METRIC.

12 Could you tell me what METRIC is.

13 A. METRIC is a remote sensing model for
14 mapping evapotranspiration spatially.

15 Q. And let's talk about, what is ET,
16 evapotranspiration?

17 A. It's the sum of plant transpiration and
18 evaporation.

19 Q. Okay. And how did you use ET In your
20 analysis for the memo?

21 A. So the idea behind looking at ET is that ET
22 represents or is equivalent to consumptive use. So if
23 a field shows a very low ET value, then there's reason
24 to believe that it doesn't have a sufficient supply of
25 water.

1 Q. All right. And you talk about different
2 types of ET in your memo.

3 Could you tell me what estimated actual ET
4 is.

5 A. It's a confusing term. "Actual ET" just
6 means that the model is attempting to estimate the ET
7 that's actually occurring, wherever we're looking with
8 the model. And then the estimated portion is just to
9 say that it's a model, so it's an estimate.

10 And that's contrasted with potential ET.
11 So reference ET is sometimes considered to be a
12 potential ET, and that's kind of like a maximum ET
13 rate.

14 Q. Okay. And then in your memo you discuss
15 different areas you used for comparison.

16 What were those different areas?

17 A. I looked at five different areas. I looked
18 at the -- an area called the Richfield area, and of
19 course that's near the town of Richfield, and the north
20 Shoshone area. Both of those areas are primarily fed
21 by Magic Reservoir.

22 And then I looked at the area of potential
23 curtailment, which was essentially, in my analysis,
24 just the groundwater rights within the area of
25 potential curtailment.

1 And then I looked at the set of surface
2 water rights along Silver Creek and the Little Wood
3 identified by Tim Luke in his memo.

4 And then lastly I looked at an area called
5 AFRD2. It's not the entire service area of AFRD2, but
6 it was used as kind of a baseline area because it -- we
7 thought it would have a good water supply, a solid
8 water supply.

9 Q. And how did you select those areas to
10 compare?

11 A. Tim Luke had a lot of input. I think the
12 thinking behind selecting those areas was that, as I
13 was talking about some of them, we expected to have a
14 secure water supply, a more reliable water supply.

15 So the AFRD area gets its water primarily
16 from the Snake River. And we thought that area would
17 have a good water supply. So it kind of started as a
18 baseline. And then also the area of potential
19 curtailment, since it's using groundwater, it should be
20 a more secure water supply.

21 The Richfield and north Shoshone areas we
22 had reason to believe that in previous years those
23 areas had been short of water. So those were selected
24 to kind of see what METRIC could see.

25 And then of course, the area along Silver

1 Creek and the Little Wood is the subject of these
2 proceedings.

3 Q. And you discussed in your memo different
4 years of analysis.

5 What were those years and what were their
6 significance?

7 A. So I was a little hemmed in by data
8 availability. But I selected 2011, 2013, and 2016.
9 And 2011 was an above median SWSI year, according to
10 the April SWSI. And then 2013 was a below median SWSI
11 year. And then 2016 was near median.

12 Q. And you mentioned that observed differences
13 in METRIC ET could be the result of many variables.

14 What are those variables?

15 A. Let me see if I can name the bulk of them.
16 Of course, water supply, variables that affect water
17 supply. So that would be precipitation and irrigation.

18 And then on the demand side we have
19 weather. So weather kind of dictates the atmospheric
20 demand for water. Weather also is going to dictate
21 whether there's, you know, frost or it's going to kind
22 of let you know how long the growing season is in that
23 particular year.

24 There's going to be differences due to
25 soil, due to fertilization, other on-farm practices,

1 cuttings, planting dates, harvest dates, and of course
2 pests and disease, as well as just uncertainty in the
3 model.

4 Q. What were the results of your comparisons
5 in 2011, your above median water year?

6 A. Fields -- and I only looked at alfalfa
7 fields. Fields in all areas had ETrF values, that's a
8 fraction of referenced ET values. And that can be
9 interpreted as a crop coefficient. They all had
10 reasonably high values. So I didn't have any reason to
11 think that there was a water supply issue in 2011 in
12 any of the areas.

13 Q. So you mentioned a couple of things I want
14 to clarify before I move on. You said that "ETrF
15 functions as a crop coefficient."

16 What exactly do you mean by "crop
17 coefficient"?

18 A. So a crop coefficient is used to multiply
19 by a potential evapotranspiration value to scale it,
20 scale it to a particular crop or a crop at a particular
21 growth stage.

22 Q. Okay. And then you also said that you only
23 looked at alfalfa fields.

24 Could you tell me why.

25 A. Different crops have different water

1 requirements. And so I wanted to remove that as a
2 variable, because it would -- I think if you looked at
3 all different crops at the same time, it would
4 introduce additional noise into the data.

5 Q. Okay. So let's go back to your
6 comparisons.

7 What were the results in 2016, your near
8 median water year?

9 A. 2016 was pretty similar to 2011. I thought
10 all the areas looked reasonably similar. And none of
11 the areas seemed to have very low ETrF values,
12 generally speaking.

13 Q. I'm sorry. Could you say that last thing
14 again. What had low ETrF values?

15 A. None of the areas had very low ETrF values,
16 generally speaking.

17 Q. Okay. So then finally the results of your
18 comparisons in 2013, your below median water year.

19 A. 2013 differed from 2011 and 2016, mainly in
20 the Richfield and north Shoshone areas. And those
21 areas showed a widespread and deep decrease in ETrF.
22 And because it was widespread and a large decrease, I
23 thought it could be surmised that that was a water
24 supply issue. Those areas were short of water.

25 And additional evidence that they were

1 short of water comes from a USGS gage below Magic
2 Reservoir that showed that the last release date was at
3 the end of June. And then if you look at the plots in
4 my memorandum for 2013, the ETrF values really begin to
5 diminish in July.

6 Q. And did you see a similar trend in the
7 Little Wood and Silver Creek area?

8 A. That was -- I did not see that trend in the
9 Little Wood and Silver Creek area. But I would note
10 that I, in this analysis, wasn't going to call an area
11 water-short unless it was pretty clearly water-short.

12 So I think in my memo I talk about how it's
13 possible that individual fields could have water supply
14 issues, but this analysis I don't think is sensitive
15 enough to detect that.

16 MS. CARTER: Okay, thank you.

17 Mr. Spackman, I move to admit IDWR
18 Exhibit 3 into the record.

19 THE HEARING OFFICER: Any objection from the
20 gallery?

21 MR. LAWRENCE: No objection.

22 MR. BARKER: No objection.

23 THE HEARING OFFICER: All right. The document
24 marked as IDWR No. 3 is received into evidence. Thank
25 you.

1 (IDWR Exhibit 3 received.)

2 MS. CARTER: That's all I have.

3 THE HEARING OFFICER: Okay. Mr. Rigby or
4 Mr. Fletcher, questions?

5

6 CROSS-EXAMINATION

7 BY MR. RIGBY:

8 Q. Mr. Blankenau, is that correct? Good
9 afternoon. Jerry Rigby, representing the Big Wood and
10 Little Wood senior surface water users. I only have a
11 couple of questions for you.

12 First of all, have you been able to see the
13 SWSI that just came out for June?

14 A. I looked at it briefly.

15 Q. Okay. So in any analysis that you would
16 have conducted had you had that, what impact would that
17 have had?

18 A. It may have changed where I was looking, at
19 what year I was looking at for my dry year. And I was
20 really hemmed in by the data I had to look at. And I
21 believe 2013 -- actually back in -- even the April SWSI
22 had a better water supply than this year at that point
23 in time. And, you know, things have only gotten worse,
24 so...

25 Q. Therefore, is it fair to say that if you

1 had the SWSI, then your concern or your finding of
2 no -- the trend below -- and I forgot the -- what is
3 the point you used below saying that you did not see a
4 lower coefficient?

5 A. I don't think I mentioned a specific number
6 in the memorandum.

7 Q. Would this have impacted the lower river?
8 I guess that's what I'm asking.

9 A. The lower river?

10 Q. Yes.

11 A. You're talking about Silver Creek and the
12 Little Wood?

13 Q. That's correct.

14 A. I -- I can't say.

15 Q. Without running it, you wouldn't know?

16 A. Yeah.

17 Q. Okay. Does your analysis reported in your
18 staff memo allow you to render an opinion regarding the
19 average percent of return flows or a range of
20 reasonable return flows in the potential area of
21 curtailment?

22 A. It does not cover that at all.

23 MR. RIGBY: Okay. I don't think I have any
24 further questions, Mr. Director.

25 THE HEARING OFFICER: Thank you, Mr. Rigby.

1 Mr. Fletcher, questions?

2 MR. FLETCHER: Mr. Rigby covered the issue I
3 wanted to talk about.

4 THE HEARING OFFICER: Okay. Thank you.

5 Mr. Barker?

6 MR. BARKER: Thank you, Mr. Director.

7

8 CROSS-EXAMINATION

9 BY MR. BARKER:

10 Q. Albert Barker on behalf of the South Valley
11 Ground Water District.

12 Phil, how are you today?

13 A. Pretty good.

14 Q. A couple quick questions for you.

15 When you ran your analysis using the 2013
16 water year, you found essentially no water shortage in
17 the Little Wood and Silver Creek area based on ET
18 analysis; is that right?

19 A. Not that I could see with this analysis.

20 Q. Okay. And you said that there were some
21 low ETrF numbers in the Little Wood that were -- can be
22 plausibly explained by causes other than a water
23 shortage; right?

24 A. Yes.

25 MR. BARKER: Thank you.

1 THE HEARING OFFICER: Ms. O'Leary?

2 MS. O'LEARY: Nothing, Director.

3 THE HEARING OFFICER: Okay. Mr. Moroney?

4 MR. MORONEY: Nothing, Director.

5 THE HEARING OFFICER: Okay. Group three.

6 Chris?

7 Mr. Lawrence?

8 MR. BROMLEY: Mr. Lawrence.

9

10 CROSS-EXAMINATION

11 BY MR. LAWRENCE:

12 Q. Good afternoon, Phil.

13 Thank you, Mr. Director.

14 Good afternoon, Phil. We met the other day
15 at your deposition. I'm Mike Lawrence. I'm an
16 attorney for the City of Hailey. I just have, I think,
17 a few questions for you.

18 In your memo you say that insufficient
19 water supply can cause diminished ET rates that should
20 be observable in METRIC; correct?

21 A. Correct.

22 Q. What else can cause diminished ET rates?

23 A. A big one is cuttings, in the case of
24 alfalfa. But anything that would affect the health of
25 the crop could affect ET rates.

1 Q. Did you do any field-by-field analysis of
2 alfalfa cuttings, for instance, or any other variable
3 that might affect ET?

4 A. What kind of analysis.

5 Q. Any analysis in your memo or for this
6 proceeding.

7 A. I think I just mentioned that alfalfa, the
8 cuttings introduced maybe more variability in the data
9 than the crops that don't see cuttings.

10 Q. You would agree that soil types can also
11 affect ET?

12 A. Yes.

13 Q. Did you conduct any field-by-field analysis
14 of the fields and the areas you looked at for soil
15 types affecting ET?

16 A. No.

17 Q. How about field-by-field analysis of pests
18 affecting ET?

19 A. I did not.

20 Q. A field-by-field analysis of disease
21 affecting ET?

22 A. Nope.

23 Q. A field-by-field analysis of fertilization
24 affecting ET?

25 A. No.

1 Q. A field-by-field analysis of local weather
2 affecting ET?

3 A. That is accounted for using reference ET.

4 Q. That is -- that is accounted for within the
5 METRIC model; is that what you mean?

6 A. Yes. The variability in ET over the domain
7 is partly dictated by local weather. And reference ET
8 represents the atmospheric demand for the water vapor.
9 And so by dividing the actual ET by the reference ET,
10 I'm factoring out weather, essentially.

11 Q. Did you conduct any field-by-field analysis
12 of actual irrigation for the years that you analyzed?

13 A. Can you repeat that?

14 Q. Did you conduct any analysis of
15 field-by-field irrigation practices for the years that
16 you've analyzed?

17 A. No.

18 Q. Would you agree that those matters that we
19 just discussed, alfalfa cutting, soil types, pests,
20 disease, fertilization, irrigation, those can all --
21 actual irrigation, those can all affect observable ET?

22 A. Yes. Those are all factors.

23 Q. If we could look in your memo. It should
24 be in front of you. I'd like to turn to page 7,
25 Figure 2.

1 This figure shows your ETrF analysis
2 throughout the irrigation season for these various
3 areas in an above median year, according to the SWSI
4 analysis Mr. Vincent conducted; correct?

5 A. Correct.

6 Q. And so I'm clear, there appears to be some
7 values in this figure that are -- show that the ETrF is
8 up near 1.0, that would be the full amount of water
9 necessary for alfalfa; is that correct?

10 A. That would be a very healthy ET Rate.

11 Q. For an alfalfa crop?

12 A. For an alfalfa crop.

13 Q. How do you explain, for instance, under
14 month five that there are many fields -- this would be
15 in May -- that are at .4, .6 instead of 1.0? Wouldn't
16 that be a time of year where there would be substantial
17 water supply?

18 A. It would be, but there tends to be more
19 variation early on in the season in ETrF because --
20 mainly because different fields are greening up at
21 different rates. They have different amounts of
22 vegetative cover.

23 Q. Would you agree that the range of ETrF
24 values displayed on Figure 2 demonstrate that there are
25 other variables aside from water supply that affect the

1 observable ET?

2 A. You're saying that Figure 2 demonstrates
3 that there's other variables that affect --

4 Q. It illustrates that there's other variables
5 involved in water supply; would you agree?

6 A. It doesn't -- yeah, sure. I'll agree.

7 Q. If we could turn the next page, Figure 3,
8 page 8.

9 A. Can I take a step back?

10 I mean it doesn't show that -- you know,
11 how the other variables are affecting. We don't know
12 exactly what's causing the variation in this plot.

13 Q. Is it --

14 A. We know already, though, that there are
15 other variables that affect ET.

16 Q. But it's your conclusion that your analysis
17 shows or demonstrates that there's insufficient water
18 supply in a below median SWSI year; is that correct?

19 A. In 2013 for the Richfield and north
20 Shoshone areas, yes.

21 Q. But you'd also agree that there are other
22 variables involved shown on these tables?

23 A. Yes.

24 Q. Okay. If you could turn the page to
25 Figure 3, page 8.

1 Figure 3 is your analysis of the ETrF in
2 2013, which is the below median SWSI year that was
3 found by Mr. Vincent to be an analog year to 2021; is
4 that correct?

5 A. I don't think he identified 2013 as an
6 analog year, but it was a below median SWSI year that I
7 had the data I needed to run the analysis for.

8 Q. Okay. Okay. So he might have had a
9 different analog year, but you could get data for 2013,
10 and it was also a below median SWSI year; is that
11 correct?

12 A. Correct.

13 Q. Okay. I don't know if you were present for
14 Mr. Vincent's testimony, but I'll represent to you that
15 Mr. Vincent testified that he found a correlation
16 between the SWSI values for the Big Wood River gage
17 above Hailey and the water supplies in Silver Creek and
18 Little Wood River.

19 Are you aware of that testimony?

20 A. I think I heard that part of it.

21 Q. If that's the case, that there is a
22 correlation between the Big Wood River above Hailey
23 SWSI and Little Wood and Silver Creek flows, how do you
24 explain that this is a below median SWSI, yet the
25 Little Wood and Silver Creek has above -- or some of

1 the higher ETrF values in Figure 3?

2 A. I'm not sure how I would explain that.

3 Q. If you could just quickly turn to page 10.

4 At the very top you list five scenarios explaining how
5 your analysis, quote, "might err regarding water
6 supplied to individual fields," unquote.

7 These variables or these five scenarios
8 listed here, these might create uncertainty in your
9 analysis in addition to the uncertainty presented by
10 the other variables that we discussed earlier, soil
11 types and disease and pests and so on; is that correct?

12 A. I think I did mention model error. That's
13 point No. 5. The others are, yeah, I think maybe
14 separate from that list.

15 Q. Okay. Did you analyze actual or material
16 injury to any particular water rights?

17 A. This was not an analysis of injury.

18 Q. Did you analyze whether in 2021 water
19 rights will use water efficiently and without waste?

20 A. No.

21 Q. And did you analyze the amount of water
22 actually available in 2021 and the source from which a
23 water right might be diverted?

24 A. No.

25 Q. And did you analyze the effort or expense

1 of a holder of a water right to divert water from its
2 source in 2021?

3 A. No.

4 Q. Did you analyze whether the exercise of
5 junior priority groundwater rights, individually or
6 collectively, affects the quantity and timing of water
7 available to any particular senior-priority surface or
8 groundwater right in 2021?

9 A. It was not in my memo.

10 Q. Did you analyze whether the exercise of
11 junior-priority groundwater rights, individually or
12 collectively, will affect the cost of exercising any
13 particular senior-priority surface or groundwater right
14 in 2021?

15 A. Could you repeat that one?

16 Q. Did you analyze whether the exercise of
17 junior-priority groundwater rights, individually or
18 collectively, will affect the cost of exercising any
19 particular senior-priority surface or groundwater right
20 in 2021?

21 A. No.

22 Q. For the 2021 irrigation season, did you
23 analyze the rate of diversion compared to the acreage
24 of land served by any senior-priority irrigation
25 rights?

1 A. No.

2 Q. For the 2021 irrigation season, did you
3 analyze the annual volume of water diverted by any
4 senior-priority irrigation rights?

5 A. No.

6 Q. For 2021 did you analyze the system
7 diversion and conveyance efficiency of any
8 senior-priority irrigation rights?

9 A. No.

10 Q. And for 2021 irrigation season, did you
11 analyze the method of irrigation water application at
12 any particular field?

13 A. No.

14 Q. Did you analyze for the 2021 irrigation
15 season the amount of water being diverted and used
16 compared to water -- the water right?

17 A. Could you repeat the last question again?

18 Q. Did you analyze for the 2021 irrigation
19 season the method of irrigation water application at
20 any particular field?

21 A. No.

22 Q. For the 2021 irrigation season, did you
23 analyze the amount of water being diverted and used
24 compared to the water right?

25 A. No.

1 Q. Did you analyze for the 2021 irrigation
2 season the existence of water measuring and recording
3 devices?

4 A. No.

5 Q. Did you analyze for the 2021 irrigation
6 season the extent to which the requirements of the
7 holder of a senior-priority water right could be met
8 with the user's existing facilities and water supplies
9 by employing reasonable diversion and conveyance
10 efficiency and conservation practices?

11 A. No.

12 Q. Finally, did you analyze for the 2021
13 irrigation season the extent to which the requirements
14 of the senior-priority surface water right could be met
15 using alternate, reasonable means of diversion or
16 alternate points of diversion?

17 A. No.

18 MR. LAWRENCE: That's all my questions. Thank
19 you very much. Appreciate it.

20 THE HEARING OFFICER: Thank you, Mr. Lawrence.
21 Mr. Simpson?

22 MR. SIMPSON: No questions.

23 THE HEARING OFFICER: Mr. Robertson?

24 MR. ROBERTSON: No questions.

25 THE HEARING OFFICER: Mr. Semanko?

1 MR. SEMANKO: No.

2 THE HEARING OFFICER: Mr. O'Bannon?

3 MR. O'BANNON: No questions.

4 THE HEARING OFFICER: Redirect, Ms. Carter?

5 MS. CARTER: No further questions.

6 THE HEARING OFFICER: Redirect, Mr. Rigby?

7 Mr. Fletcher.

8 MR. RIGBY: No.

9 THE HEARING OFFICER: Because there isn't any
10 more redirect, I think we're finished. Thank you,
11 Mr. Blankenau.

12 And we're at five minutes to 5:00. There's
13 a small matter of cleanup that I need to work through.
14 And I need to revisit the joint parties' request for
15 official notice.

16 And as I worked through this morning, I was
17 referring to a summary. And as I referred to it, I
18 misinterpreted some of my bullet points. So let me go
19 back. And I'll work directly from the document for the
20 joint request, just so it's clear.

21 So there were six items that were
22 requested. And again, I misinterpreted. Somebody's
23 looking at my notes. So I'll again look at the joint
24 request for official notice.

25 So the first one was "All agenda, notes,

1 minutes, meeting material of the Big Wood Groundwater
2 Management Area Advisory Committee available at links
3 on the Department's website."

4 And the ruling was that I would take
5 official notice of these documents but would ask that
6 if some of these documents are being discussed that
7 they be introduced, so that we at least know what's
8 being referred to.

9 Then I have several, 2 through 5, as
10 categorized by Mr. Lawrence. And these are all related
11 to the Modeling Technical Advisory Committee or design
12 documents, flow model files, and, again, groundwater
13 flow model design reference material.

14 And I ruled that I would not take official
15 notice of these documents and that the documents need
16 to be introduced as exhibits.

17 And then No. 6 is "All related documents,
18 files, and back-files in the Department's records for
19 water rights listed in Attachment A to Tim Luke's
20 memorandum." And I took official notice of those
21 documents.

22 So I'm sorry for the confusion. I honestly
23 had thought in looking at my notes that some of the
24 references to the model, and documents related to the
25 model, were referring to the documents that were

1 produced during meeting of the Big Wood Groundwater
2 Management Advisory Committee.

3 So anyway, I'm sorry for the confusion. I
4 hope at least I've clarified what the ruling is.

5 Are there questions about it?

6 MR. FLETCHER: What is the ruling? Are you --
7 did you grant all of those?

8 THE HEARING OFFICER: No. Let me go back to the
9 motion, the joint request again.

10 MR. FLETCHER: Okay.

11 THE HEARING OFFICER: So this is the document
12 that was filed jointly. And so No. 1, "All agenda,
13 notes, minutes, and meeting materials of the Big Wood
14 Groundwater Management Area Advisory Committee."

15 And I said I would take notice of these but
16 asked the parties as they introduced documents that
17 they mark them and they come in as an exhibit. That's
18 helpful to me.

19 And then 2 through 5 were documents
20 related -- again, referring to this document, they were
21 related to the modeling -- so agenda, notes, minutes of
22 the Wood River Valley Modeling Technical Advisory
23 Committee, Wood River Groundwater Flow Model design
24 documents, Wood River Valley Groundwater Model flow
25 files, and Wood River Valley Groundwater Flow Model

1 design reference material. So that's 2 through 5.

2 And I did not take official notice of those
3 documents. So those need to be marked and come into
4 the record.

5 And I will tell you that part of the reason
6 is that I don't want to be responsible for all of
7 those, many of which I may not even understand. And so
8 I -- you know, somebody needs to lay a foundation and
9 explain during examination why that particular document
10 is important.

11 And then No. 5 -- or No. 6, I'm sorry, is
12 all related documents that are water right documents in
13 the files of the Department. And I took official
14 notice of those. At least those that -- and I need to
15 clarify, that are listed in Attachment A to Tim Luke's
16 May 17th, 2021 memorandum.

17 So No. 1 and 6 I took notice of. Nos. 2
18 through 5 I did not take notice.

19 MR. FLETCHER: Thank you.

20 THE HEARING OFFICER: Yep.

21 And I hope that helps, because I was not
22 clear this morning.

23 Okay. I saw Mr. Luke in the back. I think
24 he exited.

25 Or is he here still?

1 So he must have gotten the message that
2 we'll start with him tomorrow morning.

3 What time do you want to start? Do you
4 want to start earlier than 9:00? All right. Well, I
5 do. Let's start at 8:30.

6 8:30?

7 MR. THOMPSON: Yeah, Mr. Director.

8 THE HEARING OFFICER: Huh?

9 MR. THOMPSON: Question.

10 THE HEARING OFFICER: Yeah.

11 MR. THOMPSON: Do you guys have a list for
12 tomorrow, too, after Tim, an order?

13 MR. RIGBY: Not yet. We will in the morning.

14 MR. THOMPSON: Okay.

15 MR. BARKER: So we'll just --

16 THE HEARING OFFICER: You're asking for a list
17 of who will be examined?

18 MR. THOMPSON: The sequence.

19 MR. RIGBY: No, they all will be examined.

20 THE HEARING OFFICER: Oh, okay.

21 MR. RIGBY: They want an order.

22 THE HEARING OFFICER: The order? Okay.

23 MR. BARKER: Want to know who's up, yeah.

24 So we're just going to do this on the day
25 of, is that the plan?

1 MR. RIGBY: Well, we haven't decided that yet.
2 We'll do that tonight. I can get it to you tonight.

3 MR. BARKER: That would be helpful.

4 MR. THOMPSON: Yeah.

5 MR. RIGBY: Okay.

6 THE HEARING OFFICER: Any other questions?

7 Mr. Bromley?

8 MR. BROMLEY: I have one housekeeping matter,
9 Director --

10 THE HEARING OFFICER: Okay.

11 MR. BROMLEY: -- that I was curious about.

12 On May 21st Sun Valley Company, City of
13 Bellevue, City of Hailey, City of Ketchum, we filed a
14 request for information related to staff memoranda
15 related to the four staff memos, three of which are now
16 in the record. We have not seen a response to that
17 information request.

18 I'm just curious if we're going to see one
19 or if we won't.

20 THE HEARING OFFICER: Oh, I'll take it up with
21 staff. Maybe it's just one of those in the flurry of
22 what's come in that we missed. I don't know.

23 Meghan, do you know?

24 We'll look at it.

25 MR. BROMLEY: Thank you.

1 THE HEARING OFFICER: Again, it came in on
2 May 21st, or that's when it was e-mailed?

3 MR. BROMLEY: It was filed on May 21st, and it's
4 on the website received May 21st at 1607.

5 THE HEARING OFFICER: Okay. All right. Well,
6 certainly we want to be responsive. And if we haven't
7 been, I apologize. So even for those in group three.

8 All right. We'll see you tomorrow morning
9 at 8:30.

10 (Hearing adjourned at 5:03 p.m.)

11 -oOo-

1 REPORTER'S CERTIFICATE

2 I, JEFF LaMAR, CSR No. 640, Certified Shorthand
3 Reporter, certify:

4 That the foregoing proceedings were taken before
5 me at the time and place therein set forth, at which
6 time the witness was put under oath by me.

7 That the testimony and all objections made were
8 recorded stenographically by me and transcribed by me
9 or under my direction.

10 That the foregoing is a true and correct record
11 of all testimony given, to the best of my ability.

12 I further certify that I am not a relative or
13 employee of any attorney or party, nor am I financially
14 interested in the action.

15 IN WITNESS WHEREOF, I set my hand and seal this
16 15th day of June, 2021.

17
18
19
20


21 JEFF LaMAR, CSR NO. 640

22 Notary Public

23 Post Office Box 2636

24 Boise, Idaho 83701-2636

25 My commission expires December 30, 2023

	100:8;249:3,4	90:5,8;186:23	affects (4) 80:23;223:2;224:4;254:6
/	accrue (4) 120:1;129:4,15;198:9	addressed (5) 24:1,22;89:8;101:4;122:15	affidavit (2) 29:12;30:5
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BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF BASIN 37) DOCKET No.
ADMINISTRATIVE PROCEEDING) AA-WRA-2021-001
_____))

VOLUME II
(Pages 265-412)

BEFORE

HEARING OFFICER: GARY SPACKMAN

Date: June 8, 2021 - 8:32 a.m.

Location: Idaho Department of Water Resources
322 East Front Street
Boise, Idaho

REPORTED BY:
COLLEEN P. DOHERTY, CSR 345
Notary Public

APPEARANCES:

For the South Valley Ground Water District:

BARKER ROSHOLT & SIMPSON, LLP

BY MR. ALBERT P. BARKER

MR. TRAVIS L. THOMPSON

163 Second Avenue West

Post Office Box 2139

Twin Falls, Idaho 83301

apb@idahowaters.com

tlr@idahowaters.com

For Galena Ground Water District:

LAWSON LASKI CLARK, PLLC

BY MR. JAMES R. LASKI

MS. HEATHER E. O'LEARY

Post Office Box 3310

Ketchum, Idaho 83340-3310

jrl@lawsonlaski.com

heo@lawsonlaski.com

For Big Wood Canal Company:

FLETCHER LAW OFFICE

BY MR. W. KENT FLETCHER

Post Office Box 248

Burley, Idaho 83318

wkf@pmt.org

APPEARANCES (Continued):

For Big Wood and Little Wood Water Users Association:

RIGBY, ANDRUS & RIGBY, CHARTERED

BY MR. JERRY R. RIGBY

MR. CHASE T. HENDRICKS

25 North Second East

Rexburg, Idaho 83440

irigbv@rex-law.com

chendricks@rex-law.com

For Idaho Department of Fish and Game:

OFFICE OF ATTORNEY GENERAL

BY MR. OWEN E. MORONEY

Post Office Box 83720

Boise, Idaho 83720-0010

owen.moroney@ag.idaho.gov

For Sun Valley Company:

McHUGH BROMLEY, PLLC

BY MR. CHRIS M. BROMLEY

MS. CANDICE M. McHUGH

380 S. 4th Street, Suite 103

Boise, Idaho 83702

cbromley@mchughbromley.com

cmchugh@mchughbromley.com

///

APPEARANCES (Continued):

For City of Hailey:

GIVENS PURSLEY LLP
BY MR. MICHAEL P. LAWRENCE
601 West Bannock Street
Boise, Idaho 83702
mpl@givenspursley.com

For Idaho Power Company:

BARKER, ROSHOLT & SIMPSON LLP
BY MR. JOHN K. SIMPSON
1010 West Jefferson, Suite 102
Post Office Box 2139
Boise, Idaho 83701-2139
jks@idahowaters.com

For Idaho Department of Water Resources:

OFFICE OF ATTORNEY GENERAL
IDAHO DEPARTMENT OF WATER RESOURCES
BY MS. MEGHAN CARTER
MR. GARRICK BAXTER
322 East Front Street
Boise, Idaho 83720
meghan.carter@idwr.idaho.gov
garrick.baxter@idwr.idaho.gov

///

APPEARANCES (Continued):

For Eagle Creek Irrigation Company:

PARSONS BEHLE & LATIMER

BY MR. NORMAN M. SEMANKO

800 West Main Street, Suite 1300

Boise, Idaho 83702

nsemanko@parsonsbehle.com

For City of Ketchum:

WHITE, PETERSON, GIGRAY & NICHOLS, P.A.

BY MR. BRIAN T. O'BANNON

5700 East Franklin Road, Suite 200

Nampa, Idaho 83687-7901

bobannon@whitepeterson.com

For Sun Valley Water and Sewer District, Eccles Window
Rock Ranch LLC, and Picabo Livestock, Inc.:

ROBERTSON & SLETTE PLLC

BY MR. J. EVAN ROBERTSON

Post Office Box 1906

Twin Falls, Idaho 83303

erobertson@rsidaholaw.com

Also Present:

Megan Jenkins, IDWR Staff

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4 - Tim Luke Staff Memorandum	***	381
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1 - Memorandum Decision and Order	***	318
3 - 1991 Big Wood River Ground Water Management Order	***	304
4 - Preliminary Order Creating Big Wood, Little Wood Water Measurement, 9/21/2011	***	309
5 - Preliminary Order Adding Ground Water to District 37	***	313
6 - Minidoka Project Contract, AFRD2, 9/21/1927	***	321
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10 - Contract No. 14-06-100-6031, 1962	***	327
11 - AFRD2 Big Wood Canal Company Operating Agreement, 3/30/1962	***	329
19 - Meeting Minutes, Big Wood River Ground Water Management Advisory Committee, 11/4/2020	***	350
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8 - Notice of Potential Curtailment of ESPA, 11/2/2009	357	357
9 - Notice of Potential Curtailment of ESPA, 1/28/2014	358	358
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13 - Memorandum Processing Application Memo, 5/20/1992	361	361
15 - Shelley Keen Administrator's Memorandum Application Processing No. 77, IDFG 0375-379	362	362
16 - Allan Wylie's Wood River Valley Aquifer Model, Version 1.1, Uncertainty Analysis	353	353

1 THE HEARING OFFICER: Okay. It is 8:30.
2 Let's see. Do we have anything that we need to talk
3 about this morning?

4 I think I wanted to address just before we
5 start, Chris Bromley, your inquiry about a request for
6 information or documents about staff memoranda. And I
7 think Meghan has looked at that and sent out an inquiry.

8 Meghan, do you have --

9 MS. CARTER: I did speak with Mr. Bromley this
10 morning about that. Staff is working on it. I know
11 that we'll have at least one later on this morning, if
12 not several this afternoon. And I will be getting those
13 out as soon as we get full information from each
14 individual staff.

15 THE HEARING OFFICER: Okay.

16 MS. CARTER: So I will wait until they are all
17 in just --

18 THE HEARING OFFICER: Well, I apologize for
19 our delinquency. So I can't do much else but say, I'm
20 sorry. We'll send it as soon as we gather it.

21 MR. BROMLEY: Thank you.

22 THE HEARING OFFICER: Okay. Are we ready to
23 start? Let's begin.

24 So this is Day 2 of a contested case hearing
25 for administrative proceeding regarding the

1 administration of water in the Big Wood River Basin, and
2 in particular in the Bellevue triangle and the impacts
3 of ground water pumping on Silver Creek and its
4 tributaries. And we finished yesterday with Phil
5 Blankenau, Department witness.

6 And I see Tim Luke is here today, and he
7 knows, he's done this enough times he just automatically
8 walked to the witness chair without being called. So
9 anyway, thanks, Tim, for being here.

10 Anything else we need to talk about before Tim
11 is called as a witness and testifies? Anybody?

12 TIM LUKE,
13 first duly sworn to tell the truth relating to said
14 cause, testified as follows:

15 THE HEARING OFFICER: Please be seated.

16 Ms. Carter, you may examine Mr. Luke.

17 DIRECT EXAMINATION

18 QUESTIONS BY MS. CARTER:

19 Q. Good morning. Would you please state your
20 full name and spell it for the record.

21 A. First and last name?

22 Q. Yes, please.

23 A. Tim Luke, T-i-m, L-u-k-e.

24 Q. And you are an employee of the Idaho
25 Department of Water Resources; correct?

1 A. Yes.

2 Q. What is your current job title?

3 A. Current what?

4 Q. Job title.

5 A. Water compliance bureau chief.

6 Q. And what are your responsibilities in this
7 position?

8 A. Manage and oversee up to 19 staff in five
9 separate programs within the Bureau, including water
10 distribution, which works a lot with water districts and
11 water measurement programs; ground water protection
12 section, which permits well construction and licensing
13 of well drillers, and also permitting of underground
14 injection control wells; stream channel alteration
15 program, which permits stream channel alterations; flood
16 plain management unit, one person unit that assists with
17 administration of national flood insurance program in
18 the state; and a water right enforcement coordinator
19 that does enforcement activities across those programs,
20 and general water rights enforcement.

21 Q. And so as you supervise all of those different
22 programs, what involvement do you have regarding water
23 distribution, and specifically some of the topics that
24 we'll be talking about today?

25 A. Well, that's related to our water distribution

1 area, and so administration or administrative matters
2 and operations of water districts, water delivery
3 disputes, guidance to watermasters, training of
4 watermasters, compliance with water measurement
5 requirements. I've worked off and on over the years
6 with creation and modification of water districts, water
7 district assistance.

8 Q. And how long have you been in your current
9 position?

10 A. About ten years.

11 Q. And prior to your current position, what
12 position did you hold?

13 A. I was the water distribution section manager.

14 Q. And how long were you in that position?

15 A. I think about 13 years.

16 Q. Did you hold any other positions at IDWR prior
17 to that?

18 A. Yes, I worked as a water right agent, senior
19 water right agent, I think the staff hydrologist.

20 Q. And what is your college education?

21 A. I have a bachelor's degree in geography from
22 West Virginia University, and a master of science in
23 geography from the University of Idaho.

24 Q. And did you prepare a memo discussing water
25 deliveries in the Wood River Basin?

1 A. Yes.

2 Q. Hand you a copy of IDWR Exhibit 4. And is
3 that Exhibit 4 the memo you prepared?

4 A. Yes.

5 Q. And why did you prepare this memo?

6 A. It's in response to the Director's request for
7 staff memorandum in the matter of Basin 37
8 administrative hearing. There were ten items on that
9 request. I addressed three to four of those that
10 aligned or overlapped with my area of responsibilities.

11 Q. And in front of you next to the binders is the
12 scheduling order for this matter.

13 A. Yes.

14 Q. On page 5 of that order, there is a correction
15 to your staff memo. Do you recognize that?

16 A. Yes.

17 Q. And what is that correction?

18 A. That's a correction to part of the memorandum.
19 There was just -- it's giving an example of water right
20 priority cuts in Water District 37, and it's got a
21 couple of typos specifically with the dates, so we
22 changed. An example, I had an incorrectly put May 15th,
23 1885, and it should have been 1884. And then I was
24 referencing the next priority right, and I should have
25 said junior-priority right instead of senior.

1 Q. Okay. Thank you. Did you notice after the
2 scheduling order went out, any other errors in your
3 staff memo?

4 A. Yes, I did. There were a few.

5 Q. Could you tell us what those are?

6 A. Yes, I'm going to go to my original copy where
7 I noted those. So on page 9, the sentence above Figure
8 3, just right above Figure 3, the very end it says, "Big
9 Wood Canal Company also holds a 1920 priority right for
10 87 cfs. That should be 69.3 cfs. The 87 cfs is for the
11 1905 priority right, which I mentioned in the prior
12 sentence.

13 THE HEARING OFFICER: What's the number again,
14 Tim?

15 THE WITNESS: 67.3 -- or I'm sorry. I got new
16 eyes here. I just had cataracts -- 69.3.

17 THE HEARING OFFICER: Thank you.

18 THE WITNESS: The following page, page 10,
19 right below Table 1 and above Figure 4 in the paragraph
20 in between the two items, the second sentence says,
21 "Note that the cumulative rate of diversion by priority
22 is generally greater than the Little Wood River." I
23 should have probably put in "Silver Creek." So it
24 should read, "Note that the cumulative rate of diversion
25 by priority on Silver Creek."

1 On page 12, fifth paragraph below Table 2, the
2 second sentence reads, "Three days later on July 12, the
3 September 1983 -- I'm sorry -- "Three days later on July
4 12 to September 9, 1883 priority rights were cut,
5 followed by cuts to the April," it reads "1886." It
6 should read "1883 priority rights." I think that error
7 was noted in my deposition by Mr. Barker.

8 Page 18, under item 9, third paragraph, a
9 reference to Figure 1 should be Figure 5, which is on
10 page 19. And on page 21, in the very first sentence, it
11 reads, "The 2021 predicted April SWSI value of negative
12 2.7 published by the NRCS is based on a SWSI analysis
13 period from 1981 to present." It should read "1991."
14 And that's all I had.

15 MS. CARTER: Okay.

16 MS. McHUGH: Can I ask a clarifying question
17 on that last one? Could you explain again what page
18 that was on, Tim? I can't find it.

19 THE WITNESS: It was on page 21.

20 THE HEARING OFFICER: I didn't hear the
21 inquiry, Ms. McHugh.

22 MS. McHUGH: We couldn't find the correction
23 because our page 21 wasn't --

24 THE HEARING OFFICER: So page 21.

25 THE WITNESS: Item 10 (A) beginning of the

1 fourth paragraph.

2 MS. MCHUGH: Oh, thank you. That's what we
3 missed.

4 MR. BROMLEY: I thought you said first.

5 MS. MCHUGH: I thought you said first as well,
6 so...

7 THE WITNESS: Sorry.

8 MS. MCHUGH: And could you explain the
9 correction again? Sorry.

10 THE WITNESS: Yeah. Where it says the
11 "analysis period from 1981 to present." It should say
12 "1991 to present." You are not seeing it?

13 Q. (BY MS. CARTER) All right. Thank you.
14 So --

15 MS. MCHUGH: One other clarifying question,
16 Mr. Luke, and for the record. The Exhibit 4 that you
17 are entering into the record, is it a corrected exhibit,
18 or is it the old exhibit with interlineations with
19 corrections, or do we have to compare the old -- the
20 original Exhibit 4 to the corrections that you just made
21 on the record?

22 MS. CARTER: Currently we just have the
23 original staff memo with the corrections made on the
24 record.

25 MS. MCHUGH: Okay.

1 THE HEARING OFFICER: So the corrections are
2 handwritten?

3 MS. CARTER: Yes.

4 THE HEARING OFFICER: Okay.

5 MS. MCHUGH: So the original document that
6 Mr. Luke is going to testify to has handwritten
7 corrections in it?

8 MS. CARTER: At this point, yes.

9 MS. MCHUGH: Okay.

10 MS. CARTER: I have not had the opportunity to
11 meet with Mr. Luke on the specifics of his corrections
12 to get an updated document.

13 MS. MCHUGH: Okay. Thank you.

14 THE HEARING OFFICER: What do you intend to
15 do?

16 MS. CARTER: I can work with Mr. Luke on that,
17 and get those corrections made. And we can submit the
18 corrected document in the record tomorrow.

19 THE HEARING OFFICER: Would it be helpful if
20 we also asked Ms. Sukow to change hers so we're not
21 referring back and forth to any graph that some may
22 interpret in using, though it's not correct?

23 MS. CARTER: I can certainly do that.

24 THE HEARING OFFICER: Thank you.

25 MS. MCHUGH: It may be just as easy to take

1 his interlineated document and give us copies, so we all
2 had the actual interlineated document, I mean, that he's
3 actually testifying to. I mean, that would also be an
4 option, so just to make it clear for the record.

5 THE HEARING OFFICER: Well, whatever
6 Ms. Carter wants to do. If those written corrections
7 are in the document, that's fine. But I am concerned
8 about Jennifer Sukow's staff memo, in the fact that the
9 graph contained in there is not correct. And some may
10 inadvertently refer to it. So I think we should correct
11 her memo to include the graph that's accurate.

12 MS. CARTER: I will ensure that happens.

13 THE HEARING OFFICER: Thank you.

14 Q. (BY MS. CARTER) So let's turn back to the
15 substance of your memo. You discuss surface water
16 deliveries in the Little Wood River and Silver Creek
17 area. Starting on page 11, you talk about variability
18 and water right priority deliveries. Focusing on Silver
19 Creek would you walk me through that variability?

20 A. Yes. The request for memorandum asks for some
21 summary of variability in priority right deliveries on a
22 good year, an average year, and a water short year. So
23 this part of the memo just selected three years. The
24 three years I selected were consistent with the three
25 years selected by Mr. Blankenau in his memo. And I did

1 that because he had already done it, and so for
2 consistency purposes. And two, I had looked at those
3 years, and went through the SWSI tables and verified
4 that each of those years fit within the categories of a
5 good year, above normal year, a normal year, and a below
6 normal year, or dry year, or a water short year.

7 And that's summarized in the Table 2 on page
8 12. And so you'll see that I show the streamflow April
9 to September in thousands of acre-feet as reported in
10 the SWSI tables, along with the 30-year ranking for the
11 period 1991 to 2020. And just commenting on the good,
12 normal, and water short years. So those are just
13 examples.

14 And then I just summarized the priority
15 deliveries in those three years, and attached tables
16 from the watermaster reports, the annual reports from
17 Water District 37, for each of those three years. Those
18 are on pages on 14, 15, and 16 of the memo. So it will
19 show the different levels of priority cuts, not just on
20 Silver Creek and Little Wood River, but the other
21 systems or reaches of the Big Wood River as well within
22 the water district.

23 Q. And you also talk in your memo about Condition
24 161 or the exchange condition. Could you explain what
25 that is?

1 A. Yes. So that is a condition that's placed on
2 a number of water rights in Water District 37 having a
3 source of either the Big Wood or the Little Wood River
4 with points of diversions and places of use below the
5 Milner Gooding Canal. And the condition was placed on
6 these rights during the Snake River Basin Adjudication,
7 so these are on decreed rights. And I'm paraphrasing,
8 the condition just states that the rights are to be
9 delivered to the provisions of exchange contracts
10 between the United States Bureau of Reclamation,
11 American Falls Reservoir District 2, which I'll just
12 say, AFRD2, and the Big Wood Canal Company.

13 Q. Why is that the condition relevant to this
14 proceeding?

15 A. So maybe I should explain what the condition
16 means a little bit further. So what it means is that
17 those rights having that condition with lands below
18 Milner Gooding Canal, well, they all have lands below
19 Milner Gooding Canal, receive their water from the
20 Milner Gooding Canal, which is a diversion from Milner
21 Dam on the Snake River, either storage water our natural
22 flow held by AFRD2, in lieu of, or in exchange for the
23 natural flow rights that would otherwise be delivered to
24 those places of use, are then delivered to lands within
25 the Big Wood Canal Company above Milner Gooding Canal.

1 Q. Okay. And what does the condition have to do
2 with which water rights the Department, or specifically
3 you looked at in your memo in terms of cuts?

4 A. So, yeah, and you asked why was it relevant?
5 And I didn't answer that. So it was relevant because
6 those rights may -- well, we understand that those
7 rights also have supplemental sources of water. And
8 unlike other rights that are above or below Milner
9 Gooding Canal that don't have those same conditions,
10 rely, or may rely on only on the natural flow water
11 rights that they hold from the Big Wood or Little Wood
12 Rivers. But these rights that have the conditions do
13 have some supplemental supply through AFRD2.

14 And our understanding is that -- and I'm not
15 sure what all those exact supplies are for each
16 individual right or right holder. But we assume those
17 rights had an adequate supply of water, so we removed
18 those from consideration. And the ET analysis that we
19 did as part of Mr. Blankenau's memo, so it was just sort
20 of narrowing the scope of the water rights on the Little
21 Wood River, in particular in this proceeding, that may
22 be short of water in 2021.

23 Q. Okay. In your memo, you compare water right
24 priority cuts for 2021 and pre-groundwater development.
25 Could you explain how you picked the years that you've

1 used for pre-groundwater development?

2 A. Yes. So I used a similar approach that we had
3 used for identifying analog years in more recent years
4 in that 30-year period from '91 to 2020 that Mr. Vincent
5 explained in his testimony using the SWSI NRCS tables.
6 So as per his memo using the SWSI tables for the above
7 Hailey gage, we selected 2020 and 2004 as the most
8 closest analog years to what I think the tables
9 published for April 1 looked like in comparison to 2021,
10 so...

11 And then we had an expanded SWSI table for 104
12 years. I can't remember what year it went back to, all
13 the way through 2020. So similarly it ranked all the
14 different years, the runoff from April to September,
15 gave a SWSI index. And I looked at that expanded table
16 and selected two years from pre-groundwater development
17 period, which was described nicely in Jennifer Sukow's
18 memo. The ground water development period was from the
19 late 1940s to 1991. And so I focused on years prior to
20 mid to late 1940s, and went down through that table the
21 two closest years I found using that 50 percent
22 probability within that pre-development period.

23 And the pre-development period for which I
24 would have records from is the black books of Water
25 District 37, which started in 1919, and go all the way

1 through 2019. We don't have a 2020 book yet. And we
2 have those books here, in the Department. I looked in
3 the -- well, for those two closest years were 1937 to
4 1939, and we did have priority cut tables in those
5 annual books.

6 Q. And what did you learn from comparing priority
7 cuts pre-groundwater development to the analog years to
8 2021?

9 A. In general, the more senior priority rights
10 those being 1883 and 1884 on the Little Wood and Silver
11 Creek, were or have been cut more frequently and for
12 longer durations in more recent years, and in
13 particularly those analog years that we chose, 2020 and
14 2004.

15 MS. CARTER: Okay. Thank you, Mr. Luke.
16 That's all I have.

17 THE HEARING OFFICER: I didn't hear you.

18 MS. CARTER: I said that's all I have.

19 THE HEARING OFFICER: Okay.

20 MS. CARTER: I was going to move to admit
21 Mr. Luke's staff memo into exhibit. But would you like
22 me to wait until we get a corrected version, and have
23 him verify that's --

24 THE HEARING OFFICER: Yeah, that would be
25 great.

1 MS. CARTER: Okay.

2 THE HEARING OFFICER: Okay. Mr. Rigby,
3 Mr. Fletcher?

4 CROSS-EXAMINATION

5 QUESTIONS BY MR. FLETCHER:

6 Q. Good morning, Mr. Luke.

7 A. Good morning.

8 Q. When you discussed these exchange rights, the
9 exchange right you are talking about on the water rights
10 is typically referred to as Condition 161; isn't that
11 correct?

12 A. Yes.

13 Q. And as part of your analysis, did you examine
14 all of the 161 rights, and see if they did, in fact,
15 have supplemental rights?

16 A. When you say "supplemental," AFRD2
17 supplemental water supply?

18 Q. Yes.

19 A. I didn't confirm that.

20 Q. What is your understanding of supplemental
21 rights?

22 A. It's a supplemental supply of water through
23 AFRD2 being either storage water or whatever supplies of
24 water they hold, which my understanding is limited to
25 storage water of 395,000 to 400,000 acre-feet from

1 American Falls Reservoir, and a 1921 natural flow water
2 right.

3 Q. For the purposes of your memo, you assumed
4 that all exchange rights, all rights with the 161
5 condition had a supplemental water right; correct?

6 A. Correct, that was my understanding.

7 Q. And you assumed also that the supplemental
8 right would fully replace the natural flow right that's
9 stated on the decree; correct?

10 A. I wouldn't say I assumed that fully replaced.
11 I think my handicap is not knowing what those supplies
12 are. From a prior meeting that I had with AFRD2
13 officials on March 18th of this year, I was advised,
14 maybe I misunderstood, but that anybody with these
15 conditions have some sort of supplemental supply.

16 Q. Okay. So, for example, if someone had a
17 supplemental right, but it only provided half the volume
18 or half the amount of water that the natural flow right
19 provided, it would not supply a full -- it would not
20 provide a full water supply; correct?

21 A. Perhaps not.

22 Q. And you didn't take that into account in doing
23 your memo?

24 A. No, because I don't know what those supplies
25 are. I had previously asked the AFRD2 for at least a

1 list of rights of people that do not have any AFRD2
2 supplies. This was going back a couple months, well
3 before the memo. And I was never given that
4 information.

5 Q. I would like you to turn to page 17 of your
6 staff memo.

7 A. Okay.

8 Q. The second to last paragraph on there states
9 that, "Based on recent communication with AFRD2
10 representatives and the WD37 watermaster, as well as
11 past correspondence from the WD37 watermaster attached
12 to Luke (2015), IDWR understands that most or all of the
13 exchange condition water rights of places of use have a
14 supplemental supply of water from the Snake River
15 delivered by AFRD2 via the Milner Gooding Canal. The
16 watermaster has explained that when a river right place
17 of use has AFRD2 supplemental water and the river right
18 is cut by priority, the supplemental water replaces the
19 river right after the right is cut."

20 So when you use the term in that paragraph
21 "replaces," what is your understanding of replacement?

22 A. Well, as the priority of the decreed right
23 goes off or is exhausted, then the supplemental water
24 comes into effect or kicks in.

25 Q. So aren't these two concepts -- aren't they

1 actually two concepts, exchange versus supplemental
2 rights?

3 A. Yeah, they are different things.

4 Q. Well, let's start with the exchange rights.
5 Are the exchange rights in place if the water right is
6 not in priority?

7 A. The water right has to be in priority. It has
8 to be deliverable.

9 Q. So when an exchange right, a water right with
10 a 161 condition is out of priority, the exchange no
11 longer applies; isn't that correct?

12 A. Correct.

13 Q. So at that point they are not relying upon the
14 exchange condition of the water right for a water
15 supply; correct?

16 A. When you say "they," you mean the holder of
17 the exchange right?

18 Q. The holder of a water right with an exchange
19 condition cannot rely upon the exchange condition for a
20 supply of water if the water right is out of priority?

21 A. Yeah, you can't rely on the amount of water
22 under that exchange right.

23 Q. So it has to be in priority for the exchange
24 to be in place?

25 A. Correct.

1 Q. So then the supplemental right, if the water
2 right holder has one, kicks in; correct?

3 A. That's my understanding.

4 Q. And it only kicks in to the extent that the
5 supplemental water right holder has agreed to or is
6 provided a volume of water for that supplemental right;
7 correct?

8 A. That's my understanding, correct.

9 Q. And that may or may not match up to the
10 underlying water right?

11 A. Correct, I don't -- I don't know what those
12 are.

13 Q. Have you examined any of the depositions that
14 have been taken in this case of the holders of these 161
15 exchange rights?

16 A. No.

17 Q. Have you been provided any information since
18 you wrote this memo about the fact that many of the
19 water right holders with this exchange right do not have
20 supplemental rights sufficient to satisfy their crop
21 needs?

22 A. Have I been given information about that?

23 Q. Yes. Since you wrote this memo?

24 A. Yeah. I received two emails one from
25 watermaster Kevin Lakey, and one from Cooper Brossy. I

1 think that related to that subject. I guess took some
2 exceptions in my understanding of exchange rights.

3 Q. Let's move on to the next paragraph on page
4 17, the last paragraph. It states, "IDWR staff finds
5 there may be some lack of clarity or understanding among
6 water users and the water delivery entities regarding
7 the delivery of exchange condition rights and extent of
8 AFRD2 supplemental water delivered to the lands covered
9 by such rights. Unless additional information is
10 furnished regarding available water supplies for lands
11 with exchange condition water rights, IDWR assumes such
12 lands have a full supply of water in 2021 and most other
13 years. Therefore, IDWR assumes that the exchange
14 condition rights are not injured from depletion of river
15 flows caused by ground water pumping."

16 So in that paragraph you state that the
17 Department is assuming that these lands have a full
18 supply of water, because they have an exchange condition
19 basically; isn't that true?

20 A. They have an exchange condition and
21 supplemental supply of water from AFRD2.

22 Q. Well, the last sentence, I'm just going to
23 direct your attention to the last sentence on page 18
24 states, "IDWR assumes that the exchange condition rights
25 are not injured from depletion of river flows caused by

1 ground water pumping." So I'm just trying to clarify
2 this. It's not the exchange condition that supplies a
3 full supply of water; correct?

4 A. Correct. It's --

5 Q. It's if they have a supplemental right?

6 A. Correct. The lands to which the exchange
7 condition rights are appurtenant have a supplemental
8 supply of water. And so if there are additional sources
9 or supplies of water to those lands, they may not be
10 injured, or they may not be short.

11 Q. To the extent that they have a supplemental
12 supply; correct?

13 A. Yes.

14 Q. And you don't have sufficient information to
15 determine which of the exchange rights have supplemental
16 rights; correct?

17 A. I haven't examined that. I was -- again, it's
18 my understanding from the meeting with Mr. Hobdey that
19 all of those have supplementals supply.

20 Q. And you have not examined how much
21 supplemental right each one of those water right holders
22 has?

23 A. No.

24 Q. So when you are making this assumption -- or
25 let me put it this way. Based upon that assumption, you

1 are then taking all of these people with exchange rights
2 effectively out of this proceeding; correct?

3 A. Based on my assumption, yes.

4 Q. So you did not consider in your analysis
5 losses this year to those that have exchange rights?

6 A. Correct.

7 Q. Let me just give you a hypothetical because
8 there was quite a bit of testimony in this regarding the
9 depositions. If an exchange right water holder had a
10 supplemental right, but that water right, that
11 supplemental right was only for 50 percent of the water
12 required to irrigate the crop, wouldn't that still
13 constitute a shortage that should be considered in this
14 proceeding?

15 A. Well, it could be a shortage. But the
16 shortage in supply is not entirely from the Little Wood
17 or Silver Creek. It would be then a shortage of supply
18 from the Snake River. But a shortage is a shortage. If
19 we look typically in all the sources of water that might
20 be available, but we didn't have that information as to
21 what the supplemental supply was.

22 Now, I will say that in the meeting with
23 Mr. Hobdey, there was some information given that -- and
24 I talked to the watermaster and several users afterward
25 that seemed to disagree with Mr. Hobdey. But I seemed

1 to get an understanding from Mr. Hobdey that they had, I
2 guess, an adequate supply, but I didn't understand some
3 of the things explained by Mr. Hobdey, and some of the
4 users seemed to disagree with that.

5 I will say, and I didn't note this anywhere
6 prior, but if you look at the 1955 black book, there is
7 a resolution from the AFRD2 about this particular
8 subject, delivery of water to the decreed rights, and
9 that is a very confusing to me, a very confusing
10 resolution. But it seemed to align a little bit with
11 what Mr. Hobdey was saying, because either they would
12 continue to get the same water under their decreed
13 rights, or would get the normal delivery that everyone
14 else in the AFRD2 system gets, which I believe is
15 five-eighths of an inch per acre.

16 The resolution in and of itself seemed
17 to -- there was some conflicting language in it. So
18 I -- but nonetheless, that resolution seemed to track a
19 little bit with what Mr. Hobdey was saying. So I think
20 that's the purpose here of this statement, that there
21 seems to be some lack of understanding about this item
22 and either between the entity, AFRD2, and the water
23 users -- in fact, Mr. Hobdey, I remember even saying
24 that there is not a good understanding or maybe
25 documentation --

1 Q. Well, I think --

2 A. -- these exchange scenarios.

3 Q. Excuse me. I think the most important thing
4 for this proceeding is that you disregarded all of those
5 water rights for the purposes of determining injury?

6 A. I wouldn't say disregard, but we just had a
7 lack of information. And I again I'm saying, if we had
8 the information, or if the information is provided, and
9 I think that's the purpose of this hearing, is that
10 information can be presented.

11 Q. And that was my next point. That if these
12 water right holders get up and testify about the extent
13 of these supplemental rights, you may have to reconsider
14 this opinion that you've stated in this staff memo;
15 isn't that correct?

16 A. That was the intent of saying, unless or until
17 we get further information, yes. And there have been
18 some discussion about that during the advisory committee
19 meetings, and that information was never provided as far
20 as I knew.

21 MR. FLETCHER: Thank you, Mr. Luke.

22 THE HEARING OFFICER: Thank you.

23 Mr. Fletcher, and I personally want to thank

24 Mr. Fletcher for speaking up so that what he says can be
25 heard by everyone. So thank you.

1 Mr. Rigby, do you have questions?

2 MR. RIGBY: Just a couple, Mr. Director.

3 CROSS-EXAMINATION

4 QUESTIONS BY MR. RIGBY:

5 Q. Good morning, Mr. Luke.

6 A. Good morning.

7 Q. Have you seen the most recent NRCS IDWR
8 Exhibit No. 5, which is the June, I believe it's right
9 there. Yes.

10 A. Yes, I have.

11 Q. And, of course, in your analysis, and back
12 when you did your memo, you used the, I'll say it, the
13 good year, the good water supply regular year and not so
14 good water supply year?

15 A. The good, the bad, and the ugly.

16 Q. Yeah, the good, the bad, and the ugly, a good
17 way to put it. If you had had this for this particular
18 year, and, of course, this year 2021 it seems to be the
19 focus of this particular hearing, would you estimate
20 then that your priority cuts estimations would be much
21 sooner?

22 A. Well, I don't -- are you asking me if I would
23 have selected another year?

24 Q. Okay. I'll ask you that, yes.

25 A. Yeah, I might have.

1 Q. And if this were the year you selected, I'm
2 just asking if this were the year you selected, would
3 you estimate the priority cuts that you addressed in
4 your memo would be sooner?

5 A. Well, I think that's hard to say without going
6 through the analysis. But I think we might have
7 selected a different year. I think Mr. Vincent talked
8 about 1994. And to take it a step further, if I looked
9 at a comparable year in the pre-groundwater development,
10 I might have selected 1931. And we do have priority
11 delivery records from 1931.

12 Q. And do you have any estimation as to what the
13 outcome of that would have been?

14 A. No, I haven't looked at that closely. I will
15 say 1931 -- excuse me -- in the expanded SWSI table that
16 I talked about early for the past 104 or five years,
17 1931 was ranked the lowest. And it's possible 2021
18 could be similar to that or possibly worse.

19 Q. But it just seems reasonable to assume, is it
20 not, that having chosen a year that is to a good, a bad,
21 and the ugly, even more ugly than the one you chose,
22 would reduce or shorten the priority cut; isn't that
23 reasonable to assume?

24 A. I think it's reasonable to assume that, yes.

25 Q. Do you have any estimate of the adequate water

1 supply for the irrigated acres of the Little Wood in the
2 Silver Creek drainage? Have you done any study on that?

3 A. The adequate water supply?

4 Q. Correct.

5 A. How do you mean exactly?

6 Q. Well, it's been addressed in the memos. And
7 I'm just asking you, what have you done in any kind of a
8 study for adequate water supply in this drainage, if
9 any?

10 A. I haven't, not beyond what's in my memo, I
11 believe.

12 MR. RIGBY: Okay. I have no further
13 questions.

14 THE HEARING OFFICER: Thank you, Mr. Rigby.
15 Mr. Barker.

16 MR. BARKER: Thank you, Mr. Director.

17 CROSS-EXAMINATION

18 QUESTIONS BY MR. BARKER:

19 Q. Albert Barker for the South Valley Ground
20 Water District. Good morning, Tim. How are you?

21 A. Good.

22 Q. How are your eyes today?

23 A. Doing pretty well, a little flickering.

24 Q. I have to apologize. I'm going to ask you to
25 look at some documents if that's okay?

1 A. Yeah, no worries.

2 Q. If you look in that book with the yellow color
3 on the binder right in front of you. There you go.

4 A. Okay.

5 Q. So what I would like to do is a little bit
6 similar to what we talked about in the deposition, and
7 start with how water has been administered in the Big
8 Wood area. And so what I would like you to do first is
9 turn to Exhibit 3?

10 MR. FLETCHER: Which Exhibit 3 are you talking
11 about?

12 MR. BARKER: SVGWD/GGWD Exhibit 3.

13 THE WITNESS: That's on --

14 Q. (BY MR. BARKER) It's in the binder. So there
15 is a tab in the binder. I don't see a tab for 3. It
16 starts at 5.

17 MR. BARKER: May I see what happened, maybe
18 somebody -- that's all yours.

19 THE WITNESS: That's my stuff, yeah.

20 Q. (BY MR. BARKER) I don't know --

21 THE HEARING OFFICER: We can switch,
22 Mr. Barker.

23 MR. BARKER: We had some documents fall out
24 apparently. There they are.

25 Q. (BY MR. BARKER) Mr. Luke, do you recognize

1 Exhibit 3?

2 A. Yes.

3 Q. Okay. And tell me what this is?

4 A. It is the order designating the Big Wood River
5 ground water management area.

6 Q. So are you familiar with this order?

7 A. Yes, I've seen it before.

8 Q. Okay. And what was the purpose, if you know,
9 of designating the Big Wood ground water management
10 area?

11 A. Concern and the reason for designating was
12 to -- well, it's because of concerns about continued
13 ground water pumping and effects on interconnected
14 surface water sources and supplies.

15 Q. And this was dated in 1991?

16 A. Yes.

17 Q. And it included an area, or an area bigger
18 than the triangle, it included the Camas Prairie, the
19 triangle, and parts of the basin to the north; right?

20 A. Correct.

21 Q. And the ground water management area was
22 intended to set up a method of managing ground water in
23 this entire area?

24 A. Yes.

25 Q. And attached to the ground water management

1 area is a management policy?

2 A. Yes.

3 Q. And in that management policy, the Department
4 or the Director at that time issued an order that said
5 there will be a moratorium on new wells that were either
6 consumptive or that were not fully mitigated?

7 A. Yes.

8 Q. And then it has an observation in the
9 management policy on page 3, at the bottom, where it
10 lists the geohydrologic characteristics of the Big Wood
11 River Basin. The second paragraph under that says that
12 "Silver Creek is fed by numerous springs whose flows
13 depend partly on percolating seepage resulting from Big
14 Wood River irrigation diversion and use upstream in the
15 Bellevue area." Do you see that?

16 A. It's on page 3.

17 Q. On page 3 of the exhibit, the first page of
18 the management policy.

19 A. Okay.

20 Q. Okay.

21 A. Which is page 1 of the management policy.

22 Okay.

23 Q. Correct. So is what I read consistent with
24 your review of the geohydrology of the basin?

25 A. Okay. You were reading from which sentence

1 now?

2 Q. Sorry. The last paragraph at the bottom of
3 page 3 --

4 A. Okay.

5 Q. -- 3, first page of the management policy.
6 Where it says, "how Silver Creek is fed."

7 A. Yes.

8 Q. Okay. Do you understand that to be the way
9 that Silver Creek is supplied with water?

10 A. Yes.

11 Q. In this order did the Department in 1991
12 establish an area of common ground water supply?

13 A. No, not -- no.

14 Q. Then move on to Exhibit 4.

15 MR. BARKER: Can I offer Exhibit 3 into
16 evidence as SVGWD/GGWD Exhibit 3?

17 THE HEARING OFFICER: Any objections to the
18 document being admitted into evidence?

19 MR. LASKI: No.

20 MR. THOMPSON: No.

21 THE HEARING OFFICER: The document marked as
22 Exhibit 3 of South Valley and Galena Exhibit 3 is
23 received into evidence.

24 (SVGWD/GGWD Exhibit 3 received.)

25 MR. BARKER: Thank you.

1 Q. (BY MR. BARKER) Okay. Would you turn to
2 Exhibit 4?

3 A. Yes, sir.

4 Q. This is a preliminary order creating a water
5 measurement district for ground water rights in the Big
6 Wood and the Little Wood Basins?

7 A. Yes.

8 Q. Were you involved in establishing this ground
9 water measurement district?

10 A. Yes.

11 Q. And what was the purpose of the measurement
12 district?

13 A. To begin measurement and reporting of ground
14 water diversions within the Big Wood ground water
15 management area and other areas that Basin 37 that were
16 not already subject to measurement orders. So the only
17 other area would be there were a few wells in the Carey
18 area.

19 Q. And if you look at page 13 of the preliminary
20 order, Attachment A, it describes the area subject to
21 the ground water measurement district?

22 A. Yes.

23 Q. And that includes all of the triangle?

24 A. It includes the triangle.

25 Q. This order came out in 2011. What then took

1 place after that? Well, let me back up a step.

2 What was the impetus for the Department
3 creating the ground water measurement district?

4 A. Well, to begin the process of measuring and
5 reporting ground water use, and getting the requirement
6 out there for users to comply with the deadlines for
7 installation of measuring devices.

8 Q. On page 2 of the preliminary order at the
9 bullet at the top of the page. There is a statement
10 there that said, "Senior surface water rights owners
11 within the Big and Little Wood River basins have
12 requested the Department to implement conjunctive
13 administration of ground water and surface water
14 resources."

15 A. Yes.

16 Q. What were those requests to the Department?
17 Let me back up. Do you know who those requests came
18 from?

19 A. Well, prior, when I say prior, a year or two,
20 maybe a couple of years prior to this, there were
21 inquiries or requests to start moving towards
22 conjunctive administration, including measurement in
23 reporting of ground water use, bring ground water rights
24 into districts, development of a ground water model, and
25 just generally the management and administration of

1 ground water rights and diversions in this area.

2 Q. Had there been requests for conjunctive
3 management of those ground water rights?

4 A. Well, I don't know about specific requests.
5 There were discussions. I remember inquiries, and I
6 guess I would just say, maybe pressures from surface
7 water users, inquiries from local legislatures about
8 where the Department was, what we were doing? We had
9 this Snake River Basin Adjudication that was ongoing at
10 about the same time, and that was one of the last basins
11 in the state that the Department was issuing
12 recommendations, and recommendations for partial
13 decrees.

14 And that's one of the reasons we created the
15 measurement district, because we didn't have those
16 partial decrees yet. So we couldn't put the ground
17 water rights in a water district yet, we didn't have
18 authorization from the court for administration of those
19 rights until they are at least recommended by the
20 Department, and we weren't quite there yet. So this was
21 an interim step to begin getting the ground water rights
22 at least measured and reported.

23 Q. Was it the Department's position that it could
24 not do conjunctive management until the rights were
25 decreed?

1 A. Yes.

2 Q. Was it also then the Department's position
3 that they couldn't do conjunctive management until you
4 had a measurement in place?

5 A. I don't think that's necessarily true, but I
6 think it's helpful.

7 Q. So in order to help conjunctive management,
8 you needed to be able to measure the wells?

9 A. Yes.

10 Q. And so you issued an order requiring -- the
11 Department issued an order requiring wells to be
12 measured over some period of time?

13 A. Yes, we required installation of measuring
14 devices for irrigation wells over five acres, and by the
15 2013 irrigation season, as well as non-irrigation uses
16 by January of 2013, and then installation measuring
17 devices for irrigation of five acres or less by 2014.

18 Q. So contemporaneous with this, there was the
19 USGS was in the process of developing a ground water
20 model for the Big Wood ground water area?

21 A. I believe they were, yes.

22 Q. Was part of the reason for asking for a
23 measurement district or sorry -- for instituting a
24 measurement district to gather measurements for the
25 model that was being developed for the ground water

1 management, for the ground water area?

2 A. In my mind and perspective, I think that was
3 the helpful purpose of measuring the wells, yes.

4 MR. BARKER: So, director, I would move the
5 admission of South Valley and Galena Exhibit 4.

6 THE HEARING OFFICER: Any objection to the
7 admission of this document? Hearing no objection, the
8 document marked as South Valley and Galena Exhibit No. 4
9 is received into evidence.

10 (SVGWD/GGWD Exhibit No. 4 received.)

11 Q. (BY MR. BARKER) Okay. Would you move over to
12 Exhibit 5, please.

13 A. Okay.

14 Q. So you recognize Exhibit 5?

15 A. Yes.

16 Q. And this is a preliminary order -- well, tell
17 me what it is, what this order does?

18 A. This order abolished the measurement district
19 and included ground water rights in the triangle and
20 Upper Wood River Valley within Water District 37, and it
21 also combined Water District 37 and 37M, "M" as in Mary,
22 which 37M is Little Wood River and Silver Creek. And 37
23 was the Big Wood River and Malad River. And at the time
24 those technically operated, there were separate water
25 districts, but for all intents and purposes, they shared

1 the same watermaster. They more or less operated as one
2 district. So we combined those two districts into one.
3 We created a separate water district for the Camas
4 Prairie to include surface water and ground water
5 diversions and rights. And we included the ground water
6 rights as I said earlier, in the Bellevue triangle, Wood
7 River Valley. And within that same ground water
8 management area outside of the Camas drainage within
9 Water District 37. Ground water rights in the Eastern
10 Snake Plain Aquifer were already being or were already
11 included in Water District 130.

12 Q. So this order was 2013; is that right?

13 A. Yes.

14 Q. So is this just a natural progression of
15 creating the measurement district or is this a change in
16 view by the Department of how the water rights should be
17 managed, the ground water rights should be managed?

18 A. Well, it is a progression. But the primary
19 difference is that by placing them in a water district,
20 the water district has the authority to administer or
21 regulate the rights, as well as assume responsibility
22 for measurement in reporting. The measurement district
23 under Idaho Code as the authority there is limited to
24 just measurement and reporting only of diversions.

25 Q. And then in the preliminary order, page 3,

1 paragraph 13, it indicates that you gave a presentation
2 describing how all of this would work to the water users
3 in attendance at the hearing?

4 A. Correct.

5 Q. And do you remember that presentation?

6 A. Yes.

7 Q. And in bullet point 3, under your presentation
8 it says that combining the water districts with surface
9 and ground water will provide for proper conjunctive
10 administration of surface and ground water rights and
11 protect senior priority rights; is that right?

12 A. Right.

13 Q. So that's one of the reasons for doing the
14 district?

15 A. Correct.

16 Q. And then you remember that some of the users
17 raised questions about the impact of including the
18 ground water rights in with the surface water rights?

19 A. Right.

20 Q. Do you recall that?

21 A. Yes.

22 Q. And then if you look at page 6, item 24?

23 A. Yes.

24 Q. The first bullet under there says, adversarial
25 interests between ground water users and surface water

1 users resulting from any potential conjunctive
2 administration process would compromise the operations
3 of a water district when you combine the two. Is that
4 one of the concerns that people raised?

5 A. Yes.

6 Q. And then the Department in its order,
7 conclusions of law, address that concern; correct?

8 A. Yes, I think we did.

9 Q. If you look on page 10, paragraph 16.

10 A. Yes.

11 Q. It says, I think I'll read the whole or a part
12 of paragraph 16. In response to the testimony that was
13 provided opposing the combination, the Department's
14 conclusions of law say the following. "Adversarial
15 tensions between ground water and surface water users
16 resulting from potential conjunctive administration of
17 water rights should not negatively affect water district
18 operations given the limited regulatory scope of the
19 water district and the that conjunctive administration
20 is guided by separate processes outlined in the
21 Conjunctive Management Rules (CMRs) (IDAPA 37.03.11).

22 Did I read that correctly?

23 A. Yes, you sure did.

24 Q. And is that the intention of the Department
25 when the ground water rights were incorporated into the

1 water district that conjunctive administration would be
2 guided by the Conjunctive Management Rules?

3 A. Yeah, the -- from my perspective at that time,
4 we were anticipating a delivery call under the
5 Conjunctive Management Rules.

6 Q. And you didn't advise, you, the Department,
7 and the folks involved in creating this order, didn't
8 tell the water users that there would be other types of
9 conjunctive administration?

10 A. Well, I don't recall discussions to that
11 extent.

12 Q. So this is in 2013. And then you know that in
13 2015, there was an effort for a delivery call that was
14 made by some of the surface water users; right?

15 A. Yes.

16 Q. Okay. And you did an evaluation. Here it is.
17 Turn to Exhibit 26.

18 MR. BARKER: Before I move on to that exhibit,
19 I would offer exhibit South Valley/Galena Exhibit 5 into
20 evidence.

21 THE HEARING OFFICER: Any objection to the
22 admission of the document? The document marked as South
23 Valley and Galena Exhibit 5 is received into evidence.

24 (SVGWD/GGWD Exhibit 5 received.)

25 Q. (BY MR. BARKER) So, Tim, do you recognize

1 this Exhibit 26?

2 A. Yes, I do.

3 Q. Okay. And tell me what Exhibit 26 is?

4 A. It's a staff memo that I prepared in response
5 to the Director's request for memoranda, dated June 12,
6 2015. And specifically I summarized the water rights
7 that were identified in the delivery call, some
8 background information about the delivery system with
9 the Big Wood Canal Company, and the water rights, and
10 how the watermaster administers the different areas of
11 the water district and those water rights, and how we
12 determined priority cuts and various related items or
13 issues.

14 Q. And attached to your memorandum to the
15 Director in 2015 is an Attachment 5. It starts on page
16 29 of the exhibit.

17 A. Yes.

18 Q. And that is a letter that you received from
19 the watermaster for Water District 37 explaining how he
20 administered water rights?

21 A. Correct.

22 Q. And then if you look at page 5 of your memo,
23 not of the letter.

24 A. Yes.

25 Q. About two-thirds of the way down you discuss

1 the exchange condition?

2 A. Yes.

3 Q. Do you see that?

4 A. Yeah.

5 Q. And that's the same exchange condition that
6 you were mentioning earlier in your testimony, and
7 that's described in your staff report for this
8 proceeding?

9 A. It is, correct.

10 Q. Okay. And after writing that, did you ever
11 receive any information from the Big Wood, Little Wood
12 water users association members explaining to you that
13 your interpretation in this memo about the exchange
14 condition was incorrect?

15 A. I didn't receive information from anyone about
16 anything I had said in this memo about exchange rights.

17 Q. And was your August 31, 2015 memo also part of
18 what you relied upon when you prepared your May 17th,
19 2021 staff memorandum?

20 A. Yes, I made numerous citations to this memo in
21 my May 17th, 2021 memo.

22 MR. BARKER: Mr. Director, I offer South
23 Valley/Galena Exhibit 26 into evidence.

24 THE HEARING OFFICER: Any objection to the
25 admission of this document? Hearing none, the document

1 marked as South Valley and Galena Exhibit 26 is received
2 into evidence.

3 (SVGWD/GGWD Exhibit 26 received.)

4 Q. (BY MR. BARKER) Now, turn back to the very
5 first exhibit.

6 A. Okay.

7 Q. Mr. Luke, have you seen a copy of this
8 memorandum decision and order before that's marked as
9 Exhibit 1?

10 A. Not -- I may have seen it, but I'm not
11 familiar with it.

12 Q. So if I represent to you that this is the
13 decision by the court in response to the 2015 delivery
14 call, would that help you?

15 A. Yes, it would. I agree with that.

16 Q. Okay. And I certainly don't want you to offer
17 any legal opinions about the Judge's order. But is it
18 your understanding that the reason that the delivery
19 call was -- well, let me say. You understand that the
20 delivery call was rejected by the court as being
21 improperly broad?

22 A. Yes, there were, I guess, I would just
23 generally say, there were procedural problems with the
24 delivery call.

25 Q. Right. And one of those procedural problems

1 with the delivery call was that the court believed that
2 the mechanism that was being used was improper because
3 there was no area of common ground water supply that had
4 been identified in for the Big Wood?

5 A. Well, I don't know about that. My
6 general -- my personal understanding was an issue with
7 the Conjunctive Management Rules in which rules the
8 Department was using in addressing that delivery call --

9 Q. And --

10 A. -- of which set of rules.

11 Q. So did you understand that the area of common
12 ground water supply was a significant question in which
13 rules the Department could use?

14 A. Well, I didn't -- I guess I didn't understand
15 that to be a critical issue in that, but I don't know.

16 Q. And then --

17 A. I didn't follow it that closely.

18 Q. So were you involved in any discussions within
19 the Department after this decision came out about what
20 kind of action the Department would take, if any, with
21 respect to this 2015 delivery call?

22 A. Not that I recall specifically, just generally
23 that we'd have to consider carefully how we're
24 implementing the rules on any subsequent delivery call.

25 Q. Was there any discussion within the Department

1 about trying to establish an area of common ground water
2 supply so that a delivery call could proceed?

3 A. Not that I know of.

4 Q. Is there a reason that the Department has not
5 established an area of common ground water supply for
6 the Big Wood ground water area?

7 A. Not that I know of.

8 MR. BARKER: I'll offer South Valley/Galena
9 Exhibit 1.

10 THE HEARING OFFICER: Any objection to the
11 admission of this document. Hearing none, the document
12 marked as South Valley and Galena Exhibit 1 is received
13 into evidence.

14 (SVGWD/GGWD Exhibit 1 received.)

15 Q. (BY MR. BARKER) Now, Tim, I want to switch
16 gears a little bit and go to Exhibit 6.

17 A. Okay.

18 Q. And what I'm going to tell you to give you a
19 little introduction here, Exhibit 6 through 11 in this
20 book are documents relating to the contracts for
21 delivery of water out of American Falls Reservoir
22 District to the area served by AFRD2 and Big Wood Canal
23 Company. So I'll start through with some of these
24 documents and ask you if you've seen them before. And
25 then we can talk about them if you have or have not. So

1 Exhibit 6 is a 1927 contract. Do you see that?

2 A. Yes.

3 Q. Have you ever seen this 1927 contract before?

4 A. Yes.

5 Q. In what context have you seen this contract?

6 A. I've reviewed it several days ago in
7 preparation of this hearing.

8 Q. And what was, if any, the relevance of this
9 1927 contract to your analysis of the exchange condition
10 that you've talked about earlier today?

11 A. Well, as I said I never reviewed it until just
12 a couple of days ago. Like I had no knowledge -- well,
13 let me back up. I was aware of the 1927 contract by
14 referencing later contracts, including the 1954 and 1962
15 contracts, which are referenced in the exchange
16 condition placed on those water rights in the SRBA. But
17 I never had since those contracts amended, or actually
18 superseded this, I never, A, had reason to look at it,
19 and 2, until I think a couple of months ago didn't even
20 have access to this contract, so...

21 Q. Okay. So it's your view that the earlier
22 contracts were, because they were superseded by the 1954
23 contracts, are not particularly relevant to your
24 analysis?

25 A. Right.

1 Q. Okay.

2 A. At the time, yes.

3 Q. So look on page 3 of Exhibit 6.

4 A. Okay.

5 Q. And I just want to read a paragraph, and ask
6 you if you think this comports with your understanding
7 of the water supply. And this is in 1927. "Whereas,
8 most of the lands of said Idaho irrigation project have
9 been reclaimed and improved and are occupied by settlers
10 who have separate crop losses on account of such water
11 shortages and on account of such water shortages are
12 struggling under great difficulties to continue the
13 occupation and cultivation of the lands of the project."

14 So my question is, what is your understanding
15 of that statement about the condition of the water
16 supply to lands that were within what now became the Big
17 Wood service area as of 1927?

18 A. There were typically or often waters short
19 because they relied on -- well, the available water
20 supply just often was not adequate to serve all of the
21 lands under the project. This was a Carey Act project.
22 And it's not uncommon with many Carey Act projects in
23 the day, they were often, or that was often the case
24 where they had more lands to be irrigated than they had
25 a water supply for.

1 Q. And these water shortages which resulted in
2 crop losses occurred long before there was significant
3 development of ground water in the Bellevue triangle?

4 A. Yes.

5 MR. BARKER: So I will move the admission of
6 Exhibit 6.

7 MR. FLETCHER: Mr. Director, I don't object to
8 it as a historical document. I object to it to the
9 extent that people may be trying to treat this contract
10 as totally ineffective, because it was not as stated by
11 Mr. Luke. It was superseded by Exhibits 9 and 10 of
12 Mr. Barker's list of exhibits. So to that extent, I
13 would object to the admission of this.

14 THE HEARING OFFICER: Any other objection to
15 the admission of this document? Okay. I will admit it
16 with the stipulation with the statement that this
17 document is admitted into evidence for historical
18 purposes. And based on the testimony, it is a contract
19 that has been superceded by additional amended
20 contracts. And I think you'd agree with that?

21 MR. BARKER: Yes, Your Honor, that's correct.

22 THE HEARING OFFICER: Okay. So it's admitted
23 with that particular statement.

24 (SVGWD/GGWD Exhibit 6 received.)

25 THE HEARING OFFICER: Let me add, Mr. Barker,

1 that sometimes I am struggling with your references to
2 pages. So, for instance, in looking at Exhibit 6, I
3 think you referred to page 3, but it's actually page 4
4 of your exhibit. And so I'm trying to go back and forth
5 trying to figure out which pagination is the one that
6 you are referring to.

7 MR. BARKER: I will be more clear. Thank you
8 for the direction.

9 THE HEARING OFFICER: Thanks.

10 MR. BARKER: And just for the record, I think
11 I was looking at the page 3 of the contract and not the
12 page 3 of the exhibit when I was referring to that
13 reference.

14 THE HEARING OFFICER: Right.

15 Q. (BY MR. BARKER) So let's skip over 7 and 8.
16 Let's go to Exhibit 9. This is the contract that
17 Mr. Fletcher indicates is the replacement. Okay. So
18 have you seen this 1954 contract?

19 A. Yes.

20 Q. Well, what's your understanding of this 1954
21 contract?

22 A. Well, I've reviewed it specifically with
23 respect to the exchange language in the exchange
24 condition water rights. So my understanding is that the
25 contract authorizes or acknowledges the practice whereby

1 decreed river rights from the Big Wood and Little Wood
2 Rivers may receive water from the Snake River via the
3 Milner Gooding Canal in exchange or in lieu of that same
4 water being distributed to lands within the Big Wood
5 Canal Company above the Milner Gooding Canal.

6 Q. So if you look on page 1, this does say that
7 this amends and supplements the 1927 contract?

8 A. Yes.

9 Q. Okay. So you were talking about the exchange
10 condition. If you would move to paragraph 28, page 27
11 of Exhibit 9.

12 A. Item did you say 28 or --

13 Q. Yes, paragraph 28.

14 A. Okay.

15 Q. So the first provision of this contract says
16 it's the intent to provide each irrigable acre of the
17 old lands within the district, whether located above or
18 below the main canal, with the same benefits from
19 American Falls storage and other sources.

20 So is it your understanding that the idea of
21 this contract was people above and below the canal were
22 going to get the same amount of water?

23 A. Well, that's the stated objective.

24 Q. And in on the next page on subparagraph 1, it
25 says that the water users below the canal are deemed to

1 agree that the water from AFRD will essentially replace
2 the water from Big Wood or Little Wood or Magic
3 Reservoir?

4 A. Referring specifically to sub item 1 or?

5 Q. Yes.

6 A. Yes, the owners of old lands below the Milner
7 Gooding Canal were entitled to water from the Big Wood
8 or Little Wood River or Magic Reservoir deemed to agree
9 that water from those sources may be used on old lands
10 above the canal, and to accept in lieu of water from
11 those sources, an equal amount of water from American
12 Falls storage and other sources available to the
13 district.

14 Q. So this is the exchange that you were
15 referring to?

16 A. Yes, this is the key language to the exchange.

17 Q. And then in paragraph 2, underneath that it
18 discusses pooling water between Magic and the other
19 sources. Is that paragraph 2 something that you took
20 into consideration in your evaluation of water supply?

21 A. I'm just reading through that again. So your
22 question is, did I take it into consideration for what?

23 Q. For the water supply available to these water
24 users with the exchange condition.

25 A. In 2021?

1 Q. At all. I mean, you looked at it in 2015.
2 You looked at it again in 2021.

3 A. Well, I don't -- I didn't really consider
4 this, Item 2, specifically. My review of these
5 documents was really more to understand the nature and
6 foundation of the condition, and also for purposes of
7 giving guidance to the watermaster this year in terms of
8 how these exchange rights should be administered.

9 Q. But your guidance to the watermaster is not
10 just for this year; is it?

11 A. No.

12 Q. It's for that's how these rights should be
13 delivered?

14 A. Right. But my point was, it was issued this
15 year and going forward, because we didn't have something
16 similarly in place prior to that.

17 Q. And so the same question with respect to
18 paragraph 3 about what happens in the event of an
19 extreme shortage in water supply above Big Wood and
20 Little Wood? You can go ahead and read through that, if
21 you don't mind, to yourself.

22 A. Yes, I've reviewed it.

23 Q. Do you understand how that language fits in
24 with your instructions to the watermaster on
25 implementation of the exchange condition?

1 A. It doesn't. Not specifically to that item 3.

2 Q. And when you're talking about the exchange
3 condition, you are talking about this entire paragraph
4 28 of this contract; right?

5 A. Yes, generally. I think my guidance included
6 specific language from 28, and I think it was from 28,
7 item 1.

8 Q. But you didn't include any guidance on
9 subparts 2 or subparts 3 to 28(A) -- or sorry --

10 A. No.

11 Q. -- 28(B)?

12 A. No, not specifically.

13 MR. BARKER: Would move the admission of South
14 Valley/Galena Exhibit 9.

15 THE HEARING OFFICER: Any objection to the
16 admission of this document?

17 MR. FLETCHER: No objection.

18 THE HEARING OFFICER: The document that's
19 marked as South Valley/Galena Exhibit 9 is received into
20 evidence.

21 (SVGWD Exhibit 9 received.)

22 Q. (BY MR. BARKER) Mr. Luke, turn to the next
23 exhibit, Exhibit 10.

24 A. Yes.

25 Q. Have you seen Exhibit 10 before?

1 A. Yes.

2 Q. And tell me what your understanding of Exhibit
3 10 is?

4 A. I believe that's the 1962 contract between the
5 Bureau of Reclamation, AFRD2, and big Big Wood Canal
6 Company.

7 Q. And is it your understanding that under this
8 contract that the Big Wood Canal Company is obligated to
9 the exchange condition in the 1954 contract?

10 A. So my understanding is some of the exchange
11 condition information -- well, let me back up. This
12 contract includes or reiterates the exchange provisions
13 from 1954. So there is references to exchange
14 deliveries in this contract.

15 Q. And those are the same exchange deliveries
16 that you looked at in the 1954 contract?

17 A. Yes.

18 MR. BARKER: And I would offer Exhibit 10 at
19 this time, South Valley/Galena Exhibit 10.

20 THE HEARING OFFICER: Any objection to the
21 admission of this document? The document marked as
22 South Valley and Galena Exhibit No. 10 is received into
23 evidence.

24 (SVGWD/GGWD Exhibit 10 received.)

25 Q. (BY MR. BARKER) Mr. Luke, will you turn to

1 Exhibit 11, please?

2 A. Okay.

3 Q. Have you seen Exhibit 11 before?

4 A. Yes.

5 Q. And how did you get your hands on Exhibit 11?

6 A. This exhibit and the other, the '54 and '62
7 contracts, and maybe some other documents obtained
8 through a FOIA request in 2015 to the Bureau of
9 Reclamation as part of our, or my review and
10 investigation of the exchange water rights.

11 Q. So this is something you relied upon in
12 evaluating exchange water rights?

13 A. Well, in 2015 at the time, I remember looking
14 at it.

15 Q. Is this something that was part of your
16 evaluation, though, for determining how the exchange
17 provisions operated?

18 A. In 2015, or in my more recent memo to the
19 water district?

20 Q. Either time.

21 A. I don't recall really relying on it for the
22 more recent guidance to the watermaster, but I recall
23 reviewing this in 2015 relative to trying to understand
24 the exchange rights.

25 Q. And in the first full paragraph about halfway

1 through, the Commissioner of Reclamation advises
2 Secretary of Interior that the principal objective of
3 the contract is to assure substantially equal treatment
4 for both new and old lands in AFRD2 and the Big Wood
5 Canal Company, as to water supply and operation and
6 maintenance. Is that consistent with your understanding
7 of those contracts?

8 A. Yes.

9 MR. BARKER: I would move the admission of
10 Exhibit 11.

11 THE HEARING OFFICER: Any objection to the
12 admission of this document? Hearing none, the document
13 marked as South Valley and Galena Exhibit 11 is received
14 into evidence.

15 (SVGWD/GGWD Exhibit 11 received.)

16 Q. (BY MR. BARKER) Mr. Luke, there has been a
17 reference in both, I think in the 2015 memo that you
18 wrote, to some Cottonwood rights?

19 A. Yes.

20 Q. Can you explain what those Cottonwood rights
21 are, and how they are supposed to be administered?

22 A. No, I can't really.

23 Q. Okay. Are they rights that are water from the
24 Big Wood or from the Little Wood?

25 A. Yeah, I know just a little bit about them. My

1 understanding is the source of water on the so-called
2 Cottonwood Decree rights are -- or Cottonwood rights are
3 from the Big Wood River. Many or most of those, and
4 perhaps all, I'm not certain, are injected or diverted
5 out of the Big Wood River at the Richfield Canal and
6 injected into the Little Wood River near Richfield, and
7 then re-diverted downstream. And the water --

8 Q. A lot of those --

9 A. Go ahead. Sorry.

10 Q. I'm sorry.

11 A. I was just going to say, those set of rights
12 have had different priority administration, if you will,
13 not strictly off the face of the water rights, which are
14 all 1899 priority. The watermaster has cut those rights
15 at times different from the normal 1899 priority on the
16 Big Wood. And it's somehow related to when the dam goes
17 in at Glendale Road up in the triangle. But I don't
18 understand, and I have never understood the basis for
19 it. I'm not aware of any general provisions or
20 conditions in the water rights. So I've --

21 Q. So --

22 A. I've advised the watermaster to just
23 administer those as 1899 priority rights.

24 Q. So those rights are administered now or should
25 be administered now as 1899 Big Wood priority rights

1 even though there may be some deliveries in the Little
2 Wood?

3 A. That's my position on that. I haven't
4 formalized any guidance to the watermaster to that
5 effect yet.

6 Q. Okay.

7 THE HEARING OFFICER: Mr. Barker, how much
8 longer? Should we take a break?

9 MR. BARKER: Let's take five minutes or ten
10 minutes, whatever you like.

11 THE HEARING OFFICER: Let's take ten. So
12 let's come back about 20 after.

13 MR. BARKER: Thank you.

14 (Recess.)

15 THE HEARING OFFICER: Go ahead and go on the
16 record. I'm receiving some encouragement from some
17 corners in the room that both the attorney and the
18 witness need to speak up loudly, please, and I've
19 noticed it as well.

20 Q. (BY MR. BARKER) Tim, let's look at your
21 exhibit, Department's Exhibit 4, which is your staff
22 memo.

23 A. Okay.

24 Q. And attached to your staff memo is an
25 instruction to watermaster, dated April 27, 2021 to

1 Kevin Lakey?

2 A. Yes.

3 Q. And on the last page of that attachment is
4 your description of how to deliver the water rights with
5 the exchange condition?

6 A. Correct.

7 Q. And I think I heard you say earlier that you
8 had received some communications about your watermaster
9 instructions from Kevin Lakey and Cooper Brossy?

10 A. Not about the instructions. I think it was
11 about my memo from May 17th.

12 Q. So --

13 A. Related to specifically exchange rights.

14 Q. Is that information that's been made available
15 to the parties in this case, those communications?

16 A. I don't know.

17 Q. Is --

18 A. I think so. Yeah, I think so.

19 Q. Is that information that has influenced any of
20 your testimony here today?

21 A. No.

22 Q. Not relevant to your testimony?

23 A. Well, I mentioned it in my testimony, so...

24 Q. I guess all I'm trying to find out is if there
25 is information that you are relying on to testify today

1 that is not in your staff report that we haven't seen.
2 That's what I'm trying to drive at?

3 A. I think the exchanges that I referenced in my
4 testimony earlier were provided in the information
5 request. As far as I can remember right, there was a
6 lot of stuff there, so I'm not 100 percent sure.

7 Q. And you also mentioned consulting with AFRD in
8 a meeting in, when was that, March?

9 A. March 18th.

10 Q. And you mentioned the name Craig Hobdey?

11 A. Correct.

12 Q. Can you identify for the record Craig Hobdey?

13 A. He's the former attorney for AFRD2. He
14 retired I believe at the end of 2020.

15 Q. And he's been the long-time attorney for AFRD2
16 and Big Wood, both?

17 A. Yes.

18 Q. And so you felt it was reasonable to rely upon
19 what he told you about the contracts?

20 A. Well, one of the reasons for the meeting was
21 to get some of the ground water users in the room that
22 had asked a lot of questions in the ground water
23 management area advisory committee about the exchange
24 rights with representatives from AFRD2 that could
25 address some of these questions. And Craig, given his

1 long tenure with those entities, seemed to would have a
2 lot of knowledge about the subject.

3 Q. And turn to page 12 of your staff memo.

4 A. Okay.

5 Q. You reference that you have a Table 2 on page
6 12 referencing three particular years with streamflow,
7 their rank over the 30 years, and SWSI, we've been
8 calling that SWSI?

9 A. Correct.

10 Q. So a SWSI number of more than one is a good
11 water year, or an above medium water year; is that
12 right?

13 A. Right. The range is plus four to negative
14 four, or it might be a 4.1 to negative 4.1.

15 Q. And each increment, so let's say is this
16 by -- let me see if I can ask this right. Is this by
17 percentage of how much water is accrued to the basin in
18 a particular year? And what I'm trying to get at is, if
19 you have a SWSI value of one, and compared to a SWSI
20 value of two, do you have 12 percent more water in the
21 basin in that particular year?

22 A. With the higher SWSI value, you would have
23 more runoff.

24 Q. Is that 12 percent?

25 A. I don't know.

1 Q. You don't the percentages at all?

2 A. No, I don't.

3 Q. Okay. And so you selected these three years
4 this is for the work that Mr. Blankenau did?

5 A. Right. Mr. Blankenau had actually selected
6 these years for the analysis he was doing, but he was
7 selecting years that would also be representative of a
8 good supply, a normal supply, and a water short supply.

9 Q. So what's your role in putting -- I mean,
10 what's the purpose of you putting this table in your
11 report, because you are just reporting what the years
12 that Mr. Blankenau was going to use for his analysis?

13 A. Well, I was just trying to respond to the
14 request in the Director's memorandum. It specifically
15 asked for identification of those types of years. And
16 Mr. Blankenau had already selected those. And in my
17 review, I confirmed that those seemed like
18 representative years for those three categories.

19 Q. And then you identify the priority cuts for
20 the --

21 A. Yes.

22 Q. -- low, medium, and higher water years?

23 A. Yes.

24 Q. And that page is 14 through 16?

25 A. Correct.

1 Q. And then for your analysis that you did, did
2 you use any of these water years?

3 A. No.

4 Q. That was all the analysis that Mr. Blankenau
5 did?

6 A. Right.

7 Q. Okay. So let's turn to section 9, page 18.

8 A. Okay.

9 Q. So in this section you identified irrigated
10 lands potentially injured by ground water pumping. So
11 what was the criteria for determining potential injury?

12 A. Well, we were focused on the Little Wood River
13 and Silver Creek in accordance with the notice that the
14 Director had issued about this proceeding. So I focused
15 on identifying lands that had decreed river rights or
16 natural flow rights from those sources. I guess those
17 would be the rights that are my priority, may have
18 senior priorities, and might experience shortages in a
19 dry year like this.

20 Q. And those rights are contained on Attachment
21 A?

22 A. Yes.

23 Q. And you included rights without regard to
24 their priority dates?

25 A. Right, I selected all of the rights.

1 Q. So you didn't go through and say, well, some
2 of these priority dates couldn't possibly be injured
3 because of how late priority they are?

4 A. Right. I selected all the rights. Some of
5 the lands may have multiple priority rights on the same
6 land.

7 Q. But you still listed the lands with the late
8 priority dates as well; right?

9 A. I did.

10 Q. And then you've gone through and taken some of
11 those rights off the list based upon the criteria you've
12 identified in the bullet points in section 9?

13 A. Yes.

14 Q. Okay. So then what did you do with that list?
15 What happened next with the list of water rights?

16 A. The remaining list?

17 Q. No. No. The list that you've identified in
18 Exhibit A. What happened to that?

19 A. Well, that was used by Mr. Blankenau in his ET
20 model analysis.

21 Q. And did you review his ET model analysis?

22 A. I reviewed his memo, yes.

23 Q. And did you find anything to disagree with
24 Mr. Blankenau in the results that he reported?

25 A. No.

1 Q. So in section 10 is where you get to analysis
2 of potential or possible injury. Okay. So tell me
3 again what you mean by possible injury here?

4 A. I think I was -- I think the reference to
5 possible injury was just an attempt to be consistent
6 with the memorandum.

7 Q. And so your methodology was to choose two
8 water right years, 1937 and 1939, as to compare 2021
9 with; is that right?

10 A. Well, comparing two years or two analog years
11 that are recent and similar to 2021.

12 Q. So you used 2020 and 2004 --

13 A. Correct.

14 Q. -- and as the analog comparable years?

15 A. To 2021.

16 Q. Okay.

17 A. And then looked at those priority cuts in
18 those two years, and then compared with priority cuts
19 from 1937 and 1939, and I explained to Ms. Carter
20 earlier how the process for selecting those two years.

21 Q. And then you selected 1937 to 1939 because you
22 had delivery records for those years?

23 A. We had delivery records and looking at the
24 historical SWSI table for above Hailey, those two years
25 were similar to the projected runoff for 2021.

1 Q. And you said something about a 1931 water year
2 earlier in your testimony.

3 A. I did.

4 Q. And there is not a 1931 water year analyzed in
5 this document?

6 A. No, because at the time we did it, we were
7 going off of the projected streamflow, April through
8 September, based on the April 1 NRCS report.

9 Q. Do you have the delivery records for 1931 that
10 you've looked at?

11 A. We do have delivery records from 1931.

12 Q. Have you looked at them for your analysis or
13 for your testimony today?

14 A. I don't know how to answer that. I looked at
15 the priority table, but I don't recall. I didn't look
16 at it very closely. I just confirmed that, yes, we do
17 have priority cut table listed for that year. I didn't
18 do any real further study or analysis of it. I just
19 glanced at it.

20 Q. Is it consistent with '37 and '39, or is it
21 different, significantly different?

22 A. I can't say. I'm sorry. I didn't look at it
23 closely, or I don't recall.

24 Q. So the 37 SWSI index was minus 3.2 according
25 to your report --

1 A. Yes.

2 Q. -- on page 21?

3 A. Correct.

4 Q. And the 39 SWSI year was .3, minus .3? Sorry.

5 A. Yes.

6 Q. And do you understand what the current SWSI
7 estimate for the remainder of 2021 is minus --

8 A. It's pretty low, yeah.

9 Q. -- minus 4.0? You are looking at IDWR Exhibit
10 5?

11 A. Yes, it would be minus 4.0 based on the 50
12 percent chance forecast.

13 Q. So that would mean that there is a significant
14 difference in the water supply in 2021 compared to the
15 1939 and 1937 SWSI reports?

16 A. Yes, it potentially would be lower.

17 Q. And so the priority rights would be filled
18 without regard to pumping would be filled or would be
19 cut sooner?

20 A. They might potentially be cut sooner or longer
21 and longer.

22 Q. And so is your effort here in Table 7 through
23 10 an attempt to identify material injury to any
24 individual water right?

25 A. No, I was just trying to respond to the

1 request for information in the Director's request for
2 staff memoranda.

3 Q. Well, he asked for ways to possibly determine
4 injury; did he not?

5 A. Yes, and this was one of those.

6 Q. So are you suggesting that comparing these two
7 tables is a way to determine injury in the Department's
8 practice?

9 A. I think it's information that might be related
10 to review or determination of injury. I don't think in
11 and of itself it would necessarily be so.

12 Q. And so let's take, for example, the priority
13 cut table. Let's look at Table No. 7 on page 24.

14 A. Okay.

15 Q. So if you had a SWSI year in the 1930s of 4.0,
16 it's very possible that these May 1884 rights would not
17 be wrong, and that would change your entire
18 calculations?

19 A. Well, there would be a different table
20 comparing 2020 and 2004 to --

21 Q. That's fair.

22 A. -- 1931.

23 Q. And that's not been done by the Department?

24 A. No.

25 Q. If you go back to the exhibit book. If you

1 would turn to Exhibit 19, please.

2 A. Okay.

3 Q. Do you have Exhibit 19 in front of you?

4 A. Yes, sir.

5 Q. And we talked about these in your deposition.

6 So you've seen these -- we've talked about these in your
7 deposition; right?

8 A. Yes.

9 Q. And you've seen all the meeting minutes of the
10 advisory committee?

11 A. Yes.

12 Q. And you attended all the advisory committee
13 meetings?

14 A. I did.

15 Q. And you reviewed these minutes before they
16 went out?

17 A. I did.

18 Q. And so you are familiar with the content?

19 A. Yes.

20 Q. I would ask you to look at the November 18th
21 advisory committee meeting minutes.

22 A. Okay.

23 Q. And in the third paragraph, there is a
24 description of Deputy Attorney General Baxter giving a
25 presentation and comparing and contrasting delivery

1 calls under the conjunctive management rules and
2 management plans under the ground water management act
3 area?

4 A. Yes.

5 Q. Right. What do you recall about the
6 presentation? Well, first of all, what was the purpose
7 of giving the committee this explanation of the
8 difference between the delivery calls and the ground
9 water management area?

10 A. I believe it was really just background
11 information, educational.

12 Q. Were people interested in how, what the
13 process was for administration of ground water rights in
14 this advisory committee?

15 A. Yes, I think that's fair.

16 Q. And in this presentation by Mr. Baxter was
17 there ever any indication that there was an alternative
18 way of administration using 42-237a.g.

19 A. No, I don't recall that being discussed.

20 Q. And, in fact, throughout the advisory
21 committee meetings 42-237a.g. was not brought to the
22 attention of any of the water users, surface or ground
23 water?

24 A. Well, I think it may have been in the last
25 meeting or two.

1 Q. You think there was a specific reference to
2 that statute?

3 A. I thought there was at least by April 15th.
4 And it may not be reflected in these notes. But I guess
5 from my perspective by April 15th, everybody was pretty
6 well aware 237a.g.

7 Q. How were people made aware of 237a.g.?

8 A. Well, from the Director's comments in the
9 meetings about taking potential action and initiating
10 some proceedings.

11 Q. And did the Director specifically tell people
12 he was going to initiate proceedings under 237a.g.
13 instead of under the Conjunctive Management Rules?

14 A. Well, I don't know or can't remember if he
15 discussed or referenced 237a.g. But I think it would
16 have been apparent that absent a delivery call, we would
17 not be operating under the Conjunctive Management Rules.
18 So it would have to be under some other statute.

19 Q. And so apparent because somebody at the
20 Department told the water users that you would not be
21 operating under the Conjunctive Management Rules?

22 A. Repeat that. Sorry.

23 Q. You said it was apparent you wouldn't be
24 operating under the Conjunctive Management Rules. Was
25 it made apparent, because somebody at the Department

1 said that to the water users?

2 A. No, I guess I'm saying it's apparent by
3 April 15th based on the Director's comments that we
4 would be operating under other statutes, because we
5 didn't have a delivery call pursuant to the Conjunctive
6 Management Rules.

7 Q. And in the November meeting there was no
8 mention made of 237a.g. because you hadn't thought of it
9 at that time as a potential means for administration; is
10 that right?

11 A. Yeah, I don't think there was any discussion
12 of it at that point. Personally I wasn't -- I certainly
13 wasn't thinking of it or really even aware of it. As an
14 agency, at that point in time, I don't think we were
15 thinking about any curtailment, or proceeding, our
16 objective at that time was to --

17 Q. Well, you were discussing the Conjunctive
18 Management Rules which certainly could lead to a
19 curtailment; right?

20 A. Correct. I thought you were asking about some
21 intent. I mean, I may have misunderstood your question.
22 Sorry.

23 Q. Okay. Let's skip up to page, it looks like
24 page 14, a January 5th meeting.

25 A. Okay.

1 Q. It says there in the second paragraph that you
2 gave an update on losses in Silver Creek at Highway 93
3 crossing. Do you recall what information you presented
4 to the advisory committee about -- let me back up a
5 step. What information did you have at the time of this
6 meeting about losses in Silver Creek at Highway 93?

7 A. I was aware that the watermaster, Kevin Lakey,
8 has made some measurements above and below the Highway
9 93 bridge. And that those measurements, miscellaneous
10 measurements taken over the past prior several years,
11 and that he had measured losses from between 7 and 15
12 cfs.

13 Q. Did you ever get copies of that data?

14 A. No.

15 Q. Have you seen any other data showing seepage
16 losses in Silver Creek and Little Wood between the
17 Sportsman Access gage and the Station 10 gage?

18 A. Only information in Ms. Sukow's memo of May
19 17th.

20 Q. And that's a calculation that she did just for
21 this proceeding; correct?

22 A. Correct.

23 Q. Let's talk about the meetings at the very end.
24 Let's look at the April 7th meeting minutes.

25 A. Okay.

1 Q. On the second page there is a summary of some
2 of the things that the Director said at that meeting.
3 Is that what you were referring to about moving forward
4 with administrative actions, taking action by the
5 Director?

6 A. Yes.

7 Q. Do you remember the Director saying at that
8 meeting that he had sufficient evidence of injury at
9 that time to take action?

10 A. I don't remember.

11 Q. Did the Department have information as of
12 April 7th, 2021 about injury for the 2021 water season?

13 A. We had information that was presented to the
14 committee on, I think, March 24th of the observations
15 from staff about water supply conditions in 2021 up to
16 that point or at least the beginning of March, and
17 information about impacts to Little Wood and Silver
18 Creek and Big Wood River per the ground water model.

19 Q. Had a curtailment run been done by the
20 Department for 2021 at this time, similar to the one
21 that Jennifer Sukow included in her staff report?

22 A. I don't believe so not for 2021.

23 Q. So whatever information there was about injury
24 that the Department had in April was based on the
25 observations that you all provided to the advisory

1 committee?

2 A. Yes, that's my understanding.

3 Q. And I thought you said earlier that impacts to
4 streamflow does not necessarily equate to injury?

5 A. I think I had said that in my deposition. I
6 don't know that I said that today.

7 Q. Isn't that the case?

8 A. Yeah, I would agree with that. You could have
9 a very good water year and have impacts or depletions to
10 the stream. But that doesn't necessarily translate into
11 injury if there is adequate supply to in that year until
12 senior rights.

13 Q. And similarly just because the water supply is
14 low doesn't necessarily mean there is an injury because
15 Mr. Blaneknau ET analysis show that there was no injury
16 to Silver Creek and Little Wood water rights in the 2013
17 water year?

18 MR. RIGBY: I object. That's not what he
19 said.

20 THE HEARING OFFICER: Sustained.

21 Q. (BY MR. BARKER) Okay. So what did
22 Mr. Blankenau tell you about the impact of the 2013
23 water year on the Big Wood and Little Wood water rights?

24 A. In general I believe he was saying that it was
25 difficult to see a lot of water shortage in that year.

1 Now, there could be reasons for that. ET is just
2 limited to evaluating ET. Potentially there could be
3 other reasons, if those landowners acquired other water
4 supplies on contract or something to that effect.

5 Q. So look at Mr. Blankenau's exhibit, which is
6 IDWR Exhibit 3, I believe.

7 A. Yes.

8 Q. And turn to page 10.

9 A. Okay.

10 Q. And you see that it says at the last
11 paragraph, first sentence, "This analysis did not
12 clearly identify water shortage in Little Wood and
13 Silver Creek area during the 2013 drought."

14 A. Yes.

15 Q. Have I read that right?

16 A. You read it correctly.

17 Q. And that's a poor water year, maybe not as bad
18 as this year, but a poor water year?

19 A. Yes.

20 Q. Right?

21 A. Correct.

22 MR. BARKER: Thank you, Tim. Thank you,
23 Mr. Director, for your patience. I don't have any
24 further questions.

25 THE HEARING OFFICER: Thank you, Mr. Barker.

1 MR. BARKER: I'm sorry. I would like to move
2 for the admission of Exhibit 19.

3 THE HEARING OFFICER: Exhibit 19 is the
4 meeting minutes for the ground water management area
5 advisory committee for the Big Wood. I have previously
6 stated I think that I will take notice of these,
7 Mr. Barker. But if they've been marked. And I guess
8 I'll just ask, is there any objection to the admission
9 of these documents?

10 All right. So the documents marked as South
11 Valley and Galena Exhibit 19, the documents are received
12 into evidence.

13 (SVGWD/GGWD Exhibit 19 received.)

14 MR. BARKER: Thank you, Mr. Director.

15 THE HEARING OFFICER: All right. Mr. Laski, I
16 think you are next.

17 MR. LASKI: I don't have any questions.

18 THE HEARING OFFICER: Okay. Mr. Moroney?

19 MR. MORONEY: Thank you, Director.

20 CROSS-EXAMINATION

21 QUESTIONS BY MR. MORONEY:

22 Q. Good afternoon, Tim. I'm Owen Moroney,
23 representing the Idaho Department of Fish and Game. So
24 in general, Mr. Luke, when water is short and the
25 Department makes priority cuts, are nonconsumptive

1 rights included in the cuts, generally speaking?

2 A. Can you be more specific to are we talking
3 surface water, ground water, what kind of scenarios?

4 Q. In my scenario I'm talking about
5 nonconsumptive fish propagation rights.

6 A. So we could limit it to curtailment of ground
7 water rights resulting from a delivery call, let's say?

8 Q. Yes.

9 A. Okay. Well, we looked to the order, the
10 curtailment order, itself, in that case. And per my
11 deposition Ms. Vonde clearly pointed out that past
12 orders direct that nonconsumptive rights are not
13 curtailed.

14 Q. So in your experience does the Department
15 consider fish propagation as nonconsumptive?

16 A. Normally in my experience based on where those
17 hatcheries have been located.

18 Q. Have you ever been aware of a fish propagation
19 right that the Department considered consumptive?

20 A. No, not offhand.

21 Q. I would like to point your attention to some
22 Fish and Game exhibits. They are in that black binder
23 there, it looks like this (indicating). So to start off
24 could I have you look at Exhibit 16, it should be tabbed
25 at 16. Do you recognize this memo?

1 A. Only since it was identified to me in my
2 deposition.

3 Q. What does the memo discuss?

4 A. It's specific to the Water Right 37-8252.
5 It's discussing nonconsumptive use condition. And I
6 haven't read the memo in full. The first time I had
7 seen it was when Ms. Vonde handed it to me a week ago,
8 or ten days ago.

9 Q. So is there a standard approval condition for
10 nonconsumptive use?

11 A. There is a water right condition for
12 nonconsumptive use.

13 Q. What's the number of that condition?

14 A. I believe it's 027 as it's stated here in the
15 memo.

16 Q. So when you look at the memo, does it discuss
17 how nonconsumptive rights are considered in curtailment
18 scenarios?

19 A. Bullet three there underneath the first
20 paragraph says -- I think it's referencing the condition
21 that's placed on many water rights, and it has -- the
22 condition has a number of purposes including in the
23 third bullet, it says, "It indicates water rights that
24 may not have to be regulated by priority in a
25 curtailment scenario because they do not deplete the

1 amount of water available to holders of senior rights."

2 Q. And in your experience is that just the
3 general reason why nonconsumptive rights often are not
4 curtailed because they don't deplete the amount of water
5 for the other users?

6 A. Yes.

7 MR. MORONEY: I move to admit IDFG Exhibit 16
8 into the record.

9 THE HEARING OFFICER: Any objection to the
10 admission of this document? Hearing none, the document
11 marked as IDFG No. 16; is that correct, Mr. Moroney?

12 MR. MORONEY: Yes.

13 THE HEARING OFFICER: Is received into
14 evidence.

15 MS. CARTER: Are those actually marked or do
16 we need to mark them?

17 MR. MORONEY: We do need to mark them
18 actually.

19 THE HEARING OFFICER: Thank you, Ms. Carter.

20 (IDF&G Exhibit 16 marked and received.)

21 Q. (BY MR. MORONEY) Thank you, Mr. Luke. Next I
22 want to run through Fish and Game three ground water
23 rights that apply to this hearing. First, these have
24 previously been admitted with Ms. Sukow. First I want
25 to point you to Exhibit 4 in the binder. Is there such

1 a nonconsumptive condition on the face of this right?

2 A. There is -- I'm sorry. Repeat the question.

3 Q. Does this right, Water Right 37-08271 state
4 that the use of the water shall be nonconsumptive?

5 A. Yes, there is a comment that says "use of the
6 water under this right shall be nonconsumptive."

7 Q. Next I want to point you to the next Fish and
8 Game Exhibit No. 6. This exhibit has previously been
9 admitted too. It's Water Right 37-08331. Is there also
10 a condition on the face of this right that discusses
11 nonconsumptive use?

12 A. Yes, Conditional of Approval 2 says, "use of
13 water under this right shall be nonconsumptive."

14 Q. And then the final Fish and Game water right
15 is in Fish and Game Exhibit 2, which was previously
16 admitted. It is right 37-07038. This right doesn't
17 have a nonconsumptive use condition on the face of the
18 right. But if I was to represent to you that this right
19 is commingled with the two previous rights and used in
20 the same fish hatchery, would you say it would be fair
21 to assume that it should also be labeled as
22 nonconsumptive?

23 A. I would agree that it could be labeled as
24 such.

25 Q. Have you worked on other delivery calls for

1 the Department of Water Resources?

2 A. Yes.

3 Q. How in general has IDWR treated nonconsumptive
4 water rights in the curtailment orders for those calls?

5 A. Well, if we have a priority cut established in
6 a curtailment order, then we pull all the water rights
7 within the area, and the rights qualified in the
8 Director's curtailment order. And we will look at the
9 rights that appear to have nonconsumptive uses. So in
10 my deposition one of the things we discussed was, is the
11 right or the diversion of that ground water consumptive
12 to the source or not. And the example I gave was,
13 because I know personally we've looked at some of these
14 individually and have confirmed. So a good example is
15 ground water rights for heating and cooling purposes.
16 Most of those are close loop systems where they have an
17 injection well. So they divert the ground water out,
18 run it through a heat exchanger, divert it back into the
19 ground. That would be an example where it's not
20 consumptive through the source. However there are a few
21 that might run it through that same heat exchanger, but
22 rather than going back into the ground it would
23 discharge somewhere and not return to aquifer, or maybe
24 directly to the Snake River. And so in that case it
25 could be consumptive to the source. And so we have left

1 those kinds of consumptive rights -- I'm sorry. What
2 might be perceptually viewed as a nonconsumptive right
3 on the curtailment list.

4 Q. So in a situation where it, say, bypasses the
5 senior water user?

6 A. Yeah, or otherwise just consumptive through
7 the source.

8 Q. So it's really a fact specific analysis?

9 A. Correct. So I guess what I'm trying to say is
10 that just because Condition 27 could be on a right, or
11 could not be on the right, you know, we typically try to
12 look at them individually.

13 Q. All right. So now, I want to ask you a couple
14 more questions about Fish and Game exhibits. If you
15 turn to Exhibit 8, do you recognize this document?

16 A. Yeah, it looks familiar.

17 Q. Could you describe is it the Clear Springs
18 notice of potential curtailment?

19 A. Yes.

20 Q. If you look at the first paragraph in the
21 document, on page it's Bates stamped IDFG 0322. At the
22 end of that paragraph how does this document say
23 nonconsumptive uses are going to be treated?

24 A. "Nonconsumptive uses in culinary and house
25 uses of water are not subject to curtailment under the

1 orders."

2 MR. MORONEY: I move to admit IDFG Exhibit 9
3 into the record -- or Exhibit 8.

4 THE HEARING OFFICER: Any objection to the
5 admission of this document? We need to mark it, again.

6 Thank you, Meghan.

7 (IDF&G Exhibit 8 marked.)

8 THE WITNESS: Did you have me look at 8? I
9 was looking at 8?

10 MR. MORONEY: Yes, 8. I misspoke by saying 9.
11 Sorry.

12 THE WITNESS: Okay. I think we got it right.

13 THE HEARING OFFICER: I hope that's correct.
14 I'm looking at a Notice dated November 2nd, 2009,
15 Mr. Moroney?

16 MR. MORONEY: Yes, that's correct, sir.

17 THE HEARING OFFICER: So I'm not sure I ruled.
18 So the document marked as IDFG No. 8 is received into
19 evidence.

20 (IDF&G Exhibit 8 received.)

21 THE HEARING OFFICER: Okay. Mr. Moroney.

22 Q. (BY MR. MORONEY) Next, Mr. Luke, could I turn
23 you to Exhibit 9, IDFG No. 9?

24 THE HEARING OFFICER: Would you speak up
25 Mr. Moroney?

1 MR. MORONEY: Yes.

2 THE HEARING OFFICER: Thank you.

3 Q. (BY MR. MORONEY) Do you recognize this
4 document, Mr. Luke?

5 A. Yes.

6 Q. Would I be correct to characterize it as a
7 Surface Water Coalition notice of potential curtailment?

8 A. Yes.

9 Q. If you look at the bottom of paragraph 2, how
10 does that say nonconsumptive rights are going to be
11 considered?

12 A. The same as the last exhibit nonconsumptive
13 uses and culinary and house uses of water are not
14 subject to curtailment under the order.

15 MR. MORONEY: I move to admit IDFG Exhibit 9
16 into the record, Director.

17 THE HEARING OFFICER: Any objection to the
18 admission of this document? The document marked or that
19 will be marked as IDFG 9 is received into evidence.

20 (IDF&G Exhibit 9 marked and received.)

21 Q. (BY MR. MORONEY) So next, Mr. Luke, I want to
22 turn your attention to the document tabbed 11. Do you
23 recognize this document?

24 A. Yes.

25 Q. Would I be correct to characterize it as the

1 Rangen call order reaffirming curtailment?

2 A. Yes, correct.

3 Q. If you turn to the third page of that
4 document.

5 A. Okay.

6 Q. Under the header subsection "Order." Does
7 this mention curtailment of nonconsumptive rights or
8 only consumptive water rights?

9 A. It appears to mention only consumptive. So
10 midway through that first paragraph, "This order shall
11 apply to all consumptive ground water rights, including
12 agriculture, commercial, industrial, and municipal uses,
13 but excluding ground water rights used for de minimis
14 domestic purposes where such domestic use is within the
15 limits of the definitions set forth in Idaho Code,
16 Section 42-1401(11).

17 MR. MORONEY: All right. I move to admit IDFG
18 Exhibit 11 into the record.

19 THE HEARING OFFICER: Any objection to the
20 admission of this document? Okay. The document that
21 will be marked as Exhibit 11 is received into evidence.

22 (IDF&G Exhibit 11 marked and received.)

23 Q. (BY MR. MORONEY) Next I want to turn your
24 attention to IDFG tabbed as 13. Are you familiar with
25 this document?

1 A. No. I probably have seen it in my career, but
2 not intimately familiar with it at this time.

3 Q. So looking at the document, does it
4 specifically deal with processing applications for water
5 rights?

6 A. It's dealing with processing of applications
7 for permit, correct.

8 Q. And specifically does it deal with processing
9 permits in ground water management areas, in critical
10 ground water management areas?

11 A. Yes, it appears so.

12 Q. And to start with the ground water management
13 areas at the bottom of the first page, does it mention
14 whether or not the Department will issue a water right
15 permit for nonconsumptive uses in areas where it's
16 managing ground water? Sorry the --

17 A. They are both ground water management areas
18 and critical ground water areas it states -- well, let
19 me back up and say that prior to the sections for ground
20 water management areas and critical ground water
21 management, it says, Department policy with respect to
22 the filling of applications --

23 THE REPORTER: Can you slow down please?

24 THE WITNESS: I'm sorry. Yeah.

25 THE REPORTER: Department policy --

1 THE WITNESS: -- with respect to the filling
2 of applications for permit and subsequent Department
3 action on the applications in ground water management
4 areas and critical ground water areas is as follows:"
5 The ground water management areas one of the items says,
6 "The Department will issue a water right permit for
7 nonconsumptive uses." And it goes on to say other
8 things. And then under "Critical Ground Water Area," it
9 says, "The Department will issue a water right permit
10 for nonconsumptive uses."

11 MR. MORONEY: All right. I move to admit IDFG
12 Exhibit 13 into the record.

13 THE HEARING OFFICER: Any objection to the
14 admission of this document? Okay. The document that
15 will be marked as IDFG No. 13 is received into evidence.

16 (IDF&G Exhibit 13 marked and received.)

17 Q. (BY MR. MORONEY) Mr. Luke, I want to have you
18 look at one additional Fish and Game exhibit, that would
19 be Exhibit 15. Have you seen this memo before?

20 A. No.

21 Q. Does this memo deal with the Department's
22 processing of applications to appropriate water in trust
23 water areas?

24 A. It appears so, yes.

25 Q. And would I be correct to say those are areas

1 managed to meet the minimums at Swan Falls?

2 A. Yes.

3 Q. If you turn to page 3 of this document, there
4 is a bullet discussing nonconsumptive use; correct?

5 A. Yes.

6 Q. And what does that bullet provide?

7 A. It says, "IDWR will place the following
8 condition on all new trust water appropriations for
9 nonconsumptive uses of water and consumptive uses
10 subject to mitigation." And the condition reads as
11 follows, "Administration of this right to satisfy the
12 minimum streamflow water rights in the Snake River at
13 Murphy Gage shall not be required because use of water
14 pursuant to this right is either nonconsumptive or the
15 right holder is required to provide ongoing mitigation
16 to offset the depletion of water resulting from the use
17 of this right."

18 Q. Thank you, Mr. Luke.

19 MR. MORONEY: I move to admit IDFG 15 into the
20 record, Director?

21 THE HEARING OFFICER: Any objection to the
22 admission of this document? The document will be marked
23 as IDFG Exhibit 15 is received into evidence.

24 (IDF&G Exhibit 15 marked and received.)

25 Q. (BY MR. MORONEY) So, Mr. Luke, areas

1 including curtailments, ground water management areas
2 and trust water areas are all spots where the Department
3 has determined water to be in short supply; is that
4 correct?

5 A. Say that once more.

6 Q. Curtailments, ground water management areas,
7 and the trust water area, are all areas where water is
8 in short supply; correct?

9 A. Yes.

10 Q. So why has the Department excluded
11 nonconsumptive rights in these areas?

12 A. Because it's a use that will not necessarily
13 impact senior rights.

14 MR. MORONEY: Thank you, Mr. Luke. I have no
15 further questions.

16 THE HEARING OFFICER: Okay. Thank you,
17 Mr. Moroney. I might just ask of you, there are a
18 number of additional exhibits that you have included in
19 your binder. As I look through it, none of those
20 exhibits are marked. And it seems to me we could save
21 some time if you would pre-mark those exhibits before we
22 take testimony about them.

23 MR. MORONEY: I will do that. Thanks.

24 THE HEARING OFFICER: Okay. Thank you.

25 All right. Now, I am looking at Group No. 1,

1 and I want to note that Mr. Lawrence Schoen is here, who
2 has appeared independently individually as a party in
3 Group No. 1. So, Mr. Schoen, do you have questions for
4 Mr. Luke?

5 MR. SCHOEN: I do not have questions for
6 Mr. Luke, Mr. Director. I would like to speak however
7 as a participant in Group 1 at the appropriate time,
8 hopefully today.

9 THE HEARING OFFICER: Okay. Thank you. Well,
10 we need to finish with Mr. Luke first.

11 All right. Let's move on to Group 3,
12 Mr. Bromley or Mr. Lawrence.

13 MR. BROMLEY: We'll consolidate questions with
14 Mr. Lawrence to be efficient there, Mr. Director.

15 THE HEARING OFFICER: Thank you.

16 MR. LAWRENCE: Thank you, Mr. Director.

17 CROSS-EXAMINATION

18 QUESTIONS BY MR. LAWRENCE:

19 Q. Good morning, Mr. Luke.

20 A. Good morning.

21 Q. As you know, my name is Mike Lawrence. I'm an
22 attorney for the City of Hailey in this proceeding. I
23 will try to be efficient and get us out of here before
24 lunchtime.

25 Mr. Luke, the analysis in your staff memo,

1 which I believe has been marked as IDWR Exhibit 4,
2 resulted in a listed "potentially injured" water rights
3 attached as Attachment A to that memo; is that correct?

4 A. Yes.

5 Q. And earlier in your discussion with
6 Mr. Barker, you referenced and discussed your 2015 staff
7 memo, which I believe has been marked as the Ground
8 Water Districts Exhibit 26. Do you recall that?

9 A. Yes.

10 Q. Do you know how many of the water rights in
11 your Attachment A list to your 2021 staff memo were
12 included in your analysis in your 2015 staff memo,
13 Exhibit 26?

14 A. I don't know the number offhand, but some of
15 the rights in the attachment of the 2021 memo would have
16 been included in the 2015 delivery call.

17 Q. But not all of the rights in your 2021
18 Attachment A were included in your 2015 memo; is that
19 correct?

20 A. I think that's probably correct.

21 Q. Mr. Luke, are you aware of Mr. Vincent's
22 testimony that the SWSI information for the Big Wood
23 above Hailey gage correlates well in his belief to water
24 supplies in Silver Creek and the Little Wood River?

25 A. Yes, I listened to that testimony.

1 Q. And a few moments ago, I believe it was with
2 Mr. Barker, you discussed Mr. Blankenau's analysis where
3 he concluded that in 2013, which you identified as a
4 water short year based on the SWSI, that there were not
5 low evapotranspiration results in the Little Wood,
6 Silver Creek area; is that correct?

7 A. My recollection was Mr. Barker pointed me to a
8 comment in the conclusions that said the analysis did
9 not clearly identify water shortage in the Little Wood
10 and Silver Creek area during the 2013 drought.

11 Q. But I guess a better way to ask the question
12 that I'm really getting at is if Mr. Vincent says that
13 the Big Wood above Hailey SWSI correlates well with
14 Little Wood and Silver Creek water supplies, and 2013
15 has been identified as a water short year based on that
16 SWSI gage, can you explain how Mr. Blankenau's analysis
17 resulted in it not showing a water shortage in Little
18 Wood, Silver Creek in 2013?

19 A. I can't explain it. I did offer one
20 possibility earlier in my testimony, and just from
21 personal experience I know some users have acquired
22 other sources of water to cover that shortage.

23 Q. Mr. Luke, do you know generally speaking which
24 priority dates on the Little Wood and Silver Creek
25 streams are considered senior or junior, meaning a

1 senior right that's rarely if ever cut, or a junior
2 right that almost in all years is cut?

3 A. Generally 1883 and 1884 senior-priority rights
4 are good priority rights that are not cut often.

5 Q. Are 1885 and junior rights cut frequently?

6 A. They are cut sometimes, yes.

7 Q. In most years would an 1885 right be on for
8 the full season?

9 A. Certainly an '85 priority right is cut more
10 frequently than an '84 and '83.

11 Q. And on it goes as they get more junior?

12 A. Correct.

13 Q. I guess what I'm asking is what is the date at
14 which a water right priority cannot be expected to have
15 a full season supply, are those 1885 in juniors, are
16 those 1886s in junior? Obviously, the higher you go
17 then the less fill they would be?

18 A. I don't feel like I have enough experience
19 with the priority cuts in the system to answer that.
20 Obviously, that's going to be affected by water supplies
21 and the type of water year that it is. And there is, as
22 I said earlier, there could be quite a range from very
23 good water years where a few rights are cut, if any, and
24 other years where the cuts can be deeper.

25 Q. In your list in Attachment A to your 2021

1 memo, does it include some rights that have such
2 senior-priority dates that they are essentially never
3 curtailed?

4 A. I think there are some rights on that list
5 that I'm not sure that they've ever been curtailed.
6 There is, for example, 1887 priority, and rights between
7 1877 and 1882 that from my limited review of the various
8 years that I've looked at in the different memos, I have
9 not recalled seeing cuts to those types of
10 senior-priority rights.

11 Q. And similarly, are there rights on your list
12 in Attachment A in your 2021 memo that are so junior
13 that they are essentially curtailed every year even in a
14 good year?

15 A. I don't know about every year, but I would say
16 most years. I think there is possibly some years where
17 everything was on all year. I can't say absolutely one
18 way or the other.

19 Q. Mr. Luke, if a water user does not ask for
20 water, does the water district or watermaster
21 nevertheless deliver them water to their headgate -- at
22 their headgate?

23 A. Let me repeat that and see if I understand.
24 You are saying a user who does not request delivery?

25 Q. Correct.

1 A. Does he receive delivery nonetheless?

2 Q. Correct?

3 A. I would not think so.

4 Q. But you don't know how the watermaster
5 administers?

6 A. I think if a user does not request -- well,
7 maybe you need to repeat your question. I'm taking your
8 question to mean, a user tells the watermaster he does
9 not want delivery of water. And you are asking me, does
10 the watermaster deliver it anyway?

11 Q. No, I think I would phrase it as, if a water
12 user does not affirmatively request delivery of water,
13 does the watermaster nevertheless deliver it, just
14 assuming that the water user wants the water?

15 A. I don't know for sure. That would be a better
16 question for the watermaster.

17 Q. I want to ask you a few questions about the
18 exchange conditions that have been discussed quite a bit
19 already. So I just want to make sure that I understand
20 how the Department, and through your instructions,
21 reasonable instructions, the watermaster intends to
22 administer these exchange conditions. Is it correct to
23 say that the rights with the exchange conditions are
24 entitled to Snake River water from AFRD2 when their
25 Little Wood River rights are available to be delivered

1 in priority?

2 A. Yes.

3 Q. And when those rights are entitled to the
4 Snake River water from AFRD2, the Little Wood water that
5 they would otherwise be entitled to can be delivered to
6 other Little Wood rights located above the Milner
7 Gooding Canal?

8 A. Correct.

9 Q. Is that correct?

10 A. And specifically to the Big Wood Canal
11 Company's Little Wood River -- well, to the Big Wood
12 Canal Company.

13 Q. If that exchange condition is administered in
14 the way we just described, wouldn't that change the
15 priority cuts on Silver Creek and the Little Wood River?

16 A. No.

17 Q. Why wouldn't it?

18 A. Because you still have to -- you are
19 delivering the water to the Big Wood Canal Company not
20 physically to the users located below Milner Gooding.
21 So it's an exchange. So they are getting the Snake
22 River water in exchange for physically delivering that
23 water from the Little Wood downstream below.

24 Q. But if an acre-foot of water that does not
25 need to go below Milner Gooding Canal because of the

1 exchange condition can be applied to lands above the
2 Milner Gooding Canal, doesn't that increase the supply
3 available above the Milner Gooding Canal?

4 A. It doesn't increase the supply. You still
5 have the same supply. You still have to honor those
6 exchange rights. So you have to have water available
7 for those rights. You are just not delivering it to the
8 locations below Milner. You are delivering it to first
9 the Big Wood Canal Company because that's in accordance
10 with the provisions of the contracts. If the Big Wood
11 Canal Company doesn't have demand for that, then it may
12 be available for the next priority right in line. So to
13 that extent then a more junior right holder may benefit
14 from the exchange.

15 Q. A more junior right holder above -- well, on
16 both sides --

17 A. Above Milner Gooding.

18 Q. Above Milner Gooding --

19 A. Yes.

20 Q. -- could benefit from that?

21 A. Right.

22 Q. That's what I meant wouldn't that change the
23 priority cuts? But I think you just answered --

24 A. Okay. You said "supply" though and --

25 Q. Well, my original --

1 A. It may result in some adjustment to the
2 priorities, correct --

3 Q. Okay. Great. Thank you.

4 A. -- in that scenario.

5 Q. I think that answered my question. Thank you?

6 A. Milner Gooding.

7 Q. So in a nutshell, when the exchange condition
8 will be administered, and if it's administered properly,
9 the lands below the Milner Gooding will rely on the
10 Snake River AFRD2 water, the lands about Milner Gooding
11 Canal will rely on the Little Wood water; is that
12 correct?

13 A. Yes, except there are some rights -- yeah, it
14 is only specific to rights on the Little Wood that have
15 that condition. There are some rights below that do not
16 have that condition.

17 Q. Right, rights with that condition. Mr. Luke,
18 did you analyze whether water resulting from curtailment
19 of ground water rights in the Bellevue triangle in 2021
20 would be available for diversion at any particular point
21 of diversion for a senior water right?

22 A. Yes, in the observations we prepared in March
23 for the advisory committee -- I think I'm getting your
24 question -- we did look at curtailments of ground water
25 rights within the Bellevue triangle, and I think within

1 the Wood River Valley model area, the impacts of that on
2 Silver Creek. And I look at in working with the
3 watermaster on Little Wood, what the additional flow in
4 Silver Creek from curtailment, how that might affect
5 delivery of water to priority rights. I think that was
6 your question.

7 Q. I think I understand generally speaking what
8 you mean. But I mean specifically with respect to a
9 senior water right, did you analyze whether curtailment
10 of ground water pumping resulting in additional water in
11 Silver Creek or Little Wood would actually be delivered
12 to a specific point of diversion for a senior water
13 right?

14 A. Not beyond what I just described to you.

15 Q. Mr. Luke, let me describe this. In your memo,
16 Table 7 through 10, which are on pages 24 and 25.

17 A. Yes.

18 Q. These tables comparing Silver Creek and Little
19 Wood priority cuts in 1937, '39, 2004 and 2020, these
20 tables display only the days that the later years were
21 cut off compared to the earlier years; correct?

22 A. Yes.

23 Q. These tables do not display the days when the
24 earlier years were cut off compared to the later years;
25 is that right?

1 A. That's correct.

2 Q. But it's true, isn't it, that there are days
3 when priorities were cut off in earlier years that were
4 not cut off in the later years that you examined?

5 A. Yes, I think in my deposition I noted that in
6 the '37 or '39 years, there might -- well, there were
7 junior rights that experienced cuts or were off more
8 days in that earlier year than they were in 2020. I
9 think the point we were trying to make here is that the
10 more senior rights were not cut at all in those earlier
11 years, but were cut in the more recent years.

12 Q. Right. But going back to my question, it's
13 true that there are periods of time when you compared
14 the earlier years to the later years, where the earlier
15 years priorities were cut off when they were not cut off
16 in the later years; is that correct?

17 A. Right. So in part is controlled not going on,
18 looking beyond like the 1784 priority in 1937. Because
19 the next junior-priority right, the total number of days
20 cut in that year were more than it was in 2020 or 2004.

21 Q. Okay. Thank you. Mr. Luke, did you analyze
22 actual or material injury in 2021 to any particular
23 water right?

24 A. No.

25 Q. And do you know whether all of the acres

1 within the places of use for any water right will be
2 irrigated in 2021?

3 A. Repeat that.

4 Q. Do you know whether all of the acres within
5 the place of use for any particular water right will be
6 irrigated in 2021?

7 A. No.

8 Q. Did you analyze whether in 2021 any water
9 rights will use water efficiently and without waste?

10 A. Not in 2021.

11 Q. Have you done that analysis in other years?

12 A. Which criteria is this again?

13 Q. I'm asking whether you analyzed whether water
14 rights will use water efficiently without waste.

15 A. In other years besides --

16 Q. I first asked in 2021 and then --

17 A. Yeah, and I said, no.

18 Q. Okay.

19 A. But then you asked me other years, and it was
20 to the efficiency?

21 Q. Yes.

22 A. Yes, in part in the 2015 memo, the delivery
23 call, we inventoried all the diversions that were part
24 of that delivery call, and that was summarized in the
25 appendices to my memo.

1 Q. But as we discussed not all of the rights in
2 your Attachment A to your 2021 memo were included in
3 that 2015 memo; correct?

4 A. I think that's correct.

5 Q. And you haven't updated that analysis since
6 2015?

7 A. No.

8 Q. Did you analyze the amount of water available
9 in 2021 in the source from which a particular water
10 right is diverted?

11 A. No.

12 Q. Did you analyze the effort or expense of the
13 holder of a water right to divert water from the source
14 in 2021?

15 A. Did I analyze the what?

16 Q. The effort or expense of the holder of a water
17 right to divert in 2021?

18 A. I did not do any analysis.

19 Q. Did you analyze whether the exercise of junior
20 priority ground water rights individually or
21 collectively effective the quantity and timing of when
22 water is available to any particular senior priority
23 surface or ground water right in 2021?

24 A. No, not specifically.

25 Q. And similarly did you analyze whether the

1 exercise of junior priority ground water rights
2 individually or collectively effects the cost of
3 exercising any particular senior surface or ground water
4 right?

5 A. No. And I didn't --

6 Q. For the twenty-twenty- --

7 A. I think you are reading from Rule 42 of the
8 conjunctive management rules. So I'll just say that we
9 didn't do the analysis that you are, going through each
10 of those bullet points, or that I didn't anyway.

11 Q. So just to clarify then, you are familiar with
12 the Rule 42 factors in the conjunctive management rules?

13 A. Yeah, I looked at them -- yes, I am. And you
14 went through those yesterday in Mr. Blankenau's
15 testimony?

16 Q. Correct. And you are familiar with all of
17 those factors in Rule 42?

18 A. Yes.

19 Q. And is it --

20 A. I have looked at them. I looked at the rule,
21 yes.

22 Q. And with respect to any particular water
23 rights exercised in 2021, have you evaluated those
24 factors under Rule 42?

25 A. Other than -- no, not for 2021. As I said

1 earlier, I think a few of those factors we looked at for
2 some of the -- well, the rights that were part of the
3 2015 delivery call, like water measurement, for example,
4 is one of those.

5 Q. Mr. Luke, I'm going to ask you if the Director
6 orders curtailment of junior ground water rights in this
7 proceeding, what options would be available to junior
8 users to prevent shutting off or to mitigate their use?

9 A. I don't know that there would be any.

10 MR. LAWRENCE: No further questions. Thank
11 you, Mr. Luke.

12 THE HEARING OFFICER: Thank you, Mr. Lawrence.
13 Mr. Simpson, questions.

14 MR. SIMPSON: No questions.

15 THE HEARING OFFICER: Let's see.
16 Mr. O'Bannon, I think you were on the list.

17 MR. O'BANNON: No questions.

18 THE HEARING OFFICER: Okay. We are through
19 with Group 3.

20 Let's circle around. And redirect,
21 Ms. Carter?

22 MS. CARTER: I have one item regarding
23 Mr. Luke's staff memorandum.

24 THE HEARING OFFICER: Okay.

25 ///

1 REDIRECT EXAMINATION

2 QUESTIONS BY MS. CARTER:

3 Q. Mr. Luke, I'm going to hand you a different
4 copy of IDWR Exhibit 4. I have that other one just to
5 make sure. Now, this copy has changes handwritten based
6 on your testimony earlier today. Would you review that
7 and let me know if that is accurate?

8 MR. LASKI: Is that Exhibit No. 4?

9 MS. CARTER: It is.

10 THE WITNESS: Yes, it appears accurate.

11 Q. (BY MS. CARTER) I apologize. Would you tell
12 me again; is that correct?

13 A. Yes, ma'am, it appears accurate.

14 MS. CARTER: Thank you. I move to have IDWR
15 Exhibit 4 admitted into the record.

16 THE HEARING OFFICER: As amended by --

17 MS. CARTER: Yes.

18 MS. MCHUGH: May I ask a clarifying question?
19 Do you think this contains interlineations or do you
20 just think that they are correct?

21 MS. CARTER: It's been corrected in line as
22 best as possible.

23 MS. MCHUGH: So you think there is a strike
24 out and a change?

25 MS. CARTER: Yes. For example, page 9.

1 MS. MCHUGH: Okay.

2 MS. CARTER: Did I give you the wrong copy?

3 MS. MCHUGH: I don't see anything
4 interlineated. Do you?

5 MR. FLETCHER: Yes.

6 MS. MCHUGH: We don't have the right copy.
7 Our copy doesn't have anything on it.

8 MS. CARTER: I apologize. I don't know how
9 that happened.

10 MS. MCHUGH: This one does. This makes sense
11 to me. Okay. Thank you.

12 MR. FLETCHER: That was on purpose.

13 MS. MCHUGH: Well, IDWR and typos can be job
14 ending. So I just want to make sure we were right.

15 MS. CARTER: And this is not my paper.

16 MR. BROMLEY: Well, you gave it to us.

17 MS. MCHUGH: You gave it to us.

18 MS. CARTER: I know. I think it was probably
19 here.

20 MR. LAWRENCE: Oh, I might have left it over
21 there.

22 MS. CARTER: Yeah.

23 THE HEARING OFFICER: Somebody else's slight
24 of hand. Okay. You have the copy in front of you now,
25 Ms. McHugh.

1 MS. CARTER: That is all I have.

2 THE HEARING OFFICER: Okay. And Counsel has
3 moved for the admission of IDWR Exhibit No. 4. Any
4 objection to admission of this document? Okay. The
5 document marked as IDWR Exhibit No. 4 is received into
6 evidence.

7 (IDWR Exhibit 4 received.)

8 THE HEARING OFFICER: Any more redirect,
9 Ms. Carter?

10 MS. CARTER: No.

11 THE HEARING OFFICER: Mr. Fletcher, I'll
12 characterize your questioning as redirect. So do you
13 have any more questions?

14 MR. FLETCHER: I don't.

15 THE HEARING OFFICER: Mr. Rigby?

16 MR. RIGBY: Just one.

17 RECROSS-EXAMINATION

18 QUESTIONS BY MR. RIGBY:

19 Q. Mr. Luke, yesterday I believe you were
20 listening in to Ms. Sukow's testimony; is that correct?

21 A. Most of it, yes.

22 Q. Do you recall her testifying that curtailment
23 in the triangle would result in a significant increase
24 in flows at the Sportsman Access for this year?

25 A. Yes.

1 Q. Do you have any reason to disagree with that?

2 A. No.

3 Q. Do you agree with it?

4 A. Yes.

5 MR. RIGBY: I have no further questions.

6 THE HEARING OFFICER: Okay. Thank you. Now,
7 Mr. Barker within the scope of redirect?

8 MR. BARKER: Not a thing, Your Honor.

9 THE HEARING OFFICER: Mr. Laski?

10 MR. LASKI: No.

11 THE HEARING OFFICER: Mr. Moroney?

12 MR. MORONEY: No.

13 THE HEARING OFFICER: Okay. Group 3, anything
14 further?

15 MR. LAWRENCE: No, nothing.

16 MR. BROMLEY: No.

17 THE HEARING OFFICER: All right. Thank you,
18 Mr. Luke, you are finished.

19 THE WITNESS: Thank you.

20 (Witness excused.)

21 THE HEARING OFFICER: And it's five minutes to
22 the hour. So I think we should take a lunch break.

23 MR. THOMPSON: I've got one issue, Director.
24 On the timing of the staff reports, I know they are all
25 dated May 17th, that's how they show up on the

1 Department's website, which I don't believe is the
2 official docket. We never received those until, I
3 think, late in the day of the 18th. And then some of
4 Jennifer Sukow's files weren't supplied until the 19th,
5 20th, something like that. I just would like the
6 Department to create a record of when those were
7 actually filed in this case, and that we have that on
8 the record.

9 THE HEARING OFFICER: Well, Mr. Thompson, you
10 can make that record I suppose if you want to.

11 MR. THOMPSON: Well, I don't work here. So I
12 need to know when this stuff was actually filed and
13 received, because we didn't get it until the 18th. It's
14 all dated the 17th, and it is supposedly showing on your
15 record as filed on the 17th, but we never got it.

16 THE HEARING OFFICER: I think if you read our
17 rules of procedure, whether you think they are fair or
18 not, I think the rules of procedure say the service is
19 complete upon mailing. So the date that you received it
20 may be important to you, but in terms of the date that
21 the document was served, I think the rules of procedure
22 say complete upon mailing. And I may be wrong, but
23 that's what I recall.

24 MR. THOMPSON: Well, that's the point, I don't
25 think those were ever mailed. And I would like the

1 staff to determine if those were, what date that was
2 when it was mailed.

3 THE HEARING OFFICER: Well, we'll certainly
4 look into it.

5 MR. THOMPSON: Okay. It's an important matter
6 for this case and the timing, every day counts.

7 THE HEARING OFFICER: Well, you'll certainly
8 have an opportunity to establish that as you call
9 witnesses.

10 MR. BROMLEY: Well, Director, I can confirm
11 with Mr. Thompson the same, because I was on the website
12 both on the 17th and the 18th. The memos were not
13 posted on the 17th to the website. They were not
14 served. That's another issue out there was that they
15 were never served on April. On the 18th, I was on the
16 website in the morning, and the staff memos were not
17 posted. They were posted at some point later some time
18 afternoon on the 18th. Those are my observations
19 consistent with what Mr. Thompson is saying. And he's
20 correct, every day in this proceeding that's been
21 created and the procedure, it does matter.

22 THE HEARING OFFICER: Well, and all of you
23 will have an opportunity to raise that as you present
24 evidence. So we'll look at it.

25 MR. THOMPSON: But I'm just trying to confirm

1 when it happened. We have no knowledge of when that was
2 posted, and you know who did that, and at what time.
3 And it's represented as the 17th, which I think is
4 incorrect.

5 MS. MCHUGH: Perhaps we need to call a witness
6 from your IT staff, or from your legal staff or
7 something if you want us to create a record.

8 THE HEARING OFFICER: Well, that's possible.

9 MS. MCHUGH: And if you want to identify those
10 people, that would be great.

11 THE HEARING OFFICER: Let's talk with counsel
12 about it. All right. Let's take a lunch break. We'll
13 be back at 1:00.

14 MR. BROMLEY: Thank you.

15 (Lunch recess.)

16 THE HEARING OFFICER: Okay. We are recording
17 again. It's 2:00, an hour later than the appointed time
18 that we agreed to start. As I was saying earlier, we've
19 delayed the beginning of the afternoon presentation of
20 testimony because of some ongoing discussions possibly
21 about, I guess, I suspect some kind of settlement. And
22 is there somebody prepared to report to us here?

23 MR. RIGBY: Mr. Director, I'll take a crack at
24 it to begin with.

25 THE HEARING OFFICER: Okay. Mr. Rigby.

1 MR. RIGBY: Thank you, Mr. Director. And
2 really, you are correct, there has been some discussions
3 that have gone on. And we're not prepared yet to
4 indicate what those would be or if a settlement has even
5 been reached. But there are certain terms and
6 conditions that need to be confirmed and/or sought out
7 or verified, and we need the afternoon to do that. And
8 for that reason we are here asking that this be
9 continued until tomorrow morning at 9:00. And the
10 reason I say, 9:00, instead of 8:30 is because we could
11 be scrambling tomorrow morning to do this.

12 And if it please the Director and Counsel,
13 that's where I think we are standing. I will say we are
14 negotiating in good faith. Obviously, there is
15 some -- a lot of issues here, a lot of different
16 parties, and so this is not an easy task. Although
17 Mr. Schoen wants to testify, and we certainly have no
18 objection to that.

19 THE HEARING OFFICER: Mr. Barker, do you have
20 something to add?

21 MR. BARKER: I just want to express my
22 agreement with Mr. Rigby as rare as that is. But today
23 we do agree of the status of where we're at. We do
24 think there is prospects for a resolution, and we're
25 hoping to. But we need some more time to discuss.

1 THE HEARING OFFICER: Thank you, Mr. Barker.

2 Anybody else?

3 Okay. I'm inclined to grant the continuance
4 reminding everybody that we also have a Saturday
5 scheduled should this fall apart. So I have another day
6 we can replace the afternoon with, and next week, of
7 course. All right. So I will grant the continuance
8 until 9:00 tomorrow morning.

9 But before we do, Mr. Schoen, do you wish to
10 testify today?

11 MR. SCHOEN: I think -- well, you know what,
12 I -- let me go to the podium.

13 THE HEARING OFFICER: Now, are you planning to
14 testify right now, or do you have some preliminary
15 questions?

16 MR. SCHOEN: I have some questions. I'm
17 coming to the podium so that I can be heard by everybody
18 rather than standing in the corner.

19 THE HEARING OFFICER: Yes.

20 MR. SCHOEN: Because I know from having
21 watched on the screen, it's very hard to hear anybody
22 that is standing in the back of the room. So I'm just
23 trying to be respectful of the people who are listening
24 in.

25 THE HEARING OFFICER: I just want to ensure

1 that you are not testifying, because I need to swear you
2 in if you do.

3 MR. SCHOEN: Understood. So I have remarks
4 that I prepared. I'm not an attorney. I'm here
5 representing my own interests, which I feel I have a
6 right to do in a process like this. I don't know if it
7 makes sense to testify, because I don't know what the
8 terms of this are going to be. But I drive
9 two-and-a-half hours each way to get here, and want to
10 know -- you know, and many of us go who are going to go
11 home tonight are going to want to know whether they
12 should be back here at 9:00 in the morning or not.
13 That's the first thing.

14 And so my testimony may -- you know, I don't
15 know what my own role in this will be as a participant.
16 It's not clear to me if I'm scheduled to speak. You
17 know, all I know is today was set aside for people in
18 Party 1 to speak. And yet, you know, we didn't even get
19 through yesterday's work until noon. And so because the
20 schedule is not well defined, and we don't know who gets
21 to do what when, it just makes it harder for us who have
22 other commitments and obligations, notwithstanding our
23 recognition of the importance of this. So I am
24 wondering if you can just speak to what your outlook is
25 for how this is going to proceed?

1 THE HEARING OFFICER: Well, I'm not sure I
2 have an outlook, other than I've reserved a number of
3 additional days for testimony, and that's my outlook.
4 Should I express optimism or pessimism? I don't know.
5 I don't know enough about what's being discussed. So
6 the best I can tell you is if you wish to present your
7 testimony today, I would encourage you to present it, or
8 you can wait.

9 MR. SCHOEN: I think I will go ahead and
10 present my testimony if it's okay with you?

11 THE HEARING OFFICER: Okay.

12 MR. SCHOEN: I think some of what I have to
13 say has a bearing on what these folks are going to
14 negotiate, because my testimony has to do with the
15 principles of this whole proceeding.

16 THE HEARING OFFICER: Okay. And I assume you
17 will narrate your testimony?

18 MR. SCHOEN: I will. I will. You know, and
19 this isn't -- obviously, there is some qualities of a
20 courtroom-style proceeding here, you know, with
21 objections sustained and overruled and all that sort of
22 thing. But I'm speaking on my own behalf to defend my
23 rights. And you'll have to guide me, because I've never
24 participated in a proceeding like this if I get out of
25 line.

1 THE HEARING OFFICER: Yeah. Well, do you wish
2 to testify from the podium or from the chair?

3 MR. SCHOEN: I'm very comfortable standing
4 here if that's okay with you?

5 THE HEARING OFFICER: That's fine.
6 Mr. Schoen, if you'll raise your right hand.

7 LAWRENCE SCHOEN,
8 first duly sworn to tell the truth relating to said
9 cause, testified as follows:

10 THE HEARING OFFICER: Go ahead.

11 MR. SCHOEN: Okay. My name is Lawrence
12 Schoen, L-a-w-r-e-n-c-e, last name is spelled
13 S-c-h-o-e-n. This is the testimony I had intended to
14 give today despite the fact that, you know, there are
15 some other developments as have been noted. I'm just
16 going to give it as I had intended to.

17 The first thing I want to do is thank the
18 Director for this process, and I particularly want to
19 thank the staff who put in a lot of work for us to get
20 here. Some of these folks gave depositions, and then
21 they were questioned and asked the same questions
22 repeatedly, and they stood up to it extremely well, and
23 I'm very grateful to them.

24 I farm -- I own 306 acres adjacent to the
25 Silver Creek Preserve, a tributary to Silver Creek flows

1 through my property. My water rights are Water Right
2 37-351B and 37-352B. I irrigate a grand total of 14.4
3 acres. So this isn't about the money to me. I raise
4 horse hay and pasture on that land. But this is about
5 the principle about how water rights are administered,
6 not just in Basin 37, but in the state of Idaho.

7 I also, my land is classified by the Blaine
8 County Assessor as sub-irrigated, but that sub-irrigated
9 land is turning into dry land. And the reason that is
10 happening is because the water table in the Wood River
11 aquifer is being drawn down so dramatically, and that's
12 from years of unregulated ground water pumping and
13 drought conditions that have existed, you know, for
14 quite a few years.

15 I was a county commissioner in Blaine County
16 for 12 years. From the time I became county
17 commissioner, I've worked closely with the Department of
18 Water Resources on helping us get to this point where we
19 could have a good understanding of water rights in our
20 basin. And I believe that I served as a county
21 commissioner to ensure the participation of many people
22 in Blaine County in this process. My work with the
23 Department goes back to Director Tuthill. I worked with
24 you, Director Spackman, in an official capacity, and Tim
25 Luke, and Sean Vincent, and a number of other people in

1 the Department of Water Resources, not to mention the
2 U.S. Geological Survey.

3 Blaine County has been very forward in
4 studying the water, and the hydrology, and the
5 hydrogeology, hydrogeomorphology of Blaine County's
6 water resources. We sponsored four studies by USGS.
7 Each one of those studies successively drew on the work
8 done before. And, yes, there is still work to be done,
9 but we have a very good understanding of our aquifer and
10 the water resources in it.

11 And another thing I want to say about that is,
12 when I worked with Director Tuthill, one of the
13 expressions that both of us used continuously is that
14 water use and land use are two sides of a coin. And I
15 understand all too well the consequences of changes in
16 patterns of water use on land use and what that means.
17 This is not just about the impacts on individual
18 farmers, but it's about the impacts on an entire
19 community. So I'm very well aware of the stakes here.

20 No one is here to harm anybody else. These
21 folks, I mean, there is a lot of lawyers in the room,
22 but they represent friends and neighbors of mine. And,
23 you know, this issue to me is very simple, despite,
24 Mr. Director, the efforts of some to persuade you
25 otherwise. And I believe the resolution of this issue

1 is very simple too if you follow the science, if you
2 follow the law, and you follow the Constitution of the
3 State of Idaho and the United States, which guarantees
4 equal protection under the law. You know I'm very
5 grateful for the advisory committee meetings that we had
6 beginning in November, but no results were achieved.

7 I was wondering if I could ask Meghan to put
8 up the first photo that I sent to her. I have three
9 photos that I would like to share as part of my
10 testimony, that's without objection.

11 MR. BROMLEY: Director, if I could ask a
12 question just in aid of clarification?

13 Mr. Schoen, were any of these disclosed as
14 exhibits at the exhibit deadline? I haven't seen them.
15 It's just --

16 MR. SCHOEN: They weren't. I took them
17 yesterday. And if there is an objection, and I'm not
18 allowed by the rules of procedure to present them,
19 that's fine. I can describe them. I'm simply trying to
20 give a visual aid to illustrate my point. But, you
21 know, you guys know the hearing rules better than I do.

22 MS. McHUGH: It might just be helpful to see
23 them, if we could just look at them.

24 MR. SCHOEN: Okay. Well, once they are seen.
25 They can't be unseen, right? You know that, right?

1 MS. MCHUGH: But they are not part of the
2 evidence.

3 MR. BROMLEY: Yeah, they necessarily wouldn't
4 go into the record.

5 MR. SCHOEN: Okay.

6 THE HEARING OFFICER: Well, let's at least
7 approach it from the standpoint that these photographs
8 or images being presented for illustrative purposes.
9 And then he'll have to move, if he wants to.

10 MR. SCHOEN: They don't necessarily need to
11 be. They are just a visual aid for my testimony. I
12 don't need them to be entered into the record if
13 that's --

14 MR. BROMLEY: If they are for illustrative
15 purposes, Director, I'm fine with that.

16 THE HEARING OFFICER: Okay.

17 MR. SCHOEN: Talk slower? I'm from New York
18 originally. I can't help myself.

19 MS. MCHUGH: I'm just saying.

20 THE HEARING OFFICER: What's the self-effacing
21 New York comment?

22 MS. MCHUGH: I asked him to speak a little
23 slower.

24 THE HEARING OFFICER: Oh. Drawl like the rest
25 of us.

1 MR. SCHOEN: Yeah. Okay. That's good enough,
2 Megan. So the picture is a picture of -- so my -- I was
3 shut off last week, and the ditch rider -- and my water
4 rights are 1886 and 1887. The watermaster came by my
5 house, and I spoke to him on Friday, and he told me that
6 the water rights in Silver Creek were shut off back to
7 1884. This is across the road from me. This is a well
8 that is pumping as we speak with a water right 94 years
9 junior to mine that is pumping right now.

10 I apologize for my cynicism about this. But
11 as I was saying, the advisory committee meetings didn't
12 accomplish anything. And now we have -- we're in
13 another hearing that was extended before it even began.
14 I feel, you know, it's a legitimate question, are our
15 partners in this acting in good faith or not? Why?
16 This is the evidence that I introduced, or whether it's
17 the photograph or just my statement, that ground water
18 users are continuing to pump while surface water users,
19 who are a hundred years senior, are being curtailed.
20 And all I am asking is that everybody be treated the
21 same. We have a priority doctrine in the state of
22 Idaho. I don't know why we're not following it.

23 I would ask the Director to direct legal staff
24 to begin drafting an order, stating that all water users
25 in Basin 37 shall be treated equally under the law,

1 whether we pump or whether we don't pump, that's up to
2 you. But I'm saying that let's treat each other the
3 same. That's where I'm having a problem with the
4 negotiation that is going on. Because from what I know
5 of it, I'm not sure that it's going to accomplish that.

6 And the reason I say this is because the issue
7 that we face is very simple. Silver Creek is a spring
8 fed system. The primary water source is the Wood River
9 aquifer. I could have questioned Mr. Luke on this, but
10 I didn't need to. It's all in the record. The
11 headwaters come right up out of the ground. The ground
12 water is the source, and the ground water is the water
13 that is flowing in the surface of Silver Creek and all
14 the tributaries.

15 Every study acknowledges this fact. The
16 earliest basin hydrologic study that I found dates to
17 1950. And the earliest specifically describing the
18 ground and surface water connections dates to 1972.
19 That's 50 years ago. There is no contradiction of these
20 basic facts. The study, all the staff memos cite all
21 the studies. And the studies within the staff memos
22 cite all the studies that all uphold this basic idea of
23 the ground water feeding Silver Creek. And it's all one
24 water source.

25 It's plainly obvious then that ground water

1 pumping depletes the aquifer this year and every year,
2 and that depletes surface flows. By depleting the
3 aquifer, you diminish the surface flows in the Silver
4 Creek system. That's how simple this is. You have to
5 think of this as not just a year-by-year thing. It's a
6 cumulative effect.

7 So, Meghan, if you could put up the next
8 picture, Photo 2, again, to illustrate.

9 MS. JENKINS: I'm going to assume this is 2.
10 It's the second one down to it.

11 MR. SCHOEN: Yeah, that might be it. I need
12 you to zoom out. Okay. Yeah, that's the photo. You
13 can leave it there. That's fine. This is the picture
14 taken from the Stocker Creek Bridge yesterday. I
15 don't -- it has never been this low in anybody's
16 lifetime that I know of that I've spoken with.

17 You can see the exposed mud that's never been
18 exposed in the 30 years that I've lived there. You can
19 see the typical water mark. In the springtime, the
20 water is up above that little dock. Now, you can see
21 where it is. And here we are, the first of June, this
22 is the earliest my water rights have been shut off. But
23 I want you to see what Stocker Creek looks like right
24 now. Stocker Creek is one of the three main tributaries
25 in the Silver Creek system.

1 Could you go to the next photo, please,
2 Meghan? Okay. That's good. This is a tap at the
3 corner of Highway 20 and Stocker Creek Road. I have
4 lived at my location for 30 years. For the first 25
5 years, that tap flowed continuously. It no longer flows
6 that is because the aquifer has been depleted.

7 Thank you, Meghan, that's all with the photos.

8 So I want to say to you again, Mr. Director,
9 the decision here is very clear. It's very simple, and
10 it's very obvious. And no amount of obfuscation of the
11 facts or doubts cast upon percentage of uncertainty
12 should turn you from this basic conclusion. I implore
13 you not to be led astray from the elegant simplicity to
14 the solution of this problem.

15 I mentioned, you know, my sense that a lot of
16 issues have been brought up, a lot of doubt has been
17 cast on the facts on what is best available science, on
18 the accuracy of the ground water flow model, on arcane
19 information about American Falls water. We've even had
20 the honesty of the down basin users impugned. We've
21 discussed uncertainty over uncertainty data gaps, staff
22 credibility, and whether this process is the best
23 process or another process is best. But I just come
24 back to the fundamental idea here is that the ground
25 water and the surface water are one and the same water

1 source here, and they should be managed on the continuum
2 according to priority doctrine.

3 I want to address a couple of details that
4 have come out -- came out in the advisory committee
5 meetings and probably will in the hearings. It's been
6 stated that Allan Wiley's 2019 A report, Allan Wylie's
7 staff for IDWR who has put transducers in some of the
8 wells, ground water table has stabilized. And his
9 report has been quoted. The quote that has been given
10 is, "These maps indicate that the ground water flows
11 from the north to the south and out to the basin to the
12 east and the west. The water table contours also show
13 that the water table tends to be stable within the Wood
14 River Valley portion of the Big Wood ground water
15 management area."

16 That's the quote that has been given. The
17 part that hasn't been given is the second sentence of
18 that paragraph which reads. "This may be because the
19 Big Wood River is in direct hydraulic communication with
20 the unconfined aquifer, and the river is depleted to
21 sustain the unconfined aquifer. In other words, as the
22 aquifer is drawn down, more water falls out of the river
23 and into the aquifer, stabilizing the aquifer, but
24 further depleting flows into the surface flows.

25 I want to address another issue, this question

1 that was raised in the Brockway exhibit that was
2 submitted that talks about, you know, the location of
3 certain wells, and that they are in the unconfined -- or
4 they are in the confined aquifer, so don't have an
5 impact on the aquifer -- on surface flows.

6 Jennifer Sukow was asked about this yesterday.
7 Her opinion yesterday was that, you know, there is
8 connection between the confined and the unconfined and
9 so -- and so the statement that drawing from the
10 unconfined aquifer would not impact the aquifer, itself,
11 and therefore, surface flows, she did not agree with.
12 That is -- that was taken --

13 MR. THOMPSON: Director, I'm going to object
14 to this line of question I guess. Paraphrasing what
15 Ms. Sukow has already said, that's in the record. We
16 don't need somebody to tell us what she's said. If
17 Mr. Schoen has information on that point as his own
18 personal knowledge, we can hear that. But we don't need
19 to go back and forth on what the staff has already
20 testified to.

21 MR. SCHOEN: That's funny, because I heard
22 lawyers, you know, quoting from other people's testimony
23 when they were asking questions. I guess they can do
24 it, but I can't.

25 MR. THOMPSON: You are not a lawyer.

1 THE HEARING OFFICER: Well, I don't think that
2 will be the basis, Mr. Thompson for ruling on your
3 objection. In fact, it persuades me to go the other
4 direction that kind of response.

5 Mr. Schoen, the difficulty I'm having is that
6 you are presenting what I would characterize as oral
7 argument, rather than facts that you know. So I'll
8 overrule the objection. But I want you to focus on
9 facts that you know. And I think, you know, your
10 testimony about your observations there of Stocker
11 Creek, and whether a particular tap or a pipe is free
12 flowing or not flowing. I think those are very
13 important facts that we need to know about.

14 MR. SCHOEN: Okay. Well, I respect that, sir.
15 I will tell you that having sat through many years of
16 presentations from the USGS and IDWR about this fact, I
17 feel fairly well informed. I feel as well informed as
18 Mr. Thompson on the matter. I'm not an expert in it. I
19 don't have a Ph.D. in it. But I've heard it time, and
20 time, and time again from the experts. And I do know a
21 fact that if you put a straw in a cup, no matter how
22 many twists and turns and convolutions that are in the
23 cup. If you draw from that straw, it's going to draw
24 down the water level in the cup. That's a fact that I
25 know. And it's the same thing with our aquifer. And

1 it's all in the record. It's all in the record. It's
2 in the staff memos. It's in the studies that are cited
3 by the staff memos. And it's in the studies cited in
4 the staff memos in their footnotes to the previous
5 studies that go back 50 to 60 years.

6 I just want to make the following statement.
7 I support the extent of the curtailment area for this
8 year alone. These are mostly ag areas. And these are
9 the areas that have the biggest impact on the ground
10 water in the Silver Creek drainage. I want to state
11 that I support the Director's action pertaining to the
12 2021 irrigation season under 42-237a.g. A water call at
13 this point accomplishes nothing.

14 And, you know, my earlier statements are, you
15 know, I don't know want to delay this any further. I
16 want us to get to a decision as quickly as possible,
17 because I think that's what's called for here as a
18 matter of fairness, if not the law and -- fairness, if
19 not the law.

20 So in conclusion, I'm asking you to do two
21 things. I'm asking you to issue an order either halting
22 ground water pumping or allowing seniors to continue to
23 pump pending your decision on curtailment. I ask this
24 so that all of us may be treated the same. I think this
25 would go a long way towards reducing the resentments and

1 healing the rift between all of us using water, the
2 limited water that we have in Basin 37.

3 After that, once these hearings are complete,
4 I would ask you to make a decision on curtailment that
5 treats water users fairly and equally under the law and
6 the constitution that honors the foundational principles
7 of first in time first in right, that acknowledges that
8 we have limited water resources according to the
9 well-established science of our basin's aquifer system.

10 I'm also suggesting that you consider creating
11 a new doctrine, call it the Silver Creek Rule, that
12 recognizes that where you have one water source, but the
13 water may take longer than some period of time, I've
14 heard 24 hours is the rule. It may take longer than 24
15 hours to show up, but it does show up. That it will be
16 managed as one resource.

17 You know, I don't know that anybody has
18 studied how long it takes a molecule of water to get
19 from the north fork of the Big Wood River to the
20 Glendale Bridge. There is this presumption that
21 somehow, you know, if you draw from the aquifer via a
22 well in the Bellevue triangle at a certain point, that
23 it takes some time. This is not the Eastern Snake Plain
24 aquifer. We have a ground water flow model that we can
25 use.

1 But, you know, anecdotally, however you want
2 to describe it, we all know when the pump -- for
3 example, when the pumps go off to cut hay, the water
4 table comes up. I see it on that tap that I showed in
5 the photo. I see it in my creek that flows through my
6 property. These are things that I know that I have
7 observed. There is an almost immediate impact to ground
8 water extraction and the cessation of ground water
9 extraction. And I qualify that by saying now that the
10 aquifer is so low, that that impact is becoming muffled.
11 It's becoming less obvious. The aquifer is now so low
12 that these effects, that the return of surface flows
13 with the curtailment with cessation of pumping, the
14 immediate cessation of pumping is becoming harder and
15 harder to distinguish. And that speaks to the
16 cumulative effects of allowing unlimited ground water
17 extraction by ground water pumpers through the entirety
18 of the season, it is having a long term deleterious
19 effect on our aquifer and on surface flows in Silver
20 Creek. And the last thing I want to say is, even a 1932
21 surface right is senior to a ground water right.

22 Thank you, Mr. Director. I don't know if I
23 need to stand for questions or anything?

24 THE HEARING OFFICER: Yes. You are subject to
25 examination. And I would like you to take the chair, if

1 you would, so the participants can examine you. How do
2 we want to structure this examination, shall we follow
3 the same order that we followed previously?

4 MR. FLETCHER: That's fine.

5 THE HEARING OFFICER: It seems to make sense.
6 And then those who may be adversarial to Mr. Schoen's
7 position, I don't know, can then cross-examine.

8 So, Ms. Carter, any questions for Mr. Schoen?

9 MS. CARTER: I don't have any.

10 THE HEARING OFFICER: Mr. Fletcher.

11 MR. FLETCHER: No questions.

12 THE HEARING OFFICER: Mr. Rigby stepped out.
13 We'll come back.

14 MR. THOMPSON: I have a couple.

15 THE HEARING OFFICER: Mr. Thompson.

16 CROSS-EXAMINATION

17 QUESTIONS BY MR. THOMPSON:

18 Q. Hi, Mr. Schoen, Travis Thompson for the South
19 Valley Ground Water District. And that comment earlier
20 wasn't meant to be flippant. It was to just getting to
21 the point of providing testimony on things to your
22 personal knowledge and not paraphrasing the staff
23 reports that are in the record.

24 A. Understood.

25 Q. Thank you. You have two water rights; is that

1 correct?

2 A. Correct.

3 Q. And one 37-351B is that an 1886 priority?

4 A. That, I believe so, yeah, a June of '86.

5 Q. And .16 cfs?

6 A. Correct.

7 Q. Authorized for irrigation of 14 acres?

8 A. Well, there is two water rights combined equal
9 14.4 acres. So there is also an 1887 right.

10 Q. And that would be 37-352B?

11 A. Correct.

12 Q. And those two waters rights have the source as
13 a ground water; is that correct?

14 A. It's a surface right. It's managed as a
15 surface right. When the pump was installed just
16 for -- I asked for whether I could take it from ground
17 water just for simplicity sake, but it is a surface
18 right, and it is managed as a surface right, but the
19 source is ground water, and it's in the unconfined
20 aquifer.

21 Q. Your priority is managed together with other
22 priorities on Silver Creek; is that true?

23 A. Correct.

24 Q. But the source on your water right states
25 ground water; isn't that correct?

1 A. Correct. I'm not in the ground water
2 district, however, I opted out of the ground water
3 district, and that request was granted.

4 Q. I understand that. But you understand your
5 water right says it's ground water?

6 A. I do understand that.

7 Q. And do you accept as far as projected impacts
8 on Silver Creek from ground water pumping, whether there
9 is curtailment of ground water rights this season in
10 July or August, and the resulting impacts of that
11 curtailment, do you accept the Department's reports as
12 to where that water would show up and when?

13 A. I can't answer that question, because I
14 haven't read through them thoroughly enough to give you
15 an informed answer to the question. I believe that if
16 ground water pumping is curtailed in the Silver Creek
17 drainage, that it will have a both short and long term
18 positive impacts both on the aquifer and on surface
19 flows in Silver Creek.

20 Q. And as for the 2021 irrigation season, do you
21 know if your water rights will be restored or not?

22 A. I can't say, but, you know, it's interesting,
23 Mr. Thompson, that you would ask me that question,
24 because one of the other attorneys working for the
25 ground water districts was questioning the idea that,

1 you know, if -- I think it was the questioning of
2 Mr. Luke saying --

3 Q. I'm asking you.

4 A. I know, but I'm answering you. My answer is
5 that saying that less senior senior rights that would
6 normally be curtailed, somehow don't suffer injury
7 because they are less senior senior rights is a
8 nonstarter with me. Because those rights are still
9 senior to the junior ground water rights. And so just
10 saying that because I would normally be curtailed, and I
11 am, every year I'm curtailed typically around the end of
12 June, the first of July and with an '86 and an '87
13 right, just because I would be curtailed doesn't mean I
14 should be curtailed if all water rights are managed on a
15 priority -- according to priority doctrine.

16 And so this question of how we are asked to
17 come in here and determine our injury? I know this may
18 be extending down the scope of your question. But to
19 me, that's a really problematic question, and that's a
20 really problematic line of inquiry as to how -- what the
21 outcome of this proceeding ought to be. Because how do
22 we determine injury when we've been curtailed all these
23 years and cumulative extraction from --

24 MS. MCHUGH: I'm going to object to the
25 witness just going. I don't know exactly what he's

1 doing. But I think Mr. Thompson had a question that --

2 THE WITNESS: I answered it, and I was adding.

3 MS. MCHUGH: And I'm not sure it was answered
4 but --

5 MR. THOMPSON: I'll just ask it again. I
6 don't think I did get an answer.

7 THE HEARING OFFICER: Well, Ms. McHugh, I
8 think it's the responsibility of the attorney who is
9 cross-examining to govern the way in which the witness
10 is responding. So I'll overrule the objection.

11 MS. MCHUGH: Okay.

12 Q. (BY MR. THOMPSON) Do you know if your water
13 rights will come back on if ground water rights are
14 curtailed in July or August of this year?

15 A. I have -- I would have no idea.

16 Q. Okay. And you haven't reviewed the staff
17 reports to determine whether or not that would be the
18 case?

19 A. I have reviewed the staff reports to the
20 extent of Ms. Sukow's memo talking about the gross
21 amounts of water that would returned, how that
22 would -- how the watermaster would make decisions as to
23 whether my rights would be included in that amount or
24 not. I don't know that that analysis has been done yet.
25 But if it has, and it's in the reports, I haven't seen

1 them.

2 MR. THOMPSON: Okay. That's all I have.

3 THE WITNESS: Thank you.

4 THE HEARING OFFICER: Okay. Thank you,
5 Mr. Thompson.

6 Jerry, I'll circle back to you. Do you have
7 questions for Mr. Schoen.

8 MR. RIGBY: No, Mr. Director. Thank you.

9 MR. LASKI: I don't have any.

10 THE HEARING OFFICER: Mr. Moroney?

11 MR. MORONEY: No, Director.

12 THE HEARING OFFICER: I think that's Group 2.
13 Group 3, anybody, any takers?

14 MS. MCHUGH: As tempting as it might be, no
15 thanks.

16 THE HEARING OFFICER: I don't see Mr. O'Bannon
17 back there.

18 MR. RIGBY: You didn't say, Mr. Simpson.

19 THE HEARING OFFICER: Well, I looked at him.
20 He was shaking his head.

21 MR. SIMPSON: Thank you, Mr. Rigby.

22 THE HEARING OFFICER: Okay, thank you,
23 Mr. Schoen.

24 MR. SCHOEN: Thank you, Mr. Director.

25 (Witness excused.)

1 THE HEARING OFFICER: Okay. So at this
2 juncture then, we'll adjourn for today and reconvene at
3 9:00 in the morning here again.

4 Any other comments before we close the record
5 for today? Close the record isn't a correct term,
6 interrupt.

7 All right. We'll see everybody at 9:00 in the
8 morning.

9 MR. RIGBY: Thank you, Mr. Director.

10 THE HEARING OFFICER: Thank you.

11 (Hearing adjourned at 2:39 p.m.)

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REPORTER'S CERTIFICATE

I, COLLEEN P. DOHERTY, CSR No. 345, Certified
Shorthand Reporter, certify:

That the foregoing proceedings were taken
before me at the time and place therein set forth, at
which time the witness was put under oath by me;

That the testimony and all objections made were
recorded stenographically by me and transcribed by me or
under my direction;

That the foregoing is a true and correct record
of all testimony given, to the best of my ability;

I further certify that I am not a relative or
employee of any attorney or party, nor am I financially
interested in the action.

IN WITNESS WHEREOF, I set my hand and seal this
15th day of June, 2021.



COLLEEN P. DOHERTY, CSR 345

Notary Public

P.O. Box 2636

Boise, Idaho 83701-2636

My commission expires September 7, 2023.

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BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF BASIN 37) DOCKET No.
ADMINISTRATIVE PROCEEDING) AA-WRA-2021-001
_____))

VOLUME III
(Pages 413-750)

BEFORE

HEARING OFFICER: GARY SPACKMAN

Date: June 9, 2021 - 9:08 a.m.

Location: Idaho Department of Water Resources
322 East Front Street
Boise, Idaho

REPORTED BY:

BEVERLY A. BENJAMIN, CSR 710

Notary Public

APPEARANCES:

For the South Valley Ground Water District:

BARKER ROSHOLT & SIMPSON, LLP

BY MR. ALBERT P. BARKER

MR. TRAVIS L. THOMPSON

163 Second Avenue West

Post Office Box 2139

Twin Falls, Idaho 83301

apb@idahowaters.com

tlr@idahowaters.com

For Galena Ground Water District:

LAWSON LASKI CLARK, PLLC

BY MR. JAMES R. LASKI

MS. HEATHER E. O'LEARY

Post Office Box 3310

Ketchum, Idaho 83340-3310

jrl@lawsonlaski.com

heo@lawsonlaski.com

For Big Wood Canal Company:

FLETCHER LAW OFFICE

BY MR. W. KENT FLETCHER

Post Office Box 248

Burley, Idaho 83318

wkf@pmt.org

APPEARANCES (Continued):

For Big Wood and Little Wood Water Users Association:

RIGBY, ANDRUS & RIGBY, CHARTERED

BY MR. JERRY R. RIGBY

MR. CHASE T. HENDRICKS

25 North Second East

Rexburg, Idaho 83440

irigbv@rex-law.com

chendricks@rex-law.com

For Idaho Department of Fish and Game:

OFFICE OF ATTORNEY GENERAL

BY MS. ANN VONDE

Post Office Box 83720

Boise, Idaho 83720-0010

ann.vonde@ag.idaho.gov

For Sun Valley Company:

McHUGH BROMLEY, PLLC

BY MR. CHRIS M. BROMLEY

MS. CANDICE M. McHUGH

380 S. 4th Street, Suite 103

Boise, Idaho 83702

cbromley@mchughbromley.com

cmchugh@mchughbromley.com

///

APPEARANCES (Continued):

For City of Hailey:

GIVENS PURSLEY LLP

BY MR. MICHAEL P. LAWRENCE

601 West Bannock Street

Boise, Idaho 83702

mpl@givenspursley.com

For Idaho Power Company:

BARKER, ROSHOLT & SIMPSON LLP

BY MR. JOHN K. SIMPSON

1010 West Jefferson, Suite 102

Post Office Box 2139

Boise, Idaho 83701-2139

jks@idahowaters.com

For Idaho Department of Water Resources:

OFFICE OF ATTORNEY GENERAL

IDAHO DEPARTMENT OF WATER RESOURCES

BY MS. MEGHAN CARTER

MR. GARRICK BAXTER

322 East Front Street

Boise, Idaho 83720

meghan.carter@idwr.idaho.gov

garrick.baxter@idwr.idaho.gov

///

1 APPEARANCES (Continued):

2 For City of Ketchum:

3 WHITE, PETERSON, GIGRAY & NICHOLS, P.A.

4 BY MR. BRIAN T. O'BANNON

5 5700 East Franklin Road, Suite 200

6 Nampa, Idaho 83687-7901

7 bobannon@whitepeterson.com

8 For Sun Valley Water and Sewer District, Eccles Window

9 Rock Ranch LLC, and Picabo Livestock, Inc.:

10 ROBERTSON & SLETTE PLLC

11 BY MR. J. EVAN ROBERTSON

12 Post Office Box 1906

13 Twin Falls, Idaho 83303

14 erobertson@rsidaholaw.com

15 Also Present:

16 Megan Jenkins, IDWR Staff

17

18

19

20

21

22

23

24

25

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22	TABER NO.		
23	1	- Table of Projected Losses	694
24	2	- Water rights and accompanying maps	674
25	3	- Water rights and accompanying maps	674

1	4	- Water rights and accompanying maps	674
2	5	- Water rights and accompanying maps	674
3	6	- Water rights and accompanying maps	674
4	7	- Water rights and accompanying maps	674
5	8	- Water rights and accompanying maps	674
6	9	- Water rights and accompanying maps	674
7	10	- Water rights and accompanying maps	674
8	11	- Water rights and accompanying maps	674
9	12	- Water rights and accompanying maps	674
10	13	- Water rights and accompanying maps	674
11	14	- Water rights and accompanying maps	674
12	15	- Water rights and accompanying maps	674
13	16	- Water rights and accompanying maps	674
14	17	- Water rights and accompanying maps	674
15	18	- Water rights and accompanying maps	674
16	19	- Water rights and accompanying maps	674
17	20	- Water rights and accompanying maps	674
18	21	- Water rights and accompanying maps	674
19	7 MILE NO.		
20	1	- Table of Projected Injury	696
21	2	- Water rights and accompanying maps	675
22	3	- Water rights and accompanying maps	675
23	4	- Water rights and accompanying maps	675
24	5	- Water rights and accompanying maps	675
25	6	- Water rights and accompanying maps	675

1 RITTER NO.

2	1	- Table of Projected Injury	697
3	2	- Water rights and accompanying maps	675
4	3	- Water rights and accompanying maps	675
5	4	- Water rights and accompanying maps	675

6 LEGG NO.

7	1	- Table of Projected Injury	720
8	2	- IDWR Water Right Report, No. 37-1126	717
9	3	- Place of use map, Water Right 37-1126	717
10	4	- IDWR Water Right Report, No. 37-10640	717
11	5	- Place of use map, Water Right 37-10640	717

12 NEWELL NO.

13	1	- Table of Projected Injury	744
14	2	- Water rights and accompanying maps	734
15	3	- Water rights and accompanying maps	734
16	4	- Water rights and accompanying maps	734
17	5	- Water rights and accompanying maps	734
18	6	- Water rights and accompanying maps	734
19	7	- Water rights and accompanying maps	734
20	8	- Water rights and accompanying maps	734
21	9	- Water rights and accompanying maps	734
22	10	- Water rights and accompanying maps	734

23

24

25

1 THE HEARING OFFICER: We are on the record.

2 We have a new court reporter. I think Beverly
3 has probably introduced herself to everyone. Welcome.
4 I hope you find this to be interesting.

5 Okay. We recessed yesterday afternoon and
6 allowed people some time to talk. Do I need to ask for
7 any kind of update or do we just launch?

8 MR. RIGBY: Well, Mr. Director, I just want to
9 say, we do appreciate that time and we recognize it was
10 many giving up their time for us to attempt to resolve
11 this and it was done in good faith. We spent many
12 hours, but we have not come to a conclusion yet. For
13 that reason, we cannot hold this up any further;
14 therefore, we suggest we proceed.

15 THE HEARING OFFICER: Is there a need for more
16 time for discussions?

17 MR. RIGBY: I don't believe so at this moment.
18 There would have to be something that occurs that has
19 not yet occurred. Until that happens, we wouldn't be
20 able to go anywhere. If that happens, perhaps we could
21 take a break.

22 THE HEARING OFFICER: Okay. All right. Thank
23 you.

24 Any other statements? Certainly I don't need
25 or want to know the details of negotiations, but thanks

1 for the update.

2 So given that statement then, this is day 3,
3 and the date is June 9, 2021. We will continue with the
4 testimony then today in this contested matter. I think
5 we are at a juncture now, either Mr. Rigby or
6 Mr. Fletcher, where you in group 1 would start calling
7 witnesses.

8 MR. RIGBY: That's correct.

9 THE HEARING OFFICER: So --

10 MS. CARTER: Director --

11 MR. RIGBY: I understand -- go ahead.

12 MS. CARTER: One matter before we get started.
13 I have a corrected memo for Jennifer Sukow, and
14 circulated it to the parties yesterday. Let me know
15 when you want me to bring her up to get it admitted into
16 the record.

17 THE HEARING OFFICER: Have the parties had
18 time to review this document? I'm assuming it's a
19 corrected document that replaces the table that was
20 incorrect in the first document that was received into
21 evidence.

22 MS. CARTER: Yes.

23 THE HEARING OFFICER: So how do you want to
24 approach this? Do we want to move to substitute this
25 exhibit or withdraw the old exhibit, substitute this one

1 in?

2 MS. CARTER: Yes. I would like to just
3 substitute this so that the record is not confused.

4 THE HEARING OFFICER: Any objection from the
5 parties?

6 Okay. The new document that is marked -- and
7 is it Exhibit 3 still? Is that the correct number?

8 MS. CARTER: Yes -- no, it's Exhibit 2.

9 THE HEARING OFFICER: So the document that was
10 marked as Exhibit 2 previously is withdrawn, and the
11 document that Ms. Carter has distributed to the parties
12 and has been reviewed will be substituted in place. It
13 will still be numbered as IDWR Exhibit 2; is that
14 correct, Ms. Carter?

15 MS. CARTER: Yes.

16 THE HEARING OFFICER: Thank you.

17 (Corrected copy of IDWR Exhibit 2 received.)

18 MR. BROMLEY: Can we get an electronic copy of
19 that?

20 MS. CARTER: Yes, I'll send that out.

21 THE HEARING OFFICER: Any other preliminary
22 matters?

23 MR. FLETCHER: Mr. Director, I sent out an
24 email this morning. We had sent out a proposed list of
25 order of our witnesses to the opposing counsel so they

1 would have some knowledge. Because of the changes
2 resulting from yesterday's schedule, we're going to be
3 calling Carl Pendleton probably right after lunch. For
4 those that may not have received the email, I just
5 wanted to make sure they're aware of that.

6 THE HEARING OFFICER: Thank you, Mr. Fletcher.

7 Mr. Rigby, before we start, I think there's
8 been some confusion, and I'm not sure the reason for it,
9 but there were a number of individuals who filed with
10 the Department a notice of intent to participate, and
11 then I think they were consolidated under your
12 representation. I think there has been a little
13 confusion about which of those parties or people you're
14 representing.

15 Could you just read for the record before we
16 start who you are representing today.

17 MR. RIGBY: Absolutely.

18 THE HEARING OFFICER: Thank you.

19 MR. RIGBY: To begin with, there were other
20 parties -- well, let me read these and then I'll explain
21 that there are three parties that will not be
22 participating today, although they are still parties,
23 and move to the third party that we discussed the other
24 day.

25 The ones that are in I guess classification 1

1 are Fred Brossy of Barbara Farms, Rod Hubsmith, John
2 Arkoosh, Alton -- I'm saying it wrong -- it's Huyser, of
3 Big Wood Farms, Carl Legg, Chuck Newell, Don Taber.
4 Those are the farmer parties that we represent.

5 THE HEARING OFFICER: Okay. And then the
6 other three you also represent them but only as group 3
7 participants?

8 MR. RIGBY: Correct. That's Nick Westendorf,
9 Sabala Farms, Mr. Sabala, and David Hults.

10 THE HEARING OFFICER: Thank you, Mr. Rigby.

11 Okay. If we don't have anything else to
12 present this morning as a preliminary matter, Mr. Rigby,
13 you may call your first witness.

14 MR. RIGBY: Very good. We would call -- oh,
15 preliminarily, because of the large exhibit binder that
16 I'm using, is it okay that I sit here? I do have the
17 mic here. I've asked whether or not my voice is loud
18 enough to be carried. Is there a problem? The problem
19 with that is that it's so small.

20 THE HEARING OFFICER: I'm okay with your being
21 seated.

22 MR. RIGBY: As our first witness we would call
23 Fred Brossy, please.

24 THE HEARING OFFICER: Mr. Brossy, if you'd
25 come forward, please.

1 FREDERIC A. BROSSY, III,
2 having been called as a witness by the Big Wood &
3 Little Wood Water Users Association and first duly
4 sworn, testified as follows:

5

6 DIRECT EXAMINATION

7 BY MR. RIGBY:

8 Q. Good morning, Fred.

9 A. Good morning, Counsel.

10 Q. Would you please state your full name and
11 current address for the record.

12 A. My name is Frederic A. Brossy, III, and I
13 reside at -- which address do you want; physical or
14 mailing?

15 Q. Let's go physical.

16 A. 365 Bryant Road, Shoshone, Idaho 83352.

17 Q. Are you a party to this proceeding?

18 A. Yes, I am.

19 Q. Do you own some entities that are actually the
20 farming entities from which you'll be testifying?

21 A. Yes, I do.

22 Q. Would you name those entities, please.

23 A. The entity that owns the land and the water is
24 Barbara Farms, LLC, and the entity of which I am the
25 managing member and the entity which farms the land is

1 Ernie's Organics, LLC, of which I'm also a managing
2 member.

3 Q. What's your current occupation?

4 A. Farmer.

5 Q. Would you mind briefly giving the history of
6 your education.

7 A. Well, I got a bachelor's degree in
8 agroecology, and I've been farming for about 50 years
9 now.

10 Q. So if I were to ask you your work experience
11 then other than farming for 50 years, anything else?

12 A. Well, I did a lot of stuff before that but I
13 don't remember.

14 Q. Okay. Let's talk about your farming
15 experience on the lands that are I guess subject to this
16 particular proceeding.

17 A. I've managed Barbara Farms since 1983;
18 initially for 20 years for the previous owner, and since
19 2005, my wife and I purchased it and I manage it as the
20 owner.

21 Q. Are you a member of what is known as Big Wood
22 & Little Wood Water Users Association?

23 A. Yes, I am.

24 Q. Just to make it clear, we won't have every
25 witness testify to this, but would you explain what that

1 association is basically all about.

2 A. Yes. In 2014, after the short water year of
3 2013, where we found it difficult to find substitute
4 water when decrees were curtailed, those of us in that
5 association along the Little Wood River formed that
6 association to be able to rent water as a block from
7 Eastern Idaho, and then be able to share it amongst
8 ourselves so that we would have an adequate water
9 supply.

10 Q. So the association itself owns no water as
11 such; correct?

12 A. Excuse me, may I correct that, Counsel? I
13 confused the two groups. That Big & Little Wood River
14 Water Users is an association that was formed to make
15 the first delivery call 2015. The one I just referred
16 to is another association that was formed to rent water.
17 I apologize.

18 Q. Okay. So this association, is it correct to
19 say, that it's just an association of you individual
20 parties and farmers in a way to get together and have
21 one voice?

22 A. That is correct.

23 Q. So it doesn't own any water.

24 A. That is correct.

25 Q. It's not a party to this action other than

1 it's being used as the name of which to signify that the
2 individual parties are members of that organization. Is
3 that a good way to say it?

4 A. That is correct.

5 Q. Very good.

6 Are you, in filing this, being a party of this
7 action, are you familiar with the description of what
8 they call the Bellevue Triangle?

9 A. Yes, I am.

10 Q. As far as the Director's order and requirement
11 that this be members that are out of the Little Wood and
12 the Silver Creek drainage area, are you one of those?
13 Do you divert from the Little Wood/Silver Spring [sic]
14 drainage?

15 A. Yes, I do divert out of Silver Creek/Little
16 Wood River.

17 Q. In front of you are the exhibits for everyone
18 but if we open it up to what we have named as Barbara
19 Exhibits, can you see that the tab is Barbara and then
20 it goes Exhibit 1, 2, 3, and so on?

21 A. Yes.

22 Q. Would you turn to Exhibit 2, please. It would
23 be Barbara Exhibit 2.

24 A. Yes.

25 Q. And what is that?

1 A. That is a water right report, which I presume
2 was issued at the end of the Snake River Basin
3 Adjudication to describe water rights that we own at
4 Barbara Farms.

5 Q. And I believe it purports to be Water Right
6 37-59D; is that correct?

7 A. That is the first one, yes.

8 Q. Of the priority date of what?

9 A. 5/27/1899.

10 Q. For the amount of how many cfs?

11 A. .38 cfs.

12 Q. Is this your water right?

13 A. Yes, it is.

14 Q. By "yours," when I say "yours," I'm referring
15 to you and/or your entity Barbara Farms; is that
16 correct?

17 A. That is correct.

18 Q. Where do you actually divert this water right
19 from?

20 A. This water right is diverted from the
21 four points of diversion located throughout our farm.

22 Q. And for lack of better words, this water right
23 has been referred to as the Cottonwood right; is that
24 correct?

25 A. That is correct.

1 Q. I think it's already been explained in
2 previous testimony as to what the Cottonwood right is.
3 I don't think I need to get into that.

4 But as far as your particular location of the
5 diversion of that right, is that represented by Exhibit
6 No. 3, it would be Barbara Exhibit 3?

7 A. Yes, I believe that would be the yellow shape
8 there would be our property.

9 Q. The reason for the multiple diversions is that
10 this is, because it's the Cottonwood right, it's a
11 rediversion right, that's why there's several
12 diversions. Is that your understanding?

13 A. That is correct.

14 Q. Thank you.

15 For the purposes of this particular hearing
16 and any claims that you would be making as to the impact
17 to this, is this water right significantly involved or
18 not significantly involved?

19 A. From my perspective, no.

20 Q. So although you own this right, it's not
21 significant to this particular proceeding right now.

22 A. That is correct.

23 MR. RIGBY: I'd move for the admission of
24 Barbara Exhibit 2 and 3, only to show the water rights
25 as we go through them.

1 THE HEARING OFFICER: Any objection to
2 admission of this document?

3 MR. BROMLEY: Objection for the record,
4 Director. And I don't have exhibit numbers on the
5 electronic copies that were given to me, but Water Right
6 37-59D is a source of Big Wood River. Mr. Brossy was
7 testifying about Little Wood rights, and the four
8 corners of the decree in plain language and source says
9 Big Wood River, which is not Little Wood or Silver
10 Creek. So I would object to admission of this document
11 other than it is what it is. But it's not within the
12 scope of your proceeding.

13 THE HEARING OFFICER: Any other objections?

14 MR. THOMPSON: I'll join in that for the same
15 purpose.

16 THE HEARING OFFICER: I will overrule the
17 objection, but also state that the significance of these
18 exhibits are I guess diminished because they are
19 outside, as Mr. Brossy has stated, outside the scope of
20 and the boundaries of this hearing, except that they do
21 at least describe, as best as I can determine, the total
22 water supply on this particular farm. So at least for
23 that purpose I'll let it come in.

24 So Exhibits 2 and -- did you just move for 2
25 or --

1 MR. RIGBY: 2 and 3.

2 THE HEARING OFFICER: -- they are received
3 into evidence with the qualifications I've stated.

4 (Barbara Exhibits 2 and 3 received.)

5 MR. RIGBY: Mr. Director, for the future of
6 the other witnesses, some of which also own these
7 rights, and I know we're starting with Mr. Brossy who
8 was cutting the first swath at this, it would be the
9 same issue. We're only doing it for exactly what you
10 indicated, which is the total water supply, not
11 representing that any of these rights are to be used for
12 the purpose of this hearing and showing any injury.

13 THE HEARING OFFICER: Okay.

14 MR. BROMLEY: Mr. Rigby, by "these rights,"
15 you mean 37-59 with suffixes, just so that we're clear?

16 MR. RIGBY: What are known as the Cottonwood
17 rights.

18 MR. BROMLEY: My understanding of those is
19 they're numbered 37-59 with an alpha suffix.

20 MR. RIGBY: Without looking at all of those, I
21 can't say you're right. You probably are, but I'll look
22 at those as we go through them.

23 But my point is, is that any Cottonwood rights
24 would have the same issue of starting in Big Wood, going
25 through the slough, and then coming into the Little

1 Wood.

2 MR. BROMLEY: Okay.

3 MR. RIGBY: For this hearing today, we're not
4 purporting, other than to show what the Director
5 indicated, the total water supply.

6 MR. BROMLEY: Thank you.

7 MR. THOMPSON: I'll stipulate that for all
8 those rights. All the Cottonwood rights of any
9 witnesses, I'll stipulate to that same purpose.

10 MR. RIGBY: So that's why I've got that one as
11 No. 1 because I wanted to make sure we got through that
12 issue.

13 Q. (BY MR. RIGBY) I'd have you refer then to the
14 Barbara Exhibit No. 4 and explain what that is, Fred.

15 A. That's Water Right 37-344A, and that has a
16 priority date of 4/6/1883, for a diversion rate of 4
17 cfs.

18 Q. And again, is this owned by Barbara Farms?

19 A. Yes, it is.

20 Q. If you'll refer to Barbara No. 5, what does
21 that purport to be?

22 A. Exhibit 5 is a shapefile issued by or prepared
23 by the Department of Water Resources to described the
24 allowed places of use for that water right.

25 Q. In your opinion, does that accurately describe

1 the places of use of Water Right 344A?

2 A. Yes, it does.

3 Q. And as well as the points of diversion?

4 A. Yes, that is correct as well.

5 Q. Just for the Director's sake in making sure he
6 understands what appears to be a stream or river running
7 through there, would you identify that?

8 A. That is called the Little Wood River.

9 Q. You are downstream, if you will, of the
10 Triangle?

11 A. Yes, we are.

12 Q. Very good.

13 MR. RIGBY: I move for admission of Barbara
14 Exhibit 4 and 5, Mr. Director.

15 THE HEARING OFFICER: Any objection to the
16 admission of these documents?

17 Hearing none, the documents marked as Barbara
18 Exhibit 4 and 5 are received into evidence.

19 (Barbara Exhibits 4 and 5 received.)

20 Q. (BY MR. RIGBY) Fred, would you turn to
21 Barbara Exhibit No. 6, please.

22 A. Yes.

23 Q. What is that?

24 A. That is Water Right Report for Water Right
25 37-973, which is a 2 cfs diversion for the Little Wood

1 River, also a priority date of 4/1/1884, also owned by
2 Barbara Farms, LLC.

3 Q. Barbara Exhibit No. 7 appears to be place of
4 use which is identical to No. 5; is that correct?

5 A. That is correct.

6 Q. So these water rights are used, both water
7 rights are used on the identical lands, are they?

8 A. That is correct.

9 MR. RIGBY: I'd move for the admission of
10 Barbara Exhibits 6 and 7, Mr. Director.

11 THE HEARING OFFICER: Any objection to the
12 admission of these documents?

13 Hearing none, the documents marked as
14 Exhibit 6 and 7 are received into evidence.

15 (Barbara Exhibits 6 and 7 received.)

16 Q. (BY MR. RIGBY) Fred, I'm going to ask you the
17 familiarity you might have with the diversion of these
18 water rights. And the question I am asking you is: How
19 long have you been working with these particular water
20 rights and diverting them on the lands of the exhibits?

21 A. Since the 1984 irrigation season.

22 Q. At that time you did not own the land;
23 correct?

24 A. That is correct; I managed it for the previous
25 owner.

1 Q. Have there been any significant changes in
2 place of use of those lands since you first worked with
3 these water rights?

4 A. I would characterize that as not significant.
5 There have been a few acres here and there that have
6 changed due to pivot installations. And I would qualify
7 that with saying that when I took over that farm there
8 were only 280 acres actually irrigated at that time.
9 Now we're pushing 300 just due to changes here and
10 there. But the water rights were allowed for 300 acres.

11 Q. Do you have any supplemental water, especially
12 let's talk about, first of all, through an exchange
13 agreement, what they call the 161 condition?

14 A. No, I do not have the 161 exchange water.

15 Q. Do you lease any supplemental water?

16 A. For the 2021 irrigation season I have rented
17 from the City of Shoshone 100 shares of AFRD #2 water.
18 So you could characterize that as supplemental water for
19 this season only.

20 Q. What was your reasoning for leasing this water
21 this year?

22 A. Well, we leased it last year to utilize
23 amongst any users on the river who were short. I didn't
24 actually use it myself last year. Then it was offered
25 to us again and I didn't hesitate because in January it

1 was already looking a little bit scary so...

2 Q. Do your water rights that you have indicated
3 here sufficiently water your lands in a normal snowpack
4 season?

5 A. Yes.

6 Q. This particular year without the supplemental
7 rights would your water rights sufficiently water your
8 lands?

9 A. No.

10 Q. Let's talk about the crops that you're growing
11 on your lands. What are you growing this particular
12 year?

13 A. I have 21 acres of organic processing
14 potatoes, 65 acres of organic garden bean seed, 20 acres
15 of organic pinto beans, 60 acres of barley, 75 acres of
16 alfalfa, and various other small acreages of seed crops.

17 Q. Due to the decision to rent supplemental water
18 this year, did you change what you otherwise would have
19 planted for this season?

20 A. Well, we elected to grow barley rather than
21 corn because finishing corn is sketchy. We also cut
22 back our dry bean acreage from our normal dry bean
23 acreage.

24 Q. Even with your supplemental water that you
25 rented, knowing the use of water for your land, are you

1 confident that you will have sufficient water to fully
2 irrigate your crops?

3 A. No. We're in the process of trying to secure
4 water from District 1 to make up for the shortfalls in
5 decreed water.

6 Q. These shortfalls, in your opinion, will they
7 be injurious to the full growth of your crops?

8 A. Yes, they will, especially if we can't find
9 any more supplemental, any more water to get by with.

10 Q. In your experience, numerous years of working
11 on these lands, have you seen any historical changes in
12 the available flows in the Lost River [sic] under your
13 water rights?

14 A. Yes, we have.

15 Q. Describe what you have seen personally.

16 A. Increasingly we are unable to utilize all our
17 water rights year in, year out because there have been
18 more years of curtailment, or priority cut I guess is
19 the correct term. And we since 2013 have leased
20 seasonal water I guess in six of those years, six of the
21 years since 2013 to make up for that.

22 Q. Have you attempted to change watering
23 practices to conserve water?

24 A. Definitely so. We started in 1984 with all
25 open ditch irrigation, gradually installing sprinklers

1 and gated pipe to make it more efficient, and then
2 starting in 1998 installing pivots. Just last night at
3 dark we just finished firing up an emergency pipeline to
4 replace 2,100 feet of ditch from our headgate to some of
5 our irrigated lands. We're continually trying to make
6 it better.

7 Q. So as far as loss is concerned, how would you
8 categorize your loss of water now compared to what you
9 had before? "Loss" meaning not getting to the actual
10 plant.

11 A. Could you rephrase the question, Counsel.

12 Q. My question is, that from diverting from the
13 river to the plant there's obviously some seepage that
14 occurs in ditches and otherwise. My question to you is:
15 What have you done to -- and you've testified a little
16 bit as to what you've done to make sure that you're not
17 having the loss. Can you categorize what kind of loss
18 you believe you are now having from the diversion of the
19 river to the plant?

20 A. Well, it's the loss is decreasing as we install
21 more efficient systems but I would have a hard time
22 categorizing that with a number. I'm hoping that this
23 pipeline we just got going will significantly reduce the
24 amount of water that those lands that it serves require
25 but it remains to be seen. We'll have to work with it

1 for a few weeks, if we have the water to do that, and
2 see what the flows are versus what they've been.

3 Q. Now, you're involved in this matter. Are you
4 taking the position that the lower stream flows in the
5 Little Wood are a result of any pumping upstream?

6 A. Yes. Yes, I am.

7 Q. Clearly there are other reasons for reduced
8 flows, i.e., the weather, as you indicated, looking at
9 it this spring; correct?

10 A. That is correct.

11 Q. You can't do anything about the weather. The
12 question is, and I guess are you here because you're
13 asking for a curtailment of lands within the Triangle?

14 A. Yes.

15 May I clarify that, Counsel?

16 Q. Certainly.

17 A. I would add to that, curtailment of rights
18 junior to our rights.

19 Q. So are you asking then that the administration
20 of this be done in priority regardless of surface or
21 groundwater?

22 A. That is correct.

23 Q. Now, you're no hydrologist; correct?

24 A. That is also correct.

25 Q. Why do you believe that the pumping in the

1 Triangle impacts the flows that pass your place, and
2 therefore, affect your priorities?

3 A. Well, over all the years I've been on that
4 particular farm, we've seen from time to time when pumps
5 have been shut off, surface flows in Silver Creek have
6 come back quite rapidly. So we know there's a
7 connection. You don't need to be a hydrologist to know
8 that.

9 I would also add that I farmed in the Triangle
10 when I was a young man, and I saw the other end of this
11 situation. So I have firsthand experience with that as
12 well.

13 Q. So how soon thereafter when wells are shut off
14 in the Triangle do you see it, noticeably see an
15 increase in flows in the Lemhi [sic]?

16 A. In the Little Wood River.

17 Q. I'm sorry.

18 MR. THOMPSON: We'll stipulate it happened in
19 the Lemhi. (Laughter.)

20 MR. RIGBY: That's what I get for being in too
21 many basins.

22 Q. (BY MR. RIGBY) In the Little Wood. Sorry.

23 A. Well, I can't specifically pin that down to
24 exactly how many days, but within days we have seen
25 folks come back, particularly last August, there was an

1 incident where that occurred.

2 Q. What do you mean? What occurred?

3 A. Well, that flow at Station 10 on the Little
4 Wood above Richfield was down to 7 feet. The
5 watermaster was quite alarmed and he was able to get a
6 few wells voluntarily shut off, and within a week the
7 flow in the river was back to I believe 35 or 40 cfs.

8 Q. You were personally involved with that and saw
9 that occur?

10 A. Well, I was communicating with the
11 watermaster. He was keeping me apprised of what was
12 going on.

13 Q. Is it a fact that you and others on the Little
14 Wood, your diversions are controlled by the watermaster;
15 is that correct?

16 A. That is correct.

17 Q. That would be Kevin Lakey?

18 A. That is correct.

19 Q. Do you believe that in any way you are
20 overwatering your plants, or in essence what is known as
21 wasting water?

22 A. I do not believe that.

23 Q. Have you attempted to determine what injuries
24 you are sustaining to your crops?

25 A. Well, several weeks ago in preparation for

1 this proceeding, we attempted to analyze what the lack
2 of decreed water would do to what crops, and I have
3 submitted that as a --

4 Q. An exhibit?

5 A. A projection of injury, which I hope is in
6 here.

7 Q. Yes. So if you'll turn to Barbara Exhibit 1,
8 please. Was this sheet produced by you or at least in
9 connection with the data you provided?

10 A. Yes, it was.

11 Q. Without getting into too much detail but
12 obviously making certain that it's understood what
13 you're attempting to do, why don't you start with the
14 first line and explain what each of the numbers are and
15 where you obtained those numbers, please.

16 A. Okay. If I may I'd like to preface this with,
17 we started with the fullest of our crops, then we looked
18 at what water we knew we had available, i.e., 66 inches
19 of American Falls District #2, that we rented from the
20 City of Shoshone. And it was clear to us with the value
21 of the processing potatoes and the garden seed beans, it
22 made sense to prioritize the irrigation of those. So we
23 calculated that that 66 inches would water the potatoes
24 and a portion of the garden bean seed acreage. So we
25 dropped them off the list. So this is the crops that we

1 project to be short based on the only water being
2 available, that would be that 66 inches.

3 Q. Let me stop you there. Since you've created
4 this chart, have the conditions actually gotten better
5 or worse on the Lemhi?

6 A. You better be careful, Counsel, it's the
7 Little Wood.

8 Q. On the Little Wood.

9 A. I actually think they have gotten a hair
10 better because today I believe is the 9th of June and I
11 do not think that 4/1/84 will go off until tomorrow. It
12 survived June 5th. That was partly because there was a
13 rain event and Magic Reservoir shut off for a week, and
14 that changed the dynamic on the Little Wood River.
15 However, I still anticipate, per our conversation with
16 the watermaster this morning, that the 4/6/83 could be
17 off as early as the 15th of June. So I think the
18 situation is ostensibly the same as I projected here.

19 Q. So continuing on then, that's the crops you
20 have discussed.

21 A. Okay. So what I listed were the crops that
22 I'm growing, the acreage of those crops. I projected
23 the days of water needed per last irrigation, projected
24 cutoff date per Kevin Lakey as of I believe it was 5/21
25 when we got this information to prepare this, calculated

1 days of shortfall, put in yield targets based on our
2 contracts for these crops.

3 Q. Let me stop you there. How accurate is that
4 target? By that I'm asking: Do you have historical
5 contracts that would indicate that you have met those
6 targets?

7 A. I have been doing this for a long time and I
8 have lots of contract information. I don't always meet
9 the target but I'm counting on meeting it if at all
10 possible.

11 Q. So when you don't meet it, is it close or is
12 this typically high?

13 A. No, this is a reasonable target. I would
14 suggest that in farming nothing is ever right on the
15 money so...

16 Q. Understood.

17 Okay. Continue on.

18 A. So that was how I came up with the projected
19 loss. And then I just did the value of the crop based
20 on the loss yield. And in the case of new seeding
21 alfalfa that we would like to plant in August, there's
22 some loss carryforward into 2022 as well.

23 Q. Explain that. Why is that? So in other
24 words, you have a column, the second-to-the-last column
25 would be your projected loss for 2021 and then you have

1 in your last column a projected loss for 2022.

2 A. That is correct.

3 Q. So explain your 2022.

4 A. If we can't plant those acreages of alfalfa
5 this season, get them established so they're ready for a
6 full season of harvest in '22, we'll lose a couple
7 cuttings' worth of harvest while we're establishing it
8 next spring. That's what that's for.

9 Q. That would be the same for your winter wheat?

10 A. Well, the winter wheat actually --

11 Q. Would still be seeding new alfalfa.

12 A. Yes, that's the intention, behind the barley
13 and the winter wheat.

14 Q. And again, the last column, which is the
15 organic green crop, again, seeding alfalfa?

16 A. Yeah. It's the same scenario, yes.

17 Q. So it purports to say on your Barbara
18 Exhibit 1 that you would project your projected revenue
19 loss for 2021 as being \$222,000; is that correct?

20 A. That is correct, because we considered the
21 purchase of extra water to be an injury as well.

22 Q. Have you obtained that water yet?

23 A. Yeah, we're about to start using it.

24 Q. I shouldn't say "obtained." Actually diverted
25 the water yet.

1 A. I don't believe we've needed to divert it. I
2 think we've been staying within our 300 inches of
3 decrees thus far. But as I say, I believe that changes
4 either in the morning or the next day.

5 Q. So with your supplemental or what water you've
6 been able to acquire by lease, did I understand your
7 testimony to say that you're still looking for extra
8 because you don't believe this will be sufficient?

9 A. That is correct. We are trying to make sure
10 we can replace a portion of the decrees with Snake River
11 water from District 1. That's our intention.

12 MR. RIGBY: Just a moment.

13 I have no further questions.

14 THE HEARING OFFICER: Thank you, Mr. Rigby.

15 Mr. Fletcher, do you have questions?

16 MR. RIGBY: Okay. Thank you. Yes. I would
17 move for the admission of Barbara Exhibit 1 as testified
18 to by Mr. Brossy.

19 THE HEARING OFFICER: Any objection to the
20 admission of this document?

21 Hearing none, the document marked as Barbara
22 Exhibit 1 is received into evidence.

23 (Barbara Exhibit 1 received.)

24 THE HEARING OFFICER: Thank you, Mr. Rigby.

25 Mr. Fletcher.

1 DIRECT EXAMINATION

2 QUESTIONS BY MR. FLETCHER:

3 Q. I just wanted to touch base on this rental
4 water. The water you rented is, you said you rented it
5 from Shoshone, the City of Shoshone?

6 A. Yes, I did.

7 Q. And it cost you \$3,300 to rent that?

8 A. For the season, yes.

9 Q. For this year?

10 A. Yes.

11 Q. That's an additional cost to your operation;
12 correct?

13 A. Yes, it is.

14 Q. If you're able to acquire additional water
15 that you've been looking at, have you been quoted a
16 potential price for that water?

17 A. Yes. We have looked at, as I mentioned,
18 trying to replace all told about two-thirds of our
19 water. So we would be replacing the 400 inches of '83
20 less 66 we've already obtained from AFRD #2, and that
21 has been quoted to us delivered with the wheeling fees,
22 et cetera, at about \$75 an acre-foot. And we are
23 looking to purchase 400 acre-feet if we can get it.

24 And as I say, that's not full replacement.
25 It's just to do a better job of making some of these

1 crops happen. We also are hoping to get some AFRD water
2 from a neighbor to finish the season because that 400
3 acre-feet won't last through -- that will only get us
4 through July; it won't get us into August.

5 Q. So if you were able to rent additional water,
6 that would be an additional cost to your operation;
7 correct?

8 A. Yes, it would; a significant cost.

9 Q. The reason you're renting this water is
10 because your 1883 and 1884 priority rights in the Little
11 Wood are being curtailed within the next week?

12 A. The '84s within this week and the '83s next
13 week, as far as I know.

14 MR. FLETCHER: Thank you. I have no further
15 questions.

16 THE HEARING OFFICER: Thank you, Mr. Fletcher.

17 Mr. Barker or Mr. Thompson.

18
19 CROSS-EXAMINATION

20 BY MR. THOMPSON:

21 Q. Good morning, Mr. Brossy.

22 A. How are you, Mr. Thompson?

23 Q. Travis Thompson for the South Valley Ground
24 Water District.

25 I don't know why Jerry chose you first. Are

1 you first string or the first wave of infantry for this
2 matter?

3 So going back to your questioning with Mr. --
4 MR. RIGBY: He asked the same question,
5 Counsel.

6 THE WITNESS: I pointed out that B is after A
7 but Arkooshes didn't go first.

8 Q. (BY MR. THOMPSON) Going back to your
9 questioning with Mr. Rigby. It's true that you are
10 requesting conjunctive administration of junior
11 groundwater rights this year?

12 A. No. We're requesting administration of water
13 within Basin 37 in priority. I believe there's a
14 distinction.

15 Q. Okay. But you recall our deposition a couple
16 weeks ago; is that correct?

17 A. I do recall our deposition a couple weeks ago.
18 And I did not, at that time, understand the distinction
19 between those two phrases.

20 Q. Okay. So you are or are not requesting
21 conjunctive administration?

22 A. I am not requesting conjunctive administration
23 at this time.

24 Q. That's a little different than your answer you
25 gave a couple weeks ago. Would you agree?

1 A. I just admitted that. I now understand more
2 fully the terminology.

3 Q. So as far as surface water right
4 administration, that's happened on your farm ever since
5 you started in 1983?

6 A. That's correct.

7 Q. You haven't had to request that specifically,
8 have you?

9 A. No. And I might add, we shouldn't have to
10 request it of any water right.

11 Q. You are claiming injury or adverse effect to
12 your senior rights caused by junior groundwater pumping;
13 is that true?

14 A. Yes, I am.

15 Q. But you have not identified which specific
16 groundwater rights are causing that injury. Do you
17 agree?

18 A. No, I have not.

19 Q. Your Exhibit 1 which you were just talking
20 about, that's an estimate of your potential injury to
21 your farming operations this year?

22 A. Yes, it is.

23 Q. But you have not identified how much of that
24 injury is due to groundwater pumping alone. Do you
25 agree?

1 A. That's true.

2 Q. We talked about different water conditions.
3 You agree that water conditions vary year to year?

4 A. Yes, I do.

5 Q. And that shortfalls to a water supply are a
6 year-by-year evaluation?

7 A. Yes.

8 Q. Have you made cropping decisions based upon
9 anticipated low water supplies?

10 A. Yes. As I pointed out in earlier questioning,
11 we chose not to grow corn or as many acres of beans
12 based on potentially shorter water season.

13 Q. That decision was made last winter?

14 A. It was made during the course of the winter,
15 yes.

16 Q. As far as your method of your irrigation, you
17 have all sprinklers and pivots; is that correct?

18 A. No. We have I believe approximately 75 acres
19 of surface irrigation.

20 Q. That's the gated pipe?

21 A. Yes, sir.

22 Q. Thank you.

23 Your water from the river is all diverted into
24 pipelines?

25 A. It is as of last night at dark.

1 Q. You talked about your potential losses. You
2 don't have any conveyance losses from the river to the
3 point of application?

4 A. Hopefully not. Historically yes.

5 Q. Would you agree that your only loss in your
6 operation is from the spill out of your pivot ponds?
7 Water that is not used directly on the crop?

8 A. No, I don't think I would agree with that
9 because I think there are other unknown advance losses
10 that I can't explain. Nobody has been able to explain
11 them to me.

12 Q. But the one you can explain are those spills
13 out of those ponds; is that correct?

14 A. That is correct.

15 Q. That water goes back into the Little Wood
16 River?

17 A. Yes, it does.

18 Q. But it's not measured?

19 A. No, it's not measured.

20 Q. So you don't have a good estimate of what
21 those losses might be on an annual basis?

22 A. I really don't. There's no way to measure
23 them.

24 Q. As far as your crop water need, you have not
25 come up with a total annual volume for crop; is that

1 correct?

2 A. Per crop or per farm? Or I'm not clear.

3 Q. I would say for your whole farm.

4 A. No, I have not.

5 Q. Can you help me understand your crop table a
6 little bit more on Exhibit 1. I have a specific
7 question as to Water Right 37-973. Do you see that
8 column, those rows?

9 A. Yes, I do.

10 Q. Does that table mean that you are only using
11 that Water Right 37-973 on the, I count 88 acres of
12 alfalfa green chop, rye green chop?

13 A. No, that is not exactly what we intended in
14 this table. What we were trying to show was that
15 because that water right will be cut before the '83
16 water, that would be the crop that would be sacrificed
17 first.

18 Q. So from the point that the '84 right is
19 curtailed, you don't anticipate using your '83 water on
20 that crop the rest of the year?

21 A. Probably not because it's not going to last
22 much longer.

23 Q. So is it probably not or you won't?

24 A. I would stick with probably not. If there was
25 an opportunity because we were wet on something else and

1 there was a day or two we could water hay, we would sure
2 try.

3 Q. You talked about other potential rentals if
4 you were able to secure additional rental water. Would
5 that be a circumstance when that '83 water might be used
6 on that crop?

7 A. Well, I would characterize it as we don't
8 anticipate getting this rental water before the '84 is
9 off. So if we have the rental water in time to replace
10 the '83 we'll be lucky. So I don't think that's exactly
11 accurate.

12 Q. So the priority did not get curtailed on
13 June 5th; is that correct?

14 A. Of the 4/1/84?

15 Q. Yes.

16 A. That is correct.

17 Q. So would that change the days of supply
18 shortfall in that other column?

19 A. Yes, it would change them, the amount of days
20 between June 5th and whenever that priority is cut in
21 the next several days.

22 Q. Up to this point, have you diverted the '83
23 right onto those acres?

24 A. Well, that's not an answerable question. We
25 divert water as needed at whatever diversion serves

1 whatever crop as it's needed. So there's no distinction
2 between '83 and '84 until the '84 is gone.

3 Q. That helps. I just wanted to confirm that you
4 don't have a dedicated point of delivery from the river
5 for your '84 right, it's all combined; is that correct?

6 A. That is correct.

7 Q. So the remaining acres identified under your
8 '83 right, that's about 280 acres; is that correct? If
9 you subtract the 88 acres we were just talking about.
10 Or 270, it's in that neighborhood.

11 A. I don't make that distinction so I don't know
12 how to answer that question.

13 Q. Looking down at the columns that you discussed
14 about the rented water from Shoshone, the AFRD #2 water,
15 did you use any of that Little Wood water on those
16 acres?

17 A. Again, the question doesn't really make sense
18 to me. But we combine all the water we have available
19 to get the job done as it's in priority. When it's cut,
20 then we reduce acres accordingly per crop needs, crop
21 value, et cetera.

22 Q. So maybe I'll ask it a different way. Have
23 you used any of that AFRD #2 water yet?

24 A. I don't believe I have. I believe I've stayed
25 within my 300 inches of decreed water thus far but I

1 don't know that for sure because I haven't checked with
2 the watermaster.

3 Q. Have you requested that delivery?

4 A. No, I have not.

5 Q. But at least through today your '84 and '83
6 water rights have been on, they've been delivered to all
7 acres in this table?

8 A. That is correct.

9 Q. The AFRD #2 water that you rented from the
10 City of Shoshone, you expect to receive that water
11 through the end of the irrigation season?

12 A. Yes, I do.

13 Q. That would be the September 15th day?

14 A. That or longer if AFRD delivers further into
15 the season.

16 Q. You made that decision to rent that water back
17 in January; is that correct?

18 A. I believe that is correct.

19 Q. If we can turn to your water rights, maybe
20 just Exhibit 4. Do you have that in front of you?

21 A. Yes, I do.

22 MR. BROMLEY: Counsel, what water right number
23 is that?

24 MR. THOMPSON: That's 37-344A.

25 MR. BROMLEY: Thank you.

1 Q. (BY MR. THOMPSON) Mr. Brossy, could you turn
2 to the second page of that exhibit, I think it's a list
3 of conditions. Can you read Condition No. 5.

4 A. It says: "This right is limited to the
5 irrigation of 295 acres within the place of use
6 described above in a single irrigation season."

7 Q. I've got a different condition.

8 A. You wanted Exhibit 4, Water Right 37-423?

9 Q. I'm sorry, I think that's a different batch of
10 exhibits.

11 MR. THOMPSON: Can I approach for a second?

12 THE HEARING OFFICER: Sure.

13 MR. THOMPSON: I'll let Jerry figure it out.

14 THE WITNESS: We had it right a little while
15 ago.

16 THE HEARING OFFICER: I thought these were
17 color coded but they're not.

18 THE WITNESS: I found it.

19 THE HEARING OFFICER: How come his are green
20 and mine are yellow?

21 MR. RIGBY: Talk to Chase.

22 THE WITNESS: So you want me to read Condition
23 5?

24 Q. (BY MR. THOMPSON) I think that's correct, on
25 the second page.

1 A. The "Use of this right is combined with water
2 from Big Wood Canal Company"? That one?

3 Q. Yes. So you have shares in the Big Wood Canal
4 Company; is that correct?

5 A. That is correct.

6 Q. How much water do you receive?

7 A. I have 200 shares, which per our contract with
8 a former owner of this land, amounts to 314 acre-feet.

9 Q. Have you diverted any of that water this year?

10 A. I do not believe we have needed any of that
11 water. I have, however, offered it to other water users
12 on the river when their rights were cut in the last
13 week.

14 Q. Who did you offer that to?

15 A. I offered it to the Arkooshes, Charles Newell,
16 and Alton Huyser.

17 Q. Do you know if they called for that water?

18 A. You would have to ask the watermaster.

19 Q. So as far as your farm, your total supplies
20 this year, at least authorized to be used on your
21 property, you had your Little Wood rights; correct?

22 A. Thus far, yes.

23 Q. And Big Wood Canal Company shares; correct?

24 A. Until -- thus far, yes.

25 Q. And the Cottonwood right we discussed earlier

1 that Mr. Rigby addressed; is that correct?

2 A. I really don't know if that was ever even on
3 it, to be honest with you.

4 Q. So at least as you understand it, no water
5 applied to your farm from your Big Wood sources this
6 year; would that be true?

7 A. As far as I know, yes.

8 Q. Was the Cottonwood right delivered to any
9 other users, to your knowledge?

10 A. As I say, I do not know if the Cottonwood
11 right was in priority this year; so I can't answer that.

12 Q. As far as your specific Cottonwood right, did
13 you offer to let that right be used by others?

14 A. No.

15 Q. You've identified on your table, Exhibit 1 --
16 if you want to turn back to that. Do you have that, the
17 predicted injury table in front of you?

18 A. Yes, I do.

19 Q. So can you just describe, you have the yield
20 target that I believe were identified with contracts; is
21 that correct?

22 A. That is correct.

23 Q. Those contracts were not produced as part of
24 our deposition. Do you agree with that?

25 A. That is correct.

1 Q. Can you just describe how you've identified
2 your projected 2021 yield loss.

3 A. Well, the targets you see under the column
4 Yield Target through the malt barley line are contracted
5 amounts, and the projected loss is based on our
6 anticipated difference in yield if we can't irrigate
7 those crops to maturity.

8 Q. This estimate appears to be a total loss for
9 certain crops but then it appears to be 50 percent for
10 some; is that true?

11 A. Yes. And I believe it's been eons, it feels,
12 since I did this, that the 50 percent is based on the
13 fact that we anticipated being able to cut 2 tons of
14 hay, even with a curtailment, because we've already cut
15 one and the other one is coming. The others are based
16 on the fact that we don't expect, without enough water,
17 we don't expect to mature the crop.

18 Q. Did you perform those calculations? Are those
19 your numbers?

20 A. Yes.

21 Q. What was the basis for that, I'll call it
22 50 percent?

23 A. Well, I took the average green chop tonnage
24 produced on the third and fourth cutting last year and
25 considered them to be a loss for this year.

1 Q. Comparing prior years from when you've made
2 four cuttings as opposed to two; would that be correct?

3 A. That is correct.

4 Q. The Projected Cutoff Date, that was an
5 estimate provided by the watermaster, Kevin Lakey?

6 A. That is correct.

7 Q. The 1884 water right did not get curtailed on
8 June 5th; is that true?

9 A. That is correct. Thank goodness.

10 Q. The latest projection for the 1883 is still
11 June 15, is that your understanding?

12 A. I actually don't have an update on that. I
13 heard that 9/1/83 would be off on Monday; so I am
14 anticipating that one follows.

15 Q. You had a little discussion with Mr. Rigby
16 about your understanding of groundwater use in the
17 Triangle, flows in Silver Creek, and it's your
18 contention that they have an effect; is that correct?

19 A. That they have in fact?

20 Q. That they do have an effect on Silver Creek
21 flows.

22 A. Yes, they do. That is my impression.

23 Q. If groundwater rights are curtailed on July 1,
24 will your 1884 water right priority be restored this
25 season?

1 A. I think it will.

2 Q. What's the basis for that?

3 A. My understanding is that a curtailment in the
4 Triangle would yield enough water to refill that water
5 right.

6 Q. What's the basis for enough water? What's
7 your estimate?

8 A. Well, there needs to be a certain amount of
9 flow at Station 10 above Richfield for that right to be
10 good.

11 Q. Do you know how much that is?

12 A. I believe it's in the neighborhood of 35 cfs.

13 Q. For your 1884 water?

14 A. For the '84, for everything senior and the
15 '84s to remain in priority, I believe that's true. I
16 believe that's the need.

17 Q. Would the watermaster records, as far as the
18 list of rights in priority and quantities, determine
19 that amount?

20 A. Yes.

21 Q. How about as far as timing, do you know if
22 that timing would come back in time to benefit your '84
23 right?

24 A. Well, if there was curtailment July 1 and we
25 saw water within a week, very definitely.

1 Q. As far as your 1883 water right, if that's cut
2 off on June 15th, what happens to your crops?

3 A. Well, if we can't secure more water from
4 District 1, we take our remaining rented water and water
5 garden bean seed and potatoes and take a loss on
6 everything else.

7 Q. So if you're unable to rent water, your garden
8 seed beans, if they're cut off on June 15th, total loss?

9 A. The acreage that can't be covered by the
10 66 inches of AFRD #2 water.

11 Q. How about the pinto beans?

12 A. As well.

13 Q. And your purple barley?

14 A. There might be something that could be green
15 chop there but I doubt it will mature. It's not that
16 far along.

17 Q. How about the malt barley?

18 A. Same thing.

19 Q. And the no-till pinto beans?

20 A. We wouldn't even do anything with that project
21 if there's no water.

22 Q. So if junior groundwater rights are curtailed
23 on July 1st, will your water right, your 1883 water
24 right, come back in time to save those crops?

25 A. I believe so. It would be -- it would be in

1 priority before the '84.

2 Q. As far as timing, if that water came back mid
3 to late July, would that be sufficient time?

4 A. Well, my understanding is if there were
5 curtailment on July 1st, the water would recover, flows
6 in Silver Creek would recover before late July. It
7 would recover within a week or so of the curtailments.

8 Q. Who supplied that information?

9 A. Well, I don't know exactly. We've had
10 numerous conversations about this amongst ourselves. So
11 exactly where that information would be attributed to I
12 can't say.

13 Q. Have you reviewed the Department's memos in
14 this case?

15 A. I have not reviewed the Department's memos
16 completely.

17 Q. I'll represent to you I believe Jennifer
18 Sukow's memo does a modeling analysis of curtailment by
19 certain days and projected quantities. Would you agree
20 with that?

21 A. I've heard that.

22 Q. Any reason to disagree with that estimate of
23 timing and quantity?

24 A. Not that I know of, no.

25 Q. So as far as quantity, if what Ms. Sukow

1 predicts through the model prediction, whatever water
2 shows up, however that quantity fills priorities, you
3 would agree that would be the best information for you?

4 A. Well, I believe right now since groundwater is
5 still a mystery to everybody, that's the best
6 information we have to date.

7 Q. Going back to those crops, the garden seed
8 beans, pinto beans, purple barley, malt barley, no-till
9 pinto beans, what benefit to those crops will occur if
10 water shows up in August?

11 A. Well, those crops that have already failed due
12 to lack of water in July would be nothing. But for
13 example, our ability to plant new seeding alfalfa would
14 be back on the table if we had August water.

15 Q. If the water predicted to show up from
16 curtailment, would you agree that there will be some
17 loss at the Highway 93 crossing?

18 A. No, I'm not going to agree to that.

19 Q. Are you aware of some estimated losses at that
20 location?

21 A. I've heard lots of figures bandied about.

22 Q. Do you have any reason to dispute those
23 estimates made by the watermaster or others?

24 A. Well, they're flow dependent. There's
25 different losses depending on different river levels.

1 And I think it's mostly hearsay at this point.

2 Q. As far as curtailment of groundwater rights,
3 do you have any estimate of what water remains in the
4 aquifer for the 2021 season, if that occurs?

5 A. No.

6 Q. If there is a quantity of water, and I'll
7 represent the Department's estimate is 67 percent, would
8 you agree that would not show up in the July to
9 September time frame in Silver Creek?

10 A. I do not know.

11 Q. Have your 1883 water rights been curtailed
12 before?

13 A. I believe they were curtailed in 1994 but I
14 honestly can't recall. And they may have been curtailed
15 another couple times in the years I've been managing.

16 Q. How about the 1884 water right?

17 A. Yes.

18 Q. And sometimes in July. Would that be fair?

19 A. It was curtailed in July of 2013, I remember
20 that distinctly. But rarely in July; it used to run
21 into August before curtailment.

22 Q. I'd like to go back to your questioning with
23 Mr. Rigby about last August. Do you recall that?

24 A. Yes.

25 Q. And I think we talked about that in your

1 deposition.

2 A. Yes, we did.

3 Q. Would you agree that the calls that were made
4 or the pleading by the watermaster to put water back
5 into Silver Creek, do you agree that was a combination
6 of surface water and groundwater?

7 A. Yes, I would. But I'd also refer to his
8 communication with me that a portion of it could not be
9 explained by surface water; it had to be groundwater.

10 Q. So the flows that you witnessed come back up
11 would have been a result of both surface diversions and
12 groundwater diversions shutting off?

13 A. Yes, that's correct.

14 Q. So you don't have a calculation as to what
15 that percentage would be?

16 A. No, but I believe that he said that between 10
17 and 15 cfs of that return or that increased flow could
18 only be attributed to groundwater.

19 Q. It would be a question for the watermaster?

20 A. Yes, it would.

21 Q. As far as witnessing what is occurring in the
22 Little Wood River, at your diversion is there always
23 water flowing by; is that true?

24 A. Yes, there is, because the Snake River from
25 American Falls Reservoir District is conveyed through

1 the middle of our farm.

2 Q. So that water is going past your farm during
3 the entire irrigation season?

4 A. Yes, it is.

5 Q. So are you able to I guess evaluate impacts of
6 groundwater at that location?

7 A. No.

8 MR. THOMPSON: That's all the questions I
9 have.

10 THE HEARING OFFICER: Thank you, Mr. Thompson.
11 Mr. Laski or Ms. O'Leary, questions?

12 MR. LASKI: None.

13 THE HEARING OFFICER: Group 3. Mr. Bromley.

14

15 CROSS-EXAMINATION

16 BY MR. BROMLEY:

17 Q. Hi, Mr. Brossy.

18 A. Hi, Mr. Bromley.

19 Q. First of all, Chris Bromley on behalf of Sun
20 Valley Company. Just a couple questions.

21 I think if I heard you correctly, you said
22 groundwater is still a bit of a mystery.

23 A. I think it is.

24 Q. So then in your opinion, does it make sense to
25 curtail juniors when it's mysterious if it will make it

1 downstream to you?

2 A. No, I would like to qualify that. It's a
3 mystery because we will never know exactly what's going
4 on under there but we've seen evidence that curtailment
5 makes a difference.

6 Q. What evidence is that?

7 A. Well, I would offer the response to
8 Mr. Thompson's last question about what happened last
9 August on Silver Creek in communications with the
10 watermaster.

11 Q. Would you agree that the model curtailment
12 runs, they've got to make it past Station 10; correct?
13 I heard you mention water needs to go past Station 10.

14 A. That is correct.

15 Q. Are there losses from the Triangle to
16 Station 10 and past Station 10?

17 A. I'm sure there are.

18 Q. Mr. Brossy, listening to Mr. Thompson, he
19 asked you if you were requesting conjunctive
20 administration. I was at your deposition and heard that
21 you said you were. So you changed your testimony today
22 on that point. The question I have for you is: Are you
23 changing your testimony from your deposition where you
24 said you weren't seeking administration outside of the
25 Bellevue Triangle or are you still requesting

1 administration only within the Triangle?

2 A. My testimony is based on the Director's order
3 of this proceedings, which is at this point in time
4 limited to the Triangle.

5 Q. Thank you.

6 Mr. Brossy, do you know your typical water
7 delivery per acre?

8 A. I do not.

9 Q. Can you venture a guess?

10 A. I would venture a guess that it's close to
11 6 cfs times the irrigation season divided by the acres,
12 because we are almost always utilizing all of our water
13 right.

14 Q. In your deposition testimony you said it was
15 around 5 acre-feet per acre. Does that sound about
16 right?

17 A. That was completely a guess on my part.

18 Q. Sitting here today, do you think it's more or
19 do you think it's less?

20 A. I think historically it's been that. I'm
21 hoping that going forward it will be able to be reduced
22 by the pipeline we've just installed. I think that I'm
23 confident and counting on that to make a big difference.

24 Q. So up until today then it was 5 acre-feet per
25 acre?

1 A. As a guess, but yes.

2 Q. Mr. Brossy, do you know historically in the
3 1900s time frame how many cuttings of alfalfa farmers
4 were getting on your farm or in your area?

5 A. No, I don't.

6 MR. BROMLEY: Nothing further. Thank you.

7 THE HEARING OFFICER: Thank you, Mr. Bromley.

8 Okay. Others in group 3, Mr. Simpson.

9 Let's see, Mr. Robertson?

10 MR. ROBERTSON: I do not.

11 THE HEARING OFFICER: Is Mr. O'Bannon with us
12 here today? Questions?

13 MR. O'BANNON: No questions.

14 Redirect, Mr. Rigby.

15 MR. RIGBY: I think my questions would be what
16 Mr. Foster will be asking so I'll allow him to --

17 MR. FLETCHER: Mr. Fletcher.

18 MR. RIGBY: Mr. Fletcher. Oh my God.

19 MR. FLETCHER: You need some sleep.

20 THE HEARING OFFICER: Coming to a basin near
21 you. Mr. Fletcher is in the big loss whether he wants
22 to be or not.

23 MR. RIGBY: So I do not have any.

24 ///

25 ///

REDIRECT EXAMINATION

BY MR. FLETCHER:

Q. I just wanted to clarify something. You stated you own 200 shares of Big Wood Canal Company water; correct?

A. That is correct.

Q. And early in the season this year I think you testified you didn't need them because your priorities were on and you were able to fulfill your water needs early in the season with your water supply.

A. That is correct.

Q. Your natural flow supply; correct?

A. That is correct.

Q. So you offered those to some neighbors in case they needed it; correct?

A. That is correct.

Q. Is the Big Wood Canal Company water supply going to be reliable for you later this year?

A. No.

Q. Why is it not going to be reliable?

A. Well, that water is not delivered or not available to us after Magic Reservoir ceases delivery.

Q. Do you have any idea of when Magic Reservoir is going to cease delivery this year?

A. I heard yesterday it will be tonight or

1 tomorrow.

2 Q. So within the next few days the Big Wood water
3 would not be available to you or your neighbors or
4 anyone else.

5 A. That is correct.

6 MR. FLETCHER: Thank you. I have no further
7 questions.

8 THE HEARING OFFICER: Thank you.

9 Recross based on the redirect? Mr. Thompson?

10 MR. THOMPSON: None.

11 THE HEARING OFFICER: Mr. Bromley?

12 MR. BROMLEY: No.

13 THE HEARING OFFICER: Anybody else?

14 Mr. Laski?

15 MR. LASKI: No.

16 THE HEARING OFFICER: Thank you, Mr. Brossy.

17 Let's take a break for 10 minutes.

18 (Recess.)

19 THE HEARING OFFICER: We're back on the record
20 after a short morning recess.

21 I want to tell everybody after listening to
22 both the direct examination and the cross-examination of
23 the last witness, I am left with the impression of
24 greater urgency in this matter, and am telling
25 everybody, putting them on notice right now that we will

1 go late tonight. I want to finish testimony as quickly
2 as we can because it appears to me there's an urgent
3 need for me to resolve this matter.

4 So plan to stay maybe until 9:00 tonight.
5 We'll start early tomorrow and we will go late tomorrow.
6 Let's see, though, we can't -- yes, we can. Late
7 tomorrow, late Friday, and Saturday.

8 Okay.

9 MR. RIGBY: Mr. Director, based upon that, I
10 need to make sure the rest of our witnesses are coming
11 today. We were not anticipating -- perfect.

12 THE HEARING OFFICER: Okay. Mr. Rigby, next
13 witness.

14 MR. RIGBY: Yes, Mr. Director. We would call
15 Mr. Hubsmith to the stand.

16 THE HEARING OFFICER: Mr. Hubsmith, come
17 forward.

18 RODNEY F. HUBSMITH,
19 having been called as a witness by the Big Wood &
20 Little Wood Water Users Association and first duly
21 sworn, testified as follows:

22
23 DIRECT EXAMINATION

24 BY MR. RIGBY:

25 Q. Good morning.

1 A. Good morning.

2 Q. How are you doing?

3 A. Good.

4 Q. Just what you want to be doing; right?

5 A. Absolutely. I don't have nothing else to do.

6 Q. Please state your name and current address.

7 A. My name is Rodney F. Hubsmith, I live at 1073
8 East Highway 26, Richfield, Idaho.

9 Q. Are you a party in this proceeding?

10 A. Yes.

11 Q. You were here during the exam of Fred just a
12 moment ago?

13 A. Yes, I was.

14 Q. Rather than get into the association, that is
15 the Big Wood, Little Wood Water Users Associations in
16 detail, do you agree with his testimony as to what that
17 association is all about?

18 A. Yes.

19 Q. Are you a member of it?

20 A. Yes, I am.

21 Q. What's your occupation, Rodney?

22 A. I consider myself a farmer-rancher at this
23 juncture. I was a previous dairyman.

24 Q. Previous dairy?

25 A. Yes, I had a dairy operation up until 2014.

1 Q. So let's talk about your previous life, so to
2 speak. What's your education?

3 A. I have limited college. I enlisted in the US
4 Air Force, I spent 4 1/2 years in different locations.
5 I was discharged in 1980. I shortly thereafter bought
6 my first farm, which is the farm with the decreed
7 rights.

8 Q. As a member of the association -- well, let's
9 just go right to your water rights. If you'll look at
10 the Exhibit No. 2 under, it would be entitled Hubsmith
11 Exhibit 2, please. Do you see that?

12 A. I have it, sir.

13 Q. What is that?

14 A. That is a Idaho Department of Water Resources
15 Water Right Report.

16 Q. Is that Water Right No. 37-472?

17 A. That is my decreed right, sir.

18 Q. Is that the number?

19 A. Yes.

20 Q. What is the priority date on that?

21 A. It would be 04/01. It's April 1st of 1884 is
22 how I refer to it.

23 Q. For how many cfs?

24 A. 1.2 cfs.

25 Q. Where do you divert this water right? From

1 which source do you divert the water right?

2 A. I divert it out of the Little Wood River
3 approximately 1 mile west of Richfield.

4 Q. If you'll refer to Hubsmith Exhibit 3, please.
5 It's the next tab. Does that depict the place of use of
6 this water right?

7 A. That does depict the place of use of this
8 water right.

9 Q. As far as the points of diversion, it appears
10 to be one point of diversion; is that correct?

11 A. That is correct.

12 Q. So Water Right 472 has one point of diversion
13 that's upstream of the place of use and depicted up on
14 that map?

15 A. Yes.

16 Q. The water itself -- I'm sorry, did I ask you,
17 the source is the -- and I want to make sure I get this
18 right -- the Little Wood?

19 A. Little Wood River.

20 Q. From that point of diversion to the place of
21 use, how does it get there?

22 A. I installed a pipeline system to -- and it was
23 installed in two phases before 2010. At that point I
24 was still surface irrigating. After 2010, I added to
25 the pipeline to bring to a pivot/hand line irrigation

1 system, pressurized irrigation system.

2 Q. That is for the entire place of use?

3 A. That would not be the entire place of use. On
4 the south, looking on this map, if you could depict
5 where the river is, then acres to the south would be --
6 I deliver to them acres via pipeline from my pivot
7 system, it crosses the river via pipe and then I go open
8 ditch surface irrigating to them.

9 Q. So pipeline to pressurized system above the
10 river and open source below the river?

11 A. South of the river.

12 Q. South of the river. Very good.

13 A. Pipeline to the acres south of the river also.

14 Q. So the pipeline is from the north of the river
15 to the acres on the south and then it's irrigated by --

16 A. Yes, surface irrigation.

17 Q. -- flood, surface irrigation?

18 A. Flood irrigation.

19 Q. What other water rights, if any, do you have
20 on this place of use?

21 A. I have no water rights for this acreage
22 depicted on this map other than the decreed right shown.

23 Q. So do you have any supplemental rights?

24 A. No, I do not.

25 Q. Do you have any exchange agreement, what they

1 call the 161 condition exchange agreement?

2 A. No, I do not.

3 Q. Do you lease any supplemental water?

4 A. No, I do not.

5 Q. Have you attempted to lease any supplemental
6 water this year?

7 A. No.

8 Q. As far as this particular year is concerned,
9 what are you growing on the place of use? And start
10 with the north and then go to the south.

11 A. For this particular year, I have Timothy
12 grass, alfalfa-hay on approximately slightly over
13 35 acres, and then I have a 5-acre piece on the north
14 side of the river that I currently have an alfalfa-grass
15 mix in. I kind of classified it as mostly the same
16 value because of forage hay. And then south of the
17 river I have permanent pasture grazing.

18 Q. You said you're a rancher. Is that the reason
19 for growing the crops that you grow mainly?

20 A. Yes.

21 Could I clarify that just a little bit?

22 Q. Certainly.

23 A. Through years of experience with some drought
24 involved, I have previously had corn and alfalfa on
25 this, the ground north of the river. And when you seed

1 an alfalfa field and you get a decent stand, then you
2 have a drought the next year, you generally have a poor
3 stand from there on. So with Timothy grass, if you add
4 water to Timothy grass it responds very quickly back.
5 And so at this point, I have chosen to take that
6 direction for a while to see if it better matches my
7 situation with some short water years.

8 Q. So let's talk about your situation. Are you
9 receiving your full water supply pursuant to your
10 decreed right?

11 A. When my decree is not cut I receive my full
12 water supply.

13 Q. Is it sufficient to water the crops on this
14 place of use?

15 A. Yes, it is.

16 Q. Is it sufficient to water the, for example,
17 even the additional crops that you're talking about,
18 corn?

19 A. Yes, it is.

20 Q. This particular year do you anticipate having
21 your full water supply?

22 A. No. I believe I will -- probably if I wasn't
23 at this hearing today the watermaster probably would
24 have made a curtailment on my right, from listening to
25 people out in the hallway and stuff like that.

1 Q. So you anticipate that your water right will
2 be cut?

3 A. Yes.

4 Q. And therefore, from here forward, what source
5 of water do you have to water your alfalfa and your
6 pasture land?

7 A. My grass-alfalfa and my Timothy, I will have
8 no source.

9 Q. So how will you water the other place of use
10 for your alfalfa?

11 A. It won't be watered if I have a priority cut.
12 Is that the question you're asking?

13 Q. Yes, it is. I'm sorry if I'm not making
14 myself clear.

15 These lands, let's talk about how long you've
16 been on these lands.

17 A. I bought this particular farm I believe in
18 '81, February of '81 I think we closed the paperwork on
19 it. I was there somewhat before that on this particular
20 piece of ground. I purchased this place from my
21 grandfather; so I have a lifetime of history on this
22 piece, on this place.

23 Q. Have you done anything during that period of
24 time to improve the efficiency of the watering of these
25 lands?

1 A. As I stated, I started installing the pipeline
2 approximately half a mile, thinking that if I eliminated
3 that open ditch, being quite slow, that I'd have more
4 water to irrigate with; it worked. And then in 2010, I
5 thought, you know, I need to go pressurized system to
6 become more efficient even than that. So then I spent a
7 considerable amount of money to install this pressurized
8 irrigation system. And when I say "considerable
9 amount," when you put pivots on such a small acreage as
10 this, long and narrow, it becomes very considerable.

11 Q. Expensive per acre.

12 A. Per acre.

13 Q. Understood.

14 Did you feel like you needed to do that?

15 A. I felt like I had to; I was just trying to
16 survive.

17 Q. Has that only become necessary in recent years
18 or should you have done that -- or were the flows
19 sufficient before and not sufficient now, requiring you
20 to do that?

21 A. Well, I'm just going to give you the situation
22 since I've owned the farm. Soon after I bought the
23 farm, I had some pretty good years where my priority
24 decreed water wasn't cut, and then especially in the
25 '90s it become quite regular that my priority decreed

1 was cut. Then you start looking on how to become more
2 efficient, not only for growing crops but irrigation.

3 Q. The location of your farm, as I understand it,
4 is close to what they call Station 10; is that correct?

5 A. Yes. It's approximately 2 miles from
6 Station 10.

7 Q. Are you familiar with Station 10?

8 A. Very familiar with Station 10.

9 Q. Do you visit it or are you present at
10 Station 10 often?

11 A. Previous years my uncle owned the land where
12 Station 10 was, and I just know where Station 10 is and
13 been there many, many times.

14 Q. During the depositions issues came up as to
15 Station 10's, for lack of better words, leaking or waste
16 or insufficient, that kind of language. Are you
17 familiar with that which has been argued against
18 Station 10?

19 A. Yes, I am.

20 Q. So what's your analysis of Station 10?

21 A. My analysis of Station 10 and how it's
22 measured, Station 10 would be very accurate. It would
23 correspond if you measured it any other way.

24 Q. So in your history and work in this particular
25 reach of the river, have you seen a leveling off of the

1 decline of the levels during the years or is it
2 increasingly lower? Of course, each year is different,
3 recognizing that.

4 A. Yes. If you group a bunch of years together
5 it's increasingly lower.

6 Q. So if you do not have enough water, and
7 apparently if it's shut off you won't, what do you
8 anticipate doing in an attempt to save any crop you can?

9 A. You're not going to save it in my case.

10 Q. What does that do for future years?

11 A. That is why Timothy got planted, grasses got
12 planted on this place. Future years, there will be a
13 dispersal of a stock cow herd this year. There isn't
14 much I can do. I have significant acres under the Big
15 Wood Canal Company right that they're shutting off their
16 water tomorrow.

17 Q. In fact, that was the subject of the last
18 witness. So even though you own the canal company
19 water, is it your testimony that your understanding will
20 be that you will not be able to divert it after
21 tomorrow?

22 A. No, it won't be diverted. There will be no
23 water.

24 Q. So again, not to beat a dead horse, there will
25 be no water for your place of use once your water right

1 is curtailed.

2 A. The only water I could possibly use from this
3 for this acreage has to come down the Little Wood River
4 via Silver Creek via the Triangle. It comes out of the
5 Triangle.

6 Q. Now, you're part of the Association's I guess
7 joint effort to ask that the curtailment of the
8 groundwater users up in the Triangle; is that correct?

9 A. Yes.

10 Q. Do you believe that the reduced water supply
11 to you is in part due to the pumping in the Triangle?

12 A. Yes.

13 Q. What do you -- again, I'll ask the same
14 question, you're not a hydrologist. What, if any,
15 evidence do you have personally that makes you believe
16 that pumping in the Triangle does impact the flow of the
17 Little Wood past your place of use?

18 A. Well, previous to pumping, my grandfather
19 owned this place approximately 40 years. When I bought
20 the place, he goes, You have the best water right in
21 Richfield. That was previous to pumping and then I
22 started -- I bought it, I started getting curtailed.

23 And then I got involved and there was science,
24 as you stated, I'm not a scientist, that I've listened
25 to and the modeling and everything else. But with me

1 being where I'm at, I wake up every morning and look at
2 the river. It's no further away from me to the back
3 wall. My living room looks directly at it. And I see
4 what the flows is, and especially with Magic or the Big
5 Wood Canal Company rights being -- Big Wood Canal
6 Company not running, there's no manipulation of any
7 source; it's Station 10 and then it's to my place. So
8 there's no manipulation of added water or anything else.

9 So then I know what I'm looking, and I'm
10 looking at what's at Station 10. And after 40 years of
11 living at that location, I look out my window and say,
12 Station 10's at 18 cfs. I look on a computer, it's an
13 automated station from the last 2 years, I'm close. I'm
14 not off very far. Now, when flows are significantly
15 above that, you don't guess as close. But when we're in
16 some low, low flows, it's not hard to guess cfs of water
17 when you've seen it year after year.

18 Q. So a question as to, again, your experience
19 and your knowledge living next to Station 10 and
20 familiarity with it, when the pumps or certain pumps are
21 turned off in the Triangle, do you see, do you
22 personally see an increase in flows in the Little Wood?

23 A. Let's not -- can I kind of rephrase your
24 question?

25 Q. For example, when pumps are turned off in the

1 Triangle because of, let's say, a cutting of hay. Are
2 you personally familiar enough to know that when those
3 are turned off, that there is an increase in flows past
4 your point of diversion?

5 A. I believe I am. I believe that if -- I live
6 about 20 miles from the Wood River Triangle. If there's
7 a significant weather event that might happen in the
8 Triangle, as there was a couple weeks ago when we
9 received a half inch of rain, you know the irrigation is
10 going to be shut off up there. I don't know whether
11 it's -- it's pretty much all irrigation when you're
12 overwatering or the river significantly comes up.

13 There's an event that happens nearly yearly
14 that I would like to touch upon just a tiny bit.

15 Q. Again, I'm trying to find out whether or not
16 you see any change in the flows when wells are turned
17 off in the Triangle.

18 A. Yes.

19 Q. How immediate is that change in flows?

20 A. Well --

21 Q. Or does it depend.

22 A. It could be a few days.

23 Q. So a few days, not weeks?

24 A. Not weeks.

25 Q. How do you know that that change in flow or

1 increase in flow is due to the wells?

2 A. Well, I'm familiar enough with the system, I
3 know that the decrees that come across out of the Big
4 Wood and the 45 canal is not being utilized as heavy as
5 it was, so that turns on the wells when they don't have
6 their surface decreed water up in the Wood River
7 Triangle. So I do know that that's when the wells are
8 pumping. And that's what I wanted to touch on.

9 Q. Okay. So have you attempted to determine the
10 injuries that you anticipate for the 2021 year?

11 A. Yes.

12 Q. I'd have you look at Hubsmith Exhibit No. 1,
13 please. I would ask you if the numbers and the crops
14 and the columns basically that are presented here, do
15 those come from you?

16 A. You're going to have to give me just a second.

17 Q. Understood. No problem.

18 A. I looked at that and it happened to be the
19 Brossy. I don't want to explain that.

20 MR. RIGBY: May I?

21 THE HEARING OFFICER: Yes.

22 Q. (BY MR. RIGBY) So again I'll ask you, the
23 information contained in the various columns, was that
24 information, not only Crop but Projected Cutoff Date,
25 Yield Target, so on and so forth, was that information

1 you supplied?

2 A. That is information I supplied.

3 Q. So therefore, you're familiar with these
4 numbers?

5 A. Yes.

6 Q. So again, if you wouldn't mind, addressing the
7 crops that you somewhat testified to here, and then
8 we'll get into, for example -- in fact, let me just ask
9 you this: So as far as the crops are concerned, you've
10 testified as to the Timothy grass, the pasture, and the
11 feeder calves. The feeder calves you haven't testified
12 to yet. Is that water for them to drink?

13 A. No, that is forage for them to eat.

14 Q. Very good.

15 When you say "dispersal of half of the
16 breeding cows," explain what you mean by that.

17 A. Well, I broke this down to what stock cows is
18 generally ran on this place -- on my other places I have
19 more cattle -- but what I generally am able to pasture
20 on this place. So my calculation of shutoff was going
21 to be June 15th. Make sure I'm right on that.

22 Q. That's what it indicates on the projected
23 cutoff date.

24 A. So I'm actually going to lose my water, from
25 what I understand, slightly before that. So that's what

1 I base this on.

2 I presently feel like I will harvest my
3 Timothy hay, and I will continue -- I will graze that
4 acreage shortly thereafter. And by approximately
5 July 1st, the grasses quit growing shortly after
6 irrigation water, so by July 1st I look for forage
7 shortfalls. And not presently having anywhere to go to
8 continue to feed these cattle, I expect to sell off
9 cattle early and calves early -- and cattle permanently,
10 we'll sell the calves early.

11 Q. Would you have intended to sell the cattle but
12 for the situation that you've testified to?

13 A. My typical situation is you continue with your
14 beef herd, your cows, and I generally sell these calves
15 off the cows at 700-plus pounds generally between early
16 November to late November.

17 Q. So by selling them early, is that why you've
18 anticipated the loss that you've calculated?

19 A. Yes.

20 Q. Because they won't have the pounds?

21 A. Yes.

22 Q. I'm supposed to be a rancher myself but I'm
23 not.

24 As far as the other crops then are concerned,
25 you testified that you had the Timothy hay, you would at

1 least harvest that, but then would there be a second
2 harvest that you're anticipating a loss on and that's
3 why you've got a projected revenue loss under Timothy
4 hay?

5 A. Yes.

6 Q. As far as cattle grazing is concerned, are you
7 anticipating that those that you do keep will have to
8 find other place and rent that? Is that what you're
9 anticipating?

10 A. Yes, or fed out of a hay stack.

11 Q. There you go. Okay.

12 So you have a projected revenue loss in these
13 calculations of \$68,100. Again, are those your numbers,
14 best of your estimation?

15 A. Them are my numbers.

16 Q. As far as your source for all of that, is that
17 just your knowledge of the going prices, your historical
18 knowledge? What is it?

19 A. Yes, that is. I don't have to elaborate on
20 that. It is from historical knowledge, from looking at
21 the livestock market reports, Twin Falls sale yard. I
22 have a hay broker for my other hay. He's communicated
23 with me what he thought forage hay was going to be worth
24 this year.

25 Q. So bottom line then, you're here, are you

1 asking the Director to administer the water rights in
2 their priority, both ground and surface?

3 A. Yes.

4 MR. RIGBY: I have no further questions.

5 THE HEARING OFFICER: Thank you, Mr. Rigby.

6 MR. RIGBY: Sorry, I need to do the exhibits,
7 Mr. Director.

8 I would move for the admission of Hubsmith 1,
9 2, 3.

10 THE HEARING OFFICER: Is there any objection
11 to the admission of these documents into the record?

12 Hearing no objections, the exhibits marked as
13 Hubsmith 1, 2, and 3 are received into evidence.

14 (Hubsmith Exhibits 1, 2, and 3 received.)

15 THE HEARING OFFICER: Thank you, Mr. Rigby.

16 Mr. Fletcher.

17 MR. FLETCHER: No questions.

18 THE HEARING OFFICER: Mr. Thompson.

19

20 CROSS-EXAMINATION

21 BY MR. THOMPSON:

22 Q. Good morning, Mr. Hubsmith.

23 A. Good morning.

24 Q. Travis Thompson for South Valley Ground Water
25 District.

1 So your last question from Mr. Rigby, I think
2 we talked about this at the deposition, you're
3 requesting conjunctive administration of Water District
4 37 this year; is that correct?

5 A. No, it's not correct.

6 Q. So what are you requesting?

7 A. I'm requesting from the Director to administer
8 water rights by senior priority doctrine.

9 Q. Both surface and groundwater?

10 A. Both surface and groundwater.

11 Q. In the history of your place on that farm,
12 have you had to request administration for your surface
13 rights as against other surface water?

14 A. Well, I don't necessarily request it. I would
15 like it every single year but I live with what the
16 watermaster says. If that's how you asked that
17 question, I live with the watermaster, he tells me when
18 I can run my right and when it's curtailed. So I abide
19 by the law.

20 Q. Kind of a matter of course as to when
21 priorities get cut, depending upon available supply?

22 A. Yes.

23 Q. But it's your understanding that hasn't
24 happened with groundwater rights together; is that
25 correct?

1 A. Yes.

2 Q. That's one of the purposes of this proceeding
3 is to bring those groundwater rights into that
4 administration?

5 A. Yes.

6 Q. And I think we talked about this --

7 A. We are talking about a 2021 year, and that's
8 why we're here for 2021, and that's what we're asking
9 for is the senior priority doctrine to be administered.

10 Q. Thank you.

11 And you are claiming that upstream groundwater
12 rights injure or adversely affect your senior water
13 right; is that true?

14 A. Yes.

15 Q. As far as specific groundwater rights, you
16 have not personally identified which groundwater rights
17 would be causing that injury; is that true?

18 A. No.

19 Q. Your sole water right, Water Right 37-472,
20 that has an April 1, 1884, priority; is that correct?

21 A. Yes.

22 Q. And that partial decree, that water right
23 authorizes the irrigation of 48.9 acres; is that true?

24 A. Yes.

25 Q. But is it true that you've irrigated up to 60

1 acres in the past?

2 A. I am close to, after the installation of this
3 sprinkler system and using the USDA map, I believe it's
4 57 acres or slightly more than 57 acres.

5 Q. Let's turn to your Exhibit 1, if you don't
6 mind.

7 A. Pardon me?

8 Q. Look at your Exhibit 1, please.

9 A. Is that the damage chart?

10 Q. Yes. View that table.

11 So maybe you can help me out on this. I see
12 Timothy grass hay 40 acres.

13 A. Yeah, I did it again.

14 Q. Sorry.

15 A. Yes. I'm on it now.

16 Q. An identified crop just below that Timothy
17 grass pasture 40 acres. Is that the same 40 acres?

18 A. It's the same 40 acres.

19 Q. Then the pasture below that, 20 acres.

20 A. Yes.

21 Q. Is that a separate 20 acres?

22 A. That is the pasture south of the river.

23 Q. And your testimony today that it's more like
24 57 acres -- or I'm sorry, would that be less than
25 20 acres?

1 A. Yes. After deposition I went home and added
2 up the number of acres on my USDA map, and that's what
3 we come up with was 57 acres.

4 Q. Would you agree that's beyond the number of
5 authorized acres on your water right?

6 A. I would agree to that's more than what's on my
7 water right, and I would caveat that to say that I
8 believe almost anybody who went to pressurized
9 irrigation and pivot irrigation, Bellevue Triangle, or
10 us guys on the river, a pivot runs in a circle so you go
11 over rock piles. I have never exceeded the volume that
12 my water right is.

13 Q. With that additional coverage the pivots allow
14 you to irrigate additional acres beyond what you were
15 originally authorized to irrigate on that farm?

16 A. Yes.

17 Q. So roughly 10 more acres based upon your USDA
18 map?

19 A. 9 or 10.

20 Q. I guess would you agree as to those acres, if
21 you don't have a water right on those acres, you don't
22 have a right to call out junior rights to deliver to
23 those acres?

24 A. Well, I would argue that point pretty
25 substantially that there's large acreages in the

1 Bellevue Triangle that have no surface rights that are
2 solely groundwater rights, from what I understand. So I
3 would ask that all lands be treated equally. There's
4 some kind of problem with that. Let's go upstream,
5 let's go downstream.

6 Q. Are you talking about lands without a water
7 right or with a water right?

8 A. I'm talking about, from what I understand from
9 everything, there's 4,000 acres in the Bellevue Triangle
10 without a surface right condition to them. And if
11 there's a curtailment, I'd expect them to be curtailed
12 along with any other acres that I'm irrigating.

13 Q. Supplemental groundwater right, is that what
14 you're referring to?

15 A. Yes.

16 Q. But as to any acres that do not have a water
17 right, are you contending that water rights with --
18 acres with a water right should be curtailed to supply
19 water to those acres?

20 A. Repeat the question.

21 Q. Just talking about these 10, 11 acres that are
22 not covered by your water right. Are you contending
23 that lands with a supplemental groundwater right should
24 be curtailed to supply water to those 10 or 11 acres?

25 A. Either I don't understand or -- I just don't.

1 I don't really understand.

2 I would say that I'm irrigating acres that are
3 less than what my water right would allow me to irrigate
4 at 57 acres. 1.2 cfs is 60 inches of water, that will
5 irrigate 57 acres.

6 Q. This column that says Needed last day of
7 irrigation, September 30th; is that correct?

8 A. Well, I would love September 30th but my water
9 right goes to October 30th. I was a little surprised
10 yesterday when my water right got pointed out that it
11 went to October 30th because I've been curtailed so many
12 times I actually thought it was September 30th.

13 Q. For the season of use?

14 A. Yes.

15 Q. You've been curtailed before September 30th in
16 the past; that's true?

17 A. Many times.

18 Q. Some years you've been off in July. Would
19 that be true?

20 A. Some years I've been off in July, and even
21 earlier.

22 Q. And some years where you've gone into
23 September, would you agree that groundwater pumping has
24 occurred in those years?

25 A. Yes.

1 Q. It's probably a year-by-year evaluation as
2 to --

3 A. It's a year-by-year evaluation.

4 Q. Does your water right get turned back on later
5 in the year?

6 A. We've had years when it's been intermittent.
7 Actually, sometimes in September I hope to be able to
8 turn back on -- sometimes it happens; sometimes it
9 hasn't -- and bring my fields back up to maybe obtain
10 some fall grazing.

11 Q. Your water right, I think we talked about this
12 at your deposition but I just want to clarify for the
13 record, it lists as combined with Big Wood Canal Company
14 water; is that correct?

15 A. Not on the acres that we've been discussing.

16 Q. Even though the water right has that condition
17 you do not have any shares on these lands; is that true?

18 A. No, I do not.

19 Q. You do not have any conveyance loss from your
20 point of diversion on the river to where you apply water
21 on the land; is that correct?

22 A. No, I do not.

23 Q. So if all groundwater rights were curtailed on
24 July 1st, would your 1884 water right last until
25 September 30th?

1 A. I would certainly expect it to but it may not.

2 Q. Would that change your Days of Supply
3 Shortfall calculation?

4 A. Your question is a little confusing. Are we
5 talking about if at this scenario we have my right being
6 cut June 15th and never coming back on? If there was
7 curtailment of the groundwater pumps, and my right come
8 back on, I have no way of knowing how long or if it will
9 be good as first season. So what are you asking?

10 Q. Well, I'm just looking at your Days of Supply
11 Shortfall, you've identified 107 based upon a June 15th
12 curtailment. It looks like you've calculated that out
13 to September 30th. I guess that's where that number
14 came from. I'm just saying, even if groundwater rights
15 are curtailed, would that 1884 water right have lasted
16 until September 30th?

17 A. I generally think it would have.

18 Q. But in some years it's been cut off earlier;
19 is that correct?

20 A. We've never had the groundwater curtailed; so
21 how do I know that?

22 Q. It's true you planted that Timothy hay this
23 year to survive a drought; is that correct?

24 A. I never planted Timothy hay this year; I
25 planted it 2 years ago to survive shortfalls of water.

1 After being -- like, I feel burnt on establishing a good
2 crop of alfalfa hay, trying to grow corn, I thought I
3 would give Timothy a try.

4 Q. You've made similar cropping decisions in the
5 past based upon available water supplies?

6 A. Yes.

7 Q. You talked about the 1990s.

8 A. Yes.

9 Q. So if your water right is curtailed June 15th
10 or perhaps earlier, based upon what you know today, what
11 will happen to your Timothy hay if water shows up again
12 late in July?

13 A. My Timothy hay will go somewhat dormant,
14 that's the advantage to that grass-forage type of
15 situation that I went to. If I add water to it, it
16 responds very quickly to an irrigation and you could
17 obtain at least grazing off of it.

18 Q. So for this particular crop it could stay off
19 without water for some time?

20 A. Yes.

21 Q. Will you make another cutting?

22 A. Not with my present curtailment date I will
23 not make another cutting.

24 Q. I guess with that happening, will you have
25 already sold certain calves by then?

1 A. I don't anticipate to having to sell these
2 calves until I lose the forage on those acres and then
3 there will be some decisions made about how I'm going to
4 go forward, whether it's through liquidation or trying
5 to secure some pasture, which is very hard in our area
6 when the entire area is water short, no water.

7 Q. Do you have any estimates on groundwater, if
8 it's curtailed, how much just stays in the aquifer?

9 A. I do not, I'm not the scientist in this.

10 Q. I guess for 2021, if I represent to you what
11 the Department has calculated, if 60 percent of that
12 water stays in the aquifer, will that be put to
13 beneficial use by anybody this year?

14 A. Not this year. Or I'm not the scientist. I'm
15 going to decline to answer that that way. I'm just
16 going to say, any water left in the aquifer will be used
17 sooner or later.

18 Q. I'd like to go back to your projected cutoff
19 dates. I guess with your familiarity with the river, is
20 it a different cut for 1884 below Milner-Gooding Canal
21 than above or is it the same?

22 A. The watermaster and -- from my understanding,
23 the watermaster observes the priority doctrine and he
24 makes the cut, first in right, first in time.

25 Q. I just had heard from Mr. Brossy that

1 projected cutoff was June 5th and your projected cutoff
2 was June 15th. I didn't know if there's different
3 locations on the river and how that gets cut.

4 A. Well, previous to the rain event and the Magic
5 shutoff and then turned back on, I believe what happens
6 here is Kevin may use a different station on the river
7 to make his priority cuts but I'm not sure, ask the
8 watermaster.

9 Q. But as for Station 10, if there's 18 cfs
10 measured at Station 10, your 1884 water right is on; is
11 that correct?

12 A. I don't think that's correct, no.

13 Q. I thought that's the testimony I heard this
14 morning.

15 A. Well, I think that's part of the if you buy
16 water to supply or someone buys water to supply the
17 rights below the Gooding-Milner confluence, he don't
18 have to supply them rights or as many, you know, 161
19 conditions and everything else. So then some of us
20 might, it might take less water at Station 10 for some
21 of these other rights to be good. But if every priority
22 is met on the river from Richfield to Gooding, I believe
23 Fred, I heard him testify that Fred thought around
24 35 feet was the magic number, and I have no reason not
25 to believe that because I think that is what we've been

1 told before.

2 Q. So your testimony of 18 cfs at Station 10 with
3 your water right being on is incorrect?

4 A. Well --

5 MR. FLETCHER: I object to that. That's not
6 what he testified to earlier. He said he could look out
7 his window and see if there was 18 cfs going by.

8 MR. THOMPSON: Let's go back, let's go back to
9 it. Let's read it.

10 (Record read back as follows: A. So then I
11 know what I'm looking, and I'm looking at
12 what's at Station 10. And after 40 years of
13 living at that location, I look out my window
14 and say, Station 10's at 18 cfs. I look on a
15 computer, it's an automated station from the
16 last 2 years, I'm close. I'm not off very
17 far. Now, when flows are significantly above
18 that, you don't guess as close. But when
19 we're in some low, low flows, it's not hard to
20 guess cfs of water when you've seen it year
21 after year.")

22 THE HEARING OFFICER: Mr. Thompson, is that
23 the portion that you were trying to repeat?

24 MR. THOMPSON: Yes, that was.

25 Q. (BY MR. THOMPSON) The way I understood that

1 testimony, if you look out the window and you see 18
2 cfs, are you close to going off?

3 MR. RIGBY: That isn't what he said.

4 THE WITNESS: That is not what I said. I said
5 that I know what Station 10 is by looking out my window
6 when flows are that low in the river. That is what my
7 testimony was.

8 Q. (BY MR. THOMPSON) So based upon your 40 years
9 of experience on that property, when that quantity is
10 measured at Station 10, are you irrigating or not?

11 A. I'm generally not. I'm never irrigating
12 generally at Station 10. But if that's the station that
13 the watermaster is using to make the cuts on the river,
14 I will not be irrigating with 18 feet at Station 10.
15 I'm pretty confident in saying that. But the
16 watermaster runs the river; I do not run the river.

17 Q. So do you know what quantity has to be at
18 Station 10 for your 1884 priority to be on?

19 A. I believe I stated that around 35 feet with
20 all the priorities that are below me on the Little Wood
21 River, if we're not renting water or there isn't some
22 deals made, it takes 35 feet to fulfill them rights
23 between Richfield and Gooding. And I again will defer
24 to the watermaster on that. I'm not the watermaster.

25 Q. I understand.

1 So if water rights on the Little Wood River
2 below the Milner-Gooding Canal are supplied by another
3 source, does that change the quantity at Station 10 for
4 your 1884 water right to be on?

5 A. It would in the situation that we discussed --
6 I'm not going to discuss the deal that was attempted to
7 be made yesterday -- but that would be the case.

8 Q. So theoretically if senior water rights, water
9 rights senior to your priority on the Little Wood below
10 the Milner-Gooding Canal are supplied by another source,
11 the water necessary to meet your priority at Station 10
12 could be less than 35 cfs; is that correct?

13 A. I'm going to just defer to the watermaster.
14 You've asked that question several times and it's a
15 little confusing what you're asking. So I will defer to
16 the watermaster how he is going to run that situation
17 and leave her like that.

18 Q. I will ask that question.

19 In your history of being on the place, has
20 your water right been on when there's less than 35 cfs
21 at Station 10, to your knowledge?

22 A. Yes.

23 Q. Do you know what the flow was?

24 A. No.

25 MR. THOMPSON: That's all the question I have.

1 THE HEARING OFFICER: Thank you, Mr. Thompson.

2 And thanks especially for a competent court
3 reporter that accurately is recording what is said
4 today.

5 Mr. Laski or Ms. O'Leary.

6 MR. LASKI: Nothing.

7 THE HEARING OFFICER: I want to apologize to
8 Ms. Vonde, and say welcome today. I missed you, as I
9 have done with Mr. Moroney. I want to assure you that
10 it's the physical location that is preventing me
11 sometimes.

12 So do you have questions, Ms. Vonde?

13 MS. VONDE: I do not.

14 THE HEARING OFFICER: I apologize again.

15 I think that's all in group 2. So let's go to
16 group 3. Mr. Bromley, Mr. Lawrence.

17

18 CROSS-EXAMINATION

19 BY MR. BROMLEY:

20 Q. Hi, Mr. Hubsmith. Chris Bromley, I have two
21 questions.

22 When do you typically turn on for the
23 irrigation season?

24 A. It depends on the year. Generally my water
25 right could be as early as April 1st. I generally on

1 most years don't start that early. This year, I started
2 around the 15th, give or take a day or two, the 15th of
3 April is when. I'm not saying it was the 15th of April,
4 the watermaster records would have that, but it was
5 close to the 15th of April.

6 Q. Other years besides this year, just ballpark,
7 when do you usually turn on?

8 A. It varies between the 1st of April and --
9 April, 1st of May, depending on my irrigation needs. If
10 the crops don't need it, I don't try to irrigate.

11 Q. Makes sense. Thank you.

12 A. You do not pay a pump bill.

13 Q. I always hear that, of course.

14 Second question, Mr. Hubsmith, is: Are you
15 asking for curtailment of groundwater rights that are
16 located outside of the Bellevue Triangle?

17 A. No, I'm not. In this particular year, no, I
18 am not.

19 MR. BROMLEY: Thank you. Nothing further.

20 THE HEARING OFFICER: Thank you, Mr. Bromley.
21 Others in group 3, Mr. Simpson?

22 MR. SIMPSON: No questions.

23 THE HEARING OFFICER: Mr. Robertson?

24 MR. ROBERTSON: None.

25 THE HEARING OFFICER: Mr. O'Bannon?

1 MR. O'BANNON: No questions.

2 THE HEARING OFFICER: Do we have anybody else?
3 I think that's everybody.

4 MR. THOMPSON: I forgot a question. Can I
5 come back?

6 THE WITNESS: Sure.

7

8 FURTHER CROSS-EXAMINATION

9 BY MR. THOMPSON:

10 Q. Sorry, Mr. Hubsmith, one more brief round of
11 inquiry.

12 You talked about you notice when pumps go off
13 in the Triangle you see increase in flows in Silver
14 Creek or Little Wood; is that correct?

15 A. I believe when pumps go off in the Bellevue
16 Triangle I see an increase in flows.

17 Q. Are you aware of surface diversions in that
18 area as well?

19 A. Yes, I am.

20 Q. Do flows in the river increase if surface
21 diversions are off for hay or different reasons?

22 A. I would suspect they do.

23 Q. So is it true that if you see increases in
24 flow during the season, it could be a combination of
25 groundwater or surface water off for hay or barley?

1 A. I would suspect that would be the case.

2 Q. Do you know the percentage or quantity that
3 that would be assigned to as far as diversions, surface
4 or ground?

5 A. I don't know the percentage, no.

6 MR. THOMPSON: That's all. Thank you.

7 THE HEARING OFFICER: Thank you.

8 Redirect, Mr. Rigby?

9 MR. RIGBY: No.

10 THE HEARING OFFICER: Mr. Fletcher?

11 MR. FLETCHER: No questions.

12 THE HEARING OFFICER: Because there is no
13 redirect, we'll finish with Mr. Hubsmith. Thank you.

14 THE WITNESS: Thank you, Director.

15 THE HEARING OFFICER: Thank you.

16 It's 10 minutes to the hour. Mr. Rigby, do
17 you want to call another witness?

18 MR. RIGBY: Mr. Director, the witness I would
19 call next is actually going to do two groups because
20 he's partners with his father, it would be John Arkoosh,
21 along with his father Bill Arkoosh. It's going to take
22 some time.

23 THE HEARING OFFICER: Okay.

24 MR. RIGBY: Therefore, I wonder if a break
25 would not be in order right now if it were a short one.

1 I can probably go ahead but...

2 THE HEARING OFFICER: Let's break for lunch
3 and come back at 1:00.

4 MR. RIGBY: Thank you.

5 (Luncheon recess.)

6 THE HEARING OFFICER: Back on the record. We
7 are recording again after the lunch break. It's
8 approximately 1:00.

9 Mr. Rigby, next witness.

10 MR. RIGBY: Mr. Director, as per this morning,
11 Mr. Fletcher asked that Carl be called out of order
12 right after lunch.

13 THE HEARING OFFICER: Thank you. I forgot.

14 Mr. Pendleton, are you here? There you are.

15 CARL PENDLETON,
16 having been called as a witness by the Big Wood Canal
17 Company and first duly sworn, testified as follows:

18

19 DIRECT EXAMINATION

20 BY MR. FLETCHER:

21 Q. Good afternoon.

22 Carl, can you state your full name, please.

23 A. Carl David Pendleton.

24 Q. What is your address?

25 A. 50 West 620 North, Shoshone, Idaho.

1 Q. What is your educational background?

2 A. I have an undergraduate in general engineering
3 and management and an MBA and studies in nuclear science
4 and engineering.

5 Q. What do you do for an occupation?

6 A. I farm and ranch.

7 Q. Where do you farm?

8 A. At the address mentioned. I'm north of
9 Shoshone.

10 Q. How many acres do you personally farm?

11 A. Our holding is 845 acres, of which we irrigate
12 about 600. In addition I rent another 160 from a
13 neighbor.

14 Q. The ground that you own, is that owned jointly
15 with your brother?

16 A. It is.

17 Q. And do you operate the entire farm yourself?

18 A. Yes.

19 Q. Do you do that under a limited liability
20 company?

21 A. I do.

22 Q. What is the name of that company?

23 A. Pendleton Custom Farming, LLC.

24 Q. Are all the water rights appurtenant to that
25 property in your name or your brother's name?

1 A. Three-quarters of the ownership of water is in
2 my name and one-quarter in his.

3 Q. As to you personally, what is your source of
4 water to your farm?

5 A. Solely from storage water in Magic Reservoir.

6 Q. When you say "solely from storage water,"
7 let's clarify that. You are a Big Wood Canal Company
8 stockholder; correct?

9 A. I am.

10 Q. Your source of water for the farm is Big Wood
11 Canal Company?

12 A. It is.

13 Q. Do you have any other source besides Big Wood
14 Canal Company?

15 A. No.

16 Q. Do you have any supplemental rights?

17 A. No.

18 Q. What type of crops do you personally grow on
19 your farm?

20 A. We are hay, I raise hay for the dairies,
21 that's the alfalfa hay. I raise oats; a lot of that is
22 for seed. I sell it as a commercial crop, but much of
23 it is used by local farmers for forage production. I
24 raise corn, corn silage, goes to the dairies. I have a
25 large pasture base and run stock cows on that pasture

1 base.

2 Q. So in addition to the crops you grow, you do
3 have cattle?

4 A. I do.

5 Q. How many cattle do you have?

6 A. I try to maintain 90 to 100 pairs.

7 Q. 90 to 100?

8 A. Yes.

9 Q. You are here today as a representative of the
10 Big Wood Canal Company; isn't that correct?

11 A. That's correct.

12 Q. Are you on the board of directors of Big Wood
13 Canal Company?

14 A. Yes.

15 Q. How long have you been on the board?

16 A. I've been on the board for 27 years beginning
17 in 1994, and I've been chairman of the board for about
18 10 years.

19 Q. Do you currently hold an office?

20 A. Yes.

21 Q. What is that?

22 A. I'm chairman of the board and president of the
23 company.

24 Q. Big Wood Canal Company is a nonprofit
25 corporation?

1 A. It is.

2 Q. What are your duties as chairman?

3 A. Normal fiduciary duties of the chairman; to
4 conduct the monthly board meetings, consult with
5 management when required, hire that manager and let them
6 function, of course listen to the stockholders.

7 Q. During an average month, do you have a lot of
8 interaction concerning the operations of Big Wood Canal
9 Company?

10 A. I do, yes.

11 Q. That's with the employees of the Big Wood
12 Canal Company?

13 A. With the manager and our management team.

14 Q. As a result of those interactions over the
15 last 20-some years, are you familiar with Big Wood Canal
16 Company's water rights?

17 A. I am.

18 Q. Are you familiar with Big Wood Canal Company's
19 operations?

20 A. Yes.

21 Q. Generally, can you describe the sources of
22 water to the Big Wood Canal Company.

23 A. Yes. We have, of course, storage rights out
24 of Magic Reservoir on the Big Wood River; we have river
25 rights on the Little Wood River that we use at

1 Richfield; we also have a contract with the American
2 Falls #2 to bring water on part of our acreage, a large
3 portion of our acreage is on the Snake River.

4 Q. Do you know how the water rights of Big Wood
5 Canal Company are classified, the type of use?

6 A. We have irrigation rights as well as stock
7 water rights and power rights off of the Little Wood,
8 and irrigation rights out on the Magic and irrigation
9 draws off of American Falls.

10 Q. And you have storage rights as well?

11 A. Yes.

12 Q. Now, for the purposes of this proceeding, the
13 issues were restricted to the Little Wood and Silver
14 Creek. So I'm going to ask you to look at Exhibit 1.
15 This would be --

16 A. In here?

17 Q. No, it's in a packet on the table there. I
18 set it there this morning. I don't know what's happened
19 to it.

20 MR. FLETCHER: May I approach?

21 THE HEARING OFFICER: Yes.

22 Q. (BY MR. FLETCHER) Right here (indicating).

23 A. Okay.

24 Q. What is Exhibit 1?

25 A. This is from Idaho Water Resources, statement

1 of our water rights.

2 Q. These are only the water rights on the Little
3 Wood River; correct?

4 A. Yes.

5 Q. When you say "our," you mean Big Wood Canal
6 Company's?

7 A. Yes, I do.

8 Q. The first page of the exhibit shows Water
9 Right No. 37-13043; correct?

10 A. That's correct.

11 Q. That is for 303.6 cfs?

12 A. Yes, it is.

13 Q. With a priority date of November 13, 1907?

14 A. Yes.

15 Q. It authorizes the irrigation of 39,683 acres;
16 correct?

17 A. It does.

18 Q. While I'm on that topic, how many acres does
19 Big Wood Canal Company supply?

20 A. Approximately 36,000 acres is what we
21 irrigate.

22 Q. So I would like you to look at the conditions
23 of the right. Under paragraph 2, it talks about the
24 digital boundary. And we'll be showing a picture of
25 that in a minute, but can you generally describe the

1 digital boundary of Big Wood Canal Company?

2 A. The rights that we own and administer are
3 within that larger boundary, called the digital
4 boundary, that we can move those acreages within.

5 Q. Do you know approximately how many acres are
6 within the greater digital boundary place of use?

7 A. Approaching that 39,000 would be our digital
8 boundary; the 39,600 that is referenced here.

9 Q. On your place of use map, though, the digital
10 boundary maintained by the Department, what does that
11 show for your digital boundary?

12 A. It is much larger because it indicates also
13 those acres that are serviced by American Falls.

14 Q. We will talk about how that works in a minute.

15 Let's look at Condition 8. It talks about the
16 various water rights numbers, and it again repeats that
17 you are authorized to irrigate 39,683 acres in
18 combination with all those rights; correct?

19 A. It does.

20 Q. In looking at No. 9, it talks about all these
21 various water rights and it says it "shall not exceed
22 the irrigation of 74,000 acres." Can you explain what
23 that means?

24 A. Those are the Carey Act acres that are
25 serviced by all of the water rights, including the

1 American Falls.

2 Q. Let's turn the page to the next water right.

3 Just to save a little bit of time, your
4 conditions on your irrigation rights are the same on
5 every irrigation right; isn't that correct?

6 A. That's correct.

7 Q. So the next water right is 37-13111. It shows
8 a priority date of December 24, 1906. It's a stock
9 water right; correct?

10 A. That's correct.

11 Q. That's 75 cfs?

12 A. Yes.

13 Q. The next water right, if you'll turn the page,
14 is 37-13112; is that correct?

15 A. Yes.

16 Q. Priority date of June 1, 1920; correct?

17 A. Correct.

18 Q. Irrigation?

19 A. Yes.

20 Q. And it's for 69.3 cfs; correct?

21 A. Yes.

22 Q. The next water right is 37-13113; correct?

23 A. Yes.

24 Q. Priority date of May 27, 1899?

25 A. Yes.

1 Q. That's for irrigation?

2 A. It is.

3 Q. That's 150 cfs?

4 A. Yes.

5 Q. Next water right is 37-13114; is that correct?

6 A. Yes.

7 Q. That has a priority date of November 6, 1905.

8 A. It is.

9 Q. For irrigation?

10 A. Yes.

11 Q. And a cfs of 87.02.

12 A. Yes, that's correct.

13 Q. The next water right is 37-21401?

14 A. Yes.

15 Q. Priority date of May 15, 1885?

16 A. Correct.

17 Q. Irrigation?

18 A. Yes.

19 Q. 5.3 cfs.

20 A. Yes.

21 Q. The next water right is 37-21402?

22 A. Yes. There is a typo there.

23 Q. What's that?

24 A. No. Go ahead. Misreading.

25 Q. We are at 37-21402; correct?

1 A. Yes, we are.

2 Q. Priority date of April 6, 1983?

3 A. Yes.

4 Q. Excuse me. That's 1883?

5 A. 1883.

6 Q. Irrigation right?

7 A. Yes.

8 Q. And cfs of 3.55.

9 A. Correct.

10 Q. The next water right is 37-21403; correct?

11 A. Yes, it is.

12 Q. It shows a priority date of April 1, 1887?

13 A. Yes.

14 Q. That's for irrigation?

15 A. Yes.

16 Q. 5.2 cfs.

17 A. That's correct.

18 Q. The next water right is 37-21404?

19 A. Yes.

20 Q. Priority date of July 1, 1896?

21 A. Correct.

22 Q. Irrigation?

23 A. Yes.

24 Q. 15.3 cfs.

25 A. That's correct.

1 Q. The last water right is 37-21405?

2 A. Yes, it is.

3 Q. And that has a priority date of April 1, 1884?

4 A. Yes, it does.

5 Q. That's for irrigation?

6 A. Yes.

7 Q. That's showing 2.63 cfs.

8 A. Yes.

9 MR. FLETCHER: I'd move for the admission of
10 Exhibit 1.

11 THE HEARING OFFICER: Any objection to the
12 admission of these documents?

13 MR. BROMLEY: A statement of clarification,
14 Mr. Fletcher. You mean Fletcher Exhibit 1?

15 MR. FLETCHER: Fletcher Exhibit 1. I followed
16 the order of the Director.

17 Fletcher Exhibit 1 is offered into evidence.

18 THE HEARING OFFICER: So the multiple
19 documents labeled as Fletcher Exhibit 1, the documents
20 are received into evidence.

21 (Fletcher Exhibit 1 received.)

22 Q. (BY MR. FLETCHER) Now, some of these rights
23 are quite junior to others; correct?

24 A. That's correct.

25 Q. In your mind, which priority dates are the

1 most reliable of those Little Wood rights?

2 A. Probably our 1883 and 1884 rights, '85
3 possibly.

4 Q. Then there's several rights that we talked
5 about that had priorities in the late 1800s and early
6 1900s; correct?

7 A. Correct.

8 Q. Are those rights curtailed almost every year?

9 A. The later rights, yes, they are.

10 Q. What is the benefit of those junior rights to
11 the canal company?

12 A. The biggest benefit is spring flows, to have
13 those large spring flows that we can -- since all of our
14 river waters are diverted at Richfield through the
15 Dietrich Canal. The Dietrich area is lower in elevation
16 and sandy soils, and the Richfield and North Shoshone
17 tracts are heavier soils.

18 By using our river rights in the spring we can
19 turn that Dietrich area on for a week, maybe 10 days,
20 before the rest of the tract comes on, and thereby that
21 preserves any storage water that we have in Magic
22 Reservoir.

23 Q. So you are able to irrigate those areas with
24 these junior rights early in the season?

25 A. We can irrigate them. It's not done on a full

1 delivery basis, there is usually not enough river water
2 to irrigate them fully as in the normal season. But it
3 does allow us to put on enough water out there that the
4 users can pass that water around and sustain their early
5 planted crops in that kind of soil.

6 Q. And that prevents the use of storage by the
7 canal company?

8 A. It does.

9 Q. During that time period?

10 A. Yes, it does.

11 Q. So when I say "your," I am referring to the
12 Big Wood Canal Company. When Big Wood Canal Company's
13 Little Wood rights are in priority, how does Big Wood
14 Canal Company take delivery of those rights?

15 A. They are entirely diverted at the Dietrich
16 Canal at Richfield.

17 Q. Are they only applied to one area of the canal
18 company?

19 A. Yes, only to that Dietrich tract.

20 Q. How many acres is the Dietrich tract?

21 A. It's about 8,200 acres that are irrigated by
22 the Magic rights. There are about 12,000 acres in that
23 area portion of which is American Falls delivery.

24 Q. So in addition to that I think you testified
25 there are a total of about 36,000 acres that are

1 irrigated by Big Wood Canal Company water.

2 Besides the Dietrich tract, where is the
3 location of the other acres?

4 A. The Richfield area, Richfield tract, is about
5 19,000 acres and North Shoshone tract is about
6 8,800 acres.

7 Q. Can you briefly explain the Big Wood Canal
8 Company delivery system, how do you deliver the water
9 when it's received.

10 A. Well, our delivery is open canals and large
11 canals to the delivery points and then laterals from
12 there and then off to individual headgates and
13 individual systems.

14 Q. How is it determined how much water a farmer
15 or a stockholder receives from Big Wood Canal Company?

16 A. Each stockholder owns a number of shares,
17 which is 5/8 of a miner's inch, and whatever their total
18 right is is what -- and they request that at a headgate,
19 or a number of headgates, and we deliver to that right
20 that is held by the stockholder.

21 Q. So if water situation is short, it looks like
22 you are going to have a low water supply, do you cut the
23 allocation per share?

24 A. We do not.

25 Q. Can you explain why you do not?

1 A. We found over the years of irrigating and
2 using our system, that our most efficient delivery is to
3 deliver 100 percent to the stockholders, try to give
4 them advanced notices to what the water supply would be,
5 and then let them determine what crops they would plant
6 based on that anticipated delivery period.

7 Q. What factors led to that determination?

8 A. Beginning in the winter, while we are watching
9 the snowpack and the accumulation and using the best
10 estimates to determine what that period might be.

11 Q. What factors led to the determination that a
12 100 percent delivery, as long as the water ran, was the
13 best way to go rather than cutting allocations?

14 A. We have tried to run our system on something
15 less than 100 percent allocation, and the system was
16 just built for that and requires considerable alteration
17 of our canal system in terms of temporary checks and
18 some of that kind of thing to raise elevations to be
19 able to service all stockholders, according to their
20 needs. We have just found that if we get to a point
21 where everybody is on, everybody is taking delivery,
22 that that is our most efficient operation.

23 Q. So based upon that delivery system, you are
24 delivering 100 percent to every stockholder as long as
25 your water is on; correct?

1 A. That's correct.

2 Q. And when you cut deliveries or curtail your
3 deliveries, all of the Big Wood supply is cut to all of
4 the stockholders simultaneously.

5 A. It is. We will deliver as long as we can
6 treat everybody equitably.

7 Q. Can you explain this year how the Big Wood
8 Canal Company has been managing its water supply?

9 A. Well, as closely as possible. We turned on as
10 late as we could, which stressed our crops a bit. And
11 we were lucky enough a couple of weeks ago to have a
12 fairly substantial rainfall and were able to shut off
13 for 8 days. And then we came back on and finished the
14 season; and, in fact, the reservoir will be exhausted
15 this evening.

16 Q. This evening.

17 A. Yes.

18 Q. So you expect that all Big Wood Canal Company
19 water supplies will be cut off as of tonight.

20 A. That's true.

21 Q. Do you work closely with the watermaster in
22 making your determinations of how the canal company
23 operates?

24 A. Our management team does. That includes
25 morning meetings between our watermaster with the Big

1 Wood Canal Company as well as Kevin Lakey to determine
2 how flows will be managed to cooperatively maximize the
3 river, not damage the river, but also fulfill the needs
4 of our stockholders.

5 Q. Is Kevin in those meetings giving Big Wood
6 Canal Company projections of priority date cutoffs and
7 things like that?

8 A. I'm sure he is, yes.

9 Q. I'd like you to turn to Exhibit 2. Can you
10 describe what Exhibit 2 is.

11 A. This is a map that shows our delivery area.
12 It includes not only that that's delivered under the
13 Magic system but also the American Falls system to the
14 lower left.

15 Q. Just to clarify, when you say delivery under
16 the Magic system, you're talking about Big Wood Canal
17 Company water; isn't that correct?

18 A. Yes. However, the entire acreage was
19 originally to be irrigated out of Magic. And so there
20 are Big Wood Canal Company acres below the American
21 Falls Canal that are irrigated by agreement from source
22 of the Snake River.

23 Q. Is that the exchange rights we've been talking
24 about?

25 A. It is referred to as the supplemental right.

1 Q. Or the supplemental right?

2 A. Yes.

3 Q. So on this map when you're talking about the
4 Little Wood rights, where are those delivered?

5 A. They are delivered at Richfield and it talks
6 about the mouth of the Jim Burns Slough and also
7 indicates Station 10 over there by that No. 10.

8 Q. So it's that area on the right side of the map
9 in the upper right-hand corner?

10 A. It is. That is the diversion point.

11 Q. And that area that's shown as a place of use
12 there, is that where the Little Wood water is delivered?

13 A. The Little Wood water is delivered there. If
14 you follow that line through the desert to directly
15 south or to the bottom of the page, you end up in the
16 Dietrich area, and that is the area that the water is
17 used in.

18 Q. It's used in the Dietrich area?

19 A. It is.

20 Q. So it's diverted at Richfield Canal and then
21 delivered to the Dietrich area.

22 A. Yes.

23 Q. So that is the lower right-hand corner of the
24 map.

25 A. It is.

1 MR. FLETCHER: I'd move for admission of
2 Exhibit 2.

3 THE HEARING OFFICER: Any objection to the
4 admission of Exhibit 2, Fletcher's Exhibit 2?

5 Hearing no objection, the document marked as
6 Fletcher Exhibit 2 is received into evidence.

7 (Fletcher Exhibit 2 received.)

8 Q. (BY MR. FLETCHER) I would ask that you look
9 at Exhibit 3. Could you describe what Exhibit 3 is?

10 A. Exhibit 3 I produced. I was actually on the
11 way to deposition, and I dropped by the office and took
12 a few readings at the river station at Hailey and the
13 corresponding readings at Station 10 at Richfield.

14 We had had that rain that I referred to
15 previously overnight on May 21st, as noted off there to
16 the side. I noted the river flows at the two locations
17 on the 22nd, the following day. We turned off our
18 reservoir that day.

19 It's interesting to note that the Hailey gage,
20 which of course is that measurement in the Big Wood at
21 Hailey and the Richfield gage at 38, and 2 days later
22 the river had actually dropped, indicating that the
23 rainfall didn't contribute to the river but the cool
24 temperatures reduced the flow, and remarkably Station 10
25 at Richfield came up to 80.

1 And then I followed the data up over the next
2 couple of days, and you can see as diversions came back
3 on, either surface or groundwater, why, Richfield then
4 dropped back even as the river started to raise again.

5 Q. So what does this information indicate to you?

6 A. Well, we have noticed, we, especially those
7 people that are on the river more so than myself, that
8 when pumps shut off up on the Bellevue Triangle, river
9 diversions maybe are reduced, why, it has a pretty
10 drastic effect and pretty quickly. This is within
11 48 hours on the flows at Richfield.

12 Q. The numbers at the top of this page, where you
13 have No. 19, is that a gage number?

14 A. That is a gage number as is No. 10.

15 Q. And No. 10 is a gage number as well?

16 A. Yes, it is.

17 Q. And you obtained this information from what
18 source?

19 A. I brought it in our Big Wood office, and it's
20 from reports either generated by Kevin Lakey,
21 watermaster, or our watermaster in the office taking his
22 measures.

23 Q. Are these the gage readings on those days?

24 A. Yes, they are.

25 Q. Are they in cfs?

1 A. They are in cfs.

2 MR. FLETCHER: I'd move for the admission of
3 Exhibit 3.

4 THE HEARING OFFICER: Any objection to the
5 admission of Fletcher Exhibit 3?

6 Document marked as Fletcher Exhibit 3 is
7 received into evidence.

8 (Fletcher Exhibit 3 received.)

9 Q. (BY MR. FLETCHER) I'd like you to look at
10 Exhibit 4.

11 A. Yes.

12 Q. What is this document?

13 A. This is a presentation that I made to the Big
14 Wood Ground Water Management Area Advisory Committee. I
15 was asked to generate a report of investments, mainly
16 investments that were made in our system to improve its
17 efficiency over the tenure of the Big Wood Canal
18 Company.

19 Q. What is the date of this document?

20 A. January 5, 2021.

21 Q. Where did you obtain the information that is
22 in this document?

23 A. From various documents, from the history of
24 our company, water management studies have been made
25 over the years as to efficiency of our company. Some of

1 the investment data was gathered from the individuals
2 that participated in improvements, pipelines, that sort
3 of thing to improve their efficiency.

4 Q. Can you summarize what this report states?

5 A. It goes back to the inception, the creation of
6 the reservoir as a means of irrigating the desert and
7 the investments that went into the system over the years
8 by the stockholders, paid entirely by the stockholders.
9 Bypass canal to bypass portions of the river that were
10 not very efficient, the construction in bringing the
11 Milner-Gooding Canal, BOR government funded but totally
12 repaid by the stockholders to the tune of 3 1/2 to
13 \$4 million I understand.

14 And then improvements that we've made as a
15 company in cooperation with our stockholders. The
16 latest one by a stockholder was a \$4 million project.
17 He put in a pipeline that pressurizes his farm and
18 allowed us to eliminate several miles of lateral and
19 eliminate that loss in our system.

20 And last year we put in about -- this is not
21 even on this list, I don't think, maybe I mentioned it,
22 but we were installing about a \$350,000 pipeline project
23 in Richfield for better efficiencies.

24 Q. Based upon your experience, is Big Wood Canal
25 Company constantly striving to improve its water

1 efficiencies and deliveries?

2 A. We are.

3 Q. In order to do so, is Big Wood Canal Company
4 expending funds?

5 A. Yes, we are.

6 Q. And some of those at least are outlined in
7 this report that you prepared?

8 A. They are.

9 Q. According to this report, Big Wood Canal
10 Company exclusively maintains 470 miles of canals and
11 laterals; isn't that correct?

12 A. Right. The entire American Falls and Big Wood
13 systems together are nearly 575 miles, of which 480-ish,
14 or whatever that number was, was the original Big Wood
15 system, of that about 280 are in the Magic area
16 delivered out of Magic Reservoir.

17 MR. FLETCHER: I'd move for the admission of
18 Fletcher Exhibit 4.

19 THE HEARING OFFICER: Any objection to
20 admission of this document?

21 Document marked Fletcher Exhibit No. 4 is
22 received into evidence.

23 (Fletcher Exhibit 4 received.)

24 Q. (BY MR. FLETCHER) So you've already mentioned
25 that the entire Big Wood Canal Company water supply will

1 be shut off tonight; correct?

2 A. Correct.

3 Q. What will be the effect on your personal
4 operation when that water supply is cut off?

5 A. I have -- instead of raising corn, I planted
6 oats for forage that we'll chop. Again, it was stressed
7 early and stressed a little bit as we extended our
8 turnoff last week. And instead of being a 30-ton-plus
9 crop of corn, it will be a struggle to be a 10-ton-per-
10 acre crop. We will get one cutting of hay instead of
11 three at least.

12 I mentioned that I try to maintain nearly 100
13 head of stock cows. Tomorrow I will consummate the deal
14 on selling the entire herd. And for the first time
15 since 1942 that my family has owned our property, they
16 will not be our cows next year running on our property.
17 So we will be in the pasture rental business rather than
18 in the cow business.

19 Now, admit to you I'm 70 years old and maybe
20 it's time to change, and it will be kind of nice to not
21 have to feed cows in the wintertime, and we'll see if I
22 can tolerate that. But it was driven, the decision was
23 driven by the lack of alternatives for pasture this
24 summer and we sold the entire cow herd.

25 Q. Mr. Pendleton, if junior groundwater pumpers

1 are curtailed this year, would Big Wood Canal Company be
2 able to take delivery of any of its Little Wood rights
3 this year?

4 A. We would not.

5 Q. Why would you not be able to?

6 A. We take the entirety of that at the Dietrich
7 Canal, as I have mentioned. In a normal delivery
8 situation this time of year we're diverting 180 to 200
9 cfs, and at this time the rights that will be in play or
10 in the near future will be not enough really to start
11 its way down the canal. And so we will leave them in
12 the river, or if some of our stockholders have an
13 opportunity along the river to rent them, they are
14 available. But they are priority rights, and if they
15 cut us deeply, as predicted by the watermaster, they
16 take the chance of renting something that will have no
17 water.

18 Q. So since curtailment will not necessarily lead
19 to greater water supplies, it may lead to these rental
20 opportunities you are talking about. Why is Big Wood
21 Canal Company participating in this proceeding?

22 A. As I mentioned before, why, the early flow
23 rights are very valuable to us; so that is something
24 that we want to pursue.

25 Jumping back, the storage rights are not part

1 of this consideration, but still if there is a lowering
2 or a discontinuing of diversions pumping in Bellevue
3 Triangle, hopefully the system will have an opportunity
4 to rejuvenate before next spring and we can have hope
5 that not as much water will be drafted from the river to
6 fill that gravel before entry at Stanton Crossing and
7 our water supply in the reservoir.

8 Q. So if curtailment occurs this year, do you
9 believe it will benefit Big Wood Canal Company next
10 year?

11 A. Only in the sense that it would help mitigate
12 the drawing down of the groundwater in the Big Wood
13 River Basin.

14 Q. What do you base that on?

15 A. Experience, I think Sukow's model runs show
16 that, and I know that our hydrologist has indicated that
17 there would be certain benefits to Big Wood Canal
18 Company.

19 MR. FLETCHER: Thank you. I have no further
20 questions.

21 THE HEARING OFFICER: Thank you, Mr. Fletcher.

22 Mr. Rigby, questions?

23 MR. RIGBY: No questions.

24 THE HEARING OFFICER: Mr. Barker or
25 Mr. Thompson? Or Ms. O'Leary?

1 MS. O'LEARY: Yes, Director.

2 THE HEARING OFFICER: Step to the podium.

3 Thank you.

4

5 CROSS-EXAMINATION

6 BY MS. O'LEARY:

7 Q. Good afternoon, Mr. Pendleton.

8 Mr. Pendleton, Mr. Fletcher asked you about
9 the Big Wood Canal Company and Little Wood River rights
10 and the priority dates of each of those rights. I
11 counted ten decreed Little Wood River rights. Is that
12 accurate?

13 A. Yes, it is, other than power rights.

14 Q. Correct, for the irrigation and stock water.
15 Thank you for the clarification.

16 A. Yes.

17 Q. I just want to touch base on the priority
18 dates on those rights. You did mention that some of
19 them were quite junior, and just starting, if I could
20 direct your attention to Exhibit 1, I think it would
21 just be easiest to just go through these and get
22 clarification on these.

23 The first right, 37-13043, has a priority date
24 of November 13, 1907; correct?

25 A. Correct.

1 Q. Would you consider that to be a junior right?

2 A. Yes.

3 Q. And would that right be delivered as a runoff
4 condition?

5 A. Yes. A normal year to runoff condition, yes.

6 Q. So would it be fair to say that the
7 shareholders of Big Wood Canal Company are not relying
8 upon this right to get them through the irrigation
9 season.

10 A. Correct.

11 Q. The next water right, Water Right 37-13111,
12 priority date December 24, 1906. Would you classify
13 that in the same manner as the prior right?

14 A. Well, I will point out that is a stock water
15 right that doesn't apply during the irrigation season,
16 but it has value in the fall of the year for us and
17 through the winter.

18 Q. Thank you.

19 The next right, Water Right 37-13112, priority
20 date June 1, 1920. Would you classify that as a junior
21 right?

22 A. Yes, it's a junior right.

23 Q. So it would be fair to say that similar to the
24 first water right that we discussed, your shareholders
25 are not relying on this particular water right for

1 irrigation purposes throughout the full irrigation
2 season.

3 A. That's correct.

4 Q. The next water right, Water Right 37-13113,
5 priority date May 27, 1899, would you classify that as a
6 junior right as well?

7 A. Yes.

8 Q. Water Right No. 37-13114, priority date
9 November 6, 1905, would that be the same classification,
10 as junior?

11 A. Yes, it would.

12 Q. Moving to the next right, Water Right No.
13 37-21401. This has a priority date of May 15, 1885, and
14 I believe your testimony was that that depends on the
15 year?

16 A. That depends on the year. Normally or
17 historically, why, yes, that would last into probably
18 midsummer.

19 Q. Then we have Water Right 37-21402, priority
20 date April 6, 1883. Did I read that right?

21 A. That's correct, yes.

22 Q. And how would you classify that right?

23 A. That is our premier right, and we would expect
24 that to stay on.

25 Q. Through the whole irrigation season?

1 A. Generally, yes.

2 Q. Did it stay on through the whole irrigation
3 season last summer?

4 A. No, it did not. Well, I'm not sure. Last
5 summer was a dry summer, but I'm not sure. That would
6 be a question for our watermaster or Mr. Lakey.

7 Q. Then we have Water Right No. 37-21403,
8 priority date April 1, 1887. How would you classify
9 that right?

10 A. In a normal year it would run midsummer.

11 Q. So would you classify that a junior, a senior?

12 A. It just would depend on the flows that year.
13 We would expect it to last a good portion of the year.

14 Q. Then Water Right 37-21404, priority date
15 July 1, 1896. How would you classify that right?

16 A. That would be close to a junior.

17 Q. And then Water Right 37-21405, priority date
18 April 1, 1884, what classification would you designate
19 to this right?

20 A. That would be one of our better rights, and we
21 would expect it to be in the mid to late summer or full
22 season.

23 Q. From what I have heard from you today, the
24 premier right, as you called it, that 1883 and then this
25 last right we discussed as 1884, those are your more

1 senior, it sounded like. The remainder of the rights
2 were junior or dependent upon the year. Would you say
3 that is a fair classification?

4 A. Yes.

5 Q. And this 1883 right only allows 3.55 cfs; is
6 that correct?

7 A. Correct.

8 Q. And the 1884 right only allows 2.61 cfs;
9 correct?

10 A. Correct.

11 Q. So the senior rights held by Big Wood Canal
12 Company only represent a very small portion of its total
13 decreed water right, would you agree?

14 A. Yes.

15 Q. Mr. Fletcher spoke to you about Big Wood Canal
16 Company's place of use for its decreed right, and it's
17 accurate to say, please correct me if I'm wrong, that
18 the land above the Milner-Gooding Canal is delivered
19 with water out of Magic Reservoir; correct?

20 A. That's correct.

21 Q. So that would include the Dietrich tract,
22 North Shoshone, and Richfield; is that right?

23 A. Correct.

24 Q. When Magic is turned off, those senior Little
25 Wood rights that we were just discussing are not turned

1 into that Dietrich Canal because they are not
2 sufficient; right?

3 A. That's correct.

4 Q. Instead that water is just left in the river;
5 right?

6 A. It is, unless it's rented, yes.

7 Q. So that would theoretically increase the
8 supply for users below the Dietrich Canal, would you
9 agree?

10 A. Yes.

11 Q. It was briefly brought up, the exchange
12 condition that we have been discussing this week, and
13 during the deposition that we had of you in Twin a week
14 ago, I believe you testified that you were familiar with
15 Mr. Luke's memorandum to the Department. Do you recall
16 that?

17 A. Yes, I do.

18 Q. We talked about the exchange condition and
19 individuals' interpretations of how that should be
20 applied; right?

21 A. We did.

22 Q. And I was reviewing that memorandum, and I can
23 provide you a copy if you would like, you're familiar
24 with Craig Hobdey; right?

25 A. Yes, I am.

1 Q. That is Big Wood Canal Company's former
2 attorney; is that correct?

3 A. That's correct.

4 Q. And in Mr. Luke's April 27, 2021, memorandum,
5 Mr. Hobdey summarized the proper application of the
6 exchange condition. Do you recall that?

7 A. Yes.

8 Q. But Mr. Luke has made us aware through his
9 memorandum and then also through his testimony today
10 that the water has not been administered as set forth or
11 as intended. Do you recall that?

12 A. I recall that line of thinking.

13 Q. When you say "thinking," does that mean you
14 disagree with that?

15 A. Well, I think when that issue was opened up,
16 there seemed to be some disparity as to how it should
17 have been done, how it had been done. And as we kind of
18 dug to the bottom of that and investigated that and
19 spoke with both Mr. Lakey and Tim Luke in our May 1st, I
20 believe it was, board meeting, it became apparent that
21 they really were on the same page and that the rights
22 are being administered correctly and have been
23 administered correctly.

24 Q. So perhaps I could have you turn to the
25 Department's Exhibit 4. It should be in that stack of

1 papers. I would like to direct you towards the end,
2 it's Attachment B, page 3.

3 A. Is it verbiage?

4 Q. Yeah, I was going to point you to some
5 particular language.

6 A. In the center of the page it's Watermaster
7 Guidance Regarding --

8 Q. Actually, in the paragraph above that. So
9 this was written --

10 A. I just wanted to make sure I was on the right
11 page.

12 Q. I appreciate that.

13 This was written by Mr. Luke and it was
14 directed to Watermaster Kevin Lakey. So it's saying:
15 "You," referring to Mr. Lakey, "reported that you make
16 no distinction between river rights with or without the
17 exchange condition when delivering water or making
18 priority cut determinations." Do you see that language?

19 MR. RIGBY: Counsel, what page is that on?

20 MS. O'LEARY: Page 3 of Attachment B.

21 THE WITNESS: Let's see if I'm in the right
22 attachment.

23 Q. (BY MS. O'LEARY) It's the paragraph above
24 that heading that you just identified.

25 A. That I just indicated?

1 Q. It's the second sentence in that paragraph.

2 A. Second sentence. So start again, please.

3 Q. Sure. "You reported that you make no
4 distinction between river rights with or without the
5 exchange condition when delivering water or making
6 priority cut determinations." Do you see that there?

7 A. Yes.

8 Q. Would you agree that that means that Mr. Lakey
9 was not administering water historically under the
10 specifics of the exchange condition?

11 A. I think what he's saying there is
12 administering the river rights, both or all based on
13 reading at Station 54 at Shoshone. So without regard of
14 whether they were above or below the Milner-Gooding
15 Canal.

16 Q. Right. And the exchange condition is
17 dependent on designated land above and below the canal;
18 correct?

19 A. But the priority cutoff is still determined
20 the same. They do not receive water below the Milner-
21 Gooding Canal if they are not entitled to it by priority
22 at Station 54.

23 Q. Well, if he's not making the distinction
24 between river rights with or without the condition, it
25 would be fair to say that he's not administering the

1 condition properly; correct? You have to make that
2 distinction to administer the condition properly.

3 A. That's not the way I understand it.

4 Q. Okay. And then this memo goes on to give
5 instructions on how to proceed moving forward; correct?

6 A. It does.

7 Q. And based on no prior distinctions being made,
8 it's now asking for distinctions to be made; correct?

9 A. Yes.

10 Q. So it's clarifying how the right should be
11 properly administered.

12 A. Yes. I would only add that, again, as we had
13 those folks in the same group, that it became more and
14 more clear that really they were on the same page and
15 they were being delivered in accordance with the
16 exchange agreement.

17 Q. What folks are you referring to?

18 A. Tim Luke and Kevin Lakey at our board meeting
19 on May 1st, Big Wood Canal Company board.

20 Q. You listened to Mr. Luke's testimony
21 yesterday; correct?

22 A. I did.

23 Q. He confirmed these instructions; correct?

24 A. Yes.

25 Q. Moving forward with administering the water

1 pursuant to the instructions in this memorandum, it's
2 likely that that administration will have some type of
3 impact; correct?

4 A. It could.

5 Q. That means that there could be an adjustment
6 of the priority cut dates; right?

7 A. That is a possibility. But again, that's why
8 we asked those two individuals to be at our board
9 meeting because we anticipated there would be some great
10 benefit to the diversions above Shoshone, above 54.

11 Q. To clarify, when you are saying those "two
12 individuals," that is Mr. Lakey and Mr. Luke; correct?

13 A. That's correct.

14 But it became apparent by the end of the
15 meeting that there was no wet water for Big Wood Canal
16 Company to anticipate delivered above that 54 gage, no
17 additional waters. That would tell me that they have
18 administered correctly, or consistently at least.

19 Q. Now, you were just mentioning gages. You
20 testified earlier that your Exhibit 3, that you created
21 this document based on some measurements that the
22 watermaster provided; correct?

23 A. Yes.

24 Q. One of these measurements is from Station 10
25 at Richfield.

1 A. It is.

2 Q. Were you present during Ms. Sukow's testimony
3 regarding measuring devices and sensors at Station 10?

4 A. I was listening on Zoom as I came to Boise,
5 yes.

6 Q. Do you recall her testifying that there were
7 concerns that there were not adequate manual
8 measurements to calibrate from that station?

9 A. Yes, I heard that comment.

10 Q. Your numbers are based on the gages from that
11 station; correct?

12 A. They are.

13 Q. So these numbers are based on uncalibrated
14 measurements, would you agree?

15 A. I would not agree with that statement. I
16 think her testimony indicated that she would like to see
17 more manual measurements to support the SCADA
18 instruments that are there and measuring other measuring
19 stations. And we find it common as you go through the
20 summer about on a monthly basis that these gage stations
21 need to be recalibrated, and that has to do with moss
22 buildup or other things in the system over the summer.

23 So it's not uncommon for there to be some
24 minor error in every season. And I think that, yes, her
25 comment is maybe true, that maybe there is reason to

1 believe on a daily basis from one month to the next
2 there may be some deviations.

3 Q. I understand there could always be more
4 measurements. But she testified that there were not
5 adequate manual measurements. So these numbers in your
6 Exhibit 3 are based on inadequate manual measurements
7 per Ms. Sukow.

8 A. They are based on the data that we use on a
9 daily basis to manage the river. You can make the same
10 argument possibly at the Hailey gage, and that's a USGS
11 gage.

12 Q. But you don't recall Ms. Sukow testifying to
13 concerns about that gage, do you?

14 A. No, she didn't.

15 Q. Now, Big Wood Canal Company is claiming injury
16 from groundwater pumpers within the Bellevue Triangle;
17 correct?

18 A. Yes.

19 Q. But you have not identified any specific
20 groundwater rights causing that alleged injury, have
21 you?

22 A. No.

23 Q. You have not specifically identified how the
24 groundwater pumpers in that Bellevue Triangle area are
25 affecting your, meaning Big Wood Canal Company's,

1 decreed rights, have you?

2 A. The company, no, but through our hydrologist
3 and those types of studies we are trying to pinpoint
4 those or have pinpointed those.

5 Q. When you mention your hydrologist, is that
6 Eric Miller?

7 A. It is.

8 Q. So you are basing the alleged injuries on Mr.
9 Miller's report?

10 A. Yes, we are.

11 Q. And that's that June 1, 2021, report?

12 A. I would assume that's correct.

13 Q. So Big Wood Canal Company hasn't made any
14 calculations on its own regarding shortfalls of water.

15 A. No.

16 Q. Or effects that groundwater pumpers within the
17 Bellevue Triangle may be having on its decreed rights;
18 correct?

19 A. No. We are depending on our hydrologist, yes.

20 Q. I believe you testified in your deposition
21 that about a quarter of your shareholders are still
22 using gravity irrigation methods; is that correct?

23 A. That is probably correct, over the entire
24 system, yes.

25 Q. Would you agree that that method of irrigation

1 is not as efficient as other methods of irrigation, such
2 as pivots?

3 A. Yes.

4 Q. I recall you testifying in your deposition
5 that Big Wood Canal Company has not made any efforts to
6 design or secure funding for a pipeline to bring water
7 from the Milner-Gooding Canal to the lands up north
8 above it.

9 A. No, that would require pumping. It's just
10 geographically impossible to deliver to North Shoshone
11 or Richfield from the river, or from the Milner-Gooding
12 Canal, as you mentioned.

13 Q. Ms. Sukow testified during her May 27, 2021,
14 deposition that the Department received letters from Big
15 Wood Canal Company informing it that the canal company
16 was planning on making a delivery call. Are you aware
17 of those letters?

18 A. Yes, they were in coordination with the Little
19 Wood-Big Wood users.

20 Q. Do you recall when these letters were sent?

21 A. I don't particular dates, but they are of
22 record.

23 Q. Were you involved in drafting those letters?

24 A. They were drafted and I read and signed, if
25 those are the letters you're referring to.

1 Q. What do the letters say?

2 A. That we were going to participate in the call,
3 and we felt as though we were injured, and that we were
4 supporting the association or the group of decreed
5 holders in the action.

6 Q. I know you said you don't specifically recall
7 the date, but would those letters have been sent within
8 the last year or two?

9 A. No. They would be previous to that, I
10 believe.

11 Q. Around 2017?

12 A. Yes, could have been.

13 Q. Was the call actually made after those letters
14 were sent?

15 A. I forget the dates, but I'm going to say that
16 yes, there was a call attempted and because of
17 technicalities was not made.

18 Q. Would that have been in 2015 or 2017?

19 A. There were two, two attempts at a call, and I
20 think, was it '15 or '17? I'm not certain, but yes, two
21 call attempts.

22 Q. You also testified in your deposition that Big
23 Wood Canal Company requested conjunctive administration
24 in Water District 37. Do you recall that?

25 A. I may have said that, but that's not what we

1 are here today about.

2 Q. That wasn't my question. My question was:
3 Did Big Wood Canal Company request conjunctive
4 administration?

5 A. We get to a legal term here, and that seems to
6 be what is being dwelled on by yourself and others. We
7 have been working with those folks, I personally for a
8 number of years, trying to come to some sort of
9 cooperative management that would allow both the pumpers
10 and the stockholders of my company to prosper and
11 survive.

12 So if the legal term is "conjunctive
13 management," we submitted an answer to a management plan
14 that was presented by the groundwater pumpers and our
15 proposal which spurred the formation of the groundwater
16 Advisory Committee. But we are really seeking in this
17 action priority administration.

18 Q. So based on your understanding of conjunctive
19 administration, Big Wood Canal Company did request such
20 administration from the Department.

21 A. In a legal sense?

22 Q. Based on your understanding.

23 A. On my understanding at the time, I probably
24 said that, yes.

25 Q. That would have been last fall?

1 A. What we submitted last fall was an answer to a
2 management plan, not a request for conjunctive
3 management. So it gets back to the legal term.

4 Q. Sure. I'm not trying to -- I just asked based
5 on your understanding whether Big Wood Canal Company had
6 requested conjunctive administration, and I was just
7 trying to get a time period for when that request was
8 made.

9 A. So I guess I don't know how to answer that,
10 depending on the legalese that was involved in the
11 documents you are referring to. We have been seeking
12 some sort of cooperative management plan, whatever form
13 that takes.

14 MS. O'LEARY: Okay. Thank you, Mr. Pendleton.
15 That's all the questions I had.

16 THE HEARING OFFICER: Thank you, Ms. O'Leary.
17 I'll circle back. Mr. Thompson, do you have
18 questions?

19 MR. THOMPSON: I have a couple.

20

21 CROSS-EXAMINATION

22 BY MR. THOMPSON:

23 Q. Hi, Mr. Pendleton. Travis Thompson for the
24 South Valley Ground Water District.

25 Can you pull up Tim Luke's memo, that IDWR

1 Exhibit 4.

2 A. Yes.

3 Q. Could you turn to page 9.

4 A. Of the original document, or the main
5 document?

6 Q. Correct.

7 A. Yes.

8 Q. Is there a Figure 3 on that memo?

9 A. Yes.

10 Q. Right above that figure Mr. Luke describes the
11 increases and the total diversions, and I think he
12 references the Big Wood Canal Company water rights. Do
13 you recognize that?

14 A. Yes.

15 Q. And it looks like junior to 1899 -- well,
16 including the 1899, that 540 cfs increase is probably
17 mostly all Big Wood Canal Company water rights; is that
18 correct?

19 A. Yes, I would think that is correct.

20 Q. Do you agree with his characterization that is
21 a high runoff water supply appropriation?

22 A. Yes.

23 Q. So my question to you is: Is there 900 cfs in
24 the Little Wood, has that water ever been diverted, all
25 of that?

1 A. All of that?

2 Q. Yes.

3 A. There probably would be isolated instances,
4 yes. Unfortunately that diversion can only handle about
5 200 cfs. So your question is a little bit null there
6 because that's the capacity of the Dietrich Canal, about
7 200 cfs.

8 Q. But when those rights are in priority in the
9 early spring, that's what supplies that canal at that
10 time.

11 A. It is. It allows us not to turn on the rest
12 of the system or supplements, reduces our draws on that
13 storage reservoir.

14 Q. How often do those rights stay on priority, I
15 guess, for the length of the irrigation season?

16 A. I don't know. Honestly, that is kind of a
17 management function, and being on the board I stepped
18 away a little bit. But it would be a question for
19 either Mr. Lakey or possibly somebody from our
20 management team.

21 Q. Could you turn back to your Exhibit 3,
22 Fletcher Exhibit 3.

23 A. Yes.

24 Q. These were your notes from gage readings, is
25 that correct, at the Hailey and then the Station 10 at

1 Richfield?

2 A. Yes.

3 Q. You stated that there was a rain event 5/21
4 and then you saw Station 10 go up; is that correct?

5 A. That's correct.

6 Q. So could part of that increase be due to the
7 rain?

8 A. It doesn't show in the river. The river
9 actually drops. You would expect the higher elevations.

10 Q. The river at the Big Wood River?

11 A. At Hailey, yes.

12 Q. How about the Little Wood?

13 A. The Little Wood you would expect to -- I would
14 not expect a lot of rainfall contribution. For one, the
15 land is dry, the deserts are dry, all of that is dry
16 through that stretch from Silver Creek to the Richfield
17 gage. There was no runoff.

18 Q. Do you have any personal knowledge of that?

19 A. No. Just in the fact that it took blacktop at
20 my place to make a puddle. The ground took it all. We
21 are talking something less than 3/4 of an inch of rain.

22 Q. Would that have shut off diversions?

23 A. It possibly could have shut down the
24 diversions. Although, just looking at the canals
25 visually, the 45 and the Baseline Canal, we went up for

1 an evening dinner, and they were still running pretty
2 darn high. So I didn't visually see it. I certainly --
3 I mean, I did visually see it in the canals, and the
4 appearance in the canals, obviously did not go to the
5 measurements to verify if they reduced their surface
6 diversions.

7 Q. How about individual surface diversions off of
8 Silver Creek or the Little Wood?

9 A. I would have no knowledge of that.

10 Q. Would you expect those to shut down during
11 that event?

12 A. It's possible that they shut them down quite
13 often in a small event. That was a relatively small
14 event. It was big for Magic because we could shut off
15 for a while. But in that small amount of rainfall in
16 that area up there, I would not expect that they changed
17 those river diversions. I could be totally wrong. That
18 is my speculation.

19 Q. But it's your testimony that the groundwater
20 pumps shut off.

21 A. That's the easiest thing to do is to flip a
22 switch. It takes some work to adjust deliveries.

23 Q. But do you have any personal knowledge of
24 pumps going off at that time?

25 A. No, I do not.

1 Q. So it would be fair to say this could be a
2 combination of surface and groundwater diversions going
3 off.

4 A. I think that is very fair, yes.

5 Q. I guess the last question, your testimony
6 about your Big Wood Canal Company water rights and your
7 own property, are you intending to offer that as
8 evidence of injury in this proceeding dealing with the
9 Little Wood?

10 A. No, because our rights -- we have many
11 stockholders; we have 1,200 stockholders. I know of
12 individuals that have some big losses, and they would
13 certainly be happy to step forward and offer those. But
14 they are not as easily isolated as those individual
15 users that you heard from this morning and those you'll
16 hear from this afternoon whose water applies to a very
17 specific piece of property based on a decreed right.

18 Q. So would you agree that injury to the Big Wood
19 Canal Company's Big Wood water rights is beyond the
20 scope of this proceeding?

21 A. Until we include storage rights, yes, that's
22 correct.

23 Q. One last question, if junior groundwater
24 rights in the Triangle are curtailed, do you agree that
25 the Big Wood Canal Company would not be able to put its

1 Little Wood rights to beneficial use if water shows up
2 for those?

3 A. Only if we rent those to one of our
4 stockholders who can access those from the river.

5 Q. Do you have a rental in place today?

6 A. We have a rental policy, and if the agreement
7 of last night would have gone forward, I had one
8 individual who wanted to rent most of our premier right,
9 the 1883 right.

10 Q. But as of today you don't have a rental; is
11 that true?

12 A. No. There is concern -- it would be a sum
13 that has to be paid regardless of whether that priority
14 stays in play or whether that priority is terminated.
15 And there is question of whether that 1883 right may be
16 cut by midsummer.

17 MR. THOMPSON: That's all the questions I
18 have.

19 THE HEARING OFFICER: Thank you, Mr. Thompson.

20 Ms. Vonde is not here and is participating as
21 I look at the screen remotely. So I think that's the
22 group 2 questioning.

23 Group 3, Mr. Bromley?

24 MR. BROMLEY: Thank you.

25 ///

1 CROSS-EXAMINATION

2 BY MR. BROMLEY:

3 Q. Hi, Mr. Pendleton.

4 A. Good afternoon.

5 Q. How are you?

6 A. Good.

7 Q. Thanks for being here.

8 I have three questions; so very brief.

9 First is, do you know when your Little Wood
10 rights generally turn on at the start of a year? So
11 let's just talk about an average year.

12 A. On an average year we may come on, depending
13 on the demands of weather, latter part of April. Our
14 normal target date is about the 1st of May. However, in
15 relation to these decreed rights where they need those
16 earlier out on the Dietrich tract, we may divert those
17 in mid April.

18 Q. Do you know this year when those rights turned
19 on?

20 A. We turned on our system about the 7th I
21 believe, and those rights to Dietrich were probably
22 turned on the last week of April, first of May, bought
23 us about 10 days to a week.

24 Q. Thank you.

25 Second question is: Are you asking for

1 curtailment of groundwater pumping outside of the
2 Bellevue Triangle?

3 A. No.

4 Q. Third question: If junior groundwater users
5 are able to show they can mitigate, would you agree that
6 they ought to be able to mitigate?

7 A. I would hope so. I would hope that we can
8 come to some agreement. I've been pursuing that for
9 more than 5 years, if that answers your question.

10 Q. It does.

11 MR. BROMLEY: Thank you.

12 THE HEARING OFFICER: Thank you, Mr. Bromley.

13 Now, other questions from those in group 3. I
14 see John Simpson is not here and is participating
15 remotely.

16 Mr. Robertson, any questions?

17 MR. ROBERTSON: No questions.

18 THE HEARING OFFICER: Mr. O'Bannon?

19 MR. O'BANNON: No questions.

20 THE HEARING OFFICER: I don't think we have
21 anyone else.

22 Redirect, Mr. Fletcher.

23 MR. FLETCHER: I don't have any questions.

24 THE HEARING OFFICER: Redirect, Ms. O'Leary?

25 MS. O'LEARY: No.

1 THE HEARING OFFICER: There is no redirect.

2 Thank you, Mr. Pendleton, for your testimony.

3 And I want to personally thank Mr. Pendleton for his
4 long years of service on the canal board, and anybody
5 that serves that long and sits in that many midnight
6 meetings deserves some public recognition. Thank you.

7 THE WITNESS: Thank you.

8 THE HEARING OFFICER: I had to sit through
9 some of those meetings and they are never done until
10 midnight.

11 THE WITNESS: You didn't mention we started at
12 9:00 in the morning.

13 THE HEARING OFFICER: Yeah.

14 Mr. Rigby or Fletcher, next witness.

15 MR. RIGBY: Mr. Director, we'd call John
16 Arkoosh to the stand.

17 THE HEARING OFFICER: Mr. Arkoosh, if you'll
18 come forward, please.

19 JOHN ARKOOSH,
20 having been called as a witness by the Big Wood &
21 Little Wood Water Users Association and first duly
22 sworn, testified as follows:

23

24 THE HEARING OFFICER: Mr. Rigby, you may
25 question Mr. Arkoosh.

1 MR. RIGBY: Thank you.

2
3 DIRECT EXAMINATION

4 BY MR. RIGBY:

5 Q. Good afternoon, John.

6 A. Hi.

7 Q. Please state your full name and current
8 address for the record.

9 A. John Arkoosh, my address is 490 Ohlinger Road,
10 Shoshone, Idaho 83352.

11 Q. And you are a party to this proceeding?

12 A. Yes.

13 Q. Is it also a fact that your father is a party
14 to this proceeding?

15 A. He is.

16 Q. What is his name?

17 A. William Arkoosh.

18 Q. Do the two of you work together, I'll call it
19 a loosely knit partnership?

20 A. Yeah, we have a partnership; we own equipment
21 and cattle together. We each own our own farms and
22 operate them kind of together, sharing equipment and
23 feed.

24 Q. The reason I'm asking that is, is it your
25 intention today to cover not only the water rights on

1 your particular farm but also your father's farm?

2 A. Yes, it is.

3 Q. Is that because you have personal knowledge of
4 both farms?

5 A. Yes.

6 Q. Let's talk about how personal that knowledge
7 is. How far back do you go on those particular two
8 farms?

9 A. His two farms? Well, I was born in 1965; so
10 the one farm we owned then. And I believe he bought the
11 other one when I was 12 years old. He rented it for a
12 couple years before that.

13 Q. So do you have personal familiarity with the
14 irrigation practices on his farm as well as your farm?

15 A. Yes.

16 Q. The answer you just gave me, was that as to,
17 we'll call them your father's farm?

18 A. Yes.

19 Q. How about as far as your farm, how long have
20 you owned your farm?

21 A. I should have looked back to see for sure, but
22 I'm thinking maybe 2007 for one and 2015 for the other,
23 and both of those farms I rented at least for several
24 years. In the case of the second farm, I leased it for
25 nearly 15 years before I purchased it.

1 Q. So again, is it fair to say then you are
2 fairly comfortable with being able to address the water
3 usage on both your father's farms as well as your farms?

4 A. Yes, I think so.

5 Q. Are you a member of the Big Wood & Little Wood
6 Water Users Association?

7 A. Yes.

8 Q. Do you hold a position there?

9 A. Well, they call me chairman of the board, but
10 it's not a very big board. So that's my position there.

11 Q. You have heard the testimony of Mr. Brossy as
12 far as what the organization is all about. Do you have
13 any -- without getting into the details of it, do you
14 have anything to add to that?

15 A. No, that was an accurate description.

16 Q. All right. Let's proceed then. And if it's
17 okay, please turn to -- and maybe we need to -- is it
18 opened up to Bill's?

19 A. Yes.

20 Q. Very good. Would you turn, first of all, to
21 Bill's water rights. That would be W. Arkoosh exhibits;
22 is that correct?

23 A. Exhibit 2?

24 Q. Let's go to Exhibit 2 to begin with; that's
25 correct.

1 A. Okay.

2 Q. So as quickly as possible. Let's just go
3 through his water rights.

4 Exhibit 2 purports to be Water Right 37-59M;
5 is that correct?

6 A. Yes.

7 Q. And it's 5/27/99?

8 A. Yes.

9 Q. Priority date?

10 A. Yes.

11 Q. For 2.304 cfs irrigation?

12 A. Yes.

13 Q. And Exhibit --

14 MR. BROMLEY: Mr. Director, I'll renew my
15 objection, as you previously ruled on, but this 37-59M
16 is a Big Wood River right.

17 THE WITNESS: This is a Cottonwood right, yes.

18 Q. (BY MR. RIGBY) That's what I was going to ask
19 next.

20 A. Yes.

21 Q. So again, what we addressed in the cross -- or
22 excuse me, the direct with Mr. Brossy, do you agree that
23 this is the Cottonwood right?

24 A. Yes, it is.

25 Q. It's the same right that he was referring to.

1 A. Yes.

2 Q. Are you using this particular right in any way
3 to show injury for this particular action that is before
4 the Director?

5 A. No.

6 Q. Therefore, are you presenting it only to show
7 your full water capacity or full water rights
8 themselves?

9 A. Yes.

10 THE HEARING OFFICER: Mr. Rigby, I'm trying to
11 catch up. It's a little bit hard for me to find the
12 tabs here. Maybe everybody else is faster than I am.
13 So you are under William or W. Arkoosh.

14 MR. RIGBY: That's correct. So No. 2 and 3
15 were stickered as W. Arkoosh Exhibit 2 and W. Arkoosh
16 Exhibit 3.

17 THE HEARING OFFICER: Okay. So Mr. Bromley,
18 you objected or at least reiterated your previous
19 objection. Do you still object to this particular
20 document?

21 MR. BROMLEY: Yes, Director, I'm just renewing
22 my same objection, which you've already ruled on and Mr.
23 Rigby has explained, but I'm just renewing the same
24 objection.

25 THE HEARING OFFICER: Okay. So for purposes

1 of the record, I'll overrule the objection with the same
2 stipulation, that this particular water right is just
3 showing the total water supply but not for purposes of
4 water administration.

5 MR. RIGBY: Very good.

6 THE HEARING OFFICER: Okay.

7 Q. (BY MR. RIGBY) All right. So John, if you'll
8 move now to W. Arkoosh Exhibit No. 4, please.

9 A. Okay.

10 Q. Again, attempting to expedite, it purports to
11 state that it's Water Right 37-176, with 4/01/1890
12 priority, and 2 cfs diversion right. Is that what you
13 understand?

14 A. Yes.

15 Q. And where is -- well, let's go to W. Arkoosh
16 Exhibit 5. That purports to be the IDWR's-generated
17 mapping of place of use of that particular water right;
18 is that correct?

19 A. Yes.

20 Q. As you review that mapping, is that an
21 accurate description of the place of use of Water Right
22 37-176?

23 A. Yes.

24 Q. Explain again, as I've asked others, the river
25 or stream that appears to be meandering through that,

1 what river is that?

2 A. That is Little Wood River.

3 Q. Where particularly is this located
4 geographically? You can use maybe some of the others
5 that have testified or from station such and such. What
6 would be a good way to describe where you fit?

7 A. Well, we're just downstream probably 4 miles
8 from where the South Gooding Main Canal leaves Little
9 Wood River, and there is some, I believe, some measuring
10 stations there where those canals take off. That's
11 upstream about 4 miles. This is about 4 miles east of
12 Gooding on the Little Wood River.

13 MR. RIGBY: Very good.

14 So I would move for the admission of
15 W. Arkoosh Exhibit 4 and W. Arkoosh Exhibit 5.

16 THE HEARING OFFICER: Any objection to the
17 admission of these documents?

18 Very well. Hearing no objection, the
19 documents that are marked as W. Arkoosh Exhibit 4 and
20 Exhibit 5 are received into evidence.

21 (W. Arkoosh Exhibits 4 and 5 received.)

22 Q. (BY MR. RIGBY) If you'll turn to W. Arkoosh
23 Exhibit 6, please.

24 A. Yes.

25 Q. And again, Water Right, it purports to read

1 Water Right 37-327, with a priority date of 5/15/84,
2 diversion rate of 2.2 cfs; is that correct?

3 A. Yes.

4 Q. Again, turning to W. Arkoosh Exhibit 7, which
5 is the IDWR-generated mapping of this particular water
6 right. Does that appear to be correct?

7 A. Yes.

8 Q. As it relates to the previous water right, it
9 appears to be different lands; is that correct?

10 A. Yes.

11 Q. And where are they located one from the other,
12 generally?

13 A. This would be probably 4 miles upstream on the
14 Little Wood River.

15 Q. But again, diverting from the Little Wood
16 River.

17 A. Yes, Little Wood River runs through the
18 property.

19 Q. In relationship to the Gooding Canal?

20 A. The Gooding-Milner Canal?

21 Q. Yes.

22 A. I guess it would -- well, the Gooding-Milner
23 dumps into Little Wood at Shoshone. So I guess it's on
24 both sides of the -- that water is carried by the
25 Gooding -- yeah, it's right there.

1 Q. Very good.

2 MR. RIGBY: I would again move for the
3 admission of W. Arkoosh Exhibit 6 and W. Arkoosh
4 Exhibit 7.

5 THE HEARING OFFICER: Any objection to the
6 admission of these documents?

7 The documents marked as Exhibit 6 -- well, let
8 me back up. W. Arkoosh Exhibit 6 and 7 are received
9 into evidence.

10 (W. Arkoosh Exhibits 6 and 7 received.)

11 THE HEARING OFFICER: Mr. Rigby, I just have a
12 question of Mr. Arkoosh. I thought his last answer was
13 that this place of use is located on both sides of the
14 Milner-Gooding.

15 THE WITNESS: Well -- do you want me to answer
16 or --

17 MR. RIGBY: Yes, please do.

18 THE HEARING OFFICER: I don't understand. I
19 don't see the canal.

20 THE WITNESS: If you're talking about, the
21 Gooding-Milner Canal comes into Shoshone. Part of it is
22 diverted north of Shoshone via the North Gooding Main, I
23 believe they call it, and the rest continues down Little
24 Wood River -- dumps into Little Wood River and continues
25 down to the South Gooding Main where most of that water

1 is taken out of the river and distributed to American
2 Falls, which is downstream.

3 THE HEARING OFFICER: So this place of use is
4 located below the point of injection where Snake River
5 water is injected into the Little Wood River, this is
6 downstream.

7 THE WITNESS: Yes.

8 THE HEARING OFFICER: Okay.

9 THE WITNESS: Yes.

10 THE HEARING OFFICER: All right. I
11 misunderstood the answer.

12 THE WITNESS: I probably didn't state it very
13 clearly.

14 THE HEARING OFFICER: Thank you.

15 Q. (BY MR. RIGBY) If you'll turn to W. Arkoosh
16 Exhibit No. 8.

17 MR. THOMPSON: Just for the record, I'll
18 stipulate to the rest of your exhibits.

19 MR. RIGBY: I would love that.

20 THE HEARING OFFICER: The rest of W. Arkoosh
21 exhibits?

22 MR. FLETCHER: No objection.

23 THE HEARING OFFICER: Anybody else?

24 Thank you, Mr. Thompson. That's helpful.

25 Perhaps I should have asked if the parties

1 would stipulate to the exhibits. So based on the
2 statements here, the documents marked as W. Arkoosh
3 Exhibits 8 through 11 are received into evidence. Is
4 that the last one?

5 MR. RIGBY: It is, Mr. Director.

6 THE HEARING OFFICER: Thank you.

7 (W. Arkoosh Exhibits 8, 9, 10, 11 received.)

8 Q. (BY MR. RIGBY) So just to be clear then, the
9 two mappings that we just discussed of those first two
10 before we stipulated to the balance, were any of the
11 water rights additional lands or places of use than
12 those?

13 A. The water rights we discussed?

14 Q. Right.

15 A. No.

16 Q. So all the other water rights are additional
17 water rights for those two particular pieces of land.

18 A. Yes.

19 Q. Now, as far as W. Arkoosh's lands, does he or
20 you have any supplemental supply of water in addition to
21 the water rights you have described here?

22 A. He does have some supplemental water on what
23 we call the Leabo place, the place just east of Gooding.
24 I believe there is around 100 inches, it's about
25 two-thirds of what the decreed right is, or probably not

1 what the decreed right is if you're counting the
2 Cottonwood water. But yes, he does have about enough to
3 irrigate two-thirds of that farm with --

4 Q. Which particular farm would that be? Would it
5 be under Exhibit No. 2 or No. 4?

6 A. No. 2.

7 Q. No. 2?

8 A. The first one we talked about.

9 Q. Very good. Again, you say that 100 inches are
10 applied toward that.

11 A. Yes.

12 Q. And is that able to be applied at any time
13 throughout the season?

14 A. Just when some of your decreed water is out of
15 priority, then that supplemental water kicks in.

16 Q. As far as this particular year is concerned,
17 have you used any of the 100 inches on this land that's
18 described -- you call it the Gooding land?

19 A. We call it the Leabo place, the old guy that
20 we bought it from. But I don't know what -- yeah,
21 that's the only farm we have in Gooding County with
22 decreed rights.

23 Q. So the Gooding County place.

24 A. Yes.

25 Q. So has it been applied, your supplemental

1 water?

2 A. Yes, it has this year.

3 Q. Has it been exhausted?

4 A. No. It's still running. The supplemental
5 will run as long as American Falls is on, but we only
6 have enough to irrigate about two-thirds of that farm
7 with the American Falls water.

8 Q. Are any of these within the exchange agreement
9 of what we call the 161 Condition?

10 A. I believe it is.

11 Q. Again, would that be the Gooding place?

12 A. Yes.

13 Q. Gooding County place?

14 A. Yes. And there is -- you asked me if we had
15 additional water. There's a supplemental well on that
16 farm as well, and it's appurtenant to just that farm.

17 Q. I will get to that one in just a minute.
18 Let's stick with the AFRD water.

19 How does the relationship between the
20 supplemental supply of water under AFRD that you
21 testified to and the exchange agreement interact, if at
22 all?

23 A. Well, like I said, when the decreed right is
24 cut, the supplemental water comes into play. So it will
25 run through the season for whatever amount of

1 supplemental water you have. That place happens to be
2 covered by about two-thirds, it will irrigate about
3 two-thirds of that farm.

4 Other farms we have will irrigate less than a
5 quarter with supplemental, and then other farms have no
6 supplemental, or one other farm has no supplemental.

7 Q. No supplemental?

8 A. No supplemental. One of mine.

9 Q. We'll talk about that later. But is this
10 particular one then, you're saying about two-thirds of
11 the Gooding County one would be covered under
12 supplemental.

13 A. Yes.

14 Q. Is it, generally speaking, sufficient to grow
15 the crops that you generally grow on the Gooding County
16 property?

17 A. Not just with that one supplemental right, no.

18 Q. I understand that. I'm saying, with that
19 supplemental right -- in normal years are you able to,
20 with this supplemental right, sufficiently grow the
21 crops that you grow or intend to grow on the Gooding
22 County property?

23 A. Yes. If the water stayed in priority, yes.

24 Q. Very good.

25 What kind of crops are you growing on the

1 Gooding County property, and then we'll go to the other
2 one?

3 A. This year it's all in alfalfa.

4 Q. Is that a change or a modification, if you
5 will, from what you would normally grow on the Gooding
6 County property?

7 A. No. We generally grow hay and corn. We
8 occasionally do some small grains. But we farm and
9 ranch so we have quite a lot of cattle that we need to
10 make sure we have feed for. So our focus is on the feed
11 crops; hay and corn for silage because we background our
12 calves.

13 Q. So do these lands also support livestock?

14 A. Yes.

15 Q. Are these livestock located upon those lands?

16 A. About 5 to 6 months a year, yes.

17 Q. Is it after the crops are grown?

18 A. Yes.

19 Q. You feed the cattle on those lands?

20 A. Yes.

21 Q. Otherwise where are the cattle kept?

22 A. They go out to summer range.

23 Q. So let's talk then about the other rights that
24 you have on the Gooding County property. You indicated
25 that there is a well?

1 A. Yes, there is a supplemental well that's
2 appurtenant to that farm and another farm we have that
3 has American Falls water that was insufficient when he
4 drilled the well. He made it appurtenant to those two
5 farms.

6 Q. Do you have that water right?

7 A. Well, I don't think here, but I think --

8 Q. Or is that part of your --

9 A. No, it's part of his and I had it listed on
10 the exhibit I took to my deposition, which I saw in here
11 somewhere.

12 Q. Excuse me just a minute.

13 A. I've got it here, I believe.

14 Q. Which exhibit are you referring to?

15 A. Actually, I don't have it here because I just
16 took my water rights to my deposition. I didn't take
17 his so I don't have that water right number. I'm sorry.

18 Q. Let's talk about that water right then. It's
19 a well water right?

20 A. Yes.

21 Q. Do you know the priorities and the --

22 A. It was drilled in 1977, in March of '77, I
23 believe.

24 Q. What is the water right number, do you know?

25 A. I don't know.

1 Q. Do you know the cfs?

2 A. I think it's rated for 4.4 or 4.2, something
3 like that.

4 Q. Its authorized place of use is where again?

5 A. It's the Gooding farm and another farm that my
6 dad owns across the -- like you say, across the tracks,
7 which is supplied by American Falls water.

8 Q. So is it part of the proceeding that we have
9 before the Director today?

10 A. No.

11 Q. So how is the water from that well split, if
12 you will, between these parcels, the Gooding County
13 property and the other property that is not part of this
14 proceeding?

15 A. It's not really ever sent to the other
16 property. We have irrigation systems now and have
17 sufficient water for that property.

18 Q. So the well then would be used on this
19 particular parcel.

20 A. It's appurtenant to this Gooding property.

21 Q. So with those parcels in the Gooding County
22 property, with your water rights that we've described
23 here, and the AFRD rental of the 100 inches, and the
24 exchange agreement together with the well, what is your
25 anticipated shortfall, if any, for this particular year

1 on the Gooding County property?

2 A. I don't think I listed any shortfall, except
3 for maybe having to turn on the well and paying for the
4 power bill on that property.

5 Q. So now let's go to the other parcel of
6 property, which is the -- how do you want to describe
7 that one, which would be W. Arkoosh Exhibit -- is it
8 Franklin County?

9 A. Shoshone County. Or Lincoln County.

10 Q. I'm sorry.

11 A. Lincoln County.

12 Q. I'm still in Lemhi; so you're good.

13 THE HEARING OFFICER: No, now you're in
14 Preston.

15 Q. (BY MR. RIGBY) So just to make sure I've got
16 the two parcels then, we're talking Shoshone County?

17 A. Lincoln County.

18 Q. Lincoln County. Okay. There's a Lincoln
19 County and we've talked about the Gooding County.

20 A. Yes.

21 Q. So now we're on the Lincoln County property.

22 A. Owned by my father, yes.

23 Q. This, again, owned by your father.

24 A. Yes.

25 Q. What supplemental water right then do you have

1 or does he have on the Lincoln County property?

2 A. He's got, I believe, 30 inches or --

3 Q. Is that AFRD water as well?

4 A. I believe it's AFRD supplemental water, yes.

5 Q. And so, again, does it also have the Exchange
6 Agreement Condition 161?

7 A. These decreed rights do, yes.

8 Q. Do you know whether or not that has been
9 delivered or used thus far this year?

10 A. Yes, it has.

11 Q. And again, is it exhausted or will it be
12 exhausted only when the canal --

13 A. The supplemental portion of that right will
14 run through the summer.

15 Q. It will run through the summer.

16 THE HEARING OFFICER: I want to interject
17 right here for the benefit of the reporter.

18 So Mr. Arkoosh, you need to wait until his
19 question is --

20 THE WITNESS: I'm sorry.

21 THE HEARING OFFICER: -- and then answer
22 because she's having to try to transcribe both of you at
23 the same time.

24 THE WITNESS: I got in trouble for that at the
25 deposition.

1 THE HEARING OFFICER: And then will you also
2 speak up?

3 THE WITNESS: I will. I'm sorry.

4 THE HEARING OFFICER: Thank you.

5 Q. (BY MR. RIGBY) Okay. We're back to the
6 Lincoln County property, we are discussing the
7 supplemental rights to the Lincoln County property, and
8 you indicated there was 30 inches.

9 A. I believe so.

10 Q. The last question was: Will it continue to be
11 diverted throughout the summer?

12 A. Yes.

13 Q. So as to any deficiency that you maintain for
14 this particular year on the crops grown -- let me strike
15 that first.

16 What are the crops grown on the Lincoln County
17 property?

18 A. Alfalfa hay and silage corn.

19 Q. So the only additional crop that is grown on
20 the Lincoln County property as opposed to the Gooding
21 County property is you're also growing silage corn.

22 A. Yes.

23 Q. Is there any particular reason why you are
24 growing silage corn on the Lincoln County versus the
25 other? Is it because of a better water supply or just

1 that's your rotation?

2 A. Just our rotation.

3 Q. Very good.

4 So any additional supplemental water to the
5 Lincoln County property that we haven't discussed
6 already?

7 A. No.

8 Q. No well.

9 A. No.

10 Q. Very good.

11 Have you then, or through your dad through
12 you, made any claim that the water for this particular
13 year is insufficient for the crops that you're growing?

14 A. Yes.

15 Q. Let's turn then to your father's. It would be
16 W. Arkoosh Exhibit 1.

17 A. Okay.

18 Q. Were you involved in providing the numbers
19 that were used in creating this chart?

20 A. Yes.

21 Q. Are you familiar with the crops grown, the
22 needed days of irrigation, the yield loss that is
23 indicated here and projected revenue loss?

24 A. The one I'm looking at isn't mine.

25 MR. RIGBY: May I approach?

1 THE HEARING OFFICER: Yes.

2 THE WITNESS: Okay.

3 Q. (BY MR. RIGBY) So again, to repeat the
4 question, are you familiar with and did provide the
5 input that addresses the crops grown, number of days
6 needed to projected cutoff, yield target, yield loss,
7 et cetera, in this particular W. Arkoosh Exhibit No. 1?

8 A. Yes.

9 Q. Explain, if you would, why you believe that
10 there will still -- with the water rights you've
11 indicated, there would still be revenue loss and
12 projected yield loss for 2021?

13 A. Because on this farm, we have only got enough
14 supplemental water to irrigate a portion of it after our
15 priority cuts are made to our '84s, which has already
16 happened. I believe it happened June 2nd. And I
17 don't --

18 Q. Let me just stop you there. Sorry.

19 So are you indicating that the water rights
20 that we've discussed, except for the supplemental
21 rights, are cut for this particular piece?

22 A. Yes.

23 Q. So you're on supplemental.

24 A. Yes.

25 Q. Okay. Proceed.

1 A. And so with the amount of water we have left,
2 this shows we'll have a supply shortfall for 92 acres of
3 alfalfa for 81 days, and our average yield per acre for
4 alfalfa is 7 ton historically, and most -- not most, but
5 the first cutting is fairly heavy and the second is
6 heavy also, but we're not going to get the last two on
7 that acreage with the water we have available on this
8 farm. And so the shortfall would be a 3-ton per acre
9 shortfall. And right now the hay market, I just use
10 \$200 a ton because that's what -- I'm familiar with some
11 recent sales for that and more, and I thought that was a
12 conservative figure.

13 Q. So it could be higher.

14 A. Yeah, on the alfalfa on that farm. Yeah, it
15 could be higher because they're saying it could go to
16 250 or higher than that even, but I don't know. I do
17 know that there is hay selling now for \$200 a ton.

18 Q. So again, as far as the historical use of your
19 target, is that conservative or is that just a hope that
20 you get that much? Have you done that?

21 A. No, I think we pretty consistently get that if
22 we have a full water supply.

23 Q. Do you generally have a full water supply?

24 A. Well, increasingly we are being cut more and
25 more early, not every year, but I would say

1 progressively, over the last 25 years, the water supply
2 has gotten worse.

3 My dad said this morning that he got this farm
4 in 1958, and he never had his '84 water go off until
5 1977. And it lasted in the worst, I think one of the
6 worst water years in history it lasted until August 1st
7 that year. And it's been off in June and July several
8 years since then, and it's happening increasingly more
9 often.

10 Q. What kind of work have you done on the water
11 system in order to be more efficient in your water
12 delivery, if any?

13 A. On this particular farm?

14 Q. Correct.

15 A. I would say 17 or 18 years ago we put in a
16 pivot irrigation system. We didn't have any power on
17 this farm until late 2015. So we pumped with diesel on
18 that pivot until 2015. And then we were able to get
19 power on up the river and operate a pump. So then we
20 put in an additional -- we put the rest under pivot
21 irrigation. And it was very expensive, but we knew we
22 had to do it because we had less and less water all the
23 time.

24 Q. So is any of the farm now being flood
25 irrigated?

1 A. No.

2 Q. So it's all under pressure system.

3 A. Pressurized pipe, yes.

4 Q. Is that from the river to the plant?

5 A. Yes, from the river to the plant all in pipe.

6 MR. RIGBY: I would move for the admission of
7 W. Arkoosh Exhibit No. 1.

8 THE HEARING OFFICER: Any objection to the
9 aforementioned document?

10 MR. RIGBY: I have to make a correction.
11 Apparently there's two parts to the chart. The second
12 page, we want to make sure we cover that before I guess
13 I ask for it. There's a very small amount of the cost
14 of pumping that --

15 THE WITNESS: That was what I talked about on
16 the Gooding farm. So we have to turn on the
17 supplemental well and there will be some expense there.

18 Q. (BY MR. RIGBY) So the \$2,184 is what you
19 estimate the cost of the pumping.

20 A. Yes. I mean, last year it was quite a lot
21 higher than that. But this year, to cover that amount
22 of water to make up the shortfall on that farm would...

23 MR. RIGBY: So when I move for the admission
24 of W. Arkoosh Exhibit 1, it would include both pages.

25 THE HEARING OFFICER: Any objection to the

1 admission of these documents?

2 Hearing none, the documents -- well, there's
3 two tables that are part of W. Arkoosh Exhibit No. 1 are
4 received into evidence.

5 (W. Arkoosh Exhibit 1 received.)

6 Q. (BY MR. RIGBY) John, I'm going to wait to ask
7 you concerning your understanding and knowledge as to
8 any pumping impacting that for your particular farm so I
9 only have to ask it once.

10 A. Sure.

11 Q. So let's move now to -- so if you'll find the
12 tab that starts with J. Arkoosh, that would be just
13 after your dad's farms. Do you have that?

14 A. Yes.

15 Q. And so again, let's jump to --

16 MR. LASKI: Can we stipulate to all the water
17 right exhibits.

18 MR. RIGBY: Yes, and that's what I was going
19 to do. I'm assuming I would get the same. I just want
20 to go through the tabs to say that they are all the
21 water rights.

22 So that would be J. Arkoosh Exhibit No. 2,
23 with the accompanying water right mapping of Exhibit 3;
24 the J. Arkoosh Exhibit No. 4, with the accompanying map
25 of Exhibit 5; the J. Arkoosh Exhibit No. 6 with the

1 accompanying map of J. Arkoosh Exhibit 7; J. Arkoosh
2 Exhibit 8 with the accompanying map of J. Arkoosh
3 Exhibit 9; same thing with 10 and 11; 12 with the map of
4 13.

5 And then 14 is not there because it was
6 actually in your father's. So that's why that's not
7 there.

8 So Exhibit No. 15 and the accompanying map
9 of -- actually, we got that reversed too. 15 is the map
10 and 16 is the water right.

11 I would say that in stipulation, this
12 particular water right, which is under J. Arkoosh
13 Exhibit No. 16, is a Big Wood water right, and again we
14 are only submitting it for the purpose of the water
15 supply, not for this particular action.

16 MR. LASKI: Is Exhibit 12 also a Cottonwood
17 right?

18 MR. RIGBY: It is.

19 MR. LASKI: So same.

20 MR. RIGBY: Same stipulation. The point
21 being, if there are any Big Wood rights, it's only for
22 the purpose of showing water supply not for anything
23 else.

24 MR. LASKI: Okay.

25 Q. (BY MR. RIGBY) In fact, let me ask you, do

1 you have any Cottonwood rights?

2 A. Yes.

3 Q. Are these the two that we have addressed?

4 A. Yes.

5 Q. So again, make sure we're talking about the
6 same kind of rights, they were Cottonwood rights;
7 correct?

8 A. Yes.

9 Q. Very good.

10 All right. Well, that helps us because we
11 have now gone through those.

12 The question I would then come back to though
13 is in an attempt to determine what particular parcels so
14 we can determine crops grown on those. So if you'll
15 turn to J. Arkoosh Exhibit 3, that's mapping. I'm
16 better at reading maps than I am determining the other.

17 MR. BROMLEY: Mr. Rigby, if you could just
18 please give a water right number because the electronic
19 exhibits you gave us don't have exhibit numbers on them.

20 MR. RIGBY: Very good. 37-326.

21 MR. BROMLEY: Thank you.

22 Q. (BY MR. RIGBY) For this particular year, what
23 crops are being grown on that parcel?

24 A. Alfalfa.

25 Q. And typically speaking, what crops are grown

1 on that parcel?

2 A. Corn or alfalfa or maybe small grains.

3 Q. Is there any particular reason why corn is not
4 grown in this particular year?

5 A. Just wasn't in rotation for this farm right
6 now.

7 Q. No other reason.

8 A. No.

9 Q. Now, the next one I show as a different
10 parcel, or different lands, I believe would be showing
11 up in J. Arkoosh Exhibit 9, 37-461 water right.

12 A. Yes.

13 Q. Again, for what is being grown in 2021, what
14 do you have planted there?

15 A. Organic potatoes.

16 Q. In the past have organic potatoes been grown
17 on this particular parcel?

18 A. No.

19 Q. Is there a particular reason why you chose to
20 grow organic potatoes on this parcel this year?

21 A. Yes, there is. We generally don't rent ground
22 very often, we rarely rent ground, but this farm has
23 been gravity irrigated, the whole farm has been gravity
24 irrigated throughout history. And there were -- I don't
25 know, I tried adding it up today, but there was probably

1 over 3 miles of ditches on this farm, open ditches, and
2 it wasn't efficient to irrigate that way, and I knew we
3 had to get more efficient.

4 The other problem was we didn't have
5 sufficient power to run an irrigation system. But a new
6 technology came out in the last couple years, which I
7 learned about, and coupled with that I was able to put
8 pivot irrigation on this farm this spring. But it was a
9 very expensive system. And I knew that I had to do
10 something to help pay for it.

11 So this farm is farmed organically, and I went
12 out last fall, before I had any knowledge of what the
13 water shortage might be, and got it leased with a fellow
14 to raise these potatoes. In the lease I have got to
15 provide power and water. And so that's why we have got
16 potatoes this year. Now I'm kind of wishing we didn't.
17 I might have made a different choice had I known what
18 the water year was going to be. But the lease was made
19 last fall.

20 Q. Are there other parcels within these water
21 rights that are different than the two we've talked
22 about already?

23 A. No.

24 Q. So you've talked about the more efficient
25 water supply that you have made to -- and, again, for

1 convenience of trying to determine these two parcels,
2 how would we refer to one versus the other?

3 A. It might just be simplistic to call them by
4 what I call them. The Varin property would be the first
5 property we talked about, V-a-r-i-n. And the one we're
6 talking about now is the Ohlinger, O-h-l-i-n-g-e-r. I
7 live on the Ohlinger place.

8 Q. Very good.

9 So let's start with the Ohlinger property
10 because that's where we were discussing the current
11 situation and also the modification from the typical
12 flood irrigation to sprinkler irrigation.

13 With the flood irrigation before, what kind of
14 crops would you have grown?

15 A. We raised generally hay. When we had to
16 rotate we would plow it out and raise small grain or
17 corn, kind of depending on whatever we needed for our
18 own use and maybe what the water supply was as well.

19 Q. Are there any additional supplemental rights
20 on this parcel?

21 A. This has decreed rights. It has got two 1884
22 rights, I believe, and it has the Big Cottonwood, which
23 I know we're not talking about today. But it does have
24 46.8 inches of Carey Act water.

25 Q. Explain that.

1 A. Well, I'm not sure exactly how it works, but
2 it is dependable water. As long as American Falls is
3 running, that water will be on.

4 Q. So it's not leased water from AFRD?

5 A. No. And the water we spoke of before, none of
6 that was leased either. It was --

7 Q. It was actual ownership of inches.

8 A. Yes. Carey Act water is my water and there
9 is, I think, 46.8 inches.

10 Q. And again, how is that delivered to you?

11 A. Through the Little Wood River.

12 Q. From what source?

13 A. I believe it comes out of American Falls.

14 Q. Is it part of the Exchange Agreement 161?

15 A. I don't think it is, no. I'd have to look. I
16 don't think so.

17 Q. But it's supplemental water to you.

18 A. I don't know if it would be called
19 supplemental. It's just Carey Act water. I'm not
20 really sure how you would characterize it. But it is
21 good water, it runs through the season, if American
22 Falls is on.

23 Q. So typically it wouldn't be supplemental if
24 you can divert it at any time through the season. Is
25 that how you understand it?

1 A. Yes.

2 Q. Is that why you're saying maybe it's not
3 supplemental?

4 A. No, it's not supplemental. To my knowledge,
5 it's just a water right.

6 Q. Have you leased any additional water for this
7 particular parcel which you refer to as the Ohlinger
8 property?

9 A. We have a deal in the works right now to lease
10 an additional 200 acre-feet.

11 Q. From whom?

12 A. The same outfit that Fred talked about
13 earlier. I can't remember who it was, but it's coming
14 from -- is it Idaho Irrigation District, I think, or --
15 Fred is kind of facilitating that and putting the deal
16 together.

17 Q. Snake River rental water, is that a good way
18 to explain it?

19 A. Yes, that's what I would call it.

20 Q. Did you feel the necessity to rent that water?

21 A. Yes, we're going to need that and more. We're
22 hoping to be able to find more water.

23 Q. That's my next question. Even if you were
24 able to obtain that water, do you believe it will be
25 sufficient to properly grow and finalize the crop?

1 A. No, I don't think it will. For this farm we
2 need more water.

3 Q. The water you're talking about, as far as
4 Snake River rental water, what is that going to cost you
5 per acre?

6 A. I believe it's going to be \$75 an acre-foot.

7 Q. Does that include all the carrying costs
8 and --

9 A. I believe so.

10 Q. Again, to finalize it on the Ohlinger
11 property, even with what you have right now, are you
12 maintaining that you do not have sufficient supplies to
13 properly grow the crop to its fruition?

14 A. No, I don't think we do. I mean, you do what
15 you can to manage your water and use it where it's most
16 effective, but no, we're going to have a serious
17 shortfall this year.

18 Q. Getting back to what you've done to make it
19 more efficient, how about your diversion from the river,
20 is it pressurized from the river to the plant?

21 A. This one is not pressurized from the river
22 yet. There remains about 500 feet of open ditch from
23 the river to my pump. That was just done this year as a
24 cost savings. The whole system this year for that
25 little farm cost me \$400,000, and I was tapped out. And

1 I am hoping that in coming years I can pipe all the way
2 back to the river.

3 Q. So that is an intent for the future.

4 A. Yes. But we did eliminate probably 3 miles of
5 ditches; so I think it was overall positive. I know it
6 was; we're using a lot, lot less water.

7 Q. How many miles of ditches?

8 A. I don't know. I started adding it up and got
9 about halfway through it and I was over 2 1/2, and I
10 still had some to -- so it was a lot of -- it wasn't a
11 very efficient system before.

12 Q. Very good.

13 Let's go back to the, did you call it the
14 Varin property?

15 A. Yes.

16 Q. You say you are growing alfalfa on that
17 property?

18 A. Yes.

19 Q. How is it being watered?

20 A. Pivot irrigation and a few hand lines.

21 Q. Is there any flood irrigation on that
22 property?

23 A. No.

24 Q. From the river then is it pressurized all the
25 way through?

1 A. Yes.

2 Q. Have you had to do that lately or was it
3 always that way? Well, I can't say "always."

4 A. No. When I bought the farm it was -- there
5 was about 40 acres of wheel lines and the rest was open
6 ditches and gated pipe.

7 Q. So do you believe you're much more efficient
8 now in your watering of that property?

9 A. Yes.

10 Q. So let's talk about your water rights as they
11 stand for the Varin property. Do you believe you have
12 adequate water supply to water that crop?

13 A. No.

14 Q. Why?

15 A. Because all my rights are off there except for
16 some -- I do have some supplemental water there, and
17 I've got some 1882 water.

18 Q. I was going to get into that. So let's talk
19 about, in addition to your decreed rights, what
20 additional rights do you have? You say you have
21 supplemental water. From where?

22 A. From American Falls.

23 Q. How much?

24 A. I have to look at this -- between the
25 supplemental and just a regular certificate there is .6

1 cfs.

2 Q. .6 cfs?

3 A. Yes.

4 Q. Any other water?

5 A. There is some 1882 water that is still on.

6 Q. So when you say your decreed rights will be
7 turned off, not the 1882?

8 A. Well, I don't know. Kevin has made
9 predictions that the '83s will probably go off, and he
10 said he wouldn't guarantee that the '82s would stay on.

11 Q. For how long? Did he give you a range?

12 A. No, he wasn't sure about the '82s.

13 Q. But I mean, is it for a month, for weeks?

14 A. I think they will maybe be on another month
15 anyway.

16 Q. Okay. But again, although you have those
17 rights -- by the way, do you have any other rights? Am
18 I missing any?

19 A. No.

20 Q. So with those rights, do you believe -- I
21 think your testimony was you still believe you do not
22 have enough to go all the way through.

23 A. Yeah. The water on this farm is only
24 sufficient, after the priority cuts that we've already
25 had, is not sufficient to irrigate more than about half

1 of the acreage.

2 Q. So what do you intend to do?

3 A. Well, we're going to purchase this water from
4 Snake River, and I was able to secure a little bit of
5 water from my brother-in-law, a few shares, 21 shares, I
6 believe, and --

7 Q. Are you paying for that?

8 A. Yes.

9 Q. What are you paying for that?

10 A. Well, we haven't arrived at that yet. But I
11 told him I would --

12 Q. That's a family thing?

13 A. I told him I would pay whatever fair market
14 value was.

15 Q. Are you attempting to find additional water
16 then to be able to complete the crop?

17 A. I've talked to some neighbors that are
18 hopefully going to have maybe some water available when
19 their grain crop finishes. There is no solid
20 commitment, but they said they would help all they
21 could.

22 Q. So, again, if you will turn to this time
23 J. Arkoosh Exhibit 1. Are you able to find that? It's
24 right after your tab.

25 A. Yes.

1 Q. Again, so I don't forget this time, there are
2 two sheets; correct?

3 A. Yes.

4 Q. So are the two sheets attempting to address
5 the Varin property as well as the Ohlinger property?

6 A. Yes. I did my injury sheets to reflect the
7 water that is appurtenant to each property and what
8 would be able to be sustained with that water.

9 Q. Understood.

10 So the first sheet of J. Arkoosh Exhibit 1,
11 what property would that one be?

12 A. That is the Varin property.

13 Q. Very good.

14 Let's talk about that. Again, were you the
15 person that provided the information for the crops
16 grown, the days needed to irrigate, the target yields,
17 projected loss and cost?

18 A. Yes.

19 Q. And would you explain what the -- let's take
20 alfalfa, explain what you think as far as the yield and
21 the crop loss could be.

22 A. Well, when I did this it was with the
23 watermaster projections of certain priority cuts. I
24 believe the '85 has been off for quite a while now. And
25 so really all I have on that place now is just about a

1 half a cfs.

2 So basically it's the same as I talked about
3 before, I think we'll have about a 3-ton-per-acre
4 shortfall on that property, on --

5 Q. The Varin property.

6 A. Yes, on -- I should have brought some glasses.
7 I can't tell if that's -- I think it's 58 acres, and at
8 \$200 a ton that's \$40,800.

9 Q. Again, the basis of the value of the hay you
10 already testified to, and that would be the same here?

11 A. Yes.

12 Q. So the \$40,800 is what you would project to be
13 your loss on the Varin property this year?

14 A. Yes.

15 Q. Let's turn to the second sheet then. This
16 would be, I assume, the Ohlinger property?

17 A. Yes.

18 Q. Explain your numbers there, especially when
19 you're dealing with the organic fresh potatoes.

20 A. On these potatoes I had to rely on other folks
21 to tell me their value and approximate yields to expect.
22 This reflects, if this crop fails, what the renter, the
23 loss to the renter will be and ultimately probably the
24 loss to me, because I guaranteed him water and power.

25 So it's 350 sacks per hundredweight, and I

1 think we used a price of 15.9 cents a pound, I think is
2 what it was, which is, I think, very, very conservative
3 for this crop, and that comes out to \$605,283.

4 Q. How about the organic new seeding?

5 A. Yes. Knowing we didn't have enough water to
6 keep these potatoes alive, we didn't want to plant
7 organic new seeding and have it fail as well. So we
8 just saved the seed cost and didn't plant them, plant
9 it.

10 Generally when we plant alfalfa, we get 5 ton
11 to the acre. We'll get a good cutting of oats and
12 alfalfa, which will amount to about 4 ton or a little
13 better. It really yields well. And then we usually get
14 another good cutting that is over a ton. So I think
15 that is a reasonable yield.

16 Q. So this would show then that you're projecting
17 losses of up to \$611,000 and some change.

18 A. Yes. And again, the potato loss, I don't know
19 how you would assign that, to him or me, but ultimately
20 probably to me.

21 Q. Well, you say you guaranteed the water?

22 A. Yes.

23 Q. And if you don't have the water and the
24 potatoes fail, do you presume you could have some issues
25 there?

1 A. I presume I could.

2 Q. I don't want you to admit liability as your
3 attorney. Okay?

4 A. Yeah. But we will manage our water as best we
5 can to try to save ourselves as best we can. So, I
6 don't know.

7 Q. So last line of questioning then. You're part
8 of the organization that has asked that the curtailment
9 of the pumps in the Bellevue Triangle occur; is that
10 correct?

11 A. Yes.

12 Q. Do you believe that the pumps in the Bellevue
13 Triangle are, in fact, decreasing the flows and,
14 therefore, impacting your water rights in the Lemhi --
15 oh, my gosh, in the Little Wood?

16 A. Yes, I do believe that.

17 Q. I'm so sorry. I don't know why I've got that
18 on my brain.

19 Do you have any personal knowledge or personal
20 experience to make you believe that when pumps are
21 turned off in the Bellevue Triangle that, in fact, the
22 Little Wood actually does increase in flows?

23 A. Like everyone else that's spoken today, it's
24 been observed over the years. I rely a lot on what Rod
25 Hubsmith has told me over the years. He lives there and

1 we communicate quite often. We'll talk throughout the
2 year and we always talk about how much water is in the
3 river, and so he tells me there is quite a correlation.
4 But on top of that we have hired Eric Miller.

5 Q. So you're relying upon experts as well.

6 A. Yes. I believe Eric Miller and Jennifer's
7 testimony, and I have read part of her report. So yeah,
8 I think there is definitely a strong correlation just
9 from what I've been told and what I understand from
10 experts.

11 Q. And from your testimony, would you maintain
12 that obviously if there are additional flows in the
13 Little Wood, that your water rights would stay on
14 longer?

15 A. Yes.

16 Q. Therefore, less damage to your crops?

17 A. Yes.

18 MR. RIGBY: I have no further questions.

19 THE HEARING OFFICER: Mr. Fletcher.

20 MR. FLETCHER: I have no questions.

21 THE HEARING OFFICER: Is this an appropriate
22 time for a break or --

23 MR. RIGBY: I'm sorry, before we do, I need to
24 move for the admission of J. Arkoosh Exhibit 1, which
25 includes two sheets.

1 THE HEARING OFFICER: Any objection to the
2 admission of these documents?

3 Okay. The documents included in -- this will
4 be John Arkoosh or J. Arkoosh -- Exhibit 1 are received
5 into evidence.

6 (J. Arkoosh Exhibit 1 received.)

7 THE HEARING OFFICER: Mr. Rigby, my memory is
8 that even though there was a discussion about
9 stipulation of the admission of the other documents, I
10 don't think we actually stated that they were admitted
11 into the record.

12 MR. RIGBY: Good point, Mr. Director.

13 So, therefore, I would move, based upon the
14 stipulation that each of those that I stated and are
15 contained in the exhibit book for both W. Arkoosh as
16 well as J. Arkoosh be admitted into evidence with the
17 stipulation that any of the Cottonwood rights or the
18 Wood River rights only be for the purpose of showing
19 total water supply.

20 THE HEARING OFFICER: So referencing the
21 exhibit number themselves, they would be J. Arkoosh
22 Exhibits 2 through 17?

23 MR. LASKI: I think it would be 2 through 16,
24 and excluding 14 because there is no Exhibit 14.

25 MR. RIGBY: Correct.

1 THE HEARING OFFICER: That's correct because
2 we did not discuss 17.

3 MR. BROMLEY: My same statement as to the
4 so-called Cottonwood decreed rights that are sourced
5 from the Big Wood River.

6 THE HEARING OFFICER: So there are two of
7 those rights, as I recall, and which exhibit numbers?

8 MR. LASKI: Those are Exhibits 15 and 12.

9 THE HEARING OFFICER: Thank you, Mr. Laski,
10 for tracking.

11 MR. RIGBY: Yes, thank you.

12 THE HEARING OFFICER: So 15 we actually --

13 MR. RIGBY: Actually, it's 16 because they
14 were reversed in order.

15 MR. LASKI: 15 is the map.

16 MR. RIGBY: 15 is the map. So it would be 16
17 and 12.

18 THE HEARING OFFICER: That's the way I
19 remember the explanation.

20 So water rights that are described by Exhibits
21 12 and 16, these water rights identify the source as the
22 Big Wood River, and so the water rights identified in
23 Exhibits 12 and 16, the exhibits are admitted into
24 evidence with the recognition that the sole purpose of
25 the admission is to describe the entire water supply in

1 those lands, but not for any other purpose, Mr. Bromley.

2 MR. BROMLEY: Thank you.

3 THE HEARING OFFICER: So all of those
4 exhibits, and let me see if I can get it right again.
5 Exhibits marked as J. Arkoosh Exhibit 2 through 13; is
6 that correct?

7 MR. RIGBY: 16.

8 MR. LASKI: 16.

9 THE HEARING OFFICER: Well, but we missed --
10 The documents marked as Exhibits 2 through 13
11 and Exhibits 15 and 16 are received into evidence.

12 (J. Arkoosh Exhibits 2 through 13, 15, and
13 16 received.)

14 THE HEARING OFFICER: That completes the
15 housekeeping. Do we want a break before cross-
16 examination?

17 MR. THOMPSON: Yes, please.

18 THE HEARING OFFICER: Let's come back at 3:30.

19 (Recess taken.)

20 THE HEARING OFFICER: We are back on the
21 record after the afternoon break.

22 Mr. Laski.

23 ///

24 ///

25 ///

1 CROSS-EXAMINATION

2 BY MR. LASKI:

3 Q. Mr. Arkoosh, I'm Jim Laski. I represent the
4 Galena Ground Water District. I believe you were
5 deposed by my associate, Heather O'Leary.

6 A. Yes.

7 Q. I apologize in advance because I wasn't sure
8 how we were doing you and your dad; so I'm probably a
9 little disjointed going through this.

10 But first, just on a global basis, between
11 your dad's water rights and your water rights, there
12 are -- you testified that there is American Falls water
13 rights, there is Carey Act water rights, and there is
14 Cottonwood water rights that are all sort of
15 supplemental to the main water rights; is that correct?

16 A. Well, some of them are supplemental rights;
17 some are just water rights.

18 Q. So I guess the Carey Act right is just a
19 regular water right.

20 A. I believe it is, yeah.

21 Q. And the American Falls are supplemental water
22 rights?

23 A. No. Some American Falls rights are just water
24 rights, and then there is American Falls supplemental
25 water, which is supplemental to our decreed rights, and

1 we have some of those, just a little bit of American
2 Falls regular water right. I think I'm -- I mean, I'm
3 not an expert.

4 Q. We can go through that more closely. I was
5 just trying to sort of go over it quickly and maybe that
6 won't work.

7 But other than the American Falls rights, the
8 Carey Act rights, and the Cottonwood rights, which are
9 decreed, all the other decreed rights also contain a 161
10 Condition; is that correct?

11 A. I believe so. I think we went over that in
12 deposition. I think they did, yes.

13 Q. And each of those have a place, or a source
14 that is below the Milner-Gooding Canal; isn't that
15 correct? I think that's what you said on the Director's
16 questions.

17 A. On the exchange?

18 Q. Yes.

19 A. Yes, when they are in priority, I believe the
20 water comes from American Falls #2, when they are in
21 priority.

22 Q. But there has been also testimony in the
23 record that those water rights have never been delivered
24 in accordance with the exchange condition; isn't that
25 correct?

1 A. I don't know what you mean by that.

2 Q. Well, the exchange condition requires that the
3 water be delivered from American Falls, yet Mr. Luke
4 testified that there was confusion as to how the
5 delivery was to work, in that he didn't think that they
6 were delivered that way.

7 A. Well, I can tell you my understanding of it,
8 if you like.

9 Q. Sure.

10 A. When those rights are in priority, the actual
11 river water is held above the Gooding-Milner Canal and
12 delivered through the Big Wood Canal system to help
13 rights up there, and the American Falls delivers our
14 decreed rights until we have a priority cut, at which
15 point they are cut off.

16 Q. Correct. That's how they're supposed to work.
17 But I think the testimony was that that's not how they
18 have been delivered, that there was confusion as to how
19 they were delivered, and that was all --

20 A. No, as far as I know, that's how they've
21 always been delivered, going back as long as I can
22 remember. But maybe I'm wrong, but I'm pretty sure I'm
23 right.

24 Q. Could you be sure, based on how you take your
25 water out of the --

1 A. Why I say that is because I became aware of
2 this years ago, it came up in another matter, and I
3 think they've always been delivered that way, the way I
4 just described.

5 Q. So do you know why Mr. Luke issued a
6 memorandum to Mr. Lakey directing him as to how to
7 deliver that water?

8 A. No, I don't know why for sure. I think there
9 was some confusion, I think you're right about that, but
10 I don't know why Mr. Luke -- I don't know why he did
11 what he did.

12 Q. You believe it was delivered in accordance
13 with the exchange agreement.

14 A. I believe it has been and it continues to be
15 delivered in accordance with the exchange agreement, I
16 do.

17 Q. If it was not delivered in accordance with the
18 exchange agreement, you wouldn't know what impacts that
19 might have on your dates, your priority dates?

20 A. Well, I don't think it really has any impact
21 on our priority dates, because our priority dates are
22 determined to be in priority or not in priority by
23 gaging stations in Little Wood River.

24 Q. Right. So you don't know if it would impact
25 when the cut dates were for those water rights, when

1 they would be cut off.

2 A. I don't believe it really does, but I may be
3 wrong. I'm not -- I don't work for Water Resources. I
4 am just a farmer, but I may be wrong.

5 Q. With respect to the two farms that you operate
6 in your name, that's the Varin farm and the Ohlinger
7 farm?

8 A. Yes.

9 Q. So the Varin farm has .4 cfs of 1882 water?

10 A. Yes.

11 Q. And that generally runs the entire year?

12 A. It has --

13 Q. And you're not sure this year?

14 THE HEARING OFFICER: Let me just say, both of
15 you are talking over each other. The reporter has
16 glanced at me a couple of times, and I just want to
17 interject again and say: Be patient, wait until the
18 other person finishes. Thank you.

19 Sorry, Mr. Laski.

20 Q. (BY MR. LASKI) So .4 cfs and that generally
21 does not get turned off or cut.

22 A. No, it hasn't since I've been farming that
23 place, and I don't know that it -- I don't know that it
24 ever has been turned off for a priority cut. I don't
25 know that.

1 Q. And then it also has an April 1, 1885, which I
2 think you testified has already been turned off?

3 A. Yes.

4 Q. And then you have -- this is the American
5 Falls water. You have an American Falls water right for
6 .1 cfs, and then a supplemental water right for .53 cfs
7 on that.

8 A. Yes.

9 Q. How much of the acreage then with those rights
10 remain in flow all year, all season, as long as American
11 Falls --

12 A. Those three rights you just spoke of?

13 Q. Yes.

14 A. We could irrigate about half of that farm, I
15 mean, approximately half. It's just about 1 cfs total I
16 believe.

17 Q. Just about? So --

18 A. Probably a little less than half of that farm
19 actually, but anyway.

20 Q. When you calculated your damages on your
21 Exhibit 1, when you do less cuttings -- I think you said
22 you get two cuts instead of four cuts based on having
23 less water.

24 A. Yes. If that's all -- yes, if that's all the
25 water we can count on this year, we'll probably only get

1 two cuttings instead of four.

2 Q. So you don't irrigate less land -- because you
3 have water throughout the whole season.

4 A. Yes. So if I don't get any additional water
5 for that farm, then I will turn off probably half of
6 that farm. There is three pivot systems on there. I
7 would probably run the one system, that's the biggest
8 pivot, it probably covers the best ground, and the other
9 two would go dry, after the second cutting of hay or
10 after my priority cuts come and I had no more water.

11 Q. Would the one pivot then still get four
12 cuttings?

13 A. Yes, and I reflected that.

14 Q. How is that reflected?

15 A. How many acres -- I would have to find that
16 paper. I think it's like 68 acres of ground that is
17 going to be dried up and only get two cuttings, I
18 believe is what it said, is what I had.

19 Q. So the portion of land that only gets two
20 cuttings is how you base the damage number? Isn't there
21 some savings also from not irrigating with the other two
22 pivots?

23 A. Savings?

24 Q. Yes.

25 A. In what way?

1 Q. In terms of power or --

2 A. Oh, sure, if you're not pumping as much water
3 you're not burning as much power.

4 THE HEARING OFFICER: You're talking over each
5 other again.

6 THE WITNESS: Sorry.

7 There is some power savings.

8 Q. (BY MR. LASKI) And manpower as well?

9 A. Not really manpower. It's pivot irrigation.
10 So you push a button. Maybe on the harvesting, yes.
11 Okay. There you go.

12 Q. That wasn't calculated into your damage
13 analysis.

14 A. No.

15 Q. So those are gross damages as opposed to
16 damages that are net of costs.

17 A. I guess so.

18 Q. How many cuttings did you get last year?

19 A. Four on most of our ground. Some was new
20 seeding and we only got three cuttings on part of that
21 and only two on part of that because it was seeded late.

22 Q. So you testified that you were planning to
23 purchase water perhaps to cover that?

24 A. Yes, we're trying to purchase water.

25 Q. So would the cost of purchasing water to cover

1 the shortfall be less than \$40,000?

2 A. Well, to cover the whole shortfall, no, it
3 would be more than \$40,000. If I felt I could afford
4 and find the water, it would be more than \$40,000.
5 Well, for what we're trying -- okay, for that property,
6 let me think about that.

7 Yeah, it would probably be less, somewhat
8 less, depending on where you got it and what it cost.

9 Q. So I guess the damage analysis is somewhat
10 speculative based on you haven't been damaged yet so
11 you're still trying to figure it out.

12 A. No, I wouldn't say that, because if I was able
13 to find the water to have a full season on that farm, I
14 would still be out the cost of the water, while everyone
15 in the Triangle is pumping out of priority.

16 Q. Right. But what I'm saying is you're not sure
17 what that amount is. The amounts you're saying are
18 speculative.

19 A. Well, I don't think they're speculative. I
20 think that that many ton of hay is worth that much
21 money.

22 Q. So your 1885 water right, the 37-328 on that,
23 when does that typically get cut?

24 A. A lot of years it will run through the summer,
25 but it's increasingly being cut more and more often,

1 earlier and earlier. I don't know, I would have to look
2 at the watermaster's records to tell you that.

3 Q. Do you recall if it was cut last summer?

4 A. I believe it was, yes.

5 Q. So even with that water right being cut, you
6 were still able to get four cuttings of hay?

7 A. Yes, I think we were last year.

8 Q. Then if that water right was cut, then the
9 37-1127, which has a 1905 priority, that would have been
10 cut.

11 A. Yes.

12 Q. So you don't recall the date of that last year
13 the 1885 was cut?

14 A. No.

15 Q. Going to the Ohlinger farm.

16 A. Yes.

17 Q. So you said you leased it and changed the
18 water system so now it's growing organic fresh potatoes?

19 A. Yes.

20 Q. So is the lessee responsible for the potatoes?

21 A. He's responsible for the planting and
22 harvesting and cultivating and so forth. I'm
23 responsible to provide water and power, and I'm actually
24 irrigating the crop, as per the lease agreement.

25 Q. And you calculated damages based on loss off

1 the entire crop?

2 A. No, just loss of, I believe 114 acres of the
3 152 acres.

4 Q. But you're planning to purchase water to cover
5 that.

6 A. Well, I haven't been able to purchase enough
7 yet to cover that. So we're going to have to rob Peter
8 to pay Paul. If we keep the potatoes alive, we'll have
9 more loss in our hay acres.

10 Q. If you keep the potatoes alive?

11 A. If we take water away from our other crops to
12 keep the potatoes alive, we will have a bigger loss on
13 the other side of the farm. I don't know, I'm hoping
14 that the water that we're trying to purchase will get me
15 through until I can secure some water from neighbors or
16 other sources, but I don't know, it's very uncertain at
17 this point.

18 Q. Does your lease specify how damages, who bears
19 the risk for loss of the crop?

20 A. I think when I say I'll provide water and
21 power, I would suspect that the liability for crop
22 failure for lack of water would probably fall on me.

23 Q. Is there a written lease?

24 A. Yes, there is.

25 Q. But you're not sure what the terms said.

1 A. No, honestly I'm not. I'm more of a handshake
2 guy, and when I tell somebody I'm going to do something,
3 I do it to the best of my ability. So a paper lease, I
4 signed it, and I trust the fellow I deal with; so that's
5 where it's at.

6 Q. How much are you paid -- how are you paid
7 through the lease?

8 A. So much per acre.

9 Q. So is it based on yield or not?

10 A. No. Well, I shouldn't say that.

11 MS. JENKINS: I'm sorry. Can you speak up?
12 Our Zoom people are having a hard time hearing you.

13 MR. LASKI: Sorry. I thought I was speaking
14 loud.

15 THE WITNESS: It maybe is partially based on
16 yield. Like I said, it was a handshake and there is a
17 written lease. But during the handshake portion, before
18 the written lease came about, we were standing on the
19 ditch bank last fall and we agreed on a -- well, we
20 didn't agree on a price to start with. And I wanted so
21 much and he wanted to pay so much, and he said, Well, if
22 we have a good crop, we'll pay your price. So I guess
23 sort of it's based on yield, to a certain extent.

24 Q. (BY MR. LASKI) This is the first crop, the
25 first year's crop of potatoes.

1 A. Yes. On that farm, yes, probably since the
2 '50s, I don't know.

3 Q. So you have no records whatsoever as to what
4 to expect for a yield.

5 A. I have a pretty good idea of what to expect
6 there. My neighbors just up the river have a very
7 similar farm. It's right across the fence. And he was
8 able to provide me with yield expectations for potatoes
9 grown by the same grower on his place right across the
10 fence in previous years, and yields of potatoes they
11 grow themselves and prices that they both receive for
12 their potatoes.

13 Q. And does he have the same water rights you
14 have?

15 A. Pretty similar.

16 Q. This morning Mr. Brossy said that he had
17 offered to sell you water. Have you bought any water
18 from him or rent?

19 A. No. In fact, I was going to bring that up,
20 because when Jerry asked me if I procured any extra
21 water, Mr. Brossy didn't offer to sell me water. He
22 offered me the use of his water and I accepted, and for
23 the last week I've been running on his water. And it's
24 going to be shut off tomorrow, maybe tonight.

25 Q. Do you have dates as to when you need to have

1 water to finish each cutting of alfalfa?

2 A. When I need to have water?

3 Q. Well, so I guess my question is: From a
4 priority cutoff date, is there a date that you need the
5 water to run through so you get a third cutting versus a
6 second, only two cuttings, or versus a fourth? Do you
7 have those dates?

8 A. I think I put that on my sheet. I really wish
9 I would have brought some glasses. I think it was
10 September 1st on the alfalfa. Yes, I put September 1st
11 on the alfalfa.

12 Q. But that would be to get a full four cuttings.

13 A. Yes.

14 Q. Do you have a date to get three cuttings?

15 A. No, I just know that my water will be off
16 shortly after my first cutting, and I'll be lucky to get
17 it watered again enough to get a second cutting. I
18 hadn't really thought about what date I would have to
19 get through for a third cutting.

20 Q. In Tim Luke's memo he discussed for the 161
21 Condition water rights that he would need to get
22 additional information about available water supplies.
23 Have you been asked for that?

24 A. For what?

25 Q. As he --

1 A. From me, additional information?

2 Q. Has Tim Luke asked you for additional
3 information regarding water supplies as the holder of a
4 Condition 161 water right?

5 A. No, I don't believe so. I haven't talked to
6 Mr. Luke for quite some time.

7 Q. Has anybody from the Department of Water
8 Resources?

9 A. Asked me what?

10 Q. Asked you for additional information regarding
11 available water supplies.

12 A. Water supply from where?

13 Q. From anywhere.

14 A. No, I don't believe anyone from the Department
15 has.

16 Q. Have you provided the Department any
17 information?

18 A. About additional water supply?

19 Q. Yes.

20 A. No.

21 Q. Have you requested the Department to
22 administer water under conjunctive management?

23 A. No, I don't believe I have.

24 Q. Have you requested the Department to
25 administer water in any way?

1 A. Yes, I would like the Department to administer
2 the water in Water District 37, groundwater water and
3 surface water, by priority date. That's what I have
4 requested.

5 Q. Can you identify any specific water rights,
6 groundwater rights that caused injury to your water?

7 A. No.

8 Q. Do you have a specific cause for the injury to
9 your water?

10 A. A specific what?

11 Q. Do you have an opinion as to a specific cause
12 for the injury to your water?

13 A. Yes, I think the pumping in the Bellevue
14 Triangle is injuring our water rights. The groundwater
15 pumping in the Bellevue Triangle is injuring our water
16 rights.

17 Q. Is that the sole injury to your water rights?

18 A. I would say that's the main injury. I don't
19 know of any others offhand.

20 Q. So you know of no other reasons that your
21 water supply is short.

22 A. Well, yeah, I don't. I mean, there are
23 weather conditions, but that doesn't enter into it when
24 you have priority dates, that water needs to be
25 administered by priority.

1 Q. Do you have any estimates -- I know you
2 testified that you have new conveyance systems, but do
3 you have any estimates of conveyance loss between the
4 point of diversion and the application on any of your
5 systems?

6 A. No, I would say there is none on three of
7 those farms. There may be some minor ditch seepage for
8 500 feet on the other farm, as I said, I already stated.
9 I hope to remedy that in the next year or two with a
10 pipe clear to the river.

11 Q. You don't have an estimate of the amount of
12 those losses.

13 A. No, I don't. It's very minimal. Compared to
14 what it was last year, it's miniscule.

15 Q. If your groundwater rights were curtailed on
16 July 1, do you know whether your 1884 right would be
17 restored?

18 A. I believe they would.

19 Q. Why do you believe that?

20 A. I perused Jennifer Sukow's staff memo, I've
21 talked to our hydrologist, I believe that from talking
22 with experts and listening to what the IDWR staff has
23 said.

24 Q. Do you believe they would stay on through
25 September 30th?

1 A. I think there is a very good chance that they
2 would.

3 Q. That's based on your discussion with Jennifer
4 Sukow?

5 A. No, I haven't discussed anything with Jennifer
6 Sukow. I read her memo, I've talked to Eric Miller, and
7 I have lived on that river for 56 years, and I think
8 that there is very good chance we would have water if
9 the wells were shut off in the Bellevue Triangle.

10 Q. How frequently do you need to acquire
11 additional water, like you are looking for this season,
12 to complete your farming?

13 A. Increasingly more frequently.

14 Q. Can you quantify that?

15 A. I can to a certain extent. Yesterday on the
16 way up here I asked my bookkeeper, who is my sister, to
17 go through the last several years. She started in, I
18 believe, 2013 until now, and in those 8 years, 6 of
19 those years I needed to purchase water, and I spent on
20 outside water \$82,000 in 6 of those 8 years. And I
21 think water this year is costing twice as much as it did
22 in previous years, outside water is going to cost us
23 twice as much.

24 Q. So 6 of the last 8 years you purchased
25 additional water?

1 A. According to my books, and that's from the
2 checks written for water.

3 Q. \$82,000, is that a year or cumulative?

4 A. That is cumulative for 6 separate years. Some
5 years was more, some years was less. One year it was
6 \$40,000, I recall just from memory.

7 Q. Do you know what year that was?

8 A. I don't.

9 Q. Is that just for your two farms or is that for
10 your dad's as well?

11 A. That was for my farms and my dad's.

12 Q. And your dad's?

13 A. Yes.

14 Q. I want to look at your dad's rights.

15 A. Okay.

16 Q. So in your testimony you identified your
17 father's two ranches as the Gooding ranch and the
18 Lincoln County ranch?

19 A. Yes.

20 Q. And on the Gooding ranch, based on
21 supplemental or the -- well, the American Falls water
22 and the supplemental water and then the supplemental
23 decreed water, you testified that there is sufficient
24 water for the entire season.

25 A. With all the sources, yes.

1 Q. So your only cost is pumping the supplemental
2 well.

3 A. Yes, I guess some -- yes.

4 Q. And you testified that you had to pump that
5 well last year as well?

6 A. Yes, we did.

7 Q. Do you typically have to pump it every year?

8 A. Not every year. I mean, 2017 we had plenty of
9 water. There is years when there is major weather
10 events that we don't need to pump it, but increasingly
11 more often.

12 Q. But most years you do have to pump it.

13 A. I would say half the years. Probably more
14 than half anymore, it's getting to be fairly regular,
15 yes.

16 Q. For the Lincoln County farm, I think you
17 testified that you had -- well, do you know how much
18 American Falls water you have on that?

19 A. I don't think that's right in this book. I
20 believe it's 30 inches, right around 30 inches I
21 believe.

22 MR. LASKI: Is there an exhibit binder that
23 has the water right damage chart for the Bill Arkoosh?
24 Should be Bill Arkoosh No. 1.

25 MR. RIGBY: It is.

1 MR. LASKI: But he doesn't seem to have that
2 in his binder.

3 THE WITNESS: I do.

4 Q. (BY MR. LASKI) You do?

5 A. Yeah.

6 Q. Okay. So if you look at that spreadsheet, I
7 think it identifies your American Falls water.

8 A. You are right, it does there.

9 Q. So doesn't it total 45 inches of supplemental
10 water approximately?

11 A. Oh, yeah, here. Yes, you are right, it is
12 45 inches. I misspoke. That's the amount that I used
13 for the injured projection too.

14 Q. Is your injury, with respect to the alfalfa
15 again, that is based on two cuttings instead of four on
16 the entirety of the property you have planted in
17 alfalfa?

18 A. Let's see. No.

19 Yes. Yes, it is. Yes, it is.

20 Q. You use the American Falls water on different
21 land than the decreed water rights, or your dad does.

22 A. No, it's all the same land.

23 Q. Well, is it different acreage?

24 A. Yeah, we would keep it on the corn to keep the
25 corn alive because we have to have that. You can't buy

1 silage corn very far away. So we have got to keep the
2 silage corn alive. We can buy dry hay if we have to.
3 So we would sacrifice the hay before the corn.

4 Q. Can you tell me how often your dad gets four
5 cuttings of alfalfa?

6 A. Well, if he has got a full water supply, every
7 year. Unless we choose to go for more tonnage and less
8 cuttings, which you still get the same amount of tons,
9 just not as high of quality.

10 Q. So how often do you get your full water
11 supply?

12 A. Less and less often. I don't know. We were
13 curtailed early last year. This year we are already
14 off. 2020 I don't think was a spectacular year, but I
15 couldn't tell you when the priority cuts came that year
16 for sure.

17 From 2017 to '19, I think we were kind of
18 tailed up by the big winter of '17. That kind of
19 replenished the aquifer in the Wood River Valley, and
20 the residual effect of all that water flowing in there
21 that winter, it helped for a couple of years.

22 We had cattle at Magic Reservoir, and there is
23 a spring high on the hill and that spring ran, after
24 that winter it ran a lot more water for about 3 years,
25 and then it was back to where it was before.

1 Q. Did you get four cuttings last year?

2 A. On part of our ground, yes.

3 Q. I'm talking about your dad's.

4 A. My dad's?

5 Q. Yes.

6 A. Well, on part of it. Some of it was new
7 seeding, and as I explained earlier, you don't generally
8 get four cuttings -- you can't get four cuttings on new
9 seeding. If you get it in early you may get three
10 cuttings, and I believe we did get three cuttings on
11 part of that, part of it was two. We also purchased
12 outside water last year.

13 Q. At your dad's property?

14 A. Yes. Well, for all our properties combined, I
15 guess. We used it where we needed it, where we could
16 use it.

17 MR. LASKI: I think that's all the questions I
18 have.

19 THE HEARING OFFICER: Thank you, Mr. Laski.

20 Mr. Thompson, do you have questions?

21 MR. THOMPSON: Just a couple.

22

23 CROSS-EXAMINATION

24 BY MR. THOMPSON:

25 Q. Good afternoon, Mr. Arkoosh. Travis Thompson

1 for the South Valley Ground Water District.

2 I'm just going to refer generally to these
3 sheets, the Table of Projected Injury. For your
4 father's place, noted Bill Arkoosh, you have the 1884
5 right, the 1886 right, and the 1899 river right; is that
6 correct?

7 A. Yes.

8 Q. And that property you have American Falls
9 water and American Falls supplemental, those two
10 different supplies?

11 A. Yes.

12 Q. That water is projected to be used on the
13 silage corn for the rest of the year; is that correct?

14 A. Yes.

15 Q. And the second farm of your father's property
16 has an 1890 water right and a 1906 water right from the
17 Little Wood; is that correct?

18 A. Yes.

19 Q. And the supplemental supply on that farm is
20 the supplemental groundwater right?

21 A. There is an American Falls supplemental right
22 associated with that also.

23 Q. And the American Falls water, so three
24 supplemental supplies?

25 A. Yes.

1 Q. And those supplies are expected to be
2 available through the irrigation season; is that
3 correct?

4 A. Yes.

5 Q. For that alfalfa, that portion of it.

6 A. Yes.

7 Q. And then turning to your property in your
8 name, just in general, you have again that American
9 Falls water and that American Falls supplemental water,
10 a portion of it?

11 A. On my first property, yes, the Varin property.

12 Q. And then the organic potatoes that you have,
13 the field you had leased out for that purpose, that has
14 what is called CAW 13390?

15 A. That is Carey Act water, I believe.

16 Q. So that CAW stands for Carey Act water. Is
17 that your understanding?

18 A. That's my understanding, yes.

19 Q. That water is available through the irrigation
20 season.

21 A. That's my understanding. It has been in the
22 past. I assumed it would be this year.

23 Q. But only for a portion of that field; is that
24 correct?

25 A. Yes, for whatever you can irrigate with .94

1 cfs.

2 MR. THOMPSON: That's all the questions I
3 have. Thank you.

4 THE HEARING OFFICER: Thank you, Mr. Thompson.

5 I don't see any other group 2 folks here.

6 Group 3. Mr. Bromley?

7 MR. BROMLEY: Thank you.

8
9 CROSS-EXAMINATION

10 QUESTIONS BY MR. BROMLEY:

11 Q. Hi, Mr. Arkoosh, Chris Bromley. Thank you for
12 being here.

13 A. Uh-huh.

14 Q. I have two quick questions. One, when do you
15 generally turn on with your Little Wood rights?

16 A. It depends on what the crop is, I guess. But
17 I try to be on, the first week of April is nice, the
18 second week for sure. On alfalfa or maybe a grain crop,
19 might need a little shot of water, depending on the
20 year. Some years you turn on later.

21 Q. Thank you.

22 Second question. What I heard you tell
23 Mr. Laski when he was asking about administration was
24 that you were looking for administration of groundwater
25 and surface water rights within Water District 37.

1 A. Well, within the Bellevue Triangle.

2 Q. And that then was my question. I heard you
3 later seem to clarify that by saying --

4 A. Yes, within the Bellevue Triangle.

5 Q. So you are only asking for administration
6 within the Bellevue Triangle.

7 A. Yes, within the boundaries of this proceeding.

8 MR. BROMLEY: Okay. Thank you. Nothing
9 further.

10 THE HEARING OFFICER: Thank you, Mr. Bromley.

11 Other group 3 questioners? Mr. Robertson?
12 Where is he? He decided not to stay for the nightcap,
13 huh?

14 Mr. O'Bannon?

15 MR. O'BANNON: No questions.

16 THE HEARING OFFICER: Okay. Redirect I think
17 at this point.

18 MR. RIGBY: No further questions,
19 Mr. Director.

20 THE HEARING OFFICER: All right. Thank you,
21 Mr. Arkoosh.

22 THE WITNESS: You are welcome. Thank you,
23 sir.

24 THE HEARING OFFICER: Next witness.

25 MR. RIGBY: We call Alton Huyser to the stand.

1 THE HEARING OFFICER: Mr. Huyser, if you'll
2 come forward, please.

3 ALVIN HUYSER,
4 having been called as a witness by the Big Wood & Little
5 Wood Water Users Association and first duly sworn,
6 testified as follows:

7
8 THE HEARING OFFICER: I want to apologize to
9 Mr. Robertson. He just appeared again. I'm sorry to
10 have impugned his longevity or his endurance. Are you
11 leaving now?

12 MR. ROBERTSON: No.

13 MR. RIGBY: May I begin?

14 THE HEARING OFFICER: Yes. Mr. Rigby, please
15 question.

16 MR. RIGBY: Thank you, Mr. Director.

17
18 DIRECT EXAMINATION

19 BY MR. RIGBY:

20 Q. Good afternoon.

21 A. Good afternoon.

22 Q. Endurance test here.

23 A. Yep.

24 Q. Please state your full name and current
25 address for the record.

1 A. Alton Lee Huyser, A-l-t-o-n, L-e-e,
2 H-u-y-s-e-r, at 72 North Highway 75, Shoshone, Idaho.

3 Q. And are you a named party to this proceeding?

4 A. Yes, I am.

5 Q. And you have been here for some of the other
6 farming witnesses?

7 A. Yes, I've heard others, yes.

8 Q. Again, let's both be careful not to talk over
9 each other, as per the instruction of the Director.

10 What is your occupation?

11 A. I'm a farmer. I have been all my life.

12 Q. In fact, do you own a farm?

13 A. Yes, I do. I own a farm at this present
14 location, yes.

15 Q. So the issue that is before the Director, is
16 that the farm you are discussing?

17 A. Yes. This is the farm I'm discussing. It as
18 Little Wood River decreed rights. The Little Wood River
19 runs directly through the farm.

20 Q. Very good. We'll get to that.

21 Before we get there, what is your education
22 and background, as far as work experience is concerned?

23 A. I've had 2 years through college, and a lot of
24 practical experience through farming, most of it
25 unprofitable, however some of them profitable years.

1 But through the experience, mostly through farming.

2 Q. That's what keeps you coming back, right, the
3 profitable every once in a while?

4 A. Yes.

5 Q. Very good.

6 Again, are you a member of the Big Wood &
7 Little Wood Water Association?

8 A. Yes, I am.

9 Q. And joined with them for the purposes of
10 coming together for this particular proceeding?

11 A. Yes.

12 Q. All right. If you will turn then to
13 Exhibit -- it will be the Big Wood Farms.

14 By the way, let me ask you: Do you operate
15 under a different name than your personal name?

16 A. No. I operate under Big Wood Farms.

17 Q. Is that an entity or is that a DBA or --

18 A. It's a strictly entity, and so...

19 Q. By that I'm saying is it an LLC or is it just
20 the name you go -- you assume that name?

21 A. It's an LLC.

22 Q. Very good.

23 Are you the principal, one of the principals
24 in that?

25 A. Yes.

1 Q. Do you have any other entities that you
2 operate under?

3 A. No.

4 Q. The farm that we are talking about, is that
5 owned by the entity LLC?

6 A. No. The farm is owned by Alton and Paula
7 Huyser Trust.

8 Q. So the real estate itself is owned by that.
9 Is the operation of the farming done through the LLC?

10 A. That's correct.

11 Q. Very good.

12 The water rights themselves, do you know what
13 interest -- as far as the water rights themselves, how
14 are they owned?

15 A. The water rights are held by Alton and Paula
16 Huyser Trust.

17 Q. That's a revocable trust that the two of you
18 have created?

19 A. Yes.

20 Q. Very good.

21 So again, asking Counsel if we can stipulate
22 as to the water rights contained in Big Wood Farms
23 Exhibit 4, and Exhibit 5, which is the mapping of that.
24 Recognizing that, again, this is what we call the Big
25 Wood rights, with the prior stipulation.

1 And then as to Exhibit 6 and 7, which again is
2 the water right under 10561A and its resulting mapping.
3 Exhibit 8, which is 10561B and 9, which is the mapping.

4 And would that be it, those three water
5 rights, decreed?

6 A. That would be correct.

7 Q. Very good.

8 MR. RIGBY: May we stipulate, and have a
9 stipulation for that?

10 MR. THOMPSON: Yes.

11 MR. BROMLEY: Yes.

12 MR. RIGBY: Then I would offer them into
13 evidence, again, with the stipulation as to the
14 Cottonwood right.

15 THE HEARING OFFICER: Okay. So Mr. Rigby,
16 you'd move for the admission of Big Wood Farms exhibits
17 4 through 9; is that correct?

18 MR. RIGBY: It would be 4 through 9; that is
19 correct, Mr. Director.

20 THE HEARING OFFICER: And apparently the water
21 right that is represented by Exhibit 4 is a Cottonwood
22 right and lists Big Wood River as the source, or at
23 least one of the sources. Is that what you are
24 asserting, that there are two -- there is also a source
25 of Little Wood River there. Is there another one that

1 is the Cottonwood right?

2 MR. RIGBY: I don't believe so. I believe
3 it's only the one.

4 THE HEARING OFFICER: So Mr. Bromley, you
5 would renew your objection to at least the portion of
6 Right 37-59k that describes the Big Wood River as a
7 source.

8 MR. BROMLEY: That's correct. But Mr. Rigby
9 had asked about a stipulation, and I said yes. He was
10 removing 37-59k from his discussion, consistent with
11 prior stipulations, which is simply to look at total
12 water supply.

13 THE HEARING OFFICER: So you are stipulating
14 based on that explanation to the admission of Exhibit 4
15 through 9.

16 MR. BROMLEY: Correct.

17 THE HEARING OFFICER: And is there any other
18 objection to the admission of these documents?

19 Thank you. Based on no objection, Big Wood
20 Farms Exhibits 4 through 9 are received into evidence.

21 (Big Wood Farms Exhibits 4 through 9
22 received.)

23 MR. RIGBY: Very good.

24 Q. (BY MR. RIGBY) Mr. Huyser, it appears to me
25 that the two remaining water rights are for the same

1 location, as far as the geography of the area; is that
2 correct?

3 A. Yes, it is. Yes.

4 Q. So these are rights on top of one another, so
5 to speak.

6 A. Exactly.

7 Q. So we don't have to talk about two different
8 parcels, if you will, in our line of questioning; right?

9 A. That's correct. One is simply an A and one is
10 a B. So one is a 4 cubic acre, and then B is 2.2. But
11 they have exactly the same priority date.

12 Q. So it's cfs; right?

13 A. Cfs, yes. Excuse me.

14 Q. Let's talk about the acreage then itself. You
15 say the trust owns it?

16 A. Yes.

17 Q. How long has the trust owned it?

18 A. Since it was purchased back from Michelle
19 Stennett 3 years ago.

20 Q. Before that did you have any familiarity with
21 this particular parcel?

22 A. Yes. I've continued to rent it for the 10 or
23 11 years that she owned it. Prior to that, I owned it
24 and sold it to the Stennetts. So in other words, I
25 owned the farm, I sold it to Stennett and then I bought

1 it back, and that's where I am at at the present
2 situation right now.

3 Q. So it's come full circle.

4 A. Basically, yes.

5 Q. So in years then, how many years have you been
6 familiar with farming this particular parcel, whether
7 you owned it, leased it, purchased it back, otherwise?

8 A. I would say over 15 years, but closer to 20;
9 that's probably pretty close.

10 Q. So would you consider yourself familiar with
11 the farming practices and the water needs of this
12 particular parcel?

13 A. Yes.

14 Q. In addition to the water rights, the two
15 decreed water rights we are talking about for the
16 purposes of this particular hearing, do you have any
17 supplemental water in addition to this?

18 A. Yes, there is the water that was discussed
19 earlier, I can't remember what tab that is at but --

20 Q. The Cottonwood right?

21 A. Yes.

22 Q. In addition to that, are there supplemental
23 rights?

24 A. No.

25 Q. So when we talk about water rights on this

1 parcel, these two decreed water rights are it?

2 A. Yes, but there is the --

3 Q. Except for the Cottonwood.

4 A. Okay.

5 Q. I'm sorry. You are right.

6 A. There is three rights.

7 Q. There is three rights.

8 A. Yes.

9 Q. Yes. For the purpose of this particular
10 hearing, we are discussing the two rights.

11 A. Okay. Yes.

12 Q. Do you lease any additional supplemental
13 rights?

14 A. No, not this year.

15 Q. Have you in the past?

16 A. In the past I have leased additional water
17 when it became available.

18 Q. And typically speaking, what water right is
19 leasable?

20 A. Well, we were able to locate water as a
21 complete party, and went to North Snake Ground Water and
22 was able to secure water, I believe in the year 2012,
23 2013, when we had a short water year then.

24 Q. Without having a short water year, are your
25 decreed rights sufficient to grow the crops that you

1 generally grow on this parcel?

2 A. No, that would be incorrect. Normally my
3 decreed water rights are subject to run through
4 August 15th, thus the last 3 to 4 years they've been
5 shortened. Like this year, my decreed water went off on
6 June 2nd, and so it's been off since June 2nd.

7 Q. So as of right now do you have water that is
8 available to you to divert on this parcel?

9 A. No.

10 Q. So it's dry from this point forward, unless
11 something else occurs.

12 A. Unless something else occurs.

13 Q. All right. What do you have planted on the
14 parcel?

15 A. Well, presently -- I could foresee issues of
16 water shortage, and last fall I went and took one of the
17 pivots and I planted 140 acres of winter wheat because
18 it would actually take less water, and it should be able
19 to make it through a normal year.

20 The other pivot I planted spring wheat, hoping
21 we would be able to do the same thing. However, based
22 on the days of water that I need to finish the crop, I'm
23 about 30 days short on the winter wheat and -- well, 25
24 days short on the winter wheat and 35 days short on the
25 spring wheat. That's based on the analysis of what I

1 looked at and where we are at right now as far as the
2 maturity of the crop.

3 Q. We'll get into your Exhibit No. 1 in just a
4 moment. But let me ask you, are you attempting or have
5 you attempted to find additional water to lease?

6 A. We are attempting, but at this point until the
7 deal is made, you don't know if you have it. So
8 basically the answer is, we are attempting but we do not
9 have it completely available.

10 Q. Any let's talk about actually how you irrigate
11 these lands. How is it done? Is it pressurized, flood
12 irrigated, what it is?

13 A. There is two pump stations, which basically
14 allows me to pump my decreed water right and be able to
15 maximize those gallons per minute through both pump
16 stations. And when my Cottonwood water is available, it
17 allows me to pump an additional more. But the 2,800
18 gallons per minute, I used it through both pumping
19 locations. Of that, it goes into pressurized hand lines
20 but mostly in pivots.

21 I have improved water efficiency. I spent
22 \$5,000 last year improving a lower pressure, more
23 efficient irrigation system. I continue to work through
24 my pumps to have them more efficient and also change
25 nozzles as much as I can, especially pertaining to the

1 hand lines and that, but it's subject to wear and usage.

2 Q. As far as your watering to date, until your
3 water right was cut, were you able to have a full water
4 supply as required by your crops?

5 A. I would say no. Obviously, as everyone, or
6 you and other farmers would be aware, you would want to
7 maintain the moisture of the winter wheat as much as you
8 can because it would reach maturity the fastest. And so
9 obviously the spring wheat you would have to sacrifice a
10 little bit in order to -- you are going to get shrivel
11 and various others things in this grain; however, that
12 would reduce or lessen the amount of injury.

13 Q. In a normal year, when your decreed water
14 rights and obviously your earlier water rights, the
15 Cottonwood rights, are all available to you, are you
16 able to water crops sufficiently?

17 A. Yes, I would say I am able to. As I
18 indicated, the 2,800 gallon is subject to pumping my
19 decreed water right, and then based on my other pumping
20 capacity, I am able to probably pump up to 34 or 3,500
21 gallons, and that is only available when the Cottonwood
22 right is there. And that would pertain to the request
23 or the regulations of Kevin, the watermaster.

24 Q. Obviously he controls what you can divert,
25 right, based upon any decreed right that you have.

1 In your years of watering this parcel, have
2 you noticed or is there any trend that is happening with
3 the general flows in the Big Wood -- excuse me -- Little
4 Wood River?

5 A. It seems like that in the spring and in the
6 fall, when I can actually see the amount of water going
7 through my farm, there is a reduced flow. But as I just
8 stated, the American Falls does flow through my place,
9 and so -- but that's about what I can say.

10 Q. Okay. But do you have American Falls water
11 rights?

12 A. No, I do not have American Falls.

13 Q. That's what I thought you said.

14 A. Yes, that's correct. Excuse me.

15 Q. So the flows then are obviously subject to
16 also the additional water of American Falls flowing
17 past.

18 A. Exactly.

19 Q. What do you intend to do if you are not able
20 to obtain additional water for your crop now that it's
21 turned off?

22 A. Well, if you have wheat of any kind, you can't
23 make water, and so basically there is no opportunity to
24 enhance production or anything. So a timely rain,
25 however, you are not -- there is nothing else I can do.

1 Q. But you'll continue to attempt to find
2 additional water if you can.

3 A. That's correct. If I could find additional
4 water, I would water the crop, yes.

5 Q. As a result of being part of the group with
6 the Big Wood, Little Wood Water Users Association, are
7 you under the belief that others have testified that the
8 flows in the Little Wood River are a result of, at least
9 in part, to pumping in the Bellevue Triangle?

10 A. Yes, I feel they are a part of the injury,
11 that us, as senior water rights, are actually feeling.
12 So yes, I do.

13 Q. If the flows were greater right now, it's kind
14 a rhetorical question, but I assume your water rights
15 would still be on; correct?

16 A. Yes, that's correct. It would not take that
17 many more cfs in order to have my water right whole.
18 But again, that has to do with priority doctrine.

19 Q. So you say it wouldn't take much more, but as
20 far as your crops are concerned, it makes the difference
21 between them --

22 A. That's correct. If it's not available, it's
23 not available.

24 Q. So have you attempted to determine the
25 injuries to your crops for the purposes of this

1 particular hearing?

2 A. Yes, I did.

3 Q. I would have you to turn to Big Wood Farms
4 Exhibit 1, please.

5 A. Yeah, I have that.

6 MR. RIGBY: And forgive me, I'm doing too many
7 of these, but did we already stipulate to the water
8 rights themselves into evidence?

9 MR. THOMPSON: I think so.

10 THE HEARING OFFICER: We did.

11 MR. RIGBY: I just want to be sure.

12 Q. (BY MR. RIGBY) As to Big Wood Farms Exhibit
13 No. 1, were you part of and did you supply the
14 information that was used to put this chart together?

15 A. Yes. This is my information, yes.

16 Q. So could you explain basically what the intent
17 of and how you arrived at the target yields with the
18 crops that you have there, projected yield loss and
19 projected revenue losses?

20 A. Well, the first thing I might point out is, if
21 you look at this, basically you would think that my,
22 what would you call it, the 37-59 is all related to hay
23 so there will be no loss. However, in all honesty, both
24 of the rights of the 051A and B are used for both the
25 wheat, the spring wheat, and the alfalfa. And so that

1 is one thing I might point out.

2 And then also, as you would come on across
3 here, you come across the usage or a loss, it's not
4 calculated, but it has to do with the days of supply and
5 shortfall. And basically it's saying that I would need
6 to, as far as days of irrigation, July 15th for my
7 spring wheat and July 25th for my winter wheat, which
8 basically is where you would come up with 35 days or
9 45 days, and the bushels and the cost and relate down to
10 what the estimated loss is for this year.

11 Q. So how many more days from, now that you are
12 turned off, would you need your right to still be on in
13 order to avoid the loss?

14 A. Well, it's like I stated, right now if I could
15 get 30 more days I would have basically a sufficient
16 wheat crop that would be acceptable. Now, the spring
17 wheat would need a little bit more. However, 30 days
18 makes a substantial difference at this kind of point in
19 a wheat crop.

20 Q. Is it your contention that if the pumps within
21 the Triangle were curtailed that the flows would
22 increase to the point where your water right would be on
23 those 30 days?

24 A. I think based on what we've seen, as far as
25 flows and also what I have seen as far as Mr. Miller,

1 Eric Miller, and the things that I've been looking at
2 and ties to that volume, that there would be an
3 increased amount of water in Silver Creek, thus
4 increasing the amount of water down to the Little Wood.
5 And, of course, I'm one of the Little Wood users. So
6 yes, it would bring more water to myself.

7 Q. So are then you seeking that the Director
8 curtail these based upon what, the priority system?

9 A. I'm seeking that the Director would realize
10 that the wells are the major contributor, and based on
11 the priority doctrine that has to do with the surface
12 water and the Little Wood River, that he would thus be
13 able to realize the injury that is being weighed upon
14 the Little Wood water users, and be able to use his
15 power to where we could actually get some relief and
16 hopefully some water.

17 Q. So pursuant to Big Wood Farms Exhibit No. 1,
18 it estimates that you will be damaged 38,000 -- almost
19 \$39,000; is that correct?

20 A. Yes.

21 MR. RIGBY: I'd move for the admission of Big
22 Wood Farms Exhibit No. 1.

23 THE HEARING OFFICER: Any objections to the
24 admission of the referenced document?

25 Hearing none, the document marked as Big Wood

1 Farms Exhibit 1 is received into evidence.

2 (Big Wood Farms Exhibit 1 received.)

3 MR. RIGBY: I don't believe I have any further
4 questions.

5 THE HEARING OFFICER: Mr. Fletcher, any
6 questions?

7 MR. FLETCHER: No.

8 THE HEARING OFFICER: Questions for Mr. Huyser
9 from group 2? Mr. Thompson.

10
11 CROSS-EXAMINATION

12 BY MR. THOMPSON:

13 Q. Good afternoon, Mr. Huyser.

14 A. Good afternoon.

15 Q. Travis Thompson for the South Valley Ground
16 Water District.

17 I guess would you agree that the timing of
18 this proceeding with respect to your wheat crop that
19 hasn't had water for a week is a problem?

20 A. I would say yes, the timing and the use and
21 the necessity of the Director to do something is
22 extremely important.

23 Q. So is initiating administration in the middle
24 of the season a problem for your crop right now?

25 A. If administration is not administered, my crop

1 will actually be suffered is where -- so that's the
2 answer that I can give you.

3 Q. So what happens if you don't receive water
4 between June 2nd and those dates you identified?

5 A. Well, the grain continues to grow. However,
6 without adequate moisture, the part of the grain inside
7 the head begins to shrivel. And rather than have plump
8 grain that, basically I've stated here, would yield you
9 100 bushel, it would basically end you up with 70
10 bushel. So that's where you would actually lose through
11 test weight as well as yield.

12 Q. Those yield targets and projected yield
13 losses, can you just explain those columns in that
14 table?

15 A. Those are based on the County averages, as
16 well as some of the records that I have had that
17 basically comes to that point to where those are the
18 yields that -- as I said, that's just the County
19 average. Mine are really close, but that's where the
20 target -- that's where the yield as far as a target is
21 where I got it.

22 Q. Is that 100 bushels per acre? Is that what
23 that means?

24 A. Yes.

25 Q. Then you are projecting a loss of 3,500

1 bushels total?

2 A. Yes, that's right. That's 3,500 bushel on the
3 one wheat and then 3,000 bushel on another. So
4 basically you have two different layers. And again,
5 there is no -- even though there will be, there is no
6 damages that is stated in this record. It's strictly --
7 it's just strictly wheat.

8 Q. So your alfalfa hay has no projected
9 shortfall, or is that a mistake in that column?

10 A. Well, it was mostly overlooked on my part.

11 Q. Those 66 acres aren't receiving any water
12 either; is that correct?

13 A. They received water, just like the others,
14 through the spring -- or through the season up until
15 when I was curtailed.

16 Q. But no longer right now; correct?

17 A. That's correct.

18 Q. So you are claiming material injury to your
19 surface water rights caused by upstream groundwater
20 pumping; is that true?

21 A. Yes.

22 Q. But you have not identified specific water
23 rights in the Triangle that are causing that injury; is
24 that correct?

25 A. As far as jointly identifying them? Basically

1 I haven't went through and sorted every water right that
2 is proving injury. But as a whole, because they are so
3 much junior to our Little Wood River decree, I don't
4 know of one well that is junior to the Little Wood River
5 decree, which goes to 1889, unless you know of one, sir.

6 Q. No, I am not offering that.

7 So you have the two water rights to the Little
8 Wood River, that's a May 5, 1884 priority date; is that
9 correct?

10 A. Yes.

11 Q. Does that right go off before the April 1,
12 1884, priority date?

13 A. April 1st. It says 5/27. But most of the
14 time the 37-59K goes off, and then I'm able to use only
15 the 6.2 cfs after that time, which is my original decree
16 rights dated May 5, 1884.

17 Q. And if the water right list I've looked at is
18 correct, you are the only water user with that priority;
19 is that true?

20 A. I can't answer that exact, but I know that
21 these dates pertain to whether my right is curtailed or
22 whether my right is good. I don't see the book that the
23 watermaster uses, if I am one person on that May 5, '84
24 or five, but it's subject to the watermaster.

25 Q. Where does the water get measured in the

1 Little Wood that determines if your right is on or off,
2 do you know?

3 A. I should remember the number, but I can't give
4 you that exact number.

5 Q. Is it Station 54?

6 A. I know where it is, but I won't say whether
7 it's 54 or 68, that's my question.

8 Q. Do you know how much water has to be flowing
9 at that location for your right to be on?

10 A. No, I don't. I've never followed Kevin out
11 there to determine whether his correctness is right on
12 deciding that.

13 Q. So as far as curtailing junior groundwater
14 rights and whether that would supply enough water to
15 meet your water right, would the modeling information
16 and the report from Eric Miller describe that?

17 A. Could you repeat that.

18 Q. I guess you talked about with Mr. Rigby
19 whether groundwater, if that's curtailed, if that would
20 show up and supply water to your right for the rest of
21 the 2021 irrigation season. How do you know that, I
22 guess that's what I'm asking.

23 A. Well, as has been modeled by -- I can't
24 remember his name -- Mr. Miller, it basically shows that
25 there would be an increase of flow, as well as also

1 where I live right on the river and the American Falls
2 is not going through there, that there is a difference
3 of water when -- it's nice to see the white water out of
4 the Clearwater, but I do feel like that when they are
5 not running -- when they are not running that there is
6 more water going past my house, and so...

7 Q. I guess my question is whether or not there
8 will be sufficient water to satisfy your priority. Do
9 you know that?

10 A. Well, the statement I made had to do with
11 water that is way back in September. So basically I
12 believe it would, but it would be close, based on my
13 May 5, 1885, but a person wouldn't know that until you
14 try it.

15 Q. Would the information in Ms. Sukow and
16 Mr. Miller's report tell you whether or not that would
17 happen, I guess, in their predicted estimate?

18 A. I believe it would, because there is such a
19 direct correlation between the water at Silver Creek and
20 also the relationship that is the flow and the volume in
21 the Little Wood River that it is a very rapid change.

22 Q. Will curtailing junior groundwater rights on
23 July 1st help your wheat crop?

24 A. Excuse me?

25 Q. Will curtailing junior priority groundwater

1 rights on July 1st help your wheat crop?

2 A. It will help. I won't say it will completely
3 reduce the damage, but it will help.

4 Q. If that water were to come back over the
5 course of July and meets your priority?

6 A. Well, what my hope would be, and the reason
7 why most of the Little Wood users are here, that we
8 could actually get a little bit faster change or the
9 possibility to have things to where we wouldn't actually
10 have to wait that long to reduce the damage like myself
11 and others would suffer.

12 Q. I guess if this had started back in January,
13 would that have been better timing for you?

14 A. It would be a better time for everyone;
15 however, this is where we are right now.

16 Q. Certainly.

17 Will curtailing junior groundwater rights on
18 August 1st help your wheat crop?

19 A. Well, it does that, as far as hay and various
20 other things, but like the injury that I posted here,
21 the longer you wait in the year the more difficult it is
22 to actually recoup these losses.

23 Q. So will you have already harvested your wheat
24 by then regardless?

25 A. Normally we harvest the crop the 10th of

1 August, 15th of August.

2 Q. But do you turn the water off before then?

3 A. Yes.

4 Q. July 15th, July 25th?

5 A. Yes. It's just like I stated here, basically,
6 the water we would turn off would be 7/15 or 7/25.

7 Q. So curtailing groundwater rights on
8 August 1st, you wouldn't turn water on back on after
9 that point, would you?

10 A. So curtailing groundwater rights when?

11 Q. August 1st.

12 A. August 1st? Probably not that late. It's no
13 different than other crops we have. At that point
14 injury has been suffered, and that's why I think all of
15 us are here right now trying to facilitate some kind of
16 an agreement that we can get this settled without any
17 time that would be of the essence pertaining to loss.

18 Q. On that loss you have -- isn't it true you
19 have multiperil crop insurance on your property?

20 A. Yeah. Right.

21 Q. Would that cover some of that loss that you've
22 identified in your table 1?

23 A. Yes.

24 Q. Do you know how much?

25 A. Where is table 1?

1 Q. I think it's right in front of you, that page.
2 I'm sorry.

3 MR. RIGBY: Exhibit 1.

4 Q. (BY MR. THOMPSON) Exhibit 1. The page you
5 were just on, I believe, Mr. Huyser.

6 A. Here? Back here?

7 Q. No. Go back. I'm sorry. The one you just
8 turned over, I think it's that one.

9 A. Okay.

10 Q. Table of Projected Injury.

11 A. Right.

12 Q. So your policy could cover damages for some of
13 that, a portion?

14 A. Yes, that's correct. I have never -- with a
15 multiperil, multi crop, I've never actually went through
16 a drought situation, but I do have multiperil, yes.

17 Q. You have two pumping stations on the river; is
18 that correct?

19 A. Yes, I do.

20 Q. And your capacity is about 3,250 gallons; is
21 that correct?

22 A. When you look at the water rights combined,
23 they are about 2,800 gallon a minute, which equates to
24 my decreed water right. And when the other supplemental
25 right is good, yes, it's between 32 and 3,400 gallon.

1 MR. THOMPSON: That's all the questions I
2 have. Thank you.

3 THE HEARING OFFICER: Thank you, Mr. Thompson.
4 Mr. Laski or Ms. O'Leary, any questions?

5 MR. LASKI: No.

6 MS. O'LEARY: No.

7 THE HEARING OFFICER: Group 3. Mr. Bromley?

8 MR. BROMLEY: Thank you, Director.

9

10 CROSS-EXAMINATION

11 BY MR. BROMLEY:

12 Q. Mr. Huyser, hi, Chris Bromley.

13 A. Hi.

14 Q. Thanks for being here.

15 Two questions very, very quick. First is:
16 When do you usually turn on with your Little Wood
17 rights?

18 A. Normally, of course depending on crop, but
19 it's normally around the 1st of April, right in that
20 area, plus or minus, whether we have wheat, corn, or
21 alfalfa, that is a plus or minus window.

22 Q. Sure. Definitely.

23 This year when did you turn on?

24 A. I believe it was the 12th of April, is what my
25 recollection is. I know that the Cottonwood water right

1 was only on for about 6 days and then it went back off,
2 I believe. As far as my right, I think it went away
3 April 16th.

4 Q. Thank you for that.

5 Last question. So Mr. Thompson asked you a
6 question about could you identify groundwater pumping
7 wells that you were alleging cause injury to your water
8 rights, and you said you were not able to identify
9 those. Are you asking for curtailment of wells anywhere
10 outside of the Bellevue Triangle?

11 A. Based on the information that I have seen that
12 Eric has shown, I would say it is a majority of the
13 inside of the Bellevue Triangle, and that would have the
14 direct effect on the volume of water that would be
15 available in Silver Creek.

16 Q. So are you asking the Director to curtail
17 wells outside of the Bellevue Triangle?

18 A. No.

19 MR. BROMLEY: Thank you. Nothing further.

20 THE HEARING OFFICER: Thank you, Mr. Bromley.
21 Others in group 3? Mr. Robertson?

22 MR. ROBERTSON: No questions.

23 THE HEARING OFFICER: Thank you.

24 Mr. O'Bannon?

25 MR. O'BANNON: No.

1 THE HEARING OFFICER: Redirect, Mr. Rigby.

2 MR. RIGBY: No further questions.

3 THE HEARING OFFICER: With no redirect,
4 Mr. Huyser, thank you for your endurance. You are
5 excused.

6 Let's just talk about, do we have more
7 witnesses? Let's take a 10-minute break.

8 (Recess taken.)

9 THE HEARING OFFICER: Let's go back on the
10 record.

11 Mr. Rigby, next witness.

12 MR. RIGBY: Thank you. We have changed the
13 order to have Mr. Taber to go first, and I'm trying to
14 be expeditious with the time, knowing that it's after 5,
15 and he will take more time than the last two, and I
16 think we can expedite them as well.

17 So with that in mind then, please state your
18 full name and current address.

19 THE REPORTER: He wasn't sworn in yet.

20 MR. RIGBY: That's right.

21 DON TABER,
22 having been called as a witness by the Big Wood &
23 Little Wood Water Users Association and first duly
24 sworn, testified as follows:

25 ///

1 DIRECT EXAMINATION

2 BY MR. RIGBY:

3 Q. Good afternoon, Don.

4 So just to be certain, we will be addressing
5 three particular farms; is that correct?

6 A. Yes.

7 Q. One is called the -- well, I guess the Taber
8 Farm; right? That's your own farm?

9 A. The Taber Farm is the home farm, yes.

10 Q. Home Farm? Okay. And then there is the
11 7 Mile Farm and also the Ritter Farm; is that correct?

12 A. Yes.

13 Q. And those other two farms are farms that you
14 rent or lease?

15 A. Yes.

16 MR. RIGBY: With Counsel's stipulation then, I
17 would like to, with the further stipulation that any
18 Cottonwood rights be admitted only for the purpose of
19 showing the water supply, I would like to right now then
20 proceed to have Taber Exhibits No. 2 through 21, 7 Mile
21 Exhibit No. 2 through 6, and Ritter Exhibit No. 2
22 through 4 all admitted.

23 What they are, I'll represent, are water
24 rights with accompanying printed maps by IDWR. But they
25 do include at least one, if not more, Cottonwood rights,

1 but again with the stipulation, Mr. Bromley.

2 MR. BROMLEY: Thank you, Mr. Rigby. Yes, I'm
3 in agreement.

4 THE HEARING OFFICER: These are a lot of
5 documents all together. Have the parties had a chance
6 to review these documents?

7 MR. THOMPSON: Yes, Director.

8 THE HEARING OFFICER: Okay. Is there any
9 objection to their admission?

10 MR. THOMPSON: No.

11 MR. BROMLEY: No.

12 MR. LASKI: No.

13 THE HEARING OFFICER: So let me recite, if I
14 can, Mr. Rigby. You want Taber Exhibits 2 through --

15 MR. RIGBY: 21.

16 THE HEARING OFFICER: -- 21 admitted into
17 evidence. And you are excluding then -- are there some
18 additional?

19 MR. RIGBY: There are, but they are not the
20 water rights. I'm not introducing them.

21 THE HEARING OFFICER: Okay. So Taber Exhibits
22 2 through 21 are received into evidence.

23 (Taber Exhibits 2 through 21 received.)

24 THE HEARING OFFICER: 7 Mile, this would be
25 again 2 through 6 are received into evidence.

1 (7 Mile Exhibits 2 through 6 received.)

2 THE HEARING OFFICER: And Ritter 2 through 4.
3 So there are additional -- no, there are not. 2 through
4 4. Ritter Exhibits 2 through 4 are received into
5 evidence.

6 (Ritter Exhibits 2, 3, 4 received.)

7 THE HEARING OFFICER: Okay. Mr. Rigby.

8 MR. RIGBY: Thank you.

9 Q. (BY MR. RIGBY) So with that out of the way,
10 Mr. Taber, what is your occupation?

11 A. Dairy farmer.

12 Q. And where do you practice this dairy farming?

13 A. 495 East 20 North, Shoshone, Idaho.

14 Q. And as far as your dairy is concerned, how
15 many cattle do you or dairy herd -- what is the number
16 of your dairy herd?

17 A. We milk about 900 and raise all of our
18 replacements and plus all of our steers. We have a
19 feedlot that we put our steers through, they go to
20 slaughter, directly to slaughter.

21 Q. And as far as the feed required for this dairy
22 herd, is it mainly grown by you?

23 A. We farm quite a lot of land, yes. And the
24 feed is all gone by -- we use all -- we buy commodities,
25 we buy corn, but the hay and silage and everything is

1 raised on the farm, and we do sell some excess hay, not
2 this year, but we usually sell excess hay.

3 Q. And what is your background as far as
4 education and work experience?

5 A. I have a degree in ag business management from
6 Penn State University, and I've been involved in the
7 dairy industry all my life, 50 some years.

8 Q. And are you a member of the Big Wood & Little
9 Wood Water Users Association?

10 A. Yes.

11 Q. Do you join with them as a party, individual
12 party?

13 A. Yes.

14 Q. So let's first of all address what we call the
15 Taber or home place. Is that what you refer to it?

16 A. Taber place, home place, whatever.

17 Q. Let's go to, just for the purpose of looking
18 and mapping of it, if you'll pull tab 5, Taber
19 Exhibit 5, please.

20 A. Okay.

21 Q. Does that accurately describe, to best of your
22 knowledge, the home place?

23 A. Yes.

24 Q. And the water rights that are associated with
25 this have been admitted into evidence from 2 to 21.

1 Rather than go through each of those, are they stacked
2 on one another?

3 A. Yes.

4 Q. What kind of crops do you grow, generally
5 speaking, on this home place?

6 A. We grow alfalfa, we grow corn silage,
7 sometimes some grain corn, we grow malt barley, we grow
8 sugar beets, and once in a while we grow winter wheat or
9 triticale. We usually chop that off for feed.

10 Q. And this particular year what are you growing
11 on the home place?

12 A. On the home place we have got, we had
13 triticale, then we planted corn and that, and we have
14 got some winter wheat and we have got alfalfa. And
15 that's it on the home place. I said corn, didn't I?
16 Yes.

17 Q. And is there any particular reason why you are
18 growing those this year. Because of the drought that
19 others have testified to, did that make you change your
20 decision as to what you would be growing?

21 A. We changed our decision a little bit, but we
22 have to go with corn, we have to gamble. We had to
23 gamble is water going to be in the river because you
24 cannot find -- I did not have enough ground that was
25 available for corn other places. I had to put some on

1 the river.

2 Q. Is that a required product or crop?

3 A. Corn silage is required. In our area there is
4 several feedlots and there is a couple other dairies,
5 and if I don't have corn silage there, I don't know
6 where I will get it because it's all committed,
7 everybody has got it tied up.

8 Q. But for your dairy this is an essential --

9 A. I need that for the dairy, yes. I use about
10 10,000 ton of corn silage.

11 Q. Again, let me finish my question.

12 So this is a required crop for your dairy?

13 A. Yes.

14 Q. So when you say you gambled, are you concerned
15 about the water rights that exist on the home place
16 being sufficient to properly grow your crops?

17 A. Yes.

18 Q. And why are you concerned about that?

19 A. Well, because we analyzed the Big Wood
20 Canal -- or the reservoir, we knew it was going to be
21 short. We analyzed the river, we decided that that was
22 going to be short. But we just had to take a chance on
23 some water being left in the river so that we could keep
24 the corn wet.

25 Q. So you addressed another issue, which is, do

1 you have other water rights besides those that are
2 listed from 2 to 21?

3 A. Yes, I do.

4 Q. What are those rights?

5 A. I have a supplemental well that produces about
6 1,300 gallon, and I expect to use that to help cover the
7 corn and some of the alfalfa.

8 Q. What other rights do you own?

9 A. That's other than decreed rights?

10 Q. Yes. Supplemental rights.

11 A. I have no other supplemental rights.

12 Q. Have you leased water for this year?

13 A. Not on this ground.

14 Q. We're only talking about this ground.

15 A. Yeah. No.

16 Q. So other than the decreed rights which are
17 Exhibit 2 through 21, that Taber Exhibits 2 through 21,
18 and the well, you have no other rights that are on this
19 property?

20 A. No.

21 Q. You said you're concerned about having
22 sufficient water to get through the rest of the season;
23 is that correct?

24 A. Yes.

25 Q. What, if anything, are you doing or have you

1 done to shore up the ability to finish the crop?

2 A. I'm not sure what you mean by that. I mean, I
3 couldn't purchase additional water; there wasn't any to
4 purchase. All I could do is on some of my other ground
5 on the other farms, we cut back so that we could shuffle
6 our water to the corn where we had the corn planted and
7 to our other crops. But we did raise some extra grain
8 this year on some of the other farms to help with the
9 water situation.

10 Q. Is that because the grain will be off sooner?

11 A. The grain will be off, we can divert that
12 water then to the corn if the water is there.

13 Q. And although we'll get to the other locations,
14 is this the location that requires the most water, if
15 you will?

16 A. Yes.

17 Q. It's mostly because of the corn?

18 A. Mostly because it's the most acres.

19 Q. Okay. So what type of watering do you use?

20 In other words, is it pressurized, is there groundwater?

21 A. It's all pressurized; we have pivots, we have
22 a few hand lines, and wheel lines.

23 Q. So there's no flood irrigation on this?

24 A. No, no flood irrigation.

25 Q. So as far as any flood irrigation on this

1 place, your answer was?

2 A. No.

3 Q. Therefore, from the river itself -- and by the
4 way, what river is this?

5 A. Little Wood River.

6 Q. From the river itself to the plant then, is it
7 all pressurized?

8 A. Yes.

9 Q. So the pumping that occurs on this place
10 appears to be in two different locations; is that
11 correct?

12 A. Yes.

13 Q. So there's no other pumping from the river?

14 A. No.

15 Q. Where is the groundwater well located on the
16 parcel?

17 A. It's the dot that is on the eastern side, just
18 down from my pivot and from that little field, that's
19 our pumping station for the river, and the well's
20 located right there also.

21 Q. Okay. As far as the well is concerned, is it
22 limited in its diversion?

23 A. Yes.

24 Q. What's the cfs?

25 A. 3 cfs or 3.5, I'm not sure now, but it's

1 1,300 gallon.

2 Q. Does it have a particular place of use that
3 you're using it on?

4 A. It is supplemental and we're allowed to -- the
5 only place we can use it is on that eastern part of the
6 ground, because where you see that split between the
7 fields, that comes from another pumping station and we
8 can't get the well water down there.

9 Q. So by the eastern side, if we're reviewing the
10 map Taber Exhibit 5, it would be on the right side?

11 A. The right side, yes.

12 Q. So that pivot is pretty much groundwater when
13 your other rights go away?

14 A. Yes.

15 Q. So let's talk about the other rights. Again,
16 without going into them specifically or each one of
17 them, what, if any -- do you know if those rights will
18 be curtailed in the next few weeks?

19 A. I think they will be. We've been hearing
20 reports that the '84 rights will be curtailed by the
21 15th, and the '83 rights I hope will stay on. The '87
22 right is curtailed. I think they've curtailed that.

23 Q. So the '83 right is your best right?

24 A. Yes.

25 Q. You believe it will stay on?

1 A. I don't know. I'm hoping (crossing fingers).

2 Q. And if the other rights are cut, will that
3 then impact the ability to grow your crop?

4 A. Yes.

5 Q. Is the '83 right sufficient enough to cover
6 the lands of the home place?

7 A. Not my personal '83 right but the other '83
8 rights that I have control of, yes.

9 Q. So does that make it possible to continue to
10 water the home place if those rights stay on?

11 A. Only if there's water in the river.

12 Q. So what do you mean by that? Because you
13 covered that in your deposition.

14 A. If there's water in the river, I can pump it;
15 if there's no water in the river, I can't pump it.

16 Q. So has there been occasion where -- were you
17 done?

18 A. Well, I can be.

19 Because I said before, even my well, I can't
20 use that anyplace else because I can't send the water
21 down the river, it will just disappear before it gets
22 there. So same way with if I pull my rights, the '83
23 water off of like the Ritter property, maybe I can't
24 even pump the '83 water on the Ritter property if there
25 isn't any water in the river. If there's no water

1 there, you can't pump it; if there's water there, you
2 can float it and use it one place or another.

3 Q. But it requires water to be in the river
4 before you --

5 A. It requires water to be in the river.

6 Q. So are you saying even though a right may be
7 on, you're not able to pump it?

8 A. Yes.

9 Q. Has that happened?

10 A. Yes.

11 Q. Has it happened historically or more recently?

12 A. Well, more recently because the rule of thumb
13 was the 1883 water never went off. That was the best
14 water on the river. But the last couple years it's went
15 off for a certain amount of time, a short time or
16 whatever, then come back on. But yes, recently it goes
17 off more frequently than in the past.

18 Q. So as to this '83 right, is that a right that
19 even though it would be on, may not be able to be
20 pumped?

21 A. Yes.

22 Q. So again, I will wait to deal with the
23 curtailment issue and ask that all at once as to all
24 three farms.

25 So let's move on now to the second farm, which

1 is the 7 Mile. Can you find that tab?

2 A. Yes.

3 Q. Again, 7 Mile Exhibit 2 through 6 have been
4 admitted into evidence, indicating water rights on this
5 particular place. So if you will turn to, please, let's
6 turn to 7 Mile Exhibit 5, please. That is a map of your
7 Water Right 37-321, produced by IDWR. Does it
8 accurately depict the farm known as 7 Mile?

9 A. Yes.

10 Q. The water rights on that particular farm, as I
11 said, are indicated by Exhibit 2 through 6 of 7 Mile.
12 What are you growing this year on that particular
13 parcel, the 7 Mile parcel?

14 A. We have spring wheat up there and we have one
15 small field of sugar beets. I had to go with sugar
16 beets because we had to set up for last fall, I had some
17 of the chemicals and fertilizer on for it, and I had to
18 put them in. I expect I'll lose them but I had to put
19 them up there.

20 Q. So you felt like you had no choice?

21 A. I felt I had no choice, yes. We went with the
22 wheat to cut back on the water consumption there and
23 everything. We normally would have planted corn but we
24 planted wheat instead to get the water.

25 Q. So what is the anticipated cutoff, if you

1 know, of the water rights that are connected to the
2 7 Mile parcel?

3 A. I think that's anticipated that will go off by
4 the 15th of June. Or maybe it's -- I haven't been home
5 for 2 days, maybe it's already off. I haven't gotten a
6 notice on it.

7 Q. What other water rights do you have on this
8 7 Mile parcel?

9 A. With the grain going off and everything, we
10 felt that we could move some '83 water up there to just
11 water 20-some acres of beets if we had to, it wouldn't
12 take very much. And that was how we figured we would be
13 able to water the beets if there was water in the river
14 and we could pump it up there.

15 Q. But so far you're not sure you'll have the
16 water.

17 A. Not sure we'll have water. And so far we
18 haven't had to do that. So we're okay so far.

19 Q. Again, what's the early right on the 7 Mile?

20 A. 1884, I think it's like 4/25 or 4/30 or
21 something like that.

22 Q. Typically how long does that water last?

23 A. Normally it lasts most of the season. You
24 might lose it for a couple of weeks and maybe some
25 people shut off from water grain or something, a little

1 more water comes in the river and it goes back on. But
2 it's a fairly reliable right.

3 Q. This year?

4 A. Keep your fingers crossed. I don't think
5 we'll have it.

6 Q. If you don't, have you been able to acquire
7 any supplemental water for that right?

8 A. No.

9 Q. You've indicated you needed the water down on
10 the home place so it's not coming from that right.

11 A. Well, possibly, we'll stretch it as far as we
12 can. If we have to take a little bit of '83 water up
13 there, as I say, to water 20 acres, we might do that for
14 a few days, then move it back.

15 Q. What kind of irrigation system do you have on
16 the 7 Mile place?

17 A. Pivots and wheel lines.

18 Q. So is it all pressurized?

19 A. Yes, all pressure.

20 Q. Again, from the river to the crop?

21 A. Yes.

22 Q. So no other water rights. I think I already
23 asked that. That's it on this place.

24 A. Well, there's a Cottonwood right on the place.

25 Q. Okay. But again, that's not an issue right

1 now.

2 A. No.

3 Q. Let's move on then to the Ritter Farm. By the
4 way, are these farms contiguous in the sense that
5 there's no one in between those farms and you?

6 A. Yes.

7 Q. How long of a stretch would it be from stem to
8 stern on these farms if you were to stack them up?

9 A. We can control the river for 7 miles.

10 Q. Okay.

11 A. From farm to farm it would be approximately
12 5 miles but actually there's nobody else below us that
13 pumps out of the river until you get down to Shoshone
14 where American Falls and the river comes together.

15 Q. I didn't ask you, I'm trying to hurry this
16 thing, but how familiar are you with these farms? How
17 long have you been working on these farms?

18 A. Time flies but I think we've farmed them for,
19 the 7 Mile Farm we used to farm it years ago and then
20 that was sold to somebody else, and then Jeff Ward that
21 owns it now bought it, and we farmed it ever since he
22 bought it. He's the one that put the sprinkler system
23 on. The Ritter Farm, he got sick about 10 years ago,
24 and we've farmed that ever since.

25 Q. So back now on to the Ritter Farm, the water

1 rights that are included there, what's your earliest
2 water right there?

3 A. 1883.

4 Q. So that's your good water right.

5 A. Yes, that's the good water rights.

6 Q. If we go to the map that was generated, Ritter
7 Exhibit No. 4, is that an accurate depiction of the
8 Ritter parcel?

9 A. Yes.

10 Q. And it evidences or shows two points of
11 diversion; is that correct?

12 A. Yes.

13 Q. Again, what kind of an irrigation system do
14 you have there?

15 A. It's all pressurized.

16 Q. So again from river to crop?

17 A. Yes.

18 Q. Again, what are you growing on the Ritter
19 place this year?

20 A. On the Ritter place we've got alfalfa, we've
21 got a small field of sugar beets, and we've got corn,
22 corn silage.

23 Q. Are you concerned having the '83 right that
24 you will still not be able to complete the crop?

25 A. We are concerned, yes. The first thing we

1 would probably curtail is the alfalfa, try to -- if the
2 water was there that we could pump the rest of it and we
3 didn't have -- we would cut the alfalfa first.

4 Q. So therefore, how many cuttings would you
5 expect to get this year on the Ritter place?

6 A. Normally we get four cuttings. This year I'm
7 hoping we can get two. We got one cutting off. I'm
8 hoping the water will stay good long enough and we can
9 keep water there long enough we can at least get one
10 more.

11 Q. I failed to ask that same question for the
12 home place.

13 A. Same thing, yes. Where the well will reach
14 part of that, we will try to get our four cuttings of
15 hay.

16 Q. So you could get on some of the hay four
17 cuttings?

18 A. Four, we could, yes.

19 Q. As far as the 7 Mile?

20 A. We hope to keep the -- we don't have any
21 alfalfa up there. We hope to keep, if we move enough
22 water up there, to keep the sugar beets alive.

23 Q. Understood.

24 So as to these three parcels, do you have a
25 belief that the reduced water supply that could cause

1 the curtailment of your water rights is due in part to
2 the pumping of the Bellevue Triangle?

3 A. I believe that, yes.

4 Q. What's your information or what's your
5 knowledge or personal understanding as to why?

6 A. Well, first off, 2 weeks ago or 10 days ago,
7 time goes so fast, Magic Reservoir was shut off. And so
8 there's no other source of water, and they had a little,
9 there was some rain across the Bellevue Triangle up
10 there, and we didn't get hardly anything down our way.
11 I don't think we even got a mud puddle. But about a day
12 or two later the river comes up. And my thoughts on
13 that was that, Well, they must have shut down pumping up
14 there. And it's very quick that the water goes back
15 into Silver Creek, gets down the river.

16 But the river did come up. I don't know how
17 much, I didn't ask the watermaster or anything. But my
18 guys saw it and they said, Hey, the river is up.

19 Q. So in all fairness, in part it's also due to
20 the lack of diversions of surface water up above as
21 well; right?

22 A. Could be, yes. I don't know how much surface
23 water is diverted up there and I don't know how many
24 pumps.

25 Q. But historically have you in other times

1 believed that the pumps were a significant cause of the
2 reduction in flows past these three farms?

3 A. I attribute it to the pumps, I wasn't sure
4 because -- but I knew that it seemed every year the
5 river run less and less, and so it had to be something.
6 It's a small watershed, as I say, it's quick recovery.
7 The water just comes out of Silver Creek and then comes
8 right down the river. In 2 days you can see a
9 difference.

10 Q. So have you attempted to determine the
11 injuries to your crops or potential injuries to your
12 crops --

13 A. Yes, I have.

14 Q. -- in 2021?

15 A. Yes.

16 Q. So if you would please first go back to the
17 Taber or home place, that would be Taber Exhibit No. 1.
18 Don't go back too far, you'll get into somebody else's.

19 So is that entitled Taber Exhibit No. 1?

20 A. Yes.

21 Q. Very good.

22 So were you the party that presented the crop
23 information and the projected cutoff dates, days needed
24 to irrigate, the projected loss, and projected revenue
25 loss on this particular Taber Exhibit No. 1?

1 A. Yes.

2 Q. So explain it, the best you can.

3 A. Okay. What I looked at was how much water my
4 well would put out. So I tried to calculate, well, if I
5 have to give up one cutting of alfalfa or if I have to
6 give up, it will be down on the other pumping station.
7 So I just took the acres I thought would be affected and
8 I looked at my yields, I figured my corn silage normally
9 we get about 32 ton. So I priced that at \$40 a ton,
10 which is way too low. If I have to find corn silage or
11 buy it, I'm going to be paying 60 or \$70 a ton for it.

12 And I priced the hay that I thought we might
13 lose at \$135 a ton. And that's \$200 a ton now; so I was
14 way low on that. And then the barley and wheat are
15 whatever, the wheat was priced at \$7, which was what the
16 market price was the day we was working on this.

17 Q. There's one that's down at the bottom, because
18 those two projected revenue loss indicate 82,000 for the
19 alfalfa and 135 and some change for this silage corn; is
20 that correct?

21 A. Yes.

22 Q. Going down though you also had a malt barley
23 for the, it's indicated CAW.

24 A. Malt barley, yes, that's on the west end of
25 the property. Mostly we use Cottonwood water is what's

1 appropriated for that. When that isn't on, we pump that
2 out of our pumping station there off the river or we can
3 bring Magic water down, Magic Reservoir water down, to
4 reach that. And none of them are going to be available;
5 so that's why I put that in.

6 Q. So in all fairness, I guess if this is
7 Cottonwood water or if it's anything to do with the Big
8 Wood, then perhaps the malt barley is outside of the
9 issue?

10 A. It could be, yes.

11 Q. So that still would leave your 135 and some
12 change and 82,000 as far as your claimed damages; is
13 that correct?

14 A. Yes.

15 MR. RIGBY: So I would move for the admission
16 of Taber Exhibit No. 1.

17 THE HEARING OFFICER: Any objection to the
18 admission of this document?

19 MR. THOMPSON: No.

20 MR. LASKI: No.

21 MR. BROMLEY: No.

22 THE HEARING OFFICER: Document marked as Taber
23 Exhibit 1 is received into evidence.

24 (Taber Exhibit 1 received.)

25 Q. (BY MR. RIGBY) Now move, if you would,

1 please, to 7 Mile Exhibit No. 1. Again, same question:
2 Did you supply the information for this tabulation?

3 A. Yes.

4 Q. Would you please explain that one then in
5 detail.

6 A. Well, we figured if I took it as a total loss,
7 say, right today we had no more water up there, then we
8 factored the sugar beets at 40 ton per acre, which is a
9 little under my normal yield, and we factored them at, I
10 think I factored them at \$50, which is what they're
11 projecting the price will be.

12 The spring wheat, again, I factored it our
13 normal yield is 130 bushel, I think I factored that at
14 \$7 a bushel, which is, again, the going price. So
15 that's all we had up there.

16 Q. Those two equal 125, almost \$126,000.

17 A. Okay.

18 Q. So you think that is a fair estimate of the
19 losses on the 7 Mile lands?

20 A. I think it's on the low side but it's what I
21 put down.

22 MR. RIGBY: I move for the admission of 7 Mile
23 Exhibit No. 1.

24 THE HEARING OFFICER: Any objection to the
25 admission of this document?

1 MR. THOMPSON: No.

2 MR. LASKI: No.

3 MR. BROMLEY: No.

4 THE HEARING OFFICER: The document marked as
5 7 Mile Exhibit 1 is received into evidence.

6 (7 Mile Exhibit 1 received.)

7 Q. (BY MR. RIGBY) Now if you'll turn to the
8 Ritter Exhibit No. 1 under the Ritter tab, please. Do
9 you have that?

10 A. Yes.

11 Q. Again, same question: Please give us an
12 explanation as to how you came up with the calculations
13 there.

14 A. Okay. The alfalfa, if we lose the rest of
15 that, I figured that at the tonnage that was left,
16 because normally we make 6 1/2 ton, and so I figured a
17 portion of that, I think 3.5 ton is what we would be
18 losing or whatever, that was figured at, I think it was
19 figured at \$135 a ton, which is very conservative on
20 that.

21 Silage corn, if we lost all of that, if there
22 wasn't any water in the river and we couldn't pump it,
23 even though we had good rights there, that would be 32
24 ton to the acre, and I figured that at \$40.

25 And the sugar beets again were figured at \$50,

1 at 40 ton.

2 Q. Same calculation you used before?

3 A. Yes.

4 Q. So that comes up as the total of 177,600, is
5 that your testimony here?

6 A. Yes.

7 MR. RIGBY: I move for the admission of Ritter
8 Exhibit No. 1.

9 THE HEARING OFFICER: Any objection to the
10 admission of this document?

11 MR. THOMPSON: No.

12 MR. BROMLEY: No.

13 MR. LASKI: No.

14 THE HEARING OFFICER: The document marked as
15 Ritter Exhibit 1 is received into evidence.

16 (Ritter Exhibit 1 received.)

17 Q. (BY MR. RIGBY) Don, let me just ask you
18 another question. Some of the questions that have been
19 asked of others is, what if the pumpers were curtailed
20 and yet you wouldn't receive the benefit of that for
21 some time, even let's use the extreme of August, would
22 there still be a benefit, in your opinion, to the crops
23 that you are growing?

24 A. It probably would not benefit the corn because
25 it would be dead. The alfalfa would have went into

1 dormancy. If you water it in August, there's a
2 possibility you can get a cutting off of it late
3 September. It would allow us, a late water would, if we
4 disced the corn down or whatever, we raise triticale for
5 feed for the livestock, and maybe we plant triticale and
6 get it watered, so that's growing, because that's a
7 fall-planted crop that we harvest in the spring. So
8 yes, it would be, the water would be beneficial. Any
9 time you can get water is beneficial.

10 Q. So are you then seeking to have the water
11 rights in the Bellevue Triangle, that is the groundwater
12 rights, curtailed based upon the priority system of both
13 surface and ground?

14 A. Yes.

15 MR. RIGBY: I have no further questions.

16 THE HEARING OFFICER: Mr. Fletcher, questions.

17 MR. FLETCHER: No questions.

18 THE HEARING OFFICER: Mr. Thompson.

19

20 CROSS-EXAMINATION

21 BY MR. THOMPSON:

22 Q. Good afternoon, Mr. Taber. Travis Thompson
23 for the South Valley Ground Water District. Can you
24 hear me okay?

25 A. Yes.

1 Q. You talked with Mr. Rigby about you have about
2 327 acres on your home place; is that correct?

3 A. Yes.

4 Q. You have alfalfa, corn, and wheat; is that
5 true?

6 A. Yes.

7 Q. That one pivot to the far west has a mixed
8 source; is that correct?

9 A. Yes.

10 Q. Water from both the Little Wood and the Big
11 Wood River?

12 A. Yes. We own beyond -- we own a couple more
13 pivots right just west of that. So as I say, we
14 comingle that water down there. If it's 1887 water, we
15 pump. It's whatever water we have available to put down
16 there.

17 Q. So the source of that water on that pivot, you
18 have a portion of your Little Wood rights appurtenant to
19 it. What's the source for the rest of it?

20 A. Sometimes if the 1887 water is good, that's
21 what we put down there. Sometimes the Cottonwood water,
22 if that's good, we use that there. Sometimes if we have
23 Magic Reservoir water, we can water that ground with
24 that water.

25 Q. Your most senior water right is the 1883

1 priority; is that correct?

2 A. Yes.

3 Q. And you have an 1884?

4 A. Yes.

5 Q. And an 1887?

6 A. Yes.

7 Q. You've previously described your 1887 right as
8 a junior surface water right. Would that be correct?

9 A. That was, I say it was a junior right because
10 it goes off more often than the 1881 rights.

11 Q. You've described --

12 A. I mean the 1884 rights. I'm sorry.

13 Q. It will be curtailed before the 1884; correct?

14 A. Yes.

15 Q. Sometimes that's earlier in the season?

16 A. Sometimes.

17 Q. Your Cottonwood right, that has an 1899
18 priority date; is that correct?

19 A. It does, yes. In some years the Cottonwood
20 right is good because, it's my understanding, it's based
21 on the flow coming into Magic at a certain position or
22 up there at a certain station. And sometimes the 1887
23 right is off for a short time, and probably because of
24 the amount of water in the river. But anyway, it seems
25 illogical but that's the way it is. Sometimes the

1 Cottonwood right is better than the '87 and then they
2 reverse and the Cottonwood right will go off and the '87
3 right comes back on.

4 Q. Would you still describe that Cottonwood right
5 as a flood right available in times of high flow?

6 A. I think that's the way it's been described
7 over the years. Everybody's talked about it as more or
8 less a flood right. It's not one of our senior decreed
9 rights that you can count on for the whole season.

10 Q. As of your deposition on May 28th, you weren't
11 clear if you received any water under that right this
12 year; is that correct?

13 A. I do not know if I received water on that or
14 not.

15 Q. Do you know now?

16 A. I don't know.

17 Q. For your farm, you own all of the irrigated
18 land except for a small piece on BLM; is that correct?

19 A. Yes.

20 Q. Apart from your surface water rights, you do
21 have a supplemental groundwater right; is that true?

22 A. Yes.

23 Q. That water right is 37-8401. Does that sound
24 familiar?

25 A. I think so.

1 Q. That right allows you to divert and use up to
2 1,350 gallons per minute; is that correct?

3 A. Yes.

4 Q. And irrigate 248 acres?

5 A. Yes. We stretch it as far as we can possibly
6 stretch it.

7 Q. You've used the supplemental groundwater right
8 about every year; is that true?

9 A. Just about every year. Some years, if the '87
10 right stays good longer, we don't have to use it, but
11 most years we do. Maybe only for a couple weeks, maybe
12 for -- but it's turned on for a short time.

13 Q. You expect to use it this year; is that true?

14 A. Oh, yes.

15 Q. So does that cover about three-quarters of
16 your farm with that supplemental groundwater right?

17 A. Yes.

18 Q. For that area that you cannot use the
19 groundwater because some of your farm cannot deliver
20 groundwater to all of it, that's true; correct?

21 A. Yes.

22 Q. Do you anticipate moving some of your 1883
23 water to that pivot?

24 A. Yes.

25 Q. Have you done that yet?

1 A. No.

2 Q. Would that include moving some of the 1883
3 water off the Jim Ritter property?

4 A. Yes.

5 Q. Mr. Rigby went through the three properties,
6 7 Mile Ranch, the Ritter place, and your home place. Is
7 it fair to say you operate all three of those as one
8 operation?

9 A. Yes.

10 Q. Able to move water back and forth if needed?

11 A. Yes.

12 Q. Looking at your Exhibit 1 I believe for the
13 Taber exhibits, I don't know where you're at there, but
14 if you could go back to that.

15 So I'm a little confused. This is your home
16 place table; is that correct?

17 A. Yes.

18 Q. But does this table not identify your
19 supplemental groundwater right?

20 A. It does. I was looking at this too, and I
21 think what happened on this table is we included the
22 total pivot on the west end of the property that was not
23 in the drawing.

24 Q. So it's fair to say for any of the acres that
25 you are using the supplemental groundwater right on you

1 don't project a loss; is that right?

2 A. That's right.

3 Q. Which ones of this table are those?

4 A. Well, if you look there, it's so small I have
5 trouble reading it, but I think we accounted for partial
6 crops on the whole thing, and we took off a little bit
7 in case we run short of water later on, like if we
8 didn't have enough water for the alfalfa. But if I was
9 reading that right, I think we were not showing much
10 loss on part of it there at all where we could reach it
11 with the river.

12 Q. So the silage corn, is that the pivot you will
13 apply the groundwater to all season?

14 A. Yes.

15 Q. So that projected loss of 135,000, is that
16 inaccurate?

17 A. Yes.

18 Q. In looking down -- I'm sorry, I do see your
19 groundwater right now, it's down at the bottom. So you
20 have to read the top and bottom together; is that
21 correct?

22 A. Yes.

23 Q. Thank you.

24 We talked about this CAW water right. Do you
25 know what that is?

1 A. What right?

2 Q. Well, it's listed as CAW.

3 A. Carey Act.

4 Q. Carey Act. Were you here for the testimony of
5 John Arkoosh?

6 A. I could not hear him real well on that. I
7 have over the years heard people talk about Carey Act
8 water but I do not understand it. I do not know if
9 we've ever been delivered it, Carey Act water, or what
10 it is.

11 Q. Do you know if it's deliverable through the
12 whole season or not?

13 A. I have no idea.

14 Q. So it could be, as Mr. Arkoosh testified,
15 available through the end of the irrigation season?

16 A. I don't know how it would be delivered. If
17 they were going to bring it down the river, if there
18 wasn't any water in the river, you couldn't use it. I
19 mean, you couldn't go up and buy it and hope that it
20 would be delivered down the river because it probably
21 wouldn't make it.

22 Q. Could there be different types of Carey Act
23 water in this river system?

24 A. I don't know.

25 Q. As far as any projected crop loss on this

1 table, do you have crop insurance this year?

2 A. Yes, we do.

3 Q. Will that cover that loss?

4 A. On the corn our crop insurance covers
5 75 percent.

6 Q. Do you know if there has been a drought
7 declaration in your county?

8 A. I think the commissioners in Lincoln County
9 filed for it. I would assume that we received a drought
10 declaration. I know Blaine County did but I was
11 thinking, Why haven't we? But I'm not positive yet.

12 Q. If there is a drought declaration, would that
13 open up other sources of revenue -- or claims, federal,
14 state moneys? Do you know?

15 A. Well, probably what would open up is probably
16 low interest loans. But my interest rate at Farm Credit
17 is very low as it is. So I don't think a crop disaster
18 where they can say you can go into Farm Service office
19 and apply for a loan, I don't think that would help me.

20 Q. As you testified today, you believe your
21 surface water rights are being injured by junior
22 groundwater rights; is that correct?

23 A. Yes.

24 Q. Are groundwater rights within Water District
25 37, are you aware?

1 A. I'm thinking there's Water District 37 up
2 there, I don't know.

3 Q. Let's move to the Ritter Farm. You've leased
4 that property the last 10 years; is that true?

5 A. Yes.

6 Q. That has the 1883 priority water right; is
7 that correct?

8 A. Yes.

9 Q. That's Water Right 37-49?

10 A. Probably.

11 Q. That water right, I'll represent, is
12 authorized for the irrigation of 215.7 acres but you're
13 only irrigating 166; is that correct?

14 A. Yes.

15 Q. It's been that way ever since you've leased
16 the property?

17 A. Yes.

18 Q. The balance is not irrigated; is that true?

19 A. Yes.

20 Q. In the time you have farmed that property
21 you've had not much crop loss there. Would you agree
22 with that?

23 A. No.

24 Q. You wouldn't agree with that?

25 A. No. Repeat that.

1 Q. I'm sorry. You haven't had much crop loss
2 there on that property, have you, due to short water?

3 A. No. We have not had much crop loss, no.

4 Q. That's because of the priority of the water
5 right?

6 A. Yes.

7 Q. Your crops are covered by the same insurance
8 policy on this farm; is that true?

9 A. Yes.

10 Q. Like the other water rights on your home
11 place, you're claiming injury for the water right here
12 based upon junior pumping upstream?

13 A. Yes.

14 Q. Moving up the river, the 7 Mile Ranch, you've
15 leased that property from Jeff Ward since about 2008; is
16 that correct?

17 A. Yes.

18 Q. That water right -- there's a number of water
19 rights, I'm sorry. There's the Cottonwood water right,
20 I'll disregard that for now. But there's a 1884, April
21 30, 1884, water right on that property?

22 A. Yes.

23 Q. And that water right authorizes the irrigation
24 of 173 acres. Would you agree with that?

25 A. Yes.

1 Q. But you're only irrigating about 105?

2 A. Yes.

3 Q. And that's been the case ever since you leased
4 the property?

5 A. Yes.

6 Q. Mr. Ward has a hunting preserve on the
7 balance, the 50 acres or so?

8 A. Yes.

9 Q. When you took over this property there was a
10 pivot and wheel lines installed; correct?

11 A. Yes.

12 Q. Make that more efficient.

13 A. Managing the water more efficient. Managing
14 the crop, either way.

15 Q. For 2021, you have 81 acres planted in spring
16 wheat and 26 acres in sugar beets; is that true?

17 A. Yes.

18 Q. I believe you talked about this, but you may
19 be moving water from the Jim Ritter place, the 1883
20 water, out of here to the sugar beets on the 7 Mile
21 Ranch, if necessary.

22 A. Yes.

23 Q. With respect to your spring wheat, what's your
24 projected needed last day of irrigation?

25 A. I don't know what I wrote down there but I'm

1 thinking it would be at the very least the 10th to the
2 15th of July.

3 Q. What happens if you're shut off on June 11th
4 on the 1884 priority?

5 A. We would have to evaluate the wheat. You're
6 talking about the wheat?

7 Q. Yes.

8 A. We would have to evaluate the wheat, see if it
9 was going to head out and make grain or whether we'd
10 have to take it and just chop it off.

11 Q. When would you make that decision?

12 A. Well, we'd watch it and we'd have to -- I
13 don't know what exact day we'd make that decision, but
14 you look at it, you bring in a crop advisor, he looks at
15 it, and everybody puts their heads together and says,
16 Well, before it gets dried out, we better chop it so we
17 can salvage something.

18 Q. Would that be before the end of June?

19 A. Yes, it would have to be.

20 Q. So would curtailing any junior groundwater
21 rights after that point provide any benefit to that
22 crop?

23 A. Probably would not provide a benefit for the
24 wheat.

25 Q. How about the sugar beets, what happens if

1 you're cut off on the sugar beets?

2 A. There's no salvage value there at all. We
3 would have to abandon that. I don't know what the sugar
4 factory would say because we couldn't get water to it,
5 we just have to -- it would be just a total loss.

6 Q. In the two exhibits you identified needed last
7 day for sugar beets, needed last day of irrigation, and
8 one said September 20th and one said September 1st. Do
9 you know which is the correct date?

10 A. If we could harvest the sugar beets early on
11 the 1st, the sugar factory starts the very first part of
12 September, and you can dig maybe 10 percent of your crop
13 and they start, that's how they start their factory. So
14 they rotate that by the different receiving stations.
15 So maybe we would be scheduled to not dig our early
16 beets until, say, the middle of September, but with a
17 hardship we'd say, Can we dig first?

18 So then you take the water away, say, the 1st
19 September and harvest the beets, otherwise if they said,
20 No, you have to stay in line, it might be September 20th
21 or even maybe October 1st that you needed the water
22 because the late harvest of beets doesn't start until
23 like the 6th or 8th of October.

24 Q. So you could have different harvest dates for
25 these different fields; is that correct?

1 A. Yes.

2 Q. All these crops on the 7 Mile place are
3 covered by the same insurance policy as well?

4 A. Yes.

5 Q. Would that policy cover some of the projected
6 revenue losses?

7 A. I hope so.

8 Q. Do you know, you are diverting from the Little
9 Wood River below Station 10; is that correct?

10 A. Yes.

11 Q. Do you know what the flow has to be in Station
12 10 for your different priorities to be on?

13 A. I do not.

14 Q. Kevin Lakey is the best person to ask that?

15 A. Kevin Lakey would know. He talks about, the
16 only number that I have in mind is like 20 feet,
17 23 cubic feet or something to get water down to us so
18 that our '83 rights are good or whatever, but I'm not
19 sure.

20 MR. THOMPSON: Thank you.

21 THE HEARING OFFICER: Thank you, Mr. Thompson.
22 Mr. Laski?

23 MR. LASKI: Nothing.

24 THE HEARING OFFICER: Thank you.

25 Group 3.

1 CROSS-EXAMINATION

2 BY MR. BROMLEY:

3 Q. Hi, Mr. Taber.

4 A. Hello.

5 Q. Chris Bromley. Two questions.

6 So when do you turn on your Little Wood rights
7 on those three places that we were talking about, in an
8 average type of year?

9 A. Average year, it depends on the crop and it
10 depends on the spring. They start riding the river,
11 what I call riding the river, checking how much flow or
12 how much water we're using the 1st of April. And if
13 it's a real dry spring and maybe you've just planted
14 sugar beets or something and you need to water them to
15 get them up, we might start watering, say, the 5th of
16 April. If the winter wheat shows drought and it doesn't
17 have any rain on it, we might start the 1st of April.
18 But normally around the 15th of April we start watering
19 a little bit, not everything, but some.

20 Q. Do remember this year when you turned on?

21 A. Not as quick as we needed to because we were
22 trying to get other things done, but we should have been
23 on by the 1st of April.

24 Q. Do you remember when you turned on?

25 A. I think it was around the 5th.

1 Q. Okay. Thank you.

2 Second question: In response to questions
3 from Mr. Thompson about curtailment of junior
4 groundwater rights, are you asking the Director to
5 curtail junior groundwater rights that are located
6 outside of the Bellevue Triangle?

7 A. No.

8 MR. BROMLEY: Thank you.

9 THE HEARING OFFICER: Others from group 3?

10 MR. ROBERTSON: No.

11 THE HEARING OFFICER: Mr. O'Bannon has left
12 us.

13 Okay. Redirect, Mr. Rigby.

14 MR. RIGBY: No redirect, Mr. Director.

15 THE HEARING OFFICER: Thank you, Mr. Taber,
16 for your patience in waiting.

17 Now let me inquire of THE HEARING OFFICER
18 reporter, do you need a break?

19 THE HEARING OFFICER REPORTER: That would be
20 great.

21 (Recess.)

22 THE HEARING OFFICER: We are back on the
23 record after the next-to-the-last break.

24 Mr. Legg, would you raise your right hand,
25 please.

1 CARL LEGG,
2 having been called as a witness by the Big Wood & Little
3 Wood Water Users Association and first duly sworn,
4 testified as follows:

5

6 DIRECT EXAMINATION

7 BY MR. RIGBY:

8 Q. Good afternoon.

9 A. Good afternoon.

10 Q. Please state your full name and current
11 address.

12 A. Carl Legg, 836 East Highway 26, Richfield,
13 Idaho.

14 Q. Are you a named party in this proceeding?

15 A. I am.

16 Q. Are you also a member of the Big Wood & Little
17 Wood Water Users Association?

18 A. I am.

19 Q. Please explain your education and work
20 experience to date.

21 A. Well, since my mom had told me not to touch
22 things that's hot, it's experiential learning, six
23 decades of it, and I try not to get burned twice.

24 I own and run a business that builds pole
25 barns and operate 160 acres of trying to do something

1 with so...

2 Q. This 160 acres is the subject of this
3 particular proceeding, as far as you are concerned;
4 correct?

5 A. That's correct.

6 MR. RIGBY: Pursuant to stipulation of
7 counsel, I believe that Legg Exhibit 2 through 6 -- no,
8 5, excuse me. 2 through 5, I would move for the
9 admission of those exhibits. Representing that 2 and 3
10 are the irrigation rights; 4 through 6 are the stock
11 water and domestic rights.

12 THE HEARING OFFICER: Mr. Rigby, is 6 included
13 or not included?

14 MR. RIGBY: It's not included.

15 THE HEARING OFFICER: You referenced 2 through
16 6.

17 MR. RIGBY: I'll tell you why, it's because
18 there are two pages of 5 that include the domestic and
19 stock water so I was confusing myself.

20 THE HEARING OFFICER: Okay. So the
21 stipulation is, if I can recite, the documents marked as
22 Exhibits 2 through 5 you are requesting through
23 stipulation that these be received into evidence?

24 MR. RIGBY: I am, Mr. Director.

25 THE HEARING OFFICER: Any objection?

1 MR. THOMPSON: No.

2 MR. BROMLEY: No.

3 THE HEARING OFFICER: The documents marked as
4 Legg Exhibits 2 through 5 are received into evidence.

5 (Legg Exhibits 2 through 5 received.)

6 THE HEARING OFFICER: Thank you.

7 Q. (BY MR. RIGBY) Mr. Legg, how long have you
8 owned the property that is subject to the irrigation
9 right and evidenced by the picture on Legg Exhibit 3?

10 A. I've owned this property for 6 years.

11 Q. I think in your deposition you said this
12 property is kind of off the grid.

13 A. It is off the grid. There's no power
14 available to this property.

15 Q. I also understand that your intent for this
16 property is to actually conduct a bison project. Would
17 you explain.

18 A. That's correct. I fully intend on raising a
19 little herd of about 35 head of bison. I've done a
20 business model and a business case to do that. So
21 that's what our intent is.

22 Q. I'm trying to address this particular issue.
23 Are you, with your water right, it's a 1908 water right,
24 is there additional water besides the 1908 right water
25 evidenced by Legg Exhibit No. 2?

1 A. I believe it's a 1904 -- yeah, 1908. 1908 is
2 correct. And no, there's no other water right besides
3 that one.

4 Q. Do you lease water?

5 A. I do not.

6 Q. Do you have any supplemental water?

7 A. I do not.

8 Q. Therefore, with your stock water right, is
9 that what you're intending to provide for some of the
10 bison?

11 A. That would be correct.

12 Q. Again, if you'll turn to Legg Exhibit No. 1.
13 I'm trying to cut to the chase. As I understand it
14 through your deposition and otherwise, that your only
15 claim of damages is that you were not able to seed the
16 place with the kind of seed that is required to properly
17 raise buffalo; is that correct?

18 A. That's correct. So what our plan was, was to
19 plant new seed this year. So we pulled off the cattle
20 that typically graze this ground, and that was our plan.
21 But as the water became not available and that was
22 evident, we made a new plan of pushing that off another
23 year. However, if we're able to get some water in the
24 fall, then we'll try to do some fall planting and allow
25 that seed -- we won't see any growth out of it but at

1 least it will have a chance to get a start for next
2 year. Otherwise, this projection would be off a full
3 another year because we'll have to do the same thing
4 next year.

5 Q. The 3,000 you've estimated as projected loss
6 of revenue, how is that calculated?

7 A. That is just the revenue that we pulled the
8 cattle that graze this year off for this purpose. So
9 that's what the tenant paid us; so that's the value for
10 the year.

11 Q. Do you have any water right that is on at the
12 present time?

13 A. No, I do not.

14 Q. Are you, along with the others, maintaining
15 that one of the reasons why you're not able to have
16 water at this time is due to the pumping that's
17 occurring in the Bellevue Triangle?

18 A. Yes. The junior right up there pumping does
19 create a problem for our flow downstream, that's
20 correct.

21 Q. And are you relying upon any personal
22 information or just the experts that have been involved?

23 A. I'm relying on the experts that have been
24 involved plus my 6 years of watching what's going on up
25 there.

1 Q. What has that shown to you, your 6 years of
2 watching?

3 A. Silver Creek pulls down and the flow, we are
4 obviously downstream from where Silver Creek confluence
5 comes into the Little Wood, and it definitely changes.
6 The more pumping that goes on, the changes happen to it.

7 MR. RIGBY: I'd move for the admission of Legg
8 Exhibit No. 1.

9 THE HEARING OFFICER: Any objection to
10 admission of this document?

11 MR. THOMPSON: No.

12 MR. BROMLEY: No.

13 THE HEARING OFFICER: The document marked as
14 Legg Exhibit 1 is received into evidence.

15 (Legg Exhibit 1 received.)

16 Q. (BY MR. RIGBY) Mr. Legg, are you then seeking
17 to have the water rights of the surface and groundwater
18 administered by priority?

19 A. Yes, I am.

20 Q. And again, do you believe that will improve
21 your right to conduct the business that you intend to
22 conduct on this parcel?

23 A. Yes, I do.

24 Q. Do you believe this particular year that if
25 there is a curtailment it will benefit you?

1 A. Water in the river will benefit everyone
2 downstream; so yes, I believe that.

3 Q. You indicated that if there were, if the right
4 came back on, you'd be able to plant this seed even this
5 year?

6 A. That's correct. If I can get water in the
7 late fall, I would go ahead and plant, get some water on
8 it.

9 Q. But as it stands now, without a curtailment,
10 do you think that's a possibility?

11 A. No. I would not do it now.

12 MR. RIGBY: I have no further questions.

13 THE HEARING OFFICER: Thank you.

14 Mr. Thompson.

15
16 CROSS-EXAMINATION

17 BY MR. THOMPSON:

18 Q. Good evening, Mr. Legg. Travis Thompson for
19 the South Valley Ground Water District.

20 A. Good evening, sir.

21 Q. It's true you're requesting conjunctive
22 administration in Water District 37 this year; is that
23 correct?

24 A. I've looked up what conjunction is, and I
25 don't know as I have a full understanding. I haven't

1 been advised by my lawyer one way or the other. So I
2 would just say, I'm not going to answer that. How's
3 that?

4 Q. I'd like to open your deposition, give that to
5 you.

6 A. Sure.

7 Q. Enter this into the record.

8 THE HEARING OFFICER: Mr. Thompson, is this
9 for the purpose of impeachment?

10 MR. THOMPSON: There's just a few things in
11 this one.

12 THE HEARING OFFICER: I just want to know.

13 Q. (BY MR. THOMPSON) Can you please turn to page
14 12.

15 A. Absolutely.

16 Q. Could you read lines 12 through 15.

17 A. Sure.

18 Line 12, question: "Are you requesting
19 conjunctive administration of upstream junior
20 groundwater rights in Water District 37 this year?"

21 Line 15, answer: "Yes, I am. Invested a lot
22 of money, I need the water."

23 17 --

24 Q. No, I just asked for that, Mr. Legg. That's
25 fine.

1 Second question: Are you claiming upstream
2 groundwater rights injure or adversely affect your
3 surface water right; is that true?

4 A. Say that again.

5 Q. Are you claiming your surface water right is
6 injured or adversely affected by junior groundwater
7 rights?

8 A. I do. Do you want to go back to the
9 conjunctive administration piece?

10 Q. No, you read that. Thank you.

11 Do you agree you don't know which groundwater
12 rights are causing that injury?

13 A. As far as individually?

14 Q. Correct.

15 A. Collectively?

16 Q. Do you know which groundwater rights are
17 causing your alleged injury?

18 A. As an individual person that's causing my
19 injury, no, I do not.

20 Q. So you've leased your property to Harold Cook
21 for pasture in the past, haven't you? Is that true?

22 A. Yes, that's correct.

23 Q. But you're not renting it this year; is that
24 correct?

25 A. That's correct.

1 Q. He used to pay you \$3,000 a year?

2 A. That's correct.

3 Q. And you decided not to rent it this year
4 because of an agreement with NRCS for a new seed
5 planting; is that true?

6 A. That is correct.

7 Q. The NRCS recommended that you not run cattle
8 on it; is that correct?

9 A. For a year from the new planting, that's
10 correct.

11 Q. For 2021.

12 A. For the year for a new planting, that's
13 correct.

14 Q. How long would you need water to establish the
15 new seed?

16 A. I have no idea.

17 Q. It's a special grass that should take less
18 water; is that true?

19 A. It is. It's a drought-resistant grass. Bison
20 are natural herbivores and they don't require the same
21 type of products that you heard Mr. Taber testify that
22 he's raising for his dairy cattle.

23 Q. But you are irrigating the pasture for 2021?

24 A. I am not irrigating currently.

25 Q. On your water right, if you could turn to

1 Exhibit 2, that's your Water Right 37-1126?

2 A. That's correct.

3 Q. And does it have Conditions 4 and 5
4 referencing other sources of supply?

5 A. Yes, it does. Item 4 does for American Falls
6 and item 5 does for Big Wood Canal.

7 Q. If you can turn back to Exhibit 1. I think
8 that's your Table of Projected Injury. So there's a
9 Supplemental Water column. Do you know what that is?

10 A. Are you looking across the top?

11 Q. I think it's on the bottom below your Decreed
12 Water.

13 A. Okay. It's there.

14 Q. That CAW, do you know what that stands for?

15 A. I do not.

16 Q. Have you heard the term Carey Act water?

17 A. Today I have.

18 Q. Did you hear Mr. Arkoosh's testimony?

19 A. I did, and I've had some conversation about it
20 but I don't understand it. My limited understanding is
21 the Carey Act was an investment the federal government
22 made through private individuals to create the dam for
23 delivery of water.

24 Q. So did you irrigate through August last year?

25 A. I believe so, yes.

1 Q. And was that with your 1908 Little Wood right
2 or this CAW water?

3 A. I have no idea. I was told when to turn it on
4 and when it was turned off. So I don't regulate that;
5 there's a ditch rider that does that.

6 Q. Were you here for the testimony of Carl
7 Pendleton?

8 A. I was not for the whole thing.

9 Q. Can you turn to IDWR Exhibit 4, page 9,
10 please. Should be the report of Tim Luke.

11 A. I have 3, 4, 5, 2. It doesn't look like I
12 have a 4 here. Maybe I do. IDWR 4?

13 Q. Yes, page 9.

14 A. Yes. Okay. Sorry that took a minute.

15 Q. That's okay.

16 A. I'm with you.

17 Q. So I'm looking at Figure 3, Cumulative water
18 right diversion rates for irrigation uses from Little
19 Wood River & Silver Creek. Do you see that?

20 A. I do.

21 Q. Do you see the description about the Big Wood
22 Canal Company rights above that figure?

23 A. As far as the table?

24 Q. Yes.

25 A. Yes, I do.

1 Q. Would you agree the Big Wood Canal Company has
2 a 1907 priority right for 303 cfs?

3 A. I see that table connects with that.

4 Q. So would that water right have to be delivered
5 before your 1908 right could turn on?

6 A. According to this chart that would be correct.

7 Q. By priority too; correct?

8 A. Correct.

9 Q. To your knowledge, was that priority on last
10 August?

11 A. Again, I don't have any knowledge if it was or
12 if it was not.

13 Q. So how much water, according to this figure,
14 has to be in the river before your water right is turned
15 on?

16 MR. FLETCHER: I'm going to object for lack of
17 foundation. I guess that assumption is everybody is
18 diverting their right fully?

19 MR. THOMPSON: Certainly.

20 MR. FLETCHER: I'm going to object for lack of
21 foundation. If you want to lay the foundation -- I'll
22 let you rule on that.

23 THE HEARING OFFICER: Sustained.

24 Q. (BY MR. THOMPSON) According to this figure,
25 how many water rights have authorized diversion rates, I

1 guess the quantity out of yours?

2 A. As far as dates?

3 Q. Dates and quantity.

4 A. So prior to mine would be 1907, looks like 850
5 cumulative diversion rates and cfs; 1901 at 450; 1895 at
6 just under 250, I can't tell if that would be 249.5 or
7 249.8, I didn't make the chart; 1895 at again less than
8 250 but a little over 240; 1889, I would say that comes
9 in at 215; 1883, I think the lines cross somewhere
10 around 150; 1877 shows a flat line, zero.

11 Q. Do you have any knowledge of whether or not
12 curtailing junior groundwater rights would supply that
13 amount of flow in the Little Wood River?

14 A. I have no idea. I don't have a gage and I
15 don't measure the Little Wood River as far as cfs is
16 concerned.

17 Q. So as far as this year, when was your water
18 right on?

19 A. My understanding it turned on on April 15. I
20 didn't turn any pumps on until May.

21 Q. When was it curtailed?

22 A. It was curtailed earlier this month. I don't
23 know the exact date.

24 Q. So would the Water District 37 records provide
25 the best source of evidence as to when your water right

1 is on priority and when it's not?

2 A. Say that again, sir.

3 Q. Would the Water District 37 records be the
4 best source of information of when your priority is on
5 and when it's off?

6 A. I would presume so but I can't answer that
7 question with any integrity.

8 Q. Let's go back to your table 1. You have a
9 needed last day of irrigation September 30th; is that
10 correct?

11 A. That's what this chart says, that's correct.

12 Q. Do you know how many times your 1908 right has
13 lasted until September 30th?

14 A. I do not.

15 Q. How about August 31st?

16 A. I do not.

17 Q. July 31st?

18 A. I do not.

19 Q. June 30th?

20 A. I do not.

21 Q. May 31st?

22 A. I do not.

23 Q. Again, would the watermaster records be the
24 best source of information for that?

25 A. Yes, it would.

1 MR. THOMPSON: That's all the questions I
2 have. Thank you.

3 THE HEARING OFFICER: Thank you.

4 Ms. O'Leary?

5 MS. O'LEARY: Nothing, Director.

6 THE HEARING OFFICER: That's group 2.

7 Mr. Bromley, questions?

8

9 CROSS-EXAMINATION

10 BY MR. BROMLEY:

11 Q. Good evening, Mr. Legg.

12 A. Good evening.

13 Q. Chris Bromley. I have one question for you.

14 So in response to questions from Mr. Thompson
15 you said you're asking for curtailment of junior
16 groundwater rights and you weren't able to identify
17 which rights those were; is that correct?

18 A. Individually that's correct.

19 Q. Are you asking the Director to curtail junior
20 groundwater rights that are outside of the Bellevue
21 Triangle?

22 A. No, I am not.

23 MR. BROMLEY: Thank you. Nothing further.

24 THE HEARING OFFICER: Okay. I don't see any
25 of our other group 3 folks here now.

1 Redirect, Mr. Rigby.

2 MR. RIGBY: Just one.

3

4 REDIRECT EXAMINATION

5 BY MR. RIGBY:

6 Q. Mr. Legg, when you in your deposition
7 addressed the conjunctive management and then you said
8 you looked up conjunctive management, was that after
9 your deposition?

10 A. That's correct.

11 Q. So at the time of your deposition when you
12 said that were you fully advised what conjunctive
13 management may or may not have meant?

14 A. Absolutely not, I did not understand.

15 MR. RIGBY: No further questions.

16 THE HEARING OFFICER: Any more recross?

17 MR. THOMPSON: I've got one on that.

18

19 RECROSS-EXAMINATION

20 BY MR. THOMPSON:

21 Q. Mr. Legg, what did you look up?

22 A. I looked up conjunctive management.

23 Q. Where?

24 A. I just Googled it.

25 Q. Oh, you Googled it.

1 You didn't look in the Idaho statutes or the
2 Idaho Administrative Rules?

3 A. I did not.

4 MR. THOMPSON: Okay.

5 THE HEARING OFFICER: Thank you, Mr. Legg.

6 THE WITNESS: Thank you, Mr. Director.

7 THE HEARING OFFICER: Next witness.

8 MR. RIGBY: Our last witness would be Chuck
9 Newell, please.

10 THE HEARING OFFICER: Mr. Newell, come
11 forward, please.

12 MR. RIGBY: I'm sorry, last witness today.

13 CHARLES "CHUCK" NEWELL,
14 having been called as a witness by the Big Wood & Little
15 Wood Water Users Association and first duly sworn,
16 testified as follows:

17
18 DIRECT EXAMINATION

19 BY MR. RIGBY:

20 Q. Good afternoon, Chuck.

21 A. Good evening.

22 Q. Yeah, I guess it's good evening.

23 A. Yeah.

24 Q. Please state your full name and current
25 address for the record.

1 A. Charles Newell, N-e-w-e-l-l. And I live in
2 Shoshone.

3 Q. What's your address?

4 A. 136 120 West Road.

5 Q. In Shoshone?

6 A. Yes.

7 Q. Are you a named party to this proceeding?

8 A. Yes, I am.

9 Q. Also a member of the Big Wood & Little Wood
10 Water Users Association?

11 A. Yes.

12 Q. And involved with that particular group?

13 A. Correct.

14 Q. What's your work experience and education?

15 A. I've been involved with some type of
16 agriculture since I was able to walk I guess. Dad used
17 to drag me around whenever we were going someplace. So
18 I've had my feet in the dirt for quite a while.

19 Q. Do you own land that is watered by the Little
20 Wood River?

21 A. Yes.

22 MR. RIGBY: Pursuant to the stipulation of
23 counsel, I believe that Newell Exhibit 2 through Newell
24 Exhibit 10 would address the particular water rights
25 associated with that land. And again, with the

1 condition that there is a Cottonwood right among those,
2 and with the same stipulation we previously had.

3 Therefore, pursuant to stipulation, I would
4 move for the admission of Newell Exhibit 2 through
5 Newell Exhibit 10 into the record.

6 THE HEARING OFFICER: I'm looking at the
7 reference, and it appears that the document marked as
8 Exhibit 11 is a map. You don't want to include this
9 one?

10 MR. RIGBY: I was going to but I guess we've
11 decided not to. Only reason being, Mr. Director, is
12 that there are other maps that would address this.

13 THE HEARING OFFICER: Okay. So other parties,
14 is Mr. Rigby's statement about the stipulation correct?

15 MR. THOMPSON: Yes.

16 MR. BROMLEY: Yes.

17 THE HEARING OFFICER: All right. So Exhibits
18 2 through 10 are received into evidence. These are
19 labeled Newell Exhibits 2 through 10.

20 (Newell Exhibits 2 through 10 received.)

21 Q. (BY MR. RIGBY) Mr. Newell, if you would look
22 at Newell Exhibit 5 for me, which is the map of Water
23 Right 37-432.

24 A. Yes.

25 Q. Does this map accurately depict the location

1 of your lands?

2 A. Of the irrigated land, yes.

3 Q. Good point, the irrigated lands.

4 And do you own these lands?

5 A. Yes.

6 Q. How long have you owned these lands?

7 A. I've been on the place 50 years and 2 days.

8 Actually owning those when my dad checked out,
9 why, I took over from that, and that was in 1979.

10 Q. But obviously you're very familiar with these
11 lands.

12 A. Yeah, unfortunately.

13 Q. How about the irrigation of these lands?

14 A. Yes.

15 Q. Presently how are these lands irrigated?

16 A. Combination of sprinkler and corrugates, and
17 some gated pipe.

18 Q. Therefore, from the river itself it appears as
19 though there are several points of diversion; is that
20 correct?

21 A. Yes.

22 Q. Are each of those used to help irrigate this
23 land?

24 A. Yes.

25 Q. Are they all piped or are they ditched?

1 A. Combination; part of it is piped and part of
2 it is in ditch.

3 Q. Have you in recent years done anything to be
4 more efficient in the use of your decreed water?

5 A. Yes.

6 Q. What have you done?

7 A. Have added a sprinkler system, have put in
8 some gated pipe, and redone some of the ditches, make
9 them more efficient.

10 Q. In addition to the water rights that we just
11 introduced -- in fact, let's talk about those first.
12 What's your earliest water right?

13 A. 1885, I think it's 4/15 of '85.

14 Q. So that's your earliest one?

15 A. Yes.

16 Q. And presently is that water right on?

17 A. I think that tomorrow or the next day it's
18 supposedly going off.

19 Q. The other water rights, without getting into
20 them specifically, are they on?

21 A. As far as I know.

22 Q. They're on?

23 A. Which water rights?

24 Q. I'm sorry, you talked about the earliest water
25 right.

1 A. Yes.

2 Q. I'm talking about the later water rights, are
3 they on?

4 A. No, no.

5 Q. So when this earliest water right goes off in
6 the next day or so, according to what you understand, do
7 you have any other water rights that can be used to
8 divert on this land?

9 A. No. It will be dry.

10 Q. What have you planted on this land?

11 A. We've got some grain and oats on there, and
12 that's all I planted this year.

13 Q. Why did you plant those this year?

14 A. Because there was no snow in the mountain and
15 it looked like it was going to be dry and I figured we
16 were going to be out of water.

17 Q. So typically speaking, what kind of crops do
18 you grow on these lands?

19 A. Alfalfa and irrigated pasture.

20 Q. Do you own cattle?

21 A. Yes.

22 Q. Is that the reason why you would generally
23 grow alfalfa?

24 A. Yes.

25 Q. You try to feed from your lands?

1 A. Raise all my own feed if at all possible.

2 Q. Are any of these lands in pasture land?

3 A. Yes.

4 Q. Are this irrigated?

5 A. Yes.

6 Q. Again, with the water right being cut, will
7 they now go without water?

8 A. They are kind of like the floor, they get
9 pretty dry.

10 Q. So what do you intend to do? Have you
11 attempted to obtain any additional water from any
12 source?

13 A. It's possibly in the process but nothing is
14 cut and dried yet.

15 Q. And in the process what are the kind of prices
16 you are hearing?

17 A. Very high and scary. Somewhere's it cost,
18 somewhere several thousand dollars depending on how much
19 water we will be able to get.

20 Q. Without water will any of your pastureland
21 die?

22 A. It will go to hell real fast, yes.

23 Q. Will that require reseeding?

24 A. Possibly; it depends how long the drought
25 continues or the water is not available.

1 Q. As far as the non-pastureland, the crops you
2 are growing, what do you expect to happen to those
3 crops?

4 A. The oats will probably dry up before we could
5 do too much with it, no doubt make hay out of that,
6 salvage what you can. Part of the pasture is going to
7 deteriorate. We had a new seeding of alfalfa last year,
8 that's going to suffer. So it's not a great outlook at
9 the moment.

10 Q. So because you have been on these lands for
11 quite some time, historically has it been this bleak as
12 far as the outlook is concerned?

13 A. My memory isn't that great, but I would say in
14 the last 50 years this is the worst it's been.

15 Q. And typically speaking, taking this year out
16 of it, has there been any decline, if you will, in your
17 opinion of the flows of the Lemhi -- strike that.

18 A. Of the Little Wood River.

19 Q. Of the Little Wood?

20 A. It has declined definitely.

21 Q. You have seen that?

22 A. Yes.

23 Q. And what have you personally seen or done to
24 help you make that determination or that, I guess,
25 experience?

1 A. Our dining room is right on the river, and
2 there is certain rocks on there, that when those rocks
3 are showing the water is really down. And this spring
4 there was no runoff, there was no water, or very little
5 water in the river, you could walk across that and
6 hardly get your ankles wet. In the fall, when the canal
7 water goes out, there is extremely low water.

8 Q. That's more than just this year?

9 A. Yes, over the past several years. Each year
10 it keeps going down.

11 Q. You have made a conscious recognition of that
12 trend, if you will?

13 A. Yes. I don't even have to wear glasses to see
14 that, yes.

15 Q. Do you believe that the reduction in the water
16 supply in the Little Wood is due in part to the pumping
17 in the Triangle?

18 A. That seems to be the thought, yes.

19 Q. Have you attempted to determine the injuries
20 that your crops have sustained this particular year?

21 A. Yes, I have.

22 Q. I would have you turn to Newell Exhibit No. 1,
23 please. And in this exhibit, are these numbers, as far
24 as crop acres, projected cutoff time, yield target,
25 projected yield loss and also revenue loss, were those

1 numbers that you provided?

2 A. Yes, I went through the wastebasket, found my
3 records.

4 Q. Okay. Please explain then how you came up
5 with these kind of numbers. For example, start with the
6 alfalfa hay.

7 A. We've gone ahead and mow a bale of hay, haul
8 the stuff in, you weigh a number of the bales to get an
9 average weight on there, figure how many bales you have
10 taken off the field, add that stuff up and you come up
11 with a tonnage on there. And that's where I come up
12 with those numbers.

13 Q. As far as projected target, how did you come
14 up with that? Is that your average that you would
15 expect to get on this land?

16 A. That is what we have been getting over the
17 past couple of years, yes.

18 Q. Therefore, the loss of, for example, the
19 62 tons, how did you come up with that?

20 A. I am hoping that we'll get a partial second
21 cutting, no guarantee by any means. A third cutting is
22 out of the question.

23 Q. Typically speaking, if you have your full
24 water supply, how many cuttings do you get?

25 A. I've always gotten three.

1 Q. How about with the grass hay and the grass
2 pasture; same questions?

3 A. It's basically the same thing. I've counted
4 the number of bales you take off of the different fields
5 on that, weigh it out, how many tons per acre or how
6 much have you gotten from the crop on there.

7 Q. As far as the oat hay, is that the same
8 calculation?

9 A. Yes. Last year we took off a nice batch of
10 hay and replanted and took a second batch of hay off
11 there; it came out about the same. This year we won't
12 even think about replanting. That's just going to be
13 bare ground.

14 Q. Now, one additional column you projected for
15 losses beyond 2021 of \$9,000 and also replacement
16 heifers of 26,000. So why are you needing to replace
17 heifers? Are you having to sell heifers as a result of
18 this year?

19 A. This year I had some heifers that I was using
20 as replacements for following years. I held onto those
21 as long as I thought we might get some water, it might
22 rain, something might happen, and the might didn't
23 happen, and sold the animals because of lack of feed.

24 Q. So in all fairness, you would have to at least
25 subtract from the repurchase of those the revenue you

1 received from the sale of the ones this year, would you
2 not?

3 A. Yes.

4 Q. And that's not depicted here?

5 A. No. And I don't get any calves -- if they are
6 bred, there is no calves from those animals as being a
7 replacement. So that goes into the following year,
8 which would be next year. And I am still short 13
9 animals on there that I have sold. So I'm 13 animals in
10 the hole, no matter what.

11 Q. I understand. So your claim would still be
12 that your 35,000 is legitimate.

13 A. Yes.

14 Q. So a total of 54,000, almost 55,000, is what
15 you are claiming is losses.

16 A. That is my projected guesses, yes.

17 MR. RIGBY: I'd move for the admission of
18 Newell Exhibit No. 1.

19 THE HEARING OFFICER: Any objection to
20 admission of the document?

21 MR. THOMPSON: No.

22 MR. BROMLEY: No.

23 THE HEARING OFFICER: Hearing no objection,
24 Mr. Rigby, the document marked as Newell Exhibit 1 is
25 received into evidence.

1 (Newell Exhibit 1 received.)

2 Q. (BY MR. RIGBY) And finally, are you seeking
3 to have the water rights of both surface and ground
4 administered pursuant to the their priorities?

5 A. Yes, I am.

6 Q. And you may or may not have said in your
7 deposition that you wanted them conjunctively managed.
8 Did you understand what you were saying there?

9 A. No, I didn't by any means. I asked to have it
10 clarified, and I still didn't understand. So I don't
11 even remember what I said at that time on there. I
12 would imagine it's written down. I'll no doubt be
13 reminded of it.

14 Q. But as far as you're concerned again --

15 A. It should be by priority.

16 MR. RIGBY: I have no further questions.

17 THE HEARING OFFICER: Mr. Thompson.

18
19 CROSS-EXAMINATION

20 QUESTIONS BY MR. THOMPSON:

21 Q. Good evening, Mr. Newell.

22 A. Good evening.

23 Q. Travis Thompson for South Valley Ground Water
24 District.

25 Your farm is located west of Shoshone on the

1 Little Wood River; is that correct?

2 A. Yes.

3 Q. And is that below the point where AFRD #2
4 delivers water from the Milner-Gooding Canal?

5 A. Yes.

6 Q. And when did they start delivering water into
7 the river?

8 A. Well, whenever it was that they deemed it
9 irrigation season. I don't remember what the date was
10 on that.

11 Q. Are they delivering a different amount this
12 year, do you know?

13 A. I'm not involved with American Falls. I don't
14 know.

15 Q. I am just trying to get back to your testimony
16 about the river. I thought you said you could see rocks
17 in it when it was lower. I'm just trying to see when
18 that was.

19 A. When there is a natural flow in the river,
20 that is when you see the rocks and things. When the
21 canal water comes in, then there is more water and you
22 don't see the rocks quite as well.

23 Q. So before the irrigation season when it's just
24 the natural Little Wood flowing through; is that
25 correct?

1 A. Yes.

2 Q. You irrigate approximately 77 acres on your
3 farm; is that correct?

4 A. Approximately, yes.

5 Q. And your most senior water right is an 1885
6 priority; is that true?

7 A. Yes.

8 Q. And has that water right been curtailed in
9 July some years?

10 A. Yes.

11 Q. And your second water right, 37-21135, is that
12 an enlargement water right?

13 A. Have you got the exhibit on here someplace? I
14 have to see it.

15 Q. Exhibit 10 is a copy of the decree.

16 A. Yes, that is correct on there.

17 Q. So would you agree out of your 77 acres, 23 of
18 those acres have a 1985 priority?

19 A. All the ground that is irrigated on the place
20 has historically been irrigated. And this was a time
21 the water adjudication took place that they suggested
22 that we do an enlargement just for a record on there.
23 Historically the 77 acres has been watered for, I don't
24 know how long, more than 50 years by far.

25 Q. So at least subsequent to the SRBA, these

1 23 acres would have a different priority as far as the
2 water district, do you know?

3 A. It's all 1885.

4 Q. Which is different than what is stated on this
5 water right; is that correct?

6 A. That's correct, yes.

7 Q. Do you know if junior groundwater rights are
8 curtailed whether your 1885 priority will come back on
9 this season?

10 A. That is the hope that it will, yes.

11 Q. Do you know the flow at any stations that have
12 to be in the river for your right to be on?

13 A. I'm not familiar with those. That is
14 upstream. I have nothing to do with that.

15 Q. Do you know which gage it's measured at?

16 A. I do not.

17 MR. THOMPSON: That's all the question I have.
18 Thanks.

19 THE HEARING OFFICER: Thank you, Mr. Thompson.

20 Mr. Bromley? I'm sorry. Ms. O'Leary?

21 MS. O'LEARY: Nothing from me, Mr. Director.

22 THE HEARING OFFICER: Mr. Bromley.

23 MR. BROMLEY: Thank you.

24 ///

25 ///

1 CROSS-EXAMINATION

2 BY MR. BROMLEY:

3 Q. Good evening. It's 7:20, so hopefully we'll
4 be able to get out of here by 7:23.

5 A. Sounds great.

6 Q. I just have two questions.

7 When do you usually turn on your Little Wood
8 rights?

9 A. As soon as they are available.

10 Q. Do you recall when that was this year?

11 A. I don't. I think it's listed on the water
12 right deal or someplace. It goes for whatever the
13 irrigation season is. April 1 maybe, don't quote me,
14 please, to whenever the water goes off. It can vary
15 from year to year.

16 Q. Okay. Second question. You were asked by
17 Mr. Rigby whether you were seeking administration of
18 groundwater rights, you said yes, in priority. My
19 question to you is: Are you asking for curtailment of
20 groundwater rights that are outside of the Bellevue
21 Triangle?

22 A. No, I'm not.

23 MR. BROMLEY: Thank you. I have nothing
24 further. And I see it's 7:21. So I was 2 minutes
25 faster.

1 THE WITNESS: Yeah.

2 THE HEARING OFFICER: Thank you, Mr. Bromley.

3 MR. BROMLEY: Thank you.

4 THE HEARING OFFICER: No more -- category 3?
5 Mr. Rigby.

6 MR. RIGBY: Nothing further.

7 THE HEARING OFFICER: All right. Thank you,
8 Mr. Newell, for enduring with us.

9 Is Mr. Newell the last -- yes, you are
10 excused.

11 Mr. Rigby, other witnesses tonight?

12 MR. RIGBY: No other witnesses tonight. That
13 would conclude the witnesses as to the individual farmer
14 parties. We will continue tomorrow morning with the
15 watermaster and then with our expert.

16 THE HEARING OFFICER: So we will recess now
17 and we will resume our proceeding tomorrow at 8:30.

18 Thanks everybody. See you tomorrow.

19 (Proceedings adjourned at 7:23 p.m.)
20
21
22
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24
25

1 REPORTER'S CERTIFICATE

2 I, BEVERLY A. BENJAMIN, CSR No. 710, Certified
3 Shorthand Reporter, certify:

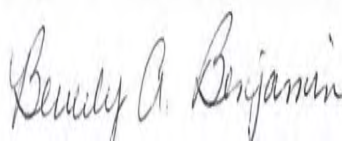
4 That the foregoing proceedings were taken before
5 me at the time and place therein set forth, at which
6 time the witness was put under oath;

7 That the testimony and all objections made were
8 recorded stenographically by me and transcribed by me or
9 under my direction;

10 That the foregoing is a true and correct record
11 of all testimony given, to the best of my ability;

12 I further certify that I am not a relative or
13 employee of any attorney or party, nor am I financially
14 interested in the action.

15 IN WITNESS WHEREOF, I set my hand and seal this
16 17th day of June 2021.

17
18
19 

20 _____
21 BEVERLY A. BENJAMIN, CSR 710

22 Notary Public

23 P.O. Box 2636

24 Boise, Idaho 83701-2636
25

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BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF BASIN 37)
ADMINISTRATIVE PROCEEDING) Docket No.
_____) AA-WRA-2021-001

VOLUME IV
(Pages 753 - 1095)

BEFORE

HEARING OFFICER: GARY SPACKMAN

Date: June 10, 2021 - 8:33 a.m.

Location: Idaho Department of Water Resources
322 East Front Street
Boise, Idaho

REPORTED BY:

ANDREA L. CHECK, CSR No. 748, RPR

Notary Public

A P P E A R A N C E S

For South Valley Ground Water District:

Barker Rosholt & Simpson, LLP

BY MR. ALBERT P. BARKER

& MR. TRAVIS L. THOMPSON

1010 West Jefferson Street, Suite 102

P.O. Box 2139

Boise, Idaho 83701-2139

apb@idahowaters.com

tlr@idahowaters.com

For Galena Ground Water District:

Lawson Laski Clark, PLLC

BY MS. HEATHER E. O'LEARY

675 Sun Valley Road, Suite A

P.O. Box 3310

Ketchum, Idaho 83340-3310

heo@lawsonlaski.com

For Idaho Department of Fish and Game:

Office of Attorney General

BY MS. ANN Y. VONDE

Post Office Box 83720

Boise, Idaho 83720-0010

ann.vonde@ag.idaho.gov

A P P E A R A N C E S (Continued)

For Big Wood Canal Company

Fletcher Law Office

BY MR. W. KENT FLETCHER

1200 Overland Avenue

P.O. Box 248

Burley, Idaho 83318

wkf@pmt.org

For Big Wood & Little Wood Water Users Association:

Rigby, Andrus & Rigby, Chartered

BY MR. JERRY R. RIGBY

& MR. CHASE T. HENDRICKS

25 North Second East

Rexburg, Idaho 83440

jrigby@rex-law.com

chendricks@rex-law.com

For Sun Valley Company:

McHugh Bromley, PLLC

BY MS. CANDICE M. MCHUGH

& MR. CHRIS M. BROMLEY

380 South Fourth Street, Suite 103

Boise, Idaho 83702

cbromley@mchughbromley.com

A P P E A R A N C E S (Continued)

For City of Hailey:

Givens Pursley, LLP

BY MR. MICHAEL P. LAWRENCE

601 West Bannock Street

P.O. Box 2720

Boise, Idaho 83701-2720

mpl@givenspursley.com

For Idaho Department of Water Resources:

Office of Attorney General

Idaho Department of Water Resources

BY MS. MEGHAN CARTER

322 East Front Street

Boise, Idaho 83720

meghan.carter@idwr.idaho.gov

For City of Ketchum:

White, Peterson, Gigray & Nichols, P.A.

BY MR. BRIAN T. O'BANNON

5700 East Franklin Road, Suite 200

Nampa, Idaho 83687

bobannon@whitepeterson.com

Also Present:

Megan Jenkins, IDWR Staff

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P R O C E E D I N G S

HEARING OFFICER: So we are recording. This is day four of a hearing for a proceeding regarding and the ensuing contestant cases sprung out of the proceeding for a determination of whether junior groundwater rights are injuring senior water surface water rights and whether they should be curtailed in the Bellevue Triangle.

Are there preliminary matters we need to discuss this morning on the record?

Okay. Having heard silence, Mr. Rigby or Mr. Fletcher, your witness.

MR. RIGBY: It's Mr. Fletcher, Mr. Director.

MR. FLETCHER: We would call Kevin Lakey.

HEARING OFFICER: Kevin, the man with a difficult job.

KEVIN LAKEY,
first duly sworn to tell the truth relating to said cause, testified as follows:

HEARING OFFICER: Thank you, Kevin. Please be seated.

///

DIRECT EXAMINATION

QUESTIONS BY MR. FLETCHER:

Q. Good morning, Kevin.

A. Good morning.

Q. Thank you for driving here. I know it's a busy time of year for you.

Can you state your full name, please.

A. Kevin Lakey.

Q. And what is your address?

A. 1614 East 1800 South, Gooding, Idaho.

Q. What is your educational background?

A. I have a bachelor of science degree in agricultural education from the University of Idaho.

Q. What is your current occupation?

A. Watermaster for Water District 37.

Q. Prior to the time that you were watermaster, what did you do for an occupation?

A. General maintenance and ditch rider for the Big Wood Canal Company.

Q. When did you start working for Big Wood Canal Company?

A. September of '98.

Q. And how long did you work for them?

A. Until November of 2003.

Q. And what happened in November 2003?

1 A. I was hired by Water District 37 to be their
2 watermaster.

3 Q. Have you received any training in your role as
4 a watermaster?

5 A. Watermaster training from the Idaho Department
6 of Water Resources.

7 Q. Who is your employer?

8 A. Water users of Water District 37.

9 Q. Are you elected every year as watermaster?

10 A. Yes.

11 Q. Can you describe your duties as watermaster?

12 A. I oversee water delivery in the Big Wood
13 Basin, as well as administer and record the ownership of
14 water rights within Water District 37.

15 Q. And as part of that job, do you keep records
16 of diversions?

17 A. Yes, I do.

18 Q. Do you have any involvement with groundwater?

19 A. Yes, I do.

20 Q. What is that involvement?

21 A. Water District 37 monitors groundwater, as far
22 as making sure measuring devices are operating properly,
23 and then we take meter readings two to three times a
24 year, and then we totalize those readings at the end of
25 the year to see how much groundwater is pumped.

1 Q. So on the surface side, part of your duties --
2 one of your duties is to determine priorities; correct?

3 A. Correct.

4 Q. And when someone falls out of priority, what
5 do you do?

6 A. We shut them off.

7 Q. On the groundwater side, do you get involved
8 in shutting off any groundwater users?

9 A. No.

10 Q. To your knowledge, has a groundwater user ever
11 been curtailed in Basin 37?

12 A. Only if there were assessment issues. If they
13 had not paid their assessments to the water district.

14 Q. Have they ever been curtailed on a priority
15 basis?

16 A. No.

17 Q. Can you explain how you go about administering
18 the surface water rights on Silver Creek and the Little
19 Wood?

20 How do you determine priorities?

21 A. I look at the flow at Station 54 on the Little
22 Wood River and adjust accordingly.

23 Q. So can you explain that in a little bit more
24 detail. You look at the flows, and do you then do some
25 calculations?

1 A. Yeah. So let's say there would be -- pick a
2 number -- 50 cfs at Station 54, then I go down through
3 the priority list and identify what water rights can
4 still be delivered below 54 with 50 cfs.

5 If there was water or water rights junior to
6 that priority date that would be cut above 54, then I
7 would calculate how much water would be coming to 54,
8 and go back and forth on the calculation until I hit the
9 amount of water that would match priorities above 54 and
10 below 54.

11 Q. So you look at the water at 54, and then you
12 also look at supplies that may be coming to 54?

13 A. Correct.

14 Q. And then you determine your priority cuts?

15 A. Correct.

16 Q. And how do you communicate priority cuts to
17 the water users?

18 A. A variety of ways. Sometimes I call the water
19 right owners specifically or person to person and let
20 them know. Most of the time Water District 37 has three
21 other deputy positions that the watermaster would
22 contact those deputies, and the deputies would handle
23 the communication between the water district and the
24 water users.

25 Q. In general, how would you describe water

1 conditions on Silver Creek and Little Wood this year?

2 A. Through the spring, the Department of Water
3 Resources has identified what we call analog years that
4 had comparable snowpack levels, or SWSI is the term
5 sometimes used. And the Department had identified 1994,
6 2014, and possibly 2020.

7 So I looked at those years, and 2021 is lower
8 in flow at both the Sportsman's Access and Station 10
9 this year than they -- 2021 is lower than all of those
10 other analog years for the comparable dates.

11 Q. So since you've been watermaster in 2003, are
12 these the worst water-supply conditions you've seen?

13 A. Yes.

14 Q. Have you made projection cuts for this year?

15 A. Yes.

16 Q. Currently, what water right is in priority on
17 the Little Wood and Silver Creek?

18 A. May 5th of '84 is off. I'm not sure the exact
19 date that would be just senior to that. It's going to
20 be probably a 5-1 or a 4-15 of '84 that's going to be
21 senior that would still be deliverable.

22 Q. You prepared a memorandum dealing with your
23 priority cut analysis; is that correct?

24 A. Yes.

25 MR. RIGBY: And I think that's -- can you show

1 him, Chase, where that is up there? It's marked as
2 Rigby Exhibit 2, I believe.

3 MR. HENDRICKS: May I approach?

4 HEARING OFFICER: Yes.

5 Q. (BY MR. FLETCHER) You've been handed what's
6 been marked Rigby Exhibit 2.

7 Can you identify this document?

8 A. Yes.

9 Q. Is this the memorandum that I just asked you
10 about?

11 A. Yes.

12 Q. Did you prepare this memorandum?

13 A. Yes.

14 Q. Did you prepare it on or about May 29, 2021?

15 A. Yes.

16 Q. Why did you prepare this memorandum?

17 A. I was asked to estimate when water users might
18 need to curtail. If we had questions about trying to
19 find other water, they were just trying to crop plan
20 late, maybe they were going to plow something under.
21 There are a variety of reasons, but, basically, we
22 needed to kind of have a guess of what was going to
23 happen in the next -- or the upcoming growing season.

24 Q. So can you summarize the work you did in order
25 to prepare this memorandum?

1 A. So using -- so I believe the memorandum states
2 that on or around the 1st of March, the Department of
3 Water Resources came out with their first estimate of an
4 analog year. And I think that was, at the time, 2014.
5 And so I looked at what my cutoff dates were in 2014,
6 but I also looked at storage levels in Magic Reservoir.

7 And at the time, 2014 had around -- Magic
8 Reservoir, in 2014, had -- I don't remember the exact
9 number -- 30-some-thousand acre-feet more in 2014 than
10 we had currently at that time in 2021. So I took that
11 into consideration.

12 And then through the spring for March through
13 May, runoff levels never really showed up, so we knew
14 that there wasn't a lot of water left to come into
15 Magic, so we readjusted and, basically, came up with the
16 numbers that I had.

17 Q. So is it better to look at page 2 of the
18 memorandum or the tables attached to the end of the
19 memorandum to deal with the priority-cut issue?

20 A. Yeah, the tables actually show the predicted
21 dates for the priority dates -- the dates of cutoff, I'm
22 sorry.

23 Q. Excuse me. Did I let you finish that answer?

24 I'm sorry, I didn't mean to cut you off.

25 A. Well, I talked over the top of you. Sorry.

1 Q. Okay. So the first page of -- well, it's the
2 fourth page -- third page of the memorandum, I guess, is
3 titled, "Water District 37, 2017 Priority Cuts" at the
4 top?

5 A. I have -- with the memorandum I'm looking at,
6 I have tables that have been inserted into the
7 memorandum, but I don't have a title on them.

8 MR. FLETCHER: May I approach the witness?

9 HEARING OFFICER: Yes.

10 MR. THOMPSON: What page are you looking at?

11 HEARING OFFICER: At least my count, Kent,
12 that's page 4.

13 MR. FLETCHER: Oh, I miscounted, I'm sorry.
14 It is page 4.

15 Q. (BY MR. FLETCHER) So you think these tables
16 are the best to look at?

17 A. These are the predicted. That is the actual
18 that happened in 2014.

19 Q. Right. And then this?

20 A. Yeah, that's predicted.

21 Q. Okay. Well, let's just go to the table you're
22 referring to.

23 A. That's actual. That second one you showed me
24 was actually what was happening in 2021.

25 Q. Okay. We'll get into that in a minute so

1 everybody knows what we're talking about here.

2 Let's look at page 2 of your memorandum.

3 Isn't that the page that you're making reference to?

4 A. Yes.

5 Q. Can you explain what those tables show?

6 A. So the first table is predicted on May 17th
7 what I thought the priority date shutoffs would be. And
8 then on May 25th we updated that. Because of a rain
9 event and a shutoff by Magic Reservoir, it extended the
10 priority date out a little further, so we made another
11 estimation on May 25th.

12 Q. So do you believe that the second table on
13 this page is a more accurate estimate?

14 A. Yes.

15 Q. As of May 25th?

16 A. Yes.

17 Q. So let's just go through that table so
18 everyone understands it.

19 Starting at the bottom of the table, the first
20 column is entitled, "Cut Date"; is that correct?

21 A. Correct.

22 Q. And does that mean that's the date that you
23 shut off for priority?

24 A. Correct.

25 Q. And so the month shows "5," and what does that

1 mean?

2 A. In the "Cut Date" column?

3 Q. No, in the "Month" column.

4 A. Oh, that's -- so the "Month," "Day," and
5 "Year" columns are the date of the priority.

6 Q. Okay.

7 A. So that would be May 15th, 1886.

8 Q. And then the date shows -- the "Date" column
9 shows what?

10 A. The same thing.

11 Q. So if I'm reading your table right, you
12 predicted that the '86 rights were going to be cut on
13 May 27th, 2021; correct?

14 A. Correct.

15 Q. And do you know when they were actually cut?

16 A. Can I refer to the note here?

17 Q. Sure.

18 A. May 27th.

19 Q. Okay. And going forward, you're making
20 estimates of every -- of the various priority dates that
21 are set forth in this table; correct?

22 A. Correct.

23 Q. So if we go up to June 30th, 2021, on the "Cut
24 Date" -- do you see that?

25 A. Yes.

1 Q. You're predicting that you will cut those
2 rights on April -- excuse me -- you will cut the
3 April 1st, 1883, rights on June 30, 2021; correct?

4 A. Correct.

5 Q. So based upon your estimates, all of the
6 rights junior to April 1st, 1983, including that date,
7 will be cut by the end of June; correct?

8 A. April 1, 1883.

9 Q. 1883, I'm sorry.

10 A. Including, and junior will be cut on
11 June 30th, 2021, estimated.

12 Q. So based upon your projections, what
13 priorities will remain on after that date?

14 A. March 15th, 1883, up through March 29th, 1877.
15 We also have rights, what we call perpetual, that were,
16 basically, also what -- they're called saved water.
17 They're called saved water.

18 They -- the Wood River Valley has some
19 peculiarities. We have water that was developed after
20 the Frost Decree, and they received, basically, the
21 seniority senior to the most senior, if that makes any
22 sense at all.

23 Q. Do you know much more about that than what
24 you've said?

25 A. No. I know the volume -- I have the volumes

1 and the ownerships --

2 Q. Okay.

3 A. -- of delivery.

4 MR. FLETCHER: I'd move for the admission of
5 Exhibit 2.

6 HEARING OFFICER: Any objection to the
7 admission of this document?

8 MS. MCHUGH: Can I ask a question?

9 HEARING OFFICER: Sure.

10 MS. MCHUGH: Will we be able to look at the
11 notes that the witness referred to, to aid his testimony
12 relative to this document?

13 I think it might be helpful to have that
14 included since he's looking at it so the rest of us
15 could see what he's referring to. I'm not sure the
16 document is 100 percent clear in the record without his
17 notes.

18 MR. FLETCHER: Yeah, I'm not offering it.
19 You're free to do that on cross if you'd like.

20 MS. MCHUGH: Okay. Can we --

21 HEARING OFFICER: What notes are you referring
22 to?

23 MS. MCHUGH: That he just referred to that
24 helped his testimony. Because they're not part of the
25 exhibit. So I just wanted to see if we could have a

1 chance to look at them prior to cross and understand how
2 they might relate to this exhibit.

3 HEARING OFFICER: Well, is there an objection
4 to the admission of the document? The questions are
5 usually in aid of an objection.

6 MS. MCHUGH: I guess the objection is I'm not
7 sure that right at this time that the testimony relative
8 to this exhibit is complete without fully understanding
9 what the notes said that he testified to about the
10 exhibit. If we're allowed to look at the notes prior to
11 our cross, I guess, I have no objection to the entrance
12 of the exhibit. I guess that's what I was asking.

13 HEARING OFFICER: Okay. I'll overrule the
14 objection and admit the document into evidence. So the
15 document marked as Rigby Exhibit 2 is received into
16 evidence.

17 (Rigby Exhibit 2 received.)

18 HEARING OFFICER: And, Ms. McHugh, you
19 certainly can question Mr. Lakey about his notes. And I
20 don't know why they wouldn't be available to you.

21 Mr. Fletcher?

22 MR. FLETCHER: Thank you.

23 Q. (BY MR. FLETCHER) There's been a lot of
24 discussion in this hearing, Mr. Lakey, about Exchange
25 Condition 161 that's contained on some water rights in

1 the Basin.

2 Are you familiar with that condition?

3 A. Yes.

4 Q. Historically, can you describe how those
5 exchange condition water rights have been administered?

6 A. I was not aware of the exchange condition
7 formally until proceedings starting in this last six to
8 ten months that there was a formal exchange condition.
9 I was not aware of that.

10 Q. Okay. So prior to this year, you were not
11 administering the exchange condition?

12 A. Not formally, no.

13 Q. Okay. Can you describe your understanding of
14 what should be done with the water rights that have the
15 exchange condition?

16 A. Based on the priority curtailment procedures I
17 spoke about earlier at Station 54, the priority date is
18 established. Of that water that's available at
19 Station 54, we would look at total flow, then look at
20 what rights have the 160 -- or the exchange condition.

21 Once we have that amount, we can move that
22 amount back up to an old lands delivery, and the only
23 water left then to deliver below 54 would be the
24 nonexchange water rights. So that's how I understand it
25 to be delivered.

1 Q. So where will those that are in priority but
2 below the canal receive their water if they have an
3 exchange condition?

4 A. From the American Falls Reservoir, District
5 No. 2, system.

6 Q. Will those with the exchange condition receive
7 more water than they would have received from the Little
8 Wood River?

9 A. No.

10 Q. They're receiving the same amount of water
11 based upon their priority?

12 A. Yes.

13 Q. Can you give an example of how that operates?

14 A. So if the April 1 of '83 were in priority, I
15 would need 24 cfs, maybe 25 -- there's fractions -- 24
16 to 25 cfs at Station 54. Of that -- 14, I'm sorry.
17 There's 14 cfs available there. Of that 14, 15, cfs,
18 11.83 is exchange -- or is total. 11.83 is total. And
19 the 3-point -- there's 3.22 without the exchange.

20 So that would be the difference with the
21 exchange water. So whatever 11.83 minus 3.22 is
22 exchange water. And that exchange water would then be
23 moved up to old land delivery.

24 Q. And when you refer to "old land delivery," so
25 people know what you're talking about, is that ground

1 above the Milner-Gooding Canal?

2 A. Yes.

3 Q. And when you say, "be moved up there," the
4 water is left in the river so it can be diverted by
5 people located above the canal; correct?

6 A. That's not the way I understand it.

7 Q. What do you understand?

8 A. That the difference between 11.83 and 3.22 is
9 to be delivered at the Dietrich Canal to the Big Wood
10 Canal Company users.

11 Q. So it goes into the Big Wood Canal Company
12 system?

13 A. Yes.

14 Q. And is that what -- so is this exchange, as
15 you understand it, between AFRD2 and Big Wood Canal
16 Company?

17 A. That's correct.

18 Q. There's also been some discussion of
19 supplemental water, and I think there's some confusion
20 about that.

21 Do all exchange -- all water users that have
22 an exchange condition on their water right have
23 supplemental water, to your knowledge?

24 A. I believe so, yes.

25 Q. Does the fact that -- how does the exchange

1 right play into supplemental water?

2 Does it have anything to do with it as far as
3 the way it's administered?

4 A. No, they're two separate issues.

5 Q. Okay. So can you -- can you explain how you
6 administer supplemental water?

7 A. When the most junior priority decree owned by
8 a water right holder is cut, then that priority date or
9 that decree is no longer delivered, but supplemental
10 water is then delivered in place of the decree.

11 Q. And the source of that supplemental water is
12 AFRD2 storage water?

13 A. Yes.

14 Q. Now, does the amount received under an
15 exchange right -- excuse me -- under a supplemental
16 right, is that equal to the amount that would be
17 received under the priority right?

18 A. No.

19 Q. How is that amount determined?

20 A. There were contracts between those individual
21 water users and either AFRD2 or Big Wood Canal Company.
22 I'm not sure. There were contracts made in history
23 somewhere that established how much water they were to
24 get.

25 Q. And does the amount of water that any one

1 water user receives under a supplemental water right
2 vary from user to user?

3 A. Yes.

4 Q. And does the amount of the water right -- when
5 I say "water right," the natural flow right that the
6 water user has -- holds, does that have anything to do
7 with how much exchange water they receive -- how much
8 supplemental water they receive?

9 A. No.

10 Q. So the -- the right to receive supplemental
11 water stands apart from the amount on the decree on the
12 natural flow right?

13 A. Yes.

14 Q. Now, there's been some testimony that
15 variation -- I think you said it varies from farm to
16 farm; is that correct?

17 A. Yes.

18 Q. So that some farmers refer to it as
19 replacement water, the supplemental water. In some
20 cases that may be as small as 50 percent of what the
21 water right would furnish if the water right were in
22 priority; isn't that correct?

23 A. Yes.

24 Q. And in some cases that may be close to
25 100 percent; correct?

1 A. Yes.

2 Q. So when you're looking at a supplemental
3 right, do you assume that that provides a full water
4 supply to the recipient of the supplemental water?

5 A. No.

6 Q. Are you familiar with the term "adequate water
7 supply"?

8 A. Yes.

9 Q. What does that term mean to you?

10 A. Enough water for a water user to accomplish
11 his purposes, whether it's growing a crop or raising
12 fish, to make his business work in that particular
13 season.

14 Q. So in the case of an irrigation right, would
15 that include irrigation needs plus conveyance losses?

16 A. Yes.

17 Q. Have you reviewed your records to try to
18 determine years that represent an adequate water supply
19 for Silver Creek and Little Wood?

20 A. Yes.

21 Q. And what did you do to make that
22 determination?

23 A. Over the years, talking to water users,
24 getting their general feel of whether a year was
25 successful or not, and then comparing that information

1 to the water records from those particular years when
2 they said things went well.

3 Q. And did you come up with some criteria to
4 determine what would constitute an adequate water supply
5 for the Little Wood and Silver Creek?

6 A. Yeah. The criteria is whether the April 1 of
7 1884 can be delivered up to around September 1st at
8 100 percent delivery.

9 Q. Okay. Any other criteria that you looked at?

10 A. There are other criteria for the district as a
11 whole, but not for the Little Wood. The -- if the
12 4-1 -- April 1 of '84 lasts into September, Station 10
13 will discharge somewhere between 25,000 and
14 33,000 acre-feet in a year like that when April 1 of '84
15 goes. So I would guess maybe that's also a criteria,
16 that if the Station 10 could discharge that much water,
17 it would be considered adequate.

18 Q. And you said 25,000 to 33,000 acre-feet?

19 A. Yes.

20 Q. So based upon that review, did you determine
21 some years that demonstrate an adequate water supply for
22 Little Wood and Silver Creek?

23 A. Yes.

24 Q. And what years were those?

25 A. 2000, 2009, and 2010.

1 Q. Okay. And when you looked at those years,
2 what was the supply of water to Little Wood and Silver
3 Creek for the senior -- for the surface water deliveries
4 that year -- those years?

5 A. I think I need you to clarify that and be more
6 specific. What do you mean by --

7 Q. Well, did you determine how much water was
8 delivered in those years?

9 A. I looked at the priority date cutoffs in those
10 years.

11 Q. And do you know how much water was delivered
12 in those years?

13 A. To those users?

14 Q. Yes.

15 A. Yes.

16 Q. Okay. And how much water was that?

17 A. Are you -- I want to clarify. Are you talking
18 about the Silver Creek drainage as a whole or senior
19 surface water users? Or what are you looking for?

20 Q. Well, you stated that these three years you
21 determined that those are examples of an adequate water
22 supply, and you did -- did you do a calculation of how
23 much water was delivered those years to constitute an
24 adequate water supply?

25 A. Delivered to whom?

1 Q. Well, that's what I'm asking you.

2 A. I made two different calculations. I made it
3 to the senior surface water users, as well as the Basin
4 as a whole.

5 Q. Okay. So when you say "Basin as a whole," are
6 you including --

7 A. Silver Creek drainage.

8 Q. So what were those numbers?

9 A. The Silver Creek drainage, as a whole, used,
10 on average, a little over 40,000 acre-feet.

11 Q. And that's the average of those three years?

12 A. Yes.

13 Q. And when you say "used," what does that mean?

14 A. We delivered that much water to their
15 headgates.

16 Q. You delivered 40,000 acre-feet to the
17 headgates of the users?

18 A. Yeah.

19 Q. Based upon your analysis, is 40,000 acre-feet
20 of water required on an average year to constitute an
21 adequate water supply for the Little Wood and Silver
22 Creek?

23 A. I would add that in those adequate years, when
24 I say 40,000-plus was delivered to all of Silver Creek
25 drainage, there was an additional 5,000 acre-feet that

1 was dumped in out of Magic Reservoir into Silver Creek.
2 So that 40,000 would include 5,000 out of the Magic
3 system. So if Magic is running and spilling water and
4 can spill 5,000 into the Little Wood system, then I
5 would say that's adequate. But if Magic is not able to
6 spill the 5,000, then all the 40,000 has got to come out
7 of the Silver Creek drainage.

8 Q. So when you're talking about -- I guess you're
9 getting to the source of that water.

10 The source -- part of the water you're talking
11 about in your calculation includes spill from Magic
12 Reservoir --

13 A. Yes.

14 Q. -- in your numbers; correct?

15 A. Yes.

16 Q. And you said that averaged about
17 5,000 acre-feet per year?

18 A. Yes.

19 Q. So not counting the spill from Magic
20 Reservoir, 35,000 has to come from other sources;
21 correct?

22 A. Correct.

23 Q. There's been some discussion about losses,
24 conveyance losses.

25 Have you ever observed a time when losses from

1 the Bellevue Triangle to Station 10 were 100 percent
2 after accounting for surface water diversions?

3 A. No.

4 Q. Have you observed responses to water at
5 Station 10 if pumping is curtailed?

6 A. I think so, yes.

7 Q. When did you make those observations?

8 A. In August and September of 2020.

9 Q. What happened in August of 2020?

10 A. The Little Wood had reached flows around
11 8 cfs. So there was a group that I was working with
12 called a collaborative committee. It was water users
13 throughout the Basin who were trying to come up with
14 solutions, and I was involved in that.

15 So around the first week of August, those
16 flows on Little Wood got down to around 8 cfs, so I sent
17 a text to a lot of those people that I was working with
18 on that collaborative to let them know that all of the
19 work that we may have thought we were doing was still
20 not creating water in the system. So I sent a text to
21 them to let them know what the flows were.

22 And then within about five days to a week,
23 water started showing up, so I started looking at what
24 it was from or where those increases would have come
25 from, and I added up all of the senior water that was

1 still on, and then started tracking that use over the
2 next month.

3 And within about five days to a week from the
4 low point, we started getting water that I couldn't
5 describe as surface water, and so the only other source
6 would have been groundwater. And there was around
7 10 cfs, maybe a little more, that started showing up
8 that I could not account for.

9 Q. So who did you send that text to?

10 A. You want names?

11 Q. Yeah, I think that would be good.

12 A. Keri York of the Wood River Land Trust, Fred
13 Brossy, John Arkoosh, Sharon Lee, Justin Stevenson, Pat
14 Purdy. That may not have been all, but that was the
15 ones I remember.

16 Q. And that sounds like it's a combination of
17 surface water users and groundwater users?

18 A. Yes.

19 Q. And your observation and calculation showed
20 there was about 10 cfs of water that did not originate
21 from the surface; is that correct?

22 A. Correct.

23 Q. And you said that showed up within how many
24 days?

25 A. Five days was when it first started showing

1 up. Within about ten days it was up to around 10 cfs.

2 Q. And that was in August?

3 A. Yes.

4 Q. And was there any rain event during that time?

5 A. No.

6 Q. Was there anything else that occurred that
7 could account for that water, that you're aware of?

8 A. No, not that I'm aware of.

9 Q. Do you have any personal knowledge of whether
10 pumps were shut off as a result of that text?

11 A. No.

12 Q. Have you analyzed which senior priorities in
13 Little Wood and Silver Creek will benefit if junior
14 groundwater rights are curtailed in 2021?

15 A. Yes.

16 Q. Can you explain how you did that analysis?

17 A. I used numbers from Jennifer Sukow's work that
18 gave me an idea of how much water would return to Silver
19 Creek or show up in Silver Creek over certain days. So
20 using her numbers, I went back to my estimated priority
21 cut dates and said if there were certain priority cuts
22 that we're estimating, and what Jennifer was estimating
23 would be in Silver Creek more than what we had, and so I
24 made the comparison of the two, and started saying,
25 well, which priority dates might be left on.

1 Q. So do you remember what numbers you used in
2 that calculation, Jennifer's numbers?

3 A. I used -- she had a May 1 curtailment, a
4 July 1 curtailment, and an August 1 curtailment, so I
5 used all three to just see the difference.

6 Q. Well, looking at the July 1 curtailment date,
7 do you remember the numbers she showed would be coming
8 back into the system if curtailment took place?

9 A. I don't remember her exact numbers of flows,
10 no.

11 Q. And what was your conclusion in that analysis?
12 What priority dates would be restored if
13 curtailment took place on July 1?

14 A. There were varying effects on priority
15 rates -- or priority dates and the rates we would be
16 able to deliver. The September of '83 would have gotten
17 some, but not their full right. The June of '83 would
18 have gotten, I believe, all of their water. The
19 April 6th and the April 1st priorities would receive
20 water with the July 1 curtailment.

21 Q. Correct. Well, let's talk about the April 1,
22 '83 priority date.

23 When do you project that will be cut if there
24 is not curtailment?

25 A. June 30th.

1 Q. What about the April 6th, '83, right, when
2 will that be cut if there's not curtailment?

3 A. June 25th.

4 Q. When would the June '83 right be cut, if
5 there's not curtailment?

6 A. June 22nd.

7 Q. And how about the September '83?

8 A. June 20th.

9 Q. Did you review which of the surface water
10 diversions that are involved in this case would benefit
11 from that curtailment by restoring those priorities?

12 A. It would just be the April 1st and the
13 April 6th that are involved in this proceeding.

14 Q. And do you know who holds rights that have
15 those priorities?

16 A. The Ritter Farm operated by the Taber family,
17 and the Taber family's home -- what I'd call their home
18 farm -- have April 1 of '83 priority dates. And Barbara
19 Farms owns the 4-6 of '83 priority date.

20 Q. So the Barbara Farms is below the canal;
21 correct?

22 A. Correct.

23 Q. And the Taber Farm -- I think you called it
24 the Ritter Farm -- is above the canal; correct?

25 A. Both the Ritter Farm and the Taber home farm

1 are both above the Milner Canal, yes.

2 Q. And do you know how many cfs the Brossy right
3 is?

4 A. 4 cfs.

5 Q. It's 4 cfs with a priority date of April 6th,
6 1883?

7 A. Yes.

8 Q. And do you know how many cfs the Taber Farms
9 have?

10 A. The Ritter Farm is 4.2 cfs of 4-1 of '83, and
11 the Taber home farm is .3 cfs of 4-1-83.

12 Q. And based upon your analysis, those rights
13 would come back into priority if full curtailment were
14 to take place?

15 A. Yes.

16 Q. Are there any other rights that would benefit
17 from curtailment, that you're aware of?

18 A. In this proceeding or others?

19 Q. Yes -- well, let's talk about others.

20 Are there others?

21 A. No. Not with the July 1 curtailment, no. But
22 there are others within the Silver Creek drainage that
23 would come on. And that's the September and the June of
24 '83.

25 Q. And what are those rights?

1 A. The September of '83 is 20 cfs, and the June
2 of '83, I think, is 4 to 6 cfs.

3 Q. And do you know who holds those rights?

4 A. Blackburn Farms owns the June of '83, and
5 Picabo Livestock owns the September of '83.

6 Q. And does Big Wood Canal Company own any rights
7 that would benefit from curtailment?

8 A. They have a 4-6 of '83, yes, for 3.55 cfs, I
9 believe.

10 Q. And do you know the purpose of use of that
11 water right?

12 A. Most of the time we deliver that at the
13 Dietrich Canal.

14 Q. Okay. Are there other rights, stockwater
15 rights or any other rights that would benefit?

16 A. The Big Wood Canal Company has a stockwater
17 right that starts sometime late October, early November,
18 and so that is extremely contentious. There are --
19 Northside Canal Company owns a stockwater right, and Big
20 Wood Canal Company owns a stockwater right; and often,
21 in these drier years, we can't deliver the Northside
22 Canal Company right, it's junior to the Big Wood Canal
23 Company stockwater right. So if we had extra water in
24 the system, there's a possibility that the Northside
25 Canal Company right could be filled also.

1 Q. But if curtailment were to occur July 1st,
2 would that benefit Big Wood's stockwater right?

3 A. Yes, I believe it would.

4 Q. And why would that benefit that right?

5 A. That's -- it's a stockwater right we deliver
6 to Dietrich, and if -- we have enough water to deliver
7 maybe 25 cfs of that right. They would usually like to
8 take around 30 to 35. The right is for 75 cfs. I
9 just -- it would just make it easier to deliver that
10 right and not dry the whole system up in the wintertime
11 in November and December.

12 Q. So that would be a post-irrigation season
13 benefit?

14 A. Correct.

15 MR. FLETCHER: I don't have any other
16 questions. Thank you, Kevin.

17 HEARING OFFICER: Thank you, Mr. Fletcher.

18 Mr. Rigby, questions?

19
20 DIRECT EXAMINATION

21 QUESTIONS BY MR. RIGBY:

22 Q. Good morning, Kevin, Jerry Rigby. Just a
23 couple of questions in addition to those asked by
24 Mr. Fletcher. And that is: You addressed the July 1
25 curtailment and its impacts and the effects on the '83

1 rights.

2 Isn't it true that later in the season, even
3 in a normal season, rights that have been cut off can
4 come back on, and very often do --

5 A. Yes.

6 Q. -- is that correct?

7 So, therefore, isn't it logical to conclude
8 that even though you've testified as to the '83 rights
9 initially benefiting from the July 1, as we go later
10 into the season, then if there's continued curtailment,
11 that later rights, '84 and others, could also benefit
12 because they could come back on even sooner than they
13 otherwise would?

14 A. Yes.

15 Q. And then, obviously, the post-irrigation,
16 therefore, those impacts and effects that would be for
17 the next year would also benefit from --

18 MR. THOMPSON: I'll object to that question
19 and questioning anything beyond the 2021 irrigation
20 season.

21 MR. RIGBY: Well, Mr. Director, it's still a
22 benefit for the '21 season, because '21 season always
23 impacts the next season as to what is retained within
24 the watershed, and so I think it's relevant.

25 HEARING OFFICER: Objection overruled.

1 Q. (BY MR. RIGBY) So, again, as far as the
2 benefit postseason in the '21 year, would there be a
3 benefit?

4 MR. BROMLEY: Objection as to outside the
5 scope of the notice in the '21 irrigation season. I'll
6 join Mr. Thompson's objection.

7 HEARING OFFICER: Well, objection overruled.

8 Go ahead, Mr. Rigby.

9 Q. (BY MR. RIGBY) So do you understand the
10 question?

11 A. I think so, yes.

12 Q. Please answer it.

13 A. By the numbers I've seen out of the water
14 model, there is a lasting effect over two to
15 three years.

16 MR. RIGBY: I have no further questions.

17 HEARING OFFICER: Okay. Mr. Barker or
18 Mr. Thompson?

19 MR. BARKER: Thank you, Your Honor.
20

21 CROSS-EXAMINATION

22 QUESTIONS BY MR. BARKER:

23 Q. Good morning, Mr. Lakey. How are you?

24 A. Good. How are you?

25 Q. Good. I think both of us may be in danger of

1 not speaking loud enough for the court reporter and
2 everybody in the room. So I'll do my best to speak up,
3 if you would do the same, because I was having a little
4 trouble hearing you, but I will blame my hearing and not
5 your speaking. Okay?

6 A. Okay.

7 Q. Good. Wow.

8 HEARING OFFICER: I like that. Let's see if
9 counsel can keep up with you.

10 MR. BARKER: I doubt it. I doubt it, Judge.

11 Q. (BY MR. BARKER) So let me just take that last
12 question first that Mr. Rigby asked you about delayed
13 benefits to a subsequent year.

14 Is that based on your observations, or is
15 that -- I thought you said that was based upon Jennifer
16 Sukow's model runs?

17 A. I would say both.

18 Q. Okay. And so have you looked at Jennifer
19 Sukow's model runs about how long well water stays in
20 the aquifer in the event of curtailment and how much
21 water comes out during the wintertime versus how much
22 would be available for the following season?

23 A. Not exact numbers, no.

24 Q. Okay. So you just agree with the concept, but
25 you don't have any idea of what the numbers should be?

1 A. Not numbers nor timing.

2 Q. Okay. So your background is as a water
3 delivery entity, you worked for Big Wood Canal Company
4 prior to becoming the watermaster for Basin 37; is that
5 right?

6 A. Yes.

7 Q. Do you have any background in agronomics,
8 trying to understand crop needs?

9 Are you testifying as an expert here today on
10 what the needs of the crops are in Basin 37?

11 A. No.

12 Q. This memorandum that you prepared that's
13 Mr. Rigby's Exhibit 2, who asked you to prepare it?

14 A. Multiple people.

15 Q. Well, tell me their names.

16 A. Cooper Brossy, Eric Miller, Lance Strout.

17 Q. And is this prepared as part of your duties as
18 a watermaster, or was it prepared for purposes of this
19 litigation?

20 A. With Eric Miller, it was, I believe, for this
21 procedure. With Lance Strout, it was so that he and I
22 could better know whose water was what at certain times.

23 Q. Lance is who?

24 A. He is the watermaster for the Big Wood Canal
25 Company.

1 Q. And the Big Wood Canal Company is involved in
2 this proceeding as well; right?

3 A. I believe so, yes.

4 Q. And you said you were hired by the water users
5 in Basin 37?

6 A. Yes.

7 Q. And the largest water user in Basin 37 is the
8 Big Wood Canal Company?

9 A. The Big Wood Canal Company and several others,
10 yes.

11 Q. But they're the single largest one; is that
12 right?

13 A. That is correct.

14 Q. And so when you -- you were talking about
15 analog years that were identified by the Department of
16 Water Resources, '94, 2014, and 2020. And that came out
17 of what -- where did you get the information that that
18 was an analog year?

19 A. From the Department of Water Resources.

20 Q. From whom at the Department? Was this from
21 the staff memos or was this some other source that you
22 received that information?

23 A. The 1994 I did not hear until the beginning of
24 those procedures when Sean Penn mentioned it in his
25 testimony -- Sean Penn -- sorry, Sean.

1 HEARING OFFICER: That's all right. He lives
2 in the Lemhi Basin.

3 THE WITNESS: Sean Vincent used 1994 as a
4 drier year that had started to develop as an analog year
5 -- I mean, a dry analog year. I'm not sure if you're
6 asking about adequate supply years or dry years.

7 Q. (BY MR. BARKER) Well, no, I'm just first
8 talking -- you had talked about analog years, so I just
9 want to understand where you got that information from.

10 A. So adequate analog years would be --

11 Q. Yeah. No, I'll get to the adequate.

12 A. -- something I developed.

13 Q. So the analog years you were looking at is
14 what was comparable to this year's dry year?

15 A. Yeah.

16 Q. Right?

17 A. Right.

18 Q. And then have you made any further analysis of
19 what an analog year would be with additional information
20 about the flows in Silver Creek that have come out since
21 this proceeding began?

22 A. I'm not sure I understand your question, I'm
23 sorry.

24 Q. Okay. So you're aware that there were new
25 SWSI tables that came out from NRCS for the 1st of June?

1 A. Yes.

2 Q. And are you aware that those tables suggested
3 the water year was worse than it had been in the April
4 tables?

5 A. Yes.

6 Q. So have you tried to find an analog year that
7 you think compares to this year with the new SWSI
8 information?

9 A. Yes, I have.

10 Q. What would you consider that to be?

11 A. 1994.

12 Q. 1994. So that's the one you added? You
13 started off with 2014 and 2020; right?

14 A. Yes.

15 Q. And your -- I think what your testimony was is
16 this is drier than 1994?

17 A. Yes.

18 Q. And how did you use 1994, if at all, in
19 preparing this exhibit, Rigby No. 2?

20 A. I'm not sure I understand your question.
21 Could you repeat that?

22 Q. So did you use the 1994 numbers, the flow
23 data, in preparing this exhibit that you prepared for
24 Mr. Rigby?

25 A. No, I did not.

1 Q. Okay. So if I look at your table -- you've
2 got Exhibit 2 in front of you?

3 A. Yes, I do.

4 Q. I think the table is on page -- whatever it is
5 -- 3? 2? The second page of your memo.

6 What flow criteria are you using to estimate
7 the curtailment dates?

8 A. Those remain, basically, on 2014 data, based
9 on 2014 data, minus the Magic storage deficit from 2021
10 to 2014.

11 Q. But are you using these curtailment dates
12 based upon a flow measurement at a particular location?

13 A. I cross-referenced them to Station 10 and to
14 the Sportsman's Access. It's a rough estimation of what
15 was going on at the same time.

16 Q. Okay. So what flows do you -- well, let's
17 pick your table here for -- the bottom number is what
18 you think is more likely -- the bottom table, rather?

19 Is that the one you think is more likely for
20 this year?

21 A. Yes.

22 Q. So what flows do you need at Station 10 to --
23 or what flows are there at Station 10 when you curtail
24 the April 1st, '84, rights?

25 A. I do not use Station 10 as a curtailment

1 basis.

2 Q. What do you use for your curtailment basis?

3 A. Station 54.

4 Q. And then I think at some point you said that
5 you change and use Station 10 as a measuring point once
6 Magic is no longer delivering water?

7 A. No.

8 Q. You always use Station 54 no matter what?

9 A. Yes, that is correct.

10 Q. So what flows at Station 54 do you use to make
11 a determination that April 1, '84, should be curtailed?

12 A. I would need 33 cfs at Station 54 -- no,
13 24 cfs at Station 54 to deliver all rights April 1, '84,
14 and senior.

15 Q. So aren't there a bunch of rights that are up
16 above Station 54 that are April 1, '84, and senior?

17 A. Yes.

18 Q. Do you know how many cfs there is there in
19 those rights?

20 A. April 1 and senior?

21 Q. Yes.

22 A. There would be, approximately, 2 or 3 cfs of
23 April 1, '84, and then the next in line would be the
24 September of '83, and then the June of '83.

25 Q. September of '83 is --

1 A. 20.

2 Q. -- 20?

3 And then June of '83 is how much?

4 A. About 6.6. But those rights wouldn't come
5 down in a 4-1 of '84 cut. I just know they're there if
6 I do need them.

7 Q. So if you've got 54 -- excuse me -- if you've
8 got 54 cfs at Station 10 -- Station 54 -- let me try
9 again.

10 54 cfs at Station --

11 A. 24.

12 Q. 24. Okay. Sorry about that. 24 cfs at
13 Station 10. All --

14 A. 54, Station 54.

15 Q. Thank you. Okay. Let me start again.

16 If you have 24 cfs at Station 54, a number of
17 these rights on the curtailment above -- or, I'm sorry,
18 on the priorities above it that are senior to it are in
19 the river above that location?

20 A. I'm not sure which priority dates you're
21 talking about and what priority date has already been
22 curtailed. That would make a difference.

23 Q. Well, we've just curtailed April 1, '84?

24 A. Oh, I'm looking to curtail it, but I have not
25 curtailed it yet.

1 Q. No, no, no. In our hypothetical here, we've
2 just curtailed April 1, '84, because there's 24 cfs at
3 Station 54, okay? Let's assume that.

4 A. Okay.

5 Q. So 9-1-83 that's above; right? That's in
6 Silver Creek?

7 A. Above in what terms, priority date or
8 location?

9 Q. Location.

10 A. Yes, it is above.

11 Q. And the same is true of 6-14-83, those are
12 above?

13 A. Above in what?

14 Q. In location.

15 A. Yes.

16 Q. The 4-1 and 4-6s, are those all above in
17 location?

18 A. The 4-1 is above, but it's senior to 4-1 of
19 '84, so it would not be curtailed. We could --

20 Q. I'm not asking about curtailment, I'm just
21 asking about the location of these rights that are above
22 Station 54.

23 4-1 and 4-6, those are all located above?

24 A. No.

25 Q. Okay. Which rights are below?

1 A. 4-6 of '83.

2 Q. And those were the Arkoosh rights that you
3 mentioned?

4 A. Brossy.

5 Q. Brossy, sorry. And then the 4-1s, those are
6 above?

7 A. Both above and below.

8 Q. Those are the Taber rights?

9 A. Some of them are Taber, yes.

10 Q. And how much is below?

11 A. Excuse me?

12 Q. How much water is below Station 54 with the
13 4-1-83 right?

14 A. 7 or 8 maybe. It's in that neighborhood. I
15 think it's less than 10.

16 Q. And then the 1887s, those are all up in the
17 Silver Creek area?

18 A. Not all, no.

19 Q. How much of the water is up above and how much
20 is below?

21 A. Of the '87?

22 Q. Yes.

23 A. I'm not sure.

24 Q. Okay. So it sounds like most of the water
25 that is in the -- or most of the rights that are senior

1 to April 1, '84, are located above Station 54; would you
2 agree with that?

3 A. I would not say that, no.

4 Q. Okay. Well, you told me --

5 A. Wait a minute. Did you say senior to 4-1 of
6 '84?

7 Q. Yes.

8 A. Not necessarily, because there are a lot of
9 1877s and early 1883s that are below 54.

10 Q. Well, you told me 1883s were 7 to 8 cfs?

11 A. How much?

12 Q. 7 to 8; isn't that what you said?

13 A. Which '83?

14 Q. Whatever '83s you were talking about.

15 April 1, of '83 --

16 A. I would have to consult the record. I'm not
17 sure.

18 HEARING OFFICER: Just a moment. Mr. Barker
19 isn't finished with his question when you're responding,
20 Mr. Lakey. So --

21 MR. BARKER: Sorry, Mr. Lakey.

22 HEARING OFFICER: -- just be a little more
23 deliberate, please. Thanks.

24 Q. (BY MR. BARKER) Sorry, Mr. Lakey. I thought
25 you told me that there were 7 or 8 cfs of April 1, '83s,

1 that were below Station 54.

2 Did I hear that wrong? I very well could
3 have.

4 A. Restate the question, please.

5 Q. Of the April 1, 1883, priority date rights,
6 how much is above and how much is below Station 54?

7 A. Do you want exact numbers?

8 Q. Well, you seem to be doing pretty good with
9 exact numbers.

10 You can't tell me that?

11 A. No.

12 Q. You don't have any of the documents that you
13 brought with you here today --

14 A. I do here.

15 Q. -- that you can look at and tell me that?

16 A. I do not have specific current ownership names
17 to tell me which owner of a 4-1 of '83 is above or
18 below.

19 Q. I guess what I'm trying to drive at here is
20 that, how do you know that you need 24 cfs at Station 54
21 in order to deliver water rights with priorities that
22 are senior to April 1, '84, if you don't know how much
23 water is above and below Station 54?

24 A. I have a number here that's cumulative above
25 or below 54 on this list.

1 Q. Okay. So tell me what you're looking at.
2 Maybe that will help us.

3 Yeah, what is that document?

4 A. It's notes I prepared for myself for
5 questioning.

6 Q. And where did you get those notes from?

7 Where did you obtain the information in those
8 notes?

9 A. Water District 37 records.

10 MR. BARKER: You know, Your Honor, typically,
11 when a witness uses documents to refresh their
12 recollection, we're entitled to have that information
13 admitted into the record and reviewed by counsel. And I
14 would ask at this time that we have the opportunity to
15 see that document and to review it so that we can have a
16 chance to see what's in it.

17 HEARING OFFICER: Any objection, Mr. Fletcher?

18 MR. FLETCHER: No objection.

19 HEARING OFFICER: You want to mark it as an
20 exhibit or just distribute it?

21 MR. BARKER: I would like it marked as an
22 exhibit, please.

23 HEARING OFFICER: Okay.

24 MR. THOMPSON: Excuse me. Can we get a copy
25 so we can see?

1 HEARING OFFICER: Yeah, that would be fine.
2 Why don't we just recess for a minute.

3 (Break taken.)

4 HEARING OFFICER: Let's go back on the record,
5 Andrea. Thank you.

6 We're recording after a brief recess and
7 copying some materials.

8 Mr. Barker, you may continue your examination.

9 MR. BARKER: Thank you, Mr. Director.

10 (SVGWD & GGWD Exhibit 37 marked.)

11 Q. (BY MR. BARKER) Mr. Lakey, you've got two new
12 exhibits in front of you, one marked Exhibit 37 and 38.
13 There's some initials underneath it that say "SVGWD &
14 GGWD" under each one. And those are the South
15 Valley/Galena Groundwater District exhibits.

16 Can you tell me what Exhibit 37 is?

17 A. It's a list of water rights in priority date
18 order from perpetual through July 17th, 1884.

19 Q. Okay. Is there a reason you picked July 17,
20 '84, as the cutoff date?

21 A. It fit my printer and...

22 Q. And so tell me what these perpetual water
23 rights are in the Little Wood and Silver Creek.

24 A. Those are water rights in the Silver
25 Creek-Picabo area that were issued, I believe,

1 post-Frost Decree. And they were developed when those
2 water users plugged ratholes, basically, put extra water
3 into the stream that had not really been decreed in the
4 Frost Decree, and the judge issued them a priority date
5 senior to all other water rights.

6 Q. So this is the saved water rights from the
7 judicial decrees?

8 A. I'm not sure if you're talking about saved
9 water from the Big Wood, but they're like those saved
10 water rights from the Big Wood, if you are familiar with
11 those.

12 Q. Okay. Thank you. So these -- let's go
13 through your columns here. Some of them are
14 explanatory.

15 "Priority Date," "Inches," "CFS," and then
16 you've got a column that says "BWCC."

17 What does that mean?

18 A. That's water owned by the Big Wood Canal
19 Company.

20 Q. And so the owner --

21 A. But that's not all correct for the Big Wood
22 Canal Company. This is an old list.

23 Q. So this list came out of what book?

24 A. I believe it came out of an old priority book
25 that I had.

1 Q. Okay. So if you've got -- there's three
2 rights I see on this page, and a few on the others,
3 where it's in the column of Big Wood Canal Company, but
4 it's listed as -- the name is listed as the owner. For
5 example, "37-0708 Woodworth."

6 Was that the original owner, and it's now
7 owned by Big Wood? Is that what that means?

8 A. Yes.

9 Q. And so you've got two columns next to that,
10 "BELOW 10 CUT" and "ABOVE 10 CUT."

11 Tell me what those two columns mean.

12 A. They represent water that would be above 10
13 and below 10.

14 Q. Station 10 on the Little Wood?

15 A. Yes.

16 Q. Okay. And then what does "OTHER" mean?

17 A. I do not know.

18 Q. And then you've got a column that says how
19 much water is "below Station 54," "cumulative below."
20 So let's walk through those columns on the right-hand
21 side of your chart.

22 What does each one of those columns mean?

23 A. The "below Station 54" is a designation if the
24 water is below Station 54 or not. And then the "Cum
25 below 54" is just adding it up as it goes.

1 Q. And then "below 54 without 161," what does
2 that mean?

3 A. That's whether or not the right is a -- has
4 the 161 condition applied to it.

5 Q. The exchange condition --

6 A. Yes.

7 Q. -- right.

8 And then you've cumulated those without the
9 161?

10 A. I'm sorry, yeah, both those columns are
11 without.

12 Q. So if there's a 161 right where they're -- or,
13 sorry, if there's a right that's below 54 with a 161
14 condition, it would just appear blank in this?

15 A. Yeah, you'd have to do the math to back it
16 out.

17 Q. Okay. And so you were referring to this when
18 I was asking you about the number of -- the number of
19 rights above and below the Station 54 that were -- well,
20 the number of rights above and below Station 54 with
21 certain priority dates.

22 So I can just compare this list that you've
23 given me in Exhibit 37, and that would answer my
24 question of how many rights there are above and below
25 Station 54 with the 1877 priority date, for example; is

1 that right?

2 A. I think so, yes.

3 Q. So I can just -- we can do the math based on
4 this, and I don't need to have you do that on your -- in
5 front of everybody here.

6 (SVGWD & GGWD Exhibit 38 marked.)

7 Q. (BY MR. BARKER) So Exhibit 38, tell me what
8 that is.

9 A. The first page is water right owners that have
10 supplemental rights of some sort. That's on the first
11 page.

12 Q. Okay.

13 A. On the second page, those are largely water
14 rights that do not have any form of supplemental. Maybe
15 they have some Carey Act water, but not American Falls
16 supplemental. So that second page would not have any of
17 the 161 condition or the AFRD2 supplemental water. And
18 that would be the same for the third page.

19 Q. All without supplemental rights, but it
20 doesn't tell me if there is Carey Act water, or maybe it
21 does.

22 On the third page aren't there some references
23 to "CAW"?

24 A. Yeah, that's Carey Act water.

25 Q. So the third page is supposed to identify the

1 Carey Act water rights -- oh, no. All up and down the
2 second page there are references to Carey Act water?

3 A. Yes.

4 Q. And so tell me what your understanding of
5 Carey Act water is and how it affects your ability --
6 your duties to deliver water?

7 A. My understanding is that Carey Act water above
8 Station 54 is delivered out of Magic, and if it's below
9 54, it's delivered out of American Falls.

10 Q. And all of these rights in Exhibit 38, are
11 they all Little Wood or Silver Creek rights, or do they
12 include Big Wood rights -- Big Wood River rights?

13 A. The water rights with the May 27th, 1899,
14 priority date strung throughout there --

15 Q. Help me. Which page are you on?

16 A. I think they might be scattered out throughout
17 the whole exhibit, but if they have a May 27th, 1899,
18 right -- or priority date, that's that Cottonwood right
19 that's been talked about quite a bit. So that would be
20 a Big Wood source. Everything else is Little Wood.

21 Q. Okay.

22 A. I should add, these are all Little Wood
23 diversions. All of the diversions -- points of
24 diversion are on the Little Wood River.

25 Q. When you were answering some of Mr. -- sorry,

1 Kent, I was going to say Foster -- Mr. Fletcher's
2 questions, you were describing old lands delivery.

3 So tell me, again -- explain for me what an
4 old land is.

5 A. I believe that is a term that was used to
6 describe lands developed under Magic Reservoir before
7 American Falls came in, but I'm not the authority on
8 that. You'd probably need to talk to the Big Wood Canal
9 Company.

10 Q. But I think you said that the old lands above
11 the canal would be delivered this water under the
12 exchange agreement?

13 A. Yes.

14 Q. And I didn't hear everything you said about
15 the April 1 priorities. And I think we were -- on your
16 table, I think we were talking about 1883s, that you
17 need 24 to 25 cfs at Station 54.

18 Did I hear that right?

19 A. I think that number, 24, is for the 4-1 of
20 '84.

21 Q. Okay. Okay. And then, obviously, I didn't
22 hear everything, but what I didn't understand was the
23 explanation about how the exchange rights are calculated
24 in that. You talked about a number that I didn't hear,
25 11-point-something, that would tell me -- that were

1 exchange rights, and then there was a -- how that
2 affected how much water got delivered above and below
3 the canal.

4 So could you run through that again, please?

5 A. So if we go to the very last April 1 of '84
6 priority date, the owner there is labeled as "Frank R.
7 Gooding."

8 MS. MCHUGH: For record purposes, are we
9 looking at South Valley 37?

10 THE WITNESS: I'm looking at the initials --
11 Exhibit 37, South Valley/Galena 37. The second -- well,
12 it's actually, it looks like, the third page. So I'm at
13 the bottom of April 1 of '84.

14 Q. (BY MR. BARKER) I'm there.

15 A. Okay. So in the "Cum below 54," there's total
16 water rights of 24.03 cfs below 54 with an April 1, '84,
17 decree and senior.

18 Q. And then "Below 54 without 161" there's 9.22?

19 A. Correct. Yeah, out of that string of water
20 rights from 4-1-84 and senior there's 9.22 without the
21 exchange condition --

22 Q. And so the -- I'm sorry.

23 A. The difference is -- the difference between
24 the 24.03 and the 9.22 is the 161 water.

25 Q. And that's satisfied by the exchange?

1 A. Yes.

2 Q. And then you made a comment about the exchange
3 water being delivered to Big Wood Canal Company.

4 Can you explain how that works?

5 A. That would be delivery to the Dietrich Canal
6 for the Big Wood Canal Company.

7 Q. So what happens to the water that otherwise
8 would have gone to the Dietrich Canal for the Big Wood
9 when the water -- when Big Wood is no longer delivering
10 water?

11 A. I don't know that yet.

12 Q. So would it be -- would it surprise you to
13 hear that Carl Pendleton said they don't take that water
14 into the Dietrich Canal, and that --

15 A. In years --

16 Q. Go ahead.

17 A. In years past, when I was not, or maybe even
18 Carl was not, aware of the full implications of the
19 exchange, the only water that the Big Wood Canal Company
20 had left, let's say in a year like this, in a time like
21 this, would be their two decrees, possibly the April 1
22 of '84 and the 4-6 of '83 would be left now, give or
23 take. And so that's the only -- a dribble of water in
24 that canal, so they would just choose not to take it.

25 But if I were to maybe get direction from the

1 Department about -- or a clarification from -- and how,
2 let's say, that difference between the 24.03 and the
3 9.22, where it's supposed to be delivered is can the
4 exchange still go on, and American Falls would agree to
5 deliver that exchange water below 54, then I could take
6 that difference and take it back up to 11 and pair it
7 with their decrees that are left and possibly make, you
8 know, 10 to 15 to 20 cfs of delivery. And then they may
9 take that water up there at that time.

10 Q. So what did you say, "pair it with 11"?

11 What does that mean?

12 A. Pair it with the Little Wood decrees the Big
13 Wood Canal Company has that would be in priority; their
14 April 6th of '83 and their April '1 of '84 decrees, they
15 would still have that water available.

16 Q. But they don't have any water -- they don't
17 have any way to get that water to their landowners?

18 A. Well, if there was more water teamed or paired
19 or riding with that -- I think it's 7 cfs of decrees
20 that they have, their two senior rights, if they had
21 this exchange water moved up there -- if the American
22 Falls is willing to deliver that -- I don't know -- then
23 we would have, say, 18 cfs that might be delivered to
24 the Dietrich Canal that might make it to a beneficial
25 use of someone; I don't know.

1 Q. But that's never been done?

2 A. No. It's never been done, no.

3 Q. And you don't have any direction from Big Wood
4 to do that?

5 A. Right.

6 Q. And would it surprise you to hear that Carl
7 Pendleton testified that that water would otherwise be
8 available for other users in the Little Wood?

9 A. I don't know.

10 Q. Isn't that how it worked once Big Wood goes
11 off?

12 A. Yes.

13 Q. You also were asked some questions by
14 Mr. Fletcher about supplemental water rights, and you
15 mentioned some contracts, and he asked you to explain
16 what was in the contracts.

17 Have you ever seen these contracts?

18 A. No.

19 Q. So you don't really know whether -- how much
20 water is available under these contracts for anybody?

21 A. Water District 37 gets a -- what we call pink
22 slips from Big Wood Canal Company or American Falls 2
23 that has the owner name, certificate number, if it's a
24 certificate -- I don't remember whether it's a Big Wood
25 Canal Company or American Falls 2. Anyway, it has

1 ownership records on these pink slips that has an owner
2 name and a volume that is to be delivered.

3 Q. Is that the delivery that you do or that Big
4 Wood does?

5 A. That's delivery out of the river system, yes.

6 Q. So you get a direction from Big Wood that says
7 deliver "X" amount of water?

8 A. Correct.

9 Q. But you don't know the basis for what that
10 order is; right?

11 A. Never seen a contract.

12 Q. Okay. And then you were asked some questions
13 about how -- about determination of an adequate water
14 supply for the Silver Creek and Little Wood Basin.

15 Do you remember that?

16 A. Yes.

17 Q. When was it that you first undertook the task
18 to determine what an adequate water supply is?

19 A. I don't know specifically.

20 Q. Was it for this proceeding?

21 A. Yes.

22 Q. So you said you've talked to people over the
23 years to determine this. So how -- tell me how you --
24 if you did this just for this proceeding -- how talking
25 to people over the years informed your decision -- or

1 your opinion in this proceeding?

2 A. I might talk to a grower who said, "Well, we
3 had a pretty good year. We were able to make three
4 cuttings of hay," something along that line, and say,
5 okay, that was a good year. And those things are,
6 basically, mental notes, you remember what was happening
7 that year.

8 Q. Okay. And you selected 2000, 2009, and 2010,
9 based upon what information?

10 A. Then if somebody, let's say, on the Little
11 Wood could make three crops of hay, and they had an
12 April 1 of '84, that would be the only way they can make
13 that three crops of hay, I would say, okay, if you can
14 make three crops of hay and you own an April 1 of '84
15 right, it takes water up until the first week of
16 September to make a third crop of hay in Water District
17 37. So putting the two together, like the anecdotal
18 conversations with what was actually happening, as far
19 as priority dates, I came up with that criteria.

20 Q. Have you read the staff memoranda that have
21 been prepared for this case by the Department?

22 A. Not completely, no.

23 Q. Have you read the staff memo that Phil
24 Blankenau prepared?

25 A. No.

1 Q. Well, let me tell you what he said. He
2 concluded that a water year of 2013 -- which was a
3 reasonably low water year in the Basin, would you agree?

4 A. Yes.

5 Q. He said that he didn't find, by doing his ET
6 analysis, any shortfall in water supply in that year.

7 Would you disagree with Mr. Blankenau?

8 MR. RIGBY: I object. Again, Mr. Director, I
9 don't think that's exactly what he said. He indicated
10 that it didn't evidence that the ET -- the ET did not
11 evidence the supply, not that he concluded there was a
12 low supply. There is a difference.

13 HEARING OFFICER: Mr. Barker, I think at least
14 my memory is that Mr. Rigby is correct. Maybe we should
15 go directly to the exhibit -- or to the staff memo.

16 MR. BARKER: Certainly, we could do that.
17 There should be a staff -- let me help you, Kevin.
18 There's enough documents stacked up here.

19 HEARING OFFICER: Is it not there? I probably
20 have it here.

21 MR. BARKER: It should be 3; right?

22 MR. THOMPSON: Megan should have the
23 Department exhibits; right?

24 MR. BARKER: I've got 2 and 4.

25 HEARING OFFICER: I have it here.

1 MR. BARKER: Can we borrow your copy?

2 HEARING OFFICER: Yes. Yes.

3 MR. BARKER: Thank you.

4 HEARING OFFICER: Refer you to that.

5 Q. (BY MR. BARKER) So, Mr. Lakey, I've handed
6 you Exhibit -- IDWR Exhibit 3.

7 Is that the right number, 3?

8 A. Yes.

9 Q. Would you turn to the page 10. And you see
10 under "Conclusions"?

11 A. Yes.

12 Q. The last paragraph, and I'll just read this
13 aloud, "This analysis did not clearly identify water
14 shortage in Little Wood and Silver Creek area during the
15 2013 drought."

16 Did I read that right?

17 A. Yes.

18 Q. And so do you understand that what
19 Mr. Blankenau was doing was using ET analysis to make
20 that determination?

21 A. Yes, I understand that, yeah.

22 Q. Okay. And are you disagreeing with
23 Mr. Blankenau's analysis that the ET information that he
24 had for the Little Wood and Silver Creek in 2013 did not
25 clearly identify a water shortage in that year?

1 A. Well, I guess it would depend on what he's
2 considering Little Wood and Silver Creek. The
3 irrigation in the Silver Creek area, say around Picabo,
4 is groundwater supplemented, so perhaps the groundwater
5 was showing no effects of drought. I'm not sure what he
6 would be describing there.

7 Q. So you don't have -- you don't know what areas
8 he was evaluating?

9 A. No.

10 Q. And it does say "Little Wood"; correct?

11 A. Yeah.

12 Q. And so if his analysis included -- let's
13 assume for this question his analysis included the
14 entire area served by the Little Wood and Silver Creek,
15 would you disagree with that, that conclusion that he
16 drew?

17 MR. RIGBY: Again, Mr. Director, I'm going to
18 object, only that in his testimony he clearly stated
19 that it also could be because of water rendered.

20 MR. BARKER: If you want to cross-examine the
21 witness, Counsel, you can do that.

22 MR. RIGBY: I'm just saying, you're trying to
23 determine what he said, and I'm saying in his response,
24 that's what he said.

25 MR. BARKER: I am asking the question about

1 what is written in the report.

2 HEARING OFFICER: All right. Let me respond.
3 I'll overrule the objection. We read the text. But let
4 Mr. Barker pursue this line of questioning.

5 Q. (BY MR. BARKER) So anyways, my question was:
6 Do you disagree with Mr. Blankenau's conclusion about
7 the water shortage in the Little Wood or that there was
8 no -- let me try again.

9 Do you disagree with his conclusion where
10 Mr. Blankenau states the "analysis did not clearly
11 identify water shortage in the Little Wood and Silver
12 Creek area during the 2013 drought."

13 A. I don't think I can agree or disagree, because
14 I believe there would need to be -- for me to understand
15 what he's saying, I think there would need to be a
16 delineation, really, between Little Wood and Silver
17 Creek area. Because I think that irrigation is
18 different in those two areas, so I don't think I could
19 agree or disagree.

20 Q. So look at page 4 of his memo.

21 Have you got that map in front of you on
22 page 4?

23 A. Yes.

24 Q. And Mr. Blankenau identifies the area of the
25 Little Wood and Silver Creek area in red.

1 Do you see that? Do you see his legend on the
2 left-hand side?

3 A. I think so, yeah.

4 Q. And then if you look over at the map, he's got
5 areas identified in red in the fields, I suppose, below
6 Picabo and along the Little Wood. It doesn't include
7 areas in the Triangle, does it?

8 A. No.

9 Q. Does that help you understand the question?

10 A. Not really, no.

11 Q. So you can't agree or disagree with that
12 conclusion?

13 A. That is correct.

14 Q. Did you do anything to determine what crop
15 demands were in these years of 20 -- of 2000, 2009, and
16 2010?

17 A. No.

18 Q. Did you determine what the spill in Magic was
19 in those years?

20 A. Excuse me, repeat that again.

21 Q. Did you determine what the spill in Magic was
22 in those years for users on the Little Wood?

23 A. I believe I did for 2009 and 2010.

24 Q. Was there?

25 A. Was there what?

1 Q. Spill from Magic.

2 A. Yes.

3 Q. Did you compare to any of the analog years
4 that you've described whether there was adequate water
5 supplies in those years?

6 A. No.

7 Q. Mr. Fletcher asked you a question about
8 conveyance losses, and he asked you whether there was
9 ever 100 percent conveyance loss in the Little Wood.

10 Do you remember that question?

11 A. Yes.

12 Q. Have you ever done calculations to determine
13 what the losses are in the Little Wood or Silver Creek,
14 either one?

15 A. No.

16 Q. So you don't know how much they are?

17 A. No.

18 Q. So if you don't know what the conveyance
19 losses are, how do you know how to do the priority cuts?

20 A. The conveyance losses I would consider built
21 into priority cuts. They're already within the system.

22 Q. So how do you build them in?

23 A. By the amount of water that shows up at 54.

24 Q. So you just look at what's at the downstream
25 end as the basis, and you don't worry about the water

1 availability up above?

2 A. Correct.

3 Q. So you also said that you did some comparisons
4 of the amount of water that you would need to deliver
5 these various rights we talked about earlier at -- with
6 the flows at Sportsman's and at Station 10; right?

7 A. I don't understand your question.

8 Q. Okay. So you said that you make your priority
9 cuts based upon the flows at Station 54; right?

10 A. Yes.

11 Q. And that never changes?

12 A. That's correct.

13 Q. Whether Magic is delivering water or not?

14 A. Yes, that's correct.

15 Q. Okay. And I thought what you said was that
16 you also did a comparison to determine what the flows
17 would be needed at Station 10 and at Sportsman's Access
18 as a rough estimate of what water would be available at
19 those places in order to meet the April '84 delivery
20 requirements?

21 A. I thought I was talking about the Sportsman's
22 Access in 10 in a way to compare analog years -- I'll
23 say "analog" -- whether it's a dry year or a wet year, I
24 was trying to compare those flows at those stations, but
25 not developing my priority cuts, no.

1 Q. So I'm sorry if I misunderstood, but do you
2 have knowledge of what the flows you need at Station 10
3 are in order to keep the '84, April '84 rights in
4 priority?

5 A. Approximately, anywhere from 35 to 45,
6 depending on -- and that would also depend on whether
7 Magic is spilling or not. If Magic is not spilling into
8 the Little Wood, it may be higher than, say, 45; it may
9 be as high as 50, just as a general guideline.

10 Q. I'm sorry, how about the flows at Sportsman's
11 in order to keep the April of '84s on?

12 A. I believe it's probably in the neighborhood of
13 80 to 85.

14 Q. And then how about September 1, '83, rights,
15 what are the flows that you need at Station 10 to keep
16 those in priority?

17 A. I don't know.

18 Q. How about the April '80 -- sorry, how about
19 Sportsman's flows?

20 A. For?

21 Q. For the September '83 rights?

22 A. I thought that was what I was answering on the
23 80 to 85, or, no? What priority date were you asking
24 about?

25 Q. I was asking about the April '84's.

1 A. Oh, it would be slightly more than the
2 September of '83. I'm not sure how much.

3 Q. So the numbers you're talking about are
4 September '83's, 80 to 85 at Sportsman's --

5 A. Yeah.

6 Q. -- and how much at Station 10?

7 A. I'm not sure at Station 10. I'm just
8 guessing.

9 Q. And so you know that the September '83 rights
10 of 20 cfs are taken out above Sportsman's?

11 A. Yes.

12 Q. So you need --

13 A. Let me correct that.

14 Q. Go ahead.

15 A. As far as I know, the Picabo Livestock right
16 has a permissible place of use, so they have a large
17 service area for that right; and whether they move it to
18 other points above or below Sportsman's Access, I'm not
19 sure. I'm not sure exactly where their permissible
20 place of use sits in relation to the Sportsman's Access
21 gage.

22 Q. How about their point of diversions? Do you
23 know if those are above or below Sportsman's?

24 A. I couldn't say.

25 Q. So doesn't that matter, whether the

1 September '83's are taken out above or below
2 Sportsman's, in order to determine how much water you
3 need at Sportsman's to fill the rest of the rights?

4 A. I don't use Sportsman's as a point of
5 adjustment.

6 Q. But I was asking you about -- you said you
7 were asking -- sorry -- you were speaking about needing
8 80 or 85 at Sportsman's in order to make sure that the
9 September '83's remained in priority, but if the
10 September '83's are taken out above Sportsman's, does
11 that change your calculation?

12 A. The 80 to 85 is just a general kind of how we
13 do and type number, it's not a management number.

14 Q. The only management number you've got is
15 Station 54, then?

16 A. Yes.

17 Q. Mr. Fletcher asked you about some curtailment
18 pumping that took place in August and September of 2020.

19 Do you remember that testimony?

20 A. Yes.

21 Q. And you said you sent out a text on
22 August 1 --

23 A. I think it was more around August 7th, but I'm
24 not sure.

25 Q. Okay, August 7th. And you sent it out to the

1 collaborative group?

2 A. Some of them, yes.

3 Q. And then you said five to seven days later
4 water started showing up?

5 A. Yes.

6 Q. And then ten days later you had 10 cfs that
7 you couldn't account for from surface deliveries?

8 A. Yes.

9 Q. Do you know what wells were turned off?

10 A. No.

11 Q. Do you know how much water was turned off?

12 A. No. No.

13 Q. Do you know if surface water was turned off?

14 A. Yes.

15 Q. It was?

16 A. There were varying amounts of surface water.
17 I had taken that into account.

18 Q. Oh, that was taken into account in calculating
19 how much water -- additional water you got?

20 A. Yeah.

21 Q. Was the Picabo Livestock surface water turned
22 off during that period of time?

23 A. I believe so, but I'm not positive for sure
24 without going back through the records.

25 Q. So do you have some calculations to show you

1 how you came up with this 10 cfs that you couldn't
2 account for?

3 A. Yeah.

4 Q. Do you have those with you?

5 A. They were in my notebook, but I don't know
6 where that is right now; but, yeah.

7 Q. Okay. Well, it's being copied, so I'm sure
8 you'll have a chance to answer that question later.

9 So you don't know -- just to reiterate, you
10 don't know how much water, how much pumps were turned
11 off, how much water was not being diverted from the
12 pumps during that period of time?

13 A. No.

14 Q. And Mr. Fletcher asked you if there were any
15 rain events?

16 A. Yeah.

17 Q. And you said there were none?

18 A. Not that I remember, no.

19 Q. And do you know if there were any other
20 changes in temperature or conditions?

21 Was it hotter, colder, during that period of
22 time?

23 A. No, not specifically.

24 Q. And so it took at least ten days for that full
25 amount of defect to show up from the date you sent out

1 the request?

2 A. That's what it looked like, yeah.

3 Q. So the -- you did some analysis to suggest
4 that if the water that Jennifer Sukow estimated would
5 show up in the creek from her 100 percent curtailment
6 run on July 1, and you took those figures and decided
7 that that would help you return some of September '83's,
8 all of the June, and all of the April '83's?

9 A. I believe so, yeah.

10 Q. Back in priority.

11 And how did you make that determination? Is
12 this just math, you take the 20 cfs and see how much of
13 it would accrue to Station 54?

14 A. Yes.

15 Q. So how much of that 20 cfs -- or whatever her
16 estimate was -- would accrue at Station 54?

17 A. I think there was a 25 percent loss subtracted
18 from her numbers to make sure we had some seepage loss
19 in the system.

20 Q. So you took her numbers and subtracted a
21 25 percent loss?

22 A. Yeah.

23 Q. So you didn't use the full numbers?

24 A. No.

25 Q. And you found that three rights -- three

1 rights would return to priority?

2 A. Four, I believe.

3 Q. I thought -- I've got written down Ritter,
4 Taber home place, and Barbara Farms.

5 Is there another one?

6 A. Well, the September of '83 would have been
7 able to come back on a percentage, and the June of '83
8 would have been -- would also.

9 Q. Oh, I see. The Picabo and the Blackburn
10 Farms?

11 A. Yes.

12 Q. And neither Picabo Livestock or Blackburn
13 Farms is making an injury claim in this case; is that
14 right?

15 A. Not that I'm aware of.

16 Q. So one of these rights, the Barbara Farms
17 rights is below the canal; that's what you said?

18 A. Yes, that's correct.

19 Q. So did you have enough water to actually get
20 this 4 cfs down to Station 54 and into the canal and to
21 Barbara Farms?

22 A. Yes. I thought we would, yes, at the flows.

23 Q. And how do you get that additional carriage
24 water to get that all of the way to there?

25 A. The water rights senior to those would also be

1 in those flows.

2 Q. The water rights -- oh, the 1887s?

3 A. 1877s.

4 Q. Sorry, 1877. And we can look and see how much
5 of that is -- and that shows up in your table?

6 A. Excuse me?

7 Q. Your table will show us how much is above and
8 below the canal?

9 A. Yeah.

10 Q. And the same is true with the perpetual rights
11 that show us which ones are above and below the canal?

12 A. Yes.

13 Q. Did you make any effort to determine -- let me
14 lay a little foundation here.

15 Mr. Rigby said that it's possible that some of
16 the earlier curtailed rights could come back on, and you
17 said it's possible?

18 A. Yes.

19 Q. Did you do any determination --

20 A. No.

21 Q. -- of that?

22 A. [Witness shakes head.]

23 Q. And then you also talked about some of the Big
24 Wood stockwater right being -- it might be able to be
25 used after the irrigation season?

1 A. That's correct.

2 Q. And how much water, if any, would there be in
3 the river after October 1st as a result of these
4 curtailments?

5 A. I don't believe the Sukow numbers went into
6 October.

7 Q. Right. So how can you tell that there would
8 have been sufficient water for Big Wood's stockwater
9 right if you were relying on Sukow's evaluation?

10 A. I thought we were trying to go back to
11 Mr. Rigby's question about water would show up, and it
12 might mean the difference if you had Sukow's numbers.
13 I'm presuming that the numbers would still continue
14 through October, but I don't know that for sure.

15 But if there was a curtailment, and he was
16 trying to figure out would there be other possible water
17 rights, and I said it's possible. I'm not sure if
18 that's the question you're asking.

19 Q. Yeah, my question is: How do you know whether
20 or not those rights would be -- there would be
21 sufficient water to supply those rights if you don't
22 have any figures from Jennifer Sukow's model run to
23 determine that, how much water would have been in the
24 creek?

25 A. I was just under the assumption when a

1 diversion stops, that lack of diversion affects --
2 continues on through later in the season.

3 Q. Right. But you don't know how much that is --

4 A. No.

5 Q. -- or when it propagates itself or anything
6 like that?

7 A. No.

8 Q. In the binder in front of you -- it may be
9 easier if I could switch here.

10 So, Mr. Lakey, would you look at Mr. Luke's
11 staff report, IDWR Exhibit 4.

12 A. Yes.

13 Q. Okay. Would you turn to Attachment B,
14 Mr. Luke's memo to you regarding the exchange condition.

15 A. I'm sorry, I don't know how to find
16 Attachment B.

17 Q. So the page numbers aren't numbered. So go
18 towards the back of the exhibit. It's actually about
19 four or five pages from the back. There's a bunch of
20 tables, and then there's a --

21 MR. BARKER: Mr. Director, may I?

22 HEARING OFFICER: Yes.

23 THE WITNESS: I think I got it.

24 MR. BARKER: Oh, you found it.

25 Q. (BY MR. BARKER) So you've seen this

1 memorandum from Mr. Luke to you about the delivery of
2 the water rights with the exchange conditions?

3 A. Yes.

4 Q. And I think you said prior to this proceeding
5 you weren't familiar with those exchange conditions in
6 the water rights?

7 A. Yes, that's correct.

8 Q. So I want to just draw your attention to
9 page 4 of this memo, and Item No. 2. And then -- well,
10 before we get into the details, is it your intent to
11 deliver water in 2021 and future years in accordance
12 with this direction instructions to watermasters?

13 A. Yes.

14 Q. And is that -- that is different than how it's
15 been administered in the past?

16 A. Yes.

17 Q. At least as it respects the Little Wood?

18 A. Yes.

19 Q. So if you look at 2(a) on the fourth page of
20 the memo.

21 A. Yes.

22 Q. So Mr. Luke is, essentially, telling you that
23 if the Big Wood doesn't have a demand for water above
24 the canal that can be delivered to the exchange rights,
25 then you distribute that water to the next available

1 right in priority in the Little Wood?

2 A. Yes.

3 Q. And so if that -- when that occurs, when Big
4 Wood doesn't have the ability to take that water, that
5 means that there's additional water in the Little Wood
6 that's available for junior users --

7 A. You said --

8 Q. Juniors to Big Wood.

9 A. I'm sorry, go ahead.

10 Q. I'm sorry, I interrupted you. Go ahead.

11 A. I think your question is if they had no way to
12 take it, or is it they had no demand? I guess I need a
13 clarification on that.

14 Q. Well, isn't that what the direction says, "if
15 Big Wood has no demand or need for water above
16 Milner-Gooding that's deliverable, then the water shall
17 be distributed to the next available rights in
18 priority"?

19 A. So I would paraphrase to say, if Big Wood
20 Canal Company says, "No, we don't want the water," then
21 I can deliver it somewhere else.

22 Q. Right.

23 A. Correct.

24 Q. And if Big Wood Canal Company said, we want to
25 just run 6 cfs into the Dietrich Canal, even though the

1 Dietrich Canal is empty, and they couldn't get that
2 water downstream to their users, you wouldn't allow them
3 to do that, would you?

4 A. We have not in the past, no.

5 Q. Next I want you to look in the book in front
6 of you to Exhibit 9.

7 A. Is that Tab No. 9?

8 Q. Tab No. 9, yes. South Valley Groundwater
9 District/Galena Groundwater District Exhibit 9, and turn
10 over to page 27.

11 A. Okay.

12 Q. So this document has been admitted as a
13 contract with the United States regarding delivery of
14 water. And paragraph 28 has been described in previous
15 testimony as the operative exchange condition language.
16 So it starts on the bottom of page 27, goes over into
17 the next two pages.

18 HEARING OFFICER: These pages are offset by a
19 page number, Mr. Barker, as I look at it. So we've
20 got -- well, no, that's not right.

21 MR. BARKER: I don't think they are this time.

22 HEARING OFFICER: No, you're right. You're
23 correct. Sorry. They're the same. Thank you.

24 Q. (BY MR. BARKER) I may have misstated, but
25 it's the paragraph 28 I was referring to that starts on

1 page 27. If I stated that wrong, I apologize.

2 So have you read this language of the contract
3 before?

4 A. Yes, I have.

5 Q. Did you have an understanding, beyond what
6 you've got in the staff -- I'm sorry -- the instructions
7 to watermaster from Mr. Luke about how to implement this
8 language?

9 A. Repeat that question. I'm sorry.

10 Q. Let me just not repeat it, because that wasn't
11 a very good question.

12 You've read this Section 28; correct?

13 A. Yes.

14 Q. And you know that there's a provision about
15 how the water is to be exchanged between the parties to
16 this agreement; right?

17 A. Yes.

18 Q. And if you look at subpart one, is that really
19 what Mr. Luke's instructions to watermaster cover?

20 A. [Reviewing documents.]

21 Okay. Repeat your question, please.

22 Q. So subpart 1 -- (b)(1)?

23 A. Yeah.

24 Q. Is that the implementation of that section
25 that is included in your watermaster instructions?

1 A. I'm not sure.

2 Q. Okay. Do you think this says something
3 different than what Mr. Luke --

4 A. I'm not sure.

5 Q. So look at subpart two. Read that section to
6 yourself, please.

7 A. [Reviewing documents.] Okay.

8 Q. Okay.

9 A. I'll make a shot at it.

10 Q. So I'm going to expect your answer will
11 probably be the same, but --

12 A. Yep.

13 Q. -- there's some language here about pooled
14 water. Have you ever been called on to do anything with
15 pooled water?

16 A. No.

17 Q. And subsection 3, if you would read through
18 that, please.

19 A. [Reviewing documents.] Okay.

20 Q. Okay. The first question is: Do you -- have
21 you ever been called upon to implement the language of
22 subsection 3?

23 A. I believe that's comparable to the directive
24 from Tim Luke.

25 Q. Okay. And so you think subsection 3 is really

1 what is driving Tim Luke's memoranda -- or watermaster
2 instructions?

3 A. You'd have to probably ask Tim.

4 Q. Well, this talks about having a deficiency in
5 supply being made up in subsequent seasons, and I -- do
6 you see that language over on page 29?

7 A. Exactly where on page 29 are you referring?

8 Q. In subpart 3 --

9 A. Okay.

10 Q. -- starting the fifth line down.

11 A. "Until the deficiency in supply received by
12 the old lands above the canal in that season has been
13 offset in subsequent seasons."

14 Q. Right. Do you know what that means?

15 A. No.

16 Q. So I take it, then, you've never actually been
17 called upon to implement that provision?

18 A. Well, if I were to keep reading down, it has
19 something to do with if Magic were to fill in subsequent
20 years, then the current requirements would go away. So
21 if there were a pretty good year and Magic filled, then
22 this language would no longer be applicable, but I am
23 not sure.

24 Q. The next thing I would like to do is ask you
25 about a different topic, if I may.

1 Go to Jennifer Sukow's report in front of you,
2 IDWR No. 1.

3 A. I have 2, 3, and 4.

4 MR. BARKER: May I, Mr. Director?

5 HEARING OFFICER: Yes.

6 MR. THOMPSON: It should be 2, Sukow.

7 Q. (BY MR. BARKER) I'm sorry, Mr. Lakey. I gave
8 you the wrong number. It's IDWR 2, Jennifer Sukow's
9 report.

10 Have you got that in front of you now?

11 A. Yes.

12 Q. I want to ask you about her comments on
13 page 26, so if you'd turn to that page.

14 Are you there?

15 A. Not quite. So I have 24 and then a photo and
16 then an Attachment B, and then a B1 and a B2 and a B3
17 and B4, but I'm not seeing a 25 or 26.

18 MR. RIGBY: He's too far back.

19 MR. BARKER: Is that an attachment? That may
20 be earlier.

21 THE WITNESS: Okay.

22 Q. (BY MR. BARKER) Are you there?

23 A. Yes.

24 Q. 26 of the May 17th, 2021, staff memo?

25 A. Yes.

1 Q. The last paragraph, towards the bottom of that
2 page is discussing seepage losses between Sportsman's
3 Access and Station 10.

4 Do you see --

5 A. Yes.

6 Q. -- how she mentions that she's calculated
7 losses somewhere between 20 and 37 percent?

8 A. Yes.

9 Q. And you used those same percentages when you
10 did your discount of the amount of water that would make
11 it to the users when you said -- named the three water
12 users?

13 A. I think we used 25 percent.

14 Q. Just across the board?

15 A. Yes.

16 Q. So you know that she had different losses in
17 different months?

18 A. Yes.

19 Q. Is there a reason you didn't use the losses
20 per month?

21 A. Too much work.

22 Q. Jennifer says here in her staff report -- and
23 I'll read this -- "Reliable evaluation of seepage losses
24 is frustrated by measurement uncertainty at the gages,
25 the large number of diversions, the lack of

1 winter-season maintenance, and calibration of the
2 Section 10 gage."

3 Is that a fair statement in your view as the
4 watermaster?

5 A. No.

6 Q. Okay. Do you have measurement uncertainty at
7 your gages?

8 A. No.

9 Q. There's no uncertainty at all?

10 A. Oh, that's a good point. There is no perfect
11 measuring station within water delivery. Whether it's
12 USGS, Idaho Power, or Water District 37, there will
13 always be some form of error.

14 Q. Do you know what your measurement uncertainty
15 is at the Station 10 gage?

16 A. There's always some.

17 Q. Do you know what it is?

18 A. No.

19 Q. Plus or minus 10 percent?

20 A. So plus or minus 10 percent from what?

21 Q. The uncertainty about whether the water is
22 being measured accurately or not?

23 A. So Station 10 has been around for 100 years.
24 The current gage curve discharge table that we use for
25 Station 10 is based on watermaster measurements over the

1 last 26 years. Before -- the previous watermaster, Lee
2 Peterson, and myself have taken measurements there
3 periodically. Whenever -- and so that's how our gage
4 curve is built.

5 Whenever we need to make an adjustment as far
6 as priority, we measure the station at that time to make
7 sure we have an accurate measurement at that time of
8 curtailment. So I'm extremely confident in Station 10
9 flows, if that's what you're asking.

10 Q. So you measure at the time that you make --
11 you measure by hand at the time?

12 A. Yes.

13 Q. And how does your hand measurement compare to
14 the Station 10 gage measurements?

15 A. They might be off 5 percent, 5 to 10. So
16 let's say we had a -- gage stations have a staff gage in
17 them, and it's what it is. And my discharge table
18 might -- let's say a gage height of 2.0 on the gage
19 table or our discharge table for a 2.0 on the gage might
20 be -- let's pick a number -- 50 cfs. And I might go
21 there and measure 53 or 48. And it will vary depending
22 on aquatic vegetation, maybe silt movement, stuff like
23 that. So I don't know if I still understand your
24 question.

25 Q. So let's --

1 A. And that number is always a moving target. So
2 to try to describe something as plus or minus, I'm not
3 sure if we have -- we always have a moving target in
4 which to compare to.

5 Q. So has anyone at the Department of Water
6 Resources expressed frustration to you that the -- about
7 the measurement uncertainty of the gages at Silver Creek
8 and at Sportsman's Access and Station 10?

9 A. I had not heard that until Sean Vincent
10 testified to that.

11 Q. Do you know what Ms. Sukow means when she says
12 there's been a "lack of winter-season maintenance"?

13 A. Yeah. Those stations ice up, and they're
14 difficult for us to maintain.

15 Q. So what do you have to do to fix them?

16 A. Figure out how water won't freeze at 32
17 degrees, I guess.

18 Q. So what do you do in the spring, then?

19 A. Oh, we can go back out and measure once the
20 ice is out.

21 Q. So you don't really have any decent winter
22 measurements, is that what you're saying?

23 A. December, January, February are pretty
24 difficult.

25 Q. And do you know what Ms. Sukow is referring to

1 when she questions the calibration of the Station 10
2 gage?

3 A. I don't know what she's referring to, no.

4 Q. Do you calibrate your gage?

5 A. Yeah, that's what I was talking about earlier
6 in the flow measurements we take.

7 Q. And then when you do that, do you adjust the
8 staff gage?

9 A. No. We adjust what we call an offset.

10 Q. And she also says that the Department and
11 Water District 37 are working to improve operation and
12 maintenance -- future year-round operation and
13 maintenance of the gage.

14 What are they doing to improve that operation
15 and maintenance?

16 A. I think they -- well, I don't think. They
17 install their own measuring equipment -- not equipment,
18 but -- well, streamflow identification, or they're
19 installing their own equipment on Station 10. I would
20 guess that's what they're trying to do to improve the
21 accuracy, they want their own information.

22 Q. Do you provide that information, Station 10
23 gage, to the Department or USGS or anybody else?

24 A. When asked.

25 Q. And have you observed any differences in your

1 readings versus the Department's readings in their gages
2 that they're putting in?

3 A. I have not seen their data, no.

4 Q. So turn over to page 29 in the same report,
5 the same staff memo.

6 Are you there?

7 A. Yes.

8 Q. So at the top of page 29, there's a reference
9 to "Seepage losses in the vicinity of the Highway 93
10 Bridge."

11 A. Yes.

12 Q. You're familiar with that problem?

13 A. Yes.

14 Q. Do you know that -- do you know that the
15 Department has issued a notice of violation to
16 Mr. Hannifer in that area?

17 A. No, I'm not aware of that.

18 Q. Do you know that Mr. Hannifer's diverting
19 water from the creek into a pond without a water right?

20 A. I'm not sure I would call that diversion on
21 anybody's behalf.

22 Q. So is he putting it to beneficial use without
23 a water right?

24 A. I'm not aware that he's -- I don't know what
25 he's using it for.

1 Q. You know there's a big pond --

2 A. Yes.

3 Q. -- beside the creek --

4 A. Yes.

5 Q. -- that doesn't have a water right for it?

6 A. There are no water rights for ponds in that
7 area, no.

8 Q. And have you done anything to try and prevent
9 that water from being used in that pond -- prevent
10 Silver Creek water from being used in that pond?

11 A. To be fair, if I went after Mr. Hannifer, I
12 would also have to go after Simplot, and Water District
13 37 probably doesn't have the capability to do that. So
14 that's a difficult problem, as you well know, to solve.

15 Q. But it's a problem, nonetheless, in getting
16 water downstream into the Little Wood; isn't it?

17 A. Yes, it is.

18 Q. Have you measured seepage losses?

19 A. Yes.

20 Q. And Ms. Sukow reports that there have been
21 measurements between 7 and 15 cfs by the water district?

22 A. Yes.

23 Q. Is that you?

24 A. I believe The Nature Conservancy may have done
25 some, and Brockway Engineering may have done some, at

1 times.

2 Q. Have you ever measured the seepage losses at
3 that location?

4 A. Yes, I have.

5 Q. What numbers did you come up with -- well,
6 first of all, when have you done that?

7 A. We started measuring there, I don't know, two
8 or three years ago, four years ago. Over this past
9 spring when water was high, I made a measurement there
10 and found 20 cfs of loss in that stretch. I'm not sure
11 what the percentage would be. I don't remember my
12 beginning and ending flows.

13 Q. Let's look at Exhibit 12 in the book --
14 actually, let's -- there's something else I want you to
15 look at.

16 MR. BARKER: Mr. Director, I have a document
17 that you've identified as something that will be part of
18 what you would take official notice of from the black
19 books of the watermaster. And I think I'd like to mark
20 this as our next exhibit number, if I may?

21 HEARING OFFICER: Okay. At this juncture in
22 the break for marking, I want to check with the court
23 reporter. Do you need a break?

24 COURT REPORTER: I'm okay. So whatever you
25 want to do.

1 HEARING OFFICER: Anybody else? Our first
2 break was a little early. Anybody want --

3 MS. MCHUGH: It would be great to take at
4 least a five-minute break to -- it would be great to be
5 able to take a five-minute break.

6 MR. BROMLEY: We've got all of these documents
7 that are being brought in while Mr. Lakey is testifying,
8 and we're trying to make sense of what they are and what
9 they aren't. We're going to need to stamp things as
10 exhibits, so it would be helpful.

11 HEARING OFFICER: Let's take ten minutes, and
12 then we'll plan to run a little bit into the lunch hour
13 and maybe take lunch at 12:30 or so. I don't know.
14 Depending on how the testimony progresses. Let's break
15 for ten, come back at 20 after.

16 (Break taken.)

17 HEARING OFFICER: Back on the record, Andrea.
18 Thank you. Recording?

19 MS. JENKINS: Yes.

20 HEARING OFFICER: Good. There's been an
21 opportunity to exchange some of the documents.

22 Mr. Barker, further questions?

23 MR. BARKER: Thank you, Mr. Director.

24 Q. (BY MR. BARKER) Mr. Lakey, before I want to
25 ask you about those 1931 watermaster books, I want to

1 return to -- real briefly to August of last year.

2 A. Okay.

3 Q. When the -- some amount of wells may have been
4 turned off, and some surface water rights went off. I
5 think you said those were the two factors that you could
6 point to as being responsible for increase in flows at
7 Station 10?

8 A. We also receive water from Little Wood
9 Reservoir at Highway 93 Crossing, so that was added in
10 there also.

11 Q. Is that all?

12 A. Is what off?

13 Q. Is that all of the water that you got?

14 A. I'm not sure what you're questioning.

15 Q. So you said groundwater pumping curtailment?

16 A. Voluntary curtailment.

17 Q. Voluntary curtailment. The Purdy '83's going
18 off?

19 A. Oh, no, that was a misunderstanding. There
20 were a variety of water rights still on. So the '83
21 could have gone off voluntarily for harvest, the
22 September of '83 could have gone off voluntarily for
23 harvest, or any number of water rights that were still
24 on up there would be off for harvest. And so I went
25 back and looked at all of those, not just the September

1 of '83.

2 Q. And so are you aware that there was any other
3 source of water into Silver Creek at that time?

4 A. Not aware, no.

5 Q. Do you remember getting a text from Nick Purdy
6 in this time advising you that he was pumping 8 cfs from
7 his well directly into Silver Creek?

8 A. Yeah, I remember that.

9 Q. So that 8 cfs direct pumping from the Purdy
10 wells into Silver Creek is going to have a significant
11 effect downstream, isn't it?

12 A. Yeah, it would.

13 Q. And that was something that was part of what
14 showed up at Station 10, then?

15 A. It could be, yes.

16 Q. But you didn't factor that into your --

17 A. No, I did not.

18 Q. -- calculations?

19 So if you had 10 cfs of additional improvement
20 from what you thought was well curtailment that you
21 couldn't factor, and you had 8 of that coming from wells
22 that were being directly pumped into the creek, isn't
23 that the explanation for most of what you were unable to
24 determine the source for?

25 A. It could be, yes.

1 Q. Instead of groundwater curtailment.

2 (SVGWD & GGWD Exhibit 39 marked.)

3 Q. (BY MR. BARKER) Okay. Turn to this document
4 that we marked as South Valley/Galena Exhibit No. 39.

5 Is that the right number?

6 COURT REPORTER: Yes.

7 THE WITNESS: Okay, yes.

8 Q. (BY MR. BARKER) So this is a document we just
9 received the other day from the Department, and it's
10 from the 1931 black books.

11 Have you seen this before?

12 A. No.

13 Q. Are the black books in your possession as the
14 watermaster?

15 A. Yes.

16 Q. Do you, as part of your duties, occasionally
17 go back and review information about what's happened in
18 the district?

19 A. Yes.

20 Q. But you don't ever remember looking at the
21 1931 black book?

22 A. Not specifically, no.

23 Q. I want you to turn to page 7. And there's
24 some discussions of gains and losses. I don't know what
25 these stations mean.

1 Can you tell me what Stations 19 and 2 are, or
2 is that in the Big Wood side?

3 A. What page did you say?

4 Q. I'm on page 7. There's a table --

5 A. I do not see 19 or -- okay. There we go,
6 yeah. Okay. I'm on the right page.

7 Q. Yeah. So tell me what are Stations 19 and 2?

8 Does that have anything to do with Little
9 Wood, or is that Big Wood?

10 A. I think 19 -- we use No. 2 now as Stanton
11 Crossing, but I don't know if that's the same No. 2, and
12 I don't know what 19 would be.

13 Q. Okay. Just for the record, District 11-AB
14 is -- if you'd go back to the first page, sorry, this is
15 a report for District 7-AB and 11-AB.

16 Do you see that?

17 A. Yes.

18 Q. And 11-AB is the Silver Creek and Little Wood
19 Rivers?

20 A. Okay.

21 Q. Got it?

22 All right. So then I want you to return to
23 page -- oh, so, I'm sorry, 11-AB is a predecessor to
24 Basin 37 -- or Water District 37; right?

25 A. I think so, yes.

1 Q. And you've seen Water District 11-AB records
2 before as part of your duties?

3 A. Yeah.

4 Q. So under the heading "IMPROVEMENTS."

5 Do you see that?

6 A. Yes.

7 Q. Page 7. It says, "Some improvement work was
8 made on Silver Creek to decrease channel losses. This
9 work was in the nature of bank building to keep the
10 creek from overflowing its banks and the water finding
11 its way into sinkholes. The work was authorized at the
12 watermaster election in March and a committee was
13 appointed" --

14 COURT REPORTER: Can you read it just a little
15 bit slower?

16 MR. BARKER: Sorry. Sorry.

17 COURT REPORTER: Sinkholes?

18 MR. BARKER: Where are you? Sinkholes?

19 Q. (BY MR. BARKER) [As read] "The work was
20 authorized at the watermaster election in March and a
21 committee was appointed to advise the watermaster of the
22 work to be done."

23 Do you see that part?

24 A. Yes.

25 Q. Okay. So isn't it the case that as far back

1 as 1931, the water district was involved in maintaining
2 the channel banks of Silver Creek?

3 A. It appears so, yes.

4 Q. And that was intended to enhance the flows to
5 reach -- so that the flows would reach further down into
6 the Little Wood?

7 A. I'm not sure I see where you say -- where it
8 says that.

9 Q. I'm asking you if that's what you would do it
10 for if you were the watermaster?

11 A. I'm not sure.

12 Q. And you don't know why you would enhance the
13 -- build up the banks at Silver Creek to prevent stream
14 losses?

15 A. I guess it would be to help the system as a
16 whole, yeah.

17 Q. And are you aware that the water district,
18 ultimately, obtained an easement to continue this work
19 for the landowner?

20 A. Yes.

21 Q. Would you turn to page -- Exhibit 12 in the
22 book, South Valley/Galena Exhibit 12.

23 A. Yes.

24 Q. Have you seen this exhibit before?

25 A. Yes. I think so, yes.

1 Q. Is this in the records of the water district?

2 A. Yes.

3 Q. And the water district is a party to this
4 easement, is it not?

5 A. Yes.

6 Q. And if you look down to the fourth full
7 paragraph, about the fourth line -- fifth line down, it
8 describes the purpose of the easement is to build up and
9 repair the banks to prevent the channel from overflowing
10 and prevent loss of irrigation water?

11 A. Yes.

12 Q. All right. And are you aware whether or not
13 the water district carried out its obligations under
14 this easement during the -- or ever?

15 A. No, I'm not aware of any.

16 Q. Do you have any reason to believe that the
17 water district did not perform the work that's described
18 in this easement?

19 A. I have no opinion one way or the other.

20 Q. Isn't it true that the water district was
21 asked by its members to -- during your tenure -- to
22 perform some of the work under -- that's authorized by
23 this easement?

24 A. Yes.

25 Q. And were you involved in that?

1 A. Please define "that."

2 Q. The work to -- that's authorized under this
3 easement.

4 A. The watermaster previous to me lost his job, I
5 believe, basically, from work done at this site.

6 Q. Okay.

7 A. Because he didn't have the proper permits, and
8 I think he was operating based on the basis of this
9 easement alone. And he lost his job, I think, because
10 of that. So it's always been my opinion to not get
11 involved, as the watermaster, to be involved in stream
12 alteration work.

13 Q. So you've not ever attempted to get a permit
14 to carry out the obligations of this easement?

15 A. No.

16 Q. And so since your tenure, the water district
17 hasn't done anything to reconstruct, buildup, repair,
18 maintain the banks of the channel to prevent loss of
19 irrigation water by overflowing?

20 A. That is correct.

21 Q. Turn in the book to Exhibit 20.

22 A. Okay.

23 MR. BARKER: Is that -- oh, I'm sorry. I
24 would move for the admission of -- Director -- of
25 Exhibit 12, South Valley/Galena Exhibit 12.

1 HEARING OFFICER: Any objection to the
2 admission of the document marked as South Valley and
3 Galena No. 12?

4 MR. RIGBY: No.

5 HEARING OFFICER: The document marked as South
6 Valley and Galena Exhibit 12 is received into evidence.

7 (SVGWD & GGWD Exhibit 12 received.)

8 MR. BARKER: Thank you, Mr. Director.

9 Q. (BY MR. BARKER) Okay. So, Mr. Lakey, you've
10 got Exhibit 20 in front of you?

11 A. Yes.

12 Q. Okay. So tell me what Exhibit 20 is. Is this
13 a document that you prepared?

14 A. It appears so, yes.

15 Q. It appears so. Is it or is it not? Sorry.

16 A. I have made so many of these over the last six
17 months, that -- but it's got my name on it, so, yes.

18 Q. What were you attempting to explain to IDWR
19 staff in this narrative?

20 A. It looks like shortfall calculations of some
21 kind.

22 Q. Shortfall calculations for what?

23 A. For the Big Wood River Groundwater Management
24 Area Committee.

25 Q. What kind of shortfalls were you attempting to

1 calculate?

2 A. It must have been some kind of water delivery,
3 obviously.

4 Q. Well, I don't have your backup for this and
5 what was made available. It may be in here somewhere.
6 So this is for a water delivery claimed by the Big
7 Wood/Little Wood Water Users Association; isn't it?

8 A. Say that again.

9 Q. Isn't this a claim for a water delivery by the
10 Big Wood/Little Wood Water Users Association that you
11 were assisting them with?

12 A. This document?

13 Q. Isn't that part of what you're trying to do is
14 calculate shortages for that?

15 A. No. This was to be a presentation to the Big
16 Wood River Groundwater Management Area Committee, I
17 believe.

18 Q. And what was the purpose of providing shortage
19 calculations to the groundwater management committee?

20 A. Oh, to show if there were any shortfalls.

21 Q. And shortfalls in the water delivery to the
22 Big Wood/Little Wood Water Users; is that right?

23 A. I think so, yeah.

24 Q. All right. Is there anybody else that you
25 were doing shortfall calculations for?

1 A. I don't think so.

2 Q. So under 2, you have an acre limit multiplied
3 by 3.18 acre-feet per acre.

4 Do you see that?

5 A. Yes.

6 Q. Where did you come up with that figure?

7 A. The state, under -- maybe my assumption, the
8 state usually would allow 3.5 acre-feet for kind of an
9 average. I didn't think it was probably that high based
10 on some of my research, so I dropped it down a little
11 bit.

12 Q. So you think for the crops that are being
13 grown by the Big Wood Water Users -- Big Wood Little
14 Wood Water Users Association, the 3.1 acre-feet is a
15 good average crop use over a growing season?

16 A. It depends on the farm and the irrigation
17 system.

18 Q. Well, you used 3.1 per acre across all of your
19 combined irrigation -- or your area, haven't you?

20 A. On this particular calculation, yeah, I must
21 have.

22 Q. And then if I go down, you say that -- well,
23 let me back up a second.

24 What are you comparing the use against, what
25 kind of water supply?

1 A. I'm not sure.

2 Q. So as of April 22nd, you don't know what water
3 supply -- of this year, you don't know what water supply
4 forecasts you were using, if any?

5 A. April 22nd? I don't think I had made any
6 predictions by then.

7 Q. So you do a short -- if you go down to the
8 first full paragraph after all of the numbers, you say
9 that there's enough water -- you say that you were not
10 using the junior rights in a shortfall calculation.

11 Can you explain that?

12 A. It just says the junior rights were not used.

13 Q. Why did you not use the junior rights?

14 A. In some cases, depending on the farm, there
15 are other senior rights that can fill the number of
16 acres -- or the number of acres that might be on the
17 farm or the place of use.

18 Q. So this is talking about farm-by-farm
19 calculation?

20 A. I don't see that it is anywhere, per se.

21 Q. Go down to the bottom under "Follow-up." Just
22 read to yourself that last paragraph under there.

23 A. Yes. [Reviewing documents.]

24 Okay.

25 Q. You read that?

1 A. Yeah.

2 Q. So is it your -- is it your understanding that
3 the seniors rejected your proposed methodology because
4 it didn't give them the water right all of the way to
5 the very end of the season regardless of whether or not
6 it was more or less than 3.1 acre-feet per acre?

7 A. No. I believe it says because "the method
8 does not give them the full flow rate of their rights."
9 It doesn't say anything about 3.1 or the flow season.
10 It just says that the method used there didn't give them
11 a full flow rate.

12 Q. And the sentence underneath that says, "Their
13 argument is that the rights were adjudicated with a full
14 flow rate and no acre-foot limit," so there was a
15 discussion about acre-foot limits; right?

16 A. Yeah, they didn't care for the 3.1, I guess.

17 Q. Did they explain why?

18 A. No.

19 Q. Other than that they wanted their full flow
20 rights for the full season?

21 A. I guess, yes.

22 Q. Mr. Lakey, would you turn to Exhibit 5 in the
23 book, please.

24 A. Okay, I'm there.

25 Q. Have you seen this order regarding a

1 combination of some of the water districts and the
2 groundwater and surface water rights into Water District
3 37?

4 A. I believe so, yes.

5 Q. Were you at the hearings where these matters
6 were presented to the public and to the water users?

7 A. I know I was at some, but I don't remember if
8 I was at all hearings.

9 Q. Do you remember that some of the groundwater
10 users objected to being brought into the district?

11 A. Not specifically, no.

12 Q. Turn to page 6. Page 6, I'm sorry, of the
13 same exhibit.

14 A. Okay. I'm sorry, start again. Exhibit what?

15 Q. South Valley and Galena Exhibit No. 5. The
16 one you were just looking at, the order.

17 A. Okay.

18 Q. Turn to page 6.

19 A. Okay.

20 Q. And you see No. 24, the first bullet point?

21 Do you see that?

22 A. Yes.

23 Q. And so the concern of the groundwater users --
24 some of the groundwater users was there would be an
25 adversarial proceeding or adversarial positions as

1 between the surface and groundwater users within the
2 combined district?

3 A. That's what it says, yes.

4 Q. And if you go to paragraph 28 on the next
5 page, it indicates that you submitted written comments
6 in response to some of these concerns?

7 A. Yes.

8 Q. And it says, "Kevin Lakey submitted written
9 comments that addressed some of the testimony at the
10 hearing regarding concerns about consumptive
11 management."

12 A. Yes.

13 Q. Right. So do you now recall that there were
14 concerns about conjunctive management?

15 A. Must be.

16 Q. All right. And your answer to the water users
17 in your written comments was what?

18 A. "Mr. Lakey noted that water users at annual
19 water district meetings only vote on district 'budget,
20 hiring and resolutions' and not 'on how conjunctive
21 management will be enforced.'"

22 Q. Did you say anything other than that about
23 conjunctive management in your written testimony?

24 A. So the next sentence you want me to read?

25 Q. No. I'm just asking you what else you

1 remember saying about conjunctive management in your
2 testimony?

3 A. I don't remember any other testimony as far as
4 conjunctive management, no.

5 Q. Okay. Then turn to page 10. And this is Item
6 10 under the "CONCLUSIONS OF LAW" by the Department.

7 You're there?

8 A. No.

9 Q. I'm sorry, Item 16. Sorry, page 10, Item 16.

10 A. Okay. I'll be needing some help on that one.
11 Item 10, so Tab 10.

12 Q. No. No. Exhibit 5.

13 A. Okay.

14 Q. Page 10.

15 A. Page 10.

16 Q. Paragraph No. 16.

17 A. Okay.

18 Q. You're there?

19 A. I think so.

20 Q. Okay. And, again, this is a discussion of the
21 concern over conjunctive administration of groundwater
22 and surface water rights being imminent.

23 Do you see that first sentence?

24 A. Yes.

25 Q. Okay. And then the Department says that those

1 concerns are not -- if I go down to the third sentence
2 in that paragraph, I'll summarize, but the Department
3 says those concerns are not a problem in combining the
4 groundwater rights because of -- and I'll read this part
5 -- "the fact that conjunctive administration is guided
6 by separate processes outlined in the Conjunctive
7 Management Rules, CMRs, (IDAPA 37.03.11)."

8 Do you see that?

9 A. I think so, yeah.

10 Q. Did I read that correctly?

11 A. I'm not sure.

12 Q. Do you want to read it out loud, then, so that
13 we get that correctly --

14 A. Where do you want me to start?

15 Q. -- into the record?

16 A. Where do you want me to start?

17 Q. Start with the word that -- "adversarial,"
18 that whole sentence.

19 A. "Adversarial tensions between groundwater and
20 surface water users resulting from potential conjunctive
21 administration of water rights should not negatively
22 affect water district operations given the limited
23 regulatory scope of the water district and the fact that
24 conjunctive administration is guided by separate
25 processes outlined in the Conjunctive Management Rules."

1 Q. Okay. And did the Department advise the
2 groundwater users who were being brought into Water
3 District 37 that there would be other processes than the
4 conjunctive management rules that would be utilized for
5 conjunctive administration of groundwater and surface
6 water?

7 A. I can't answer. I don't know. I don't know
8 what they --

9 Q. Did you ever tell the water users that --

10 A. Did I ever tell --

11 Q. -- there would be other processes outside the
12 conjunctive management rules?

13 A. Could you repeat the question, please? I'm
14 sorry.

15 Q. So this sentence that you just read says that
16 "conjunctive administration is guided by separate
17 processes outlined in the Conjunctive Management Rules";
18 right?

19 A. That's what it says, yes.

20 Q. My question is: Did either you or the
21 Department advise the groundwater users that there was
22 going to be a different process other than the processes
23 outlined in the conjunctive management rules for
24 conjunctive administration of water rights -- of
25 groundwater and surface water rights in Basin 37 -- or

1 District 37? Sorry.

2 A. I don't know the rules of conjunctive
3 management or any other process, so I don't believe I
4 could have given testimony one way or the other. And
5 I'm not sure how the Department would have -- or what
6 the Department would have told groundwater users about
7 other processes.

8 Q. You never heard the Department advise the
9 groundwater users that there were going to be other
10 processes utilized for conjunctive administration, did
11 you?

12 A. I don't know.

13 MR. BARKER: Director, thank you. I'll stand
14 down.

15 Thank you, Kevin. You've been patient.

16 HEARING OFFICER: All right. Let me just
17 houseclean a little with you.

18 MR. BARKER: Oh, one housecleaning. I did not
19 move for the admission of Exhibit 20, and I would do
20 that.

21 HEARING OFFICER: Well, I think there are some
22 others, if I recall, but I'm not sure, so let's go back
23 through.

24 So you moved for the admission of Exhibit 20,
25 which is Kevin Lakey's one-page document that's titled,

1 "NARRATIVE." So let's talk about these one at a time.

2 Any objection to the admission of this
3 document?

4 The document that's marked as South Valley and
5 Galena Exhibit 20 is received into evidence.

6 (SVGWD & GGWD Exhibit 20 received.)

7 HEARING OFFICER: I'm not sure, Mr. Barker,
8 maybe my memory is too short. I'm not sure that you
9 ever moved for admission of South Valley/Galena 37 and
10 38. I don't know whether you were intending to offer
11 these after having questioned Mr. Lakey.

12 MR. BARKER: If I didn't, I would so move.

13 HEARING OFFICER: I'll just ask the court
14 reporter and others, those were not received into
15 evidence, were they?

16 MS. CARTER: Not according to my records.

17 HEARING OFFICER: So any objection to the
18 admission of these two documents, spreadsheets prepared
19 by Mr. Lakey?

20 MS. MCHUGH: No objection.

21 HEARING OFFICER: So the documents marked as
22 South Valley and Galena 37 and 38 are received into
23 evidence.

24 (SVGWD & GGWD Exhibits 37 and 38 received.)

25 HEARING OFFICER: Now, I can't remember,

1 honestly, did you intend or did we admit South Valley
2 and Galena Exhibit 39?

3 MS. CARTER: We did not admit it, but
4 Mr. Barker suggested that was one of the documents that
5 you had taken official notice of at the beginning. But
6 for clarity purposes...

7 MR. BARKER: I would move for the admission of
8 Exhibit No. 39, South Valley/Galena Exhibit 39.

9 HEARING OFFICER: Any objection to the
10 admission of this document?

11 All right. The document marked as South
12 Valley and Galena Exhibit No. 39 is received into
13 evidence.

14 (SVGWD & GGWD Exhibit 39 received.)

15 HEARING OFFICER: Now, am I missing any
16 others?

17 Okay. Thank you, Mr. Barker.

18 MR. BARKER: Thank you, Mr. Director.

19 Thank you, Mr. Lakey.

20 MR. THOMPSON: Al, 5.

21 MR. BARKER: What?

22 MR. THOMPSON: Exhibit 5 is the last one.

23 MS. CARTER: Exhibit 5 was already admitted.

24 MR. BARKER: It's already admitted.

25 HEARING OFFICER: Okay. Ms. O'Leary,

1 questions?

2 MS. O'LEARY: Nothing from me, Director.

3 HEARING OFFICER: Thank you. Let's see.

4 Ms. Vonde is not here. Group 3?

5 MS. MCHUGH: Yes, Mr. Director.

6 HEARING OFFICER: Ms. McHugh.

7

8 CROSS-EXAMINATION

9 QUESTIONS BY MS. MCHUGH:

10 Q. Hi, Mr. Lakey. Candice McHugh on behalf of
11 the City of Bellevue.

12 Would you agree that the senior surface water
13 rights that are in this proceeding have water rights
14 that have as their source Silver Creek?

15 A. I'm not sure exactly which water rights would
16 list that as a source, whether Little Wood or Silver
17 Creek. Some of them are different.

18 Q. Would you agree that Silver Creek is a
19 tributary to the Little Wood River?

20 A. Yes.

21 Q. Would you agree that the Little Wood River is
22 a source different than Silver Creek?

23 A. The Upper Little Wood River would be different
24 than Silver Creek, yes.

25 Q. And if a water right has as the source Little

1 Wood River, is it true that it's point of diversions
2 would divert directly out of the Little Wood River?

3 A. I believe so, yes.

4 Q. And if the source of a water right has Silver
5 Creek as its source, the points of diversions would
6 divert out of the Silver Creek channel?

7 A. I'm not sure of that. I think sometimes I've
8 seen it both ways. It wasn't always perfect, but I'm
9 not sure.

10 Q. So your testimony and understanding,
11 potentially, is that there is water rights that have the
12 source of Silver Creek that have points of diversion
13 from a source that is not the Silver Creek channel.

14 Is that what I understood you to say?

15 A. There are other water rights like Loving
16 Creek, Silver Creek. They go back and forth sometimes.
17 And I've never really looked at that specifically to
18 identify specifically whether a right is on the ground
19 delivered from...

20 Q. Do you consider the Little Wood River the same
21 source as Silver Creek?

22 A. Not the Upper Wood River -- or Little Wood
23 River, no. That's Carey. I'm not sure --

24 Q. If a water right has a source of Little Wood,
25 can they divert out of Silver Creek?

1 A. I don't think so.

2 Q. Have you ever delivered any Little Wood waters
3 out of Silver Creek?

4 A. I don't think so.

5 Q. Have you delivered any Silver Creek water out
6 of the Little Wood?

7 A. Physically, I would say so, yes.

8 Q. And did the Silver Creek water right -- would
9 that have to have a point of injection into the Little
10 Wood in order to be authorized to divert out of the
11 Little Wood?

12 A. I don't believe so, no.

13 Q. So a Silver Creek water right that has a
14 source of Silver Creek can divert out of the Little Wood
15 River; is that your testimony?

16 A. Please restate your question, please.

17 Q. I'm just talking about source here, because I
18 think there's some confusion.

19 A. There is.

20 Q. And the notice in this case specifically said
21 that it's involving the impact of groundwater pumping
22 within the Bellevue Triangle on water rights from Silver
23 Creek, so I'm trying to explore whether or not Silver
24 Creek and Little Wood River are synonymous or if they
25 are different sources.

1 So if a water right has the source of Silver
2 Creek, do you deliver it from points of diversion
3 located physically on the Little Wood River?

4 A. I still don't quite understand your question,
5 I guess, to get it exactly right.

6 Q. Okay. Is there someone besides you that would
7 be delivering or authorizing diversion of water in Basin
8 37 from a Silver Creek water right that has the source
9 of Silver Creek on it to authorize it to divert from a
10 point of diversion located on the Little Wood River?

11 Is there someone else besides you that would
12 have that information?

13 A. Perhaps the Department of Water Resources, but
14 at Water District 37, I'm the person that would say
15 whether something should be delivered, yeah.

16 Q. Do you believe that the Little Wood River is
17 the same source as the Silver Creek -- as Silver Creek?

18 A. Not the Upper Little Wood River, no.

19 Q. Because Silver Creek is actually a tributary
20 to the Little Wood; right?

21 A. Correct.

22 Q. You're familiar with Tim Luke's 4-22-2021
23 instructions to you regarding the -- what we've referred
24 to as the exchange condition?

25 A. Yes.

1 Q. Do you intend to deliver water pursuant to
2 those instructions?

3 A. Yes.

4 Q. If you could look at, I think it's South
5 Valley Exhibit 2 and South Valley Exhibit 37.

6 A. Is it in here?

7 MS. MCHUGH: Can I approach for a second?

8 HEARING OFFICER: Yes.

9 MS. MCHUGH: Oh, good gravy. No, that's not
10 it. Which ones are your exhibits?

11 MR. THOMPSON: The yellow binder. Probably
12 the one right in front of him.

13 MS. MCHUGH: The yellow binder.

14 MR. THOMPSON: Probably the one right in front
15 him.

16 MS. MCHUGH: This?

17 MR. THOMPSON: No, that's not it.

18 MS. MCHUGH: This?

19 MR. THOMPSON: Yeah.

20 HEARING OFFICER: The yellow on the front.
21 That's not yellow.

22 MS. MCHUGH: If you have it, can we find
23 Exhibit 37?

24 Q. (BY MS. MCHUGH) So Exhibit 2, from my notes,
25 that Al was questioning you on shows priority cuts.

1 So is that IDWR Exhibit 2?

2 A. I have no idea.

3 MR. FLETCHER: Exhibit 2 is the order
4 dismissing petition for administration. Oh, IDWR 2, is
5 that what you're looking for?

6 MS. MCHUGH: Maybe.

7 MR. RIGBY: Sukow's memo?

8 MR. FLETCHER: Sukow's memo?

9 MS. MCHUGH: Yeah.

10 MR. FLETCHER: It's IDWR 2.

11 THE WITNESS: Okay. I have that.

12 HEARING OFFICER: There's a lot of
13 conversation going on. The court reporter needs to try
14 to distinguish what needs to go in the record and what
15 doesn't.

16 Q. (BY MS. MCHUGH) I just wanted to clarify a
17 question that I wasn't sure I understood your answer to,
18 so we'll look at Exhibit 37.

19 If you were to look at Exhibit 37, would we be
20 able to understand the total volume of water rights that
21 are senior to April 1st, 1883, upstream from Station 54?

22 A. Possibly, yeah.

23 Q. And could you explain, by using Exhibit 37,
24 how we would come to that number?

25 A. The way I would do it is if I could actually

1 see the current owner's name and then know where they
2 live, and I would go down through that list. I don't
3 necessarily trust that below/above thing.

4 Q. So Exhibit 37 really doesn't tell us the total
5 volume that's senior to April 1st, 1883, without having
6 some information on who the owner of the individual
7 water rights are?

8 A. Yeah.

9 Q. Okay. In your answer, I think, to
10 Mr. Fletcher, you mentioned that you verify measurements
11 of groundwater users.

12 Do you recall that testimony?

13 A. Yes.

14 Q. Do you also verify measurements for surface
15 water users?

16 A. Yes.

17 Q. And do you do that on a monthly or yearly
18 basis, or how do you do that?

19 A. Deputy watermasters verify, usually, every two
20 to three days.

21 Q. That the surface water users measurement
22 device is accurate?

23 A. Oh, no. Usually if there's a problem with
24 inaccuracy, they will let me know. At the end of the
25 year, we'll try to get a letter out to the water users

1 and say they need to have that fixed or repaired.

2 Q. Okay. And do you verify the measurement of
3 groundwater users' measurement devices for their
4 accuracy as well?

5 A. Yes.

6 (BV Exhibit 1 marked.)

7 Q. (BY MS. MCHUGH) I'm going to hand you what
8 has been marked as, I call it, BV 1, Bellevue Exhibit 1.

9 Can you identify that document?

10 A. Yes.

11 Q. Would you tell me what it is?

12 A. It's a document I wrote for notes to myself
13 that would be adequate supply indicators.

14 Q. And did you go over some of this information
15 with Mr. Barker in your testimony?

16 A. Yes.

17 Q. And if you could just, like, look at it. Is
18 this the document that was from your blue notebook that
19 you brought with you today to the hearing?

20 A. The first page?

21 Q. The whole document.

22 MR. THOMPSON: What memo are you on?

23 MS. MCHUGH: This is the June 2nd, 2021, memo.

24 (Discussion held off the record.)

25 Q. (BY MS. MCHUGH) Mr. Lakey, did you have a

1 chance to look at that, and did you confirm that this is
2 a document that was from the blue book that you brought
3 today?

4 A. I'm not sure of the order it was in my blue
5 book. I'm not sure what -- I would consider this a
6 document out of my blue book, but there is information
7 in here that was in my blue book, yes.

8 Q. Okay. I gave you back your blue book; right?

9 A. Yes.

10 Q. Well, I just wanted to have you page back,
11 approximately, I think eight pages back, the top of
12 which says, "Average Acre-Feet per acre water use in
13 Adequate years."

14 Do you see that table?

15 A. Yes.

16 Q. Okay. Did you prepare that table?

17 A. Yes.

18 Q. And this -- you testified about years 2000,
19 2009, and 2010 as water years that, in your experience,
20 constituted what you call adequate water years?

21 A. Yes.

22 Q. And you calculated the amount of acre-feet per
23 acre that you would consider to be adequate for these
24 particular owners; is that what this table is showing?

25 A. This table is showing how much water was

1 delivered to those headgates in adequate years.

2 Q. So Column 3 is the amount of water that these
3 individual owners used in years that you considered
4 adequate --

5 A. Yes.

6 Q. -- that was delivered to them?

7 MS. MCHUGH: I would move for the admission of
8 Bellevue Exhibit 1.

9 HEARING OFFICER: Any objection to the
10 admission of this document?

11 The document marked as BV 1 is received into
12 evidence.

13 (BV Exhibit 1 received.)

14 Q. (BY MS. MCHUGH) If you would continue to look
15 at that same page, 8, of Bellevue Exhibit 1.

16 A. Which one is 8? Is this one page 8?

17 Q. Page 8, yeah. The table, again, that says,
18 "Average Acre-Foot."

19 Is the acre-foot per acre the amount of water
20 that was delivered to the farm headgate?

21 A. Acre-foot per acre? The amount of water
22 delivered to the headgate is the acre-foot column.
23 That's the total acre-feet volume delivered to the
24 headgate, yes.

25 Q. Is that the farm headgate, or is that a

1 different headgate?

2 A. That would be the farm headgate.

3 MS. MCHUGH: I have nothing further.

4 HEARING OFFICER: Okay. Thank you,
5 Ms. McHugh.

6 Let's see, in Group 3, you have questions as
7 well, Mr. Bromley?

8 MR. BROMLEY: I do, Director.

9 HEARING OFFICER: We'd normally combine, so I
10 didn't...

11 MR. BROMLEY: And, Director, it's a good
12 question. Because of the truncated nature of this
13 entire proceeding, Mr. Lakey had not been deposed. And
14 so, you know, Mr. Lakey has documents that came with him
15 today that nobody has seen. We're taking them up as we
16 come, and we're doing what we can to try and be as
17 thorough as possible given the truncated nature of the
18 schedule that we have.

19 HEARING OFFICER: No limitation, Mr. Bromley.
20 I just was observing the reason why I was passing over
21 you is all. So go ahead.

22 MR. BROMLEY: And thank you, Director. And I
23 appreciate that.

24 ///

25 ///

1 CROSS-EXAMINATION

2 QUESTIONS BY MR. BROMLEY:

3 Q. Mr. Lakey, hi, Chris Bromley. I'm here on
4 behalf of Sun Valley Company today.5 You've been having back-and-forth
6 communication with the calling senior parties, is what
7 I've understood in listening to your testimony today; is
8 that right?

9 A. Yes.

10 Q. And you've had some communications with the
11 Department of Water Resources, too; is that right?

12 A. Yes.

13 Q. The question I have, Mr. Lakey, is sitting
14 here today as the watermaster for Water District 37, are
15 you asking the director for curtailment of certain
16 groundwater rights?

17 A. No.

18 Q. Exhibit 37, do you have that in front of you?

19 It's one of these spreadsheet documents.

20 A. Yes.

21 Q. And this is South Valley/Galena Exhibit 37?

22 A. Yes.

23 Q. On the last page of this document, I was
24 wondering if you could tell me, the last water right
25 that's on this list is Matt McFall 37-0461 with a

1 priority of 7-17-1884.

2 Do you see that?

3 A. Yeah.

4 Q. Is there a reason that this sheet ends at
5 7-17-1884?

6 A. That's what fit in my printer at the time on a
7 page setup command.

8 Q. Okay. I was just wondering if there was any
9 significance to not having other water rights or not?

10 A. No. These were just notes to myself,
11 remembrances.

12 Q. In some prior days, Mr. Lakey, we've talked
13 about the Cottonwood decree rights.

14 A. Yes.

15 Q. Are you familiar with them?

16 A. Yes.

17 Q. And they all have 1899 priority dates?

18 A. Yes.

19 Q. Okay. In some prior testimony -- and I'm
20 looking to see if you can clear up any confusion -- do
21 you deliver those Cottonwood decree rights as 1899, or
22 do you deliver them as senior or something different
23 than the priority date that's on the decree?

24 A. In the past, I would characterize it as the
25 words you used, "something different."

1 Q. If you could explain "something different."
2 Thank you.

3 A. When I started as a watermaster, the deputy
4 watermaster on the Big Wood River right above Magic was
5 tasked with telling the watermaster when the dam at the
6 Glendale Road or the Glendale bridge went in. And he
7 said, "You need to know that so you can administer the
8 Cottonwood rights." That was the direction I got.

9 So that was what I carried forward until the
10 last year or so when Tim Luke said, "Let's administer
11 that as if it were a Big Wood below Magic priority
12 date." And so that's what we're doing this year.

13 Q. Okay. Thank you. I'd like to talk with you
14 about losses, just to hopefully get a better
15 understanding, maybe.

16 So do you -- and let's just start at
17 Sportsman's. Do you know what the losses are between
18 Sportsman's and Station 10?

19 A. No.

20 Q. What about Station 10 to Station 54?

21 A. Not specifically, no.

22 Q. And by "not specifically," do you have a range
23 in mind between there or just no number at all?

24 A. 10 to 20 percent, depending on flows.

25 Q. Between Station 54 and Station 14?

1 A. No idea whatsoever.

2 Q. Okay. And then between Station 14 and Station
3 16?

4 A. No.

5 Q. All right. You're tasked with delivering
6 water in priority; correct?

7 A. Correct.

8 Q. Do you think it's helpful to understand what
9 the losses are in river reaches to ensure that you're
10 delivering water in priority?

11 A. No. Like I said in earlier testimony, it's
12 built into the system, whether it's on the Big Wood or
13 the Little Wood. We have an idea of how much water is
14 going to come from upstream in a curtailment, but it's
15 always different from flow to flow, so it's difficult to
16 say, okay, now on July 1st I know there will be a
17 15 percent loss on any curtailed water above Station 54.
18 I don't know that. It's just too random and variable.

19 So we make a shot at it, bring the water down.
20 If that's not perfect, we may be long, we may be short,
21 but to try to estimate the seepage losses to a number
22 perfectly would be very difficult.

23 Q. But you could -- if you had a station above
24 and a station below, you could measure water in, water
25 out?

1 A. Possibly.

2 Q. And that would probably help you, I would
3 think, in delivering water in priority so that you're
4 making sure that water isn't being wasted out the bottom
5 end of the system?

6 A. Water is wasted out the bottom of the system
7 quite a bit.

8 Q. So is there anywhere in the Little Wood system
9 below Station 10 where the river dries up?

10 A. Say that again. Below where?

11 Q. So below Station 10, we're bringing -- I'm
12 just thinking about this on the map in my head. So
13 we're coming out of Sportsman's, we're going through
14 Station 10 past Richfield and on down.

15 Is there anywhere below Station 10 where the
16 river dries up?

17 A. I believe it has at times at 54 when Magic was
18 taking more than what they were putting in at times.
19 They were trying to make adjustments within their system
20 at Richfield or Dietrich, and they will miss it, maybe
21 because of demand within their system. And then they
22 will run what we call the mouth of the Jim Byrns Slough
23 short and still be delivering their water to Dietrich.
24 So then they'll try to get that corrected. But I
25 believe there are times when because of that, Station 54

1 has gone, basically, dry.

2 Q. So then below Station 54, is there anywhere,
3 when you're delivering water in priority -- and I'm
4 thinking about senior priority dates --

5 A. Correct.

6 Q. -- so 1883 and senior -- where the river is
7 drying up below Station 54?

8 A. Is that a question?

9 Q. It is.

10 A. Please rephrase it. Thanks.

11 Q. Sure. So below Station 54, when you're
12 delivering senior priority dates, 1883 and senior, does
13 the river dry up anywhere, or is it continuing to flow
14 past Station 54?

15 A. If it's dry at 54, there would be no more flow
16 movement below 54.

17 Q. So I'm asking, below 54 when you're delivering
18 1883 water, does the river dry up anywhere below that,
19 or is it continuing to flow out the system?

20 A. I'm sorry, if it's dry at 54, there would be
21 no more flow past 54.

22 Q. I'm asking below 54. So once you're past
23 Station 54 and you're delivering 1883 water below
24 Station 54. So there's live flow coming past Station
25 54 --

1 A. Not if it's dry.

2 Q. That's not what I was saying. Let me try and
3 rephrase this.

4 There's water coming in through Station 54.

5 A. Is it dry, or is there water there?

6 Q. That's what I just said, there's water there.

7 A. Okay.

8 Q. Yeah. So water is flowing past Station 54.

9 A. Okay.

10 Q. Okay. We've gotten past the station. You're
11 delivering 1883 water below Station 54.

12 A. Correct.

13 Q. Once you've done that to your first headgate
14 after Station 54 with 1883 water, is there anywhere
15 below that where the river is then drying up, or does
16 the river continue to flow?

17 A. It continues to flow.

18 Q. So when you're delivering 1883 water past
19 Station 54, there's nowhere where the river is drying
20 up, it's continuing to flow in, and does it run out the
21 end of the system?

22 A. Yes.

23 Q. On administration, there was a statement
24 earlier, I believe it was from Mr. Luke --

25 A. Could I stop you for a second?

1 Q. Sure.

2 A. Let's go back to that last question.

3 Q. Yeah, absolutely.

4 A. If there were a priority adjustment made at
5 54, that is a zero-sum adjustment. I try to get that
6 within fractions of a cfs to get it right. The water
7 that would be leaving the bottom of the system is
8 American Falls 2/Big Wood water. So that spillage is
9 theirs. Mine is -- I try to figure that to a zero sum,
10 because my water is riding on top of their water.

11 Q. Okay. That helps. That helps me.

12 A. Okay.

13 Q. So what you're saying, then, is at 54, you're
14 zeroing out --

15 A. Yes.

16 Q. -- Little Wood rights?

17 A. Correct.

18 Q. The additional water, then, that's going out
19 the system, that's coming from -- either from Magic or
20 AFRD2 or some --

21 A. Correct.

22 Q. -- some combination?

23 A. Correct.

24 Q. Thank you. In prior testimony, we've heard
25 reference, potentially, of moving to computerized

1 accounting in Basin 37.

2 Do you understand what I mean by "computerized
3 accounting"?

4 A. I think so.

5 Q. So what we see in Water District 1 would be an
6 example, in my mind, of computerized accounting?

7 A. I'm not aware of any Water District 1
8 accounting, so I can't answer that.

9 Q. So then what do you think "computerized
10 accounting" is?

11 A. A computer will take -- maybe a computer --
12 there would be software that would be -- information
13 would be entered into the software that would make
14 calculations based on flows at whatever stations there
15 might be, and add up water or subtract water and make an
16 adjustment.

17 Q. Okay. Have you had any discussions with the
18 Department or water users about moving to a computerized
19 accounting system?

20 A. Yes.

21 Q. Who have you talked with?

22 A. Tim Luke.

23 Q. Okay. Mr. Lakey, I'd like to talk with you
24 about one of these new documents that we got, and
25 it's -- I've marked it as Sun Valley 1.

1 (SV Exhibit 1 marked.)

2 MR. BROMLEY: Director?

3 HEARING OFFICER: Oh, sorry. Thank you.

4 MR. BROMLEY: If we can just go off the record
5 quickly.

6 HEARING OFFICER: Let's go off the record.

7 (Break taken.)

8 HEARING OFFICER: Back on. We're recording
9 again?

10 MS. JENKINS: Yep.

11 HEARING OFFICER: Mr. Bromley?

12 MR. BROMLEY: Thank you.

13 Q. (BY MR. BROMLEY) And, Kevin, if you could
14 also have IDWR Exhibit 2 in front of you. I'm not sure
15 where those --

16 A. Okay.

17 Q. -- those are. That's the Jennifer Sukow memo.

18 A. Okay.

19 Q. And if you could turn to page 21 of IDWR 2,
20 and it's a table, Table 1; is that correct?

21 A. I think so, yes.

22 Q. Okay. Good. Hopefully, we're both on the
23 same page there.

24 Okay. Looking at Sun Valley Exhibit 1, my
25 understanding is this was a document that was -- that

1 you brought with you today; is that correct?

2 A. That is correct.

3 Q. So at the top here of Sun Valley 1, I see a
4 column that says [as read] "Curtailment scenario with no
5 curtailment." And I also see a column that says,
6 "Completed 6/5 with J. Sukow Stream Estimates."

7 A. That's correct.

8 Q. What are those columns, if you could just
9 please describe what you're talking about there?

10 A. The current scenario with no curtailment were
11 my estimated curtailment dates. And the second column
12 with the "J. Sukow" column heading is adding her water
13 in.

14 Q. So what I'm interested in, then, is by adding,
15 as you say, her water in, is her water what's in Table 1
16 of IDWR Exhibit 2, or is it something else?

17 A. Without seeing the documents that I used to
18 develop this, I'm not sure exactly the amounts to be
19 able to compare the two. I'm not sure.

20 Q. Actually, I should have had you on page 25,
21 Mr. Lakey, which is Table 2. And that was my mistake in
22 writing it down wrong.

23 HEARING OFFICER: And this is page 25 of IDWR
24 Exhibit 2.

25 MR. BROMLEY: That's correct, Director.

1 Q. (BY MR. BROMLEY) So IDWR Table 2, page 25 of
2 IDWR Exhibit 2, these are responses to curtailment that
3 were computed by Ms. Sukow using the model, as I
4 understand it, from her testimony.

5 In Sun Valley Exhibit 1, with the column,
6 "Completed 6/5 with J. Sukow Stream Estimates," what
7 water were you using, if it's something other than
8 Table 2, page 25?

9 A. Without seeing the backup document to this,
10 I'm not sure if I got the numbers exactly the same as
11 her numbers or what the correct percentage of loss is.
12 I was estimating percentage of loss. I think I had
13 said, in testimony from Mr. Barker, that I think I may
14 have used 25 percent seepage loss. So I can't really
15 compare the numbers from Sun Valley 1 to the Sukow
16 document.

17 Q. So then I guess I'm trying to understand what
18 you were using to compute this Column, "6/5 with
19 J. Sukow Stream Estimates"?

20 A. I can't say without my other document. I just
21 made this -- basically, the blue book as notes to myself
22 and to make sure I could at least have some kind of a
23 guess at something if I were asked. Because I would, by
24 no means, suggest that this is something that the
25 Department of Water Resources is going to take into

1 advisement or whatever. These are just numbers that I
2 was trying to make estimates of what might happen.

3 Q. As the watermaster, if water is curtailed in
4 the Bellevue Triangle, and it's water that -- let's say
5 it shows up at Sportsman's, will you be able to shepherd
6 that water down to the calling seniors?

7 A. It depends on what seniors are still on.

8 Q. So the seniors that are being represented here
9 today by Mr. Rigby, we know who they are?

10 A. Yes.

11 Q. So if that water -- let's just say it shows up
12 at Sportsman's, are you going to move that water down to
13 the calling seniors, or will you let other people divert
14 who are upstream who may also be senior to those calling
15 parties?

16 A. They would have the right to do that if
17 they're senior, yes.

18 Q. So the water, then, that flows past
19 Sportsman's that manifests from curtailment, you're not
20 going to shepherd that specific amount of water down to
21 the calling seniors, you're going to have other seniors
22 taking in priority on the way down; is that correct?

23 A. It depends on whether they're on or not. So
24 can we use an example?

25 Q. Absolutely.

1 A. If the 4-1 of '83 were the only right on,
2 there would be only the perpetuals in 1877 above
3 Sportsman's or anywhere around Sportsman's that would be
4 in priority to take that water. There would be no
5 other. So the September of '83 would be off; they would
6 not be allowed to divert. June '83 would be off; they
7 would not be allowed to divert.

8 Q. So other water users besides the water users
9 represented by Mr. Rigby, if they're senior, you would
10 turn them back on?

11 A. Yeah. That's -- I believe there was testimony
12 of that earlier, that the September of '83 and the June
13 of '83 would have some benefit from curtailment, yes.

14 Q. Even though they're not calling parties here
15 today?

16 A. That's correct.

17 Q. The last question I have, Mr. Lakey, is: Do
18 you consider how much water is being actually diverted
19 by the senior, or do you just administer to the quantity
20 that's on the decree?

21 A. I'm not sure I understand your question or the
22 difference.

23 Q. Yeah. So what I think this is getting at is
24 if the senior has a need for diversion of something less
25 than the decreed amount, do you just assume that you're

1 delivering to the decree amount, or do you say, okay,
2 I'm told that the water user needs something less than
3 the decree, and I'm going to pass the rest downstream to
4 somebody else?

5 A. In the past, we have just taken into account
6 what we're reading at one of those exhibits and saying,
7 it looks like there's 24, let's keep 24 there. Because
8 we don't necessarily know -- like I said, our deputies
9 check headgates every other day or every two or three
10 days. So we don't know exactly when that water needs to
11 be there. So in order to not short the canal company,
12 we keep that water there at all times.

13 Q. Okay. One last question, just building off of
14 that, we've heard some testimony yesterday that
15 sometimes water users have agreements that, I don't need
16 all of this, you take the rest of it.

17 Are you brought into that conversation when
18 water is being moved around between users?

19 A. When it's an emergency drought transfer or if
20 it's the canal company water, I will be brought into it,
21 yeah.

22 Q. So there may be some communication that you're
23 not aware of?

24 A. Usually not. If they're going to do it,
25 they'll let me know so that I know a particular diverter

1 is taking a neighbor's water.

2 MR. BROMLEY: Okay. Thank you. Nothing
3 further.

4 HEARING OFFICER: Thank you, Mr. Bromley.

5 MR. LAWRENCE: Mr. Director?

6 HEARING OFFICER: Yes, Mr. Lawrence.

7 MR. LAWRENCE: Just a couple of questions.
8 Thank you, Mr. Director.

9

10 CROSS-EXAMINATION

11 QUESTIONS BY MR. LAWRENCE:

12 Q. Hello, Mr. Lakey. My name is Mike Lawrence.
13 I represent the City of Hailey. Just a couple of
14 questions.

15 Do you know of any changes in how the water
16 district administers water rights comparing
17 pregroundwater pumping era to today?

18 A. Do I know of any management practice
19 differences?

20 Q. Sure.

21 A. No.

22 Q. And, however, you've testified that you
23 received instructions on how to administer the exchange
24 conditions; correct?

25 A. That is true, yes.

1 Q. And you intend to administer the exchange
2 conditions in accordance with the instructions; correct?

3 A. Yes.

4 Q. So is that an example of how future
5 administration of water rights in the Basin may differ
6 than it has historically occurred?

7 A. With the exchange conditions, yes.

8 MR. LAWRENCE: That's all I have. Thank you.

9 HEARING OFFICER: Thank you, Mr. Lawrence.

10 Mr. O'Bannon, any questions?

11 MR. O'BANNON: No, thank you.

12 HEARING OFFICER: How much redirect do we
13 have?

14 Do we want to break for lunch, or do you want
15 to try to finish?

16 MR. RIGBY: Could we break for lunch? There
17 may be just a couple of questions, but I'm unclear what
18 they might be at this point.

19 HEARING OFFICER: You want to break? That's
20 your suggestion?

21 MR. RIGBY: That's our suggestion. It will
22 not be long, very short.

23 HEARING OFFICER: All right. Let's break for
24 lunch and come back at, approximately, 1:30. Mr. Lakey,
25 I'm sorry.

1 THE WITNESS: No problem.

2 MS. CARTER: Director, just one point of
3 cleanup. Did you want your exhibit admitted?

4 MR. BROMLEY: Yeah, Chris Bromley. Back on
5 the record. The document that was marked SV 1, we'd
6 move to admit that into evidence.

7 HEARING OFFICER: Any objection to admission
8 of this document?

9 Very well, the document marked as Sun Valley
10 or SV 1 is received into evidence.

11 (SV Exhibit 1 received.)

12 HEARING OFFICER: Thank you, Meghan.

13 MR. BROMLEY: Thank you.

14 HEARING OFFICER: All right. Let's break for
15 lunch.

16 (Lunch break taken.)

17 HEARING OFFICER: All right, Andrea, we're
18 back on the record.

19 And we're recording again, Megan?

20 MS. JENKINS: Yep.

21 HEARING OFFICER: We're back after the lunch
22 recess.

23 Redirect Mr. Fletcher?

24 MR. FLETCHER: Mr. Rigby is going to handle
25 that, Your Honor.

1 HEARING OFFICER: Mr. Rigby?

2 MR. RIGBY: Thank you, Mr. Director. Just one
3 area of questioning.

4

5 REDIRECT EXAMINATION

6 QUESTIONS BY MR. RIGBY:

7 Q. Mr. Lakey, would you pull up IDWR Exhibit
8 No. 3, which I believe is Mr. Blankenau's staff memo?

9 A. Yeah. Yes.

10 Q. And turn to page 10.

11 A. Okay.

12 Q. The last paragraph, which was previously
13 discussed between Mr. Barker and, I guess, myself and
14 the Director. But let's read that last sentence again,
15 if you wouldn't mind.

16 A. "This analysis did not clearly identify water
17 shortage in the Little Wood and Silver Creek area during
18 the 2013 drought. It is possible that some fields in
19 this area were water short, but additional information
20 would be required to make conclusions about the water
21 supply of individual fields."

22 Q. So as to any additional information, that's
23 the area I want to address here, I'll represent to you
24 -- and maybe you've heard the discussion of Mr. Luke
25 that recognized there may have been additional sources

1 of water that would then not show any stress on the
2 crops from just the decreed water. And there's also
3 been some testimony, I'll represent, that in dry years
4 parties would share water, so to speak, with each other,
5 just to make sure neighbors get by.

6 Do you have any personal information,
7 especially as to the particular year 2013, that this is
8 addressing, that that, in fact, did occur?

9 A. Yes, water was rented in 2013.

10 Q. And were there -- was there sharing going on
11 as -- did you hear that testimony? Let me just ask you
12 that first.

13 You weren't here during that or online?

14 A. Yeah, I don't recall.

15 Q. Let's ask it this way: Were you aware of any
16 sharing that, then, was going on to make crops meet
17 their needs?

18 A. In 2013, there was a Little Wood River
19 Association that rented water out of Idaho Falls, I
20 believe, and brought it through Water District 1 and on
21 into the waters of Water District 37. And they rented a
22 block of water, and so each member of that association
23 spoke up for so many acre-feet, and each one of them
24 then paid their share of that block of water that they
25 got.

1 Q. And so, therefore, even though you're not an
2 expert in ET, would that help to explain this statement
3 made by Mr. Blankenau?

4 A. Oh, yes. Yeah. There would be additional
5 water that was available in 2013, yes.

6 Q. And so crops may not necessarily show the
7 stress that, apparently, ET is attempting to show?

8 A. Yeah. I would say that, yes.

9 MR. RIGBY: Okay. No further questions.

10 HEARING OFFICER: Okay. Mr. Barker?

11 MR. BARKER: Thank you, Mr. Director.
12

13 RECROSS-EXAMINATION

14 QUESTIONS BY MR. BARKER:

15 Q. Mr. Lakey, this water that was rented by the
16 association, do you know how much it was?

17 A. Not exactly, no.

18 Q. Not exactly or not even a ballpark?

19 A. I think it was 1,500 to 2,000 acre-feet,
20 somewhere in that neighborhood.

21 Q. And you have Mr. Blankenau's memo in front of
22 you?

23 A. Yes.

24 Q. Would you turn to page 4.

25 So if -- this water came from the Upper Snake,

1 is that what you said?

2 A. Yes.

3 Q. Was it delivered to lands above the canal?

4 A. No.

5 MR. BARKER: No further questions.

6 HEARING OFFICER: Okay. Any other questions?

7 Ms. O'Leary?

8 MS. O'LEARY: No, Director.

9 HEARING OFFICER: Group 3 any questions?

10 MR. BROMLEY: No.

11 HEARING OFFICER: Mr. O'Bannon has left us, I
12 think. I don't see him.

13 Okay. Thank you, Mr. Lakey.

14 THE WITNESS: Okay.

15 HEARING OFFICER: You got off easy this
16 afternoon.

17 The next witness, Group 1, Mr. Rigby or
18 Mr. Fletcher?

19 MR. RIGBY: We'd call Eric Miller.

20 HEARING OFFICER: Mr. Miller, if you'll come
21 forward, please. I'm going to make some space for
22 Mr. Miller to deposit his notebook.

23 (Discussion held off the record.)

24

25 ERIC MILLER,

1 first duly sworn to tell the truth relating to said
2 cause, testified as follows:

3 HEARING OFFICER: Thank you. Please be
4 seated.

5 Mr. Rigby?

6 MR. RIGBY: Thank you, Mr. Director.

7
8 DIRECT EXAMINATION

9 QUESTIONS BY MR. RIGBY:

10 Q. Good afternoon.

11 A. Good afternoon.

12 Q. Please state your full name and current
13 address.

14 A. My name is Eric Miller, and my current address
15 is 2202 West 8200 South Rexburg, Idaho 83440.

16 Q. And are you currently employed?

17 A. I am self-employed.

18 Q. And what's your job title?

19 A. My current job title is principal earth
20 scientist.

21 Q. And do you -- is that an entity that you
22 formed or is it a d/b/a?

23 A. It is an entity that I have formed, a d/b/a.

24 Q. And what are your current job duties?

25 A. I generally do general environmental science

1 and also groundwater modeling, in addition to that.

2 Q. And how long have you been self-employed or
3 working through that entity?

4 A. Most recently, I've been doing this
5 approximately a year and a half. But prior to that, I
6 had approximately six years of experience also doing my
7 own company through a d/b/a.

8 Q. And what was that?

9 A. That was called Equus International.

10 Q. And what was your job duties -- what were your
11 job duties under that entity?

12 A. Essentially, the same as now, general
13 environmental science.

14 Q. And more specifically, what were the types of
15 jobs you would work on through environmental science?

16 A. All sort of analysis permitting, I've done a
17 lot of permitting work, computer --

18 Q. What type of -- excuse me -- but what type of
19 permitting?

20 A. Permitting could be -- examples of that,
21 wastewater reuse permits, Army Corps joint application
22 permits, those kinds of permits are things that I would
23 typically do.

24 Q. And you said that entity was named what again?

25 A. The earlier one?

1 Q. Yes.

2 A. Equus International.

3 Q. And prior to that, were you employed by
4 anyone?

5 A. I was. I worked for 19 years at the Idaho
6 National Laboratory.

7 Q. Under which of their names or what entity?

8 A. Under a wide variety of names, which I do not
9 have. If I could refer to my resume, I could tell you,
10 but there was a variety of names.

11 Q. Well, in fact, let me just ask you: Have you
12 prepared a resume --

13 A. Yeah.

14 Q. -- of your --

15 A. I have.

16 Q. -- past employment?

17 A. I have, yes.

18 Q. We'll get to that, but it's --

19 A. Okay.

20 Q. -- right now it's marked as Exhibit No. 5. In
21 fact, it's Miller Exhibit No. 5; is that correct?

22 A. I don't know what the -- do I have that in
23 front of me?

24 Q. You do.

25 A. Let me verify.

1 Q. Refer to that at the beginning of the book. I
2 think you're the first tab or the second tab, "Miller."

3 A. Okay, I see that.

4 Q. If you'll go to Miller 5.

5 A. Yes, I am there.

6 Q. Okay. Is that the resume --

7 A. That is.

8 Q. -- of which you speak?

9 A. Yes.

10 Q. Okay. So let's continue on, though, orally
11 describing what most likely is covered in the resume
12 anyway.

13 A. Okay.

14 Q. So were you employed by GeoEngineers?

15 A. I was employed for eight years, previous to my
16 current situation, with GeoEngineers, yes.

17 Q. And, again, what were your job
18 responsibilities with GeoEngineers?

19 A. My primary -- my job title with them was
20 senior hydrogeologist. My job description was specific,
21 in this case, to groundwater modeling and related
22 surface water modeling.

23 Q. And what type of models would you, generally,
24 be dealing with?

25 A. Typically, I was generating MODFLOW

1 simulations.

2 Q. And, specifically, how would -- what type of
3 MODFLOW simulations would you deal with?

4 A. You're referring to what applications I might
5 model?

6 Q. Correct.

7 A. Okay. Typically, it was either groundwater or
8 contaminant transport, for purposes of things like water
9 delivery, capture zone analysis, dewatering analysis.
10 In the cases of contaminant transport, it was designed
11 to determine contaminant concentration and source of
12 contaminants at various locations.

13 Q. And was this done for specific clients?
14 Specific groups? What was it done for?

15 A. A variety. Some of our clients may have been
16 -- the City of Redmond was a large model we put together
17 for the City of Redmond to do capture zone analysis for
18 their municipal wells.

19 Another example would be Vulcan, which was the
20 real estate arm of Paul Allen's group in Seattle, to do
21 contaminant transport modeling for some of his
22 properties in downtown Seattle. So for that we had to
23 put together a simulation of groundwater transport and
24 contaminant transport in the downtown Seattle area.
25 Most of Seattle was included in that.

1 Q. In using MODFLOW, as you did for these
2 particular purposes, would that be similar to using
3 MODFLOW which the Department has used it in the past, to
4 your knowledge?

5 A. Very similar processes would be involved, yes,
6 in my opinion.

7 Q. Looking for maybe different outcomes?

8 A. I would not say that they're significantly
9 different. Any model is, really, designed to model
10 groundwater transport, and it can be tailored to
11 specific outcomes, but in general, they can be used to
12 model groundwater transport and, perhaps, contaminant
13 transport, if that becomes an interest.

14 Q. How many, would you estimate, various projects
15 that you worked on for this modeling?

16 A. I would say, over the eight years I was with
17 them, I probably put together and calibrated 10 to 15
18 MODFLOW simulations.

19 Q. And have you continued to keep yourself up to
20 speed or apprised as to modeling?

21 A. I have. Although I will admit, after moving
22 away from the Seattle area, I've had less customers in
23 the modeling department, but I do maintain my licenses
24 to the software to allow me to do MODFLOW simulations
25 through GMS through the Aquaveo platform, yes.

1 Q. So let's talk about --

2 COURT REPORTER: Wait, wait. Say that again,
3 through the what platform?

4 THE WITNESS: Aquaveo GMS.

5 Q. (BY MR. RIGBY) So let's talk about your
6 education and experience and licensing.

7 First of all, what is your education?

8 A. I have an undergraduate degree in chemistry, a
9 master's degree in environmental science and waste
10 management, and part of my education was a Ph.D. program
11 in vadose zone science that I did not finish the
12 dissertation on for a variety of reasons. But the
13 coursework was completed in vadose zone science for
14 Ph.D.

15 Q. Any additional education or --

16 A. You know, yearly or semi-yearly training in
17 MODFLOW could be included in that.

18 Q. Do you have any professional registrations or
19 certificates?

20 A. I do not.

21 Q. So what experience qualifies you as an expert
22 in groundwater modeling or hydrology -- hydrogeology?
23 Sorry.

24 A. Yes. Well, I would say that during my time at
25 INEL, I was tasked with supervising and reviewing

1 groundwater modeling under -- I was the cost account
2 manager for the program that developed the initial
3 groundwater model for the Snake Plain.

4 And as part of that responsibility at INEL, I
5 had to review and made comments and recommend changes to
6 that modeling effort. Of course, my eight years of
7 experience at GeoEngineers. In addition to that, I
8 currently work on doing simulations that support
9 wastewater reuse permit applications, which requires an
10 analysis of groundwater flow and contaminant transport
11 for those applications.

12 Let's see, other examples? I have some
13 written down. I'm currently involved in a project at
14 the INEL to do modeling of both chemical and
15 radionuclide transport for risk assessment analysis of
16 NRF at the Idaho National Laboratory. So those are some
17 examples of a variety of things I model and look at.

18 Q. So those that you've spoken to thus far are
19 generally groundwater; correct?

20 A. They are. That is correct.

21 Q. So what experience do you have in surface
22 water modeling?

23 A. Well, in any fraction of groundwater models
24 that you will put together, there will be the need to
25 couple those with the surface water, as was done in the

1 case of the Wood River Valley model, where you,
2 essentially, are asking questions about how surface
3 water and groundwater are interrelated.

4 So whenever you put those kinds of models
5 together, you necessarily have to deal with the surface
6 streams and surface discharges and relationships in that
7 way. So that would be an example of the experience that
8 I would have in, I would say, surface water hydrology,
9 as opposed to modeling.

10 The distinction is surface water modeling is,
11 typically, the purview of a licensed engineer that would
12 do hydraulic analysis, as opposed to surface water
13 hydrology, which is more something I have had experience
14 with.

15 Q. So do you consider yourself an expert in the
16 ability to model both surface and ground, then?

17 A. I consider myself an expert in groundwater
18 modeling and an expert in surface water hydrology, not
19 surface water modeling.

20 Q. However, as you testified, in groundwater
21 modeling it does incorporate some of the surface water;
22 is that right?

23 A. In a large fraction of models you have, you're
24 looking at situations where you want to understand the
25 relationship between surface water and groundwater, yes.

1 Q. What's your experience with evaluating water
2 rights?

3 A. Well, it was limited prior to my beginning of
4 this particular project, but that began in about, I
5 think, February of 2019. And since that time, I am
6 embarrassed to say that I've bothered the Director and
7 his staff probably three or four times a week on
8 questions of water rights, and so I've become somewhat
9 conversant in water rights through that time. So I
10 would say two years, more than two years.

11 Q. How about, then, as a result of that, your
12 experience and expertise in irrigation efficiency?

13 A. Yeah, so I deal with systems in a variety of
14 projects. Currently, I'm working with Madison County on
15 a FEMA-floodplain-related project where we have to
16 evaluate both natural streams and associate the
17 irrigation systems as they pertain to flood issues and
18 to analyze them for ways in which we can mitigate for
19 floods, through both the natural channels and the
20 irrigation and ditch systems.

21 And I'm involved in other projects in Madison
22 County dealing with their natural streamflow and
23 irrigation systems. I have dealt with various canal
24 companies in terms of joint application permits for
25 their canals. And those include Sunnydale Irrigation

1 District and Lenroot Canal Company, which I think we
2 have a current pending Army Corps permit with them.

3 Q. What about crop irrigation water requirements?

4 A. So as part of my responsibilities as a general
5 environmental scientist, I do a lot of applications for
6 wastewater reuse to Department of Environmental Quality;
7 and as part of that, we are required to deal with crops
8 in both irrigation efficiencies of crop irrigation
9 requirements. And I've had that experience for more
10 than ten years, having to both develop permit
11 application packages and also yearly reporting to
12 Department of Environmental Quality, which requires me
13 to be expert in those issues.

14 Q. Did that involve any irrigation return flows?

15 A. Yes. That's part of what one typically has to
16 do and look at when you're making application and/or the
17 yearly reporting.

18 Q. So, again, for purposes of qualifying you as
19 an expert, the question then is: What have you been
20 tasked to review for the purposes of testifying at this
21 administrative hearing?

22 A. Well, I've been tasked with reviewing all of
23 the staff memos that were produced by the Department,
24 which I believe touch upon most, if not all, of the
25 expertise that I've just articulated.

1 Q. And that would be the four that have been
2 testified to here. And were you sitting here during
3 those -- excuse me -- those witnesses' testimony?

4 A. Yes, I was.

5 Q. Very good. And have you -- are you prepared,
6 then, to testify as to the task of reviewing those?

7 What was the -- let me ask you this: What was
8 the purpose of you reviewing them?

9 By that, I'm asking, are you -- were you to
10 contest them, to refute them, to support them? What was
11 the purpose?

12 A. The purpose, in my mind, was to review them,
13 essentially, to prepare to discuss any similarities or
14 differences I might have and render an opinion thereto.

15 MR. RIGBY: Very good. So, Mr. Director, I
16 would tender this witness as an expert for the purpose
17 of this hearing as to the issues and intended testimony
18 that this witness intends to provide.

19 HEARING OFFICER: Any objection to the
20 recognition of this witness as an expert, for the
21 purposes described by Mr. Rigby?

22 MR. THOMPSON: I guess, Mr. Director, I'll
23 stipulate to Rule 600 as evidence coming in under that
24 rule.

25 MS. MCHUGH: I will -- should I object?

1 I object to Mr. Miller being an expert in
2 water rights. He said he was somewhat conversant. He
3 doesn't even consider himself an expert. So I would
4 object to any offer to give any expert opinion on water
5 rights.

6 I also heard him talk about crop irrigation
7 requirements and irrigation efficiencies; he alluded to
8 helping with permits and as a general environmental
9 scientist with DEQ. I don't think that renders him an
10 expert in irrigation -- crop irrigation requirements or
11 irrigation efficiencies without more foundation there.
12 So those are my two objections. I don't object to him
13 being offered as an expert in water.

14 HEARING OFFICER: Okay. Mr. Thompson, I don't
15 have Rule 600 in front of me. I could retrieve it. Why
16 don't you just -- how long is it?

17 MR. THOMPSON: Well, it just says you're not
18 bound by the rules of evidence. You can take any
19 evidence in the type commonly relied upon by persons in
20 the conduct of their affairs, so I think it's kind of a
21 catchall. I do have concerns, and I'll raise those in
22 cross-examination, about certain areas, and I think that
23 probably goes to the weight of the witness's testimony.

24 HEARING OFFICER: And based on Mr. Thompson's
25 statement, Ms. McHugh, I will recognize Mr. Miller as an

1 expert witness. And if you want to try to discredit his
2 qualifications in some way, you can do it on
3 cross-examination.

4 MS. MCHUGH: Thank you.

5 Q. (BY MR. RIGBY) Okay. So, Mr. Miller, again,
6 referring to Miller Exhibit No. 5, you've already
7 indicated that this is your resume?

8 A. It is.

9 MR. RIGBY: I would then move that this
10 exhibit, Miller Exhibit No. 5, be admitted.

11 HEARING OFFICER: Any objection to the
12 admission of Miller No. 5?

13 Based on no responses, the document marked as
14 Miller Exhibit No. 5 is received into evidence.

15 (Miller Exhibit 5 received.)

16 Q. (BY MR. RIGBY) So, Mr. Miller, as you
17 testified as to the tasks that you were assigned, in
18 preparing to present for those tasks, did you prepare an
19 opinion as such or a memo as such in dealing with that?

20 A. I prepared a report that discussed various
21 aspects that I felt were important after reviewing those
22 memos, yes.

23 Q. Would you look at Miller Exhibit No. 1 that,
24 again, is before you.

25 A. All right. Yes.

1 Q. And this report, would you consider, then, to
2 be your expert report?

3 A. It is, yes.

4 Q. Again, it may be a little redundant, but what
5 was your source that you, then, reviewed in order to
6 create this report?

7 A. In terms of the staff memos, are you referring
8 to?

9 Q. Let's start there.

10 A. Well, much of this -- I will say part of this
11 was based on an existing understanding of the modeling
12 that the Department has done, and also a further
13 curtailment study as part of Jennifer Sukow's staff memo
14 of 2021.

15 Q. So if you were to categorize -- before we get
16 into the details of the report, if you were to
17 categorize the areas that you focused, what would that
18 be?

19 A. I really focused on this -- in computing there
20 was three areas that I really, I think, focused on here.

21 Q. Yeah, that's what I'm asking. The three
22 areas --

23 A. Yeah.

24 Q. -- let's talk about those.

25 A. So the first one would be, essentially,

1 computing what I felt would be a depletion that would be
2 represented in the system based on the assumption of a
3 zero curtailment for 2021.

4 Q. Okay. The next one?

5 A. Essentially, doing a general computation of
6 the cutoff date for the average farmer in the Little
7 Wood River/Silver Creek drainage if no curtailment were
8 to be done. And under various scenarios if a
9 curtailment occurred.

10 Q. So either if a curtailment occurs or if there
11 is no curtailment?

12 A. Right.

13 Q. All right. And the third one?

14 A. Oh, let me review that. The last one really
15 represented a computation that represented a date upon
16 which I felt that the accrued depletions for 2021 would
17 exactly equal the possible curtailments that could occur
18 to determine that balance point. And I stated a date in
19 here in the document in that regard.

20 Q. We'll get into -- sorry. We'll get into the
21 details later.

22 A. Okay.

23 Q. Let's jump back, then, to No. 1, which is
24 computing the depletions in the system in 2021.

25 A. Right.

1 Q. Let's, again, ask you what your sources were
2 and what you reviewed before you did your computing?

3 A. Very well. So I will start by saying, I do
4 not currently have access to a MODFLOW version of the
5 Department's model. So I'm, necessarily, limited to
6 using output from that model to make any computations at
7 this point. So for this particular computation or
8 analysis, I relied upon the 2007 simulation results from
9 the Jennifer Sukow 2019 curtailment study.

10 Q. And that would be in her IDWR No. 2, I
11 believe, memo, staff memo?

12 A. I don't know what it's designated as, so I
13 can't comment to that without seeing the document.

14 Q. You'd think I'd have it down by now. Yes,
15 it's IDWR No. 2. That would be her staff memo. Is
16 that --

17 A. From 2019?

18 Q. Which included 2019, as I believe. You had
19 the 2021 and then the 2019 was attached to it.

20 A. Well, I need to be clear. My analysis for
21 this part of this was based upon only the 2019
22 curtailment memorandum.

23 Q. Very good. And what did you, then, use from
24 that 2019 that was already done by the MODFLOW that you
25 did not have?

1 A. Right. So, essentially, what I did is I
2 isolated -- the 2007 year was chosen because, in my
3 mind, represented isolation of a single year that would
4 be more advantageous for me to evaluate and base my
5 analysis on. And the day that I, essentially, pulled
6 the data directly from the IDWR's website for,
7 essentially, the responses to Big Wood and Silver Creek
8 based on her 2007 curtailment scenario.

9 Q. So did you approach it differently than she
10 did?

11 A. I did not approach it differently, but what I
12 did do that was different is, essentially, I assumed
13 that those depletions that were modeled for the
14 2007 year would be sequential and additive for a
15 three-year -- for any given three-year period, which was
16 an attempt to, essentially, use a single-year-model
17 output to somewhat informally model what would occur
18 under a multiyear pumping scenario.

19 Q. Do you believe that -- I mean, do you
20 understand that she did that analysis, or was this
21 strictly something you did in addition to her?

22 A. No. It was purely my own work and my own
23 approach.

24 Q. And what was the purpose of doing that?

25 A. Well, again, it was to try to estimate

1 multiyear pumping from a single-year event, because I
2 did not have the model.

3 Q. And why did you think that was important to do
4 a multiyear event?

5 A. Well, because according to Figure 9 of her
6 memo --

7 Q. And at what page?

8 A. Well, it's showing here on my expert report,
9 page 3, Figure 1.

10 Q. So, again, you're referring to Miller
11 Exhibit 1, and you've re-created --

12 A. Yes. Essentially, that's a reprint from Sukow
13 2019. And what, in my mind, it really represented was
14 the fact that it's any given single-year pumping results
15 and, approximately, a three-year impact to the system
16 when taken by itself.

17 Q. Well, correct me if I'm wrong, then. You say
18 that she didn't approach that. Her graph actually does
19 address the impacts for more than one --

20 A. I would grant that. She didn't --

21 Q. You're going to have to wait until I'm done --

22 A. Sorry.

23 Q. -- asking the question so we don't talk over
24 each other.

25 A. Okay.

1 Q. So isn't it true, then, that graph actually
2 does depict that?

3 A. I would -- yes, it does.

4 Q. So although the graph does, she didn't go into
5 depth, and you did; is that a fair statement?

6 A. I would characterize it differently. She has
7 the ability, with the model, to, of course, account for
8 explicitly multiyear pumping events and reporting those.
9 And so she, indeed, did that in her curtailment
10 scenarios. So all I did was take a single year and,
11 essentially, again, make the assumption that it was
12 cumulative and additive for three years.

13 Q. And, again, what conclusion did you draw from
14 that as opposed to Ms. Sukow's conclusion as to the
15 depletions?

16 A. Well, ultimately, on a -- in a total
17 volumetric basis, our numbers, actually, were very
18 similar in terms of the result.

19 Q. And what were your numbers pursuant -- and are
20 they depicted in your report?

21 A. They are. Using the approach I analyzed and
22 picking the -- and I'm referring now to Table 1 on
23 page 4.

24 Q. So, again, Miller Exhibit 1, page 4?

25 A. So these columns represent my computations

1 based on the 2007 run, assuming they were cumulative and
2 additive, and they take into account pumping from 2019,
3 2020, and 2021 to represent an impact in 2021. I
4 estimated that for the irrigation season of 2021 there
5 would be, approximately, 8,182 acre-feet of impact
6 during the irrigation season.

7 Q. And do you know what Ms. Sukow's conclusion
8 was?

9 A. She did not report that explicitly in her
10 report, to my knowledge, but I have computed, based on
11 her testimony and the support files from hers, that she,
12 essentially, computed that that value -- let me make
13 sure that I'm reporting this correctly -- the equivalent
14 value from Sukow's 2021 would be 8,861. So I
15 underestimated her value by some fraction in this case.
16 I don't have the percent in front of me.

17 Q. In your professional opinion, then, even
18 though you did it a different way, is that close enough
19 that -- I guess, is there a significant difference there
20 to be concerned about?

21 A. Not in my mind. I should note that we should
22 not expect fundamentally different answers, given that
23 my fundamental basis of the calculation was based on her
24 model, albeit, for one year. But, yeah, I do not
25 conclude that there's a significant difference in these

1 values, especially considering the uncertainty of any
2 model.

3 Q. So do you support her in her position and in
4 her conclusions?

5 A. I do.

6 Q. Is there anything else within your report --
7 expert report as to your first task, which is the
8 computation of deletion, that you need to address?

9 A. I do not believe so.

10 Q. Let's so move on to No. 2, which is the
11 computation of the farmers if no curtailment versus
12 curtailment.

13 First of all, where did you start as far as
14 your source is concerned?

15 A. Well, this computation really begins with the
16 watermaster's estimate of a day's run for each water
17 right within his district. I -- my recollection is that
18 I requested an estimate of the number of days that would
19 be run for each water right or vintage of water right,
20 class of water rights, if you will.

21 And, essentially, after receiving that, I
22 weighted those by virtue of their instantaneous
23 diversion right and then simply did a calculation that
24 said if the start date of irrigation for the district is
25 April 20th, and I took the average -- the weighted

1 average number of days and then computed a day that the
2 average farmer within the district would be,
3 essentially, cut off of water.

4 Q. So were you -- again, talking about the
5 source, did any of that source come from Ms. Sukow's
6 report?

7 A. It did not.

8 Q. So you did this for what purpose in addressing
9 the reports, as you indicated was your task?

10 A. I did this for the purpose of, essentially,
11 laying foundation, I believe, for individual claims of
12 cutoff data on average for the system and to provide
13 myself some assurance that there was actually depletion
14 in the system. So this goes to was there truly a
15 depletion that would be experienced to the users, and
16 that helped me answer that question.

17 Q. And what other sources, then, did you use?

18 I didn't want to cut you off on that if there
19 were other sources.

20 A. Other than the note -- the fact that the start
21 date was April 20th and the number of run days was
22 provided by Kevin Lakey, I do not recall any other
23 information that led me to those conclusions.

24 Q. And as you've sat through the testimony of
25 this hearing, have you heard anything that would

1 contradict or add to what source you were originally
2 using in computing these?

3 A. I have not looked at that, but, in my opinion,
4 these numbers are relatively close to what we currently
5 think are the cutoff dates for the farmers.

6 Q. And where are you looking at in your report
7 to -- as your conclusion dealing with the source that
8 you've talked about?

9 A. I will try to find that. I'm sorry, Counsel,
10 I've looked at so many documents that I'm struggling,
11 but I would refer, I suppose, to -- to get the most
12 clearest determination of one of the appendices, which I
13 can identify.

14 Appendix D of my report lists the individual
15 run dates for all of the rights involved and provides
16 the summary of those computations at the bottom or the
17 last page of that appendix and states a date of
18 June 21st, 2021, as the most likely expected end date
19 for irrigation for the class of water right holders.

20 MR. THOMPSON: What are you referring to? I'm
21 sorry.

22 Q. (BY MR. RIGBY) Let's make sure we're on the
23 same page, then.

24 You're referring to?

25 A. Appendix D of my expert report entitled,

1 "Water Rights List With May 25, 2021, Estimated 'Days
2 Run.' "

3 COURT REPORTER: And, Mr. Miller, if you could
4 slow down a little bit for me, I would appreciate it.

5 THE WITNESS: I will.

6 Q. (BY MR. RIGBY) So, again, Appendix D, as in
7 "dog"?

8 A. Yes.

9 Q. And that's, again, Miller Exhibit No. 1?

10 A. Yes.

11 Q. And the list of the various owners and water
12 rights comprise of, I think, three and a half pages; is
13 that correct?

14 A. Something to that effect.

15 Q. And the last page is what you're referring to
16 as your conclusion?

17 A. Yes.

18 Q. And when you say, "average expected end of
19 irrigation," again, define what you mean by that?

20 A. That is the day by which if no curtailment
21 were to have occurred, that these farmers would be out
22 of water, barring any supplementals from other sources,
23 private leases, or other things.

24 Q. So does that -- help me out here. Is that
25 with curtailment? Without curtailment? What is it?

1 A. That is assuming no curtailment.

2 Q. Okay. And did you, then, also address the
3 issue of with curtailment?

4 A. Not in this particular part of my analysis,
5 no.

6 Q. Have you done so?

7 A. No, I would not say that. I have done
8 computations to deal with another way of looking at
9 dates, but it had nothing to do with, essentially,
10 estimating the amount of run days, no.

11 Q. Now, you've heard testimony, even from
12 Mr. Lakey this morning, as to projected cutoff dates?

13 A. Yes.

14 Q. So your analysis was done, obviously, before
15 you heard this testimony.

16 Would that testimony then change, or how close
17 was your estimate to the -- to his projected cutoff
18 dates?

19 A. Well, again, my analysis only dealt with that
20 date with the assumption of no curtailment. So I
21 believe the testimony offered by Kevin Lakey was under
22 certain curtailment scenarios. So I don't believe we
23 have the ability to correlate those.

24 Q. So what significance does this particular task
25 have to this particular hearing, in your opinion?

1 A. In my opinion, it underscores the fact that
2 the farmers -- the holders of rights within the Little
3 Wood River/Silver Creek drainage, in general, without a
4 curtailment, will be out of water on or about June 21st
5 of this year. I think that's important to note that
6 most crops are not finished prior to that date and,
7 therefore, some impact to those crops is likely to have
8 happened.

9 Q. And was that a task assigned to you because of
10 the concern of the senior water users?

11 A. I actually assigned myself that task. It was
12 a question that I felt important to answer as an expert,
13 and I pursued that analysis.

14 Q. But isn't it a fact that they were very
15 concerned about that?

16 A. Yes. Yes, of course.

17 Q. And conversed that with you?

18 A. I would not say that we really conversed much
19 on that. I knew that they were doing it, I knew it was
20 important to them, but there was not really any request,
21 formally, from them to do that, to do my analysis.

22 Q. Okay. Anything else on your computation of
23 noncurtailment and the cutoff dates depending upon that?

24 A. No.

25 Q. So your third task, then, was again what?

1 A. It was to answer the question, really, of
2 when -- on what dates, on or about, would the
3 accumulated depletions under a no-curtailment scenario
4 equal those that could be provided as remedy under a
5 curtailment to, essentially, answer the question of when
6 do we need to have a curtailment to match those
7 depletions.

8 Q. And, again, what source did you use to begin
9 your computation of that analysis?

10 A. Well, it's fundamentally based on the same
11 sources that supply the 8,182 acre-feet from my Table 1.
12 Because that's a predominant basis in which I made that
13 computation. And other than that, I actually did the
14 calculation in several ways.

15 One is to just note that under a
16 no-curtailment scenario, the midpoint of accumulated
17 injury, which would start during the beginning of the
18 season, and the end is really the midpoint or the
19 halfway point between the full volume of curtailment.

20 In other words, if I divided 8,182 in half,
21 that that volume would, essentially, be that point at
22 which that would have occurred. But in terms of
23 reporting for this document, what I, essentially, did is
24 compared my work to the various curtailment scenarios
25 that Jennifer Sukow had outlined.

1 Q. That's what I was getting to is that you did
2 then, in fact, go back to the staff memos for purposes
3 of --

4 A. I did, to the 2021 staff memo by Jennifer
5 Sukow to do that, yes.

6 HEARING OFFICER: Mr. Miller, I want to remind
7 you that you're cutting Mr. Rigby off halfway through
8 his questions. You need to wait until he finishes his
9 question.

10 THE WITNESS: Thank you.

11 HEARING OFFICER: Thank you.

12 Q. (BY MR. RIGBY) Did you use any other staff
13 memos in your source or analysis to address this
14 particular issue?

15 A. I do not recall any.

16 Q. What modeling, then, or what kind of an
17 analysis did you run?

18 A. Well, in this particular case -- I'm going to
19 remind myself just momentarily. In summary, I think in
20 this particular case, what I essentially noted is I
21 accumulated the estimated depletions from my Table 1,
22 compared that to the benefit that would have accrued
23 under Jennifer Sukow's curtailment scenario for the
24 July 1, and equated those values and, essentially,
25 calculated the fact that on or about July the 5th of

1 2021, that the accumulated depletions that I had
2 estimated would be, approximately, equal to the benefits
3 that could be rendered to the system based on an
4 interpolation between the July 1 curtailment scenario
5 under Sukow and the August 1 curtailment under Jennifer
6 Sukow. That point, according to my calculations, was on
7 or about July the 5th.

8 Q. So, again, in your professional opinion, do
9 you believe that your analysis confirmed Ms. Sukow's
10 report?

11 Was there enough variance from that that you
12 felt it was significant?

13 A. I think what it did is verified to me that the
14 selection of a July 1st curtailment scenario was useful,
15 and -- for this because that is the date on or which I
16 computed that the depletions would, approximately, equal
17 the remedies.

18 Q. So in your professional opinion, is a July 1
19 curtailment date important?

20 A. What I would say to that is that on a July 1
21 date, that a curtailment on that would slightly provide
22 more remedy than depletions would demand, if that makes
23 sense.

24 Q. Explain that.

25 A. So in other words, the accumulated depletions

1 on or through July 1st would be slightly less than the
2 remedy that would be provided under that; and,
3 therefore, essentially, we would be getting more water
4 than the seniors needed to present equity there. So in
5 other words, a few days later is when the balance point
6 would come between cumulated depletions and remedy under
7 curtailment.

8 Q. Were you here when Mr. Vincent testified?

9 A. I was.

10 Q. And were you here when he presented what has
11 now been marked IDWR's Exhibit No. 5, which is a SWSI
12 for June 1, 2021?

13 A. I was, yes.

14 Q. And based upon his testimony, as I understand
15 it, it's because of the severe drought he conducted a
16 second SWSI or an updated SWSI due to that.

17 Is that what you understand?

18 A. My understanding is that he may have looked at
19 an updated SWSI, but did not produce that himself.

20 Q. Oh, I'm sorry, who did produce the SWSI, then?

21 A. SWSIs are produced as a product that's
22 produced by NRCS and were -- may have been requested by
23 the Department, but were not produced, necessarily, by
24 the Department, in my understanding.

25 Q. Okay, my error. But the fact of the matter is

1 it was upon his request that that June 1 SWSI was -- I
2 think that's what he testified to?

3 A. That is my understanding.

4 Q. So based upon his testimony and that SWSI that
5 was done by June 1, were you concerned, in any way, of
6 the results of that SWSI?

7 A. In general, I would say I fully supported the
8 memo that Sean Vincent produced in relation to the SWSI.
9 There is one item that I feel that should have been
10 added to that SWSI.

11 Q. And what is that?

12 A. May I refer to the document?

13 Q. Yeah.

14 A. I don't know if I have it in front of me.

15 Q. We have proposed --

16 HEARING OFFICER: You're looking for --

17 THE WITNESS: I'm actually looking for his
18 staff memo.

19 MR. RIGBY: Oh, you're looking for his staff
20 memo?

21 THE WITNESS: Yeah.

22 MR. RIGBY: IDWR No. 1. Are you looking for
23 the updated SWSI?

24 THE WITNESS: No.

25 MR. RIGBY: Okay.

1 THE WITNESS: I'm looking for his staff memo.

2 MR. RIGBY: May I?

3 HEARING OFFICER: Yes. I've got a copy.

4 THE WITNESS: I don't see it.

5 HEARING OFFICER: Here you go.

6 THE WITNESS: Thank you.

7 MR. RIGBY: Thank you, Mr. Director.

8 HEARING OFFICER: Yep.

9 Q. (BY MR. RIGBY) Okay. You're referring to
10 IDWR Exhibit No. 1, Mr. Vincent's memo; is that correct?

11 A. That is correct.

12 Q. And what is it that you are wanting to review?

13 A. Well, my only issue with this staff memo is in
14 the last paragraph of page 3 wherein Mr. Vincent reports
15 the following -- may I read?

16 Q. Please do.

17 A. "For the period of 1991 to 2020, the years
18 with the most similar total supplies to the 50th
19 exceedance forecast are" -- "for 2021 are 2004 with a
20 SWSI of negative 2.6. And 2020 with a SWSI of negative
21 2.8. Despite being a poor water year, the water volume
22 supply in 2004 at 136 KAF just exceeded the 135 KAF
23 adequate water supply.

24 Q. So what did you take issue with, if you did?

25 A. The issue that I had with this is after

1 reviewing the actual SWSI data that was used to prepare
2 the SWSI, that the 2020 date, which was one of the two
3 that Mr. Vincent had mentioned as being most similar,
4 actually had a KAF value that was much closer to the
5 2021 KAF than 2004.

6 So in my opinion, it would have been nice to
7 have seen it, since it also discussed how the 2020 KAF
8 related to the adequate water supply. And if he would
9 have done that, then what one would have rendered is
10 that under that year 2020, that the result would have
11 been that the system would have had a deficit of
12 14,000 acre-feet of water.

13 Q. And how did you compute that?

14 A. Simply the difference between the stated
15 adequate water supply of 135 KAF versus the 2020 KAF, as
16 pursuant to that material of 121 KAF. So in other
17 words, the difference is 135 minus 121. It would have
18 showed a deficit of 14. And so what I would have liked
19 to have seen in this is that statement, in addition to
20 the one -- because I believe this is misleading in this
21 case, not that it was meant to be done so purposely.

22 But I think the common layperson would read
23 this sentence and infer that, in fact, the Big Wood
24 above Hailey did not have a deficit of water and, in
25 fact, if that other statement had been in there, I think

1 it would have been clear that the closest similar year
2 showed a deficit of 14,000 acre-feet of water for that
3 drainage.

4 Q. So that's fairly significant?

5 A. I believe so.

6 Q. And it was just because of a choice of years?

7 A. I don't believe -- I think it was simply just,
8 perhaps, an oversight of reporting. I think, obviously,
9 the year 2020 was reported. And what wasn't reported
10 was how the deficit would have been different under the
11 2020 year rather than the 2004. Other than that, I
12 fully support this memo and support its conclusions and
13 approach and methodology.

14 Q. Very good. So getting back, then, to IDWR's
15 Exhibit No. 5, the SWSI that was, as you said, done at
16 the request of instead of by Mr. Vincent, is there --
17 well, let me just ask you this: Did you request a
18 different SWSI based upon June 1's analysis?

19 A. I did not.

20 Q. Have you -- I'm going to hand you what has
21 been marked for, I guess, identification.

22 MR. HENDRICKS: It's in his binder.

23 MR. RIGBY: I'm sorry.

24 MR. HENDRICKS: It's in his binder at 7.

25 MR. RIGBY: You have it in your binder as

1 Miller Exhibit No. 7.

2 THE WITNESS: Okay. I do not see a Miller 7
3 in this binder.

4 MR. HENDRICKS: It's right after 6.

5 HEARING OFFICER: Let's go off the record for
6 a minute.

7 (Discussion held off the record.)

8 HEARING OFFICER: Back on the record.

9 All right. We're recording again.

10 Mr. Rigby?

11 MR. RIGBY: Thank you, Mr. Director.

12 Q. (BY MR. RIGBY) Mr. Miller, what is -- would
13 you identify Miller Exhibit No. 7?

14 A. I will. This is a preliminary SWSI that I
15 developed within the last several days to address what I
16 felt was a more appropriate way to gage the water supply
17 for the Little Wood River/Silver Creek drainage.

18 Q. And what would be the difference between --
19 because it states it's June 1 -- what is the difference
20 between the June 1 SWSI, that is labeled Miller Exhibit
21 No. 7, and the IDWR's Exhibit No. 5, as requested by
22 Mr. Vincent?

23 A. I think the main difference is the -- a
24 representativeness of the SWSI. As people may or may
25 not understand, a SWSI is developed at a given gaging

1 station for a particular basin and a particular group of
2 water users.

3 In my opinion, the SWSI for Hailey, for above
4 Hailey, and for that below Magic are poor
5 representations of a supply of water to the Little Wood
6 River/Silver Creek drainage. Whereas, the most obvious
7 selection of SWSI for that is the headwaters of the
8 waters that feed the users of Little Wood/Silver Creek
9 drainage, essentially.

10 Q. So running a SWSI for the Sportsman's Access
11 gage versus the one above, you think, is significant?

12 A. Is a much better approximation of the issues
13 at hand, in my opinion, yes.

14 MR. RIGBY: And, therefore, Mr. Director, we
15 would ask that Miller Exhibit No. 7 be introduced for
16 that purpose. Especially because the IDWR Exhibit No. 5
17 came in, obviously, during the examination of
18 Mr. Vincent during the hearing.

19 HEARING OFFICER: And so are you moving for
20 the admission of this document? Or what is your --

21 MR. RIGBY: I am.

22 HEARING OFFICER: Okay. Any objections to the
23 admission of this document?

24 MR. THOMPSON: Yes, Director. We would object
25 to the introduction and admission of this exhibit. And

1 may I voir dire in aid of objection?

2 HEARING OFFICER: Yes, I'm interested.

3

4 VOIR DIRE EXAMINATION

5 QUESTIONS BY MR. THOMPSON:

6 Q. Mr. Miller, have you had any experience
7 preparing SWSI tables before?

8 A. No.

9 Q. Have you prepared any for any clients?

10 A. No.

11 Q. Is this the first one you've ever done?

12 A. It is.

13 Q. Has it been recognized by anybody?

14 A. No.

15 MR. THOMPSON: I would say he's not qualified
16 to prepare a table like this, Director.

17 HEARING OFFICER: Mr. Rigby, response, if you
18 want?

19 And I will just say, you've compared the
20 document that was marked as IDWR Exhibit No. 5, but the
21 SWSI number was prepared by NRCS.

22 MR. RIGBY: That is correct.

23 HEARING OFFICER: And this document has not
24 been prepared by NRCS. So, in my opinion, they're not
25 comparable. But, anyway, that's my reaction.

1 MR. RIGBY: Fair point. Fair point.

2 Q. (BY MR. RIGBY) Let me just ask you, then,
3 what -- how did you -- what tool did you use or model
4 did you use in order to prepare this?

5 A. I used discharge data from Silver Creek, the
6 Sportsman's Access gage. I also used AgriMet data for
7 the Picabo AgriMet station. And I would argue, Counsel,
8 that these would be things that I would normally do
9 under any analysis of surface water hydrology, standard
10 thing for any surface water hydrologist to have done,
11 and, therefore, not in any way, you know, unique in that
12 regard.

13 In addition to that, as included in this SWSI,
14 preliminary SWSI, I have listed a reference to the SWSI
15 development protocol listed by the NRCS, which is
16 provided online and provides a very simple outline of
17 the methods that, I would submit, almost anyone could
18 follow to create this table.

19 Q. So if you weren't following the SWSI regime or
20 the SWSI model, could you come up with the same
21 conclusion that you've come up with in this particular
22 preliminary SWSI that you're referring to?

23 A. Indeed. If we were to rename this analysis of
24 the predicted water supply in this year versus an
25 adequate supply, and renamed it, the analysis would

1 stand as is, yes. I couched it in the framework of a
2 SWSI, which, frankly, again, is mathematically very
3 simple, simply because that seems to be the desire or
4 the method that the Department utilizes. But, yes, the
5 analysis is simply a frequency analysis and a prediction
6 of the 2020 year -- 2021 irrigation year.

7 HEARING OFFICER: The objection is sustained.

8 Mr. Rigby, if you want to ask Mr. Miller about
9 some of the factors and the background that led the
10 development, he's free to testify about those, but I
11 don't want to have an -- I guess, an outlier SWSI
12 document in the record.

13 MR. RIGBY: Understood. Understood,
14 Mr. Director.

15 Q. (BY MR. RIGBY) All right. So let's do that,
16 Mr. Miller.

17 So, again, you started to address what sources
18 you use to come up with the -- a conclusion. So let's
19 talk about your sources, what you did with those, how
20 you computed those, and in the end, what your conclusion
21 was.

22 A. Very well. The initial analysis began with an
23 analysis of the April and May discharges at the
24 Sportsman's Access gage.

25 Q. And where did you get those?

1 A. From the website. And I did that back until
2 1994, to look at the most recent period of interest,
3 and, essentially, acquired average April-May discharges
4 for that period, order ranked those. And I will
5 underscore this point, that the 2021 year is represented
6 in that data set. So I could stack --

7 Q. Explain that. Explain that.

8 A. So in other words, 2021 we had records. These
9 were physical records of 2021 that were included in this
10 preliminary part of the analysis, as opposed to
11 predictions. Okay?

12 So when we add -- we pull those records, and
13 then when we order rank them, we see -- we can see where
14 2021 sits within that spectrum. And when we do that, we
15 see that the most -- the year most like 2021 is the year
16 1994, which I believe has been testified to in these
17 proceedings in other ways. And so --

18 Q. And you support that year?

19 A. I do. I do.

20 Q. Continue.

21 A. So using that 1994, what I then did was take
22 the total discharge for May and -- or excuse me -- for
23 April and May, which was recorded, and then using 1994
24 as a predictor, added to that what the predictions for
25 1994 would be or were to create, essentially, a

1 prediction of the 2021 irrigation season pursuant to the
2 gage at -- or the Sportsman's Access gage.

3 Q. And is this methodology something that you
4 have used in the past?

5 A. It has. Very typical for one to predict using
6 a part of a discharge sequence and a prediction from
7 another, yes.

8 Q. And so as a result of that, were you able to
9 come up with a prediction?

10 A. I was. That prediction resulted in a value of
11 34,530 acre-feet of water for 2021.

12 Q. Meaning what?

13 A. That's how much water would be available
14 pursuant to the -- as measured at the gage, Sportsman's
15 Access gage, for the '21 irrigation -- 2021 irrigation
16 season.

17 Q. And that's taking into consideration
18 curtailment?

19 A. I would believe it would presume no
20 curtailment, because that is the current status quo. So
21 that would presume that no curtailment were to have
22 happened.

23 Q. So that amount of water would be available
24 without curtailment?

25 A. That amount of water would be the amount of

1 water that I would predict would be in the system in the
2 irrigation season of 2021 without curtailment.

3 Q. And what does that -- to you, what, then, do
4 you conclude as far as this particular hearing is
5 concerned?

6 A. Well, I have to take that number in
7 combination with estimates of the adequate water supply
8 that I think has been already entered into testimony
9 here today. And that value would need to be compared to
10 the adequate water supply to render any opinion.

11 What I did in my analysis was take the three
12 years that Kevin Lakey had already testified to
13 representing adequate water years, and then what I did
14 was I took the cumulative, the total volume of water in
15 each of those three years that was recorded to have gone
16 through the Sportsman's Access gage and took an average
17 with the intent that that should represent, at that
18 point, an adequate supply of water. When I did that,
19 the value came out to be 45,310 acre-feet of water.

20 So in summary, then, if one has -- if the
21 adequate water supply volume at that point is,
22 essentially, 45,000 acre-feet, and the expected this
23 year is 34,000 acre-feet, the delta represents a deficit
24 of what this year should have compared to the adequate
25 water supply year.

1 Q. Again, getting back to the water needs, go
2 into depth and more detail on how you came up with that
3 number or how you computed that number.

4 A. Well, again, it was simply taking the
5 testimony of Kevin Lakey that the 2000, 2009, and
6 2010 years represented an adequate year, and simply
7 queried the USGS discharge records for what the total
8 volume of water was for the irrigation season for those
9 years to compute an average of 45,310 acre-feet.

10 Q. So the deficit, then, is to take that number,
11 subtracting from the 30-some-odd thousand that you
12 calculated would be the discharge, and you're saying
13 that's the deficit?

14 A. That is. And that deficit is, approximately,
15 10,000 acre-feet. And I would submit that in my best
16 opinion as an expert in this area, that this year
17 there's going to be a 10,000 acre-feet deficit in the
18 year 2021 versus the adequate water supply for the
19 Little Wood River/Silver Creek drainage.

20 Q. And is this, again, taken at the Sportsman's
21 Access?

22 A. This is at Sportsman's Access, yes.

23 Q. As opposed to anything above?

24 A. Anything above and/or below. Yes, it's its
25 own estimate.

1 Q. Understood.

2 A. Yes.

3 MR. RIGBY: I have no further questions.

4 HEARING OFFICER: Thank you, Mr. Rigby.

5 Mr. Fletcher, any questions?

6
7 DIRECT EXAMINATION

8 QUESTIONS BY MR. FLETCHER:

9 Q. Just to follow up with the last line of
10 inquiry, when you were doing the calculations at
11 Sportsman's gage -- or Sportsman's Access, did you do
12 any calculations for conveyance from that point to the
13 Little Wood and Silver Creek users?

14 A. I did.

15 Q. Can you explain that, please?

16 A. I can, in the sense that I -- during --
17 actually, during the morning's proceedings, I took Kevin
18 Lakey's testimony, which was, I believe, that there was
19 40,004 acre-feet was what he computed as the adequate
20 water supply at Station 10 or in his area. And I
21 believe he also testified there was 5,000 of that that
22 was delivered through Magic.

23 And so to normalize that to what I did, I
24 subtracted 5,000 to get that 35,004 represented -- if
25 there was no input from Magic -- represents an adequate

1 water supply volume for the area that is served. And I
2 simply then took that value and assumed that there would
3 be 25 percent seepage losses from the Sportsman's Access
4 gage to Station 10, and to normalize it back to that
5 value.

6 And when I do that, I get a value of 43,755
7 for an adequate water supply volume normalized to the
8 gage of the Sportsman's Access gage. The difference
9 between my number and his, in that regard -- and I will
10 say this, done in two completely independent methods --
11 yielded a difference of only 2.2 percent. So in that
12 way, I analyzed the seepage losses and took those into
13 account.

14 MR. FLETCHER: I have no further questions.

15 MR. RIGBY: Mr. Director, I failed to
16 introduce -- or ask for the introduction of Miller
17 Exhibit No. 1, which is his expert report.

18 HEARING OFFICER: Any objection to the
19 admission of the document that Mr. Rigby has referred
20 to?

21 Hearing no objection, the document marked as
22 Miller Exhibit 1 is received into evidence.

23 (Miller Exhibit 1 received.)

24 HEARING OFFICER: Thank you.

25 Mr. Thompson or --

1 MR. THOMPSON: Can we take a quick break?

2 HEARING OFFICER: Yeah, that would be fine.
3 Ten minutes. We'll be back at, what, five to 3:00.

4 (Break taken.)

5 HEARING OFFICER: We're back on the record.

6

7 CROSS-EXAMINATION

8 QUESTIONS BY MR. THOMPSON:

9 Q. Good afternoon, Mr. Miller. Travis Thompson
10 for the South Valley Ground Water District.

11 A. Hello.

12 Q. We met at your deposition a week ago. It
13 feels like a year ago.

14 A. It does.

15 Q. Just to follow up, at that deposition you
16 identified you've had emails and data you've received
17 from Kevin Lakey; is that true?

18 A. That is true.

19 Q. And have you provided those spreadsheets and
20 that data?

21 A. I have provided them to my attorneys. After
22 that, I do not know what happened to them at that point.

23 MR. THOMPSON: We still haven't seen anything.
24 If we could get that today --

25 MR. RIGBY: I will.

1 MR. THOMPSON: -- that would help.

2 Q. (BY MR. THOMPSON) And you also referenced
3 documents and emails from Tim Luke and Jennifer Sukow.

4 Do you recall that?

5 A. I do.

6 Q. And has that been produced to Mr. Rigby as
7 well?

8 A. That has been produced.

9 MR. RIGBY: Yeah.

10 Q. (BY MR. THOMPSON) Getting back to the --
11 well, let's just start here.

12 Would you agree that your past experience in
13 groundwater modeling has primarily concerned contaminant
14 transfer simulations?

15 A. I would not agree with that.

16 Q. Why not?

17 A. Any groundwater model that has a contaminant
18 transport component is, necessarily, built upon a flow
19 model that has to be built prior to the analysis of
20 contaminant transport. So I would say the vast majority
21 of the experience would be with flow models and not with
22 contaminant transport models.

23 Q. But you've worked in that for contaminant
24 transfer simulations, the work you have done
25 specifically?

1 A. Well, yes, I've done both.

2 Q. And your current consulting work focuses on
3 general environmental services and contaminant transport
4 modeling?

5 A. It does.

6 Q. And this work with the Big Wood and Little
7 Wood water users is your first consulting job concerning
8 irrigation water rights?

9 A. I think that is a fair statement, yes.

10 Q. As well as evaluating surface water hydrology
11 related to irrigation projects?

12 A. I would not agree with that.

13 Q. Okay. What do you disagree with?

14 A. Well, almost any groundwater model built that
15 tries to link surface water and groundwater,
16 necessarily, deals with estimation of surface hydrologic
17 issues irrespective of whether they're from irrigation
18 systems or from natural flows. There's really no
19 difference, so I would not agree with that
20 characterization.

21 Q. Okay. My question was specific to irrigation
22 projects, surface water hydrology and irrigation
23 projects.

24 A. So can you repeat the question, then, for me?

25 Q. Would you agree this is your first consulting

1 job evaluating surface water hydrology related to
2 irrigation projects?

3 A. No.

4 Q. That's a little different answer than you gave
5 me a week ago. I'm just concerned what the difference
6 is.

7 A. Well, I have an example of several projects
8 that I'm currently working on that deal with irrigation
9 systems and surface hydrology components, and I may not
10 have had access or recalled those at that time. And I
11 can share those, if you'd like, now?

12 Q. Sure.

13 A. I'm involved in two projects with Madison
14 County, Idaho, presently, that deal both with natural
15 streams and irrigation systems where I am involved
16 directly in determining the hydrologic issues of those.

17 One is the FEMA floodplain mapping support
18 project in Madison County for which I am subcontracted
19 by Forsgren Engineering to perform those functions. The
20 second, I hold the prime contract with the -- Madison
21 County in the Lyman Creek Levy accreditation project,
22 and a major component in that is to redevelop the
23 hydrology for the system of which I am personally
24 responsible. So there's two examples.

25 Q. How about as far as evaluating the surface

1 water supply for an irrigation project?

2 A. That are only irrigation projects?

3 Q. Correct.

4 A. I would submit a natural surface stream is,
5 obviously, an irrigation project.

6 Q. How about diverted irrigation projects where
7 you have a diversion from the stream evaluating surface
8 water supplies for that project?

9 A. I believe I've answered the question. The two
10 that I provided.

11 Q. And you've not consulted on any new water
12 right applications or water right transfers before; is
13 that correct?

14 A. That is true.

15 Q. So would you agree you've never analyzed
16 hydrology in the context of injury to a water right from
17 changes in either a surface or groundwater source?

18 A. I think I would agree with that.

19 Q. And you've only been qualified as an expert
20 one time in regards to a stream alteration permit before
21 IDWR?

22 A. That is correct.

23 Q. And that was the -- concerned the impact of a
24 proposed bridge structure on trumpeter swans in Madison
25 County?

1 A. That is correct.

2 Q. So you've been retained by the Big Wood and
3 Little Wood users since February of '19; is that --

4 A. I believe that is correct.

5 Q. -- what you testified?

6 And you've been working for the Big Wood Canal
7 Company for about a year?

8 A. That is approximately correct. I do not have
9 the dates, but that is approximately correct.

10 Q. And you're retained by the Big Wood Canal
11 Company to prepare for a potential water delivery call?

12 A. That is my understanding, yes.

13 Q. And in this case, you started working on your
14 report -- I think that was Exhibit 1, if I've got it
15 right -- about May 11th; is that right?

16 A. That is my recollection.

17 Q. And you've had several conversations with
18 Kevin Lakey and Department staff since that time?

19 A. I have had several conversations with Kevin
20 Lakey. I have had, to my recollection, one conversation
21 with Department staff.

22 Q. And you did not interview any senior surface
23 water users; is that true?

24 A. In preparation for my report?

25 Q. Correct.

1 A. No.

2 Q. Okay. Who did you interview?

3 A. I'm sorry?

4 MR. RIGBY: I think he said "no," Counsel.

5 Q. (BY MR. THOMPSON) I'm just -- I asked you
6 last week if you interviewed anybody in preparation for
7 your report, and you said you do not recall interviewing
8 anybody, so did that change between last week and now?

9 A. No. That's still my testimony.

10 Q. And you prepared an earlier report dated
11 May 26th that has since been superseded; is that
12 correct?

13 A. That is correct.

14 Q. And that's the exhibit we have here today, the
15 June 1st report?

16 A. That is correct.

17 Q. And that was provided to us last week, I think
18 about an hour before your deposition; do you recall?

19 A. I think that is correct.

20 Q. As far as that June 1st report and your prior
21 May 26th, the main difference was the removal of the
22 water users shortfall calculations; would you agree with
23 that?

24 A. That is correct.

25 Q. Let's turn to your report. Do you have that

1 in front of you --

2 A. I do.

3 Q. -- Exhibit 1?

4 You talked about three different areas you
5 captured in this report. The first, hydrologic impacts
6 to Little Wood/Silver Creek drainage -- and I'll call
7 that with curtailment -- during the 2021 irrigation
8 season. And then depletion and potential injury to
9 seniors during the 2021 irrigation season.

10 Is that a general characterization of that?

11 A. I would not agree with that, as I heard you
12 say with the assumption of curtailment. My analysis on
13 impacts or depletions was assuming without curtailment
14 in terms of computing depletions.

15 Q. The first part was without curtailment, the
16 second part was with; is that correct?

17 A. Yes, that is correct.

18 Q. And as far as evaluating the model impacts of
19 pumping, you reviewed and relied upon Jennifer Sukow's
20 2019 curtailment runs; is that true?

21 A. That is correct.

22 Q. So as far as modeling, I heard you say you did
23 not have access to a MODFLOW program; is that true?

24 A. That is true.

25 Q. And are you aware that the Department's Wood

1 River Valley model, 1.1, is available for download from
2 the Department website?

3 A. I am, yes.

4 Q. And have you downloaded that before?

5 A. No.

6 Q. Any reason why?

7 A. Yes. The platform that I use and am
8 accustomed to to most efficiently model is the GMS
9 platform produced by Aquaveo, LLC. It's one of,
10 arguably, two or three platforms used in the world. And
11 a simple download of the files from IDWR does not lend
12 itself to direct use under GMS platform.

13 Q. And that was the software you're looking at
14 developing or trying to convert that to.

15 Is that something in progress?

16 A. That's right, yes.

17 Q. And as far as performing your own model runs
18 with either platform, how long does that take?

19 A. If one were to have a platform?

20 Q. Yes.

21 A. It depends on which questions are posed. In
22 this particular case, if the questions were posed of a
23 July 1st, an August 1st curtailment, that run could,
24 most likely, be done in several days and written up
25 within another several days.

1 Q. Over a week?

2 A. Probably.

3 Q. Maybe two weeks?

4 A. I believe that could be done, yes.

5 Q. And you said you had some familiarity with the
6 ESPAM model, is that correct, on the Eastern Snake Plan?

7 A. I said I had review capacity with that. So,
8 yes, during its initial phase of development.

9 Q. Have you performed any model runs with that
10 model?

11 A. I have not.

12 Q. Are you aware of how many model cells are in
13 the ESPAM model?

14 A. I do not recall that number.

15 Q. Does 11,000, thereabouts, sound correct?

16 A. I know that the model's grid cells are mile by
17 mile. There is, I believe, 890 square miles at the
18 INEL. So my best recollection would be, no, that it is
19 something less than that probably.

20 Q. I thought I've seen that number before.
21 That's okay. That's close enough.

22 How many model cells in the Wood River Valley
23 aquifer?

24 A. I do not have that information.

25 Q. Does 55,000 come to mind?

1 A. I cannot -- I do not know.

2 Q. So assuming that's correct, if there were
3 55,000 model cells would evaluating certain response
4 functions or making changes to those take much longer
5 than working on the ESPAM model?

6 A. So you're asking me to do a comparison of an
7 equal question on the ESPAM versus the --

8 Q. Sure.

9 A. Okay. The more model cells that are present
10 would affect run time. And since I don't know what the
11 individual number of cells are, I think I -- that's all
12 I can say to that; it would affect run time.

13 Q. You wouldn't have experience of making
14 individual model runs with either model; is that true?

15 A. Not of either of those two, that is correct.

16 Q. So getting back to your report, you've looked
17 at Jennifer Sukow's 2019 curtailment runs, and
18 specifically the modeled impacts for 2007 --

19 A. That is right.

20 Q. -- is that correct?

21 And the second page of your report, you
22 contend that when single-year effects of pumping are
23 considered for multiple years, the hydrologic effects
24 overlap and are additive.

25 And is that -- is this contention based upon

1 the Department's model run and estimated hydrologic
2 responses to simulated curtailment?

3 A. I believe that is my personal conclusion, not
4 anything put out by the Department.

5 Q. So you didn't perform any actual model runs
6 for this; is that correct?

7 A. I did not.

8 Q. And then as part of this exercise, you said
9 you took the estimated volumes of consumptive use and
10 linearly scaled them to the consumptive use of 41,000
11 acre-feet for 2007; is that correct?

12 A. That is correct.

13 Q. And you used data from Tim Luke for that
14 groundwater pumping in 2019 and 2020?

15 A. That is correct.

16 Q. And then you made an assumption that 2021 will
17 be similar to 2020?

18 A. That is correct.

19 Q. With respect to that data that Mr. Luke gave
20 you, that was orally; is that correct?

21 A. That is correct.

22 Q. And you've not verified that data, have you?

23 A. I have attempted to verify it, but have not
24 been able to do so to date.

25 Q. So the answer is no you haven't verified?

1 A. The answer is no.

2 Q. That's something you did not have time to do
3 with the short schedule?

4 A. I think that would be an accurate
5 representation, yes.

6 Q. Based upon evaluating 2007 to today, have you
7 considered crops that are planted in the Bellevue
8 Triangle this year?

9 A. To the extent that I've created an estimate of
10 irrigation water requirement for general crops within
11 the area, yes. And I assume that that general crop
12 selection is represented in the current year. So to
13 that extent, yes.

14 Q. So to the extent that you believe 2007 is
15 accurate as to what's going on in 2021, that's as far as
16 you've gone?

17 A. In terms of crop --

18 Q. Correct?

19 A. -- issues, yes.

20 Q. And how about changes in efficiency on the
21 individual farms?

22 A. No, I have not considered that.

23 Q. Have you evaluated seepage losses in
24 irrigation canals?

25 A. No, I have not.

1 Q. So let's turn to your page 6 -- I'm sorry --
2 Table 1, page 4.

3 A. Okay.

4 Q. So your column, "Total Silver Creek Impacts"
5 -- and you have it identified by month -- this is your
6 sum of total pumping impacts from '19, '20, and 2021; is
7 that correct?

8 A. It is a cumulative number that represents
9 2019, 2020, and 2021, yes.

10 Q. And your "Total Irrigation Season"
11 number, 8,182 acre-feet, that's just the total of the
12 irrigation season, April through September?

13 A. That is correct.

14 Q. And do you agree that these impacts or
15 depletions do not equate to injury to a water right; is
16 that true?

17 A. I'm not qualified to indicate whether a
18 depletion equates to injury.

19 Q. At least a week ago you said it did, and I'm
20 just curious what's happened between now and then?

21 A. I would say that it's -- depletions are a
22 potential injury.

23 Q. But as far as depletions themselves do not
24 equate to injury; would you agree with that, or not?

25 A. I would agree with that.

1 Q. You agree that crop demands can be less than
2 what's stated on a water right, as far as maximum
3 diversion right?

4 A. Yes, I agree. Although, I will say that I've
5 been -- well, I'll leave it at that.

6 Q. And that a senior surface water user may not
7 be injured every year that groundwater pumping occurs;
8 would you agree with that?

9 A. I would agree with that, yes.

10 Q. And specifically for this case, you did not
11 analyze total annual crop water need for the seniors in
12 this case; is that true?

13 A. I would not agree with that assessment. The
14 previous testimony I provided, I believe, determines or
15 endeavors to determine the needed water to supply to the
16 crops within the Little Wood River/Silver Creek
17 drainage.

18 Q. Okay. I'll just -- again, that's a different
19 answer than I received last week. I asked you: "Have
20 you looked at a total annual volume crop water need for
21 the seniors in this case?"

22 Your answer was "no."

23 A. And, yeah, I will qualify that by that I
24 developed the analysis that I presented earlier within
25 the last several days.

1 Q. The exhibit that was not admitted this
2 morning --

3 A. Yes.

4 Q. -- is that what you're talking about?

5 A. Yes.

6 Q. That was your effort to look at total crop
7 water need for individual seniors in this case?

8 A. Not individual seniors, as a system.

9 Q. That was my question. So back to your Table 2
10 on page 6 of your report --

11 A. Okay.

12 Q. -- if you'd look at that.

13 That table shows the differences between
14 curtailment dates of July 1st or August 1st of this
15 year; is that correct?

16 A. It does.

17 Q. And your July 1st curtailment number, that
18 3,001 acre-feet --

19 A. Uh-huh.

20 Q. -- that number is made up of pumping impacts
21 from one-third of April, all of May, and all of June; is
22 that correct?

23 A. That is my understanding, yes.

24 Q. And then you've added the partial impacts from
25 the past two years in July, August, and September?

1 A. That is my -- yes, I think that is correct.

2 Q. And for the August 1st curtailment number,
3 that 4,695, is that pumping impacts from a third of
4 April, all of May, all of June, and all of July, and
5 then the partial impacts from the past two years in
6 August and September?

7 A. Are you referring to the second column under
8 "REACH GAINS" that says "4,695"?

9 Q. Correct.

10 A. Those numbers -- no. The answer would be no.
11 Those numbers are directly out of Sukow's 2021 staff
12 memo, not my computations.

13 Q. So the -- your impact number includes pumping
14 from prior years, but the reach gains does not; is that
15 true?

16 A. I guess I can't comment on how those were
17 produced, necessarily, by Jennifer -- Ms. Sukow, they
18 are just out of her report.

19 Q. So would you agree that the impacts -- from
20 the Department's standpoint of administration -- that
21 the impacts from pumping in 2019 and 2020 cannot be
22 remedied this year?

23 A. Can you repeat that question, Travis, please?

24 Q. As far as the Department's standpoint, they
25 have the authority to curtail water rights; would you

1 agree with that?

2 A. I do.

3 Q. And to your knowledge, did they curtail water
4 rights in 2019?

5 A. No.

6 Q. How about 2020?

7 A. Not to my knowledge.

8 Q. And that would be my question for this year,
9 for that pumping that was authorized in those two years,
10 can the Department curtail this year as a result of that
11 prior pumping?

12 A. That's a question of law that I'm not
13 qualified to answer.

14 Q. So you do agree that they were allowed to pump
15 in those two years; correct?

16 A. I do.

17 Q. And are you aware of any determination that
18 they were out of priority in those years?

19 A. I'm not aware of any determination.

20 Q. And did the seniors allege shortfalls in those
21 years?

22 A. They may or may have not. I am not aware of
23 that condition.

24 Q. So as far as this year, your evaluation was
25 for irrigation season impacts only; is that correct?

1 A. That is correct.

2 Q. And it was your understanding, at least at
3 your deposition, that was because your clients have not
4 made any claim upon water outside their season of use;
5 would you agree with that?

6 A. I'm not aware of any such claim for the
7 clients in the Little Wood River/Silver Creek drainage.

8 Q. And your analysis relies upon the Department's
9 curtailment run of the entire basin in the model
10 boundary; is that correct?

11 A. That is my understanding, yes.

12 Q. But then you reduced it by a couple factors,
13 would you agree with that, the 15 percent for irrigation
14 efficiency, and 30 percent for pumping north of Glendale
15 Road?

16 A. Are you referring to my numbers in column --
17 the second column under "IMPACTS" or Table 1 or both.

18 Q. I thought it was the impacts of -- your
19 impacts, correct, your column?

20 A. I'm still confused.

21 Q. Okay. When you looked at the curtailment memo
22 that Jennifer Sukow did, did you reduce that by a couple
23 factors?

24 A. I did not reduce any of her work by any
25 factors, I only applied those factors to my own work.

1 Q. Okay. And what were those factors?

2 A. Essentially, my basis that -- I think I
3 understand your line of questioning -- to arrive at the
4 8,182 -- I'm going to refer to notes, if I may?

5 Q. Sure.

6 A. I used recorded withdrawals for the entire
7 domain of 37,377 for 2019, 47,715 acre-foot for 2020,
8 and an assumed value of 47,715 acre-feet for 2021 to
9 arrive at an average value of 44,269. I then assumed a
10 15 percent loss for return flows to get to a value of
11 37,629, and then further reduced that by .68 or 68 -- I
12 guess -- further reduced it by 32 percent to account for
13 only those withdrawals within the potential area of
14 curtailment, yes.

15 Q. And that's reflected in your Table 1. I'm
16 sorry, I think I was on the wrong table.

17 A. That is -- that's how -- are you referring to
18 the 8,182?

19 Q. Yes.

20 A. That's how that number was -- part of the
21 support for that number arrives out of that -- those
22 calculations, yes.

23 Q. Would it be correct to say you did not analyze
24 pumping from any particular well or response function?

25 A. That is correct.

1 Q. And you did not evaluate the pumping from the
2 different aquifers; is that true?

3 A. That is correct.

4 Q. That would be the unconfined and the confined
5 system in the Wood River aquifer?

6 A. That is correct.

7 Q. But you would agree that the location of a
8 well and which aquifer it pumps from is important for
9 purposes of estimating impacts on Silver Creek?

10 A. I would, in general. However, within the
11 context of what I did, those effects, in my opinion, are
12 integrated into Jennifer Sukow's model responses, which
13 integrate both the responses from the unconfined and the
14 confined aquifers. So in this case, I do not believe
15 there's a distinction in terms of the numbers I used,
16 but in general, yes, I would agree with your statement.

17 Q. How about for administration for the rest of
18 this irrigation season, I guess, as far as putting water
19 into Silver Creek or when it would show up, would that
20 be an important factor?

21 A. Yes, I believe that would be an important
22 factor.

23 Q. Maybe more important than on a year-to-year
24 analysis or a general overview of the Basin?

25 A. Can you clarify, please?

1 Q. Yeah, certainly. If you're looking at
2 curtailing an individual groundwater right for the 2021
3 irrigation season, at some point, would it be important
4 to know that particular wells impact on the stream and
5 its timing?

6 A. I believe that would be important to know,
7 yes.

8 Q. Would that sort of evaluation evaluate the
9 uncertainty of the predicted model result?

10 A. Analysis -- so the analysis you're discussing
11 is analysis of which wells would have the most impact on
12 responses.

13 Q. Certainly. Individual wells.

14 A. I don't think that has any bearing on the
15 accuracy of the model.

16 Q. I meant the certainty, I'm sorry. I must have
17 said uncertainty.

18 A. Pardon me?

19 Q. I meant the word "certainty."

20 Would that impact from individual wells, would
21 that impact the certainty of the predicted model
22 results?

23 A. Are you asking me if there's a difference in
24 the certainty of response from a well in an unconfined
25 system versus a confined system.

1 Q. It's certainly dependent upon the location;
2 would you agree?

3 A. I would completely agree that it's dependent
4 on the location, yes.

5 Q. And in Ms. Sukow's report, she talked about an
6 uncertainty analysis performed by Alan Wylie.

7 Are you familiar with that?

8 A. I'm vaguely familiar with that report.

9 Q. And is it true that for your analysis, you
10 have not analyzed model uncertainty in this three-month
11 model simulation that she performed?

12 A. That is true.

13 Q. Looking back at the curtailment scenario, your
14 Table 2, is it true that you accepted the estimated
15 seepage loss of 25 percent?

16 Is that the number you used?

17 A. In computing the difference between the third
18 and fourth columns, yes, I accepted that estimation of
19 seepage losses at 25 percent.

20 Q. And was that a number that you came up with?

21 A. No.

22 Q. Okay. Where did that number come from?

23 A. That number came out of the approximate
24 average of the seepage loss range that was reported in
25 Sukow 2021 staff memo.

1 Q. That was an average for the entire year?

2 A. It was an approximate average for the entire
3 range, not for the year, but for an entire -- the range
4 that she quoted in that document.

5 Q. And did you recognize her estimated losses of
6 33 percent in July?

7 A. I'm sorry, can you restate?

8 Q. Do you recognize that she identified an
9 estimated loss of 33 percent in July?

10 A. No. I recognize that there was a range of
11 values around 25, and I do not recall any specific
12 months that were quoted, which they may have been.

13 Q. I guess it's for curtailment and water that
14 may show up this year.

15 Would you agree that an actual monthly
16 estimate is better than an average?

17 A. I'm not following. I'm sorry.

18 Q. If we're looking at administration for the
19 rest of the season -- we're here on June 10th -- would
20 evaluating estimated seepage losses by actual month and
21 if those estimates have been made, would that be a more
22 accurate value than a year-long average?

23 A. I would qualify my answer in this respect: I
24 think it's been testified to in these proceedings that
25 there is general uncertainty about the seepage loss

1 numbers and, therefore, the ability for us to
2 discriminate a value in any given month would be
3 suspect. And so I would say if the gages were providing
4 accurate data, then I would agree with the assertion.

5 Q. Do you have an opinion on the accuracy of the
6 gages involved?

7 A. I cannot render that opinion.

8 Q. Can you turn to Jennifer Sukow's memo. I
9 think it's IDWR 2.

10 Could you turn to page 28, please.

11 A. 28?

12 Q. Yes.

13 A. I'm there.

14 Q. So have you reviewed this table before?

15 A. No, I have not.

16 Q. So I'll give you a minute to look at it.

17 A. Okay. [Reviewing documents.]

18 All right.

19 Q. So I'm looking at the July 20, and I think
20 that's 2020, that there were some measurements taken and
21 some calculated seepage losses performed.

22 Do you see that 33 percent?

23 A. I do see that.

24 Q. Do you accept that?

25 A. No.

1 Q. You don't. Why not?

2 A. As I said before, I have no knowledge of the
3 accuracy or dependability of that gage information and,
4 therefore, I cannot either accept or reject that number.

5 Q. So you accept Jennifer's work for certain
6 things, but not this time; is that right?

7 A. I accept her range of values as reported, but
8 not at a monthly level.

9 Q. So in your estimate, it would be more accurate
10 to use a range of values average than what's actually
11 measured and estimated in a given month?

12 A. I believe that the range probably represents
13 the average over the irrigation period and the
14 individual months, I think, would have less certainty to
15 them.

16 Q. So if we were to accept the monthly estimates,
17 would that change your numbers in Table 2?

18 A. I think it would, yes. It would yield less
19 back to Station 10 than the 25 percent that I assumed,
20 yes.

21 Q. And, certainly, in August it would be
22 20 percent versus 25; do you agree with that?

23 A. I would agree.

24 Q. Looking at your Appendix C or Appendix D in
25 your report -- go back to that.

1 A. Is it D that you're looking at?

2 Q. I was looking at C first.

3 A. Okay. I am at C.

4 Q. And as far as the work you did, the last
5 section of your report, the section titled, "Depletion
6 and Potential Injury for the 2021 Irrigation Season,"
7 it's true you relied upon Mr. Lakey's predicted shutoff
8 dates and then those list of water rights in Appendix D;
9 is that correct?

10 A. I believe I -- depending upon the cutoff
11 dates, but I did not depend upon this sheet. After he
12 had -- I had received this sheet from Mr. Lakey, I
13 received a more expansive sheet listing individual
14 rights with individual days of water availability to
15 support my analysis. But my suspicion is this is a
16 subset, a summarization of that, but I did not use this
17 appendix directly.

18 Q. But Appendix D is a list of all of the water
19 rights that you then attributed numbers to --

20 A. Yes.

21 Q. -- days on?

22 And that was based upon Mr. Lakey's
23 estimates --

24 A. Yes, that is true.

25 Q. -- of cutoff days? Okay.

1 A. Yes.

2 Q. And based upon this list of water rights,
3 you've tabulated what you term an average water right
4 having 62 days of water; is that correct?

5 A. That is correct.

6 Q. With an average cutoff of June 21st, 2021?

7 A. Yes.

8 Q. I guess with the testimony you've heard over
9 this past week, would you agree that there's no such
10 thing as an average water right?

11 A. I would agree.

12 Q. Would you agree every water right is different
13 as far as priority and quantity?

14 A. I would agree.

15 Q. And Mr. Lakey testified this morning, as far
16 as if there were a curtailment in July and August, which
17 water rights would receive water.

18 Did you hear that testimony?

19 A. I did.

20 Q. And would you agree with it?

21 A. I would.

22 Q. You talk about an irrigation hiatus at the end
23 of your report. And the way I understand that is you
24 were projecting a cutoff date of June 20th, 2021; is
25 that correct?

1 A. June 21st, 2021, yes.

2 Q. Thank you. June 21st. And then if there were
3 a curtailment on July 1st or August 1st, that would
4 result in a hiatus of when water would be available; is
5 that true?

6 A. Assuming that there was no supplemental water
7 through private leases or other things brought, yes.

8 Q. And do you agree there could be a significant
9 gap in time between those predicted cutoffs on surface
10 rights and the time when curtailed groundwater reenters
11 the surface stream?

12 A. I believe that depends upon the outcome of
13 these proceedings to make that assertion.

14 Q. But in your report you estimate that between
15 14 and 45 days; is that true?

16 A. That is true.

17 Q. And would you agree that the total water
18 realized in any given month could take longer based upon
19 the model?

20 A. Take longer than?

21 Q. 14 days. We'll use that number.

22 A. I do not -- I'm not sure that the model speaks
23 to timing of delivery more than on a monthly time step,
24 which is the -- my understanding is that the time step
25 on the model is on a monthly time step. And so outside

1 that, I don't think we can speak to timing of returns.

2 Q. So it predicts a total quantity on a monthly
3 time basis over that whole month, like that total
4 diversion -- or total quantity? I'm sorry.

5 A. That is my understanding.

6 Q. So that could take anywhere from 1 to 30 days?

7 A. Yes.

8 Q. So you talked about, in this last section of
9 your report, that -- you reference, "anecdotal reports
10 indicate it takes only three to four days following the
11 cessation of pumping for increases in discharge to be
12 measurable in the system."

13 What's the basis for your statement right
14 there?

15 A. Discussions with various users and the
16 watermaster relating those anecdotes to me.

17 Q. And did they tell you they'd give you a date
18 of three to four days?

19 A. Did you ask for a date?

20 Q. Just a number of days. It says three to four
21 days.

22 A. Yeah, that's my recollection of what they
23 elaborated to me.

24 Q. Did you hear the testimony of Mr. Lakey this
25 morning?

1 A. I did.

2 Q. And I thought I heard seven to ten days for an
3 event last August?

4 A. That is not my recollection of Mr. Lakey's
5 testimony. I believe he said it was on the order of
6 closer to my own.

7 Q. Okay. You believe he testified it took three
8 to four days from the shutdown of groundwater pumps for
9 water to show up at Station 10?

10 A. That is my recollection, something on that
11 order.

12 Q. We can, obviously, refer back to the record.
13 I thought I heard seven to ten days.

14 You were here for all of the witnesses, the
15 senior surface water users; correct?

16 A. I was.

17 Q. And what happens to sugar beets if they don't
18 receive water for 45 days?

19 A. I'm not qualified to render an opinion in that
20 regard.

21 Q. Any other crops?

22 A. No.

23 Q. So you don't have -- as far as your past
24 experience with crop irrigation requirements, you have
25 no knowledge of a lack of water and specific days what

1 that does to the crop?

2 A. My previous experience is limited to the
3 irrigation crop requirements, assuming there is not a
4 deficit of water and do not extend to -- the
5 consequences to the crop under a deficit of water.

6 Q. So for irrigation hiatus -- I'll use your
7 term -- you don't have an estimate of what happens to
8 particular crops if they're off for a certain time?

9 A. I do not.

10 Q. So based upon the model results, you've
11 accepted Jennifer Sukow's runs, and I guess the output
12 of her memo; is that correct?

13 A. In my opinion, having both reviewed the model
14 and sitting in on a variety of technical advisory
15 committee meetings of which I am a party, I believe the
16 model is the best available science we have to answer
17 these questions.

18 Q. So would you agree with that prediction that
19 for either July 1st or an August 1st curtailment that
20 67 percent of that water curtailed will remain in the
21 aquifer for the balance of the irrigation season?

22 A. Yes, I do.

23 Q. And I believe last week you testified that's
24 not an optimum use of water resources for the rest of
25 this irrigation season, in your opinion?

1 A. That is not my recollection of my testimony.

2 Q. What's your recollection?

3 A. I cannot recall, but I do not recollect
4 stipulating to that.

5 Q. I'll just read it. I asked you a question:
6 "Would you agree that with the July 1st curtailment,
7 that approximately 67 percent of that water curtailed
8 remains in the aquifer?

9 "Answer: In the 1st -- in the year of the
10 curtailment?

11 "Question: Yes.

12 "Answer: Yes, I would agree with that.

13 "Question: Is that water beneficially used by
14 anybody?

15 "Answer: Not at that point.

16 "Question: Is that an optimum use of the
17 water resource, in your opinion?

18 "Answer: To leave potentially curtailed water
19 in an aquifer system?"

20 "Question: 67 percent.

21 "Answer: My personal belief is that the water
22 will reenter the system within two years, three years at
23 the outset, and will be available. So if you want to
24 put a year -- a one-year time frame around that, then I
25 would say no."

1 Do you still agree with that testimony or not?

2 A. I do.

3 Q. Isn't it true, Mr. Miller, in your report
4 you're not offering an opinion on the reasonably
5 anticipated average rate of future natural recharge?

6 A. That is true.

7 Q. And you are also not offering any opinion on
8 a reasonable groundwater pumping level; is that correct?

9 A. Reasonable in relation to an adequate rate of
10 recharge, or what is the basis of reasonability?

11 Q. Just a reasonable groundwater pumping level
12 for pumping.

13 A. I have no context for which to be able to
14 answer that.

15 Q. Did you review Mr. Blankenau's memo in this
16 case?

17 A. I did a cursory review of his memo and his
18 conclusions.

19 Q. Any reason to disagree with that today?

20 A. No.

21 MR. THOMPSON: Thank you. That's all of the
22 questions I have.

23 HEARING OFFICER: Thank you, Mr. Thompson.

24 Ms. O'Leary?

25 MS. O'LEARY: Just a few, Director.

1 CROSS-EXAMINATION

2 QUESTIONS BY MS. O'LEARY:

3 Q. Good afternoon, Mr. Miller. My name is
4 Heather O'Leary. I am an attorney for Galena Ground
5 Water District, and I just have a few questions for you
6 this afternoon.

7 Mr. Miller you've classified yourself as an
8 expert in modeling; is that correct?

9 A. Yes.

10 Q. Can you please tell me, as a modeler, what are
11 the typical hydraulic conductivity values in groundwater
12 models with alluvium material?

13 A. Well, it depends on where you're at, but in
14 most cases I deal with in the area, they're probably
15 around 2,000 feet per day, in that region. Maybe 10 to
16 200 -- or 2,000 feet per day.

17 Q. So that would be the kind of values you expect
18 when you run a model?

19 A. Yes. There's a wide range of variabilities in
20 that, but that's the median values that I would expect
21 to see, yes.

22 Q. Mr. Miller, can you have a multiyear effect if
23 surface rights are not curtailed?

24 A. If surface rights are not curtailed, can you
25 have a multiyear effect?

1 From pumping, presumably?

2 Q. Correct.

3 A. I believe so, yes, under one condition. If we
4 have a sequence of dry years where there's not
5 significant additional recharge that can reset the
6 system, I believe that you're going to see additive
7 effects over those periods over multiyears, yes.

8 Q. Now, in your deposition, I believe it was
9 about a week ago, and here today, you mentioned that you
10 are a member of the Wood River Valley Modeling Technical
11 Advisory Committee; is that correct?

12 A. That's right.

13 Q. And that committee -- during those meetings, I
14 believe you discuss certain aspects about the model,
15 such as direction of modeling efforts, things like that;
16 is that correct?

17 A. That is right.

18 Q. Now, you've only been a member of that
19 committee for two years, though; right?

20 A. That is approximately accurate, yes.

21 Q. Are you aware that that committee has held
22 bimonthly meetings since 2013?

23 A. I was not aware that the -- when they
24 initiated those meetings, no.

25 Q. Well, given that you've only been involved in

1 it for two years, it's fair to say that you have no
2 knowledge regarding what was discussed from 2013 until,
3 approximately, 2019; is that accurate?

4 A. I would agree, yes. That's true.

5 Q. So you don't have any knowledge about the
6 modeling efforts prior to 2019; right?

7 A. That is correct.

8 Q. So your knowledge is just limited to a short,
9 two-year span, then?

10 A. That is right.

11 MS. O'LEARY: That's all I have, Mr. Miller.
12 Thank you.

13 THE WITNESS: Thank you.

14 HEARING OFFICER: Thank you, Ms. O'Leary. And
15 thanks for speaking up.

16 Let's see, Group -- Ann Vonde, questions?

17 MS. VONDE: No.

18 HEARING OFFICER: Thank you.

19 Group 3? Mr. Lawrence, you're first.

20 MR. LAWRENCE: Thank you, Mr. Director.

21

22 CROSS-EXAMINATION

23 QUESTIONS BY MR. LAWRENCE:

24 Q. And good afternoon, Mr. Miller.

25 A. Hello.

1 Q. Mike Lawrence, attorney for the City of
2 Hailey. I think this will be fairly brief.

3 Mr. Miller, your opinion in this proceeding is
4 limited to the impacts of groundwater pumping in the
5 Triangle; is that correct?

6 A. That is correct.

7 Q. Your analysis mentions residual effects of
8 previous groundwater withdrawals from 2019 and 2020;
9 correct?

10 A. Correct.

11 Q. But groundwater withdrawals prior to 2021
12 cannot be curtailed; is that correct?

13 Would you agree with that?

14 A. I would agree with that, yes.

15 Q. Is it your position that groundwater users are
16 responsible for the impacts of pumping prior to the
17 issuance of a curtailment order?

18 A. Can you rephrase -- or repeat, please? I'm
19 sorry.

20 Q. Is it your position that groundwater users are
21 responsible for the impacts of pumping prior to the
22 issuance of a curtailment order?

23 A. I think it's a matter of law that I'm not
24 qualified to answer.

25 Q. In your analysis, you scaled the pumping

1 impacts for three years together; is that -- am I saying
2 that correctly?

3 A. I summed them for three years and then took
4 the total and then scaled them.

5 Q. Okay.

6 A. Yes.

7 Q. Is that part of your analysis employing the
8 principal of superposition?

9 A. I would say that it is similar to the
10 principal of superposition.

11 Q. How is it different?

12 A. Additive effects are typically done
13 concurrently in terms of temporal space, not necessarily
14 in different years. And so I don't know if it would be
15 perfect employment of the principal of superposition,
16 but for purposes of this argument, yes, generally so,
17 yes.

18 Q. Is it true that the use of superposition would
19 presume that the model is linear?

20 A. Yes, that is true.

21 Q. And do you recall hearing Ms. Sukow testify
22 that the model was nonlinear and that you cannot use
23 superposition?

24 A. I recall her saying the model can be used in
25 either superposition mode or other modes.

1 Q. Do you recall whether she used it in
2 superposition mode?

3 A. I do not know that.

4 Q. Earlier with Mr. Thompson, you discussed
5 the -- your analysis of reducing Ms. Sukow's model
6 figures, her model run conclusions, to account for
7 irrigation efficiency.

8 Do you recall that?

9 A. I recall speaking to the difference in our
10 approaches in how we dealt with those, yes.

11 Q. Is it true that your analysis assumes an
12 85 percent irrigation efficiency for all pumpers?

13 A. I would say it differently. I would say my
14 analysis assumes a 15 percent return flow, percent
15 return flow.

16 Q. But isn't that the flip side of the coin, that
17 that would assume 85 percent irrigation efficiency?

18 A. The term "irrigation efficiency," I think, is
19 perhaps not the -- exactly the right term here, but it
20 is the combination of a variety of factors. I'd just
21 say that my work assumed 15 percent return flows, which
22 is 1 minus .85 or 1 minus 85, yes.

23 Q. Have you analyzed whether 85 percent
24 irrigation efficiency is reasonable for all pumpers?

25 Or maybe I should put it this way: Have you

1 analyzed whether 15 percent return flows is reasonable
2 for all pumpers?

3 A. I have personally not, but I have hired a
4 third-party expert to render an opinion for the
5 Triangle, the area of interest, and he has provided an
6 estimate to me.

7 Q. And what was his estimate?

8 A. He estimated that the percent return flows for
9 the potential area of concern is, approximately,
10 8.5 percent.

11 Q. So somewhat less than the 15 percent that you
12 assumed?

13 A. [Witness nods head.]

14 HEARING OFFICER: And the answer is,
15 Mr. Miller?

16 THE WITNESS: Oh, I'm sorry. Yes, it is --
17 that is less than the return flows that were assumed in
18 my -- yes, my report.

19 Q. (BY MR. LAWRENCE) Do you know the upper limit
20 of efficiency for center pivots?

21 A. The upper limit of efficiency? I can estimate
22 that range of probably at 95 percent to 100, maybe 97.
23 So, yes, 95 or slightly better.

24 Q. And isn't it true that there are many pumpers
25 in the Triangle that don't have center pivots?

1 A. That is true.

2 Q. You were discussing with Mr. Thompson the
3 seepage losses in the Little Wood River.

4 Do you recall that conversation?

5 A. I do not.

6 Q. I believe you testified that you used a
7 25 percent assumption for seepage loss between
8 Sportsman's Access gage and Station 10; is that correct?

9 A. That is true, yes.

10 Q. And didn't you and Mr. Thompson discuss that
11 Ms. Sukow found ranges between 20 and 37 percent losses
12 in that reach?

13 A. I would have to refer to that memo. I don't
14 know what the range was, but I believe the upper end was
15 37 percent. May I refer to her memo?

16 Q. Do you know what the seepage losses are below
17 Station 10?

18 A. I do not, no.

19 Q. You have not done any analysis of that?

20 A. No, I have not.

21 Q. Have you considered the error uncertainty in
22 your 25 percent transit loss --

23 A. I have not.

24 Q. -- assumption?

25 COURT REPORTER: Can you say that question

1 again, please?

2 MR. LAWRENCE: I'll try. "Have you considered
3 error or uncertainty in your 25 percent transit loss
4 assumption?"

5 Q. (BY MR. LAWRENCE) Have you evaluated seepage
6 losses upstream of Sportsman's Access?

7 A. I have not.

8 Q. Have you analyzed the diversion and use of
9 water by surface water users on Silver Creek?

10 A. No, I have not.

11 Q. Mr. Miller, I want to discuss with you,
12 briefly, a couple of the numbers that I believe are
13 conclusions that you've testified to today.

14 One number is found on page 3 of your report.
15 And it says that the computed hydrologic impacts to
16 surface water rights in the Little Wood/Silver Creek
17 drainage during the 2021 irrigation season would be --
18 you calculate to be approximately 8,182 acre-feet
19 resulting from groundwater pumping south of Glendale
20 Road.

21 A. I see that.

22 Q. So just so I'm clear, that 8,182 acre-feet,
23 that's calculated from the three years -- your analysis
24 of the three years of pumping, 2019, 2020, and 2021; is
25 that correct?

1 A. That is correct, yes.

2 Q. Is it your opinion that Mr. Rigby's clients
3 will be injured to the tune of 8,182 acre-feet in 2021?

4 A. Not necessarily, no.

5 Q. Is it your opinion that Mr. Rigby's clients
6 will have shortfalls totaling 8,182 acre-feet?

7 A. I would render -- I would rather say it in
8 this way, that the system will receive, approximately,
9 8,182 acre-feet less water than it would have otherwise
10 if pumping had not happened. How that is received or
11 disbursed or given or injured is beyond the scope of
12 this statement.

13 Q. And Mr. Rigby's clients are just a portion of
14 the users on the system; is that correct?

15 A. That is my understanding, yes.

16 Q. So their shortfalls would be something less,
17 in your opinion, than the 8,182?

18 A. I would agree to that, yes.

19 Q. And through another analysis that you
20 testified to, you concluded that there would be a
21 10,000 acre-foot deficit below the adequate water supply
22 in 2021.

23 Did I say that accurately?

24 A. Can you say that one more time, please?

25 Q. You testified to another analysis you

1 conducted where you concluded that the -- that there
2 would be a 10,000 acre-foot deficit in 2021 below what
3 you've determined to be the adequate water supply?

4 A. That is correct.

5 Q. And, again, is it correct to say that
6 Mr. Rigby's clients would require something less than
7 that 10,000 acre-feet that you found?

8 A. I am not following this question, I'm sorry.

9 Q. Well, let me -- I probably asked it poorly.
10 I'm sure I did.

11 Let me try it this way: It is not your
12 testimony that Mr. Rigby's clients have a
13 10,000 acre-foot deficit below their adequate water
14 supply; is that correct?

15 A. That is correct, yes.

16 Q. And, again, it would be something less than
17 10,000 acre-feet for Mr. Rigby's clients because they
18 are just a portion of the users in the system?

19 A. I would agree with that, yes.

20 Q. Did you analyze actual or material injury in
21 2021 to any particular water rights?

22 A. I did not.

23 Q. Do you know whether all of the acres, when in
24 the places of use, for any water rights will be
25 irrigated in 2021?

1 A. I do not. I do not know.

2 Q. Did you analyze whether in 2021 any water
3 rights will use water efficiently and without waste?

4 A. No.

5 Q. Did you analyze the amount of water available
6 in 2021 and the source from which a particular water
7 right is diverted?

8 A. No.

9 Q. Did you analyze the effort or expense of the
10 holder of a water right to divert water from the source
11 in 2021?

12 A. No.

13 Q. Did you analyze whether the exercise of junior
14 priority groundwater rights individually or effectively
15 effects the quantity and timing of when water is
16 available to any particular senior priority surface or
17 groundwater right?

18 A. No.

19 Q. Did you analyze whether the exercise of junior
20 priority groundwater rights, individually or
21 collectively, affects the cost of exercising any
22 particular senior priority surface or groundwater right?

23 A. No.

24 Q. Did you analyze the rate of diversion compared
25 to the acreage of land served by any senior priority

1 irrigation rights?

2 A. I did not.

3 COURT REPORTER: And can you slow down a
4 little bit?

5 MR. LAWRENCE: Sure. Gladly.

6 Q. (BY MR. LAWRENCE) Did you analyze, for the
7 2021 irrigation season, the annual volume of water
8 diverted by any senior priority irrigation right?

9 A. I did not.

10 Q. Did you analyze the system diversion and
11 conveyance efficiency of any senior priority irrigation
12 rights?

13 A. I did not.

14 Q. Did you analyze the method of irrigation water
15 application for any senior priority water rights?

16 A. I did not.

17 Q. Did you analyze the amount of water being
18 diverted and used compared to the water rights?

19 A. I did not.

20 Q. Did you analyze the existence of water
21 measuring and recording devices?

22 A. I did not.

23 Q. Did you analyze the extent to which the
24 requirements of the holder of senior priority water
25 rights could be met with the user's existing facilities

1 and water supplies by employing reasonable diversion and
2 conveyance efficiency and conservation practices?

3 A. I did not.

4 Q. Did you analyze the extent to which
5 requirements of senior priority surface water rights
6 could be met using alternate reasonable means of
7 diversion or alternate points of diversion?

8 A. I did not.

9 MR. LAWRENCE: That's all of my questions.

10 Thank you, Mr. Miller.

11 HEARING OFFICER: Thank you, Mr. Lawrence. I
12 assume now that the other attorneys want to participate
13 in this examination.

14 Mr. Bromley and Ms. McHugh?

15 MS. MCHUGH: I have no questions.

16 HEARING OFFICER: Okay. Mr. Bromley?

17 MR. BROMLEY: Thank you.

18
19 CROSS-EXAMINATION

20 QUESTIONS BY MR. BROMLEY:

21 Q. Mr. Miller, hi.

22 A. Hello.

23 Q. Chris Bromley. I'm looking at your expert
24 report, Mr. Miller, and I'm in Appendix B.

25 A. Okay.

1 Q. Did you prepare this table?

2 A. I did not.

3 Q. Where did it come from?

4 A. One moment. May I refresh myself with the
5 table?

6 Q. Yep.

7 A. I'm sorry, proceed.

8 Q. Sure. Appendix B. And it says it's "Water
9 Rights in the LW-SC Drainage."

10 And did you prepare this table?

11 A. I did not.

12 Q. Do you know where it came from?

13 A. I received this from the watermaster,
14 Mr. Kevin Lakey.

15 Q. And for what purpose did you use this table in
16 your --

17 A. This table was used, ultimately, to support my
18 calculation of the average cutoff date for all of these
19 users on this table.

20 Q. Okay. So one of the things that was just
21 interesting to me, Mr. Miller, as I was listening to
22 your testimony and I was looking at this table and was
23 just curious about some of the water rights, and the
24 very first one that I opened up was marked 29-P3.

25 Do you see that?

1 A. I do see that, yes.

2 Q. And it's in the name of Walter Hofstetter?

3 A. I see that.

4 Q. And when I went to look this water right up,
5 37-1224C, in the records of the Department, there was
6 not a Hofstetter associated with this water right. And
7 the diversion rate that's in this table, which is 0.70
8 cfs, when I did find the Hofstetter water right, which
9 is actually 37-1224A, the decreed diversion right is for
10 .651 cfs.

11 So you didn't, then, independently verify this
12 table with the records of the Department?

13 A. I did not, no.

14 Q. I then looked at another one, which was 69-P.
15 Do you see that?

16 A. Yes, I see that.

17 Q. It says Lincoln County Cemetery is the owner,
18 and water right 67-0606 [sic]. And when I look in the
19 records of the Department, there is no 37-0606. There
20 is a 37-0606E. I haven't, then, taken the time to go
21 through the rest of them, but, you know, just plucking
22 two, I was surprised to find errors like that.

23 And you had said earl ier that you believed
24 yourself at least conversant with the records of the
25 Department. Would it surprise you, then, that this

1 table has errors?

2 A. It would not surprise me, but it would
3 surprise me if the incidence of errors was very large,
4 which I did not analyze.

5 Q. And at least with the Walter Hofstetter right,
6 where there's -- it's showing a diversion rate of .7, in
7 reality the diversion rate is .651, as decreed, and this
8 is being attached to your expert report, which is
9 purporting to show losses within the system attributable
10 to groundwater pumping; correct?

11 A. One moment. I want to look through this. I
12 would agree with that, but I would caveat that by saying
13 that in this particular analysis that I did, the
14 difference between the stated -- the instantaneous
15 diversion and the discrepancy would not have materially
16 affected my finding of a June 21st cutoff date. But,
17 yes, in general, I would agree with that.

18 Q. And would you agree that we ought to be using
19 the decreed diversion rates as opposed to something
20 else?

21 A. I would completely agree with that, yes.

22 Q. The last question, Mr. Miller. Are you here
23 advocating for curtailment outside of the Bellevue
24 Triangle of groundwater rights?

25 A. No.

1 MR. BROMLEY: Nothing further. Thank you.

2 HEARING OFFICER: Thank you, Mr. Bromley.

3 Okay. Mr. -- let's see. Do we have anybody
4 else? I don't believe we do.

5 Okay. So redirect, Mr. Rigby?

6 MR. RIGBY: No questions.

7 HEARING OFFICER: Okay. Thank you,
8 Mr. Miller.

9 What do we want to do at this point? Who's
10 your next witness?

11 MR. RIGBY: Mr. Director, I believe we are
12 done.

13 HEARING OFFICER: So you're ready to rest?

14 MR. RIGBY: We are ready to rest.

15 HEARING OFFICER: Do we want to take a break
16 before we start?

17 Mr. Barker, I assume you or Mr. Thompson will
18 be calling witnesses?

19 MR. BARKER: So Ms. Vonde has asked to go
20 ahead.

21 HEARING OFFICER: Oh, okay.

22 MR. THOMPSON: We have agreed with that. And
23 so --

24 HEARING OFFICER: I noticed you had a witness
25 here.

1 Do we -- you want to take a break, Ms. Vonde?

2 MS. VONDE: Yes, that would be welcomed.

3 HEARING OFFICER: Okay. Let's take ten
4 minutes.

5 (Break taken.)

6 HEARING OFFICER: Let's go back on the record.

7 So we're back on the record after the
8 afternoon or late afternoon break. Mr. Rigby and
9 Mr. Fletcher have rested, and, by agreement, Fish and
10 Game will now present evidence.

11 Ms. Vonde, you have a witness here that I need
12 to swear in. If you will -- Mr. Anderson, if you'll
13 stand and raise your right hand, please.

14

15 GREGG ANDERSON,
16 first duly sworn to tell the truth relating to said
17 cause, testified as follows:

18

19 HEARING OFFICER: Thank you. Please be
20 seated.

21 Ms. Vonde?

22

23 DIRECT EXAMINATION

24 QUESTIONS BY MS. VONDE:

25 Q. Can you please state your name and spell it

1 for the record.

2 A. Gregg, G-r-e-g-g, Anderson, A-n-d-e-r-s-o-n.

3 Q. And what is your current job title and who do
4 you work for?

5 A. I'm a fish hatchery supervisor for Idaho Fish
6 and Game. And I manage the Magic Valley complex.

7 Q. And what is your current work address? Your
8 current work address?

9 A. Oh, you know, I can't, honestly, give that to
10 you. It's our Jerome regional office.

11 HEARING OFFICER: Mr. Anderson, you will need
12 to speak up.

13 THE WITNESS: It's Idaho Fish and Game's
14 Jerome regional office. I do not have the exact
15 address.

16 Q. (BY MS. VONDE) That's fine. Thank you.

17 So how long have you been in your position?

18 A. I've been in my current position two years.

19 Q. And what is your educational background?

20 A. I have an associate of applied science in fish
21 hatchery management and a bachelor of science in project
22 management.

23 Q. And what is your current work experience?
24 What are your current duties?

25 A. I've currently worked for Idaho Fish and Game

1 for 14 years. The hatchery in question, Hayspur
2 Hatchery, I was manager of it from 2015 to 2018, and I
3 currently manage over -- I oversee that hatchery now in
4 my current position as well.

5 Q. And do you have any other relevant work
6 experience?

7 A. I was also a fish hatchery manager for Fish
8 Breeders of Idaho, 2005-2006. And I was a fish
9 culturist for the Nevada Department of Wildlife in '86,
10 '87, and '88.

11 Q. Thank you. Where is the Hayspur Fish Hatchery
12 located?

13 A. It is on -- it's right off of Highway 20 about
14 4 miles west of Picabo.

15 Q. And is that within the Bellevue Triangle?

16 A. Yes, it is.

17 Q. And is it your understanding that the hatchery
18 lays within the area of potential curtailment outlined
19 for this proceeding?

20 A. Yes.

21 Q. Can you please turn to Exhibit 25, and let's
22 take a look at page IDFG 426.

23 So can you please just tell us what this is a
24 photo of?

25 A. That's an aerial view of the fish hatchery,

1 and it encompasses all of the hatchery.

2 Q. And can you describe, in a general way, the --
3 sort of the surface body sources of water that we see in
4 this photo?

5 A. The surface water, you really can't see it,
6 there's a small box off to the -- it's right in the
7 center here at the top. It says it's "Butte Creek
8 Springs." There's actually a metal structure that the
9 spring is under, and that is the head of Butte Creek.
10 And that is one water source that's surface. Then if
11 you look just to the left of all of the silos, Loving
12 Creek is another one of our surface water sources.

13 Q. And what is the other large kind of
14 pond-looking --

15 A. The one large pond that runs right along the
16 lower section where the raceways are is called Gaver's
17 Lagoon. It's an offshoot of Loving Creek.

18 Q. So does Fish and Game have surface water
19 rights associated with Loving Creek and the Butte
20 Springs?

21 A. Yes.

22 Q. And what is the water right associated with
23 Loving Creek, do you know the number?

24 A. Loving Creek is 25 cfs.

25 Q. And is that Water Right No. 37-2695?

1 A. I believe, yes, it is.

2 Q. Does Fish and Game use its Loving Creek water
3 right in the hatchery?

4 A. Currently, we do not actively use it in the
5 hatchery due to pathogen levels. We do use it to supply
6 water for the fishing pond that's right below the
7 hatchery --

8 Q. And is that?

9 A. -- or adjacent to the hatchery.

10 Q. Excuse me. Is that Gaver's Lagoon?

11 A. Gaver's Lagoon, yes.

12 Q. Is it your understanding that this Loving
13 Creek surface water right is subject to potential
14 curtailment under this proceeding?

15 A. The surface water right, no. This is only for
16 groundwater, from my belief.

17 Q. And then does Fish and Game also have a water
18 right associated with Butte Creek Springs?

19 A. Yes.

20 Q. And is that Water Right 37-2489?

21 A. Correct.

22 Q. And do you know what the quantity on the face
23 of that water right is?

24 A. I believe that one is 15 cfs.

25 Q. How much does that spring actually produce

1 now?

2 A. Right now we're lucky if we can get a little
3 over 5 cfs.

4 Q. And do you use that Butte Springs water right
5 in the hatchery itself?

6 A. Yes.

7 Q. So is it your understanding that the Butte
8 Springs water right is subject to potential curtailment
9 under this proceeding?

10 A. The spring is not. It's the surface water.

11 Q. The hatchery also has three groundwater
12 rights; is that correct?

13 A. Correct.

14 Q. So on the map here on page 462, we see
15 Well No. 2 delineated. And is that associated with
16 Water Right 37-8271?

17 A. Yes.

18 Q. Okay. That has been previously submitted as
19 Fish and Game Exhibit 4.

20 Can you flip over to that tab quickly?

21 A. Which page was that?

22 Q. 4.

23 A. 4.

24 Q. Do you have Water Right 37-8271 there?

25 A. I have to figure out how to read this page

1 right quick.

2 Q. It's right at the top, just under the heading.

3 A. Oh, yep. Gotcha.

4 Q. How much is that water right for on the face
5 of the water --

6 A. 1 cfs.

7 Q. And about how much does that Well No. 2, which
8 is associated with that water right, actually produce?

9 A. It actually produces just under 1 cfs.

10 Q. Is this water right labeled, on its face, as
11 nonconsumptive?

12 A. Yes, it's nonconsumptive.

13 Q. Is it your understanding that this water right
14 may potentially be subject to curtailment under this
15 proceeding?

16 A. Yes.

17 Q. And then I won't have you flip back, but Well
18 No. 3, is that also associated with a water right?

19 A. Correct.

20 Q. Is that Water Right 37-7038?

21 A. Yes.

22 Q. Can you please flip to what has previously
23 been submitted as Fish and Game Exhibit 2.

24 And is that Water Right 37-7038?

25 A. Yes.

1 Q. How much is that water right for on the face
2 of the water right itself?

3 A. 2 cfs.

4 Q. And how much does that well actually produce?

5 A. That one we probably, actually, get about half
6 a cfs.

7 Q. Is that right labeled as nonconsumptive on its
8 face?

9 A. It is nonconsumptive.

10 Q. Does it say on the face of that water right
11 that it's nonconsumptive?

12 Do you see anywhere on there that it does?

13 A. [Reviewing documents.]

14 Q. And I could just represent to you that it does
15 not, if that helps.

16 A. I just see "fish propagation." I don't see
17 it.

18 Q. Right. Okay. So do you know why that one
19 doesn't have that label on it?

20 A. I do not.

21 Q. Is it used in the hatchery --

22 A. It is used in the hatchery.

23 Q. -- the same way the others are?

24 HEARING OFFICER: Okay. You'll need to wait
25 until she finishes. You're answering before she

1 finishes her question. Thank you.

2 Q. (BY MS. VONDE) Is it your understanding that
3 this Water Right 37-7038 is also subject to potential
4 curtailment under this proceeding?

5 A. Yes.

6 Q. All right. Then Well No. 4 is associated with
7 Water Right 37-8331; is that correct?

8 A. Yes.

9 Q. So that has been previously submitted as Fish
10 and Game Exhibit 4.

11 Can you flip -- Exhibit -- sorry, hold on.
12 Excuse me, it's Exhibit 6. So do you have 37-8331 in
13 front of you?

14 A. Yes.

15 Q. How much is that water right for on the face
16 of the water right?

17 A. 3 cfs.

18 Q. And how much, in your experience, does that
19 well actually produce?

20 A. About one and a half cfs.

21 Q. And if you would look at Condition No. 2,
22 Conditions of Approval No. 2, does that state that this
23 water right is nonconsumptive?

24 A. Yes.

25 Q. Is it your understanding that this water right

1 may be subject to potential curtailment under this
2 proceeding?

3 A. Yes.

4 Q. Okay. Let's turn back to Exhibit 25, please.

5 And let's look at the first page, IDFG 425,
6 which is a diagram.

7 Okay. So what are the four sources of water
8 that enter the hatchery?

9 A. You have Butte Springs, Well 2, Well 3, and
10 Well 4.

11 Q. And from each of those points of diversion,
12 where does the water go?

13 A. All of those go to what's called our head box.
14 And when they go into there, they are elevated through a
15 degas tower to remove any gases or nitrogen or so forth
16 that are in the water, which is commonly found in well
17 sources.

18 Q. Are each of those points of diversion piped
19 from the point of diversion into the head box?

20 A. Yes.

21 Q. And once they're in the head box, are they
22 commingled?

23 A. Yes.

24 Q. So after this point you can't differentiate
25 one source of water from another?

1 A. No.

2 Q. Can you measure -- do you have the capability
3 to measure individual wells and how much is flowing into
4 the head box?

5 A. No.

6 Q. So from the head box, there's an arrow
7 indicating that flow goes to the incubation building; is
8 that correct?

9 A. Yes.

10 Q. How does water get from the head box to the
11 Incubation Building?

12 A. Through a pipe.

13 Q. And once in the incubation building, how is
14 the water used?

15 A. In the incubation building, we use it to -- as
16 it's called "incubation" -- to incubate eggs.

17 Q. And what are the eggs contained in? Are they
18 vats? Are they plastic trays?

19 A. They are in plastic trays called the heat
20 stack, and they filter through them, and then the water
21 exits the building through a drain into a pipe.

22 Q. Okay. So the water is, basically, completely
23 contained while it's inside the building?

24 A. Yes.

25 Q. And you mentioned that the water exits the

1 incubation building.

2 Where does it go from the incubation building?

3 A. It goes into a pipe, and it is delivered below
4 our settling basin.

5 Q. And into what body of water?

6 A. Butte Creek.

7 Q. Is there a way to measure water exiting the
8 incubation building?

9 A. Not exiting.

10 Q. From the head box there is another arrow that
11 indicates flow from the -- flow to the hatchery
12 building; is that correct?

13 A. Correct.

14 Q. And how does the water get from the head box
15 to the hatchery building?

16 A. Through two pipes.

17 Q. Once in the hatchery building, how is the
18 water used?

19 A. It is used in concrete raceways inside the
20 building, and then it exits through another pipe.

21 Q. And those raceways are covered by the
22 building?

23 A. Correct.

24 Q. Is there a way to measure water used in the
25 hatchery building?

1 A. Only where we -- where it comes out of the
2 pipe, we measure that using a stopwatch and a bucket and
3 determine how many gallons per minute.

4 Q. And how does the water exit the hatchery
5 building?

6 A. It exits through a standpipe, it goes into a
7 drain pipe. When it leaves the hatchery building, it
8 can either go to the settling basin or to the front
9 raceways.

10 Q. Is there a way to measure that water that's
11 exiting the --

12 A. No.

13 Q. -- hatchery building?

14 Not directly as it exits the hatchery
15 building; is that right?

16 A. Not as it exits, but we do measure what comes
17 in.

18 Q. And can you measure it later when it gets
19 either to the front raceways or over the settling basin
20 weir?

21 A. I cannot measure that little portion, but as a
22 sum of use, yes.

23 Q. As a collective.

24 Okay. From the head box, there's another
25 arrow indicating that water can flow into the round

1 ponds; is that correct?

2 A. Yes.

3 Q. And how does the water get from the head box
4 to the round ponds?

5 A. Through piping.

6 Q. Can you describe the construction of the round
7 ponds?

8 A. The round ponds are 1-foot-thick concrete
9 diameter ponds with grain silos built over the top of
10 them.

11 Q. And what do you raise in the round ponds?

12 A. They house all of our brood stock.

13 Q. How many round ponds are there?

14 A. There are a total of 15 round ponds in two
15 different areas.

16 Q. So this area that we're talking about now, is
17 that round ponds 1 through 12?

18 A. Yes.

19 Q. Is there a way to measure water going into the
20 round ponds?

21 A. Eight of them, round ponds 1 through 8, we can
22 measure water going in. Round ponds 9, 10, 11, and 12
23 we can only measure water leaving the raceway -- the
24 round ponds.

25 Q. Well, how does water exit round ponds 1

1 through 12?

2 A. They have a center standpipe where all of the
3 water drains to. It goes into piping and out to its
4 exit.

5 Q. So it looks like on the diagram it can exit
6 either to the Parma box or directly to Butte Creek; is
7 that correct?

8 A. The round ponds, yeah, that is correct.

9 Q. And what is the Parma box?

10 A. The Parma box is a box that allows us the
11 ability to reuse that water in the front raceways.

12 Q. So from the Parma box, water can either go
13 into the settling basin or to the front raceways; is
14 that correct?

15 A. Correct.

16 Q. And do you have a way of measuring what's
17 coming out of the Parma box?

18 A. I do not have a way to measure what comes out
19 of the Parma box.

20 Q. So -- and forgive me if I asked this already
21 -- but is there a way to measure what is coming out of
22 the round ponds?

23 You answered that already, didn't you?

24 A. Yeah, I can measure what's coming out of the
25 round ponds.

1 Q. Okay. From the head box there is another
2 arrow indicating that water can flow into the small
3 raceways, 1 through 4; is that correct?

4 A. Correct.

5 Q. How does water get from the head box into
6 those raceways?

7 A. Through piping.

8 Q. Can you describe the construction of these
9 small raceways?

10 A. They are concrete raceways, and they're all
11 covered with netting, but they are still exposed to the
12 environment.

13 Q. And what do you raise in the small raceways?

14 A. We raise juvenile fish, and that's where we
15 start all of our brood stock as well.

16 Q. Is there a way to measure water going into the
17 small raceways?

18 A. Not going in.

19 Q. Is there a way to measure water coming out of
20 the small raceways?

21 A. Yes.

22 Q. And where does the water go when it exits the
23 small raceways?

24 A. Well, the water can either go to the settling
25 basin or the front raceways.

1 Q. From the head box, there's yet another arrow.
2 That goes into round ponds 13 through 15; is
3 that correct?

4 A. Correct.

5 Q. How does water get from the head box to those
6 round ponds?

7 A. Through piping.

8 Q. Can you describe the construction of round
9 ponds 13 through 15?

10 A. They're identical to the other 12. They're
11 1-foot-thick concrete ponds with grain silos constructed
12 over the top of them.

13 Q. And what do you raise in those ponds?

14 A. Those are specifically used for our brook
15 trout brood stock.

16 Q. Is there a way to measure water going into
17 those round ponds 13 through 15?

18 A. 13 and 14 we can only measure water exiting.
19 Round pond 15 has actually got a series of smaller tanks
20 inside, and we use a bucket, and we can measure the
21 inlet to each of those.

22 Q. When water exits round ponds 13 though 15,
23 where can it go?

24 A. It can only go to the settling basin.

25 Q. I see, when I look at the diagram, an arrow

1 that indicates those round ponds could also go to the
2 front raceways; is that correct or incorrect?

3 A. In theory, they could. Unfortunately, where
4 we have the smaller ponds inside of them, we're unable
5 to drain to the front because of the water level. It
6 would submerge all of our experimental tanks. So we're
7 kind of forced to use the settling basin.

8 Q. And I think you already indicated there's a
9 way to measure water exiting those round ponds; is that
10 correct?

11 A. Yes.

12 Q. All right. So overall, water from the
13 hatchery is discharged into the natural channel formed
14 by Butte Creek Springs; is that correct?

15 A. Yes.

16 Q. Are there any other surface water users on
17 Butte Creek Springs in between any of the points of
18 discharge of the hatchery?

19 A. No, not that I'm aware of.

20 Q. So how is the settling basin formed on Butte
21 Creek Springs Creek?

22 A. The settling basin, it's just the natural
23 spring.

24 Q. So when we look at Exhibit 25 -- let's look at
25 page 426 again -- on that aerial photograph, I see a

1 road that looks like it sort of divides Butte Creek
2 Spring.

3 Is there some sort of manmade structure under
4 that?

5 A. Yeah, we did put a culvert so we could drive
6 over and have access to the other side. So there is a
7 culvert that goes between there.

8 Q. And is there -- are there any boards that --

9 A. Yes. There's a weir that we've set up so that
10 we can measure the water leaving that pond.

11 Q. And the boards there, are they fixed? Do you
12 move them a lot?

13 A. We rarely ever move them.

14 Q. So how long would you estimate, as a
15 layperson, that water is held back by that weir there in
16 the culvert in the center for the settling basin?

17 A. You know, like I said, I'm not trained to do
18 that, but I assume there's, roughly, an acre-foot of
19 water there. And with the amount of water we currently
20 have going through there, it probably turns over four
21 times a day.

22 Q. So would you say that the settling basin flows
23 fairly continually --

24 A. Yes.

25 Q. -- even though those boards are there?

1 There's also water discharged from the
2 hatchery into the settling pond below the settling pond
3 weir; is that correct?

4 A. Yeah. The -- the incubation building directly
5 deposits water below that, and the large raceways all
6 flow below that settling basin.

7 Q. And thank you for reminding me. I think we
8 might have skipped the front raceways in our description
9 of the hatchery complex.

10 Can you go back, please, and describe how
11 water gets into the front raceways?

12 A. It can get its water from a couple of
13 different sources, one of which is -- the primary source
14 is the Parma box. We try to reuse the water and send it
15 out front to at least get a second use of that water
16 before we deposit it back into the creek. We also have
17 the ability to inject fresh water, but we rarely have
18 spare fresh water to do that.

19 Q. So the front raceways is second use water; is
20 that correct?

21 A. Second use, yes.

22 Q. And where do the front raceways discharge?

23 A. The front raceways discharge right below the
24 dike on the settling basin.

25 Q. So below the settling basin?

1 A. Yes.

2 Q. And do you have a way to measure water coming
3 out of the front raceways?

4 A. Yes, coming out we can measure.

5 Q. And then water that flows -- discharges from
6 the hatchery into Butte Creek below the settling basin,
7 where does it go?

8 A. Could you repeat that, please?

9 Q. Water that discharges from the hatchery into
10 Butte Creek but below the settling basin, where does
11 that water eventually flow to?

12 A. Eventually it goes into Loving Creek.

13 Q. And where does Loving Creek flow into?

14 A. Loving Creek eventually goes into Silver
15 Creek.

16 Q. How would you describe Butte Creek below the
17 settling basin?

18 A. That's just a creek.

19 Q. Just a creek?

20 A. Yeah.

21 Q. All right. I'll have you take a quick look at
22 Exhibit 20.

23 Can you tell me what that document is?

24 A. It's the best management practices for the
25 hatchery.

1 Q. And why was that document developed?

2 A. We had to develop this for our NPDES permit.

3 Q. Does that document also provide some
4 descriptions of how water is used in the hatchery?

5 A. It does. And it shows how we measure and what
6 we measure and how we contain waste and so forth.

7 Q. Okay. Is there anything else about how water
8 flows into and out of the hatchery that you think we
9 missed?

10 A. I think we pretty much covered it all.

11 MS. VONDE: I would -- at this point, I'd like
12 to move to admit Fish and Game Exhibits 20 and 25 into
13 the record.

14 HEARING OFFICER: Any objection to the
15 admission of these documents?

16 The documents marked as Idaho Fish and Game 20
17 and 25 are received into evidence.

18 (IDFG Exhibits 20 and 25 received.)

19 Q. (BY MS. VONDE) So based on your testimony, it
20 sounds like there are several places where you can take
21 measurements of water flowing into the hatchery; is that
22 correct?

23 A. Into the various uses at the hatchery,
24 correct.

25 Q. So what are those different places where you

1 can take measurements?

2 A. You can take it where water comes into some of
3 the round ponds. We can take it where it comes into the
4 heat stacks in the incubation building. We can take it
5 where it comes into the concrete raceways inside the
6 hatchery building.

7 Q. So could you please take a look at Exhibit 23.

8 And I'm going to stop here. We submitted a
9 corrected Exhibit 23 to the parties today, so I would --
10 I am proposing to, basically, switch this corrected
11 exhibit out for the one that we disclosed.

12 So any objections to that?

13 MR. RIGBY: No.

14 HEARING OFFICER: No objections that I can
15 hear.

16 MS. VONDE: So then I will switch your binders
17 out with new copies. Is that the easiest way to do it?

18 HEARING OFFICER: Yep.

19 MS. VONDE: And I'm not sure I have quite
20 enough. Do you need four or just three?

21 Do you need one?

22 HEARING OFFICER: I think there are four
23 binders, aren't there?

24 MS. VONDE: And do you need it?

25 MS. CARTER: No, I have one.

1 MS. VONDE: So this can be for you. And if
2 you need one more...

3 Q. (BY MS. VONDE) Okay. So taking a look at
4 this corrected Exhibit 23, who prepared this exhibit?

5 A. This was actually prepared by the fish
6 culturist on station, and then I reviewed it and found
7 some errors and had it corrected.

8 Q. So what does this exhibit show?

9 A. Please say it again.

10 Q. What does this exhibit show?

11 A. This exhibit shows what the water measurement
12 is on, basically, all of the places it's used coming
13 into the facility.

14 Q. And was this -- were these measurements taken
15 on a certain date? In other words, is this a snapshot
16 in time of water use?

17 A. Correct. These were done on May 19th.

18 Q. So are you personally aware of how these
19 measurements are generally taken, even if you, yourself,
20 did not perform the measurements?

21 A. Yes, I am.

22 Q. So what was the total inflow into the hatchery
23 on May 19th of this year?

24 A. 7.06 cfs.

25 Q. And how was that amount determined?

1 A. That was done by taking the intakes of the
2 small raceways, the intakes on round ponds 1 through 8,
3 the outlets of round ponds 9 through 14, and then we had
4 to do the intakes on round pond 15, and it would have
5 been on the intakes of all the concrete raceways in the
6 hatchery building and the intakes on the heat stacks in
7 the incubation building.

8 MS. VONDE: Now let's take a look at
9 Exhibit 26. And once again, this is another exhibit
10 that we corrected. I submitted that to counsel, so I
11 would propose to do the same thing that we did with 23,
12 unless there are any objections?

13 HEARING OFFICER: Great.

14 Q. (BY MS. VONDE) Okay. So can you please tell
15 us what this exhibit shows?

16 A. This one shows the outlets for all of the
17 hatchery.

18 Q. And did you prepare this exhibit?

19 A. It was actually prepared by my fish culturist,
20 and I went through it and revised it and corrected some
21 mathematical errors.

22 Q. And so even if you were not personally
23 involved in taking these measurements, do you understand
24 how they were taken?

25 A. Yes.

1 Q. And, again, is this a snapshot in time?

2 In other words, were these measurements taken
3 on a certain day?

4 A. Yes.

5 Q. So let's walk through this a little bit.
6 There's a box labeled, "Large Raceways."

7 What does that box show?

8 A. That shows what the gallons per minute leaving
9 each raceway is. And the sum of those is 2,086 gallons
10 or 4.65 cfs.

11 Q. So that's water exiting the raceways and
12 discharging into Butte Creek Spring -- Butte Spring
13 Creek below the settling basin; is that correct?

14 A. Correct.

15 Q. And what water flows into these raceways?

16 A. This is water that comes from the Parma box.

17 Q. And then we see some boxes labeled "RP13,"
18 "14," "15."

19 Can you describe what those are showing?

20 A. Round pond 13, 14, 15, it's showing the total
21 gallons per minute used in those. And that is what's
22 discharged into the settling basin.

23 Q. And we see a box labeled, "Discharge Over
24 Settling Basin Weir."

25 Can you describe what's in that box?

1 A. That shows what your discharge is from round
2 ponds 13, 14, and 15, 243 gallons per minute. And then
3 when we measure going over the weir that goes underneath
4 the dike, we show 945 gallons per minute total.

5 Q. So what is the purpose in this "Discharge Over
6 Settling Basin Weir" of the two boxes to the right that
7 say "Round Pond 13," "14," "15," and then the "Parma Box
8 and Settling Basin"?

9 What are you trying to denote there?

10 A. By taking that number and the number from the
11 large raceways, I have a very good idea of exactly what
12 ran through the hatchery and was used.

13 Q. So can you, please, describe how you came to
14 the total amount of water being discharged from the
15 hatchery?

16 A. On those ones there, what I did is I took the
17 total water, which is the 945 gallons per minute, and
18 then I took that and added it to the 2,086 gallons per
19 minute; it gave me 3,031 gallons per minute.

20 Now, leaving the raceways and then leaving the
21 upper settling basin, there are boards there. Boards
22 leak. And there's a percentage factor, it's really hard
23 to quantify, so I used a couple of different equations.
24 I used 10 percent and 20 percent because it is
25 unaccounted for, but it all does return to the creek.

1 And so on those, you can see my correction
2 factors 303 gallons or 606 gallons per minute, leaving
3 me with 7.43 to 8.10 gallons per minute -- or 8.1 --
4 7.43 cfs to 8.1 cfs leaving the facility.

5 Q. So the total discharge from the hatchery, is
6 that the .54 cfs from the round ponds, the 4.65 from the
7 large raceways, and the 2.11 from the weir over the
8 settling basin?

9 A. Correct.

10 Q. And that's where you get the 7.43 cfs; is that
11 correct?

12 A. Correct.

13 Q. And then you have a -- as you said, you have a
14 correction amount of 10 or 20 percent. And that's to --
15 you said that was to account for leakage through the
16 boards?

17 A. Leakage through the boards. And it's not lost
18 because it just goes right into the drain and back to
19 the creek. It's just I cannot quantify or measure it.

20 Q. Because it's not going over the weir; is that
21 correct?

22 A. Correct, it's not going over the board.

23 Q. I see an "LR10% Correction" and an "LR20%
24 Correction"; what does that denote, and how are those
25 different?

1 A. Those are different because that would be if I
2 only took a correction on the raceways themselves and
3 not the settling pond. It's hard to really justify or
4 show what's leaking in the settling pond.

5 Q. So the other boxes that just say "10%
6 Correction," "20% Correction," those took the correction
7 on both the water exiting from the large raceways and
8 the water going over the weir through the weir at the
9 settling basin; is that correct?

10 A. Yes, correct.

11 Q. So what was the total outflow from the
12 hatchery on this date?

13 A. 7.43 to 8.1 cfs.

14 Q. And I think you testified earlier that the
15 inflow into the hatchery was 7.06 cfs; is that correct?

16 A. That is correct.

17 Q. So what accounts for the increase in flows at
18 the end of the hatchery?

19 A. Unfortunately, in the large -- in the settling
20 basin, if you were to walk around it, there are some
21 seep springs, and you can see small amounts of water
22 that seeps in. So there is some water that seeps in and
23 increases the amount in the settling basin. That number
24 is not quantifiable, I have no way to measure it.

25 Q. Okay. So you think the increase in flow comes

1 from those naturally occurring springs that arise in the
2 settling basin --

3 A. Yes.

4 Q. -- is that correct?

5 Okay. Can you please take a look at
6 Exhibit 24. And maybe before I move on to Exhibit 24,
7 I'll ask one more question, just as a conclusion.

8 Given the inflow and outflow numbers from the
9 hatchery, does that demonstrate anything to you about
10 the hatchery water usage?

11 A. It's nonconsumptive.

12 Q. Now moving to Exhibit 24, what is this
13 exhibit?

14 A. This is a -- it looks like our EPA permit.

15 Q. Is this your NPDES permit for discharges from
16 the hatchery?

17 A. Correct.

18 Q. Can you, please, take a look at page IDFG 415.

19 So this describes your system as a
20 "Flow-through System." What is your understanding of
21 the meaning of that?

22 A. It flows through. We don't retain, move
23 anything offline. What comes in goes out.

24 Q. Let's take a look at page IDFG 418. Under
25 "Outflow" -- the discharge "Settling Basin Outflow," the

1 discharge type is listed as "Constant."

2 What is your understanding of the meaning of
3 that for this NPDES permit?

4 A. We're constantly discharging; we don't stop.
5 Like I said, there's nothing offline. We don't retain
6 the water anywhere. What comes in goes out.

7 Q. And then let's take a look at page IDFG 419.

8 Under "Facility Total," the "Outfall Type" is
9 listed as "Sum."

10 What's your understanding of the meaning of
11 that?

12 A. The sum of all in is what leaves, so we are
13 not retaining anything.

14 Q. So in terms of this NPDES permit, they say
15 that whatever is coming into your facility is also going
16 out?

17 A. Correct.

18 Q. All right. So based on your understanding of
19 how the hatchery operates and personal observations,
20 would you say the inflow generally equals the outflow?

21 A. Either equals or exceeds. Generally it
22 exceeds.

23 Q. And you're not a hydrologist; correct?

24 A. Correct.

25 Q. But based on your experience and understanding

1 of how a hatchery operates, would you say there's any
2 significant evaporative or seepage losses associated
3 with the Hayspur Fish Hatchery?

4 A. No. And like I demonstrated earlier, the only
5 place where we have any exposure to the sun is in the
6 actual raceways themselves, and that turns over three
7 times every hour. And then the large settling basin, on
8 my rough figures, it changes four times a day. There's
9 not a lot of time, there's no real increase in
10 temperature, so I personally don't see where there's any
11 evaporative loss.

12 Q. And then I'll just ask this question again:
13 Are there any intervening water users on Butte Creek
14 between where you are taking the water into the hatchery
15 and water is discharging back into the creek?

16 A. No.

17 MS. VONDE: I would like to move, at this
18 point, to admit Exhibits 23, 24, and 26 into the record.

19 HEARING OFFICER: Any objection to the
20 admission of these documents?

21 The documents marked as IDFG 23, 24, and 26
22 are received into evidence.

23 (IDFG Exhibits 23, 24, and 26 received.)

24 Q. (BY MS. VONDE) Then I'll have you take a look
25 at Exhibit 21.

1 Do you recognize this exhibit?

2 A. Yes.

3 Q. Who prepared it?

4 A. This was actually prepared by the hatchery
5 manager at the Hayspur facility.

6 Q. And were you copied on this memo?

7 A. Yes, I reviewed it.

8 Q. Do you have any personal knowledge of the
9 information that this contains?

10 A. Yeah. Yeah, I've been pretty much involved in
11 almost all of this.

12 Q. So if you could just take a look at IDFG
13 page 404 to 406. And quickly just run us through the
14 types of fish that the hatchery raises and what they're
15 produced for.

16 A. Okay. Our primary function is to raise
17 rainbow trout eggs, which are disseminated to all of the
18 other Fish and Game hatcheries that we have in the
19 state. So, basically, if a rainbow trout is caught in
20 the state of Idaho, it came from Hayspur Fish Hatchery.
21 The broodstock has been selected. All of our fish are
22 triploided. They return well to the fisherman. And we
23 have spent about 25 years developing that current stock.

24 Q. So you produce rainbow trout eggs that are
25 then sent to other hatcheries where they raise them up

1 to be catchables; is that correct?

2 A. Correct.

3 Q. And then do you raise your own rainbow trout
4 catchables?

5 A. We do. We raise the rainbow trout --

6 MR. THOMPSON: Mr. Director, if I can
7 interject. I stipulate to the beneficial use of fish
8 propagation. I don't know if we need to know exactly
9 what fish are going where, do we, for those rights?

10 MR. RIGBY: We would as well, Mr. Director.

11 HEARING OFFICER: Does that shorten the
12 testimony?

13 MS. VONDE: Not by much, but that's fine.

14 HEARING OFFICER: Okay.

15 Q. (BY MS. VONDE) So I'll just skip to the --
16 these will be my last questions.

17 What would happen to the hatchery if you were
18 curtailed?

19 A. If we were curtailed, I mean, there's some
20 water that we get to keep because it is surface water,
21 from my understanding. But anything that would be
22 curtailed would decrease the water that goes into that
23 head box, which means everything across the board loses
24 water. When that happens, fish populations will slowly
25 die down to a level where they're comfortable. And we

1 don't know where that is. It's usually pretty harsh at
2 the beginning.

3 So I mean, if we were to be curtailed and lose
4 the 3 cfs that's most likely in question, you could see
5 that that is over a third of our water, and we would
6 probably lose more than half of our fish.

7 Q. And how long would it take you to rebuild the
8 program that you have going?

9 A. Six to eight years.

10 MS. VONDE: I'd like to offer IDFG Exhibit 21
11 into the record.

12 HEARING OFFICER: Any objection to the
13 admission of this document?

14 MR. THOMPSON: No.

15 HEARING OFFICER: The document labeled IDFG 21
16 is received into evidence.

17 (IDFG Exhibit 21 received.)

18 MS. VONDE: That's all I have.

19 HEARING OFFICER: Okay. Cross-examination of
20 this witness, Mr. Fletcher?

21

22 CROSS-EXAMINATION

23 QUESTIONS BY MR. FLETCHER:

24 Q. Good afternoon, Mr. Anderson. My name is Kent
25 Fletcher, and I'm representing Big Wood Canal Company.

1 I want to direct your attention to the Butte
2 Springs right. The number, I think, is 37-2489. You
3 testified about that; right?

4 A. I've got to look at the picture to make sure
5 I've got it right. 37-2489, that is correct.

6 Q. Thank you. And you testified what the
7 authorized cfs diversion on that right is.

8 Do you remember that testimony?

9 A. I believe it was 15 cfs.

10 Q. And the priority date of that is January 26th
11 of 1948?

12 A. That, I do not know.

13 Q. Do you know how much that spring is producing
14 now?

15 A. Currently, I'm getting right around 5 cfs out
16 of it.

17 Q. Have you done any studies of the decline in
18 the spring flows?

19 A. No, sir.

20 Q. Has the Department, to your knowledge, done
21 any analysis of why that spring has declined from 15 cfs
22 to 5 cfs?

23 A. Not that I'm aware of, sir.

24 Q. Do you have any knowledge of why groundwater
25 right 37-7038, which was Exhibit 2, did not contain the

1 nonconsumptive statement on it?

2 A. No, I do not.

3 Q. And do you have any knowledge of why the
4 Department drilled wells at this site?

5 A. Some of it was to replace what -- it's
6 probably over time. And I can only make that as an
7 assumption from the losses that they've gotten from
8 their initial water right. Well No. 2 was actually
9 drilled -- it was actually a spring that was just
10 adjacent to it. And that was put in so that we could
11 direct the water where we wanted it to go. If we were
12 to remove that well, that's going to free flow whether
13 we want it to or not.

14 Q. If Butte Springs was producing 15 cfs, would
15 that be an adequate amount of water to operate the
16 entire facility?

17 A. Yes.

18 MR. FLETCHER: I don't have any further
19 questions. Thank you.

20 HEARING OFFICER: Thank you, Mr. Fletcher.
21 Mr. Rigby?

22 MR. RIGBY: No questions, Mr. Director.

23 HEARING OFFICER: Mr. Barker or Thompson?

24 MR. BARKER: No.

25 HEARING OFFICER: Ms. O'Leary?

1 MS. O'LEARY: No, Director.

2 MR. BROMLEY: No.

3 HEARING OFFICER: Group 3, any questions?

4 MS. McHUGH: No questions.

5 HEARING OFFICER: Oh, and I hesitate to
6 venture, but I wanted to ask one question, Mr. Anderson.

7

8 EXAMINATION

9 QUESTIONS BY HEARING OFFICER:

10 Q. What's the surface area of your settling pond?

11 A. That's what I had said, I estimate it to be
12 approximately 1 acre.

13 Q. But I thought you -- I thought when you
14 testified, I thought you were talking about volume. I
15 thought I heard you say an acre-foot --

16 A. It's about 1 acre. It covers about a 1-acre
17 span.

18 Q. So 1 acre in surface area?

19 A. Yes.

20 Q. Is there any leakage into the settling basin
21 from the diversion at Butte Creek Spring?

22 A. No, there's none that's visible. The settling
23 basin, though, if you were to walk around it, you will
24 see some seepage coming out of the ground in various
25 places.

1 HEARING OFFICER: Okay. I don't have any
2 further questions. All right. Thanks, Mr. Anderson.

3 Let's go off the record for a minute.

4 (Discussion held off the record.)

5 HEARING OFFICER: Back on the record.

6 Are we recording?

7 MS. JENKINS: We are.

8 HEARING OFFICER: Okay. Mr. Barker?

9 MR. BARKER: South Valley Ground Water
10 District calls Mark Johnson.

11 Mark?

12 THE WITNESS: Correct.

13 MR. BARKER: How are you?

14 HEARING OFFICER: Will you please stand.

15 THE WITNESS: Yes.

16 HEARING OFFICER: Raise your right hand.

17
18 MARK JOHNSON,
19 first duly sworn to tell the truth relating to said
20 cause, testified as follows:

21
22 HEARING OFFICER: Thank you. Please be
23 seated.

24 ///

25 ///

1 DIRECT EXAMINATION

2 QUESTIONS BY MR. BARKER:

3 Q. Mr. Johnson, what's your full name and
4 address.5 A. Mark Alan Johnson, 231 Tendoy Street,
6 Bellevue, Idaho 83313.7 Q. And, Mr. Johnson, what is your current
8 occupation?

9 A. I'm a seed potato grower.

10 Q. Do you have -- do you operate under your own
11 name, or do you have a company?

12 A. Yes. My company name is Silver Creek Seed.

13 Q. How long have you been a seed potato grower?

14 A. I started the company in 2006, so 15 years.

15 Q. Okay. What were you doing before that?

16 A. I worked for my in-laws for 19 years, Cummins
17 Farms, in the Magic Valley farming on the family farm.
18 And then they went out of business in 2005, and we
19 managed to scrape enough money together to start the
20 business with a partner.

21 Q. Are you born and raised in Idaho?

22 A. Yes.

23 Q. And do you have a post high school degree?

24 A. Just one year of college, then I started
25 farming.

1 Q. So for the last, if I count --

2 A. 34.

3 Q. 34. There we go. 19 and 15.

4 All right. For 34 years you've been farming
5 in the area around the Magic Valley; correct?

6 A. Correct, yes.

7 Q. And also when did you first start farming up
8 in the area of the Big Wood?

9 A. Cummins Farms started growing seed potatoes in
10 1997.

11 Q. Where was that -- where was that farm?

12 A. The potato cellars are in Picabo, but we rent
13 ground in the Bellevue Triangle and the Carey area.

14 Q. All right. And is that consistent through --
15 since that time, since you formed the company?

16 A. Yeah, we've been fairly consistent with our
17 company since we started.

18 Q. Are you growing potatoes anywhere other than
19 in the Bellevue Triangle right now?

20 A. I have a few in Carey on the Little Wood
21 system.

22 Q. So how many acres do you have in potatoes
23 right now?

24 A. Approximately, 660.

25 Q. And is that all in the Triangle or does that

1 include the Carey?

2 A. That includes the Carey potatoes as well.

3 Q. How much in the Triangle?

4 A. 600.

5 Q. So you've got a map in front of you that is
6 taken from an exhibit that's already in evidence, and
7 it's just for orientation purposes. This is Jennifer
8 Sukow's exhibit -- staff report. I believe that's
9 IDWR 2.

10 Is that right, Meghan?

11 MS. CARTER: I'm sorry?

12 MR. BARKER: Is that IDWR 2, Jennifer Sukow?

13 MS. CARTER: Yeah.

14 MR. BARKER: Okay. Thank you.

15 Q. (BY MR. BARKER) So just for orientation
16 purposes, would you explain where your potatoes are
17 being grown this year?

18 A. Yeah. Probably starting 2 miles north of
19 Gannett would be the first -- part of the northern ones,
20 and then we have some on Baseline Road, some south of
21 Gannett, west of Picabo, and Carey, over in Carey. And
22 then we have some, actually, west of the blinking light
23 at Timmerman.

24 Q. Okay. So you have crop in the ground pretty
25 much all over the Triangle --

1 A. Correct.

2 Q. -- right?

3 A. Yes.

4 Q. When you grow seed potatoes, what's the -- how
5 do you get rid of your crop at the end of the year; what
6 do you do?

7 A. Well, we have commercial -- contracts with
8 commercial growers. We grow the seed potatoes, and then
9 the commercial growers in the Magic Valley, Washington,
10 they grow commercial potatoes for processors and fresh
11 pack. So we grow the seed, we provide the seed for
12 them, and then they grow it out, and then that produces
13 french fries, processed goods, and fresh-packed potatoes
14 for grocery stores and restaurants.

15 Q. So you are under long-term -- are you under
16 contracts with these commercial growers?

17 A. Yes. We have contracts on probably 90 percent
18 of our product that goes out. If we have exceptional
19 yields, we'll have some extra product, but on an average
20 year, it's 100 percent contracted.

21 Q. And when do you enter into these contracts,
22 typically?

23 A. We typically try to do a three-year -- two- to
24 three-year contract. And, you know, they're rolling
25 over constantly, so some of them renew every year, and

1 some of them are out as much as three years, and some of
2 them just keep immigrating until we renew a different
3 negotiation on that contract.

4 Q. And what time of year do you typically enter
5 into these contracts?

6 A. In the fall, winter, basically.

7 Q. So tell me about your thought process in
8 putting crops into the ground in 2021 at these various
9 locations in the Triangle. What was your plan?

10 A. As far as water?

11 Q. Well, no, as far as what -- where you were
12 going to plant, why you were going to plant, whether you
13 were going to not plant?

14 A. Well, we're on a longer rotation being on a
15 seed potato farm, so we rent from multiple people
16 wherever we can find ground on any given year. So if
17 someone has to take a crop out, and they want to put
18 potatoes in, we rent from them. So it changes from year
19 to year who we're renting ground from. But we have
20 several of them that we rent from every year.

21 Q. And when do you enter into these rental
22 contracts with the landowners?

23 A. We try to do our groundwork in the fall, so
24 before winter comes, we try to have all of that ground
25 secured.

1 Q. Okay. So for the 2021 growing season, you
2 would have already entered into a rental contract last
3 fall?

4 A. Sure. Yeah. We do all of our work in, oh,
5 October, November. Fieldwork, we put fertilizer down
6 for our phosphate and potash so it will be ready for use
7 in the spring.

8 Q. So at these different locations that you're
9 farming this year, what kind of water supply do you have
10 for them?

11 A. What kind of water supply do I have? You mean
12 like well water? Surface water?

13 Q. Well, sure. What's your source of water for
14 each of these fields?

15 A. We have some from the Big Wood, we have well
16 water, we have Silver Creek, and we have Little Wood
17 water.

18 Q. And that, obviously, depends on where the farm
19 is located?

20 A. Exactly. And if the farmer has a well or what
21 their water rights are like.

22 Q. Does all of the land that you're farming this
23 year, does it have a well water supply?

24 A. No, not all of it has well water.

25 Q. Do you have some -- you have surface water on

1 all of your crops or all of the land that is irrigated?

2 A. No. Some of it's well water, some of it has
3 both. It's all over the board.

4 Q. So if you -- so explain what -- how much you
5 have to put into a potato field in order to make it
6 productive, in terms of what's your investment into a
7 potato field? What do you got to do?

8 A. Input costs are higher this year with fuel and
9 fertilizer being up, but it's somewhere in the
10 neighborhood of between 4,000 to \$4,500 an acre.

11 Q. And that's sum cost?

12 A. That's what?

13 Q. That's sum cost once you agree to rent the
14 field and put the crop in the ground?

15 A. Right now at this point it is. You know, at
16 the agreement to rent the field, no, you don't have
17 those costs. But, I mean, it just keeps -- we get a lot
18 of costs in the fall, and by the 15th of May, we have
19 probably two-thirds to three-quarters of our costs in.

20 Q. And for the land that you have that's supplied
21 by surface water, do you have any understanding of what
22 the surface water supply curtailment dates are going to
23 be this year?

24 A. Don't know yet. We have our fingers crossed
25 that we'll be okay, but some of them are marginal so we

1 don't know yet.

2 Q. So have you heard any dates beyond the end of
3 June, early July for your surface water?

4 A. Nothing solid yet. I guess it would be rumor,
5 whatever I've heard so far.

6 Q. So tell me what the water needs are for a
7 potato crop.

8 A. Well, we start watering a lot later than the
9 grain and barley. Like, we're just barely starting to
10 water right now. We can't plant -- in our valley, we
11 usually start about the 5th of May, and it takes three
12 weeks for emergence. And they're just coming up right
13 now. So we're just barely starting to water right now.

14 So we need about 90 to 120 days, given the
15 variety. Some of them take less days. But it takes
16 about 120 days to grow the crop, and then the 1st of
17 September we'll kill them. And then we need to prewater
18 to be able to dig the crop.

19 Q. So "prewater," what does that mean?

20 A. We have to put down about three-quarters of an
21 inch to an inch to moisten the ground so when we harvest
22 them it's not just straight clods coming into the potato
23 cellars.

24 Q. And then you said "kill" the crop about the
25 1st of September.

1 What do you mean by that?

2 A. Well, we whip the vines. Sometimes we put
3 chemical on to kill the vines so that the skin will set
4 on the potato. That takes about three weeks to do that.

5 Q. And do you need -- up until when do you need
6 water for this -- for the growing of the potato crops?

7 A. With potatoes, all of the growing happens at
8 the end. They're just a growing plant for most of the
9 season, then they put all their weight in on the potato
10 itself right at the end. So right up until when we kill
11 them, we're out doing test digs every day checking to
12 see what the yield looks like and the size profile.
13 Because we can't get them too big for seed potatoes. So
14 when we reach a certain point, then we kill them.

15 Q. And then at that point, you don't need water
16 until you do the prewatering for the harvest?

17 A. Correct.

18 Q. So you're aware that -- so are you involved in
19 the South Valley Ground Water District?

20 A. I just purchased a small farm, and I just got
21 our first water rights. So this is the first I've been
22 involved because we've always leased our ground, so I'm
23 just becoming more involved right now.

24 Q. So where is your ground that you purchased?

25 A. It's on Schoessler Lane.

1 Q. How much of your own ground do you have?

2 A. It's 450 acres with water rights for
3 200 acres.

4 Q. And is that in potatoes also?

5 A. No. The person we bought it from has the farm
6 until the end of November, and then we take possession,
7 so we haven't done any watering on it.

8 Q. So is the person you bought it from irrigating
9 that land?

10 A. Correct.

11 Q. And does -- the water rights you have for that
12 property are from what?

13 A. Are what?

14 Q. What kind of water rights do you have for that
15 property?

16 A. There's a little bit of surface water and some
17 well water.

18 Q. Surface water out of the 45?

19 A. Yeah, I'm not familiar with that yet --

20 Q. Okay.

21 A. -- on the water districts. But, yeah.

22 Q. Okay. So you understand that the purpose --
23 one of the purposes of this proceedings is to determine
24 whether to curtail groundwater use throughout the entire
25 Bellevue Triangle?

1 A. Correct.

2 Q. So would you explain to the Director the
3 impact on your operations if groundwater were to be
4 curtailed on July 1, as at least contemplated in
5 Jennifer Sukow's memorandum?

6 A. Yeah. For us it would put us out of business.
7 We wouldn't have any crop at all, we assume. July 1st
8 the potatoes are tiny. It wouldn't -- we wouldn't have
9 a crop. It would cost us \$3 million.

10 Q. And by saying you wouldn't have a crop, or it
11 would put you out of business, do you mean just for this
12 year?

13 A. Yeah, because we wouldn't -- it would be
14 \$3 million we wouldn't have coming in. There's no way
15 we would survive it. Our customers would find new
16 clients, and we wouldn't have our customers anymore.

17 Q. Because you can't deliver potatoes that are
18 the size of a pea to your customers?

19 A. Yeah. They have to be 50 millimeters or
20 bigger to even get to the cellar. So if they're not
21 bigger than that, it's impossible for them to even make
22 it up the harvester.

23 Q. And so what would be the consequence to your
24 business of not being able to harvest any of the
25 potatoes this year?

1 A. We'd be out of business.

2 Q. Entirely?

3 A. Yes.

4 MR. BARKER: I don't have any further
5 questions. Thank you, Mr. Johnson.

6 HEARING OFFICER: Okay.

7 MR. BARKER: Oh, somebody else may have some
8 questions, so you --

9 THE WITNESS: Oh.

10 MR. BARKER: -- but we can both leave, if you
11 like.

12 HEARING OFFICER: So what order of questioning
13 do we want to pursue now with witnesses being called by
14 the groundwater users or attorneys representing
15 groundwater users? Do we want to rotate through the
16 groundwater user crowd and then come to the surface
17 water?

18 What's the preference? Or I guess I could --

19 MS. MCHUGH: I think from Group 3, I don't
20 think we plan to ask this witness any questions.

21 MR. LAWRENCE: I don't have any questions.

22 HEARING OFFICER: I'm sorry, let's go off the
23 record.

24 (Discussion held off the record.)

25 HEARING OFFICER: So let's go back on the

1 record now.

2 And we resolved that there are no other
3 questions from the groundwater users. So Mr. Rigby or
4 Mr. Fletcher, do you have questions for Mr. Johnson?

5 MR. FLETCHER: Yes, I have some questions.

6 May I remain seated? Do you have a problem
7 with that?

8 HEARING OFFICER: I don't have a problem
9 because you speak up so well, Mr. Fletcher.

10 Do you have a problem with that?

11 MS. JENKINS: I think we can hear you.

12 MR. FLETCHER: Okay. Well, if you can't --

13 MS. JENKINS: You're good.

14 MR. FLETCHER: -- let me know. I just didn't
15 want to --

16 HEARING OFFICER: Move the microphone.

17 MS. JENKINS: You're good.

18 MR. FLETCHER: Okay. Thank you.

19

20 CROSS-EXAMINATION

21 QUESTIONS BY MR. FLETCHER:

22 Q. Mr. Johnson, I'm Kent Fletcher. I represent
23 Big Wood Canal Company.

24 Have you listened to any of the testimony of
25 the surface water side dealing with the potential

1 damages to their crops?

2 A. I have not heard that testimony yet.

3 Q. I'll represent to you that Fred Brossy
4 testified he's growing potatoes this year, too. If he
5 doesn't receive water this year for his potato crop, he
6 could expect the same types of damages you're claiming;
7 isn't that correct?

8 A. Correct.

9 Q. As far as your -- I think you testified that
10 you have some acres that have only a surface water
11 supply; isn't that correct?

12 A. Correct.

13 Q. How many acres are you farming that only have
14 a surface water supply?

15 A. I'm guessing 300.

16 Q. Okay. And --

17 A. Maybe a little less than that. Possibly 200.
18 I'm not sure how all of the tenants plan on delivering
19 water, so I -- between 2- and 300, let's say.

20 Q. Okay. Do you know the sources of water for
21 those acres that only have a surface water supply?

22 A. One of them is Big Wood water -- or not --
23 excuse me -- Little Wood water and Silver Creek. That
24 would be 80 acres. About 130 is off Big Wood water.

25 Q. That would add up to about 210 acres, roughly.

1 A. Yeah. I think that's probably -- that would
2 be all of the surface water ones.

3 Q. Thank you. When you say "Big Wood water," are
4 you talking about Big Wood Canal Company water?

5 A. See, that's what -- I don't know how
6 everybody's water rights work, but this water is coming
7 down the Big Wood by Stanton Crossing. It's surface
8 water rights, so I don't know what you would call that.

9 Q. So you don't know -- do you know if the land
10 -- you're renting this land from someone else?

11 A. Yes.

12 Q. And do you know if he owns canal shares or
13 shares in the canal company?

14 A. I don't know how their water rights work,
15 that's the thing. I just lease the ground from them,
16 and water rights are not a discussion we have.

17 Q. If his only source of water is Big Wood Canal
18 Company, do you know when they're planning on curtailing
19 deliveries?

20 MR. BARKER: I'm going to object, Kent. You
21 know there's no Big Wood Canal Company water above in
22 the Triangle. Why are you asking him that? That's
23 unfair to this witness.

24 MR. FLETCHER: I'll withdraw the question.
25 That's fine.

1 Q. (BY MR. FLETCHER) So is it your understanding
2 that that water is actually coming from American Falls
3 Reservoir, or do you know?

4 A. How can it come from American Falls Reservoir
5 if it's coming down the Big Wood? I don't know the
6 water rights. I don't know what you're asking me.

7 Q. Well, I'm just trying to clarify whether it's
8 coming from Big Wood Canal Company or --

9 A. I do not know that.

10 Q. -- or the Big Wood River. Is it a river
11 right, or you don't know?

12 A. I don't know.

13 Q. So if your source of surface water is cut off
14 on the Little Wood and Silver Creek rights, you said
15 there's about 80 acres?

16 A. [Witness nods head.]

17 Q. And they're solely under -- they're solely
18 being diverted out of the Little Wood; is that correct?

19 A. And Silver Creek.

20 Q. Okay. And if -- do you know the priority
21 dates on those rights?

22 A. Not 100 percent, no, I don't.

23 Q. If that water right is curtailed, do you have
24 any other source of water for those 80 acres?

25 A. Not at the moment.

1 Q. What is your plan if that source of water is
2 curtailed?

3 A. I don't have a plan yet.

4 Q. Are you expecting to suffer losses because of
5 the amount of ground that you're farming solely under
6 surface water rights this year?

7 A. Am I expecting to have losses?

8 Q. Yes.

9 A. I have not been expecting to have losses.

10 Q. And you may have already testified to this,
11 but you don't know your priority dates on the Little
12 Wood or --

13 A. I do not.

14 Q. -- Silver Creek?

15 No?

16 A. No, I do not.

17 Q. On those acres that have solely surface water
18 as the supply, did you take into account water
19 conditions before planting the crop?

20 A. No. The ground was rented long before the
21 water problem arose this winter.

22 Q. When did you lease it? I'm sorry.

23 A. September.

24 Q. Oh, last September, 2020?

25 A. Yes.

1 MR. FLETCHER: I don't have any further
2 questions. Thank you.

3 HEARING OFFICER: Mr. Rigby?

4 MR. RIGBY: No further questions.

5 HEARING OFFICER: Redirect, Mr. Barker?

6
7 REDIRECT EXAMINATION

8 QUESTIONS BY MR. BARKER:

9 Q. Thank you, Mark. The water rights that you --
10 or sorry -- the land that you're renting over off of
11 Silver Creek near Picabo, are you renting that from the
12 Purdys?

13 A. Some is from the Purdys in Picabo, yes.

14 Q. Yeah. And do you know that the Purdys have
15 1877 water rights on your property?

16 A. Again, I don't. It's never discussed. When I
17 lease ground, I go to them and say, "Have you got
18 ground?"

19 "Yes, we've got ground."

20 "Are you going to have water?"

21 "Yes, we have water." And that's the extent
22 of our conversation. It's never been a problem to this
23 point.

24 Q. And the other property that you're renting
25 with surface water rights you said is around Stanton

1 Crossing?

2 A. Yes, that's one of them.

3 Q. And that's over by Willow Creek?

4 A. By what?

5 Q. By Willow Creek?

6 A. It would be west of Willow Creek. It would be
7 west of Timmerman. That's also the Purdys'.

8 MR. BARKER: Thank you.

9 HEARING OFFICER: Any other questions? Any
10 recross?

11 Thank you, Mr. Johnson.

12 Mr. Barker?

13 MR. BARKER: Stuart Taylor.

14 HEARING OFFICER: Mr. Taylor, did I hear that
15 correctly?

16 THE WITNESS: Yeah.

17 MR. BARKER: I hope so.

18 THE WITNESS: Yes.

19 HEARING OFFICER: Come forward. Raise your
20 right hand, please.

21

22 STUART TAYLOR,
23 first duly sworn to tell the truth relating to said
24 cause, testified as follows:

25

1 HEARING OFFICER: Thank you. Please be
2 seated.

3
4 DIRECT EXAMINATION

5 QUESTIONS BY MR. BARKER:

6 Q. Mr. Taylor, would you spell your full name for
7 the record and tell us where you live.

8 A. Yes. My first name is Stuart, S-t-u-a-r-t.
9 My last name is Taylor, T-a-y-l-o-r. And I live at the
10 headquarters for the Wood River Ranch at 10524 Highway
11 75 Bellevue, Idaho 83313.

12 Q. Okay. So, Mr. Taylor, what do you do for the
13 Wood River Ranch?

14 A. I am the general manager and the operator.

15 Q. How long have you been at the Wood River
16 Ranch?

17 A. Nine years in April, last April.

18 Q. So you moved up to Idaho in 2012?

19 A. Yes. Yes.

20 Q. Okay. Where were you before that?

21 A. I was in southwestern New Mexico.

22 Q. So what's your background, your work
23 background?

24 A. Well, I've been professionally managing cattle
25 operations for 30 years. And I have a bachelor's degree

1 in agriculture with an animal science major. And I have
2 a master's degree in animal breeding and genetics from
3 New Mexico State University. I've been working in
4 private industry for most of my time, but I've also
5 managed ranches for universities.

6 Q. And other than New Mexico and Idaho, where
7 have you worked?

8 A. Mainly in Nevada.

9 Q. Okay. So are you familiar with your -- that's
10 a silly question.

11 You are familiar with the Wood River Ranch
12 property?

13 A. Yes.

14 Q. Can you identify where that is on this map in
15 front of you?

16 Or just describe, generally, where the ranch
17 is in relation to the rest of the Triangle.

18 A. Oh, okay. Yeah, we're in the -- we're pretty
19 much in the -- on the western boundary of this -- you
20 know, of this perimeter that's drawn on the map here,
21 and about a quarter of the way up from the bottom end of
22 the boundary.

23 Q. Are you located above what's called the Heart
24 Rock?

25 A. Yes.

1 Q. All right. Are you adjacent to the Heart
2 Rock?

3 A. We border the Heart Rock Ranch on our southern
4 border.

5 Q. How many acres are there under the ranch
6 ownership?

7 A. There's 3,992 deeded acres.

8 Q. Is any of this land irrigated?

9 A. Yes. Roughly, 1,550 acres are irrigated.

10 Q. And what kind of crops do you grow under this
11 irrigation?

12 A. It's predominantly pasture. We have -- at
13 present, we have approximately 103 acres being irrigated
14 for the production of grass alfalfa hay mix. The
15 balance of the irrigated lands are used for pasture.

16 We do have other hayfields, but they're
17 dryland fields that we rely on subwater. And we have an
18 additional field not contiguous with the primary ranch
19 that we take dryland hay off of as well.

20 Q. Is that additional -- where is that additional
21 field located?

22 A. It's located up on the corner of Glendale Road
23 and Highway 75 going up towards Bellevue.

24 Q. Does that -- so does that parcel up on Highway
25 75 and Glendale have a water right?

1 A. It does. It's got a groundwater right. And
2 we have actually had that right in the water bank for
3 the past five years.

4 Q. How big a parcel is that?

5 A. It's, I think -- I'm not exactly sure, but I
6 think the water right is rated for 47 acres. And it's
7 1.06 cfs.

8 Q. The rest of the land that's irrigated under
9 the Wood River Ranch, what are the sources of water that
10 you have for that?

11 A. We have groundwater on the west side of the
12 river, as well as two surface water rights that irrigate
13 those fields out there.

14 Q. So you -- the property is on both sides of the
15 river?

16 A. Yes.

17 Q. East and west side?

18 A. Yes. The Wood River bisects the ranch.

19 Q. And the -- you have two wells on the west side
20 of the river?

21 A. No. There's actually four groundwater wells
22 on the west side of the river. And there is a surface
23 water diversion directly across from the headquarters of
24 the ranch. And then we also have a diversion that comes
25 off of the Glendale lateral system that provides us

1 surface water for, approximately, 120 acres north of
2 there.

3 Q. And we're talking about the west side --

4 A. Yes.

5 Q. -- of the river, still?

6 A. Yeah. The --

7 Q. So the diversion on the river is called the
8 graph?

9 A. Correct.

10 Q. Okay. And then how much land are you
11 irrigating over on the west side?

12 A. All total over there, there's approximately
13 5 -- approximately, 500 -- I want to say about
14 550 acres.

15 Q. Of irrigated ground?

16 A. Yes.

17 Q. Okay.

18 A. Yep.

19 Q. And then on the east side of the river, that
20 would give you about 1,000 acres of irrigated land?

21 A. Yeah. Well, are you talking about -- okay.
22 That's -- on the west side we have an additional
23 300 acres that's primarily flood and subirrigated.

24 Q. Flood irrigated out of the river?

25 A. Yes. Yeah. Yep. Yeah. I was thinking in

1 terms of pressurized irrigation. I'm sorry.

2 Q. So on the west side you have 500 acres or so
3 that are supplied by a combination of wells and surface?

4 A. Well, no. Approximately, about 800.

5 Q. Okay.

6 A. Yeah. Right.

7 Q. All right. And then on the east side of the
8 river, what do you have?

9 A. The balance of that 1,500 acres. And that
10 includes the hayfield on Baseline Road, too. 100 acres
11 on Baseline Road.

12 Q. And then how is the land on the east side of
13 the river irrigated, from what sources?

14 A. The pastures there at the home ranch are all
15 groundwater irrigated. We have an alfalfa field on the
16 southern boundary of the ranch that is supplied off of
17 the Baseline extension. So it's, basically, a surface
18 right that's pressurized at that point. And then the
19 piece on Baseline Road, the 100-acre hayfield is a
20 combination right of surface and groundwater.

21 Q. So you called it the Baseline extension.

22 Is that a surface water canal?

23 A. Yeah. That's the canal that comes down from
24 the diversion above the Glendale bridge.

25 Q. And that Baseline canal runs through the

1 property and then --

2 A. The Baseline extension does, yes. The bypass,
3 yep.

4 Q. So when you first arrived at the ranch, had
5 you had experience with irrigation before?

6 A. Yes, I had.

7 Q. And was this in New Mexico and Nevada?

8 A. Mainly in Nevada, yes. Uh-huh.

9 Q. So what kind of irrigation experience had you
10 had before you arrived at the ranch in 2012?

11 A. Both flood and pressurized irrigation.

12 Q. So when you got to the ranch in 2012, what did
13 you observe about how the irrigation operations were
14 taking place at the ranch?

15 A. Well, when I first got there, the first thing
16 I noticed is that we were grossly overwatered. The
17 ranch had a lot of -- there was a lot of maximizing that
18 was going on, as I like to say, in terms of
19 overwatering, overfertilizing, overstocking.

20 So my first line -- you know, my first line of
21 business was to decrease the amount of water that we
22 were putting out on our pastures, because we had a lot
23 of monoculture pastures. And I wanted to develop a more
24 diverse forage base in these pastures.

25 Q. So first of all, explain what you mean by a

1 "monoculture pasture"?

2 A. Well, a lot of the pastures, you know, if
3 you've got one species of grass, that's all you had in
4 there. And a lot of that was due to the fact that --
5 the way the pastures were watered, fertilized, and
6 grazed. There was never any opportunity for other
7 species to compete with the existing grasses and forages
8 that were present.

9 So by cutting back on the water, we were able
10 to promote some of these other forage species and,
11 thereby, improved the palatability of the feed in the
12 pastures due to that diversity. And, also, to promote a
13 healthier canopy and improve the nutritional quality and
14 the palatability of the forages that were there.

15 Q. So how did you go about reducing the amount of
16 water that was used on the ranch?

17 A. Well, you know, initially a lot of that was
18 done with soil probes. Because I wasn't that familiar
19 with what -- you know, what we were looking at. So we
20 had -- everybody had a soil probe in their pickup, and
21 when we were, you know, looking at moving water, we'd go
22 out and take some samples in the pasture and just see
23 where the water level was.

24 And that was kind of the initial process to
25 identifying what our actual water needs were. And then

1 from there, with some trial and error and
2 experimentation with, you know, various stocking rights
3 and so forth, we were able to evaluate and then develop
4 some optimums, in terms of not only our water use but
5 also our stocking rates in those given pastures.

6 Q. Stocking rates means the number of heads --

7 A. The number of cattle, yes. Uh-huh.

8 Q. So explain -- I want a little more explanation
9 from you about what -- this difference in the forage.

10 Why does that reduce your water consumption?

11 A. Well, if you have a variety of forages
12 available for cattle, they're going to -- you know,
13 cattle will kind of shop around when they graze. And
14 they're going to select plants at different stages of
15 growth. So if you have a variety of forages available,
16 you can -- you know, you can eliminate this -- a lot of
17 this pattern grazing that will go on in monocultured
18 pastures, where they'll just go on and, you know, mow an
19 area down.

20 And, you know, that's a bad situation because,
21 basically, if you eliminate your canopy, then your
22 moisture retention goes away, and you've just got to add
23 more water to maintain that grass stand. So by having a
24 variation in your canopy, you can retain a lot more soil
25 moisture, and at the same time, you're providing a more

1 diverse and beneficial diet for your cows to graze on.

2 Q. So when you have multiple -- a more diverse
3 forage system, you don't need as much water as you do if
4 you have a monoculture?

5 A. Oh, exactly, yeah. That's very true, yes.

6 Q. And is it also true that that diverse forage
7 consumes less water than the monoculture?

8 A. Yes, it does, because you have the opportunity
9 to -- you know, if you're wanting to promote more bunch
10 grasses, for example, in your pastures, whether they're
11 wheat grasses or -- you know, we've gone in and planted
12 some hybrid species. One is called Johnson Festulolium,
13 which is a rye hybrid. These grasses are a lot more
14 drought tolerant. So, you know, utilization on these
15 plants will remain strong even with lower water
16 applications.

17 Q. So are you -- the pastures, are they supplied
18 by pivots? Hand lines? Wheel lines? How are you
19 irrigating those?

20 A. On the west side of the river, all of our
21 pressurized irrigation is done through pivots. And --
22 pivots and flood -- floodwater over there. On the east
23 side -- or on the -- yeah, on the east side of the
24 river, we utilize some hand lines, wheel lines,
25 cart-type sprinklers, and then pivots.

1 Q. How much of your property is under pivot right
2 now?

3 A. Oh, I'm trying to think of how many acres
4 we've got total. Oh, about 800 acres.

5 Q. Have you done any other changes to your
6 irrigation practices from -- since you've been there
7 over the last nine years from what was occurring when
8 you first arrived?

9 A. Well, we've done -- you know, with our
10 property on Baseline Road, our hayfield over there, when
11 I arrived, they were not using that water right the way
12 they were supposed to. They had a -- that particular
13 piece of ground has a combination right attached to it
14 where the surface water and the groundwater are used in
15 conjunction with each other.

16 And what they had been doing is they had a
17 much higher horsepower pump in place, and they were not
18 pulling water out of the canal. So what I did was I
19 went in there, and I established the surface water
20 delivery system, and then downsized the existing
21 groundwater pump, and matched that system up to where it
22 could not exceed the volume of that water right.

23 So, you know, that was a pretty good step
24 right there to make that system work appropriately. The
25 other thing we've done a lot of over the years is

1 installing new -- putting in new pivot packages on our
2 pivots so that we're, you know, as efficient as we can
3 be in our delivery through our sprinklers.

4 And we've also, you know, taken a lot of time
5 to evaluate our pumps and, you know, try to match things
6 up to where our horsepower meets our rights and we're
7 not, you know, doing any overpumping or anything like
8 that.

9 Q. So on your baseline property, as a result of
10 the changes you've made, you've reduced the amount of
11 pumping from the groundwater?

12 A. Oh, yeah, definitely, yes. About 50 percent.

13 Q. And these pivot packages, what do you mean by
14 that?

15 A. Well, that's where you go in and you,
16 basically, go through your -- all your drops on your
17 pivot, and you replace the nozzles or even the whole
18 sprinkler head. Because over time those nozzles will
19 get to where they -- especially if you're pumping
20 surface water through them -- the gravel and stuff will
21 deteriorate the diameter of the nozzle. It will open it
22 up, and you'll -- you know, your efficiency in your
23 pivot will drop way back.

24 Q. So you're using more water for the same --
25 than you need --

1 A. Exactly.

2 Q. -- when that happens?

3 A. Right. So if you -- you know, and you can
4 call -- you know, there's a lot of companies around in
5 the Magic Valley that will come out and evaluate your
6 system and say, you know, well, you need this, this, and
7 this, and they'll actually come in there and do the work
8 for you.

9 Q. So your surface water rights, do you have any
10 idea on how long you're going to remain in priority this
11 year?

12 A. I'm thinking probably sometime the first week
13 in July we're probably going to be -- we're going to be
14 out of -- pretty much out of surface water.

15 Q. And after that what would you have to rely
16 upon?

17 A. We would have to rely on our pumped water at
18 that point.

19 Q. And you understand that this proceeding is an
20 effort to evaluate whether there should be curtailment
21 of all of the wells in the Bellevue Triangle as of
22 July 1 --

23 A. Right.

24 Q. -- of this year?

25 You understand that?

1 A. Yes.

2 Q. So explain to the Director what the
3 consequences would be to your fields and your operation
4 as a result of being completely out of water on July 1?

5 A. Well, at this stage in the game, with -- you
6 know, we're doing a summer calving program, and we have
7 been for the past five years. Our cows -- our mature
8 cow herd has just started calving. They started the
9 first of June, and they'll calve through until about the
10 middle of July or maybe into the first of August. So
11 with that, we will be -- we will be in a hay-feeding
12 mode, so...

13 Q. Okay. So what does that mean?

14 A. Well, we'll be buying -- we'll have to be
15 buying hay and feeding because we're not going to be --
16 we're not going to be selling pairs with young calves on
17 them.

18 Q. So why would that be? Why would you --

19 A. Well, you know, a lot of people think that
20 cows are a liquid asset, but they're not, in my book,
21 because you've got way too much of an investment into
22 that female, if you're raising your own replacement
23 females.

24 You know, I've got a lot of investment in that
25 cow herd at this point to where we have developed cows

1 that are specifically designed for our system. Because
2 not only do we, you know, run those cows on that ranch
3 in the summertime, but we have a BLM allotment where we
4 ship those cows to during the winter months down in
5 southern Idaho. And I've got a set of cows that work
6 for that ranch, and my production values bear that out.

7 So to say, you know, I can sell these cows and
8 then go in -- go down to the Twin Falls sale barn or go
9 to some sale somewhere and replace them, it's not going
10 to happen. It's not. Not for any amount of money. I
11 can't do that. So I've been in this cow business way
12 too long to say otherwise.

13 Q. Is that because of the genetics and the
14 breeding of the cattle that you've been working?

15 A. It's the genetics, and it's just the years of
16 selection and culling that have gone into the cow herd,
17 yeah.

18 Q. So in order to hay -- so if you were to have
19 to hay -- feed the cattle with hay starting on July 1,
20 how much hay would you need to get you through until the
21 time you move them to the range?

22 A. Well, you know, a lot of that -- there's some
23 variables in there. It's hard to make a solid estimate
24 on that because there's always the notion that it could
25 rain. And one thing we do do, especially with the way

1 we've been irrigating, is we bank up a lot of feed, and
2 we use our native country as long as we can. So a lot
3 of that's going to depend on weather conditions and the
4 ability to utilize our banked-up feed.

5 But if we had to start -- you know, if we took
6 a hit on July 1st and we had to start feeding the first
7 part of August, I estimate we'd be into it for \$100,000
8 or even more. And that's not taking into account
9 collateral damage, because that's -- having to feed cows
10 during the breeding season is drastically going to
11 affect that -- the performance on that cow herd as far
12 as conception goes.

13 And, also, I would anticipate death loss
14 because of the confinement aspects associated with
15 feeding cattle during the hot time of the year. So, you
16 know, my damages from this could be as much as 250- or
17 \$300,000 when it's all said and done.

18 Q. So, in essence, the feeding of the cattle
19 would reduce the conception, give you fewer calves next
20 year?

21 A. Oh, most definitely.

22 Q. By what percentage?

23 A. I would estimate a 40 percent drop in
24 conception rates due to having to feed the cows.

25 Q. And you'd also lose cattle to death, did you

1 say?

2 A. Well, I'd probably have sickness in calves is
3 what I'd end up with. Because having those cows come in
4 on the feed ground when it's 90 degrees and all of the
5 dust and everything else. Anytime you take cows and
6 move them from a known environment to a different
7 environment, there's going to be stress. And that
8 stress is going to, ultimately, affect your youngest
9 cattle. And I'm sure we're going to be plagued with
10 respiratory problems and death a lot.

11 MR. BARKER: Thank you, Mr. Taylor.

12 THE WITNESS: You're welcome.

13 HEARING OFFICER: Thank you, Mr. Barker.

14 Questions from the groundwater user group?

15 MS. O'LEARY: Not from me.

16 HEARING OFFICER: Ms. O'Leary?

17 MS. MCHUGH: No questions.

18 MR. LAWRENCE: No, thank you.

19 HEARING OFFICER: No questions from Group 3.

20 Okay. Cross-examination, Mr. Fletcher.

21
22 CROSS-EXAMINATION

23 QUESTIONS BY MR. FLETCHER:

24 Q. Mr. Taylor, I'm Kent Fletcher. I represent
25 Big Wood Canal Company.

1 You testified that you work for an entity
2 called Wood River Ranch; is that correct?

3 A. Yes.

4 Q. Do you know who owns the water rights for Wood
5 River Ranch?

6 A. Yes, I do. Lakeside Industries.

7 Q. You also mentioned that you had a 47-acre --
8 or your employer has a 47-acre groundwater right in the
9 water bank?

10 A. Yes.

11 Q. Why is that water right in the water bank?

12 A. Well, I'll tell you, we had done that as kind
13 of a community effort to -- and that's one thing I
14 really didn't get to touch on here is that my approach
15 to this water system has been a community approach. And
16 that was a very difficult piece to irrigate with the
17 system that we had in place. But in addition to that,
18 we thought that it was appropriate to take the lead on
19 possible mitigation measures for this pending water
20 call.

21 Q. And so that -- I think you testified that
22 water's been in the water bank five years; is that
23 correct?

24 A. I believe that's correct. I'm not 100 percent
25 on that. I believe it's been five years.

1 Q. So regardless of the outcome of this hearing,
2 as I understand it, your employer owns some ground near
3 Glendale, I think you said on the west side of the
4 river, that is solely irrigated with surface water
5 diversions; correct?

6 A. Yes.

7 Q. And how many acres are solely irrigated by
8 surface water?

9 A. Well, that's -- there's 120 acres on the west
10 side of the river that's solely irrigated off of the
11 Glendale lateral. It's got a pivot in place, but the
12 water is drawn out of the canal. And then we have an
13 additional -- there's 300 acres down on the south of
14 there that has -- that's primarily flood irrigated --
15 that is flood irrigated and subwater.

16 Q. Okay. You mentioned that on this Glendale
17 property that you believe it will be curtailed around
18 the 1st of July, the 120 acres?

19 A. No. I said that -- on the surface water
20 rights?

21 Q. Yes.

22 A. Yeah. No, probably the first week in July.

23 Q. Oh, first week?

24 A. Yeah. Yeah. Yeah. I'd suspect maybe the
25 first week up to the 10th or so is kind of what the

1 read's been on it.

2 Q. And what is the source of that water?

3 A. It's the Big Wood River.

4 Q. So for that acreage, you will not have another
5 water source if those Big Wood rights are curtailed?

6 A. No. No.

7 Q. So were the losses that you calculated, did
8 that include the damages you will incur as a result of
9 that curtailment of those surface water rights?

10 A. No. You know, we plan on -- we usually plan
11 on losing our surface water sometime between the --
12 around the 10th of July and the first part of August.
13 So, no, my damages come from the curtailment of the
14 groundwater.

15 Q. On the additional 300 acres that you mentioned
16 are solely surface water; you have no other source of
17 water for those 300 acres?

18 A. No, huh-uh.

19 Q. And do you know whether -- or have you heard
20 projections of whether that right will be curtailed this
21 year?

22 A. Oh, that will go off about the same time.
23 Yeah, they all -- that first one we were talking about,
24 that 120-acre piece, that's going to go down a little
25 bit sooner, but once we get to -- you know, if our

1 water's going off, say, the 15th of July, once we get to
2 the 1st of July, the cascade effect on the cuts kicks in
3 and everything, pretty much, goes down about the same
4 time.

5 Q. Do you know the priority dates for the
6 Glendale property, the 120 acres?

7 A. That's an 1885 right.

8 Q. And do you know the priority date for the
9 300 acres?

10 A. That -- there's some mixed rights over there.
11 I think the oldest right associated with that one is an
12 1883.

13 Q. Do you know the priority dates of the
14 groundwater rights that are used on the ranch?

15 A. Some of them, yep.

16 Q. What are they?

17 A. Well, we've got a well there on the -- we've
18 got a well on the west side of the river that waters
19 about 230 acres, and it's a 1973 right. We have a well
20 at the -- right there at the headquarters that is a 1967
21 right. The well on the property at -- the Baseline
22 piece that I referred to that has a combination right, I
23 believe that's a 1973 or '4 right. And then the well at
24 the -- up on the piece that is in the water bank is a
25 much newer right, it's a 1989.

1 Q. So you mentioned that these surface water
2 rights that you own are curtailed almost every year; is
3 that correct?

4 A. Yes. Well, we've had some -- we've had --
5 we've had a couple of years where we had been -- we had
6 been curtailed way back earlier on, but then things
7 changed up north, we either got some rain or, you know,
8 whatever happened, and then they would reinstate some of
9 them. So -- but generally by -- you know, generally by
10 sometime in August, we're definitely off.

11 Q. Have your groundwater rights ever been
12 curtailed?

13 A. No.

14 Q. Do you believe the groundwater rights should
15 be administered in priority with other water rights?

16 A. Yes, I believe they -- well, they have a
17 priority date attached to them, so, yes.

18 Q. So do you believe they should be administered
19 in priority with surface water rights?

20 A. Well, you can't really lump them all together.
21 When you're dealing with an 1895 right and a 1973 right,
22 you're working on a completely different scale. But I
23 think if the scales are adjusted to where they are in
24 sync with each other, I would feel that would be
25 appropriate.

1 Q. Can you describe what you're talking about a
2 little bit so I understand it better?

3 A. Well, I'm just saying if you got -- nobody's
4 going to have -- well, I don't know, maybe somebody does
5 -- but I don't think anybody's going to have an 1882
6 groundwater right, for example. So, you know, if
7 there's a groundwater right that's a 1920 right, and
8 that's the oldest right in the valley, for example, that
9 would be -- that would coincide with the surface right
10 that is an 1880, 1879, whatever right.

11 Do you follow what I'm saying?

12 Q. Yes. So you're saying they should be
13 administered based upon relative priority dates between
14 -- the oldest groundwater right should tie to the oldest
15 surface water right?

16 A. No. I'm saying they should be -- no. I'm not
17 saying they should be tied together. I'm just saying
18 that they should be administered accordingly to the
19 period of time -- the time range between the oldest and
20 the most junior right.

21 Q. Based upon your experience with irrigation and
22 the management of these rights, do your -- does the
23 pumping of your groundwater rights affect surface water
24 supply?

25 A. Not to my knowledge.

1 Q. You mentioned you had about 800 acres in
2 pivots; correct?

3 A. Correct.

4 Q. And you keep these maintained regularly?

5 A. Yes.

6 Q. And you put the pivot sprinkler packages --
7 you update those frequently to keep them maintained?

8 A. We do.

9 Q. Do you have any idea how efficient those
10 pivots supply water to the ground?

11 A. I do not. I do not know the value on that.

12 Q. You haven't done any efficiency studies for
13 your water delivery system?

14 A. As far as the actual infrastructure, the
15 mechanical systems?

16 Q. Yes.

17 A. No, I have not. No.

18 Q. Did you hear the testimony of some of the
19 senior surface water holders concerning what they've had
20 to do this year because of water shortages concerning
21 their cattle?

22 A. I have not.

23 Q. So it's your position you won't sell cattle
24 because of water shortages if you were curtailed, but
25 that you would buy hay to supplement the feed?

1 A. That's correct.

2 Q. And you had mentioned how you're -- I don't
3 want to use the word "proud," but you've worked hard to
4 build the genetics of your herd, especially your cows,
5 and you don't want to get rid of those cows that you've
6 worked so hard to breed all of these years; correct?

7 A. That's correct. Well, and the other thing, I
8 think the investment -- the time and money investment
9 into those cows is greater than -- like I said, there's
10 no way that I can get that money back. I can't replace
11 those cows.

12 Q. And isn't that true with most people who raise
13 livestock, that they want to maintain their breeding
14 herd?

15 A. I don't know.

16 Q. You don't know?

17 A. I don't know. I think -- you know, in my
18 opinion, better ranchers, yes, I would say so. That
19 would be job one is to maintain -- to try to hang on to
20 your cow herd at all costs.

21 Q. For all the reasons you've mentioned here
22 today?

23 A. Exactly. Younger cattle are a lot easier to
24 liquidate. If you've got a lot of yearling stock or,
25 you know, cows -- cattle that aren't in your breeding

1 herd, then that's a different story.

2 But to -- and the other issue at this time of
3 the year is when you've got cows with young calves on
4 them, if you take those cows to the sale barn, those
5 calves are going to get split off and sold as a leppy
6 calf, and that cow is going to go probably to the kill
7 floor. And I just don't -- I don't do that.

8 MR. FLETCHER: Thank you. I don't have any
9 other questions. Thank you.

10 THE WITNESS: You bet.

11 HEARING OFFICER: Mr. Rigby?

12

13 CROSS-EXAMINATION

14 QUESTIONS BY MR. RIGBY:

15 Q. Mr. Taylor, Jerry Rigby representing the
16 senior surface water users --

17 A. Yes.

18 Q. -- down on the Little Wood.

19 I just want to ask you, especially when you
20 talk about the herd and the importance, as you say, of
21 keeping it intact, I'll represent to you that in the
22 testimony of at least two that I can recall of my
23 clients, they have either had to sell off part, if not
24 most, of their herd or will be required to as a result
25 of water having been turned off. They have no other

1 source. They do not have the wells.

2 So when you talk about syncing up the
3 available water rights and syncing between ground and
4 surface and the importance of keeping a herd, I'm having
5 a difficult time understanding how that would work when,
6 clearly, they've had to sell off the herd, which is the
7 very thing that you've said you want to do everything
8 you can to avoid.

9 A. Uh-huh.

10 MR. BARKER: So I'm going to object. There's
11 no question there. It's just a speech by Mr. Rigby.

12 MR. RIGBY: I'm asking him how he wants to
13 sync it. He's the one that brought up syncing.

14 MR. BARKER: No, you had a speech about a
15 page-and-a-half long in the transcript. So if you want
16 to ask him --

17 MR. RIGBY: If you want to talk about
18 page-and-a-half long, your --

19 HEARING OFFICER: Overruled. This is
20 cross-examination. Ask a question, Mr. Rigby.

21 Q. (BY MR. RIGBY) So, again, is there any way
22 you can sync that to make it reasonable?

23 A. I think we're talking about -- I don't see the
24 relationship here. He was asking me a question about
25 managing surface rights and groundwater rights on

1 priority dates, and I don't see the tie-in to what
2 you're talking about.

3 Q. What I'm asking is: They've had -- they don't
4 have any water.

5 A. Right.

6 Q. But their surface water rights are, obviously,
7 much older in priority than the groundwater. And you
8 suggested there ought to be a way to sync them so that
9 they make a more reasonable connection.

10 My question was: They've had to sell off
11 their cattle because they don't have water; you're not
12 going to have to. How would you then sync or make that
13 reasonable in today's world?

14 A. Are you talking about syncing the water
15 rights?

16 Q. To make it so that -- should you be on when
17 they're off and have to sell their cattle?

18 A. Well, that's not what I was saying. I'm not
19 saying I should be on when they're off and they have to
20 sell their cattle. The question was what was I going to
21 do with my cows if my water got cut.

22 I didn't make any comment about, you know,
23 what they should do if their water is cut. And as far
24 as the syncing thing goes, that's an administrative
25 deal, not -- and I don't have anything to do with that.

1 I was just saying that that made sense to me.

2 Q. So then asking the question as to the
3 importance of keeping your herd together --

4 A. Right.

5 Q. -- you are saying that's very important to
6 you?

7 A. [Witness nods head.]

8 Q. Is it not equally important to them?

9 A. I would think so.

10 Q. So if they have to sell off their herd, I
11 guess my question is: Why should you not have to sell
12 off your herd?

13 A. Well, because I can go buy hay.

14 Q. Okay. But you said that that would cost you
15 severely to do that.

16 Are you willing to turn off your pumps and go
17 buy hay to make it more equal?

18 A. If I'm --

19 MR. BARKER: Objection.

20 THE WITNESS: If I'm ordered to -- if I'm
21 ordered to turn off my pumps, then I will go buy hay.

22 MR. RIGBY: Okay. No further questions.

23 HEARING OFFICER: Mr. Barker, redirect?

24 ///

25 ///

1 REDIRECT EXAMINATION

2 QUESTIONS BY MR. BARKER:

3 Q. Stuart, thanks for your patience with counsel
4 today.5 You said that you would have to go buy hay,
6 that would be your choice to go buy hay rather than sell
7 off?

8 A. At this stage, yes.

9 Q. You have no idea why Mr. Rigby's people think
10 that they need to sell instead of go and buy hay; is
11 that right?12 A. I have no idea about their -- what their
13 economics are or what their -- you know, what their
14 relationship is with their cow herd.15 Q. Right. But that's an option in the
16 marketplace, to go buy hay if you want to keep your
17 cows?

18 A. Yes.

19 MR. BARKER: Thank you. No further questions.

20 HEARING OFFICER: Recross, Mr. Fletcher?

21 MR. FLETCHER: Nothing. Thank you.

22 HEARING OFFICER: Mr. Rigby?

23 MR. RIGBY: No.

24 HEARING OFFICER: Okay. Thank you,
25 Mr. Taylor.

1 THE WITNESS: You bet.

2 HEARING OFFICER: I want to inquire of the
3 court reporter.

4 How are you doing?

5 COURT REPORTER: As in, do we want to take a
6 break or --

7 MR. BARKER: Mr. Director, I would prefer that
8 we adjourn for the day and start up in the morning.

9 HEARING OFFICER: Okay.

10 MR. BARKER: If that's okay?

11 HEARING OFFICER: Yes, I think this is a good
12 time to adjourn. Earlier than last night. So 8:30
13 again, is that a good time?

14 MR. BARKER: Yes, thank you.

15 HEARING OFFICER: Let's start at 8:30
16 tomorrow. We will adjourn and be back on the record in
17 the morning.

18

19 (Hearing adjourned at 6:21 p.m.)

20

21

22

23

24

25

1 REPORTER'S CERTIFICATE

2 I, ANDREA L. CHECK, CSR No. 748, Certified
3 Shorthand Reporter, certify;

4 That the foregoing proceedings were taken
5 before me at the time and place therein set forth, at
6 which time the witness was put under oath by me;

7 That the testimony and all objections made
8 were recorded stenographically by me and transcribed by
9 me or under my direction;

10 That the foregoing is a true and correct
11 record of all testimony given, to the best of my
12 ability;

13 I further certify that I am not a relative or
14 employee of any attorney or party, nor am I financially
15 interested in the action.

16 IN WITNESS WHEREOF, I set my hand and seal
17 this 18th day of June, 2021.

18
19 
20

21 ANDREA L. CHECK, C.S.R. No. 748, R.P.R.

22 Notary Public

23 P.O. Box 2636

24 Boise, Idaho 83701-2636

25 My Commission expires July 20, 2022.

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BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF BASIN 37) Docket No.
ADMINISTRATIVE PROCEEDING) AA-WRA-2021-001
_____))

VOLUME V
(Pages 1097-1380)

BEFORE

HEARING OFFICER: GARY SPACKMAN

Date: June 11, 2021 - 8:38 a.m.

Location: Idaho Department of Water Resources
322 East Front Street
Boise, Idaho

REPORTED BY:

JEFF LaMAR, C.S.R. No. 640

Notary Public

1 APPEARANCES:

2
3 For South Valley Ground Water District:

4 BARKER, ROSHOLT & SIMPSON LLP

5 BY MR. ALBERT P. BARKER

6 MR. TRAVIS L. THOMPSON

7 1010 West Jefferson, Suite 102

8 Post Office Box 2139

9 Boise, Idaho 83701-2139

10 apb@idahowaters.com

11 tlt@idahowaters.com

12 For Galena Ground Water District:

13 LAWSON LASKI CLARK, PLLC

14 BY MS. HEATHER E. O'LEARY

15 Post Office Box 3310

16 Ketchum, Idaho 83340-3310

17 heo@lawsonlaski.com

18 For Big Wood Canal Company:

19 FLETCHER LAW OFFICE

20 BY MR. W. KENT FLETCHER

21 Post Office Box 248

22 Burley, Idaho 83318

23 wkf@pmt.org

24 ///

25 ///

1 APPEARANCES (Continued):

2
3 For Big Wood and Little Wood Water Users Association:

4 RIGBY, ANDRUS & RIGBY, CHARTERED

5 BY MR. JERRY RIGBY

6 MR. CHASE T. HENDRICKS

7 25 North Second East

8 Rexburg, Idaho 83340

9 jrigby@rex-law.com

10 chendricks@rex-law.com

11 For Sun Valley Company:

12 MCHUGH BROMLEY, PLLC

13 BY MR. CHRIS M. BROMLEY

14 380 South Fourth Street, Suite 103

15 Boise, Idaho 83702

16 cbromley@mchughbromley.com

17 For City of Bellevue and Coalition of Cities:

18 MCHUGH BROMLEY, PLLC

19 BY MS. CANDICE MCHUGH

20 380 South Fourth Street, Suite 103

21 Boise, Idaho 83702

22 cmchugh@mchughbromley.com

23 ///

24 ///

25 ///

APPEARANCES (Continued):

For City of Hailey:

GIVENS PURSLEY LLP

BY MR. MICHAEL P. LAWRENCE

601 West Bannock Street

Boise, Idaho 83702

mpl@givenspursley.com

For City of Ketchum:

WHITE, PETERSON, GIGRAY & NICHOLS, P.A.

BY MR. BRIAN T. O'BANNON

5700 East Franklin Road, Suite 200

Nampa, Idaho 83687-7901

bobannon@whitepeterson.com

For Idaho Department of Water Resources:

OFFICE OF ATTORNEY GENERAL

IDAHO DEPARTMENT OF WATER RESOURCES

BY MS. MEGHAN CARTER

322 East Front Street

Boise, Idaho 83720

meghan.carter@idwr.idaho.gov

Also Present:

Megan Jenkins, IDWR Staff

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1 THE HEARING OFFICER: This is Friday, the 11th
2 of June. This is Day Five of the hearing to determine
3 whether junior groundwater rights should be curtailed
4 in the Bellevue Triangle to satisfy senior surface
5 water rights.

6 Mr. Barker, you are calling witnesses.
7 Next witness.

8 MR. BARKER: South Valley Ground Water District
9 calls Gary Beck.

10 THE HEARING OFFICER: Mr. Beck, would you raise
11 your right hand, please.

12
13 GARY McKELL BECK,
14 having been called as a witness by South Valley Ground
15 Water District and first duly sworn, testified as
16 follows:

17
18
19 THE HEARING OFFICER: Thank you. Please be
20 seated.

21 You may examine the witness.

22 MR. BARKER: Thank you, Mr. Director.

23 ///

24 ///

25 ///

1 DIRECT EXAMINATION

2 BY MR. BARKER:

3 Q. Good morning, Mr. Beck.

4 Would you introduce yourself, spell your
5 name, and tell the judge where you live.6 A. My name is Gary McKell Beck, G-a-r-y,
7 M-c-K-e-l-l, B-e-c-k. I live -- my address is 40
8 Hillside Ranch Road in Bellevue, Idaho 83313.9 Q. Okay. And what do you do for a living at
10 the present?11 A. I manage and operate Hillside Ranch Farms
12 in Bellevue.

13 Q. How long -- sorry.

14 A. I've been doing that since 1996, October.
15 I've almost been there 25 years now.16 Q. Okay. Just for the record, we need to make
17 sure we don't talk over each other, so let me try to
18 finish and make it easier for the --

19 A. Okay.

20 Q. -- court reporter.

21 A. Oh, there I go again, talking over you.
22 Look at there. There's some smiles today. Wow.

23 You've even smiled. Look at that.

24 Q. Mr. Beck, where were you born and raised?

25 A. I was born and raised in Burley, Idaho.

1 Q. So you've been in this area of south
2 central Idaho all your life?

3 A. Yes. I was born and raised on a family
4 farm in Burley, and -- until 1996. Family farm just
5 wasn't big enough to handle me and my brothers and my
6 father, and so I moved to Bellevue.

7 Q. And you took a position with the Hillside
8 Ranch at that time?

9 A. That's correct.

10 Q. So explain to the Director what the
11 Hillside Ranch is.

12 A. Hillside Ranch is a malt barley farm for
13 Coors and Anheuser. We also raise alfalfa. We also
14 have a tree farm that we supply trees throughout the
15 Northwest from -- from Denver to Park City to Jackson
16 Hole.

17 Q. How many acres do you have under
18 cultivation at the Hillside Ranch?

19 A. 4200.

20 Q. And how much of that is in hay and how much
21 of that is in barley?

22 A. So roughly we have hay -- barley right
23 now -- give me a second. So barley we are right at
24 about 2500 acres of barley. Half of that is organic,
25 the other half is conventional. And that is all malt

1 barley with Coors and Anheuser.

2 And the remaining is alfalfa, about
3 1500 acres of alfalfa and grass mix.

4 Q. Do you have -- grow any other grains?
5 Wheat?

6 A. We grow a little bit of wheat for the flour
7 mill that we supply all the wheat for.

8 Q. Okay. How much land do you have under
9 wheat cultivation?

10 A. It varies, depending on the need, supply
11 and demand for the flour. But this year only we are at
12 just a small pivot, 35 acres.

13 Q. Can you describe the water supply for the
14 ranch, please.

15 A. So it varies. We begin -- the ranch begins
16 closer up to Bellevue. We have a farm up there callid
17 Bell Ranch. It's 310 acres. It has both surface and
18 groundwater.

19 Then as you go farther south, we call that
20 the North Ranch, which has both ground and surface.
21 All the acres, all -- the whole, entire farm has
22 groundwater with surface. Some of the acres only have
23 ground and no surface.

24 And then as we go farther south and we get
25 to Baseline Road, there's another farm called Price

1 Place, and which was just purchased last year. And it
2 is also ground and surface.

3 And then as you get to south of Highway 20
4 where we call Hillside Ranch, the main -- the main
5 ranch, that is where the artesian wells are. There's
6 three of them. One is located north of Highway 20, and
7 the other two are on the south of Highway 20. And we
8 go all the way to a field -- a canyon called Teeter
9 Canyon is where we end up at the farthest south.

10 Q. Okay. And then how far west and east does
11 your operations go?

12 A. So we are in between -- right in the center
13 of the whole, entire valley pretty much. The north
14 farm is in between Friedman Lane and Kingsbury. And
15 then right off of Baseline, Price Lane, and then onto
16 the highway.

17 Q. Okay. And are --

18 A. So yeah, about right in the middle of the
19 valley.

20 Q. Okay. And are you familiar with where the
21 TNC reserve is on Silver Creek?

22 A. Yes. So the creeks that run through the
23 ranch are at the headwaters of Silver Creek.

24 Q. So does your property adjoin the TNC
25 property?

1 A. We're really close. Some of it does, yes.

2 Q. Okay. So the source of your surface water,
3 where does that come from?

4 A. It all comes from Big Wood and from a
5 couple drainages, Buhler Drain is one that is on the
6 south -- on the south end of the valley. And Patton
7 Creek.

8 Q. Okay. And those are drains in the south --
9 both of those are drains in the south end of the
10 valley?

11 A. That's correct.

12 Q. And your surface water from Big Wood, how
13 is it delivered to the ranch?

14 A. It's delivered in two different canals, one
15 in 45 and the other one in Baseline Canal.

16 Q. Do you know roughly what percentage is
17 delivered from the 45 and the Baseline?

18 A. I don't have that number.

19 Q. Okay. Do you know -- can you locate the --
20 well, let me ask it this way.

21 Are the ranches located near the end of the
22 canal systems?

23 A. Yes. We are -- majority of our -- yeah, we
24 are at the tail end. So there is typically a pit, a
25 gravel pit, at the end of the pump station, and if we

1 have any overages, they dump into gravel pits.

2 Q. But past your ranches and your pivots,
3 there's no place -- no other deliveries past there?

4 A. No.

5 Q. I'm not sure the record's going to be right
6 on that.

7 Are there deliveries past your pits -- or
8 past your last pivots?

9 A. The farthest to the south?

10 Q. Right.

11 A. On Price Lane, no. We're at the end of the
12 line there. So I would say, yeah, we are at the end.

13 Q. Okay. So what I'd like you to do now is
14 explain for the Director what kind of modifications
15 have been made to the irrigation practices on the
16 Hillside Ranch and the other ranches you've described
17 over the last let's say decade or so.

18 A. So I explained I arrived at Hillside Ranch
19 in October of 1996. Came from Burley where we just
20 kind of did the same thing over and over and over
21 again, like everybody else had been doing. And so we
22 watered seven days a week. The pivots never shut off.
23 If -- most of you probably know the soil in the
24 Triangle is gravel. And it's not a heavy loam soil
25 like what is on the south side of Highway 20.

1 And so we felt -- and I've done just like
2 what everybody -- the other managers ahead of me, we
3 just left the pivots running seven days a week. And we
4 did that for quite a few years, until 2008 we had an
5 end-gun go off of a pivot.

6 And again, all these pivots had end-guns
7 running. And the sprinkler packages were galloned up
8 to 1200 to a thousand -- a thousand to 1200 gallons a
9 minute on these pivots.

10 Well, not until 2008 when one end-gun --
11 well, the motor burned up. And we decided to leave it
12 off for the summer and not fix it.

13 Well, at the end of that year we -- thank
14 goodness we had two pivots side by side: one with an
15 end-gun, one without. And thank goodness they were
16 both off different meters. And we realized our power
17 bill was cut quite substantially, quite a bit. And
18 we're like, What's the difference this year between the
19 other years?

20 Well, that end-gun -- if you look at an
21 end-gun motor on a pivot, they're typically about a two
22 to a three horse motor. And if you're looking at a
23 pivot, each center drive on each tower is about
24 three-quarters of a horsepower. And typically they run
25 about three to four towers at a time.

1 So we started noticing, Wait a minute, our
2 power doubled when we had the end-guns on. And we
3 went, Wait a minute. This is interesting. This is an
4 interesting concept, because is it worth the power,
5 doubling our power costs per acre, from going at \$52 an
6 acre down to 26 without an end-gun.

7 Q. So did you notice any changes in water
8 consumption by removing the end-guns?

9 A. Yeah. You know, an end-gun usually puts
10 out -- a typical end-gun is about a hundred to
11 250 gallons a minute, depending on the size of the
12 pivot and the circumference you want to cover.

13 And we realized just that one end-gun, we
14 were able to shut -- we were able to save 10 percent
15 that year alone, just on one pivot, which if you look
16 at in a 24-hour period -- so you break it down, if you
17 are using 100 gallons less a minute on an end-gun,
18 you're looking at 144,000 gallons a day in savings.
19 And we're like, Okay.

20 You know, and back then we had plenty of
21 water, but we knew -- we just -- being at the
22 headwaters of Silver Creek, we knew we needed to make a
23 change. And so that year when I was explaining this to
24 Coors, our field man, that fall they came to us -- so
25 if you look at a season on an end-gun, it's about

1 7.2 million gallons of water in savings. That's a lot
2 of toilets that are being flushed. No smiles on that
3 one? There's a few.

4 Okay. So we -- as I talked to our field
5 man and explained to him what we're doing, he -- they
6 asked us that in the fall of 2009 to be their barley
7 showcase farm, because they -- they came to us and
8 asked us what's our efficiencies, "Would you be willing
9 to work with us on understanding water issues?"

10 And we said, "Yeah, let's work together on
11 this."

12 So when they came to us, we suggested that
13 TNC, which is The Nature Conservancy, be involved with
14 this, since they are part of Silver Creek. And then
15 things really started to change. This was our pivoting
16 point in 2010 when we started to really make changes.
17 And again, we did -- started doing this 12 years ago.

18 So in 2010 we bought two moisture probes.
19 And these probes consist of -- now, back then they were
20 pretty much unheard of. No one really knew much of
21 about a soil moisture probe, which there was four
22 probes that were put into the ground, one at 6 inches,
23 one at 12 inches, one at 18 inches, and one at
24 24 inches.

25 And we did -- we had two of these sensors

1 set up in two different fields. Actually, two of these
2 same pivots that we had the end-gun issue with the
3 previous year.

4 And as we set up these probes, one pivot
5 had a heavier soil than the other, and the other one
6 had a gravelly soil. And we wanted to compare the two.
7 And that's all of my data that we had been collecting
8 on Hillside Ranch for years with the help of Coors and
9 TNC.

10 And we realized at this time of the
11 ballgame we were putting on three-quarters of an inch
12 of water per pass, per pivot, thinking gravel needed
13 more water and the heavier soil needed less water.

14 Well, our soil moisture probes pretty much
15 kicked me in the butt that first week and taught me
16 otherwise. We had -- in a six-hour period, that
17 three-quarter inch of water was at 18 inches in depth.
18 I do not need 18 inches of water in depth in the soil
19 for barley. There's no reason.

20 Q. So what did you do to respond to the
21 information that you got from the soil moisture sensors
22 in terms of your irrigation practices?

23 A. So your question, let me finish, the other
24 probe was telling us on the heavier soil we did a
25 quarter inch a pass, and we realized that wasn't enough

1 water. So what it taught us, to use less water. So we
2 dropped it to a half an inch that next week. And we
3 still had plenty of water.

4 So then we dropped it to a quarter of an
5 inch, and we still -- that was seven days a week
6 running that pivot around seven days a week, one with
7 an end-gun, one without.

8 Then we noticed our probes. We still had
9 plenty of profile in our ground for the crop. So then
10 we started shutting off midseason a day a week. And
11 that -- we realized we're still putting down too much
12 water, which was pretty impressive.

13 And so at this time, as we cut the end-gun
14 on the one pivot and shut off a day a week, we really
15 dropped our percentage to over 25 percent decrease in
16 our water that year on that one pivot.

17 And with the help of Coors and The Nature
18 Conservancy and with their analyst and their field men,
19 we realized, Wait, we can save a lot more just on --
20 not just on one pivot, but on the whole entire crop for
21 Coors.

22 Q. This was the barley crop, obviously?

23 A. This was the barley crop. This is malt
24 barley.

25 So if I'm shut off one day a week, just one

1 day, that's 750 [sic] gallons of water a week per
2 pivot. And so we were just like, This is -- this is
3 pretty neat.

4 Now, again, we knew we were saving water
5 with the end-guns off, but we didn't know how much.
6 Now we know how much. We had the help of these other
7 entities that really help us fine tune this. But then
8 by 2011 Coors, when they came into this agreement with
9 us to be the barley showcase farm, out of -- now,
10 there's 200 growers for Coors in the state of Idaho, a
11 little over 200.

12 Out of the whole company there's 700, over
13 700 growers, and they picked us. Why? Well, part of
14 it was probably PR, and the other was to realize where
15 we lived. We lived next to Silver Creek. And they
16 understood that we really wanted to make a change.

17 So they asked us to do this for the next
18 five years, work with them, and they would work with us
19 and help us to understand more about our soil. So in
20 2011 we took those same two pivots and other pivots and
21 we dropped these -- so our sprinkler packages on
22 these -- on our pivots are i-Wobs, which put a bigger
23 droplet than the traditional sprays.

24 We were able to drop our regulators from a
25 20 PSI regulator to a 15 PSI regulator, which is going

1 to save you more water also. Pressure is money. So --
2 and pressure is water.

3 So as -- our typical i-Wob was about 8 feet
4 high off the ground. And we decided, Let's play around
5 with this and drop these sprinklers 3 feet off the
6 ground. And again, we had comparison, a pivot with
7 8 feet off the ground. And going the same speed, seven
8 days a week, comparing to a pivot that had no end-gun,
9 shutting off one day a week, and dropping the
10 sprinklers closer to the ground.

11 And we found out we could save another day
12 a week in water. So we were able to shut off two days
13 a week on that pivot, compared to the other pivot,
14 which, again, now you're out -- you double that
15 7 1/2 million gallons, now we're saving
16 1.5 million gallons of water a week. And that's
17 shutting off. That's not even including the end-guns.

18 So again -- and that year also with the
19 help of Coors and -- and The Nature Conservancy, we
20 also did a few other things. We -- they asked us to be
21 involved in Idaho Peak Rewards. I'm sure most of you
22 know what that is. It's when Idaho Power, you put your
23 systems on -- again, with Idaho Power, and they will
24 shut you off, depending on your plan. But we chose the
25 plan to be shut off three days a week at peak power,

1 which was from four to eight o'clock at night. And
2 they shut us off three days a week, which was 12 hours
3 a day [sic], which was another, if you're shut off --
4 if you're down to two -- if you're down to five days a
5 week, that's another 10 percent savings.

6 So we started realizing, Wow. And our crop
7 was doing better. Our yields were better. We weren't
8 leaching out all of our fertilizer out of the ground.
9 We were able to have a plumper, healthier crop, a less
10 disease, because the ground was so -- it was so wet.
11 And again, this is ten years ago when we started to do
12 this.

13 And so -- and then we added a few more
14 things in 2011. We added -- we added our first VFD,
15 which is a variable frequency drive, which was pretty
16 neat. And we went from a 60 PSI system down to 30,
17 which decreased our water usage again. Then with the
18 help of Coors and the TNC, we -- they asked us to try
19 this new VRI, this variable rate irrigation. And they
20 would take a sled through our fields, and they would
21 map out our soil content. What soils were heavier,
22 what soils were lighter, what part of the field needed
23 more water, what part of the field needed less water.

24 And so as they did a program, that pivot
25 would speed up and slow down in places. And we figured

1 out we could save another additional 5 percent of
2 water. And so by the year of 2012 with the help of --
3 between Coors and the TNC, they came up -- with that
4 year alone they came up with a savings for us with
5 their analyst and what we had saved in 2011. And this
6 report came out in 2012. And we had saved
7 339 million gallons of water that year.

8 So if you want to look at -- if you want to
9 look at a pivot and what it uses on a yearly basis on a
10 barley crop, so this year -- like last year -- we'll go
11 off of last year. We started watering May 15th, and we
12 were able to start shutting water off by July 15th. So
13 we're 60 days of watering. Now, give or take,
14 rainstorms and different aspects.

15 So if you're watering 60 days -- 60 days,
16 keep that pivot running, you're looking at over
17 8 million gallons of water usage on that pivot. Well,
18 do the math. You divide that into the three -- almost
19 340 million gallons of water we had saved that year.

20 And this was just on shutting end-guns off,
21 dropping drops on the pivots, doing new sprinkler
22 packages, doing the VRIs, doing the VFDs. We had help
23 from -- the Purdys did some changes on some flood
24 irrigation on this. We did -- Rocky Sherbine and John
25 Molyneux did some sprinklers, new sprinkler drops on

1 this pivots, and the variable rate irrigation.

2 And now it became a community effort. And
3 everybody started realizing, Wait a minute. Let's work
4 together. This is really neat.

5 Q. So, Gary, I'm sorry, but did you have an
6 estimate of the total savings that you were able to
7 accrue as a result of this -- I mean percentage of use,
8 for example, or --

9 A. So by -- by this time we had been saving
10 roughly we figured about 39 to 40 percent decrease in
11 water use. Now, we changed some sprinkler packages.
12 We changed -- we did multiple things. And the great
13 thing about this, we had a comparison. And we knew we
14 were saving water. Not just "I think" or "We made some
15 changes and I'm not quite sure," we absolutely knew,
16 with the help with the analysts from TNC and from Coors
17 field man, we knew we were saving water.

18 Q. Did you get any kind of information from
19 Coors or TNC about the impact of that water savings on
20 Silver Creek?

21 A. Yeah. So TNC did a really neat study. So
22 on that two -- 339.8 million gallons that was saved in
23 2011, it's like if any of you have ever sat at Silver
24 Creek at the Preserve and you watched Silver Creek flow
25 by, imagine sitting there for 14 hours watching that

1 creek go by, and that's how much water we had saved
2 that year. 14 hours. And this was just on a few
3 pivots.

4 Q. So did you keep up the effort after 2011?

5 A. Yeah. So by 2012 we started putting in
6 smart panels in our pivots, and we kind of started to
7 get away from the VRIs, the variable rate irrigation.
8 And these smart panels on the pivots, we could actually
9 use the panels now and adjust how the watering was in
10 the fields.

11 So by 2013 half of our end-guns were
12 removed. And then by 2015 we had four end-guns on.
13 Now, four end-guns, because we had just ripped out --
14 well, taken out with wheel lines and replaced with
15 pivots, because all of you know the efficiency of a
16 wheel line or a hand line is about 50 percent efficient
17 compared to a pivot.

18 And so we realized we can save more water.
19 And again, anytime you make an efficiency change it's
20 not for free. It's expensive. But we -- we knew we
21 were doing something amazing back then, and we wanted
22 to continue to do that.

23 So by -- and the one pivot we had left on
24 and the three new pivots that were added on that year
25 and ripping out wheel lines, the one pivot was -- we

1 call it the big pivot, because it's a 23 tower pivot,
2 hence "the big pivot." And that end-gun covered
3 35 acres on the circumference. That was a tough one to
4 shut off, 35 acres. But we did back in 2018. We shut
5 the end-gun off, and it's tough to see that ground, but
6 we planted some grass, some dryland grass underneath
7 it, and it's just the way it is. But to save that
8 water to us was more important than to farm every
9 possible acre.

10 Now, along with that we started to dry up
11 all of our corners that we had hand lines in. Again,
12 as we did these studies over the course of five years,
13 the first year we took a sample underneath the end-gun,
14 and we sent it down to Coors. And the barley was
15 rejected because the end-gun was so -- it pounded the
16 crop. Either it was lodged or too wet, and we ended
17 up -- and we realized, Wait a minute, the crop isn't
18 even worth harvesting.

19 And then we started looking at our quality
20 with Coors and realized our hand lines and our yield on
21 our hand lines were half what they were at the pivots.
22 And we continued to do this with -- with everything.

23 So, you know -- and so by the time we -- by
24 2015 this 339 million gallons of savings, that was
25 approximately -- and this is a printout I got from TNC

1 themselves. That was four end-guns, four pivots were
2 shut off that year. One pivot with dropping
3 irrigation, dropping the drops on the pivots, nine new
4 sprinkler packages, one smart panel, two VRI programs
5 installed on two pivots, and then another additional
6 eight center pivots for VRIs. Then this was also a
7 nozzle change for a VRI irrigation system. So just
8 those simple few pivots, we were able to save that much
9 water. Now --

10 Q. How much water is "that much water"? I'm
11 sorry. I didn't hear you.

12 A. Well, 339 million gallons.

13 Q. Oh, okay.

14 A. So -- and that was in 2012. And by 2015
15 almost every end-gun was shut off, every pivot had been
16 dropped to 3 feet off the ground, two more VFDs were
17 installed.

18 Q. So do you have an estimate of the savings
19 between '12 and '15? Do you have a number for that?

20 A. Well, now we -- this was just on a few
21 pivots. You know, I haven't even -- we're talking
22 billions of gallons of water --

23 Q. You don't have --

24 A. -- a year we are saving.

25 Q. Okay. Do you have any numbers, any actual

1 numbers?

2 A. No. But we can figure that out if we
3 wanted to real quick. If we take 44 pivots, you shut
4 off the end-gun on 44 pivots, and you're saving --
5 let's see, and your saving 144,000 gallons a day on 44
6 pivots. Excuse me, let me do the math right now. And
7 this is just for Hillside Ranch as of this year.

8 44 pivots, times 144,000 gallons a day.
9 This is a day. We are at 6,333,000 gallons a day. You
10 want to times that by 60 days a year. Let's just go
11 60. That's 380,000 gallons of water saved just by
12 end-guns.

13 Q. So 380 million?

14 A. 380 million, yes. Let me write that down
15 so I don't forget. 380 million gallons a day -- a
16 year.

17 Now, that didn't -- you know, that
18 didn't -- that's not with us shutting our pivots off
19 now up to three days a week, sometimes four days a
20 week, because we realized -- back then we used to bale
21 all of our straw off the fields. Every piece of straw
22 was baled off.

23 Now every other year we put the straw back
24 in the ground, build up our organic matter, and now our
25 soil is able to hold more moisture and keep it in

1 longer. So now we're off to about three days a week on
2 pivots.

3 So again, we're talking close to, for the
4 year, we're saving over a billion gallons of water a
5 year. Now, where does that water go? If we're saving
6 it, we're not using it, and we're at the end of the
7 line, it dumps into all of our gravel pits. And every
8 one of those gravel pits lead to Silver Creek.

9 And it's been -- it's been great to see
10 what -- with the help of Nature Conservancy and Coors
11 what can be accomplished in -- you know, I think five
12 years is a pretty short period of time what we were
13 able to do.

14 Q. Okay. So let's -- let's talk, then, a
15 little bit about the process of growing barley when --
16 what happens to barley when it becomes time to ripen
17 and harvest, how much water do you need to get -- or
18 how much time do you need with water on to get barley
19 to a harvestable crop on your ranch -- ranches?

20 A. So in the spring the barley crop does
21 not -- again, we've changed a lot of things in the last
22 12 years. Again, we used to water seven days a week.
23 Now, this spring with it being so cold, we were able to
24 only run a pivot around in 24 hours and shut it off.
25 Now we really are starting to understand our soil. And

1 with that, we've cut back and cut and cut.

2 Now watering a barley crop, it does not
3 need a lot of water off the get-go. But if you can't
4 get it out of the ground, if the ground's too dry, you
5 got to water it up, which takes 3 to 4 inches at least,
6 just to get the crop out of the ground. But this year
7 we were very, very blessed to have really cool nights,
8 the ground stayed wet, the crop came up by itself. We
9 start watering it by May 15th.

10 And again, there's a timeline, what we
11 planted first, what we planted last, it all varies. It
12 took us a month to plant all 2500 acres.

13 Q. So when do you plant?

14 A. We plant as soon as we can.

15 Q. And when was that this year?

16 A. This year was the last day of March. It
17 was March 30th, we started planting this year.

18 Now the barley is in the boot stage. It's
19 starting to push the head. This is when it's really
20 important to have -- have water. If we don't have
21 water right now, what happens to that head with the
22 malt barley -- now, malt is much different than feed
23 barley. Malt is -- these contracts we've been building
24 for years, with organic and conventional. Right now in
25 the boot stage, this is when it needs a little more

1 water. But it has enough foliage and the barley is
2 tall enough that it holds enough water to the ground.

3 So we are a little more water right now.
4 And by -- by July 1st, then we start cutting the water
5 back a little more. But we're typically running at
6 least four days a week. And that's the most important
7 time of the crop's life is at the very end, because
8 that determines the quality of the barley for these
9 malting facilities.

10 If we short the water at that time, the
11 barley will become thin. They call them thins. The
12 barley will be rejected. If your barley is not plump
13 enough, your barley will be rejected. If you don't
14 water it correctly, your color will not be right, and
15 it will be rejected. Your protein will not be high
16 enough, and your crop will be rejected. And the list
17 goes on and on.

18 Q. And this water after the 1st of July is
19 critical to the crop in order to -- so that it doesn't
20 get rejected by your contractors?

21 A. Yes.

22 Q. Okay. So you have contracts with Coors, I
23 assume, and anyone else to provide malt barley?

24 A. So we have contracts -- two separate
25 contracts with Coors: one conventional, one organic.

1 And then we have an organic contract with
2 Anheuser-Busch.

3 Q. Okay. And what's the -- do you have a
4 volume of barley you're supposed to provide?

5 A. So between the three contracts, it's
6 14-and-a-half million pounds of barley. So if you want
7 to figure that into bushel of barley, a bushel of
8 barley is typically 48 pounds.

9 Q. So what happens to -- what happens to
10 barley if you don't make the grade? What can you do
11 with it?

12 A. So if we're shut off on July 1st, the crop
13 will not make grade at all. I've already been told by
14 Coors field men, Anheuser's field men, our crop, they
15 will not take our crop. And then it would go to
16 feeder. Feeder right now, you might as well just go
17 ahead, swath the barley field, and bale it up, because
18 by the time you put all the time and effort into
19 harvest, you're not going to even cover your cost to
20 sell it as feeder. So you're better off just cutting
21 it.

22 Q. So have you made an estimate of the losses
23 on the contracts that you would accrue if you are not
24 able to fill your contracts with Coors and
25 Anheuser-Busch?

1 A. So we're looking at with Coors
2 conventional -- and our crop is probably the best crop
3 I've seen in years this year. The -- Mother Nature has
4 been at -- been helping us so much, except for the
5 rain, and the moisture we need. But our conventional
6 contract with Coors, it will be \$950,000 in loss. Our
7 organic contract will be \$600,000 in loss. Organic
8 contract with Anheuser will be 450,000 in loss. And
9 that doesn't even include our hay crop.

10 Q. So what do you anticipate the consequences
11 of your long-term relationships with Coors and
12 Anheuser-Busch would be if you're not able to deliver
13 your 14 million pounds of barley this year?

14 A. So the Stevenson family has been raising
15 Coors barley since 1973. And not one year has gone by
16 that a contract has not been met. But I guarantee they
17 will cut our contracts. Everything that the Stevenson
18 family has worked for since 1973 to build their
19 contracts up -- to switch from conventional to organic,
20 to make -- to get rid of pesticides and all these
21 herbicides and all these chemicals, to make Silver
22 Creek and surrounding areas a better place to live,
23 will be lost.

24 I bet -- quote me or not, I would figure
25 they would cut our contracts in half. Or they might

1 not even ask us to do it again, knowing that we cannot
2 supply them a crop anymore.

3 Q. Do you have an understanding of when these
4 contracts are entered into with companies?

5 A. Yeah. All our contracts are entered in the
6 fall. And it varies. It -- it depends on what's going
7 on in the world. But typically, October, November,
8 December is when these contracts all go in place.

9 Q. Okay. Mr. Beck, are you familiar with the
10 lands around Richfield and Dietrich and Shoshone?

11 A. Yeah. I have a lot of friends down there.
12 I am -- I am a member of the Church of Jesus Christ of
13 Latter Day Saints, and I got a lot of friends down
14 there.

15 Q. So have you been through that country
16 recently?

17 A. Yeah, yeah. I drove through there
18 yesterday.

19 Q. And --

20 A. And my -- I got some in-laws -- well, my
21 daughter's in-laws, they have a ranch -- a farm in
22 Richfield. So I took a quick drive down there
23 yesterday.

24 Q. Did you make any observations about the
25 irrigation practices in effect down there compared to

1 the ones that you're implementing up on the ranch?

2 A. Yeah. I seen -- I did not see one end-gun
3 off. I drove around through Shoshone, Dietrich,
4 Richfield -- I know Dietrich's out of this equation.
5 Shoshone, Gooding, I did not see one end-gun off. And
6 I took back roads. I spent an hour and a half driving
7 around there yesterday.

8 Every corner is watered. Every -- around
9 every rock pile, there's hand lines, there's -- and you
10 can see the difference in the crop between the pivot
11 and the hand lines. But every -- everything is
12 watered. Every end-gun on, sprinklers, top of the
13 pivots. Now, again, there's different practices for
14 every area, but the waste of water, in my opinion, in
15 what we've been trying to accomplish for years, it --
16 it hurt. It hurt.

17 Q. So one last question: If you -- if you
18 have to lose your crop this year, what's going to be
19 the consequences for the ranch operations?

20 A. Consequences? Will we survive? Yeah,
21 we'll survive another year. We will lose contracts.
22 We will lose long-term relationships. We will lose --
23 this was the best year I've had with hired help. And
24 we get four guys every year from H-2A, four guys from
25 Mexico.

1 This year all of my guys -- I got six guys
2 that are Spanish, six of them with families. I will
3 have to send the majority of them back home, which
4 they -- they rely on us. The Hillside Ranch takes care
5 of multiple families.

6 It takes care of my six men, and my son, my
7 family, John and Elizabeth, Justin and Brett Stevenson,
8 and their other two -- and Andrea and John Fell. So
9 this ranch, you know, it's getting harder and harder
10 every year. Expenses go up.

11 And that's the one thing I do know, I do
12 know numbers. I do know expenses; I know income. If
13 you don't know either, how do you know which way you're
14 going to go.

15 Q. So if you are curtailed, are you saying
16 you're going to have to send people home to Mexico?

17 A. Oh, yeah.

18 MR. BARKER: Thank you, Gary. No further
19 questions.

20 THE WITNESS: Yes.

21 THE HEARING OFFICER: Ms. O'Leary, questions?

22 MS. O'LEARY: No, Director.

23 THE HEARING OFFICER: Mr. Bromley?

24 Mr. Lawrence?

25 MR. BROMLEY: No.

1 THE HEARING OFFICER: Mr. O'Bannon, any
2 questions?

3 MR. O'BANNON: No questions.

4 THE HEARING OFFICER: Cross-examination.
5 Mr. Fletcher or Mr. Rigby?

6

7 CROSS-EXAMINATION

8 BY MR. FLETCHER:

9 Q. Mr. Beck, you're a Beck from Burley, so I
10 have to stipulate you've got to be a good guy; right?

11 A. A good guy? I'm a great guy.

12 Q. A great guy. Yeah. Well --

13 A. My dad was Denny Beck.

14 Q. Yeah.

15 A. Yes.

16 Q. Whose name are the water rights in on this
17 farm you described?

18 A. There's multiple names. John Stevenson is
19 under most of them. There's some other ones, but the
20 majority of them are under John Stevenson.

21 Q. What are the other ones?

22 A. The -- they're -- with the new property I'm
23 not sure how they have those. I think that's in
24 transition right now from Silver Springs, from Tom
25 Ogara's property to splitting between the new owners

1 and John. I'm not sure who that's all going
2 underneath.

3 Q. Anything else? Any other name that you're
4 aware of?

5 A. No.

6 Q. As I understand your testimony, all of your
7 irrigated acres are covered by sprinkler; correct?

8 A. Yes.

9 Q. And all of them are covered by groundwater
10 rights; correct?

11 A. Yes.

12 Q. Do your surface water rights get curtailed
13 in priority?

14 A. So that's a good question, because it's a
15 little difficult in our valley since we are at the end
16 of the line. When we get down to 1884 water rights,
17 they can't get water to us. It's really difficult.

18 Q. So they get curtailed or they're cut off?

19 A. Not necessarily curtailed. They -- we just
20 can't get the water.

21 Q. It's not a source of water for you?

22 A. No.

23 Q. So when that --

24 A. '86s, they can get the water to us. That's
25 great. But when we start cutting, then we have to make

1 a decision, Okay, where does all -- do we put all of
2 our water to. So instead of separating it through all
3 the branches of the creeks, all the ditches, we decide,
4 Okay, let's -- which crop is more important than the
5 others? Which well is more important? Which well is
6 going to be able to stand up for the next two weeks of
7 watering? Maybe it's a week of watering. Last year
8 most of them were ran for a couple weeks.

9 Q. So when the surface water supplies to an
10 acreage -- when the surface water supply is no longer
11 available, you're able to turn on a pump and -- excuse
12 me, turn on a well and start irrigating with
13 groundwater on that same ground; correct?

14 A. Yes. All of these systems are tied -- the
15 wells are tied directly into a majority of the pump
16 stations.

17 Q. Okay.

18 A. Some of them are dropped right into a pond,
19 and then we pressurize out of them.

20 Q. And do you use the surface water supply as
21 long as it's available?

22 A. Oh, yeah. That's our cheapest water.

23 Q. Okay. Are the groundwater rights
24 supplemental, do you know, to the surface water?

25 A. Some of them are.

1 Q. Okay. And those that are supplemental, do
2 you only irrigate with those when the surface water
3 supply is not available?

4 A. That's correct.

5 Q. So is it fair to say that -- you testified
6 about stress to your barley crop.

7 But have you had stress due to lack of
8 water on your barley crop, historically?

9 A. We've had pumps go out. We've stressed
10 them.

11 Q. Okay.

12 A. And they've been rejected.

13 Q. Okay. But as far as an actual supply of
14 water, you've never had a shortage of supply of water
15 to your barley crop; isn't that true?

16 A. That's correct.

17 Q. And your groundwater rights have never been
18 curtailed; correct?

19 A. That's correct.

20 Q. You mentioned all of these improvements.

21 Has your operation incurred expense in
22 making all these improvements?

23 A. Yeah, a lot of expenses.

24 Q. How much?

25 A. So the great thing with Idaho Power that's

1 not an expense when we do Peak Rewards, we get credit
2 for Peak Rewards.

3 Q. Okay.

4 A. Sprinkler packages, we don't pay a full
5 amount. Idaho Power has a great efficiency irrigation
6 system, which they will pay a partial of that crop -- a
7 partial of that sprinkler package. We take advantage
8 of that. This year alone we replaced nine sprinkler
9 packages.

10 So other expenses: Soil moisture probes.
11 Back then these ones -- now they're obsolete. Now
12 we've gone to other ones that are a single probe to the
13 ground. And you just put your phone up next to it. It
14 downloads everything, and it's wonderful.

15 The old ones, big, massive station with a
16 solar panel. They were about 4,000 each. We have --
17 we have five of those. The smart panels, instead of
18 doing the VRIs, we roughly now have five FieldNETs and
19 17 Valley pivot panels that are smart panels that we
20 can adjust the speed and the GPS direction of where we
21 want water.

22 Q. Okay.

23 A. And so each one of those, they range from 3
24 to \$5,000 each.

25 Q. Have you done a calculation of how much

1 money has been spent --

2 A. Well, we look at --

3 Q. Let me finish the question.

4 A. Oh, sorry.

5 Q. How much money has been expended to make
6 these improvements that you testified to here today?

7 A. How far back do you want me to go?

8 Q. Well, you said, I think, they started in
9 2010.

10 A. Yep, 2000 -- so with improvements? Pivots,
11 hoses to drop things, panels, I would say with all the
12 pivots, we have replaced roughly about 12 wheel lines
13 and put in new pivots lately. So we are probably
14 looking at an expense of over a half a million dollars.

15 Q. So these improvements you've been
16 describing are costly; correct?

17 A. Anytime you make an improvement it's
18 costly.

19 Q. Right.

20 A. Anywhere you do it. At home, anywhere.

21 Q. Based upon your testimony, as I understood
22 it, you were saying that as you reduced pumping -- or I
23 shouldn't -- I think your testimony was as you reduced
24 the amount of water you used to irrigate, you noticed
25 an increase in the flows at Silver Creek; is that

1 correct?

2 A. We have -- I haven't necessarily seen the
3 increase. But TNC, they made that comparison.

4 Q. Okay. So as your groundwater pumping
5 decreased and your other irrigation decreased, Silver
6 Creek responded to that; correct?

7 A. Yes.

8 Q. According to the study you've cited here
9 today?

10 A. Yes.

11 Q. Did they give you any idea of how quickly
12 it responded?

13 A. Typically, when we start putting water into
14 the gravel pits, up on Pero Road, let's say, or up on
15 Baseline, we typically see a 10 to a 14 day before we
16 see the water coming up in the creeks on Patton Creek
17 and Buhler Drain. That's typically what I have seen in
18 the past.

19 Q. And those drains, where do they flow?

20 A. Buhler Drain dumps into Stalker Creek. And
21 Patton Creek dumps into Stalker Creek, which dumps into
22 Silver Creek.

23 Q. So they're tributaries to Silver Creek?

24 A. Yes.

25 Q. These stresses on your crop that you

1 described due to lack of water that would occur if you
2 were curtailed, those stresses are true with anyone
3 growing a crop; correct?

4 A. That's correct.

5 Q. And if anybody's growing barley, they would
6 have similar stresses if they were curtailed; correct?

7 A. That's correct.

8 Q. And it doesn't matter if that source of
9 water is surface water or groundwater, if it doesn't
10 get to the crop, the crop is stressed; correct?

11 A. That's correct.

12 Q. Based upon your experience with contracts,
13 if someone that has solely a surface water supply has a
14 contract with Coors or Anheuser-Busch and cannot
15 produce the crop the way Coors or Anheuser-Busch wants
16 it to be produced, it will be rejected; correct?

17 A. That's correct.

18 Q. Since you've noticed this interaction
19 between groundwater and surface water, do you believe
20 that groundwater rights should be administered in
21 priority with surface water?

22 A. I believe in priority dates. I believe in
23 strictly priority. It's a -- without that -- you need
24 priority dates. That's how we get our water.

25 Q. Well, can you explain that further. Why do

1 we need to honor priority dates?

2 A. For us, when it comes to surface -- you
3 know, like you said, we have supplemental wells, some
4 of them. They've been studied -- I've been meeting
5 with several people from IDWR these last few weeks
6 going over them and understanding our situation,
7 understanding the ditches.

8 Yeah, if you want to look at well cost
9 compared to surface -- ground compared to surface, it's
10 double the expense. So everyone is trying to get what
11 water belongs to them.

12 Q. As you drove through the Richfield,
13 Dietrich, and north Shoshone areas, you commented that
14 you -- I'm paraphrasing, but you were disturbed by the
15 lack of upgrades in their system; is that a fair
16 statement? Or how would you characterize that?

17 A. Yeah. Yeah, that's fair.

18 Q. And do you know whether the source of water
19 on those fields that you observed was groundwater or
20 surface water?

21 A. It was both. I seen wells, I seen ground,
22 and some of them I just seen strictly ditches going
23 into the pump stations.

24 Q. Okay. Would you admit that to make some of
25 these improvements, perhaps not all farmers could

1 afford to make those improvements you've described?

2 A. How do you not do the improvements? That's
3 the point.

4 Q. Okay. Well, when you say "how do you not,"
5 if you don't have enough money, how can you?

6 A. Then waste the water? To me, we've been --
7 this has been a project -- yeah, it's hurt to shut off
8 the end-guns. Every end-gun on every pivot you lose 5
9 to 7 acres. Okay? You start timesing that, that's a
10 lot of ground. And so we have dropped acres to become
11 as efficient as possible.

12 So how can you not do this?

13 Q. Well, have all the groundwater users in the
14 Bellevue Triangle made these improvements?

15 A. Quite a few of them have.

16 Q. Have all of them?

17 A. I don't know that. I don't run their --
18 their systems.

19 Q. All right. So you're not saying that every
20 groundwater user in the Bellevue Triangle has made the
21 improvements that you've made?

22 A. I have no idea.

23 MR. FLETCHER: Thank you, Mr. Beck.

24 THE WITNESS: Thank you.

25 THE HEARING OFFICER: Mr. Rigby.

1 MR. RIGBY: Thank you, Mr. Director.

2

3 CROSS-EXAMINATION

4 BY MR. RIGBY:

5 Q. Mr. Beck, good morning.

6 A. Morning.

7 Q. I'm Jerry Rigby representing the senior
8 surface water users.

9 A. You're smiling today.

10 Q. Oh, and I haven't been?

11 A. No. Yesterday you weren't.

12 MR. FLETCHER: That's only when he talks to Al.

13 MR. RIGBY: That's right.

14 Q. Okay. Touché.

15 A. Sorry.

16 Q. Touché.

17 Carrying on with the questioning that
18 Mr. Fletcher asked of you, isn't it also a fact that
19 you were not able to see all of the improvements made
20 on the surface water users in your drive last Sunday or
21 yesterday?

22 A. No, no. Nope.

23 Q. Okay.

24 A. I visited a few of my friends down there,
25 talked to them. And yeah, no one wants anybody to lose

1 a crop, farmers especially. That's your livelihood.
2 No one wants to see that.

3 Q. And more importantly, you -- I believe your
4 testimony was that the time for barley watering is most
5 important at the end; is that correct?

6 A. It's important the whole time. The amount
7 is important.

8 Q. And if --

9 A. It's not the -- how much -- it's how you --
10 how you put the water out. If you get it too wet, too
11 dry, you stress it. You got to do it just right. It's
12 like every crop.

13 Q. But again, the issue is, even though you
14 may have watered it and it hasn't been stressed to
15 date, at the end becomes very important to continue the
16 correct watering; is that correct?

17 A. Yeah. Everything we have done, those last
18 two weeks, if there's no water, it will be rejected.

19 Q. Understood. And as I understand from your
20 testimony, that is still yet to come, timing?

21 A. We'll see. We'll see.

22 Q. No. I'm saying the need for the water is
23 still yet to come? Meaning in fact I believe your
24 testimony was, the 1st of July and there -- shortly
25 thereafter is an extremely important time for this

1 water?

2 A. The last two weeks. Now, it all depends,
3 again, Mother Nature and how this works, but yeah,
4 typically those last two weeks are extremely important.

5 Q. And so therefore even the surface water
6 users down below, if they were to lose their water in
7 those last few weeks, it would be the same problem for
8 their crops as well?

9 A. Oh, yeah, I already know of some friends,
10 they've already been told by Coors and by Anheuser,
11 "You might as well swath your field." Correct.

12 MR. RIGBY: I have no further questions.

13 THE HEARING OFFICER: Redirect?

14 MR. BARKER: No questions.

15 THE HEARING OFFICER: Okay. Thank you,
16 Mr. Beck.

17 THE WITNESS: Well, that wasn't as painful as I
18 thought.

19 Are you smiling?

20 THE HEARING OFFICER: Well, you could be
21 recalled.

22 THE WITNESS: Could I? Then it gets painful?

23 THE HEARING OFFICER: I don't know.

24 MR. BARKER: Depends on how quickly he gets in
25 his truck.

1 THE WITNESS: I'm going to leave right now,
2 guys.

3 THE HEARING OFFICER: Do you want to take a
4 break, or do you want to call your next witness?

5 MR. BARKER: Let's take a quick break, five
6 minutes, ten minutes.

7 THE HEARING OFFICER: All right. Ten minutes.
8 Let's come back at five to 10:00.

9 (Recess.)

10 THE HEARING OFFICER: Next witness.

11 MR. BARKER: South Valley Ground Water District
12 calls Justin Stevenson.

13 THE HEARING OFFICER: Mr. Stevenson.

14 MR. BARKER: Justin.

15 THE HEARING OFFICER: Stretch out your legs and
16 come forward, please.

17 MR. STEVENSON: I'm going to take this chair in
18 case this takes awhile.

19 THE HEARING OFFICER: Yeah, you take whichever
20 chair you want.

21 Raise your right hand.

22 | *///*

23 ///

24 | *///*

25	///
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1 JUSTIN STEVENSON,
2 having been called as a witness by South Valley Ground
3 Water District and first duly sworn, testified as
4 follows:

5
6 THE HEARING OFFICER: Thank you. Please be
7 seated.

8
9 DIRECT EXAMINATION

10 BY MR. BARKER:

11 Q. That chair work for you?

12 Justin, would you state your name, address
13 for the record, please.

14 A. Justin Stevenson. 11 -- 111 South Third,
15 Hailey, Idaho.

16 Q. Justin, do you have a business occupation
17 at present?

18 A. I am part of the barley farm we heard about
19 from Gary Beck.

20 Q. Okay. So that's the Hillside Ranch farm?

21 A. Yes.

22 Q. Do you have -- would you explain your
23 educational background, please.

24 A. Sure. I have a bachelor's degree in
25 agriculture from Montana State University.

1 Q. And since receiving that degree, have you
2 worked on the family farm in the Triangle?

3 A. After working in vineyards in California
4 for a few years and working for a sheep operation out
5 of Carey called Lava Lake.

6 Q. Okay. So how long have you been with the
7 family farm?

8 A. I came back about eight years ago.

9 Q. What generally are your responsibilities
10 with the farm?

11 A. I converse with my father and Gary, our
12 ranch manager, make planting plans, decisions, sign
13 contracts.

14 Q. Did Mr. Beck accurately describe the
15 operations, to your understanding?

16 A. Certainly.

17 Q. Is the source of your surface water for the
18 ranch -- or what is the source of surface water for the
19 ranch?

20 A. District 45 Canal and Baseline Canal.

21 Q. Does the ranch hold water rights in the
22 Triangle Irrigation District for delivery through the
23 45?

24 A. Yes.

25 Q. And does the ranch hold shares in the

1 Baseline Canal Company?

2 A. Yes.

3 Q. Are you familiar with the operations of the
4 D45 Canal?

5 A. Yes.

6 Q. Do you hold any positions either with the
7 D45 Canal or the Joint Board of Control that operates
8 the canal on behalf of the Wood River Valley Irrigation
9 District and the Triangle Irrigation District?

10 A. Yeah. About six years ago I was asked by a
11 Board member of the Triangle Irrigation District to
12 help supervise the system when they had an
13 untrustworthy ditchrider. So I was quite involved for
14 a few years. But we have a new ditchrider who needs
15 less oversight, so I've stepped back significantly from
16 that role.

17 Q. Okay. So based on your understanding of
18 the 45 Canal system, just explain briefly how that
19 system works to deliver surface water to the Triangle.

20 A. Sure. So the D45 diversion is in Bellevue.
21 It supplies water to about 9,000 acres in the Bellevue
22 Triangle. I think there are about 200 users, starting
23 with small users at the top, those are 5 to 10-acre
24 places, and that is the Wood River Valley Irrigation
25 District 45.

1 And on the southern end is most of the
2 bigger users, which are generally part of the Triangle
3 Irrigation District.

4 Q. So sorry to interrupt, but would you
5 describe the canal system. Diversion location in
6 Bellevue.

7 So what happens to that canal?

8 A. So the mainstem comes out of Bellevue, goes
9 under Highway 75 at about a little less than a mile and
10 a half. The first diversion comes off -- the first
11 lateral, rather. That lateral goes down Highway 75.
12 Terminates at Pero Road.

13 The center lateral, we would call it, goes
14 down Kingsbury to Baseline Road.

15 And the easternmost lateral goes underneath
16 Gannett Road, services the Cove Ranch, and terminates
17 just north of Gannett.

18 Q. Okay. And what's the capacity of the canal
19 at the present?

20 A. There is 170 cfs in it right now.

21 Q. Is that full, or can it take more?

22 A. It can take more.

23 Q. How much more can it take?

24 A. Well, in recent years I think it's only
25 been in the low 200s. But historically this canal in

1 the '70s I believe ran close to 400 cfs. So it's
2 diverting about half what it did in the '70s when --

3 Q. And all these diversions are from the Big
4 Wood River; is that right?

5 A. Yeah.

6 Q. So are you familiar with the seepage losses
7 in the 45 Canal?

8 A. Sure. I had a sneaky suspicion this may
9 come up. I brought a study from Alan Merritt dated
10 May 29, '90 --

11 Q. Let's back up a second. Just your personal
12 observations --

13 A. Oh.

14 Q. -- first and then we can talk about that.

15 A. Well, those are -- those are just site
16 observations. I mean we see big losses where it's
17 gravel. And where it's heavier soils, the losses
18 aren't as high. But generally I'd say losses are quite
19 high.

20 Q. Would you look in this yellow book in front
21 of you to your upper left hand. And would you open to
22 tab 31.

23 A. Uh-oh.

24 MR. BARKER: Mr. Director, can I?

25 THE HEARING OFFICER: Yes.

1 MR. BARKER: This is what happens when you use
2 too many exhibits.

3 THE WITNESS: You first.

4 Okay. Page 31.

5 Q. (BY MR. BARKER): Okay. You're at South
6 Valley/Galena Exhibit 31? You have that in front of
7 you?

8 A. Uh-huh.

9 Q. You have to say "yes" --

10 A. Yes.

11 Q. -- or "no" instead of -- thank you.

12 Exhibit 31, have you seen this document
13 before?

14 A. Yes.

15 Q. Is this something that's kept in the
16 records of the -- of the irrigation districts?

17 A. Yeah. It's the same one I found.

18 Q. Okay. Can you tell the Director where
19 Gregory Ranch is.

20 A. I believe Gregory Ranch is south of East
21 Glendale Road. Oh, yes, it is. It's -- this is --
22 this was for a water ski pond.

23 Q. Okay. And that pond is located, yeah,
24 within the area that's now part of the South Valley
25 Ground Water District?

1 A. Yes, it is.

2 Q. And is this also a pond that has water
3 delivered to it from the 45 Canal?

4 A. Yes. The Highway 75 lateral.

5 Q. So this is the westernmost lateral that you
6 described?

7 A. Exactly.

8 Q. So is there any information in here that
9 the District relies upon in determining the seepage
10 losses for the -- for the canal system?

11 A. Yes. This -- although it's dated, it's
12 still what's used, because to my knowledge there
13 haven't been any good seepage runs done on our system.
14 I know Kevin did one on the Baseline last summer,
15 but --

16 Q. Okay. So -- go ahead.

17 A. But I haven't seen that. So yes, we still
18 use this, to your point.

19 And I brought a Triangle Irrigation
20 District agreement here for a water bank application
21 that states that this application would be subject to
22 20 percent holdback from seepage loss in the system.

23 Now, this was for an application in
24 Bellevue Farms, which is on the north end of the
25 system. And so they held back 20 percent. This study

1 [indicating] says 15 percent loss in that first mile
2 and a half, which I spoke of, and Bellevue Farms is
3 about a half a mile after that. So that makes me think
4 that they're -- people are still using this study from
5 1997 to determine seepage loss.

6 Q. Okay. And the study shows 15 percent loss
7 to the split and 5 percent per mile thereafter?

8 A. That's right.

9 Q. Okay. And as you get further down to the
10 Cove Ranch on the easternmost or to Baseline on the
11 center and to the old Harris place on the west, are
12 the -- do the seepage losses increase from what you
13 described in the 20 percent holdback at Bellevue Farms?

14 A. Yes. And you might also read in this
15 Merritt study that -- it states that there are
16 additional charges, 5 percent per mile, but the rest of
17 that sentence is "as long as the 1886 rights are being
18 delivered."

19 So that leads me to believe that the losses
20 could be even higher once the '86s are cut.

21 Q. And that's because there's less water in
22 the canal?

23 A. Right.

24 MR. BARKER: Okay. So, Mr. Director, I move the
25 admission of Exhibit 31.

1 THE HEARING OFFICER: Any objection to the
2 admission of this document?

3 MR. FLETCHER: Director, I'm just trying to
4 figure out the relevance of this to this hearing.

5 THE HEARING OFFICER: Mr. Barker.

6 MR. FLETCHER: Considering the constraints of
7 the order, I'd object on that ground.

8 THE HEARING OFFICER: Mr. Barker.

9 MR. BARKER: Oh, certainly. The relevance is
10 the water supply to the Triangle comes from the Big
11 Wood River. A significant amount of that water -- all
12 the water supply is delivered through the 45 and the
13 Baseline Canal, except for whatever underflow is and
14 whatever precipitation. This is a significant part of
15 the water source that's been -- that feeds the
16 groundwater in the Triangle. And there's been
17 discussions in this proceeding about how much water
18 there is in seepage losses in the canals.

19 And now to say, Well, all the discussions
20 that came from the model about seepage losses are
21 things we can't talk about seems a bit harsh.

22 THE HEARING OFFICER: Okay. Well, I'll overrule
23 the objection and allow the exhibit into evidence.
24 We'll see how much weight it's given in consideration
25 of the decision.

1 Thanks, Mr. Barker.

2 (SVGWD GGWD Exhibit 31 received.)

3 Q. (BY MR. BARKER): So, Mr. Stevenson, you
4 mentioned also that you understood that -- well, let me
5 back up a step.

6 You also get water out of the Baseline
7 Canal; right?

8 A. Yes.

9 Q. Where does that water come from?

10 A. So the Baseline diversion is just north of
11 Glendale Road. It's part of the bypass system. It
12 bypasses the dry beds below Glendale Bridge.

13 Q. And where does it deliver water to?

14 A. The --

15 (Zoom interruption.)

16 THE WITNESS: Pardon?

17 The Baseline bypass splits --

18 THE HEARING OFFICER: Just a minute.

19 We have somebody that is not muted and is
20 interrupting the meeting we're trying to take care of.
21 But those of you who are listening in, you need to stay
22 muted, please.

23 Thank you.

24 THE WITNESS: The Baseline bypass split is -- I
25 don't know -- in the first half mile. I'm not as

1 familiar with that system. The remainder of the
2 Baseline Canal goes east across the middle of the
3 Bellevue Triangle and terminates at Price Lane south of
4 Baseline Road.

5 Q. (BY MR. BARKER): And Price Lane, that's
6 where the property that Hillside Ranch has acquired is
7 located?

8 A. Yes.

9 Q. And so it's a source of water for your
10 property?

11 A. Yes.

12 Q. You mentioned earlier that Kevin -- are you
13 talking about Kevin Lakey?

14 A. Yes.

15 Q. Okay. Kevin Lakey had done some seepage
16 runs on the Baseline?

17 A. Yeah. The manager of that -- of Baseline
18 mentioned that Kevin had done that last summer. And
19 those losses were quite high also.

20 Q. Do you have a number of what those losses
21 were?

22 A. I thought he said 350 inches to get
23 50 inches to the end of the Baseline Canal.

24 Q. Yeah. Did you ask Mr. Lakey for a copy of
25 those studies?

1 A. Well, yes, actually, I did.

2 Q. Did you ever get a copy?

3 A. No, I did not.

4 Q. So, Mr. Stevenson, are you a member of the
5 South Valley Ground Water District?

6 A. I'm a Board.

7 Q. You're a Board member?

8 A. Yes.

9 Q. Okay. When were you elected or appointed
10 to the Board?

11 A. Only two years ago.

12 Q. And what is the responsibility of the Board
13 of the South Valley Ground Water District?

14 A. Well, it's been, I think since the
15 inception, to try to find some agreeable, long-term
16 management plan for the use of groundwater in the
17 Bellevue Triangle.

18 Q. And is that something that the District has
19 been actively attempting to achieve in your term on the
20 Board?

21 A. Absolutely.

22 Q. So let's describe a little bit about what
23 is -- what the District itself encompasses.

24 So do you know approximately how many acres
25 of land are irrigated by the -- by the groundwater

1 wells in South Valley Ground Water District?

2 A. I believe it to be 22,000 acres.

3 Q. 23?

4 A. 22 or 23.

5 Q. Okay. And do you know how many water users
6 there are roughly within the groundwater district?

7 A. 120.

8 Q. And all of these 120 users, are they
9 groundwater users?

10 A. This is only groundwater, yeah.

11 Q. And you've heard the testimony over the
12 last couple of days -- well, let's back up a step.

13 Do you have any -- do you have any
14 information about the crop variation within the -- or
15 the different crops that are grown within the District?

16 A. Well, the Ground Water District conducted a
17 survey when -- it must have been just before
18 pre-hearing conference when these discussions began, to
19 get some idea what those numbers were. I brought a
20 copy of it.

21 The totals were 5,418 acres of grain, 5,884
22 alfalfa acres, 3,200 acres of pasture, about 2,600 head
23 of cattle, 700 acres of seed potatoes, 280 acres of
24 mustard. So when I added that up, it only totaled
25 15,500 acres. So that's obviously not a complete

1 picture of all users.

2 Q. So this was a voluntary request?

3 A. This was just a voluntary e-mail we sent
4 out to all our members. Those are just the ones that
5 responded.

6 Q. Okay. So of those -- did you also ask them
7 for information about the impacts to their operations
8 in the event of a July 1 curtailment?

9 A. Yeah, that's --

10 MR. FLETCHER: I'm going to object to this.
11 Calling for hearsay testimony.

12 MR. BARKER: This is information that was
13 collected on behalf of the South Valley Ground Water
14 District. This is the head of the south -- or a Board
15 member of the South Valley Ground Water District
16 testifying on behalf of the Ground Water District about
17 information collected for the Ground Water District.

18 THE HEARING OFFICER: Objection overruled, at
19 least for right now. I think the objection is
20 premature. Let's see where Mr. Barker goes with it.

21 THE WITNESS: So again, this is an incomplete
22 picture. Not all members participated in the survey.
23 But the value loss that we came up with was --

24 MR. FLETCHER: I'm going to renew my objection.
25 I think you said it was premature because the question

1 was --

2 THE HEARING OFFICER: That's true.

3 MR. FLETCHER: -- have you conducted the survey.
4 The answer was yes or no.

5 THE HEARING OFFICER: That's true.

6 MR. FLETCHER: He didn't answer the question.
7 And now he's telling you the results of the survey.

8 THE HEARING OFFICER: That's true.

9 So I would ask you to answer the question,
10 Mr. Stevenson. Let's go through this arduously. And
11 it was a question about whether you had or had not.
12 That was the basis of my ruling.

13 Thank you, Mr. Fletcher.

14 Q. (BY MR. BARKER): Okay. So let's start,
15 was -- I thought we already answered this question.
16 Was a survey conducted on behalf of the South Valley
17 Ground Water District of its membership?

18 A. Yes.

19 Q. And did you learn from your members what
20 their crop mix was planted in 2021 for this year?

21 A. Yes.

22 Q. Did you have a complete response to your
23 survey?

24 A. No, we did not.

25 Q. Okay. And so of that response, you

1 identified roughly 5,000 acres of grain, 5,000 acres of
2 alfalfa, 3,200 acres of -- I forgot what that was.

3 A. Pasture.

4 Q. -- pasture, 700 acres of potatoes, and
5 2,600 head of cattle?

6 A. Yes.

7 Q. And that's about two-thirds of the
8 responses?

9 A. Right.

10 Q. Or sorry.

11 A. Of the acres.

12 Q. The responses considered about two-thirds
13 of the total acres?

14 A. Yes.

15 Q. Okay. And did you also ask for information
16 about -- from your members about what their estimated
17 losses were?

18 A. Yes, we did.

19 Q. Okay. And what was that information you
20 obtained?

21 MR. FLETCHER: I'm going to renew my objection.
22 Same grounds.

23 THE HEARING OFFICER: Okay. Thank you,
24 Mr. Fletcher.

25 As you know, the Department of Water

1 Resources and the agency is not bound by the rules of
2 evidence, and the application of them are relaxed in an
3 administrative hearing. I'll let this information come
4 in. I don't see a reason why it would be unreliable.
5 It may be discounted, because we don't have the
6 witnesses in front of us.

7 So objection overruled.

8 Mr. Stevenson.

9 THE WITNESS: So the total I see in front of me
10 was \$11,825,000.

11 Q. (BY MR. BARKER): So you've been in the
12 courtroom, or the hearing room rather, for the
13 testimony of Mr. Johnson, Mr. Stewart, and Mr. Beck,
14 haven't you?

15 A. Yes.

16 Q. Okay. And is it your understanding that
17 those same kinds of injuries will result across the
18 entire 22 to 23,000 acres if a July 1 curtailment is
19 initiated?

20 A. Yes.

21 MR. BARKER: No further questions, Mr. Director.

22 Thank you, Justin.

23 THE HEARING OFFICER: Ms. O'Leary, questions?

24 MS. O'LEARY: Nothing for me, Director.

25 THE HEARING OFFICER: Thank you.

1 From the joint parties?

2 Mr. Bromley?

3 MR. BROMLEY: No.

4 THE HEARING OFFICER: Ms. McHugh?

5 MS. MCHUGH: No questions.

6 THE HEARING OFFICER: Mr. Lawrence?

7 Cross-examination, Mr. Fletcher.

8 MR. FLETCHER: Thank you.

9

10 CROSS-EXAMINATION

11 BY MR. FLETCHER:

12 Q. Mr. Stevenson, I represent Big Wood Canal
13 Company.

14 You indicated that historically the -- and
15 I think you said it was the District 45 Canal ran
16 approximately 400 cfs; is that correct?

17 A. Yes.

18 Q. And you said that -- and I don't think you
19 gave a date.

20 But when did the declines in that canal
21 start appearing?

22 A. I didn't give a date. I believe that was
23 probably in the early '80s when people were converting
24 from flood irrigation to sprinkler irrigation.

25 Q. Okay. And it also coincided with

1 groundwater development?

2 A. Yes.

3 Q. And you said that the diversions into the
4 canal now are roughly half of what they were in the
5 '70s?

6 A. Roughly.

7 Q. I'm not sure you explained what the source
8 of that water was as far as -- is it a priority right
9 on the Big Wood River?

10 A. Yes.

11 Q. Okay. And is it more than one priority
12 right being diverted into that canal?

13 A. I don't understand the question.

14 Q. What water right is being diverted into the
15 canal for delivery?

16 A. All those 200 users have a water right,
17 have a surface water right.

18 Q. So they're the individual water users'
19 rights being diverted in the canal?

20 A. Correct.

21 Q. Okay. Does the entity itself that operates
22 the canal own any water rights?

23 A. No. I see where you're going. Some of
24 these run differently. Like the Baseline -- like the
25 Big Wood Canal Company.

1 No, they don't own any rights. The users
2 all own their own right.

3 Q. Okay. So it's the rights of the users that
4 are being diverted into the canal in priority?

5 A. Yes.

6 Q. And the rights of all of those users, the
7 volume of those rights is diminished by 50 percent
8 since 1970?

9 A. The total volume in the canal, yes.

10 Q. Okay. You've heard the testimony that many
11 of the users also have supplemental groundwater rights,
12 correct, that have surface water rights?

13 A. Sure.

14 Q. What happens if they don't receive their
15 surface water right?

16 A. The people with supplemental?

17 Q. Yes.

18 A. They turn on a supplemental well.

19 Q. They start pumping groundwater; correct?

20 A. Correct.

21 Q. So during the time, based upon your
22 observation since the declines in this canal have
23 occurred since the '70s, has groundwater pumping
24 increased?

25 A. Yes. Because there weren't very many wells

1 in the early '70s.

2 Q. Okay. And as the surface water supply has
3 declined, has the groundwater pumping also increased?

4 A. I don't know if you could draw that
5 corollary, because the use of that water has changed.

6 Q. Now, you referred to an exhibit, Exhibit 3,
7 South Valley Ground Water District Exhibit 3, of Alan
8 Merritt transfer file memo. And it sets out some
9 losses that are occurring in the 45 Canal.

10 That memo was written in 1997; correct?

11 A. Yes.

12 Q. Who operates the South -- the canal? What
13 entity operates it?

14 A. Well, there are two, which I explained.
15 The Wood River Valley Irrigation District 45 generally
16 represents the small users on the north end, and the
17 TID, the Triangle Irrigation District, operates the
18 southern portions.

19 Q. Do these two entities maintain the canal?

20 A. Yes.

21 Q. And are there costs incurred in maintaining
22 the canal?

23 A. Yes.

24 Q. And how are those costs -- are they
25 assessed to the members of those entities?

1 A. Yes.

2 Q. Since 1997 have any improvements been made
3 to that canal to reduce the seepage rate?

4 A. Yes.

5 Q. Can you explain what those are.

6 A. Well, they cut down all the trees on
7 Highway 75. Maybe that changed the seepage rate.

8 Q. Can you explain how that would change the
9 seepage rate.

10 A. These were rather large Cottonwoods along
11 both sides of the canal. And they were pulling --
12 pulling water to feed the tree that wasn't going
13 down -- down the canal any longer.

14 Q. Okay. And when was that done? I should
15 remember. It made headlines, but...

16 A. Yeah. I should remember. It made
17 headlines. That was ten years ago, say.

18 Q. Okay.

19 A. I can't remember.

20 Q. So ten years ago.

21 What other improvements have been made to
22 the canal since 1997?

23 A. Overall or in terms of seepage?

24 Q. In terms of seepage loss.

25 A. Very little.

1 Q. Who makes decisions on whether or not
2 improvements should be made to reduce seepage?

3 A. The Board members.

4 There is an application for a system
5 optimization review, an application to apply for a
6 grant from BOR to help with some of these seepage
7 changes that the District has just applied for this
8 winter, so to address some of these seepage losses.
9 But it hasn't been done thus far.

10 Q. You haven't heard if you've obtained the
11 grant, you mean?

12 A. Right.

13 Q. Now, I assume -- now, as I understand it,
14 the only source of water into this canal is the Big
15 Wood River; correct?

16 A. That's right.

17 Q. And so I guess the reason you're bringing
18 this information into this hearing is because you're
19 testifying that Big Wood water supplies affect the
20 amount of water to the senior users in this case?

21 A. Say that again.

22 Q. The only source of water to this canal is
23 Big Wood water; correct?

24 A. Correct.

25 Q. And the water is not delivered to any of

1 the senior users on -- in this case; correct?

2 A. If it's not.

3 Q. No. It is not, is it?

4 A. It's not delivered to seniors?

5 Q. No. When I'm referring to "seniors," I'm
6 talking about the folks that testified in this hearing
7 today on behalf of the seniors, what have been referred
8 to as the calling parties, even though no call has been
9 made.

10 A. Oh, okay. You mean a couple days ago?

11 Q. Right. Those people.

12 A. Okay.

13 Q. This water isn't directly delivered to
14 them, correct, from this canal?

15 A. No.

16 Q. So you're bringing in this seepage loss to
17 show that that water affects their water supply?

18 A. Yes.

19 Q. Okay. And that's water from the Big Wood
20 River; correct?

21 A. Yes.

22 Q. In your operation -- according to the
23 testimony of Mr. Beck, in your operation you have a
24 combination of surface water and groundwater; correct?

25 A. Yes.

1 Q. And you said you sit on the Board of one of
2 these irrigation districts; correct?

3 A. No. I said I was a supervisor briefly, but
4 I'm not on the Board.

5 Q. Okay. Which board was it that you sit on,
6 you said?

7 A. South Valley Ground Water District.

8 Q. Okay.

9 A. And D37.

10 Q. So do you -- do you know why the Board has
11 elected not to expend funds to reduce seepage losses
12 out of this canal in the past?

13 A. No. Too expensive.

14 Q. It's too expensive?

15 A. It seems -- it seems probable.

16 Q. Okay. So are -- your operation's
17 considered a fairly large operation, correct --

18 A. Yes.

19 Q. -- in the area?

20 Have you made demands upon them to improve
21 the seepage losses in this canal?

22 A. We've talked about it. We have not
23 demanded it.

24 Q. Okay. And aren't reduced deliveries to you
25 from this canal requiring you to pump more groundwater

1 than you would if you otherwise had the surface water
2 supply available?

3 A. Potentially.

4 MR. FLETCHER: I have no further questions.

5 THE HEARING OFFICER: Mr. Rigby?

6 MR. RIGBY: Thank you.

7
8 CROSS-EXAMINATION

9 BY MR. RIGBY:

10 Q. Mr. Stevenson, Jerry Rigby representing the
11 seniors, surface water users.

12 So just to be clear, then, you are a
13 supervisor to the South Valley Ground Water District;
14 is that correct?

15 A. No. I sit on the Board.

16 Q. Okay. So you are a Board member of the
17 South Valley Ground Water District?

18 A. Yes.

19 Q. Okay. And in that capacity have you been
20 working for -- I think you said trying to work things
21 out between the groundwater users and the surface water
22 users; is that correct?

23 A. Uh-huh. Yes.

24 Q. Is that "yes"?

25 Has that been through the Groundwater

1 Management Area --

2 A. Plan, yes.

3 Q. -- Plan, Advisory Board, et cetera?

4 A. Uh-huh.

5 Q. And how long have you been working through
6 that?

7 A. I stated that I was -- I've been on the
8 Board for two years.

9 Q. Okay. Do you know how long that Advisory
10 Board has actually been going?

11 A. Since the beginning of the Ground Water
12 District.

13 Q. And to date, has there been a resolution of
14 substance made with those talks?

15 A. No.

16 Q. And so to date, have there been any
17 curtailment of any wells in your South Valley Ground
18 Water District?

19 A. No.

20 Q. You were aware, were you not, of a
21 potential curtailment looming in the future or as a
22 result of the talks that were going on, were you not?

23 A. Do you want to put a timetable on that or
24 just say --

25 Q. Let's talk about even as of last year.

1 A. It -- so it's been -- it's been looming
2 since before last year, certainly.

3 Q. Okay. And yet do you know any member of
4 the Ground Water District that has -- as a result of
5 that contemplated -- in contemplating that made
6 substantial changes or diminished the time that they
7 are pumping?

8 A. Yes, I do.

9 Q. And who is that?

10 A. So -- so it's been looming for a while.
11 But when the Director called for the Advisory Committee
12 to meet over the winter, it started to look more
13 serious. And some of our neighbors chose to fallow
14 some ground, some chose to change their cropping plans,
15 because of what may come of this.

16 I just would like to point out that the
17 timing of this whole hearing is very unfortunate. Had
18 this been coming in February or March, people could
19 have made changes to their farm, their cropping system.
20 But to have everything planted and then have these
21 discussions happen in June is completely unfair.

22 So in a scramble in April we started -- on
23 our place, I'm talking about now, we started to tear
24 out alfalfa that we thought couldn't be watered through
25 the season. Plant more barley in some of those places,

1 because we feel that uses the least amount of water.
2 And we chose not to irrigate pasture. We chose not to
3 have any potatoes this year. But that was done in a
4 very truncated time frame that we felt was unfair, to
5 say the least.

6 Q. You understand the frustration of the
7 senior surface water users in this, do you not?

8 A. Absolutely, Mr. Rigby. I sat through that
9 day. And I have -- I have -- I completely understand
10 and have -- I feel bad for them.

11 Q. So what's your position on the priority
12 system, as you compare groundwater users versus surface
13 water users?

14 A. Well, as Stewart tried to say, I believe in
15 the priority system, but I don't believe you can shove
16 priorities that are in different centuries together.
17 There's too many other factors that go into the use of
18 groundwater.

19 Q. But you do agree that something needs to be
20 done differently than what has occurred in the past, do
21 you not?

22 A. Yes, I do.

23 Q. And without curtailment what are the
24 possibilities?

25 A. Well, let's talk about curtailment. What

1 kind of curtailment? By priority? By location? By
2 crop? What makes the most sense? Is the answer here
3 in this room going through this process? Is it in the
4 field? Is it people talking to each other?

5 I don't -- I don't feel like this is
6 getting us anywhere.

7 Q. But you agree that it's been discussions
8 for several years, and you say there's no resolution
9 the other way?

10 A. Is it the wrong people in the room? I
11 don't -- I don't understand. I realize there needs to
12 be some sacrifices. We need to figure out which
13 sacrifices make the most sense.

14 Q. And yet to date, as testimony even on
15 Hillside, no pumps have been turned off on your lands?

16 A. Nope.

17 MR. RIGBY: I have no further questions.

18 THE HEARING OFFICER: Redirect, Mr. Barker?

19 MR. BARKER: No questions.

20 THE HEARING OFFICER: Okay. Thank you,
21 Mr. Stevenson.

22 THE WITNESS: That's it?

23 THE HEARING OFFICER: That's it. But you're
24 welcome to stay for today and tomorrow and however long
25 we go.

1 THE WITNESS: Well, I -- I've run out of clean
2 clothes, so I think I'm going to go home. I thought I
3 was only going to be here for a day or two.

4 THE HEARING OFFICER: We have some very good
5 thrift stores in town.

6 Mr. Barker, next witness.

7 MR. BARKER: South Valley Ground Water District
8 calls Zach Hill.

9 THE HEARING OFFICER: Zach Hill, come forward,
10 please.

11 We may ask you, Mr. Stevenson, to lead us
12 in some repetitions of yoga later.

13 Mr. Hill, if you'll raise your right hand.

14
15 ZACH HILL,
16 having been called as a witness by South Valley Ground
17 Water District and first duly sworn, testified as
18 follows:

19
20 THE HEARING OFFICER: Thank you. Please be
21 seated.

22 MR. FLETCHER: Director, I'd just like to
23 clarify, is South Valley done with fact witnesses?

24 MR. BARKER: Perhaps. Likely.

25 ///

1 DIRECT EXAMINATION

2 BY MR. BARKER:

3 Q. Good morning, Mr. Hill.

4 How are you?

5 A. Good morning. I'm well.

6 Q. So would you state your name and -- your
7 full name and address for the record, please.8 A. My name is Zach Hill, Z-a-c-h, H-i-l-l.
9 202 North 9th Street, Boise, Idaho 83702.

10 Q. Mr. Hill, what's your occupation?

11 A. I'm a partner at Ecosystem Sciences,
12 environmental consulting firm here in Boise, Idaho. My
13 title is principal environmental planning and design.
14 We do environmental management, mitigation, monitoring,
15 a variety of things under that umbrella.16 Q. So Ecosystem Sciences, how long have you
17 worked for them?18 A. I've been a partner for 15 years. Prior to
19 that I was an associate for about eight years with
20 Ecosystem Sciences.

21 Q. And before that what did you do?

22 A. I worked for Don Chapman Consultants.
23 Dr. Don Chapman, Dr. William Platts, and Dr. Mark Hill
24 were some of the seminal scientists in fisheries and
25 stream ecology in the Pacific Northwest.

1 Q. And how long did you work for Chapman?

2 A. For about three years.

3 Q. And before that what did you do?

4 A. I was in school.

5 Q. Okay. Tell us about your educational
6 background.

7 A. I have a bachelor's of architecture,
8 professional licensed architect in Idaho and Montana.
9 I have a master's of architecture in environmental
10 design and planning. I have a master's of ecological
11 design. I have studies at the University of Utah with
12 the National Outdoor Leadership School in east Africa.

13 Sorry, I'll try to slow down. I was
14 admonished last time.

15 Q. So you have two master's degrees?

16 A. Correct.

17 Q. And those were architecture and
18 environmental design and --

19 A. Planning --

20 Q. -- ecology?

21 A. Yeah, planning -- and master's of ecology,
22 ecological design studies.

23 Q. Okay. And where did you receive your
24 degrees from?

25 A. Montana State and San Francisco Institute

1 of Architecture.

2 Q. Is that where your BA came from?

3 A. Montana State.

4 Q. Okay. And in -- so if I add up right,
5 that's like 25 years ago that you got finished with
6 school?

7 A. Yeah. There were multiple years, time off
8 too. I spent time working in between master's
9 programs. So it was accumulated over time.

10 Q. What type of work have you done since
11 you've been with Environmental [sic] Sciences?

12 A. Primarily watershed management, water
13 monitoring. We have worked on some of the largest
14 restoration projects for stream systems in North
15 America. The Owens River Valley in eastern California,
16 for the City of Los Angeles Department of Water and
17 Power for a significant amount of time.

18 We work on a variety of projects in Idaho
19 specific to Silver Creek. Water rights, water
20 monitoring, biological systems, stream restoration and
21 design, of that scope.

22 Q. And in your experience at Ecosystem
23 Sciences, did you do any work in the Wood River Valley?

24 A. I've worked in the Big Wood and Wood River
25 Valley since about 2008. We were first engaged to do a

1 watershed management evaluation of Silver Creek in
2 2008, I believe. That was for The Nature Conservancy
3 and a group of landowners. We identified -- that was
4 specifically looking at fisheries in Silver Creek, some
5 of the aquatic biota, some of the limiting factors that
6 were apparent out there.

7 There was a lot of anecdotal observations
8 at that time. One of the primary things that came out
9 of our assessment was there was significant data gaps
10 for information that you would want to make an
11 assessment, largely related to water-quantity and
12 water-quality issues. And since that time we've been
13 working to kind of remedy those gaps.

14 Q. And so what have you been doing to remedy
15 those gaps since -- this is in 2008; right?

16 A. Yeah. Initially we established an array of
17 temperature monitoring and dissolved oxygen modeling
18 throughout the system from the headwaters down to
19 Highway 93. We also established some areas where we
20 did manual hydrologic measurements to try and establish
21 a better understanding of water quantity and streamflow
22 discharge. At the time and still to this day the
23 primary place where you get that information is the
24 USGS gage at Sportsman's.

25 As we know, the system is very complex.

1 It's a spring-driven system. It changes pretty
2 dramatically from the spring headwaters, the upper
3 tributaries down through the mainstem of Silver Creek.
4 And so from about 2011 through today we perform manual
5 measurements on about a monthly basis at six sites.
6 This is just a point in time to give us an
7 understanding of quantity in relation to some of the
8 water-quality issues that we're looking at. Subsequent
9 to that I have been hired by landowners to do more
10 specific monitoring of streamflow measurements.

11 Q. So before you go to that, the monitoring
12 that you've been doing, was that for this TNC project?

13 A. It grew out of that.

14 Q. I'm sorry. This -- between 2008 and 2011,
15 is that all part of the TNC project, or was that
16 something else?

17 A. Yeah, essentially that -- the watershed
18 management assessment came out in, I believe, 2010.
19 And from about 2011 forward the monitoring that I just
20 described has occurred.

21 Q. Okay. And so what are these significant
22 data gaps that you found when you first started looking
23 at this basin?

24 A. Well, if you want to do any management,
25 effective management, whether it's stream restoration

1 of any kind, you would want to have baseline data to
2 inform if your actions are successful or not.

3 In terms of water quantity, the only
4 available information was, and is, Sportsman's Access.
5 And so we want to build on that by doing these
6 cross-section areas. They're on the tributary streams
7 to the mainstem. Again, they're points in time, about
8 one day out of every month during the irrigation
9 season. It gives us a relative understanding of what
10 might be occurring and how that drives water-quality
11 conditions.

12 And then of course the array of
13 water-quality monitoring, which includes about 60
14 sensors from springheads down to Highway 93, and
15 dissolved oxygen monitoring as well. We also do some
16 sediment cross-sections. Sediment is an issue. It's a
17 limiting factor for the fishery as well.

18 Q. And other than -- well, tell me about your
19 experience with water-quantity monitoring over the
20 years.

21 A. Well, in addition to that, we were hired by
22 a landowner that has about a 3,500-acre ranch in what I
23 would call the center of Silver Creek. It's the Silver
24 Spring Ranch. It's in a very unique position, because
25 it's at the end of delivery systems for the District 45

1 and the Baseline canals. It's also where a majority of
2 the springheads for Silver Creek start, and it's the
3 headwaters of six of the creeks, which include Patton,
4 Cain, Chaney, Mud, Wilson, and Grove Creeks. The only
5 significant tributary that's not a part of that land is
6 Loving Creek.

7 At the time the owner was interested in not
8 only understanding the water delivery, surface water
9 deliveries, but also the amount of water that was
10 coming off of those creeks, exiting his land, and
11 feeding Silver Creek. So we established an array where
12 each of the creeks leaves the property, where we've
13 installed sensors that monitor streamflow continuously
14 since 2015 up through today.

15 Q. So based upon that data that's been
16 collected at this Silver Spring Ranch, has that
17 informed your -- I don't want to say opinions, but has
18 it informed your -- what you've been asked to do here
19 in this case?

20 A. Certainly. I mean it's current data. It's
21 relevant to any management that you would want to do
22 within the watershed. We're able to glean from that
23 not only changes within the season and yearly, but
24 through time.

25 In my work with the South Valley Ground

1 Water District, we're able to discuss how that affects
2 streamflows beyond what we find at the Sportsman's
3 Access gage. So it just gives us an increased
4 understanding of how the system functions through time
5 and within water years.

6 Q. And when did you first take on any work for
7 the South Valley Ground Water District?

8 A. I believe it was 2017.

9 Q. And what was the purpose of your engagement
10 with the District?

11 A. There have -- there's a lot of
12 misunderstanding about how the system works. And I'm
13 talking specifically about the hydrology. It's
14 complex. There's a lot of nuance.

15 And so the Board engaged with me to help
16 not only establish a monitoring program that looked at
17 groundwater levels to look at the diversions in the
18 pumping from the watermaster records, but also to
19 develop some communication tools that they could share
20 with their membership and with other stakeholders to
21 better understand how the system functioned and to
22 accumulate the data into kind of a central repository
23 so that it could be used for the management planning
24 purposes.

25 Q. Okay. And as an outgrowth of that effort,

1 did you -- did you prepare any reports?

2 A. We have prepared information on groundwater
3 levels from 2017 through 2020. The Department also has
4 an array of groundwater sites where they monitor
5 groundwater level throughout the Triangle.

6 Before Mr. Wylie departed the Department,
7 we shared that data back and forth. And the Board
8 still would like me to reciprocate the sharing of that
9 data. I think since Mr. Wylie left, I'm not really
10 sure who's in charge. But we've always felt that the
11 sharing of that data was of a benefit to everybody.

12 So the reporting consists of looking within
13 year at how those groundwater levels change within the
14 District and that depth to groundwater, you know,
15 basically what it looks like districtwide. So
16 obviously much further in the north, much shallower in
17 the south. There's a lot of factors around that, but
18 how it changes within the season.

19 Q. Okay. And you said all this data has been
20 shared with the Department; is that right?

21 A. Yeah. I don't think the 2020 has, mostly
22 because I don't have a point of contact since Mr. Wylie
23 left. But it's available.

24 Q. So would you turn in the book to your left,
25 exhibit book, to Exhibit 23.

1 A. Can you repeat the number?

2 Q. 2-3, 23.

3 Have you seen this exhibit before?

4 A. Yes, I have.

5 Q. Can you explain what this exhibit is and
6 what's it intended to illustrate.

7 A. This was asked by the South Valley Ground
8 Water District Board. I was asked to prepare this in
9 cooperation with Dave Shaw. It's looking specifically
10 at how the hydrology in the basin works. I think it's
11 important to underscore that this is -- this is a
12 communication document.

13 It's meant to be digestible to a wide
14 audience, stakeholders. A lot of the work that I do in
15 Silver Creek is working with some of the growers, some
16 of the water users. And oftentimes this very technical
17 information is difficult to comprehend.

18 And so this was a way of getting at not
19 only explaining how the system works, but also how it's
20 changed through time, with a specific focus on the
21 early 1970s through -- through what was then, I think,
22 2016, 2017 data that we had available.

23 Q. Okay. So if you would please look at the
24 exhibit and just walk us through what kind of
25 information you are trying to convey to the Ground

1 Water District and to the growers about the hydrology
2 of the basin.

3 A. The large themes were water availability
4 and water delivery and how that has changed through
5 time. We looked at data at the Hailey gage to see how
6 discharge has changed over -- over that period of time.
7 We also looked at the points of diversion for the
8 District 45 in the Baseline canals.

9 As you walk through the document, there is
10 some narrative that describes those. We tried to
11 illustrate as best as possible, using diagrams, to
12 understand volume comparisons, volume of discharge in
13 the Big Wood and how that's changed through time, how
14 the change from flood irrigation to pivot irrigation
15 has changed the amount of delivery for surface water.

16 Let's see what else further to that.

17 Q. Let's go to this first question that -- or
18 first topic, the water availability. You start on
19 page 4 with a description.

20 Why don't you just briefly explain what
21 this document is trying to convey about the water
22 availability in the basin starting with the river
23 itself.

24 A. Well, the Big Wood has diminished in volume
25 over time. It's due to probably a number of factors,

1 not the least of which is just the snowpack,
2 seasonality. It tends to, even when we have good water
3 years, we're finding that the runoff occurs earlier in
4 the season and oftentimes more quickly.

5 When you want surface water delivery, you
6 want that to coincide when you acquire the water for
7 growing crops. If it's happening earlier, it's
8 difficult to utilize that water. And so just looking
9 at the change through time of the river, we know that
10 it's decreased.

11 Q. And that's as a result of precipitation
12 decreases.

13 Is there a change in snow and rainfall
14 patterns in the basin?

15 A. There has been. I think at the very end we
16 look at some of the summary of snow-water equivalent
17 through time. It's looking at '82 through 2018 in this
18 instance. And obviously there's variability in years,
19 but it has a slight downward trend.

20 But again, you know, what we were looking
21 at more specifically was the change in timing in volume
22 of water runoff and how that might affect how you
23 divert water and deliver water.

24 Q. So if you look on page --

25 MR. RIGBY: Mr. Director -- excuse me,

1 Counsel -- I assumed until now he was laying foundation
2 to ask for qualification of this as an expert. This
3 witness is an expert. He's now giving conclusions.

4 I'm just wondering, are you intending to
5 have him accepted as an expert?

6 MR. BARKER: I'm sure you will accept him as an
7 expert.

8 MR. RIGBY: I will. I'm just trying to do it
9 right.

10 MR. BARKER: Okay. Sure. So --

11 THE HEARING OFFICER: Okay. I hope you're
12 picking up that conversation, Jeff. I can barely hear
13 it.

14 And I want to tell you, Mr. Barker, and
15 I've reserved, but you are chronically soft enough that
16 it's almost not distinguishable. So anyway.

17 MR. BARKER: Sorry, Mr. Director. I'll try to
18 speak up.

19 THE HEARING OFFICER: If you can raise the
20 volume, please.

21 MR. BARKER: So, Mr. Director, Mr. Rigby asked
22 the question of whether we would offer Mr. Hill as an
23 expert witness in the area of water management and
24 water monitoring. And we offer him in that capacity at
25 this time.

1 THE HEARING OFFICER: Any objection to the
2 qualifications of Zach Hill?

3 Mr. Rigby?

4 MR. RIGBY: No objection.

5 THE HEARING OFFICER: Mr. Fletcher?

6 MR. FLETCHER: No objection.

7 THE HEARING OFFICER: Okay. Mr. Hill is
8 recognized.

9 Mr. Barker.

10 Q. (BY MR. BARKER): So, Mr. Hill, what's
11 the -- over the last 20, 30 years, what's been the
12 change in snowpack in the Big Wood Basin?

13 A. Well, again, I would point to that it
14 varies by season, and obviously that's going to have a
15 direct impact on the length of time that water is
16 available in the Big Wood for diversion. What we've
17 seen is that you have an earlier -- a change in timing
18 of the runoff, which affects availability of the water
19 for diversion. Those would be the main conclusions I
20 would draw.

21 Q. And so if you look at page 7 -- well, maybe
22 before I ask you about questions about it.

23 I would offer Exhibit 23 into evidence.

24 THE HEARING OFFICER: Any objection to the
25 admission of this document?

1 MR. FLETCHER: Just --

2 THE HEARING OFFICER: Mr. Fletcher?

3 MR. FLETCHER: I don't necessarily -- can I ask
4 some questions to clarify?

5 THE HEARING OFFICER: In aid of objection?

6 MR. FLETCHER: In aid of objection, yes.

7 THE HEARING OFFICER: Sure.

8

9 VOIR DIRE EXAMINATION

10 BY MR. FLETCHER:

11 Q. You're not the sole author of this
12 document; isn't that correct?

13 A. That's correct.

14 Q. Who are the other authors of this document?

15 A. It was a collaboration between myself and
16 Dave Shaw.

17 Q. Okay. Are you planning on testifying today
18 as to matters prepared by your collaborators?

19 A. No.

20 Q. You're only going to testify as to those
21 matters that you inserted into this memo?

22 A. Yes.

23 MR. FLETCHER: Okay. With that understanding, I
24 have no objection.

25 THE HEARING OFFICER: Yeah, and I think it's

1 consistent, Mr. Fletcher, with the limitations of his
2 expertise that were recognized, because he's -- as I
3 understood, his education and his background work
4 experience, he really doesn't have the expertise to be
5 talking about the groundwater itself and the
6 hydrogeology of the relationship, so --

7 MR. FLETCHER: That's why I wanted to clarify
8 that he's basically going to talk about data, as I
9 understand it.

10 THE HEARING OFFICER: And at least surface water
11 or perhaps groundwater measurement data. But okay.

12 MR. FLETCHER: Thank you.

13 THE HEARING OFFICER: Mr. Barker.

14 MR. LAWRENCE: Mr. Director.

15 THE HEARING OFFICER: Yes.

16 MR. LAWRENCE: I'd like to object to this
17 document to the extent that it addresses groundwater
18 outside of the Bellevue Triangle. For example, it --
19 on page 5 it mentions aquifer conditions north of
20 Bellevue. And there may be other portions of the
21 document that address aquifer conditions outside the
22 Bellevue Triangle. So I'll just object to the extent
23 that it goes to those issues of that subject matter,
24 and it's beyond the scope of this proceeding.

25 THE HEARING OFFICER: And so your objection

1 would be requesting me to do what?

2 MR. LAWRENCE: I'm just making an objection for
3 the record.

4 THE HEARING OFFICER: Okay. Noted for the
5 record.

6 MR. BARKER: So --

7 THE HEARING OFFICER: So we need to receive this
8 into evidence, I think, Mr. Barker; is that correct?
9 Did you offer this document?

10 MR. BARKER: I thought I just did, yes.

11 THE HEARING OFFICER: Yeah. So the document
12 that is marked South Valley and Galena Exhibit 23 is
13 received into evidence.

14 (SVGWD GGWD Exhibit 23 received.)

15 THE HEARING OFFICER: Thank you.

16 MR. BARKER: So, Mr. Director, I do want to
17 respond to something I think I heard you say about
18 Mr. Hill's expertise. One of the things he did say he
19 has been involved with is in groundwater monitoring.
20 And so to say that he has no knowledge about
21 groundwater or hydrogeology I think is a bit of a
22 stretch.

23 THE HEARING OFFICER: Well, to the extent that
24 he's been involved in the measurement and collection of
25 data for groundwater levels, he can testify about that.

1 But I think drawing conclusions from that in trying to
2 predict or discuss the effect on surface water streams,
3 I don't -- at least from what I've heard, that's not
4 within his area of expertise, Mr. Barker. Thank you.

5 MR. BARKER: All right.

6
7 CONTINUED DIRECT EXAMINATION

8 BY MR. BARKER:

9 Q. So, Zach, you've been retained by the
10 Ground Water District to help understand the complex
11 relationship between the water supply that they have
12 available to them; is that right?

13 A. Yeah, I think that's fair. I'll just
14 qualify it by saying that, you know, primarily it is
15 the college of data and making that available to them,
16 the management of that data. I think that's the
17 primary focus.

18 And also that -- just the communication of
19 how the system works for their benefit. I would say
20 that that's kind of the scope of what I've worked on.

21 Q. Okay. And so as part of the data, would
22 you turn to page 15 of Exhibit 23. And there's some
23 graphs or figures, I guess, on this page that identify
24 water deliveries.

25 Do you see that?

1 A. I do.

2 Q. Okay. So would you explain what was
3 happening in the 1970s with the water delivery?

4 A. With the water delivery specifically, there
5 was much more diverted at the point of diversion for
6 the District 45 and slightly more at the point of
7 diversion of the Baseline in the early 1970s as
8 compared with 2016.

9 Q. And since that time has there been a change
10 in the diversion rates -- or diversion volumes, I
11 should say?

12 A. Well, yeah, there's a change in the
13 diversion volumes, but also the rate. On page 19 we
14 show the rate at the headgate. I think as
15 Mr. Stevenson testified to earlier, what used to be,
16 you know, greater than 400 and at times greater than
17 500 cubic feet has now diminished down to somewhere
18 around 200 on an annual basis that is diverted at the
19 headgate of the District 45.

20 Q. Okay. And is part of that decline the
21 result of decreased water availability?

22 A. I think that that is certainly part of it.
23 The -- one of the other main drivers is the change from
24 flood irrigation to pivot irrigation and probably
25 decreased demand because of that.

1 Q. And does -- do you have some information
2 about the change in timing of water availability on
3 page 28?

4 A. I have a 27. I don't have a 28.

5 Q. The change in water runoff chart.

6 A. 26? Do you have a different number? I see
7 the chart, yes.

8 So yeah, that's illustrating that the
9 runoff that we see at the Hailey gage has changed in
10 its timing, essentially it's up to a month earlier when
11 the -- when it begins or when the increase in discharge
12 begins, and up to a month earlier when you see that
13 kind of falling limb in the discharge.

14 Q. And so does the decrease in -- or sorry,
15 having water into the system earlier make it more
16 difficult to divert into the canal systems in the
17 District?

18 A. Oftentimes in my conversations with not
19 only the users of the canal system but also
20 Mr. Stevenson, there's snow in the canals during the
21 early period. Sometimes they can't push water through
22 until much later on, depending on the year. So I think
23 it's somewhat difficult at that headgate for -- usually
24 because of winter conditions when there's water
25 available.

1 Q. Okay. Thank you.

2 Now, would you turn to the next exhibit,
3 Exhibit 24.

4 A. Uh-huh.

5 Q. Can you explain to the Director what this
6 document is.

7 A. This was prepared in collaboration with
8 Dave Shaw and Erick Powell as a presentation to the
9 Advisory Committee, the Big Wood Groundwater Management
10 Area. Much of the information in here was to give
11 background and context on the hydrology. There's a
12 significant technical presentation by Mr. Shaw and
13 Mr. Powell on the specifics of the hydrology, not only
14 its history but its change through time. You can read
15 in here what the presentation topics were.

16 Q. So is there a part of this presentation
17 that you prepared?

18 A. Specifically really taking what both Dave
19 Shaw and Erick Powell prepared and putting it into the
20 presentation, and of course the hydrology report that
21 we've been discussing in the front end of this
22 presentation.

23 Q. Okay. We'll let Mr. Powell and Mr. Shaw
24 talk about those.

25 Turn to Exhibit 30, please.

1 So, Mr. Hill, you testified earlier you
2 were working on a project for the Silver Spring Ranch,
3 the ranch owner, from 2015 -- or beginning of 2015?

4 A. Yes.

5 Q. Okay. So tell me what Exhibit 30 is and
6 whether it has any relationship to the work that you
7 were doing for the ranch owner on Silver Spring Ranch.

8 A. So this is a summary of the work that we
9 have been doing since 2015 for this particular
10 property. It's rather involved, the different aspects
11 that we have done out there. But the -- I guess the
12 two main things that are probably relative to what
13 we're discussing today are we establishing an array of
14 continuous monitoring for not only water delivery in
15 the Baseline in District 45 Canal, but the amount of
16 water that is leaving the ranch in those headwater
17 tributaries, the six tributaries that I named before.

18 Q. So did you have any role at all in
19 evaluating and making recommendations for water
20 delivery operations on the Silver Spring Ranch?

21 A. In the beginning there was a lot of
22 question as to the amount of water that was being
23 delivered to the ranch. They have a pretty significant
24 portfolio of water rights for a variety of beneficial
25 uses. They are at the end of both those delivery

1 systems, the Baseline and that leg of the District 45.

2 Historically what happened out there is
3 there was a considerable amount of water delivered to
4 that ranch. And so they filed a wastewater permit for
5 that. We realized the license in 2017. So we wanted
6 to --

7 Q. A license for what?

8 A. For the wastewater. There's two wastewater
9 rights.

10 Q. To use for irrigation?

11 A. Nope. They are used for -- the beneficial
12 uses are for recharge, storage, wildlife.

13 Q. Okay.

14 A. And they're two separate rights on the
15 Baseline and the District 45.

16 Q. And so what was the purpose of obtaining
17 those water rights?

18 A. To use them for those beneficial uses.
19 There was -- as I said, they have a substantial amount
20 of water that's delivered above and beyond their
21 primary irrigation rights, being at the end of the
22 canal. So those wastewater -- which is water that has
23 been either previously used and returned to the system
24 or passed, was filed on. So anything above their
25 primary rights, the beneficial use is for the recharge.

1 And they wanted to understand exactly how
2 much of that delivery came onto the ranch and then how
3 much they are actually putting into those beneficial
4 uses for recharge and storage and wildlife.

5 Q. So did you do anything to quantify the
6 beneficial use of recharge and wildlife storage for
7 this application?

8 A. Yes. In order to realize the license, we
9 had to prove that. I worked with Erick Powell at
10 Brockway. We were able to do that, realize the
11 license. And so since 2015 we've been measuring that
12 quantity of water and how it's applied.

13 Q. So do you have any -- or can you tell us
14 how much water is being -- well, first of all, how much
15 water is in the water rights for these various recharge
16 and wildlife rights?

17 A. They both have 25 cfs, so both 25 in the
18 Baseline and 25 in the District 45. I believe the
19 total acre-feet is about 5,250 in one of them and about
20 5,500 in the other. They have combined use limits in
21 the license as well.

22 Q. So do you have any understanding of what
23 happens to the water after it gets into the -- into the
24 gravel pits?

25 A. It goes right back into the aquifer. Those

1 gravel pits are very porous. Any water that's applied
2 out there goes very quickly to the ground.

3 Q. Very quickly to the aquifer?

4 A. Yeah. Into the ground system, yeah.

5 Q. Okay. And so what was the reason for
6 establishing those -- those water rights?

7 A. Well, I think the -- the owner of that
8 ranch was very interested in the health of Silver
9 Creek. So he understood having a significant amount of
10 the springheads on his property, that he had the
11 headwaters of six tributary creeks that fed Silver
12 Creek, and that those springheads are fed by
13 groundwater conditions, that any recharge that was put
14 into the system would make it into Silver Creek, and
15 thereby increase the discharge in those creeks.

16 Q. So your monitoring system summary that --
17 well, this is Exhibit 30 that you prepared; is that
18 right?

19 A. Yes.

20 Q. Okay. So explain what this document is
21 intended to illustrate.

22 A. What it summarizes is the location of this
23 property within the heart of the center of the Silver
24 Creek watershed, the location of where we monitor both
25 surface and groundwater conditions. And to just

1 summarize that, we've been doing it since 2015. We
2 have a lot of data that's current and relevant to both
3 stream discharge, but also water delivery and
4 groundwater levels.

5 Q. So if you look at, for example, Figure 2 --
6 Well, first of all, I would move for
7 admission of Exhibit 30.

8 THE HEARING OFFICER: Any objection to the
9 admission of Exhibit 30?

10 MR. FLETCHER: I just want to ask a question in
11 aid of objection.

12 THE HEARING OFFICER: Yeah.

13

14 VOIR DIRE EXAMINATION

15 BY MR. FLETCHER:

16 Q. Did you -- are you the sole author of this
17 report?

18 A. This particular --

19 Q. Exhibit 30.

20 A. -- Exhibit 30?

21 Yeah, I'm the primary investigator. I
22 wrote the summary. I prepared the maps. Obviously, I
23 work in the firm with a lot of people. And so through
24 time --

25 Q. But your firm prepared this report?

1 A. Yes.

2 Q. You didn't rely upon other experts in
3 preparing it?

4 A. No.

5 MR. FLETCHER: I have no objection.

6 THE HEARING OFFICER: Okay. The document that's
7 been marked as South Valley and Galena Exhibit 30 is
8 received into evidence.

9 (SVGWD GGWD Exhibit 30 received.)

10

11 CONTINUED DIRECT EXAMINATION

12 BY MR. BARKER:

13 Q. So, Mr. Hill, look at Figure 2 on page 6 of
14 South Valley/Galena Exhibit 30, please.

15 A. Okay.

16 Q. Are you there?

17 So explain what this figure demonstrates.

18 A. This shows the spatial location of all the
19 monitoring that either we conduct or we're aware of
20 within the Bellevue Triangle and the Silver Creek
21 watershed. It's inclusive of the groundwater level
22 monitoring wells, which also includes those maintained
23 by the Department of Water Resources, the headgates for
24 the Baseline and the District 45 Canal, the location of
25 where we measure surface water delivery for the 45 and

1 Baseline, locations of where we monitor spring
2 discharge or creek discharge as it leaves the property,
3 and then as I mentioned before, further downstream our
4 streamflow measuring sites that are done on a
5 monthly -- relatively monthly basis for point-in-time
6 measurement. And I believe -- yep, I also put in the
7 Sportsman's Access gage and the gages there over on the
8 Big Wood as well.

9 Q. So the Silver -- the streamflow monitoring
10 you do on the ranch is in blue squares?

11 A. Yeah, correct.

12 Q. And the streamflow monitoring you do in the
13 creeks, is that in light blue?

14 A. Those are green.

15 Q. Oh, green.

16 A. Kind of green.

17 Q. Okay.

18 A. Sorry. It's not much -- not much contrast
19 there, but yes.

20 Q. Okay. And then look over to the next
21 exhibit -- or sorry, the next figure on page 7 of
22 Exhibit South Valley/Galena Exhibit 30.

23 A. Yes.

24 Q. So tell me what your -- what these
25 indications on this figure are trying to show.

1 A. So these are more specific to the ranch
2 boundary that shows the location of where we measure
3 stream discharge as it leaves the property for each of
4 the headwater creeks. It also shows that -- where we
5 monitor the delivery of surface water, and then we also
6 monitor within the property the distribution of water
7 to different portions of the property for the intended
8 beneficial uses. We also -- there's several water
9 bodies on the property, so we monitor the relative
10 water level of those and as they change through time.

11 Q. Okay. Is there a -- let's look at this a
12 little more closely.

13 Where are the water delivery locations that
14 you measure?

15 A. The District 45 is right on Baseline Road,
16 just north of the property boundary. The Baseline is
17 measured a little bit further up the canal system near
18 Kingsbury, so it's not on the property boundary, but
19 there aren't any other diversions where we measure it
20 so the total amount that comes onto the ranch is
21 measured there.

22 Q. So this blue line at the upper end is where
23 the water comes into the system --

24 A. Yeah.

25 Q. -- or to the ranch from both canals?

1 A. Yeah. They actually -- where they come
2 together is right at Baseline Road. Above that they're
3 split. And so we measure above the split.

4 Q. And where else do you measure flow?

5 A. We measure it before it gets into what we
6 call the gravel pits, which are on Price Lane. We have
7 a point there. So we know exactly how much is being
8 delivered into those for recharge.

9 Q. So those are shown right next to the legend
10 where it says "Price Lane" in a light blue color?

11 A. Correct.

12 Q. Those are the gravel pits where the
13 recharge rights exist?

14 A. Correct.

15 Q. Or sorry, are put to use?

16 A. Yeah.

17 Q. Okay.

18 A. And we also measure where the water -- it
19 splits at Baseline Road and is either delivered into
20 those gravel pits or is delivered into what we call the
21 holding pond, which is used for pressurized irrigation
22 system throughout the property. We have a flume just
23 below that that measures the water that comes out of
24 there and is basically delivered to the east side of
25 the property for applications down there. And so we

1 know that that's going to storage, wildlife, and
2 recharge beneficial uses.

3 Q. So you have a recharge and storage and
4 wildlife right at the -- the light blue area that's
5 shown more to the right?

6 A. Yeah, that's called Big Lake. And it has
7 those water rights and beneficial uses.

8 Q. Okay. So is part of this ranch irrigated?

9 A. Yeah, about 2,100 acres plus.

10 Q. Of a total ranch size of what? 35?

11 A. 3500.

12 Q. Okay. So the area to the north, is that
13 mostly the irrigated ground?

14 A. Yeah. Predominantly the irrigated ground
15 is to the north and to the west. As you get down into
16 the springheads and the creek systems, that ground
17 is -- it depends on the year, but it tends to be pretty
18 subby down there. As you get closer to Highway 20, you
19 have artesian, you have very shallow depth to
20 groundwater down at that end of the ranch. And so it's
21 less productive. It has been irrigated and farmed in
22 the past, though.

23 Q. In the years that you've been working for
24 the owner of this ranch, have you made any -- or have
25 there been any improvements in the delivery systems or

1 in the methods of irrigation on this property?

2 A. They removed end-guns in 2017 because the
3 area under those end-guns was not as productive in
4 terms of their yield and crop. We did an estimate of
5 that. It was probably around 200 acre-feet in savings
6 of water not applied under those end-guns.

7 I know that they upgraded graded their
8 sprinkler packages. I couldn't tell you specifically
9 what or how, but that was part of it. Those are the
10 things that come to mind.

11 Q. Has there been any change in the amount of
12 water that's been delivered to the individual pivots?

13 A. Well, it depends on the crop and the
14 rotation, whether -- they were mostly doing barley,
15 alfalfa, there were some a couple years with potatoes.
16 Those have different water requirements. The last few
17 years they really transitioned to pasture, and that has
18 a much less water requirement.

19 The owner of this ranch was very interested
20 in water conservation and trying to limit the amount of
21 water that might be applied in any particular crop
22 area.

23 Q. So other than the sprinkler packages and
24 the end-guns, converting to pasture, are there other
25 measures that were taken on this ranch to improve water

1 conservation?

2 A. Nothing more really to mind, other than,
3 you know, there was a -- the importance of
4 understanding of the water delivery and how much left
5 the ranch was of significant value to the owner. What
6 we were able to glean from not only the flow of the
7 springheads and the discharge of the creeks through
8 time showed that the water beginning on this property
9 has a significant impact or influence on Silver Creek
10 flows.

11 Q. So what is that significant impact?

12 A. In any year we have found that it's between
13 60 to 75 percent of the total flow of Silver Creek that
14 we see as discharge from this area.

15 Q. The discharge from on the springs, from the
16 springs?

17 A. Correct. Well, where they leave the
18 property, so we aren't actually measuring the
19 springheads, but actually a little bit further down.

20 Q. Okay. And are those locations shown on
21 the -- on Figure 3?

22 A. Correct.

23 Q. So at each one of these creeks that you
24 mentioned, Cain Creek, Chaney Creek, Mud Creek, Wilson
25 Creek, and -- what's the last one? Grove Creek?

1 A. Grove and Patton. I don't know if you
2 mentioned that one, but yeah.

3 Q. Oh, Patton?

4 A. Six of them.

5 Q. Oh, Patton is to the -- is to the west;
6 right?

7 A. Yes.

8 Q. So you know exactly how much water is --
9 well, you know how much water is leaving the property
10 at those -- in those springs?

11 A. In those creeks.

12 Q. Or from the springs into the creeks --

13 A. Yeah.

14 Q. -- at that location where --

15 A. And there aren't any -- there aren't any
16 diversions or uses between the springheads and the --
17 and where it leaves the property.

18 Q. Okay. And your legend says -- describes
19 those locations as "SonTek flow."

20 A. So those are flow meters. At the time when
21 we originally did this in 2015, we were using a
22 particular sensor that was a SonTek. The technology
23 changes pretty rapidly. I believe they're a different
24 unit now, but they're essentially velocity area
25 sensors.

1 Q. Okay. Flip over to Figure 5, page 9. This
2 is a little busy of a figure, but can you explain for
3 the Director what we're looking at here.

4 A. So the -- one of the ambitions of the owner
5 was to really understand not only delivery but
6 discharge of the creeks and how the water was used
7 throughout his ranch. And so we found that it was more
8 successful to use illustrations.

9 And I apologize for the size of this. This
10 is meant to be a map that's, you know, 3 by 4 feet.
11 And so it's much more clear in that regard.

12 But what we are illustrating is not only
13 the discharge at each one of the locations that we
14 monitor, but the total volume as well. And this is
15 just illustrative of 2017. So that's kind of what
16 that's depicting. It's almost kind of a report of
17 sorts on the conditions.

18 Q. So this tells you how much -- this reports
19 the outflow of the creeks from the property as well as
20 the inflow to the property from the two canal systems?

21 A. That's correct.

22 Q. Is there any other source of water for
23 this -- this ranch?

24 A. Groundwater.

25 Q. Is the groundwater and surface water

1 stacked?

2 A. Yes.

3 Q. Are there any places where there's only
4 groundwater?

5 A. No. It's -- everything is stacked on the
6 property.

7 Q. And turn to Figure -- it says Figure 2 on
8 the next page, page 10.

9 A. Yeah, I see this one.

10 Q. Okay. So tell me what you're trying to
11 illustrate with this figure.

12 A. This is looking at -- I believe this is
13 from 2017 again. Yeah, October through September.
14 This is showing the -- it's a graph that basically
15 depicts the discharge and volume of Silver Creek in
16 comparison to the -- all the creeks that flow off the
17 ranch, and in comparison to the surface water delivery
18 to the ranch. They're kind of layered on top of each
19 other to -- as a comparison.

20 Q. So this is for the year 2017; is that
21 right?

22 A. Correct.

23 Q. So does this tell us that 9,800 acre-feet
24 was delivered to the ranch?

25 A. That's right.

1 Q. And that almost 40,000 acre-feet left the
2 ranch at the spring, in the creeks?

3 A. That's right.

4 Q. And that the total flow in Silver Creek was
5 63 or 64,000 acre-feet?

6 A. Yeah. And those -- those values are for
7 the irrigation season. So we -- we did that for
8 April 1 through the end of September where we had the
9 data for this particular graph.

10 Q. Okay. And do you have any other data
11 backing up these stream -- the streamflow data of the
12 discharge from the ranch?

13 A. Yeah. We have all of the tabular data
14 from -- from those monitoring stations through time
15 from 2015 to today.

16 Q. Okay. Have you prepared an exhibit?

17 A. I have.

18 Q. Okay. Do you have a copy of it, or is
19 this --

20 A. I do not.

21 MR. BARKER: Okay. I'd like to mark this as
22 South Valley/Galena District Exhibit 40.

23 Is that where we're at?

24 (SVGWD GGWD Exhibit 40 marked.)

25 Q. (BY MR. BARKER): Mr. Hill, do you have

1 Exhibit -- South Valley/Galena Exhibit 40 in front of
2 you?

3 A. I do.

4 Q. Can you explain what this exhibit is
5 intended to show.

6 A. This shows the discharge at each one of the
7 stations that we monitor on those headwater
8 tributaries. It shows what we have seen from 2015 --
9 July of 2015 through -- I believe this goes to May of
10 this year, May 18th. And it shows the -- we put a
11 trend line on there as well to just show the difference
12 of a change over that time period.

13 Q. So does this accurately depict the
14 monitoring data that you've been collecting on the
15 ranch, Silver Spring Ranch, since 2015 through looks
16 like March of 2021?

17 A. Yeah, actually the date actually goes
18 through May of this year. I just didn't get it in
19 there.

20 Q. Oh, I see.

21 A. And to answer your question, yes.

22 Q. Okay. So -- and this exhibit has a number
23 of pages to it.

24 A. Uh-huh.

25 Q. It speaks of Grove Creek discharge, Mud

1 Creek discharge, Wilson Creek discharge, Cain Creek
2 discharge, Patton Creek discharge --

3 A. Correct.

4 Q. -- Chaney Creek discharge.

5 So those are all the springs that you
6 discussed that are illustrated in your Exhibit 30?

7 A. Yes.

8 Q. Okay. Then the next page of the exhibit is
9 "All creeks total discharge," what does that show?

10 A. It's a sum of all the creeks, so --

11 Q. Just a sum of the numbers in these previous
12 six?

13 A. That's correct.

14 Q. And then you've got another chart "USGS
15 Sportsman's Access discharge."

16 A. Yeah, same period of record. We wanted to
17 see if there was a trend that was similar. And we do
18 see an increase in discharge over that same time
19 period.

20 Q. And then this next chart, which is a little
21 busy --

22 A. It's a little busy.

23 Q. -- after, what is this?

24 A. That's just actually stacking all of those
25 up for the same period of record to just show not only

1 the relative discharge, but also you can see that many
2 of those creeks have fairly low discharge or what we
3 consider volume. But they do add up to quite a bit.

4 Q. Okay. And then the last three pages of
5 this?

6 A. I think these -- these are maps again.
7 They're probably duplicated from an earlier exhibit
8 showing the location of the ranch within the Ground
9 Valley -- South Valley Ground Water District relative
10 to Silver Creek watershed, Little Wood.

11 Again, this is another map of all the
12 monitoring locations that we discussed earlier.

13 Similarly with the last figure, which is
14 the monitoring locations which we discussed earlier.

15 MR. BARKER: So, Mr. Director, I offer South
16 Valley/Galena Ground Water District Exhibit 40.

17 THE HEARING OFFICER: Any objection to the
18 admission of this document?

19 MR. RIGBY: No.

20 THE HEARING OFFICER: Have you had a chance to
21 review it?

22 MR. RIGBY: We're looking at it, but I don't
23 believe so.

24 THE HEARING OFFICER: Was this document
25 previously disclosed?

1 MR. BARKER: It was not.

2 MR. FLETCHER: No.

3 MR. RIGBY: No.

4 MR. BARKER: Well, it was not disclosed, but as
5 I said, it's a summary of what we did disclose.

6 THE HEARING OFFICER: Do you need more --

7 MR. RIGBY: And based upon that, that's why we
8 would not object, if it's a summary of what was
9 disclosed.

10 THE HEARING OFFICER: Do you need more time to
11 review the document, Mr. Fletcher?

12 MR. FLETCHER: I don't think so. I think the
13 numbers are the numbers, so...

14 THE HEARING OFFICER: Okay. So the document,
15 then, based on the conversation that we just had, the
16 document marked as South Valley and Galena Exhibit 40
17 is received into evidence.

18 (SVGWD GGWD Exhibit 40 received.)

19 Q. (BY MR. BARKER): Okay. So, Mr. Hill,
20 let's walk through each one of the pages of Exhibit 40,
21 starting with Grove Creek discharge.

22 A. Uh-huh.

23 Q. What does your data indicate about Grove
24 Creek discharge from the Silver Spring Ranch between
25 7/17 and May of '21?

1 A. Well, the trend is that it's increased.
2 Obviously each one of these creeks will fluctuate
3 seasonally. Grove, in particular, is -- has the most
4 volume of each one of these. It's a very important
5 tributary.

6 Q. So is it your estimation that these -- that
7 at least some of this increase is a result of the
8 actions that have been taken on the Silver Spring
9 Ranch?

10 A. Yeah, I think so. We heard testimony
11 earlier about conservation practices. I also think
12 that the fact that recharge is actually occurring has
13 an influence on these. So, yeah, I would agree with
14 that.

15 Q. What do the variations in time of year
16 indicate to you?

17 A. Well, these are really responsive to
18 groundwater conditions, and I also think responsive to
19 the amount of surface water delivery and how that's
20 applied, particularly on this ranch. The springheads
21 are very close to where recharge water and wildlife
22 storage water is applied. And I think they respond to
23 that.

24 Q. Do you have any knowledge or estimate of
25 how long it takes for the water from the recharge pit

1 on this property to show up in the -- in the streams?

2 A. I haven't done any particular specific
3 research on that, no.

4 Q. Okay. And so you have a general increasing
5 trend at Grove Creek from looks like 25 to almost 40?

6 A. Yeah, the trend line would indicate that,
7 as just a discharge, yeah.

8 Q. Okay. Mud Creek, what's happening -- well,
9 first of all, on these reports there's some red lines.

10 A. Yeah.

11 Q. Is that where you don't have data?

12 A. So -- yeah, either that or the sensor
13 was -- there was probably an issue with the sensor
14 through winter conditions and/or something happened in
15 that particular location. There's a lot of wildlife
16 there. You could have a moose in the stream that gets
17 in there. You could have sticks that come down and
18 move stuff.

19 So we're out there pretty often, and we try
20 to keep up on it. We calibrate these pretty often.
21 But oftentimes you'll see gaps, and those red lines
22 indicate those gaps. They can easily be removed, and
23 they probably would not change the trend line much, if
24 at all. But I wanted to be clear that that data was
25 interpolated.

1 Q. Okay. So Mud Creek shows a similar
2 increasing trend over the last six years?

3 A. Yeah, that's what the data indicates. And
4 as I said before, Grove Creek is probably the largest
5 in terms of discharge, and so it's often easiest to get
6 good data for.

7 Mud, contrary to its name, is actually the
8 cleanest and clearest of all the creeks. The way that
9 these sensors work is they measure particles or water
10 bubbles as it goes by to create a calculation of total
11 discharge. And we had to install a bubbler actually
12 upstream to get it to work properly.

13 You also see that Mud really -- when you
14 see these bars going up and down pretty quickly, it's
15 just showing that what we see in the sensor probably
16 is -- is that inability sometimes to measure all of
17 that -- that particle or air bubbles coming through.

18 So I think it would be fair to say that --
19 that while this is really good data and better than
20 anything else we have in the upper system, it's -- you
21 have to understand that those sensors are bound by kind
22 of the constraints of the natural system and what may
23 occur out there.

24 Q. Okay. And is this the data that's been
25 shared with the Department?

1 A. No, this data has not.

2 Q. Oh, it's the groundwater monitoring data?

3 A. The groundwater has.

4 Q. Okay.

5 A. The data that has been shared with the
6 Department is relative to the surface water deliveries
7 for the licensing of those two water rights we
8 previously discussed.

9 Q. So going back to the -- these discharges,
10 if I go through all six of these creeks, there's a
11 general increasing trend over the last six years?

12 A. Yeah, with the exception of Cain. It's
13 showing a slight decrease or steady. I think that one
14 would be worth spending some more time investigating.
15 It's kind of unique of these tributaries.

16 Q. What is unique about Cain compared to the
17 other five streams?

18 A. I'm not sure, other than it has that
19 decreasing trend. I would like to spend more time
20 understanding it better.

21 Q. And if I go to the page that's total of all
22 sum -- all creeks total discharge from '15 to '21.

23 You can go from 50 to about 70?

24 A. As a discharge, yeah.

25 Q. Right. And then the Sportsman's Access,

1 how do you see the trends that you've reported at the
2 Sportsman's Access correlating to the trends of these
3 total discharges from the creeks?

4 A. Well, there's an increase there, probably
5 not as dramatic, but there's a lot of things that we
6 don't understand that occur between where we're
7 measuring at these headwater creeks and Sportsman's in
8 terms of injection, conveyance, redirection that would
9 really benefit from more scrutiny and clarity.

10 Q. But is it -- do you believe your data show
11 that as a result of the -- or there is a connection
12 between the increase in flows at these creeks and at
13 Sportsman's Access on Silver Creek?

14 A. That's what it appears to me, yes.

15 MR. BARKER: Thank you, Mr. Hill. I don't have
16 any further questions.

17 THE HEARING OFFICER: Thank you, Mr. Barker.

18 Are there questions from the groundwater
19 group, Ms. O'Leary?

20 MS. O'LEARY: Nothing for me, Director.

21 THE HEARING OFFICER: Thank you.

22 Joint group?

23 MR. BROMLEY: No.

24 THE HEARING OFFICER: Mr. O'Bannon, any
25 questions?

1 MR. O'BANNON: No.

2 THE HEARING OFFICER: Cross-examination,
3 Mr. Fletcher.

4 MR. FLETCHER: Thank you.

5

6 CROSS-EXAMINATION

7 BY MR. FLETCHER:

8 Q. I think it's Exhibit 23, the hydrology
9 report.

10 Is that the correct exhibit?

11 A. That's what I have listed here, yeah.

12 Q. Can you turn to page 15 on that, please.

13 A. Okay.

14 Q. This piece -- Exhibit 40, you're dealing
15 with five years worth of data; correct?

16 A. This one? Yeah, correct.

17 Q. Page 15 of Exhibit 23 you're dealing with
18 45 years of data?

19 A. Uh-huh.

20 Q. "Yes"? Or some --

21 A. From 1970 to 2016, yeah.

22 Q. 46 years.

23 A. 46.

24 Q. Do you believe looking at a longer term is
25 more reliable than a short term of five years?

1 A. Oftentimes it depends. I think that
2 relative to this Exhibit 40, we're trying to show that
3 there is current data that should be considered and
4 it's important. If I had started this longer, we'd
5 have more data. But this is what we have.

6 Q. On page 15 of Exhibit 23, did you -- did
7 you put together that page?

8 A. In terms of graphically or illustrating the
9 information, yes.

10 Q. Okay. Where did you acquire that
11 information?

12 A. Most, if not all, of that data is from some
13 of the information collected by Mr. Shaw. Some of it
14 may have been supplemented by me or transformed in
15 terms of the -- the Excel or tabular data, you might do
16 something where you're looking at instead of rate,
17 creating acre-feet in order to show volume.

18 Q. Looking at Exhibit 23, page 15, wouldn't
19 you agree that it shows declining water supplies over
20 the surface water supplies over 46 years on Big Wood?

21 A. Yeah, that's what that shows.

22 Q. It shows 26 percent; correct?

23 A. Less water available in that time period.

24 Q. Doesn't that mean less water in the river
25 over that time period?

1 A. That's correct.

2 Q. And it also shows the Canal 45 diversions
3 decreasing by 54 percent during that time?

4 A. That's correct.

5 Q. What would you attribute those declines to?

6 A. Well, as I testified earlier, the declines
7 in the Big Wood are probably from snowpack. I mean
8 that's the main driver of what we have up there.

9 The declines in the District 45 and
10 Baseline are probably less demand, because of change
11 from flood irrigation to pivot irrigation
12 predominantly.

13 Q. Okay. And Baseline diversions show a
14 decline of 47 percent; correct?

15 A. Uh-huh, yeah.

16 Q. Isn't it true that you've rendered opinions
17 in the past that declines are not just from lack of
18 precipitation, but also because of pumping?

19 A. Declines where?

20 Q. Declines to water supplies, to the Big
21 Wood.

22 A. Pumping in the upper area specifically?

23 Q. Groundwater pumping.

24 A. The only groundwater pumping that I've
25 spent any time looking at is in the Silver Creek

1 watershed.

2 Q. Okay. Has groundwater pumping reduced
3 supplies in Silver Creek?

4 MR. BARKER: Wait a minute. I'm going to
5 object.

6 Mr. Fletcher said he wasn't qualified to
7 talk about the impacts of the groundwater pumping. You
8 limited his testimony to his measurements, so --

9 MR. FLETCHER: Okay. I'll ask it a different
10 way.

11 Q. You -- I withdraw the question.

12 Isn't it true that you studied a well --
13 two wells that had been in existence since 1954 when
14 doing hydrology work in the Silver Creek area?

15 A. I've seen that data, yes.

16 Q. And what did that data show?

17 A. A decrease.

18 Q. A decrease in what?

19 A. In depth to groundwater.

20 Q. Okay. So you reviewed that data, and it
21 showed that the well levels were dropping; correct?

22 A. Correct.

23 Q. Okay. And based solely on that data,
24 didn't you draw conclusions from that as to what the
25 source of declines in Silver Creek were?

1 A. Based solely on that data? No. I mean we
2 made a comparison, but that's -- there are many
3 factors.

4 Q. Have you rendered any opinions on the use
5 of the model --

6 A. No.

7 Q. -- in the past?

8 What does a reduction in the groundwater
9 level -- I'll withdraw that question.

10 Have you monitored or measured Silver Creek
11 flows as part of your duties?

12 A. Which portion of Silver Creek are you
13 referring to? I -- all the headwater creeks that I've
14 already testified to, portions of the lower -- lower
15 tributaries before you get to the mainstem, but not on
16 what we'd call the main portion of Silver Creek below
17 all of the confluence.

18 Q. Okay. So you don't --

19 A. Sorry. We rely on the Sportsman's Access
20 gage for that.

21 Q. Okay. So you don't know the -- if there's
22 a trend in the flows in Silver Creek?

23 A. Again, where? I mean we can look at the
24 data from any of these places that I've talked about
25 and look at a trend.

1 Q. How about on Silver Creek itself, have you
2 monitored how much water is flowing on Silver Creek?

3 A. I'm not sure I understand your question.
4 Again, we have --

5 Q. Well, let me back -- let me rephrase it,
6 then.

7 Have you monitored flows in Silver Creek at
8 any point in Silver Creek?

9 A. Again, the headwaters and some of the
10 tributary stems, but not below Sportsman's Access.

11 Q. So you don't have any data on flow trends
12 in Silver Creek itself?

13 A. Beyond the USGS gage at Sportsman's, no.

14 Q. I'd like you to look at Exhibit 40. And
15 I'd like you to turn to the Sportsman's Access page.

16 In between November of 2016 and July of
17 2017 there is a big spike on that chart; correct?

18 A. Yes.

19 Q. Do you know what that's attributed to?

20 A. 2017 was a historic water year. So you saw
21 a spike there. At Hailey there's probably a similar
22 spike. I would also -- if I remember correctly, there
23 was rain-on-snow events, which would also influence
24 that.

25 Q. Okay. As you mentioned, it was a historic

1 snow year and runoff year that year, wasn't it?

2 A. Uh-huh.

3 Q. Correct?

4 A. Correct.

5 Q. When you're looking at a short period of
6 time and you put a spike like that into it, doesn't it
7 skew the result?

8 A. Sure. You can change a different -- you
9 can look at a different period of record.

10 MR. FLETCHER: Okay. I don't think I have any
11 other questions. Thank you.

12 THE HEARING OFFICER: Thank you, Mr. Fletcher.

13 Mr. Rigby, questions?

14

15 CROSS-EXAMINATION

16 BY MR. RIGBY:

17 Q. Mr. Hill, Jerry Rigby representing the
18 senior surface water users. I just have a few
19 questions.

20 And taking off on Mr. Fletcher's addressing
21 the trend line for the USGS Sportsman Access on SVGWD
22 40 exhibit, isn't it a fact, even in your deposition,
23 that your major concern with the data you were dealing
24 with was the limited time period?

25 A. Not relative to this gage. This gage has

1 extensive time period.

2 Q. From September '15 through '21?

3 A. Well, it goes back much further than that.
4 This is just the period of record that I'm reflecting
5 in relation to the headwater tributary creeks that we
6 monitor.

7 Q. I understand. What I'm asking, though,
8 same as Mr. Fletcher, is that as a result of only using
9 September 15th of '21, that would, then, in fact skew
10 this; correct?

11 A. Again, if you choose a different period of
12 record, you'll get a different result.

13 Q. And why, then, did you not use that as far
14 as all of these discharges? Why did you only go from
15 '15 to '21?

16 A. Because we began measuring/monitoring those
17 systems in 2015.

18 Q. Okay. So again, as far as -- as far as
19 your participation in this particular hearing and, of
20 course, with the limitation of your expertise, were you
21 able to hear or -- and I'll represent the statement by
22 Ms. Sukow was that curtailment within the Triangle
23 would result in a substantial increase in flows at
24 Sportsman Access.

25 Did you hear that?

1 A. I've heard that, yes.

2 Q. And do you have any of the data that you've
3 set here and produced or do you have any data that
4 would disagree with that?

5 MR. BARKER: Objection. Beyond the scope. The
6 witness was not allowed to testify about impacts. Only
7 measurements.

8 MR. RIGBY: That's all I'm asking. Any
9 measurements.

10 THE HEARING OFFICER: Yeah, this is
11 cross-examination, Mr. Barker. Overruled.

12 THE WITNESS: Can you restate the question?

13 Q. (BY MR. RIGBY): Ms. Sukow testified that
14 curtailment within the Triangle of the groundwater
15 wells would result in substantial increase in the flows
16 at Sportsman Access.

17 And because you measured Sportsman Access,
18 I'm asking you, do you have any measurements that would
19 refute that argument?

20 MR. BARKER: I'm going to object to the
21 mischaracterization of the witness' testimony. He
22 didn't say he measured Sportsman's Access. He said he
23 took it from USGS records.

24 MR. RIGBY: Okay.

25 Q. I'm asking you from USGS records, or any

1 other source of measurement that you've done or data
2 that you've obtained for purposes of your testimony
3 here, would you refute -- have anything to refute
4 Ms. Sukow's statement?

5 A. You're referring to what she produced as
6 part of the model; correct?

7 Q. Well, her memo and her testimony.

8 A. But that's based on the model results.

9 Q. Certainly.

10 A. I don't have any, you know, opinion on the
11 model, other than I know that utilizing the data that
12 we have available to us is probably an important part.
13 It's always an important part of any modeling exercise,
14 use current, relative data. I can't speak to anything
15 else beyond that.

16 Q. So other than the periods that you've
17 monitored, for example, the Sportsman Access on
18 Exhibit No. 40, you haven't reviewed the historical
19 or -- the historical discharges and done anything with
20 it, other than what's been produced by the staff memos?

21 A. Well, again, I don't monitor the USGS
22 Sportsman's gage. I use the data that's available from
23 the USGS.

24 Q. I'm sorry, taking the data from USGS.

25 A. I'm well aware of that data going back to

1 its inception.

2 Q. And you've already testified from
3 Mr. Fletcher's that you acknowledge that that shows a
4 different trend than this trend analysis evidences;
5 correct?

6 A. Again, depending on your choice of period
7 of record, you're going to get a different result.

8 Q. But again, from the period of time used in
9 the memos themselves, the staff memos, that period of
10 time you would -- you would agree with; correct?

11 A. I'd have to look at that information in
12 order to decide if I agree with it or not.

13 MR. RIGBY: I have no further questions.

14 THE HEARING OFFICER: Redirect, Mr. Barker?

15 MR. BARKER: Yes, just one question.

16

17 REDIRECT EXAMINATION

18 BY MR. BARKER:

19 Q. Zach, in your five-year period from 2015 to
20 20 -- or six year period from 2015 to 2021, in addition
21 to the high-flow year of 2017, were there drought
22 years?

23 A. 2015 was exceptionally low. 2020 I would
24 characterize as --

25 Q. Okay. So those drought years would also

1 skew the results --

2 A. Absolutely.

3 Q. -- in Mr. Fletcher's words; right?

4 A. Yes.

5 MR. BARKER: Thank you.

6 THE HEARING OFFICER: Okay. Any recross within
7 the scope?

8 MR. FLETCHER: Yes.

9 THE HEARING OFFICER: Mr. Fletcher.

10

11 RE CROSS EXAMINATION

12 BY MR. FLETCHER:

13 Q. I would like you to turn to your Sportsman
14 Access gage number on 40.

15 So the drought year you're referring to
16 is -- the one reflected on your exhibit as being
17 July 17, 15 -- 7/17/15 to 7/17/16; is that correct?

18 A. Approximately. It was a low water year,
19 2015.

20 Q. Okay. So -- but I'm just pointing out,
21 that's the year that Mr. Barker was asking you about;
22 correct?

23 A. Well, I would say that by the time you get
24 into the fall, conditions have changed. So it's
25 probably earlier than that. And my record starts in

1 July -- July 17th, which is halfway through the
2 irrigation season.

3 MR. FLETCHER: Okay. Thank you. No further
4 questions.

5 THE HEARING OFFICER: All right. Thank you,
6 Mr. Hill.

7 We're into the lunch hour. Time for lunch
8 break. Be back in an hour. 1:15.

9 (Lunch recess.)

10 THE HEARING OFFICER: Let's go on the record.
11 We're back recording after a lunch break. It's about
12 1:20.

13 And, Mr. Shaw [sic], we finished with
14 Mr. Hill. Next witness.

15 MS. O'LEARY: Yes, Director. The Galena Ground
16 Water District calls Erick Powell.

17 THE HEARING OFFICER: Oh, I'm sorry.
18 Ms. O'Leary.

19 Mr. Powell, if you'll come forward. Raise
20 your right hand.

21
22 GEORGE ERICK POWELL,
23 having been called as a witness by Galena Ground Water
24 District and first duly sworn, testified as follows:
25 ///

1 THE HEARING OFFICER: Thank you.

2 Please be seated, Ms. O'Leary.

3 MS. O'LEARY: Thank you, Director.

4
5 DIRECT EXAMINATION

6 BY MS. O'LEARY:

7 Q. Good afternoon.

8 A. Good afternoon.

9 Q. Can you please state your name and current
10 address for the record.

11 A. My name is George Erick Powell. And I live
12 at 426 Kay Drive in Twin Falls, Idaho.

13 Q. Erick, what is your occupation?

14 A. I am an engineer.

15 Q. Where are you an engineer at?

16 A. I work at Brockway Engineering in Twin
17 Falls.

18 Q. Can you just describe your educational
19 background a little bit for us, please.

20 A. Absolutely. I have a bachelor's in civil
21 and environmental engineering, I have a master's in
22 civil and environmental engineering, and I have a Ph.D.
23 in agricultural engineering.

24 Q. Okay. And when did you acquire each of
25 those degrees?

1 A. I graduated with my bachelor's in 2001, my
2 master's in 2002, and my Ph.D. in 2006.

3 Q. Okay. Where did you get your bachelor's
4 degree from?

5 A. At Brigham Young University.

6 Q. How about your master's?

7 A. At Brigham Young University.

8 Q. And then what about your Ph.D.?

9 A. At Ohio State -- or The Ohio State
10 University, if I'm...

11 Q. Do you have any publications?

12 A. When I was a graduate student at Ohio
13 State, I did publish several articles and books and
14 refereed journals and publications, yes.

15 Q. What topics were those publications
16 addressing?

17 A. I wrote the solutions manual to a hydrology
18 textbook. And I -- most of my refereed publications
19 were involving stream channel design, two-stage ditch
20 sediment trapping of small, agricultural streams in the
21 Midwest.

22 Q. Can you describe your work experience since
23 obtaining your Ph.D.

24 A. After I finished school, I started at
25 Brockway Engineering and have been an engineer with

1 Brockway Engineering since. We specialize in water
2 resource engineering, hydrology and hydraulics, as well
3 as water rights. And I think everyone in this room is
4 fairly familiar with our firm, too, so...

5 Q. So that would be about 15 years, then, that
6 you've been with Brockway; is that right?

7 A. Yes, that's correct.

8 Q. And what are your present duties? I know
9 you touched on the areas of focus. But how would you
10 describe your present duties at Brockway?

11 A. I would categorize them very similarly.
12 I'm a senior engineer with the firm. I do a lot of
13 modeling, both groundwater and surface water modeling.
14 I do a lot of water work -- water rights evaluations,
15 designing of hydraulic systems, and oversee those
16 systems. We do a lot of stream channel restoration
17 work as well, and the appropriate permitting with
18 those, so...

19 Q. Okay. You mentioned groundwater modeling.
20 Can you elaborate a little bit on the type
21 of modeling that you use.

22 A. Sure. So I actually -- in between my
23 bachelor's and master's, I spent a summer in Vicksburg,
24 Mississippi, at the U.S. Army Corps of Engineers
25 Waterways Experiments Station doing groundwater

1 modeling using FEMWATER for the Corps.

2 And then that's more research oriented,
3 FEMWATER was. And so application at Brockway I have
4 used MODFLOW only as a groundwater model and have
5 developed models, I have reviewed models. I was on the
6 Eastern Snake Plain Hydrologic Modeling Committee --
7 ESPHMC, is that what Sean refers to it as? -- as well
8 as the MTAC with the Wood River Valley Model as well.

9 Q. Do you have any experience in irrigation
10 efficiency?

11 A. So I grew up in north central Kansas. We
12 had a family farm that both has dry farming and
13 irrigation. And so I grew up around irrigation. I
14 have looked at irrigation throughout my college
15 experience. And then at Brockway I've done a lot of
16 irrigation, both design, evaluation, efficiency,
17 calculations for supply for both municipalities and
18 farmers.

19 Q. At some point throughout your work tenure
20 at Brockway, or even before, did you come -- become
21 involved with the groundwater management area of
22 Basin 37?

23 A. Yes.

24 Q. Do you recall when that was?

25 A. So if I can have you rephrase the question

1 about the groundwater management area just --

2 Q. Sure. You're aware that there were Model
3 Technical Advisory -- that there is a Model Technical
4 Advisory Committee that met over the past I think it
5 was about eight years, are you not?

6 A. Yes.

7 Q. Did you have any involvement with that
8 committee?

9 A. Yeah. So when the -- when the -- the
10 Department of Water Resources and the USGS first
11 started to discuss creation of a groundwater model,
12 they formed a Modeling Technical Advisory Committee.
13 They called it the MTAC. In 2013, I believe. And I
14 attended, I think, most every one of those meetings
15 that they held since 2013.

16 Q. And you are here today, because you've been
17 engaged by Galena Ground Water District; is that right?

18 A. That's correct.

19 Q. Okay. Do you recall when your involvement
20 with Galena Ground Water District began?

21 A. I believe the District was formed in 2016.
22 And our firm was retained by the -- by Galena Ground
23 Water District when it was formed or right after it was
24 formed.

25 Q. Can you describe the purpose of your firm's

1 engagement.

2 A. We were requested to provide general
3 engineering services, provide mapping services, and any
4 other tasks that the Board directed us, including
5 representation at those MTAC meetings.

6 Q. You mentioned your familiarity and use of
7 modeling.

8 What version of the model do you work with
9 today?

10 A. So the current version is version 1.1 that
11 was released by the Department of Water Resources in
12 2019.

13 Q. And as far as you're aware, is that the
14 same version model that the Department is using to
15 date?

16 A. That is my understanding, yes.

17 MS. O'LEARY: Director, I'd like to tender this
18 witness as an expert in groundwater modeling.

19 THE HEARING OFFICER: Any objections?

20 MR. RIGBY: No objections.

21 THE HEARING OFFICER: Mr. Fletcher?

22 MR. FLETCHER: No objection.

23 THE HEARING OFFICER: So recognized.

24 Q. (BY MS. O'LEARY): I'd like to talk to you
25 about the model itself a little bit and your knowledge

1 of it, Erick.

2 In your opinion, does the model have a
3 particular stress period?

4 A. So the model was developed with a one-month
5 stress period over originally 15 years, they extended
6 that another five, to 20 years.

7 Q. Okay. Is the model linear?

8 A. It is not linear.

9 Q. Are you aware of any models that are
10 linear?

11 A. The ESPA model is considered a linear
12 model.

13 Q. And what of significance, if any, do you
14 place on a linear versus a nonlinear model?

15 A. I think one of the big strengths of a
16 linear model is that you're able to simplify some of
17 the runs that you're able to do. You -- the ESPA model
18 has -- has developed response functions. And those --
19 those are -- you can use those easily to calculate the
20 effects at different reaches. Those effects can also
21 be additive. So you can add responses on top of
22 themselves, so to get an anticipated result.

23 A nonlinear model, it's not appropriate to
24 do some of those simplifications.

25 Q. So this is a complex system that we're

1 talking about, then; would that be fair to say?

2 A. It is a very complex system.

3 Q. Okay. And for model 1.1, do you know how
4 many cells there are?

5 A. There were -- there are over 55,000. And I
6 don't recall exactly how many, but there's over 55,000
7 cells.

8 Q. Okay. And what does each individual cell
9 represent?

10 A. So each individual cell in the Wood River
11 Valley Model is 100 meters by 100 meters. That's the
12 result of the USGS involvement and their desire to try
13 to shift us over to SI units.

14 And each cell, the centroid of that cell is
15 a calculated node. And so as the water model is run
16 and evaluated, each -- there has to be a water surface
17 calculation made at every single cell within the model
18 domain.

19 Q. Okay. Does -- in your opinion, does the
20 quality of data that is input into the model connect to
21 the quality of the predictions that the model makes?

22 A. Absolutely. So any -- the common phrase
23 used is "garbage in is garbage out." And so the
24 benefit or the quality of any model is the data that
25 goes in and supports that model.

1 Q. Okay. And how do you acquire the data that
2 you use to put into the model?

3 A. So are you speaking specifically of the
4 Wood River Valley Model or --

5 Q. Yes.

6 A. -- any model in general?

7 Q. I should have been more clear. Yes.

8 A. The Wood River Valley Model, the Department
9 staff, in collaboration with USGS, was really tasked
10 with a difficult assignment to try to develop a
11 groundwater model, because of the lack of data. That
12 was something we discussed at length in every MTAC
13 meeting was the availability of data, both surface and
14 groundwater.

15 And so surface flows, the USGS was the
16 primary resource for that. I don't believe that
17 Ms. Sukow testified about that in this proceeding, but
18 there was no gage at the Big Wood River near Ketchum.
19 And so -- or on Trail Creek or on East Fork. And so a
20 lot of those gage values used in version 1.0 and 1.1,
21 up until 2011, were fabricated datasets based on the
22 USGS gage at Hailey. And so they were -- they were
23 challenged -- I mean just with a lack of data to create
24 a model within that time period.

25 Similarly, groundwater levels, there are

1 very few groundwater locations with a long period of
2 record. And so a lot of wells were measured at the
3 time of construction with well logs or spot
4 measurements from the USGS at different -- different
5 time periods. And so they tried to pull as much data
6 from every source that they possibly could.

7 Q. Okay. I believe you testified earlier
8 about surface flows.

9 So in addition to groundwater modeling, do
10 you also calculate trends -- or have you calculated
11 trends in surface flows, specifically for this
12 proceeding?

13 A. I have, yes.

14 Q. Okay. And what have you calculated?

15 A. So I looked at stream gage data and
16 calculated surface flow trends on the Big Wood River at
17 Hailey at Stanton Crossing and on Silver Creek at
18 Sportsman's Access.

19 Q. Okay. And is there any particular type of
20 analysis that you use, some proven method?

21 A. So the best statistical analysis for any
22 streamflow data is an analysis called a Mann-Kendall
23 analysis. It accounts for time-series data. And so
24 you're not relying on potential influence from
25 time-series data, as the process has recommended by the

1 USGS.

2 Q. And did you use that analysis in your
3 stream -- in your trend flow calculations?

4 A. I did, yes.

5 Q. Okay. Are you familiar with an individual
6 named Allan Wylie?

7 A. I know Mr. Wylie, yes.

8 Q. And are you familiar with analyses that he
9 has performed in the past?

10 A. He did publish a paper looking at
11 groundwater trends in the Valley, I believe in 2019,
12 that looked at groundwater trends from 1991 through
13 current at the time of publication. And he also
14 reported and used Mann-Kendall analysis on that trend
15 data.

16 Q. Erick, if I could have you direct your
17 attention to Exhibit 24 in the binder in front of you,
18 please.

19 Have you seen this document before, Erick?

20 A. I have seen this, yes.

21 Q. Can you describe to me what it is.

22 A. This was a summary presentation that was
23 given at the Advisory Committee meeting, I believe in
24 February, by Zach Hill, Dave Shaw, and myself.

25 Q. And when you say "Advisory Committee

1 meeting," would that be the Advisory Committees for the
2 Big Wood Groundwater Management Area?

3 A. Yes.

4 Q. Okay. And did you attend most of those, if
5 not all, of those meetings?

6 A. I did not attend most of them. I attended
7 some, I would say, at the direction of the Board when
8 they asked me to attend.

9 Q. Okay. If I could just have you turn to
10 page 25, please.

11 A. Okay.

12 Q. And I guess I should have asked you, so you
13 didn't prepare this whole presentation; correct?

14 A. That is correct.

15 Q. Okay. This particular page, page 25, is
16 this a portion of the presentation that is attributable
17 to your work?

18 A. Yes, page -- on page 25 is entirely my
19 work.

20 Q. Okay. And can you describe to us what this
21 is. Is this one of your trend flow analyses that you
22 calculated?

23 A. Yes, it is. So this is the Mann-Kendall
24 results of flows at Silver Creek at Sportsman's Access.

25 Q. Okay. And it looks like this is a pretty

1 lengthy time period, about 45 years; is that right?

2 A. Yes.

3 Q. Okay. And can you just explain the tau and
4 the p value categories and what those signify.

5 A. I'll do my best. So in an effort not to
6 feel like you're in Stats 101 again --

7 MR. THOMPSON: Or ever.

8 THE WITNESS: -- or ever, just to provide some
9 context -- and this is a little bit of a pet peeve of
10 mine, is the word "significantly" that's used often in
11 proceedings like this. And I've heard it many, many
12 times.

13 In the scientific field "significantly" has
14 very specific connotations associated with it. And so
15 it -- in my opinion, it's very inappropriate to use the
16 word "significant" unless you've done statistical
17 analysis on data. So it's just a little bit of a pet
18 peeve. Soapbox. I apologize for that.

19 So what I did to develop this table is I
20 took flow data for the period of record from 1975
21 through 2020. This was done in January or February of
22 this year, so it did not extend -- I did not extend it
23 into 2021. And I took -- and averaged the monthly
24 data, so I had one value per month over the time
25 period.

1 And then I ran the Mann-Kendall analysis
2 that looks at trends in the data. And so rather than
3 just plotting a line, some of the concerns that were
4 raised earlier with -- at Silver Creek from 2017, that
5 depending on the period of record, that can influence
6 the trend data.

7 And so for the period of record, 1975
8 through 2020, the tau value gives the slope of that
9 line. It tells you what direction. So the sign,
10 positive or negative, tells the direction of the trend
11 and then the value per year.

12 And then the p value represents the
13 statistical significance evaluation. And so typically
14 in statistics a p value of .05 or less is considered
15 statistically significant. And so if we look at the
16 stream gage at Sportsman's Access, there is a negative
17 trend for every month of the period of record, meaning
18 that every month that the streamflows have gone down
19 for the entire period of record.

20 The p values then are -- every month are
21 statistically significant, with the exception of May
22 and June. And so there is a declining trend over the
23 entire period of record at Sportsman's Access.

24 Q. Okay. For Silver Creek?

25 A. For Silver Creek, yes.

1 Q. Okay. And in your opinion, do these
2 calculations indicate any connection to groundwater
3 pumping?

4 A. So unfortunately, we cannot draw specific
5 conclusions attributing all of the decline toward one
6 specific source, whether -- so what I can say is that
7 this is a -- likely a combination of atmospheric
8 climate change, diversions into canal systems,
9 groundwater pumping, changes in agricultural practices,
10 conversion from flood to sprinkler, a variety of
11 different sources.

12 Q. Could I please have you turn to page 36 of
13 this exhibit. I'm on page 36. The title is "Water Use
14 Efficiency."

15 A. I am there, yes.

16 Q. Okay. Is this particular slide, is this
17 attributable to work that you prepared or set forth in
18 this presentation?

19 A. It is, yes.

20 Q. And this particular slide says,
21 "Efficiency: BWLWWUA assumes 90 percent for all
22 diversions."

23 Is that referencing Mr. Miller's
24 calculation of 90 percent irrigation efficiency?

25 A. It -- it was, yes.

1 Q. Okay. Do you know where Mr. Miller
2 acquired his data to calculate that certain percentage?

3 A. So Mr. Miller and Mr. Shaw and I have been
4 meeting regularly for the last two years discussing
5 different issues, trying to determine injury or
6 discussion of this situation that we're in currently in
7 this proceeding.

8 Mr. Miller has always used an efficiency
9 value for irrigation diversion that's, in my opinion,
10 high. And I've raised that concern repeatedly over
11 time, and have not received any sort of feedback or any
12 sort of evidence that a 90 percent efficiency is an
13 appropriate value. And so I was -- I was concerned
14 about those values as a blanket percentage applied
15 across the entire basin.

16 Q. Okay. And when you say you raised those
17 concerns, who did you raise those concerns to?

18 A. To Mr. Miller.

19 Q. Okay. And you never received any data or
20 explanation?

21 A. Just that he said that he had talked to an
22 agricultural engineer who said that was appropriate.

23 Q. You don't know who that agricultural
24 engineer is, though, do you?

25 A. I do not, no.

1 Q. Okay. Did you calculate your own
2 irrigation efficiencies?

3 A. So for this presentation I selected just a
4 few areas within the entire model basin to illustrate
5 differences of irrigation efficiency. And so I did
6 look at, in this specific presentation, six different
7 locations.

8 Q. Okay. And would that -- would those
9 calculations be on page 37?

10 A. Yes.

11 Q. Okay. And out of these six calculations,
12 can you identify what ones are located within the
13 Bellevue Triangle?

14 A. So the -- on page 37, I'm going to say the
15 three that are on the far right, Water Right
16 No. 37-22328, Water Right 37-8011A, and the very last
17 one that says just says "Agricultural Irrigation
18 Efficiency."

19 Q. And where did you acquire your data to
20 perform these calculations?

21 A. So I looked at -- for the two individual
22 water rights, I looked at water diversion data from --
23 provided by the watermaster for groundwater diversions
24 under that specific water right, and then overlaid the
25 water right place of use and used the Department of

1 Water Resources ET mapping ability, and generated
2 METRIC crop irrigation requirements for those specific
3 locations.

4 For the last one this was diversion data on
5 individual pivots and wheel lines that Mr. Hill
6 provided me. So that was diversion data not from the
7 watermaster, but from Mr. Hill for those specific
8 pivots.

9 Q. And this last column, the "Agricultural
10 Irrigation Efficiency" column, would that be the Silver
11 Springs Ranch?

12 A. That's correct, yes.

13 Q. Okay. And just taking these one at a time,
14 the column for the "Individual User Efficiency Water
15 Right No. 37-22328," it says, "Irrigation Efficiency:
16 35.4 percent." And then the second water right
17 individual, water right, 37-8011A, calculates
18 irrigation efficiency at 23.8 percent. And then that
19 Silver Springs irrigation efficiency is calculated at
20 84 percent.

21 These are all substantially less than that
22 90 percent that we looked at on the prior page; right?

23 A. That is correct, yes.

24 Q. Okay. If you turn to the next page, it
25 looks like perhaps there's a comparison of Mr. Miller's

1 calculations versus your calculations that we just
2 looked at. So page 38.

3 A. I'm there.

4 Q. The right two columns, one is efficiency
5 90 percent and the other is efficiency 61.3 percent.

6 Is that far right column based on your
7 calculations?

8 A. That is correct. Those are -- are just
9 a -- yeah, to provide comparison of those specific
10 irrigation evaluations that were performed.

11 Q. Okay. So roughly he is calculating
12 30 percent more irrigation efficiency than you are?

13 A. For these six locations, that's correct,
14 yes.

15 Q. Okay. And I think you testified earlier
16 that his locations were not specific to the Bellevue
17 Triangle; is that correct?

18 A. That is correct. That was basinwide, all
19 pumping within the model domain.

20 Q. Okay. And you're not entirely sure where
21 he acquired his data; is that right?

22 A. I have not seen any supporting evidence of
23 that.

24 Q. If we turn to slide 48 or page 48 of this
25 exhibit, please.

1 Is this particular page of the presentation
2 work that you contributed?

3 A. This particular page was a reproduction of
4 a page from Mr. Wylie's 2019 groundwater trend report
5 that he published.

6 Q. Okay. And would this be referencing that
7 Mann-Kendall analysis that you were testifying about
8 earlier that Mr. Wylie performed?

9 A. That is correct.

10 Q. Okay. And can you just walk us through
11 what his conclusions were. These charts are a little
12 hard to read if you're not well-versed in statistics.

13 A. Absolutely. So in my previous chart that
14 we looked at -- and I don't recall what page that was,
15 20-something, I only reported the tau and the p value.
16 There's other values that are generated through a
17 Mann-Kendall analysis that Mr. Wylie produced here.

18 But if we look at the comparison of the tau
19 value, which is right underneath -- it's the row right
20 underneath "locations," that's the trend in slope of
21 the water elevations within each of these October,
22 November, or April months.

23 And then the p value is the second from the
24 bottom, is the -- the showing statistical significance.
25 So there's a positive trend in October, November, and

1 April. But the p value is not statistically
2 significant except for the April -- the month of April.

3 MR. FLETCHER: Director, the version of this
4 report that was furnished in disclosure seems to be
5 different than the one that this witness is testifying
6 to.

7 MS. O'LEARY: I think we provided a corrected
8 copy of this exhibit prior to the hearing.

9 Is that right?

10 MR. THOMPSON: And at the deposition, I believe,
11 the exhibit was replaced --

12 MS. O'LEARY: Yeah.

13 MR. THOMPSON: -- given to Mr. Rigby.

14 MR. RIGBY: So it's part of the deposition?

15 MS. O'LEARY: It is. I think it's Exhibit 2,
16 maybe.

17 MR. FLETCHER: But you didn't change it on
18 your --

19 MS. O'LEARY: We circulated it prior to this
20 hearing.

21 MR. FLETCHER: This page that the witness is
22 testifying to is not in the one that was disclosed as
23 part of your exhibits?

24 MS. O'LEARY: We corrected that prior to this
25 hearing, though.

1 MR. THOMPSON: I believe it was a day later,
2 that supplemental disclosure. It was in that.

3 MR. RIGBY: Oh, so it's located in the
4 supplemental disclosure?

5 MR. THOMPSON: I think so. Let me check.

6 THE HEARING OFFICER: Jeff, are we keeping up
7 with this colloquy and identifying the people who are
8 speaking?

9 THE COURT REPORTER: Yep.

10 THE HEARING OFFICER: Okay. With your back
11 turned to them?

12 THE COURT REPORTER: Yeah, I got them.

13 MS. MCHUGH: Should we just go off the record
14 while we figure it out?

15 THE HEARING OFFICER: Yeah, I think that's a
16 good idea.

17 Let's go off the record.

18 (Recess.)

19 THE HEARING OFFICER: Back on the record.

20 And we are -- why don't you repeat,
21 Ms. O'Leary, where we're at and then -- you don't need
22 to repeat all of what we discussed, but just for
23 purposes of continuity, the exhibit and the page.

24 MS. O'LEARY: Yes, Director.

25 So we are looking at South Valley Ground

1 Water District and Galena Ground Water District
2 Exhibit 24. It is the presentation to the Advisory
3 Committee. It was presented in February of this year.
4 And it's -- there is a link to it on the Department's
5 website.

6 And we are now looking at page 48, which,
7 as Erick has testified, is an excerpt that he pulled
8 from Mr. Allan Wylie's September 2019 report showing
9 the Mann-Kendall analysis that Mr. Wylie calculated.

10 THE HEARING OFFICER: Great. Thank you.

11 Q. (BY MS. O'LEARY): So, Erick, I'm not
12 entirely sure where we left off, but you were
13 explaining the analysis to me in layman's terms and
14 what you can discern from it.

15 A. So just for comparison of the previous
16 Mann-Kendall statistics that were provided, the tau and
17 the p value are also shown. The tau is the second row
18 underneath "location" -- well, it's of the first row
19 underneath "locations," excuse me, and the p value is
20 the second from the bottom.

21 So again, the tau just indicates direction
22 of trends. So in this case it's positive from the
23 groundwater levels from October, November, and April
24 are all positive. The p values are not -- excuse me,
25 are not statistically significant in October or

1 November, but is statistically significant in April.

2 Q. And what does that tell you?

3 A. It tells me that there's always a mixed
4 bag. We'd love for everything to be statistically
5 significant that disproves the Noel hypothesis. But in
6 this case when things are not statistically
7 significant, that means they're -- it could be, I'm
8 going to call it noise, background -- you know, that
9 there's not really -- there's not really a trend if
10 something's not statistically significant.

11 But it tells me that we don't have negative
12 levels of -- we don't have a declining aquifer from the
13 data presented from 1991 through 2018, I believe, is
14 when Allan did this analysis, and that the values in
15 April are showing a statistically significant trend.

16 Q. And if I'm interpreting this correctly,
17 this analysis was performed looking at, depending on
18 the month, 43 to 46 locations; is that right?

19 A. That's correct.

20 Q. Okay. And I believe Mr. Wylie actually in
21 the paragraph above, as you said that your takeaway is
22 the aquifer is not declining, he's stating that since
23 these values are all positive indicates rising
24 groundwater levels actually; right?

25 A. That's -- that's what the trend data

1 suggests, yes.

2 Q. Okay. Would you agree that it's fair to
3 say that this analysis shows that the aquifer is
4 stable?

5 A. That was the conclusion that Mr. Wylie
6 reached in his -- in his language. He says that there
7 is no trend and -- he says -- to quote, he says,
8 "Perhaps the October and November data contain enough
9 noise that the trend is masked or there is no trend and
10 the water table is stable."

11 MS. O'LEARY: Director, I would request that
12 this Exhibit 4 be admitted into -- or excuse me,
13 Exhibit 24 be admitted. And that's South Valley Ground
14 Water District and Galena Ground Water District
15 Exhibit 24.

16 THE HEARING OFFICER: Any objection to the
17 admission of this document?

18 MR. FLETCHER: May I ask a question in aid of
19 objection?

20 THE HEARING OFFICER: Yes.

21

22 VOIR DIRE EXAMINATION

23 BY MR. FLETCHER:

24 Q. Are you the sole author of this report?

25 A. Mr. Fletcher, are you talking about the

1 entire presentation, or this page specifically, or --

2 Q. No. I think she asked for admission of the
3 entire presentation.

4 A. So this was a collaboration between Dave
5 Shaw, Zach Hill, and myself.

6 MR. FLETCHER: I would object on the grounds
7 he's not the sole author, and there's been no
8 foundation laid for the rest of them.

9 THE HEARING OFFICER: Mr. Fletcher, I think I
10 already stated at the beginning that the presentation
11 documents were -- would be a part of the record the
12 Director would review. So I'll overrule the objection
13 and allow this to come into evidence. Thank you.

14 So the document marked as South Valley and
15 Galena Exhibit 24 is received into evidence.

16 (SVGWD GGWD Exhibit 24 received.)

17

18 CONTINUED DIRECT EXAMINATION

19 BY MS. O'LEARY:

20 Q. Erick, are you aware that four Department
21 staff members submitted memorandums to the Director
22 regarding their analysis relating to this
23 administrative proceeding?

24 A. Yes, I am aware of that.

25 Q. Have you reviewed each of those four

1 memorandums?

2 A. I have.

3 Q. Okay. And are you aware that each of those
4 four individuals -- and those being Jennifer Sukow,
5 Sean Vincent, Phil Blankenau, and Tim Luke -- testified
6 at this hearing earlier this week?

7 A. Yes, I am aware of that.

8 Q. Did you listen in or were you present for
9 any of that testimony?

10 A. I heard most of the testimony. I missed
11 most of Mr. Luke's, because I was traveling here on
12 Tuesday morning, I believe.

13 Q. But you did hear Ms. Sukow's testimony?

14 A. I did, yes.

15 Q. Okay. And how about Sean Vincent?

16 A. Yes, I heard Sean Vincent's.

17 Q. And is the same true for Phil Blankenau?

18 A. Yes.

19 Q. Do you believe that upon your review of --
20 having reviewed the memorandums that the data that
21 those four individuals used to create their memorandums
22 is based on the same type of flow data that you have
23 used in your modeling experience?

24 A. Yes, I do believe that.

25 Q. If I could have you direct your attention

1 to -- it's actually the Department's Exhibit 2. I
2 think it's in one of those other binders.

3 MS. CARTER: I moved it to the green binder.

4 THE WITNESS: The green one? Thank you.

5 Q. (BY MS. O'LEARY): Erick, I'm
6 referencing --

7 A. I'm sorry, Exhibit 2 of IDWR?

8 Q. Yes. Is that from Jennifer Sukow to the
9 Director dated May 17, 2021, her memorandum --

10 A. Yes.

11 Q. -- a corrected June 8th, 2021 version?

12 A. That is correct, yes.

13 Q. And you -- so you testified you have
14 reviewed this document; is that right?

15 A. Yes.

16 Q. And so you're aware that the curtailment
17 analysis that Ms. Sukow performed was based on using
18 2022 values in this memorandum; is that right?

19 A. 2002.

20 Q. 2002. Thank you.

21 A. Yes. I am aware of that.

22 Q. Okay. Do you think that using 2002 as a
23 base year is reasonable to compare to this particular
24 year?

25 A. I think at the time she wrote this memo,

1 that was a reasonable conclusion, yes.

2 Q. And can I just have you turn to page 21 of
3 this document, please. It's Table 1. This is
4 identified as Ms. Sukow's "Predicted responses to
5 curtailment starting July 1 within the Wood River
6 Valley 1.1 model boundary."

7 A. Yes, I'm there.

8 Q. Okay. Have you tried to replicate the
9 impact value that she calculated in this particular
10 table?

11 A. Yes. So using the supplemental information
12 that Ms. Sukow provided, I have replicated her model
13 curtailment run and have produced the same result, yes.

14 Q. And what supplemental data are you
15 referring to?

16 A. So she did provide complete MODFLOW files
17 to support this document.

18 Q. Okay. So that's what you looked at to
19 assist you in your replication?

20 A. Yes.

21 Q. And do you know what stress periods
22 Ms. Sukow used for this analysis?

23 A. So she looked at several different
24 curtailment runs starting with different start dates
25 going through the end of the irrigation season. And

1 according to the data that was in the supplemental
2 information, it actually extends all the way through
3 October, not -- it doesn't end in September.

4 And so for this specific curtailment run in
5 Table 1, she evaluated within the entire model domain
6 curtailment of all groundwater pumping starting
7 July 1st through the end of the irrigation season. So
8 four months.

9 Q. Okay. Did she report four or three months?

10 A. Well, she reported three, but she -- the
11 actual model run was four.

12 Q. Okay. And in your opinion, what time
13 period was the model intended to be run for?

14 A. So the model was developed to be run from
15 the start date through the end date. And -- and that's
16 how the model is run. And so they -- they -- in this
17 specific case, they curtail or they modified the .wel
18 file, the input data for the model to exclude
19 groundwater diversions, reduce ET, and decrease
20 incidental recharge or excess irrigation from the whole
21 model for the months of July, August, and -- July,
22 August, September, and October for 2002. But they run
23 the whole model, and then compare the two together.

24 Q. Okay.

25 A. So...

1 Q. What significance or impact, if any, would
2 you anticipate this shorter three-month stress period
3 that Ms. Sukow relied upon?

4 A. This gets into discussions of uncertainty.
5 And relying on a specific three-month response raises
6 questions of increased uncertainty over the model
7 results, based on Allan Wylie's uncertainty analysis
8 that was done.

9 Q. Okay. So you are aware of Mr. Wylie's
10 uncertainty analysis of model version 1.1?

11 A. I am aware of that, yes.

12 Q. Okay. Do you recall what he predicted the
13 uncertainty in the Bellevue Triangle to be?

14 A. If I remember correctly, he had two
15 locations that he looked at for uncertainty, so two
16 model cells that he evaluated and determined that it
17 was at 22 percent uncertainty at those two locations
18 over a ten-month period.

19 Q. Okay. So he's -- let me make sure I'm
20 understanding this right. He's predicting a 22 percent
21 uncertainty over a ten-month span, and you are opining
22 that if you reduced that time period it creates even
23 more uncertainty; is that right?

24 A. It -- it changes the uncertainty. And
25 most -- the logical conclusion is it probably increases

1 its uncertainty, as opposed to decreasing it. The
2 predictive uncertainty indicates the response of stress
3 at a certain location to river reaches over that period
4 of time.

5 And by decreasing the month evaluation, the
6 timestamp that we're looking at, in my opinion, would
7 most likely increase the uncertainty. Now, I have not
8 done that or run that to support that conclusion, but
9 that's my -- that's my opinion of it.

10 Q. Okay. So it would be fair to say that
11 there is -- it's likely that Ms. Sukow's three-month
12 period has a greater uncertainty than 22 percent; would
13 you agree?

14 A. I would agree with -- and she makes that
15 same observation.

16 Q. In addition to the uncertainties that we
17 just talked about, is there uncertainty with the model
18 because of lack of data?

19 A. Absolutely. I -- there's lots of different
20 uncertainty besides just predictive uncertainty.
21 Uncertainty helps any modeler identify areas where they
22 can focus to collect more data to help reduce some of
23 that uncertainty. And so uncertainty isn't always
24 necessarily a bad thing. It helps identify areas that
25 can improve the model in the future.

1 And so there are -- there's framework
2 uncertainty, there's model parameter uncertainty,
3 there's calibration uncertainty, all those
4 uncertainties, the date of availability. If we have
5 questions about gage information, that's also -- you
6 know, just the raw data uncertainty as well.

7 Q. Okay. Are you aware -- so have you
8 reviewed the model final report?

9 A. I have, yes.

10 Q. And let's just turn to it. It's our
11 exhibit, South Valley Ground Water District and Galena
12 Ground Water District Exhibit 14.

13 A. Okay.

14 Q. So this is titled "Groundwater-Flow Model
15 for the Wood River Valley Aquifer System, Version 1.1."

16 Are you on that same document?

17 A. I'm on that same document.

18 Q. So this was actually authored by, among
19 others, Allan Wylie and Jennifer Sukow; right?

20 A. That is correct.

21 Q. Okay. And if you could just turn to
22 pages 26 and 27, please. This appears -- the latter
23 portion under "Conclusions," last about one-third of
24 the page, talks about significant data gaps. And it
25 lists about nine or ten gaps that at the time this

1 report was created existed.

2 Do you believe that these data gaps still
3 exist within the model?

4 A. Absolutely. The model was updated to 1.1,
5 and these data gaps were identified. There's been no
6 update to the model. So these data gaps still exist in
7 the model.

8 Q. Okay. So the suggestions for future work,
9 such as installing transducers, monitoring certain
10 streams and recharge, all these items listed, you think
11 that they still exist?

12 A. Yes.

13 Q. In addition to the data gaps that we were
14 just discussing, do you believe that there are other
15 imperfections in the model or areas that raise
16 questions?

17 A. No model is perfect. And every model has
18 problems. And having a model with 55,000-plus model
19 cells doesn't increase the accuracy of the model. I --
20 earlier this week -- this is -- someone asked me in our
21 office what some estimates of hydraulic conductivity
22 were for the aquifer in a specific location within the
23 Bellevue Triangle for a different project.

24 And I opened that up and looked at those
25 values, and they were outrageously high, in my opinion.

1 And so I -- I started doing a little bit more
2 investigating, and there are some values in the model
3 that raise some serious questions about some of the
4 sideboards that were placed on hydraulic conductivity
5 calculations, to the order of layer one, I think, had a
6 maximum hydraulic conductivity value of 500 -- over
7 500,000 feet per day. Layer two had a value of over
8 950,000 feet per day, which I have never seen before.

9 And so that raises some questions about
10 just the way the model was -- just some sideboards that
11 were placed on those parameters during calibration.

12 Q. Okay. So being logically applied, some of
13 the calculations that you are -- or some of the output
14 that you're receiving just isn't illogical; is that the
15 takeaway?

16 A. Yeah. Physically I just have never seen
17 that before.

18 Q. Okay. Can you please turn to Exhibit A in
19 that same binder that you're looking at.

20 A. Is that the end? Yes.

21 Q. Yes. It was a supplemental exhibit. It's
22 Galena Ground Water District's supplemental exhibit.
23 And it was served on everyone on June 2nd.

24 A. Okay.

25 THE HEARING OFFICER: I don't know where you're

1 looking, Ms. O'Leary.

2 THE WITNESS: It is A.

3 THE HEARING OFFICER: Same binder?

4 THE WITNESS: Same binder, at the very end,
5 Exhibit A.

6 THE HEARING OFFICER: Oh, okay. Handwritten?
7 Okay. I found it. Thank you.

8 Q. (BY MS. O'LEARY): Erick, are you looking
9 at an Excel spreadsheet with a list of Galena Ground
10 Water District members' water rights within the
11 proposed curtailment area?

12 A. I am.

13 Q. Have you seen this document before?

14 A. Yes, I produced this document.

15 Q. Okay. And can you explain to me why you
16 produced this document.

17 A. After the staff memorandums came out, the
18 Galena Ground Water District Board requested a list of
19 individuals within their district that were within the
20 proposed curtailment area. And so using the
21 Department's water right information and cross-checking
22 that with the Galena Ground Water District members, I
23 generated this list of -- of members within the
24 curtailment area.

25 Q. Okay. And I count 21 water rights.

1 Is that what you recall being the number of
2 water rights owned by Galena Ground Water members
3 within that proposed curtailment area?

4 A. I count 21 as well.

5 Q. Okay. And at the bottom it says, "Total
6 4.04."

7 Can you please tell me what that number
8 signifies.

9 A. So these are water right -- water rights
10 with a partial decree or decreed flow rate, and so I
11 just totaled those up. None of these water rights are
12 stacked or have a combination limit, so they're just
13 additive.

14 Q. Okay. And you testified earlier that in
15 addition to Ms. Sukow's memorandum she produced some
16 supplemental data; is that right?

17 A. That's correct.

18 Q. Were there .shp files within that data?

19 A. There were several .shp files within her
20 data.

21 Q. Were there any response functions embedded
22 within those .shp files?

23 A. She did produce some response functions. I
24 believe she testified in her testimony that those were
25 locations where there were points of diversion for

1 water rights within the Bellevue Triangle. And so
2 that -- those response functions were within those .shp
3 files.

4 Q. Okay. Did you look at the response
5 functions associated with the 21 water rights located
6 on this particular exhibit?

7 A. I looked at the response functions within
8 the Galena Ground Water District area. I don't think I
9 necessarily cross-referenced it with these 21
10 specifically. But they range somewhere between a 20 --
11 excuse me, 20 percent response and a 4 point -- it was
12 less than 5, but like 4.8 or 4.6 percent response.

13 Q. And that was looking at the cells that were
14 in the area of where these water rights would have been
15 located; is that correct?

16 A. Correct, yes.

17 Q. Okay. If a curtailment was ordered as a
18 result of this hearing, do you know how much of the
19 4.04 cfs the State would be allowed to curtail?

20 A. I would imagine it would be the entire
21 diversion flow rate.

22 Q. Okay.

23 A. So the entire 4.04.

24 Q. Okay. Did you do any calculations to try
25 to quantify the impact of the -- this diversion rate if

1 a curtailment was ordered?

2 A. So I was concerned just because it's a
3 nonlinear model, just using the response functions. I
4 was not really comfortable doing that. And so I did
5 actually run a model simulation following Ms. Sukow's
6 analysis of just curtailment of Galena Ground Water
7 District members. And it was a reduction of 3.8 cfs,
8 if I remember that number correctly, which is based off
9 ET, not necessarily the face of the water right value.

10 Q. Okay. So your calculations show an impact
11 that these particular water rights in this exhibit
12 would have if a curtailment was issued would be what?

13 A. 3.8 cfs.

14 MS. O'LEARY: Okay. Director, this has been
15 submitted as Exhibit A, but I'm just thinking for
16 record purposes that perhaps it should be numbered as
17 Exhibit 41. We would like to have this -- we'd move to
18 have this admitted.

19 THE HEARING OFFICER: Okay. Do we want to
20 remark it somehow?

21 MR. FLETCHER: Did you say 41?

22 MS. O'LEARY: Yes.

23 THE HEARING OFFICER: It will be a joint
24 exhibit, then, is what you're proposing?

25 MS. O'LEARY: Yes. South Valley Ground Water

1 District and Galena Ground Water District Exhibit 41.

2 Thank you.

3 (SVGWD GGWD Exhibit 41 marked.)

4 MR. FLETCHER: You don't want it to be Heather
5 Exhibit A? No.

6 Q. (BY MS. O'LEARY): Erick, I'd just like
7 to -- I'm just wondering, those calculations for impact
8 that you did, did you do them for any specific months?

9 A. Of the model run of these Galena Ground
10 Water District members? I did. I did it the same way
11 that Ms. Sukow did from July through the end of the
12 irrigation season.

13 Q. And each of those months had an impact of
14 3.8?

15 A. No. That was -- that was the reduction in
16 pumping at the location. The impact to Silver Creek
17 specifically was substantially smaller. And if I -- it
18 was all three of -- all three months of July, August,
19 and September were less than a half a cfs.

20 Q. Okay. So I just want to make sure I'm
21 understanding this correctly, you're saying that if a
22 curtailment occurred, the impact that Silver Creek
23 would see, based on your calculations, would be maybe a
24 half of a cfs?

25 A. That's -- that's what the model output

1 suggests, yes.

2 Q. Okay. But you can't determine the timing
3 on that impact, can you?

4 A. The model shows timing, it raises questions
5 about timing about uncertainty. But the model, yes,
6 definitely does respond and show that in July, August,
7 September there are certain flow rates. But it doesn't
8 quantify or calculate the uncertainty associated with
9 that.

10 Q. Okay. Erick, you've testified that you've
11 been attending this proceeding throughout the week.

12 Were you present for Eric Miller's
13 testimony in this proceeding?

14 A. I was.

15 Q. Have you reviewed Mr. Miller's June 1st,
16 2021 report that he prepared?

17 A. I have reviewed that, yes.

18 Q. Could we turn to that. It's Miller
19 Exhibit 1.

20 A. I have no idea which binder this is in.

21 MR. RIGBY: It's the big white one.

22 THE HEARING OFFICER: It would be in this one.

23 THE WITNESS: Okay.

24 THE HEARING OFFICER: But I think you have one
25 right underneath that Picabo exhibits.

1 THE WITNESS: Oh, sorry, Director. I didn't
2 know that was yours.

3 So it's under Miller 1?

4 Q. (BY MS. O'LEARY): Yes.

5 MR. RIGBY: It's at the beginning. At -- yeah.
6 A couple down from there.

7 THE WITNESS: Oh, Miller. There you go.

8 MR. RIGBY: There you go.

9 Q. (BY MS. O'LEARY): I'm looking at a
10 document titled "Impacts to surface water rights in the
11 Little Wood/Silver Creek drainage."

12 A. Yes, I have that document.

13 Q. Okay. And this is what you were referring
14 to as Eric Miller's report; is that correct?

15 A. Yes, the one dated June 1st, 2021.

16 Q. And if we turn to page 2 of this document,
17 my understanding from reading this report is that
18 Mr. Miller used 2007 as the -- as his base year for his
19 curtailment analysis; would that be correct?

20 A. That is correct, yes.

21 Q. And it -- again, from my understanding, it
22 appears that he used that particular year based on a
23 2019 model run that Jennifer Sukow performed.

24 A. That is correct.

25 Q. Okay. Now, you testified earlier that

1 Ms. Sukow's 2007 reliance on her calculation -- did she
2 use the 2007 or 2002 in her memorandum?

3 A. In her memorandum she used 2002.

4 Q. Okay. So would you agree that the 2007
5 year that Mr. Miller used and that Ms. Sukow used in
6 her 2019 run was also reasonable?

7 A. Yes, I think that they were both dry years.

8 Q. Okay. So did you review how Mr. Miller
9 applied his methodology?

10 A. I have -- I have reviewed that, yes.

11 Q. Okay. And did you form any opinion about
12 how he ran his model?

13 A. I have concerns about the additive approach
14 from previous years, just because the model is not
15 linear. And I -- I believe I indicated to -- yeah,
16 I'll just leave it there.

17 Q. When you say that you have concerns about
18 his additive approach, can you break that down for me.

19 A. So my understanding of Mr. Miller's
20 methodology is that he took the percentage of response
21 from the 2007 curtailment run to Silver Creek, and that
22 extending over three year -- that extends over a
23 three-year period.

24 He then took the anticipated consumptive
25 use using pumping data from 2019, 2020, and an

1 estimated 2021 year, and then applied those percentages
2 of response from 2019, 2020, and 2021 to project total
3 impact in 2021.

4 Q. And you testified you have concerns.

5 So is it fair to say that's not how you
6 would have performed your analysis?

7 A. It's not. And I think that Mr. Miller was
8 handicapped, because he didn't have access to the
9 model. But I would have actually run three consecutive
10 years of pumping in the model to generate a response,
11 as opposed to taking an additive approach just based on
12 one response, one-year response.

13 Q. Okay. And if we look at --

14 A. And, Heather, can I also just add that this
15 is looking at the entire model -- so Ms. Sukow's
16 analysis, both in her 20 -- her 2007 and her 2002
17 curtailment runs from 2000 -- I'm getting a lot 2000s
18 in my head here. So 2002 curtailment run that she did
19 for this proceeding in her May 17th, 2021 memo and her
20 2007 curtailment run that she produced as part of the
21 modeling update to model version 1.1, included the
22 entire model domain.

23 And so looking at curtailment just in the
24 Bellevue Triangle also probably is not appropriate to
25 look at a three-year response because there's no

1 equivalent percentages of that three-year -- the
2 response from just curtailment within the Bellevue
3 Triangle.

4 Does that make sense? Do you follow me?

5 Q. So you're saying that the hydrologic
6 benefits, you don't believe that there would be a
7 three-year response from one year of curtailment; is
8 that correct?

9 A. I have not looked at that, and I have not
10 evaluated that.

11 Q. Okay.

12 A. So I don't believe that it would look the
13 same with curtailment just in the Triangle.

14 Q. Okay. And that's because one good water
15 year versus one bad water year can have just drastic
16 results; is that fair?

17 A. So that's definitely fair with an additive
18 approach, because it's not linear. I think just
19 reducing the scale of the model and looking just at
20 curtailment in the Triangle also reduces the length of
21 impact that we're seeing in those curtailment runs in
22 2007 and 2002.

23 Q. Okay. Do you recall Mr. Miller testifying
24 that he received pumping data from the watermaster,
25 Kevin Lakey?

1 A. I do recall that, yes.

2 Q. And you've testified earlier here this
3 afternoon that the model is only as accurate as the
4 data that is put into it; is that correct?

5 A. Yeah. Absolutely.

6 Q. So if you were to put inaccurate data into
7 the model, is it fair to say that the results that are
8 output would also be inaccurate?

9 A. Yeah, because it would be based on that
10 inaccurate input data.

11 Q. Have you yourself received any pumping data
12 from Kevin Lakey with regards to the Wood River Valley?

13 A. I believe I received data from Kevin in
14 January of 2020 pumping data.

15 Q. Did you make any effort to determine
16 whether the numbers or information that Mr. Lakey
17 provided you were accurate?

18 A. We -- I did look at those and identified
19 several that were incorrect and notified Mr. Lakey. I
20 also, in discussions with Mr. Shaw and Mr. Hill, they
21 identified several that were incorrect in the Galena
22 Ground Water -- or sorry, the South Valley Ground Water
23 District as well.

24 Q. And did you notify Mr. Lakey of those
25 errors?

1 A. We notified Mr. Lakey of the errors in the
2 Galena Ground Water District, not anything to do with
3 South Valley.

4 Q. Okay. Do you know whether those errors
5 were corrected?

6 A. I have not seen any update to those pumping
7 data to date.

8 Q. Okay. So it's possible that they have not
9 been corrected?

10 A. It is possible.

11 Q. Okay. So if Mr. Miller's report is based
12 on inaccurate numbers provided by Mr. Lakey, then his
13 results would also be inaccurate; is that correct?

14 A. Yes.

15 Q. And if we look back at page 2 of this
16 Miller Exhibit 1, the last paragraph, the first part of
17 the last paragraph is "Anticipating withdrawals for
18 2021 were reduced by 15 percent to arrive at an average
19 value of consumptive use for each corresponding year."

20 Do you see that?

21 A. Yes, I do see that.

22 Q. Do you have any opinion about this
23 conclusion?

24 A. I think that irrigation efficiency values
25 of 85 percent are very difficult to achieve. And I --

1 Mr. Miller alluded to some other study that was done
2 recently that concluded a much higher efficiency value.
3 But based on my brief look at several places within the
4 Valley, I think that that number is still -- 85 percent
5 is still very high.

6 Q. And when you're saying your look at several
7 places in the Valley, would that be those three
8 locations that we talked about in Exhibit 4 -- 24 that
9 are located within the Bellevue Triangle?

10 A. So those specific locations, and then just
11 my experience with irrigation efficiencies, yes.

12 MS. O'LEARY: Okay. Thank you. That's all I
13 have.

14 THE HEARING OFFICER: Thank you, Ms. O'Leary.
15 Questions, Mr. Barker?

16 Mr. Thompson?

17 MR. THOMPSON: I have a few.

18 May I stay seated?

19 THE HEARING OFFICER: Depends on how loudly you
20 speak.

21 MR. THOMPSON: I'll speak up.

22 THE HEARING OFFICER: Maybe we'll give you the
23 microphone.

24 ///

25 ///

1 DIRECT EXAMINATION

2 BY MR. THOMPSON:

3 Q. Mr. Powell, Travis Thompson for the South
4 Valley Ground Water District.5 You looked at Ms. Sukow's May 17th report;
6 is that correct?

7 A. That is correct.

8 Q. And you heard her testimony earlier this
9 week; is that true as well?

10 A. That is true.

11 Q. And she used the term "significant." And
12 I -- I'll represent on page 23, looking at the modeled
13 results of curtailment, she describes that the
14 curtailed water remaining in the aquifer, 67 percent as
15 being a significant portion, and she also references
16 the predicted increases in Silver Creek to be
17 significant.18 Now, from your review of this report, did
19 she conduct that Mann-Kendall statistical analysis for
20 these statements?21 A. I haven't seen anything to support that --
22 that significant work. People use it all the time to
23 just indicate a substantial or large number, but I
24 haven't seen anything to indicate that any statistics
25 were run.

1 Q. Okay. And getting back to the -- I guess
2 what you've heard of the hydraulic conductivity values
3 you reviewed for a couple cells, is that true, the
4 500,000 feet per day, the 950,000 feet per day?

5 A. Yeah, in excess of those numbers.

6 Q. And do those values, in your mind, impact
7 the reliability of the model results?

8 A. It definitely raises questions about model
9 aquifer parameters that are used, and then therefore
10 impacting the results, yes.

11 Q. How do you calculate conductivity values?

12 A. Like in a laboratory?

13 Q. I guess for purposes of the model
14 parameters, how do they come up with those numbers?

15 A. So we use hydraulic conductivity all the
16 time technically, and we usually use pumping data, so
17 well pumping data, volume and drawdown to estimate,
18 through a variety of different equations, what the
19 hydraulic conductivity values are.

20 We built a groundwater model 12 years ago
21 in the central area of the Valley for -- at the request
22 of the Department for a water right permit and transfer
23 application. And based on those numbers we were using
24 values of about 300 feet per day. And so we -- we use
25 actual pumping data.

1 Through model calibration, the Department
2 uses a process called PEST. And they put sideboards on
3 values. And PEST automatically adjusts those
4 parameters within those -- that range to produce values
5 that best match the goal. So streamflows and aquifer
6 elevations.

7 Does that answer your question?

8 Q. I think so. For those values you reviewed,
9 the 500,000 and 950,000 feet per day, what kind of flow
10 rate is that? What's that compared to.

11 THE HEARING OFFICER: Just a minute. We're
12 having trouble with transmission, I think.

13 MS. JENKINS: That's why.

14 THE HEARING OFFICER: That's the reason.

15 MS. JENKINS: They should be charged, though.

16 Q. (BY MR. THOMPSON): Sorry, Mr. Powell.
17 I'll repeat the question.

18 Those values, those conductivity values you
19 reviewed, would that relate to any sort of flow rate?
20 Would that be comparable as far as how quick water is
21 moving?

22 A. I have never seen values that high, so I
23 have no idea what to even compare it to.

24 Q. So if you had updated information or
25 different conductivity values that showed something

1 different, how would you go about making those changes
2 in the model?

3 A. So we would have to change -- well, the
4 model would have to be recalibrated entirely if we were
5 to adjust the range of those aquifer parameters, which
6 is a significant undertaking. And so we could go
7 through and just adjust the parameters in the current
8 model, but then the model wouldn't be calibrated and it
9 wouldn't be -- we couldn't use it for anything that
10 would be for any actual purpose.

11 Q. So if you had different information for
12 those cells you looked at and you wanted to recalibrate
13 the model, what kind of process would that take?

14 A. It would be a substantial process, one
15 that -- that usually takes the Department several --
16 and I'm going to qualify this. I'm not sure how long
17 it actually takes them, but usually it's years
18 following the availability of data before they
19 recalibrate the model information.

20 Q. So as far as testing the results of the
21 Department's memo in this case, would you have had time
22 to undertake that type of analysis between May 17th and
23 the start of this hearing?

24 A. Absolutely not.

25 MR. THOMPSON: Thank you. That's all the

1 questions I have.

2 THE HEARING OFFICER: Any questions from the
3 joint participants in category three?

4 MR. BROMLEY: No.

5 MR. LAWRENCE: No.

6 MS. MCHUGH: No.

7 THE HEARING OFFICER: Mr. O'Bannon?

8 MR. O'BANNON: No questions.

9 THE HEARING OFFICER: Cross-examination.

10 Mr. Fletcher, so you'll lead?

11 MR. FLETCHER: Thank you.

12

13 CROSS-EXAMINATION

14 BY MR. FLETCHER:

15 Q. Mr. Powell, I represent Big Wood Canal
16 Company. I'd like you to turn to Exhibit 23, please.

17 THE HEARING OFFICER: And this would be
18 Exhibit 23 --

19 MR. FLETCHER: South Valley's -- South
20 Valley/Galena's Exhibit 23.

21 THE HEARING OFFICER: Thank you.

22 THE WITNESS: I have Exhibit 23.

23 Q. (BY MR. FLETCHER): You helped author this
24 report; correct?

25 A. That's incorrect.

1 Q. Who authored this report?

2 A. I believe this was the product of Zach Hill
3 and Dave Shaw.

4 Q. Okay. You referred to it in your
5 testimony?

6 A. No.

7 Q. I would like you to look at page 4, the top
8 of the right-hand column. It says, "The Big Wood River
9 and Silver Creek are a complex, interconnected
10 hydrologic system, the relationship between the surface
11 and groundwater systems such that any stress on one
12 system will result in an effect on the other."

13 Do you agree with that statement?

14 A. I do.

15 Q. Can explain what that means.

16 A. That they are combined to -- the water that
17 shows up in Silver Creek I would say originates in the
18 Big Wood River or through precipitation in the Valley,
19 and that they are -- there is hydraulic connection
20 between -- between those river sources.

21 Q. I'd like you to turn to page 8, please.

22 THE HEARING OFFICER: And I'm assuming,
23 Mr. Fletcher, that you are referring to the numbering
24 on the original document, not the exhibit numbering.

25 MR. FLETCHER: That's correct.

1 THE HEARING OFFICER: So page --

2 MR. FLETCHER: I'm looking at the page numbers
3 at the bottom of the page.

4 THE HEARING OFFICER: Yeah. Okay.

5 Q. (BY MR. FLETCHER): Are you familiar with
6 the development of wells -- excuse me, I'm sorry.

7 A. It's okay.

8 Q. Are you familiar with the history of well
9 development in the South Valley Ground Water District?

10 A. Like actual well construction; is that your
11 question?

12 Q. When it occurred.

13 A. Yes.

14 Q. Okay. I'd like you to look at the
15 right-hand column on page 8. It states, "Several
16 hundred wells have been drilled in the District since
17 1940."

18 Do you agree with that statement?

19 A. I honestly have no idea --

20 Q. Okay.

21 A. -- what number that is.

22 Q. Okay. Well, tell me what your familiarity
23 is with the history of well development in the South
24 Valley Ground Water District.

25 A. I've looked at groundwater rights within

1 the Basin 37 that I would call the Wood River Valley,
2 both from a water right point of view and also from the
3 point of diversion file used in the Wood River Valley
4 Model, and have looked at priority dates for those. I
5 have not counted how many wells have been drilled since
6 1940.

7 Q. So you wouldn't know that -- how many were
8 drilled between 1947 and 1963, for instance?

9 A. I would have no idea.

10 Q. So let's move on down to the second full
11 paragraph on the right-hand column. It says,
12 "Groundwater pumping has affected groundwater levels
13 and available water. Groundwater pumps increased
14 steadily for the period of record and have affected the
15 delivery of surface water and groundwater levels in the
16 South Valley Ground Water District."

17 Do you agree with that statement?

18 A. I would.

19 Q. I would like you to turn to page 15,
20 please.

21 Are you familiar with the trends of surface
22 water supplies in the Big Wood system?

23 A. I am familiar with those trends.

24 Q. Okay. Looking at page 15, it indicates
25 that since between 1970 and 2016 surface water supplies

1 on the Big Wood River have declined 26 percent; isn't
2 that correct?

3 A. That's what this document says, yes.

4 Q. Do you agree with that?

5 A. I have not run that analysis from 1970
6 through 2016.

7 Q. What is your opinion about the trend of
8 water supplies on the Big Wood between 1970 and 2016?

9 A. Well, again, I haven't run 1970 through
10 2016, so I can't really speak to that. I can say that
11 I did an analysis in Exhibit 24, page 11, that looks at
12 trends from 1915 through 2020, which is with the whole
13 period of record for the Big Wood River at Hailey, and
14 through 1960 through 2020, which is close to the same
15 period that you were referring to.

16 Q. And what has the trend been?

17 A. So from 1915 through 2020 every month was
18 showing a positive trend, except for the month of July.
19 But the only statistically significant month that
20 showed positive -- that was statistically significant
21 was March from 1915 through 2020.

22 On page 14 it looks at from 1960 through
23 2020. And the trend is reversed, that we have negative
24 trends for every month except March and April, but
25 there are no statistically significant trends based on

1 the Mann-Kendall analysis.

2 Q. Do you know -- do you have an opinion as to
3 what created that change or that reversal of trend?

4 A. My opinion on that is that the river at
5 Hailey is predominantly driven by precipitation. And
6 so the trends we're seeing are changes in precipitation
7 amounts.

8 Q. Do you believe the river at Hailey is also
9 affected by groundwater pumping?

10 MR. LAWRENCE: Objection. Outside the scope of
11 the proceeding.

12 MR. FLETCHER: He just testified what the trend
13 was at Hailey.

14 MR. LAWRENCE: The scope of this proceeding is
15 groundwater pumping within the Bellevue Triangle, not
16 groundwater pumping elsewhere.

17 MR. FLETCHER: Well, you should have objected to
18 the prior answer, then.

19 THE HEARING OFFICER: No, I think they're
20 different. I want to limit the scope of this
21 particular hearing, Mr. Fletcher.

22 Sustained.

23 Q. (BY MR. FLETCHER): I'm not sure what is
24 the accurate page number on Exhibit 24, but there is a
25 page number in there that has your calculation of

1 irrigation efficiencies; is that correct?

2 A. That is correct.

3 Q. And what is that page number?

4 A. So there's a brief description of those on
5 page 37, and then it's summarized on page 38.

6 Q. So on page 37 you have six different
7 columns; correct?

8 A. That's correct.

9 Q. And for agricultural irrigation your
10 efficiency is 84 percent; correct?

11 A. The last three are all agricultural
12 applications.

13 Q. Okay. Give me one minute.

14 A. Not going anywhere.

15 Q. Okay. Well, when you talk about
16 agricultural, you're saying that municipal efficiency
17 is agricultural?

18 A. No. The last three. The individual water
19 right -- and I apologize to whoever owns these water
20 rights. I was not intending for them to be in the
21 limelight here. But Water Right 37-22328, 37-8011A,
22 and then the Silver Springs Ranch, which is the last
23 one, those are the three that are within the Bellevue
24 Triangle area.

25 Q. And do you know how the water right, for

1 example, 37-22328, how they are applying their water?

2 A. I have no knowledge of their system
3 application. I just picked two random water rights out
4 of the watermaster's delivery records for 2018 --

5 Q. Okay.

6 A. -- and used METRIC ET to figure out what
7 the consumptive -- the crop irrigation requirement was
8 for those two.

9 Q. Okay. So you don't know, looking at these
10 various columns, what percentage of diversions are
11 similar to each of the columns in the Triangle?

12 A. I'm sorry. I don't understand that
13 question.

14 Can you rephrase that?

15 Q. Well, under agricultural irrigation, how
16 much -- let me word it a different way.

17 What percentage of diversions in the
18 Bellevue Triangle is agricultural irrigation?

19 A. I don't know that value off the top of my
20 head.

21 Q. So when you did your net result of
22 irrigation efficiency, you didn't weight that to the
23 percentages of the various types that are in your
24 columns?

25 A. No. My only intent was just to show that a

1 blanket 90 percent was probably inaccurate.

2 Q. Okay. Well, Mr. Miller didn't use
3 90 percent in his report, did he?

4 A. For -- at the time of this production for
5 this presentation, he had used 90 percent, yes.

6 Q. He had, but in his final report that was
7 admitted, Exhibit 1, Miller Exhibit 1, he used
8 85 percent, didn't he?

9 A. He did. Absolutely.

10 Q. Okay. And this report says agricultural
11 irrigation efficiency is 84 percent; correct?

12 A. For that one farm, there was 84 percent,
13 yes.

14 Q. And Jennifer Sukow also used 85 percent;
15 isn't that correct?

16 A. That is the number that she used, yes.

17 Q. I believe you were making reference to the
18 Wylie report. You were talking about the aquifer
19 being -- or the groundwater -- well, you talked about
20 something being stabilized.

21 What were you referring to?

22 A. That was Mr. Wylie's report that he issued
23 in 2019.

24 Q. What were you referring to that was
25 being -- that has stabilized?

1 A. I was quoting him that said that the
2 aquifer -- there's no trend and the water table is
3 stable.

4 Q. Okay. So it's the water stable that has
5 stabilized?

6 A. That's what he concluded, yes.

7 Q. Okay. And did any significant event occur
8 in 1991, that you're aware of, that may have led to
9 that stabilization?

10 A. I believe you're probably referring to
11 the -- to the formation of the groundwater management
12 area.

13 Is that what it's classified as?

14 Q. I'm just asking you if you're aware of any.

15 A. I -- I -- I believe that happened in 1991.

16 Q. Did anything else happen --

17 A. Not that I'm --

18 Q. -- that you're aware of that could affect
19 this?

20 A. Not that I'm aware of.

21 Q. Was a moratorium put in place on
22 groundwater development?

23 A. I don't remember the date of that.

24 Q. Okay. And if in fact there had been a
25 moratorium put in place, that could help stabilize

1 groundwater levels; correct?

2 MS. O'LEARY: Objection. Speculation.

3 MR. FLETCHER: He's an expert.

4 Q. In your opinion.

5 A. In my opinion, yes.

6 THE HEARING OFFICER: Just a minute.

7 Overruled.

8 MR. FLETCHER: Thank you.

9 THE HEARING OFFICER: Thank you.

10 Q. (BY MR. FLETCHER): Does that mean -- when
11 you used the term "the groundwater levels are
12 stabilized," does that mean that they're no longer
13 impacting surface water supplies?

14 A. That's not the conclusion that anyone has
15 reached.

16 Q. Okay. So the fact that water tables are
17 stabilized means that the water table is not declining
18 any further; correct?

19 A. Correct.

20 Q. And that's all it means; correct?

21 A. Correct.

22 Q. You talked quite a bit about uncertainty.
23 What do you understand "uncertainty" to
24 mean when you use that term?

25 A. So uncertainty is that any model result is

1 not a -- necessarily a perfect number, that there is
2 uncertainty associated with that. And so I hate to use
3 the word in the definition, but that there is --
4 that's -- that's the best number, according to the
5 model, but that number could vary.

6 Q. Okay. And when someone uses a number like
7 22 percent as model uncertainty -- was it model
8 uncertainty of 22 percent or --

9 A. It's predictive uncertainty.

10 Q. Predictive uncertainty.

11 When that 22 percent phrase is used, that's
12 a plus or minus number, isn't it?

13 A. It is.

14 Q. So that means the prediction could favor,
15 in this case, groundwater pumping or it could favor
16 surface water users; correct?

17 A. Yeah. They're looking at both timing and
18 location and a 95 percent confidence.

19 Q. Okay.

20 A. And it could be either side.

21 Q. And even though there's this uncertainty in
22 the model, you believe it's the best science to use to
23 do these calculations; correct?

24 A. So I don't think the model necessarily is
25 science. I think it's a tool based on science. And so

1 I think it's the best tool we have.

2 Q. Okay.

3 A. But I think it could be a lot better.

4 Q. And that's true with virtually every model,
5 isn't it?

6 A. Absolutely.

7 Q. I assume -- you were talking about South
8 Valley Ground Water District 41, and that's the list of
9 the users. If you want to look at it, you're free to.
10 I'm not going to make a specific reference to it.

11 I think you said you had calculated that
12 the impact from curtailment of those users in pumping
13 would be 3.8 cfs; is that correct?

14 A. That's the curtailment flow rate.

15 Q. Okay. Explain what that is, would you,
16 please.

17 A. So maybe I should ask you to rephrase your
18 question.

19 Q. Well, what does the 3.8 cfs represent?

20 A. So that's the flow rate that would be
21 curtailed under a curtailment scenario.

22 Q. Okay. So that -- and just correct me if
23 I'm wrong on this, but isn't that another way of saying
24 that's how much water will no longer be pumped if those
25 wells are curtailed?

1 A. Yes.

2 Q. And then you talked about a .5 cfs.

3 And what was that .5 cfs?

4 A. That was in the irrigation season the
5 impact to Silver Creek.

6 Q. That's how much water would return to
7 Silver Creek if those users were curtailed?

8 A. In the irrigation season of that
9 curtailment, yes.

10 Q. Okay. During your -- while we're talking
11 about that very issue -- well, you mentioned this with
12 Miller's report, Exhibit 1, Miller 1. You were -- you
13 had concerns about the manner in which he did an
14 additive approach.

15 Do you remember that testimony?

16 A. Yeah. What was the word you used?

17 Q. "Additive."

18 A. Oh, "additive." Okay.

19 Q. I think that was the word you used.

20 A. Yeah, sorry. I didn't hear that clearly.

21 Q. Yeah. Okay. And you said that if you were
22 going to do that type of approach you should do it a
23 different way; correct?

24 A. I would have done it differently, yes.

25 Q. And the way you would have done it is run

1 the model for three consecutive years to make that
2 determination; correct?

3 A. Correct.

4 Q. Did you do that?

5 A. No.

6 Q. So you didn't do any work to determine if
7 his number was inaccurate or accurate?

8 A. I -- I did not try to replicate that. And
9 I did not run a three-year curtailment scenario.

10 Q. Okay. You agree that if curtailment
11 occurs, there is some residual benefit from that;
12 correct? I mean it doesn't all come back in one year?

13 A. Depending on the area of curtailment, yes
14 and no. I mean --

15 Q. Well, if the Bellevue Triangle is curtailed
16 this year, will there be benefits to the aquifer
17 occurring after the irrigation season this year?

18 MR. BROMLEY: Objection. Outside the scope of
19 the notice.

20 THE HEARING OFFICER: How?

21 MR. BROMLEY: Director, the scope of this
22 proceeding was limited to the 2021 irrigation season.
23 Mr. Fletcher is asking about benefits extending past
24 that season.

25 THE HEARING OFFICER: Well, whether it is or

1 not, there's been substantial testimony on this --
2 substantial testimony on this particular subject. So
3 the objection is overruled.

4 THE WITNESS: Yeah, according to the model,
5 there's water that's left in the aquifer.

6 Q. (BY MR. FLETCHER): And when you're doing
7 modeling, like in this case, modeling for a particular
8 time period, does the model account for pumping effects
9 in prior years?

10 A. Yes.

11 Q. How does it do that? Do you know?

12 A. By changes in aquifer storage.

13 Q. Excuse me?

14 A. Changes in aquifer storage.

15 Q. Okay. So the model, no matter how much we
16 try to restrict it, I mean it's dealing with all these
17 inputs and all these outputs; correct?

18 A. Correct.

19 Q. Okay. Do you have an opinion on how long
20 that response time would be if -- how long will water
21 continue to benefit the aquifer if curtailment occurs
22 this year?

23 A. I -- honestly, I don't know how long it
24 would last.

25 Q. Okay. But you agree it would last more

1 than one year?

2 A. Not necessarily.

3 Q. Okay. You don't have any idea, then?

4 A. No, I -- it really just depends on
5 precipitation in the winter and in the spring. I mean
6 we could see that that effect of curtailment is not
7 propagated, and that could be an easy -- that's a
8 scenario that could easily happen. We could see that
9 it couldn't remain. But there's no really -- it's
10 impossible for me to know what's going to happen in the
11 future.

12 Q. Your counsel asked you some questions about
13 groundwater data submitted by Kevin Lakey.

14 Do you remember that --

15 A. Yes, I do.

16 Q. -- submitted to Eric Miller? Do you
17 remember that testimony?

18 A. Yes, I do.

19 Q. Do you remember Eric Miller's testimony
20 saying he also received groundwater data from Tim Luke
21 at the Department?

22 A. I don't recall that.

23 Q. Okay.

24 A. But he easily could have said it.

25 Q. Concerning the Lakey data, you used the

1 term "inaccurate," kind of like "significant."

2 What was inaccurate about it, specifically?

3 A. There were duplications in the data.

4 Q. Okay. Tell us what the inaccuracies were.

5 A. Well, if something's reported twice, that's
6 double the pumping than actually occurred.

7 Q. How many cfs was misstated on that report?

8 A. I don't recall.

9 Q. You did not do a calculation?

10 A. I don't recall. That -- that was in
11 January, and I don't remember what that was.

12 Q. But you're willing to render an opinion
13 that using that data makes Mr. Miller's conclusions
14 inaccurate?

15 A. Well, I'm -- I didn't say anything about
16 Mr. Miller's calculations. I was saying that if poor
17 data was given, and then the result is going to be
18 misinformation.

19 Q. Well, wouldn't it make a difference if that
20 was .5 cfs versus 50 cfs?

21 A. I think it would. Absolutely.

22 Q. But you today, while you're silting here,
23 you have no idea what amount of inaccuracy there was in
24 that report?

25 A. Well, I don't recall, Mr. Fletcher. I'm

1 sorry. That was not something I brought with me.

2 Q. Thank you.

3 Do you remember the testimony of Mr. Beck
4 earlier today? I think it was today.

5 A. Yeah.

6 Q. Sometime this week. And he was talking
7 about the response time on Silver Creek after
8 groundwater reductions.

9 Do you remember him talking about that?

10 A. There's been a lot of testimony about that,
11 so it's all kind of jumbling together.

12 Q. Do you remember him talking about a 10 to
13 14-day response time that he observed?

14 A. I do recall that.

15 Q. Do you disagree with that?

16 A. Knowing where he was speaking about
17 specifically, I would absolutely believe that.

18 Q. When you were talking about this
19 conductivity issue, hydraulic conductivity --

20 A. Uh-huh.

21 Q. -- how many cells did you look at?

22 A. I looked at the entire model domain.

23 Q. So you looked at 55,000 cells?

24 A. I did.

25 Q. And did you examine all of those for this

1 problem?

2 A. I exported the data into Excel and looked
3 at ranges in the Bellevue Triangle specifically, and
4 the average for layer one was at somewhere in the order
5 of 3,000 feet per day. So an order of magnitude higher
6 than I thought it would be. But still the maximum
7 numbers were -- were -- and I don't recall that -- how
8 many, but it was like 200 cells that had an extreme
9 value.

10 Q. 200 out of 55,000?

11 A. Yeah.

12 Q. I don't know what the right phrase is. I
13 don't want to use "significant."

14 But do you find 200 cells out of 55,000 to
15 be significant?

16 A. It raises a lot of questions in my mind
17 just about what kind of constraints were put on PEST
18 during that calibration process.

19 Q. Okay.

20 A. If that was error that the model couldn't
21 account for and had to make those cells that
22 conductive, I don't know.

23 MR. FLETCHER: Mr. Powell, I think I'm done. I
24 appreciate your testimony. Thank you.

25 THE WITNESS: Thank you.

1 THE HEARING OFFICER: Mr. Rigby.

2 MR. RIGBY: Thank you.

3
4 CROSS-EXAMINATION

5 BY MR. RIGBY:

6 Q. Mr. Powell, Jerry Rigby on behalf of the
7 senior water users.

8 Lucky for you, the questions I had written
9 down Mr. Fletcher asked most of them. I just want to
10 cover a little bit more on a couple of the questions
11 that he asked of you, and that is getting back to the
12 SW Galena Ground Water District Exhibit 24 dealing with
13 the stability of the aquifer.

14 In addition to -- well, first of all, so it
15 is a fact that when we're talking about stability of
16 the aquifer, that's with all the -- mostly all of the
17 pumps and wells already installed? By that I'm saying
18 this aquifer at that particular time, from 1991 through
19 now, had significant pumping already occurring within
20 that aquifer; is that correct?

21 A. I would agree, yes.

22 Q. And so therefore -- I mean I'm taking this
23 to a logical conclusion, if pumps were -- had
24 significantly lowered the level of the aquifer, you'd
25 still have a stable aquifer, it just would be much

1 lower, except for -- much lower than if the pumps were
2 not actually pumping water from the aquifer; is that
3 right?

4 A. Yeah. There's no downward trend.

5 Q. Right. Well, in fact, let's talk about
6 that, because you also indicated that in your
7 discussion of it or analysis of it that you actually
8 saw a rising of the aquifer; is that correct?

9 A. According to Mr. Wylie's analysis, there is
10 a positive trend in that data, yes.

11 Q. Okay. Now, you heard the testimony again
12 of Mr. Beck and others as to the conservation that
13 they've gone through.

14 I think his initial -- when he first
15 started working here, and others as well, it was
16 pumping 24/7, Katy, bar the doors, and that's been
17 significantly changed; right?

18 A. That's correct.

19 Q. And so therefore could that be one of
20 reasons why the aquifer is raising, in your mind?

21 A. That could be one of the variables.

22 Q. And yet you've heard the testimony of my
23 clients and my people still indicating that they
24 believe the trend for their historical recognition of
25 the Little Wood River has not increased? Did you hear

1 that testimony?

2 A. I did, yes.

3 Q. And so therefore how would -- even though
4 there may be a -- you're arguing a raising of the
5 aquifer and that most of the water from the aquifer is
6 not retained in the aquifer, I'm seeing a disconnect,
7 do you?

8 A. I did not do this analysis.

9 Q. Understood.

10 A. And so I'm just producing this for -- well,
11 yeah.

12 So ask me your question again.

13 Q. More simply that if there's a rising of the
14 aquifer and, according to the analysis, most of the
15 aquifer in this basin gets into the river and is not
16 retained, although some of it, as testimony indicated
17 that it is, but if most of it in fact does get to the
18 river, the disconnect we're still seeing is that the
19 levels that my people were testifying to are not
20 increasing, in fact actually decreasing. And I'm
21 trying to find out if you have an opinion as to that
22 disconnect.

23 A. At this point, Mr. Rigby, I don't have an
24 opinion of why that's the case. I haven't seen any
25 statistics on flows at Station 10, Station 54. We

1 talked a lot about those. But, you know, I have
2 evidence from the State saying that there's gage --
3 questions about Station 10. Other testimony says that
4 no, this is a perfect -- not perfect, but this is a
5 good gage.

6 So there's a lot of uncertainty or a lot of
7 unknowns throughout this whole system. And so I'm
8 having the same problem, that disconnect on -- on the
9 data to support one side or the other.

10 Q. Dealing with the staff memos, especially
11 Ms. Sukow's memo, from my understanding of your
12 testimony, for the most part you agreed with most of
13 her analysis, other than using the three-month stress
14 period; would that be a fair statement?

15 A. I think that she did the analysis like I
16 would have done the analysis and I did do the analysis.

17 Q. In fact you did run it and found hers to be
18 correct; right?

19 A. I got the same answer, yes.

20 Q. Okay. So -- but again, getting back to the
21 three-month stress period, you, as I understand your
22 testimony, that was too short a period, is that
23 correct, according to the model?

24 A. Well, it's not that the model can't run a
25 three-month stress curtailment scenario. She just at

1 the very end of her memo talked about that using a
2 three-month scenario likely causes the uncertainty with
3 that answer to rise. So timing and location of
4 response raises more questions, but we don't know what
5 that uncertainty is because no one's ever done it.

6 Q. And although Mr. Fletcher addressed the
7 issue of the pumping reports from Kevin Lakey, that was
8 one of the questions I was definitely going to ask, is
9 if they were in error, just how significant was it? I
10 think you've already answered that.

11 Until someone runs the corrected pumping
12 analysis, we don't know; right?

13 A. We don't know.

14 Q. It could be very insignificant?

15 A. It could be.

16 Q. Even though, like you say, bad in, bad out,
17 if the bad is miniscule, then it really doesn't make
18 that much difference in the bottom line; correct?

19 A. I would agree.

20 Q. Have you looked at the precipitation since
21 the 1915 to 2020 in any of your analysis? And if so,
22 is it built into the Kendall model, the Mann-Kendall
23 model?

24 A. So I looked at trying to do some regression
25 between precipitation and flow rate like years ago.

1 And it didn't correlate real well. And so I have not
2 looked at that recently, probably at least two years.
3 So I can't tell you even -- anything about what I did
4 at the time. I just remember pulling precipitation
5 data.

6 Is that embedded in Mann-Kendall was your
7 second question?

8 Q. Yeah.

9 A. It is. The flows in any stream system are
10 a reflection of the sources of where that water comes
11 from.

12 Q. Certainly. Well, the only reason I'm
13 asking is we've heard almost everyone testify as to the
14 reason for flows in the river itself obviously include
15 precipitation and pumping, and you had a list of
16 several other things?

17 A. Sure.

18 Q. And wouldn't it be appropriate or wouldn't
19 it be helpful to understand those that we can quantify
20 to determine then what the pumping effects are?

21 A. So is that a statement or is that a
22 question? Sorry.

23 Q. No. I said wouldn't it be helpful? I
24 think that's a question.

25 A. Would be helpful?

1 Q. I think that's a question.

2 A. Yeah. Absolutely it would be helpful.

3 Q. Yes.

4 A. The more data we have, the better that we
5 can address any problem.

6 Q. I believe in your deposition when I was
7 taking it with you, you were talking about one of the
8 problems with the model is that it's a one-month stress
9 built into that.

10 Am I remembering that correctly?

11 A. No. I would say that's fairly standard. I
12 mean most models have a one-month stress.

13 Q. The reason I'm asking that is it seemed to
14 me that we went on to discuss how soon would water then
15 get back into the river from the model -- I mean from
16 the aquifer. And I believe your testimony was a small
17 amount would be very quickly, and others you just
18 didn't know. And one of the reasons I thought you said
19 was because when it's a one-month stress model, that
20 makes it a little more difficult.

21 Am I wrong there?

22 A. I think that was -- Mr. Miller had some
23 reference to like days response. And I think I was
24 just saying the model can't do days. It has to do
25 months. And so trying to interpolate days makes things

1 really difficult. And so I think that's where that
2 discussion came from. But I don't have that whole
3 transcript in front of me, so...

4 Q. So the question that's been asked of
5 several is just how soon does it come back in.

6 And you don't have an opinion, do you, as
7 to -- or any additional data that would suggest what
8 that time period is in any given year.

9 A. So I don't have any data from recent. I've
10 been to numerous locations in the Bellevue Triangle,
11 and I -- and the Bellevue Triangle extends up the
12 Valley. And so like you have headwaters and locations
13 right next to headwaters I would imagine have a much
14 quicker response than those up the Valley. And so, you
15 know, there's not one you turn off all wells and
16 there's an immediate response location, both
17 horizontally, vertically -- or north and south, maybe I
18 should -- north and south, east and west will determine
19 responses to it.

20 Q. Would you disagree with several of my
21 clients' testimony, and also the watermaster, that
22 there is a fairly quick response when wells are turned
23 off for various reasons?

24 A. I don't have any data to support that. I
25 also heard the testimony that the watermaster gave that

1 he also recognized that someone was pumping directly
2 into the river and not diverting that water. And so
3 I'm not really sure quantity and timing. I don't think
4 it's going to be instantaneous. I -- yeah. So...

5 MR. RIGBY: I have no further questions.

6 THE HEARING OFFICER: Okay. Ms. O'Leary, should
7 we take a break? I think we're overdue. And then you
8 can come back.

9 MS. O'LEARY: We could do that, Director. I
10 just have a couple questions. It will be short. Or if
11 you prefer a break. That's fine.

12 THE HEARING OFFICER: I don't care.

13 MR. FLETCHER: Let's finish with this witness.

14 THE HEARING OFFICER: Okay. If everybody's all
15 right with that. I thought maybe the redirect might be
16 extensive. So thank you.

17

18 REDIRECT EXAMINATION

19 BY MS. O'LEARY:

20 Q. Erick, Mr. Fletcher was discussing the
21 percentage of irrigation efficiency with you and really
22 focusing on that Silver Springs Ranch 84 percent
23 efficiency.

24 In your opinion and based on the research
25 that you've conducted, is an average of 84 percent

1 irrigation efficiency achievable throughout the
2 Bellevue Triangle?

3 A. Through a lot of effort -- knowing what was
4 put in at Silver Springs Ranch, I -- it takes time,
5 effort, and money to achieve that efficiency. So it is
6 possible. I don't believe it's across the Valley.

7 Q. Okay. So -- so based on your other
8 calculations we saw as low as in the 20 to 30 percent.

9 Your opinion is that that 60 percent in
10 Exhibit 24 is a more reasonable average of irrigation
11 efficiency throughout the Bellevue Triangle?

12 A. Well, and I'm sorry, Ms. O'Leary, I'm
13 not -- I'm reluctant to even say that that number is
14 right. I haven't done an analysis on -- and I think
15 that we could do that. I just haven't done it on total
16 pumping. We have lots of ET -- METRIC ET data that we
17 could evaluate what is being diverted, both from a
18 surface and groundwater standpoint, and what the ET is.

19 And so I think we could easily come up with
20 a better efficiency number than debating, you know,
21 what it is here. I just haven't had the time to do
22 that.

23 Q. Okay. But the calculations that you have
24 done don't show an average of 84 percent; correct?

25 A. No.

1 Q. Okay. Mr. Fletcher also asked you whether
2 you tried to replicate Mr. Miller's work with respect
3 to his June 1st, 2021 report; right?

4 A. I think that he asked that question,
5 yesterday.

6 Q. And was the condensed time period of
7 this -- of notice of this proceeding and receipt of
8 Mr. Miller's report attributable as to why you didn't
9 have time to replicate that work?

10 A. That definitely played a role. I mean
11 we've all been under a time constraint for sure.

12 Q. Okay. And just to be clear, because
13 opposing counsel was really focusing on the --
14 Mr. Lakey's data and whether the errors that you found
15 would be, in your mind, throwing around a term,
16 "significant" versus "insignificant."

17 At the end of the day, if the model is not
18 input with accurate data, it's not going to output
19 accurate data; right?

20 A. That's correct.

21 Q. Okay. Is it possible that even if there is
22 a curtailment this year that surface water users might
23 not receive a benefit of the curtailment, meaning, in
24 other words, you can't time your quantity to the amount
25 of water that would be available to them pursuant to a

1 curtailment, can you?

2 A. We -- again, the best tool we have is the
3 model. And there may -- you know, at this point it is
4 what it is, warts and all. And it does produce some
5 timing estimates and volume associated with those
6 timing estimates.

7 Now, the uncertainty of that, we don't
8 know. And so there is a potential that there would not
9 be any benefit. But that's impossible to calculate
10 here.

11 Q. Okay. And we've talked about that
12 uncertainty amount being plus or minus 22 percent;
13 correct?

14 A. That's the uncertainty number from
15 Mr. Wylie for the model 1.1 report, yes.

16 Q. Based on that ten-month time period?

17 A. Yes.

18 Q. And under the analysis by Ms. Sukow, since
19 it's that three-month time period, it's reasonable to
20 assume that the uncertainty would be greater than that
21 22 percent; right?

22 A. That's correct.

23 MS. O'LEARY: That's all I have. Thank you,
24 Erick.

25 THE HEARING OFFICER: More recross,

1 Mr. Fletcher?

2 MR. FLETCHER: Just one item.

3 MR. THOMPSON: I have one question.

4 THE HEARING OFFICER: Oh.

5 MR. FLETCHER: You do? Okay.

6 THE HEARING OFFICER: Sorry, Mr. Thompson.

7

8 REDIRECT EXAMINATION

9 BY MR. THOMPSON:

10 Q. Mr. Powell, just one question.

11 You said you were able to replicate

12 Ms. Sukow's model run; is that correct?

13 A. That is correct.

14 Q. And does that just mean that she ran the
15 model correctly as far as running the tool itself?

16 A. Yes.

17 Q. Okay. It doesn't mean that the results are
18 actually right or -- as far as estimates?

19 A. Well, yeah, any -- I mean the first step is
20 just making sure we can replicate what was done. So
21 I'm not saying that was right or wrong. I was able to
22 replicate it.

23 MR. THOMPSON: Okay. Thank you.

24 THE HEARING OFFICER: Mr. Fletcher.

25 ///

1 study"?

2 A. No. I'm sorry, you said the second
3 sentence at the top. So I was reading the second
4 sentence.

5 Q. No, at the -- I'm sorry. Let's get you to
6 the right place.

7 A. Okay. "Estimates of actual withdrawals"?

8 Q. Yeah. Where it goes down, at the very last
9 paragraph of page 2 --

10 A. Okay. Yeah, I have that.

11 Q. -- the second full sentence --

12 A. Yeah, I see it.

13 Q. -- starts with the word "Estimate."

14 A. "Estimate of actual withdrawals for
15 2019/2020 were provided by Tim Luke."

16 MR. FLETCHER: Thank you. I have no further
17 questions.

18 MS. O'LEARY: Director, before we take a break,
19 just one housekeeping matter. I want to make sure --
20 we renumbered Exhibit A as Exhibit 41, and I'm not
21 entirely sure if I moved to have that admitted into
22 evidence. And I just wanted to make sure that I did
23 get that on the record.

24 MS. CARTER: I don't have it admitted.

25 MS. O'LEARY: Okay. Can we have it admitted?

1 THE HEARING OFFICER: Any objection?

2 MR. FLETCHER: We have some exhibits too.

3 MR. RIGBY: Oh, that's right. We have some as
4 well.

5 MS. O'LEARY: But do you object to --

6 MR. RIGBY: No objection.

7 MR. FLETCHER: No objection.

8 THE HEARING OFFICER: Okay. So the document
9 that's been marked as South Valley and Galena
10 Exhibit 41 is received into evidence.

11 (SVGWD GGWD Exhibit 41 received.)

12 THE HEARING OFFICER: Okay. I just have one
13 line of questions for the witness.

14

15 EXAMINATION

16 BY THE HEARING OFFICER:

17 Q. I want to refer back to South Valley and
18 Galena Exhibit 24 and page 48 that we discussed at
19 length.

20 A. Director, I'm there.

21 Q. Okay. And this was -- the entire
22 discussion about this page was related to what's
23 happening with groundwater levels; right?

24 A. That is correct.

25 Q. And the groundwater levels that we're

1 talking about are groundwater levels within what area?

2 A. Within the Wood River Valley. I believe
3 that that exhibit also has a map, and I don't recall
4 where that is.

5 Q. Well, in particular, look at the first
6 clause, first sentence. It says, "The Big Wood
7 Groundwater Management Area," and then there are
8 additional references to the groundwater management
9 area.

10 A. Uh-huh.

11 Q. And do you know the extent of that
12 management area?

13 A. I believe it includes Camas Prairie as well
14 as the Big Wood valley.

15 Q. And that's true. And also in the -- it
16 includes the Bellevue Triangle; right?

17 A. Yes.

18 Q. And it includes the drainage of the Big
19 Wood River itself; correct?

20 A. Correct.

21 Q. And so is -- in your opinion, does this
22 data have any relevance to water levels or in
23 describing the water levels solely in the Bellevue
24 Triangle?

25 A. It definitely includes areas outside of the

1 Bellevue Triangle. I think really my only -- my
2 original intent of putting this in here was to show
3 that Mann-Kendall's statistics were used by the
4 Department for other purposes so that people weren't
5 just looking at me like a blank stare when we started
6 talking about time series statistical analysis.

7 Q. Well, I understand that. But there was
8 also a discussion about whether there were positive
9 trends.

10 A. That's correct.

11 Q. I guess I look at the document, Mr. Powell,
12 and say it has no value to me, because it's looking at
13 wells throughout the groundwater management area and is
14 not specific to the Bellevue Triangle, which is the
15 subject of this particular contested case. So I just
16 throw it out.

17 Okay.

18 A. Yeah.

19 THE HEARING OFFICER: Thanks.

20 Jerry.

21 MR. RIGBY: Mr. Director, apparently we have --
22 when we were attempting to get all of our exhibits in,
23 we discussed a couple of exhibits, and we were reminded
24 that we, although discussed them, didn't ask for their
25 admission.

1 Would you please remind us which ones those
2 were?

3 MS. CARTER: W. Arkoosh 2 and 3.

4 THE WITNESS: Director, am I done?

5 MR. RIGBY: So it was the testimony that John
6 Arkoosh --

7 THE HEARING OFFICER: Just a minute. I think
8 so, but just a minute.

9 MR. RIGBY: It was the testimony of John Arkoosh
10 wherein he was testifying for not only on his behalf,
11 but his father's behalf, W. Arkoosh. And it was
12 Exhibit No. 1 and Exhibit -- excuse me, Exhibit No. 2
13 and Exhibit No. 3.

14 And those were, I believe, his water
15 rights, were they not?

16 MS. CARTER: Yes. Water right and the
17 place-of-use map.

18 MR. RIGBY: Very good. And so we would move for
19 the admission of those two exhibits.

20 THE HEARING OFFICER: I don't even remember
21 those documents.

22 But I will ask, is there any objection --

23 MR. THOMPSON: No.

24 THE HEARING OFFICER: -- to the admission of
25 those documents?

1 Okay. So based on no response, Mr. Rigby,
2 the documents marked as Arkoosh --

3 MR. RIGBY: W. Arkoosh.

4 THE HEARING OFFICER: -- W. Arkoosh Exhibits 2
5 and 3 are received into evidence.

6 (W. Arkoosh Exhibits 2 and 3 received.)

7 All right. Thanks. Let's take a
8 ten-minute break.

9 (Recess.)

10 THE HEARING OFFICER: We're back on the record
11 after an afternoon break.

12 Mr. Barker, next witness.

13 MR. BARKER: South Valley Ground Water District
14 calls David Shaw.

15 THE HEARING OFFICER: Mr. Shaw, if you'll raise
16 your right hand.

17

18 DAVID B. SHAW,
19 having been called as a witness by South Valley Ground
20 Water District and first duly sworn, testified as
21 follows:

22

23 THE HEARING OFFICER: Thank you. Please be
24 seated.

25 Mr. Barker, you may examine.

1 MR. BARKER: Thank you, Mr. Director.

2
3 DIRECT EXAMINATION

4 BY MR. BARKER:

5 Q. Mr. Shaw, would you state your name and
6 address for the record, please.

7 A. David, middle initial B, as in boy, Shaw
8 S-h-a-w. 4001 East Main Street, Emmett, Idaho 83617.

9 Q. Mr. Shaw, have you -- do you have an
10 occupation at the moment?

11 A. I do.

12 Q. Besides growing fruit, do you do other
13 things?

14 A. I do other things as well, yes.

15 Q. Okay. So what would those other things be
16 that are relevant this proceeding?

17 A. I've worked for the Department of Water
18 Resources and its predecessor agencies from 1973 to
19 19 --

20 MR. FLETCHER: Mr. Director, can people speak
21 up. I'm having a hard time hearing --

22 THE HEARING OFFICER: Yep.

23 MR. FLETCHER: -- both sides of this
24 conversation?

25 THE HEARING OFFICER: Both of you need to talk

1 loudly, please. Okay.

2 THE WITNESS: Okay. I worked for the Department
3 of Water Resources and its predecessor agencies from
4 1973 to 1996. Then I went to work for ERO Resources.
5 That's a natural resource consulting firm. And I've
6 done water resource work for them since 1996.

7 Q. (BY MR. BARKER): Can you tell me a little
8 bit about your educational background. What kind of
9 degrees do you have?

10 A. I have a bachelor's of science and a
11 master's of science from the University of Idaho in
12 agricultural engineering.

13 Q. And what did you do when you first went to
14 work for the Department of Water Resources or its
15 predecessor agency?

16 A. The first program I worked on was the
17 Stream Channel Protection Program.

18 Q. All right. How long did you do that work
19 and what did you do in that job?

20 A. Well, the Department did administer -- I
21 guess they still do -- the Stream Channel Protection
22 Program. So it was reviewing permits and channel work,
23 whether or not it could be permitted or not, or
24 recommendations for changes in proposed channel work.

25 Then I moved to what at the time was the

1 Water Resource Board. They had a separate agency. And
2 I did hydrology work for them.

3 Q. What was the -- what was the separate
4 agency that was then known as the Board, Water Resource
5 Board?

6 A. Well, the Water Resource Board had a
7 separate agency called the Water Resource Board Agency.

8 Q. I see.

9 A. And the constitutional amendment, I think
10 was -- the Idaho Constitutional amendment in 1974
11 limited the number of State agencies. So the -- what
12 was the Department of Water Administration and the
13 Water Resource Board were combined into the Department
14 of Water Resources, the current agency.

15 Q. Okay. So when you went to work for this
16 subagency of the Board, what was your responsibility?

17 A. Specifically I was working on a model. I
18 believe it was a water-quality model for the Boise
19 River. And I worked on that for six months or so while
20 the agencies were still separate.

21 And when the agencies were brought back
22 together, there was a technical support section, I
23 think it was called. A unit of some kind. And we had
24 engineers, hydrologists, soil scientists, economists,
25 and we provided technical support for the rest of the

1 agency. And I was the manager of that section.

2 Q. Do you have any professional
3 certifications?

4 A. I do.

5 Q. And what are those?

6 A. I'm a registered professional engineer and
7 land surveyor in Idaho and a registered professional
8 engineer in Arizona, Colorado, and Oregon.

9 MS. MCHUGH: Can I ask the witness to speak up?
10 I don't know why I can't hear you today, but I can't.

11 THE WITNESS: Okay.

12 Q. (BY MR. BARKER): So when you became the
13 manager of this technical services division, what were
14 you -- what were your responsibilities? What kind of
15 work did you do?

16 A. We were providing technical support for
17 development of the State Water Plan primarily. We did
18 some work from time to time for the administration
19 side. There was a separate hydrology section at that
20 time that did the hydrologic modeling.

21 Q. And how long did you remain in this
22 position as the lead of the technical division or the
23 manager -- what did you say it was? The manager?

24 A. It was a manager. I can't remember what
25 the title was. I think it was about two years, maybe

1 three. And then there was a unit -- a water rights
2 section, and I started managing that section. We
3 processed applications, licenses, transfers for the
4 water rights in Idaho.

5 Q. How long were you in charge of
6 administering -- or in charge of that section
7 administering water rights in Idaho?

8 A. Probably another two years. And then I
9 moved to Western Region, and I was the manager at
10 Western Region until 1985, maybe.

11 Q. And what was your -- what were your duties
12 as the manager of the Western Region in that time
13 frame?

14 A. In the Western Region we had an ongoing
15 water right adjudication in the Payette. We processed
16 water right applications, transfers, the dam safety
17 program was administered out of the region, as well as
18 the Stream Channel Protection Program.

19 Q. Okay. And then after 2000 -- or say 1985
20 you had another position with the Department?

21 A. I did. About that time the Snake River
22 Basin Adjudication was authorized by the legislature,
23 and I was selected as Bureau chief to lead that effort.

24 Q. And did you remain in that position for the
25 rest of the time you were with the Department?

1 A. I did. Until 1996.

2 Q. And in all the time that you worked for the
3 Department and its predecessor entities, did you have
4 any involvement in stream -- or sorry, surface water
5 hydrology?

6 A. Yes.

7 Q. Okay. And what was that?

8 A. Well, some of it was related to the Stream
9 Channel Protection Act, some of it was related to dam
10 safety and inspecting dams. I believe we did a
11 preliminary review on plans for repair before they were
12 finally approved at the State office, and the Stream --
13 I think I mentioned the Stream Channel Protection
14 Program, and also processing new water right
15 applications to verify if there was water available.

16 Q. Is that something you did yourself, or did
17 you delegate that to other people to do under your
18 supervision?

19 A. A combination. If it were an ordinary
20 event, staff would take care of it. If it was unusual,
21 I usually got involved.

22 Q. During the period of time when you were
23 with the Department, did you do any work with respect
24 to groundwater rights?

25 A. With groundwater rights, yes.

1 Q. Okay. Tell us what that was, what
2 involvement you had with groundwater rights during that
3 period of time.

4 A. Well, from the time I went to work for the
5 water rights section, we processed applications for
6 groundwater rights and reviewed licensing exams for
7 groundwater permits that had been developed.

8 The same at the regional office, reviewing
9 applications. And of course, the field exams were done
10 by staff in the regional office. I reviewed those.
11 And the adjudication, we took tens of thousands of
12 claims for groundwater rights that all had to be
13 evaluated and recommended to the court.

14 Q. And in the process of reviewing these
15 groundwater applications and then later claims in the
16 adjudication, did you have some involvement in
17 groundwater hydrology?

18 A. Some involvement, yes.

19 Q. Okay. And what was that that you had?
20 What did you do with respect to understanding
21 groundwater hydrology so that you could process
22 applications and claims in the adjudication?

23 A. In some cases it was an evaluation of
24 whether or not water would be available for a new
25 permit. In other cases, it was conflicts. A new

1 permit application might be protested by either an
2 existing surface water user or groundwater user.

3 Q. And were you also involved in these -- in
4 handling these protests?

5 A. Yes.

6 Q. And that was with -- both when you were at
7 the SRBA and also at the Western Regional office?

8 A. Yes. The protests in the SRBA, of course,
9 were before the court. In regional office it was the
10 administrative procedure for a decision by the Director
11 of whether or not a permit would be granted.

12 Q. Okay. And then you said you left the
13 Department in 1996; did I get that right?

14 A. Yes.

15 Q. Okay. And joined ERO Resources.

16 So what have you done for ERO Resources
17 over the last 25 years?

18 A. A lot of the same kind of work. Evaluating
19 water supplies for new water right applications or
20 protecting -- helping existing water users defend their
21 rights if they believe they would be adversely impacted
22 by new applications, helping claimants in the Snake
23 River Basin Adjudication for both surface and
24 groundwater get their claims decreed.

25 Q. And does that work that you've done at ERO

1 involve evaluating impacts of water use from one source
2 to -- or from one water use to another?

3 A. Yes, it did.

4 Q. And did that include evaluating impacts
5 from surface to groundwater --

6 A. Yes.

7 Q. -- and vice versa?

8 A. Yes.

9 Q. Do you have -- have you done any work in
10 the Wood River Valley before this proceeding?

11 A. Yes.

12 Q. Okay. What kind of work have you been
13 involved in in the Wood River Valley?

14 A. The work I remember particularly was the
15 Stream Channel Protection Program. And in the '80s
16 there were some big water years that caused some
17 erosion in the Wood River Valley.

18 And at that time there were only two
19 offices, two regional offices of Water Resources
20 processing stream channel applications. And the Wood
21 River Valley was handled out of the Western Region
22 office here in Boise. So I spent a fair amount of time
23 dealing with flood issues in the Wood River Valley.

24 Q. Okay. How about water rights and water
25 delivery systems in the Wood River Valley, have you had

1 any prior experience with that before getting involved
2 in this administrative proceeding?

3 A. Yes.

4 Q. Okay. And what has that involvement been?

5 A. In particular, there was a proposal for
6 groundwater development on what's now called the Heart
7 Rock Ranch. It was --

8 Q. Heart Rock?

9 A. Heart Rock Ranch. Used to be the something
10 Dragon Ranch. And I worked for the adjacent property
11 owner that was concerned that their property would be
12 impacted by changes in groundwater levels on the Heart
13 Rock Ranch.

14 Q. By increasing groundwater levels?

15 A. By increasing groundwater levels.

16 Q. And did you do any groundwater analysis in
17 terms of what the -- how groundwater -- how water would
18 move about underground for this project?

19 A. We -- we did not do any modeling. We did
20 monitoring. The developer finally agreed to provide us
21 with groundwater-level data, and we were able to
22 compare that year to year, and also make an evaluation
23 of whether or not the increase in groundwater level was
24 going to impact the adjacent property.

25 Q. Have you been -- well, first of all, let me

1 do this.

2 Have you been qualified as an expert
3 witness in Department of Water Resources proceedings
4 before?

5 A. I have.

6 Q. Many times?

7 A. Many times.

8 MR. BARKER: I offer Mr. Shaw as an expert in
9 hydrology and water rights.

10 MR. FLETCHER: No objection.

11 MR. RIGBY: No objection.

12 THE HEARING OFFICER: Any objections?

13 Mr. Shaw is recognized in the areas
14 described.

15 Q. (BY MR. BARKER): Mr. Shaw, have you been
16 retained by the South Valley Ground Water District?

17 A. I have, yes.

18 Q. And when was that first -- when were you
19 first asked to provide services to the Ground Water
20 District?

21 A. As I recall, it was about six months before
22 the Ground Water District was formed. So that was
23 2015, maybe.

24 Q. And what was your task at that time?

25 A. First task was just to become familiar with

1 the water rights that were within the District and
2 their relationship, both surface and groundwater, to
3 one another.

4 Q. And sometime during the course of working
5 for the Ground Water District, did you look at other
6 issues?

7 A. Yes.

8 Q. Were you involved in analyzing the 2015
9 delivery call?

10 A. Yes, I was.

11 Q. And have you seen -- or did you see the
12 staff memoranda that were prepared by Mr. Luke and
13 Jennifer Sukow with respect to that 2015 delivery call?

14 A. Yes.

15 Q. And were you providing advice to the Ground
16 Water District about the issues raised in those staff
17 memos?

18 A. Yes.

19 Q. Have you over time evaluated claims of --
20 or delivery calls by Mr. Rigby's clients and others
21 from the Little Wood and Big Wood?

22 A. The most work was evaluating the
23 Department's, Mr. Luke's, Ms. Sukow's memos in 2015.
24 The later calls, nothing really happened, I guess, at
25 my level, because they were resolved before they

1 required a lot of work at -- work for me.

2 Q. Okay. So since then what -- since those
3 first couple of delivery calls fizzled out, what have
4 you been doing for the Ground Water District, if
5 anything?

6 A. A couple of things. Helping them with
7 applications for groundwater rights in the basin that
8 might -- might create difficulty for their -- for that
9 water supply. I've also been putting together a
10 Groundwater Management Plan that we hope will be
11 implemented at some point.

12 Q. So you were involved in helping the South
13 Valley put together the initial draft of the
14 Groundwater Management Plan?

15 A. Yes, I was.

16 Q. So tell me about that process. What kind
17 of information was gathered? What kind of consultation
18 were you engaged in?

19 A. The first step I believe was necessary was
20 to educate the groundwater users about at least my
21 understanding and Mr. Powell and Mr. Hill's
22 understanding of the hydrology of the basin.

23 Q. Is that -- so how did you -- what kind of
24 information did you gather to understand the hydrology
25 of the basin?

1 A. There is publicly available data for
2 streamflows on Big Wood, on Silver Creek. Both the
3 Department and Geological Survey have depth to
4 groundwater data, limited, but some is available. The
5 Ground Water District started monitoring one well in
6 2016, and since have put monitoring equipment in
7 additional wells to monitor groundwater levels.

8 So the first thing was to accumulate and
9 understand the available data -- to understand to the
10 best of our ability the function of the hydrology in
11 the basin.

12 Q. And did you work with Mr. Hill to put
13 together that Exhibit 23, the hydrogeology -- or sorry,
14 the hydrology of the basin report we've looked at?

15 A. Yes, I did.

16 Q. What was the -- that's the educational
17 piece that you mentioned?

18 A. Yes.

19 Q. Okay. So then what happened next after
20 that process of trying to educate the groundwater users
21 about what was happening in the basin?

22 A. I've been advocating as strongly as the
23 Directors will listen to me that we need to put
24 together a Groundwater Management Plan.

25 Q. So you helped draft a couple versions of

1 Groundwater Management Plans?

2 A. At least a couple.

3 Q. And you were involved in submitting the
4 Groundwater Management Plan that came -- went to the
5 Director last fall; is that right?

6 A. I worked on that plan, yes.

7 Q. Okay. Along with Mr. Powell and Mr. Hill?

8 A. Yes.

9 Q. Okay. And what were you trying to
10 accomplish or what were you suggesting as a proposal in
11 this Groundwater Management Plan?

12 A. I believe one of the changes to the basin
13 has been the change in irrigation methods over time.
14 Originally the Triangle was developed with surface
15 water, flood irrigation. We know it's sandy, gravelly
16 soil, so it took large amounts of water to irrigate.

17 And we've seen over time the diversions of
18 surface water into the Triangle have diminished. And
19 my belief is that's one of the impacts to -- that has
20 resulted in a decline of Silver Creek.

21 Q. So you've looked at the -- what is -- so
22 first of all, you said there has been a decline in
23 flows in Silver Creek?

24 A. There has been, yes.

25 Q. Over what period of time?

1 A. Well, the gage only goes back to 1975, so
2 we've looked at the period of record.

3 Q. So you're looking at the Sportsman's gage?

4 A. Yes.

5 Q. And you said you were concerned or trying
6 to evaluate what led to that.

7 What do you understand the sources of water
8 to be in the Bellevue Triangle?

9 A. We know that Silver Creek responds to the
10 Big Wood and the discharge at the Hailey gage. There's
11 a strong relationship there.

12 Q. So let me stop you there for a second.

13 Do you remember Mr. Vincent explaining that
14 there was a very strong -- or a strong relationship
15 between the Hailey gage and the flows at Sportsman's
16 Access?

17 A. Yes.

18 Q. Okay. Can you explain why that's the case?

19 A. If I knew exactly why that was the case,
20 we'd be a lot further down the road. We know it
21 happens. So I believe there is a connection -- it
22 may -- well, I'm sure part of it is precip, because
23 both gages respond to precip. I believe there's a more
24 direct connection than that, but I don't have data at
25 this point to describe it.

1 I think part of the connection is the
2 diversions into the Triangle for irrigation purposes.
3 When there's more water in the Big Wood, there's more
4 water diverted on the Triangle for surface
5 irrigation -- or with surface water.

6 Q. Okay. So have you found a correlation at
7 all between diversions and the -- into the Triangle and
8 flows in Silver Creek?

9 A. I have.

10 Q. And what is that?

11 A. It's -- I can't remember. About .5, as I
12 recall, so it's not a blockbuster correlation. But I
13 believe it is a relationship that exists.

14 Q. And have you -- is that relationship or
15 that -- let me rephrase that.

16 That relationship that exists, is that
17 illustrated in Exhibit 24, the presentation that you
18 gave or you were part of giving to the Advisory
19 Committee?

20 A. There is a chart in there that shows the
21 relationship. I'm not sure there's a chart in there
22 that shows the R-squared value.

23 Q. Okay. And did you run the calculations to
24 come up with an R-squared value?

25 A. I did.

1 Q. So when this -- when this hearing came
2 about, were you asked to participate in some fashion by
3 the Ground Water District?

4 A. I was, yes.

5 Q. And you have either been here or listened
6 to a great deal of the testimony so far?

7 A. Yes, I have.

8 Q. Have you also reviewed the staff memoranda?

9 A. I have.

10 Q. I want to call your attention to IDWR
11 No. 4, Tim Luke. It should be in the green book, the
12 one in your hand. The green book to your right hand.

13 Do you have Mr. Luke's --

14 A. I do.

15 Q. -- staff memo in front of you?

16 Would you turn to page 21, please.

17 A. I have that.

18 Q. Okay. This is a part of Mr. Luke's memo
19 that's described as "Analysis of Possible Injury."

20 Have you reviewed this?

21 A. I have.

22 Q. Have you spent some time analyzing this
23 part of the memo?

24 A. Yes, I have.

25 Q. Okay. So first of all, tell me what you

1 understand that this analysis was intended to show or
2 intended to look at.

3 A. I believe Mr. Luke was looking -- making a
4 comparison between water years 2020 and 2004 and 1939
5 and 1937 as analogous years.

6 Q. So why do you understand that 19 -- the
7 years in the 1930s were selected?

8 A. I believe Mr. Luke selected those based on
9 comparable SWSIs from this year, 2020, 2004, 1939, and
10 1937.

11 Q. Okay. But why did he go back to the 1930s,
12 to your understanding?

13 A. I believe he looked for years with
14 comparable SWSIs pre-groundwater development.

15 Q. So do you believe that the 1930s are pre --
16 essentially pre-groundwater development, based upon
17 your review of the history of groundwater pumping in
18 this basin?

19 A. Essentially, yes.

20 Q. Is it your understanding that Mr. Luke's
21 analysis was based on the SWSI information that he had
22 at the time he did the May 17th memo?

23 A. Yes, the April 1 SWSI.

24 Q. Okay. So we -- when we started this
25 hearing, we got a very -- an updated SWSI report from

1 Mr. Vincent.

2 Do you remember seeing that?

3 A. I do.

4 Q. Okay. So what did that tell you -- or what
5 did that updated report tell you about how to analyze
6 what Mr. Luke had done in trying to compare
7 pre-groundwater pumping with current?

8 A. It -- it made the years 2020 and 2004 that
9 he selected not be the best years to use in the
10 comparison.

11 Q. And why is that?

12 A. Because the SWSI for those years was higher
13 in -- at the 1st of June than for 2021.

14 Q. So you were trying to find a comparable
15 year for 2021 that would -- is that what you're --

16 A. Yes.

17 Q. -- that's different than the years that
18 Mr. Luke selected?

19 A. Yes.

20 Q. Okay. So how did you go about making that
21 determination?

22 A. Well, Mr. Vincent suggested that 1994 was
23 the most comparable June 1 SWSI in the last 30 years.

24 Q. Okay. And so did you do -- did you look at
25 the 1994 hydrology data?

1 A. I did.

2 Q. Okay. And what did that tell you about a
3 comparable year? Well, first of all, why did you
4 need -- why did you and Mr. Luke both need a comparable
5 year? Is there a reason you can't just use 2021?

6 A. Well, we don't have data yet for 2021.

7 Q. So you're trying to find a year as close as
8 possible to 2021?

9 A. Yes.

10 Q. Okay.

11 A. But I want --

12 Q. So you looked at 1994.

13 And then what did you conclude?

14 A. Well, I had started the process before
15 Mr. Vincent's last report. And I wanted to look at
16 years where I could see if there was a difference in
17 water supply pre-groundwater development and presently.
18 So the '30s were a time pre-groundwater development.
19 And there are some data available for those years. So
20 that was a good start that Mr. Luke made. And he, like
21 I said, chose 2020 and 2004.

22 Well, then we got a report from Ms. Sukow
23 that used 2002 as a comparable year. And Mr. Miller
24 has been using 2007 as a comparable year. And then
25 like I said, Mr. Vincent on Monday put 1994 on the

1 table as a comparable year. And I wanted to do a
2 comparison but have it be manageable so we could talk
3 about it today.

4 So I did an analysis of turning off water
5 rights of priorities that are involved in this
6 proceeding in a current year and in the '30s. And in
7 the '30s a water right was on for the entire year, and
8 in current year --

9 Q. So you said "current year."

10 Are you using -- you're not using 2021
11 data?

12 A. Recent year.

13 Q. Okay.

14 A. Pardon me. Bad term. Recent year. The
15 right was turned off on August 15th, say, then there
16 were 46 days difference between August 15th and I used
17 September 30th for the end of the year, end of the
18 irrigation season.

19 And since I was looking at 2020, 2007,
20 2004, 2002, 1994, it became a little unmanageable to
21 make into some form of exhibit. So I did that analysis
22 for all of those years, compared them to the '30s, and
23 I picked the year that had the most days of difference.

24 Q. Okay. And what year was that?

25 A. That's 2002.

1 Q. Okay. And why did you pick the year with
2 the most days of difference, instead of the least?

3 A. I believe that will result in the largest
4 difference in water supply between the '30s and recent
5 times.

6 Q. So that would be the upper limit as far as
7 the difference between the '30s and recent years?

8 A. Yes, I believe it would.

9 Q. So did you also look at the -- the SWSI
10 numbers for the years in the 1930s?

11 A. I didn't look at the SWSI numbers. I
12 looked at the June through September discharge since we
13 have a good gage at Hailey that goes back to 1916, I
14 think. And I compared the discharge from June to
15 September in 1994 to years in the '30s.

16 1994 is about 43,000 acre-feet. And 1926
17 would have been a perfect match, but as Mr. Luke says
18 in his memo, there are no Black Books available for
19 1926. So I selected 1931. That's about 10,000
20 acre-feet less than 1994. And 1937. That's about
21 10,000 acre-feet more than 1994. And completed my
22 analysis using those three years, comparing 2002 to
23 1931 and 1937.

24 Q. Okay. And did you prepare some information
25 in a tabular form?

1 A. I did.

2 MR. BARKER: Can we go off the record and put a
3 sticker on this?

4 THE HEARING OFFICER: Sure.

5 Let's go off.

6 (Recess.)

7 (SVGWD GGWD Exhibit 42 marked.)

8 Q. (BY MR. BARKER): Okay. So looking at the
9 document that we marked as Exhibit 42, would you just
10 walk us through the methodology first again.

11 A. Okay. First the selection of the names.
12 Attachment A to Mr. Luke's May 17th, 2021 memorandum
13 had a list of individuals that he thought could be
14 impacted by groundwater pumping in 2021. So I started
15 with that list and selected those individuals who had
16 made an appearance in this proceeding.

17 Q. Okay. And that's the block on the
18 left-hand side?

19 A. That's the block on the left-hand side,
20 except for Mr. Taber at the bottom.

21 During his deposition it appeared he had
22 groundwater rights that covered his surface-water
23 irrigated area. We found that the groundwater only
24 covers two-thirds, three-quarters. So I put him on the
25 list, even though he was not on Mr. Luke's list.

1 Q. Okay. And then the center block is, what
2 does that mean when it says "Cut dates"?

3 A. The cut dates are from the watermaster
4 Black Books. So if a water right, like the first one
5 in 2002, was curtailed on May 15th, it came back on on
6 June 3rd, and was curtailed for the year on June 18th.
7 And I did the same procedure for 1937 and 1931.

8 MR. BARKER: Okay. So -- well, I guess before
9 we testify any further about this, I'm going to offer
10 South Valley Ground Water District No. 42 as part of
11 Mr. Shaw's expert witness analysis.

12 THE HEARING OFFICER: Any objection to the
13 admission of this document?

14 MR. FLETCHER: May I ask a question in aid of
15 objection?

16 THE HEARING OFFICER: Yes.

17

18 VOIR DIRE EXAMINATION

19 BY MR. FLETCHER:

20 Q. When did you prepare this document,
21 Mr. Shaw?

22 A. Pardon me?

23 Q. When did you prepare this document?

24 A. This has been evolving from when I received
25 the report from Mr. Luke. I finished this document

1 last night.

2 Q. Did you furnish this -- any of this
3 information at the time of your deposition?

4 A. No.

5 Q. Were you working on this at that time?

6 A. Yes.

7 Q. Weren't you asked to produce your work
8 product at that deposition?

9 A. I didn't have a work product. Mr. Rigby
10 asked me what I was working on. I told him. And he
11 didn't inquire any further.

12 Q. But wasn't there a duces tecum attached to
13 that deposition asking you to bring those documents?

14 MR. BARKER: And wasn't there an objection to
15 the subpoena duces tecum as beyond the scope of
16 Rule 26?

17 THE HEARING OFFICER: Well, Mr. Barker,
18 Mr. Fletcher is asking these questions in aid of
19 objection.

20 MR. BARKER: Okay.

21 THE HEARING OFFICER: I think your participation
22 is improper right now.

23 MR. BARKER: Thank you.

24 THE HEARING OFFICER: Mr. Fletcher.

25 MR. FLETCHER: Yeah, I'm going to object to

1 this, your Honor. Here we are the last witness of the
2 hearing, and we're getting this exhibit for the first
3 time. Our exhibit -- our experts have had no
4 opportunity to go through this analysis or through this
5 documentation.

6 Our expert furnished his report --
7 actually, I can't remember when we first furnished the
8 first version. Several weeks ago. They've furnished
9 no expert reports. They haven't furnished us
10 information. It's just too late for us to respond to
11 this.

12 MR. RIGBY: I would join in that objection.
13 Having taken that deposition, there was nothing about a
14 report that is before us now identified with even
15 specificity of what the report was going to do. It was
16 just that I'm continuing to work for the plaintiffs --
17 I mean for the Ground Water District.

18 THE HEARING OFFICER: Okay. Mr. Barker.

19 MR. BARKER: There was no report prepared at the
20 time of the deposition. This is something that, as
21 Mr. Shaw says, has been evolving over time. Part of it
22 has been as a result of the deposition testimony.
23 We've been receiving new exhibits as we go along.
24 We've been receiving new information and new exhibits
25 as we go along. The '31 Black Book was just provided

1 to us by the Department this week, a couple of days ago
2 in fact.

3 So it -- unfortunately with the timing of
4 this hearing, and we've been getting new information
5 from Mr. Miller this week as well. So it's a little
6 bit unfortunate that we're supposed to respond to all
7 of this information that's been provided to us, and in
8 this period of time where information keeps slowly
9 dribbling in to the parties.

10 And so this is part of the analysis. It's
11 not anything different than what Mr. Luke has done,
12 except for he brings this information up to date based
13 upon the new information that we got from the
14 Department, from Sean Vincent on Monday, and from the
15 Department with the 1931 information on Wednesday. So
16 we -- I don't understand why we wouldn't be able to
17 respond to new information that the Department
18 provides.

19 How are we supposed to make this available
20 before the -- before we get the information?

21 THE HEARING OFFICER: Well, I understand your
22 argument, Mr. Barker. And I also have -- I'm sensitive
23 to the concerns of those who are objecting.

24 So at least right now I'll withhold
25 allowing this into evidence, but I'll allow you to

1 question Mr. Shaw. I'm not sure I'll allow this in.
2 And part of the problem is I'm not sure -- I'm not sure
3 I even understand the selection of the years and why he
4 did what he did, but anyway --

5 MR. BARKER: Okay. Well --

6 THE HEARING OFFICER: Because I think this is a
7 departure from Mr. Luke's analysis. And it takes us in
8 an entirely different direction. So I'm inclined,
9 honestly, not to allow it in.

10 But go ahead, Mr. Barker. I'll withhold
11 ruling on the objection.

12 MR. BARKER: Okay. So first of all -- well,
13 before I ask a question, I do want to ask the question.

14 Are we not allowed to respond to the
15 information that the Department has added to the record
16 in this week? Are we not allowed --

17 THE HEARING OFFICER: I don't know --

18 MR. BARKER: Are we not allowed to consider
19 that?

20 THE HEARING OFFICER: I don't know what that
21 information is, Mr. Barker.

22 MR. BARKER: Well, we got -- as I explained, we
23 got Mr. Vincent's new SWSI information on Monday. You
24 saw that. You admitted that into evidence. On
25 Wednesday we got the 1931 Black Books.

1 THE HEARING OFFICER: But, Mr. Barker, this
2 isn't even using SWSI; right? It was a selection of
3 year 2002, which was not an analogous year. It was
4 selected --

5 MR. BARKER: Why do you think 2002 is not an
6 analogous year?

7 THE HEARING OFFICER: It was not selected based
8 on SWSI. That's what I understand Mr. Shaw's testimony
9 to be, that he took and selected one of four or five
10 alternative years that he might want to select.

11 MR. BARKER: Well, you -- your witnesses, your
12 witnesses have used four or five different years. He
13 was analyzing each one of those four or five different
14 years and picking the one that he thought provided the
15 greatest amount of difference.

16 THE HEARING OFFICER: This analysis is not based
17 on SWSI. And the -- and the other years that were
18 referred to, 2002, 2007, and the other years, those
19 were not based on SWSI either. They were -- the
20 criteria for selecting those years were different than
21 what Mr. Luke's analysis was.

22 MR. BARKER: Correct. But what Mr. Vincent's
23 new exhibit shows us is that there is new information
24 about the water conditions this year that requires a
25 review of what is the appropriate year.

1 THE HEARING OFFICER: Okay. Based on our
2 discussion, Mr. Barker, I will right now exclude this
3 document.

4 Thank you. Let's go on.

5 MR. BARKER: So you're not going to allow
6 Mr. Shaw to testify about the work that he's done; is
7 that what you're telling me?

8 THE HEARING OFFICER: You can explore the
9 subject with him.

10 MR. BARKER: Okay.

11

12 CONTINUED DIRECT EXAMINATION

13 BY MR. BARKER:

14 Q. So let's go back and try to answer some of
15 the Director's concerns.

16 So, Mr. Shaw, is this -- is what you -- the
17 analysis that you've done a departure from what
18 Mr. Luke has done, or are you simply building upon
19 what -- the work that he's done?

20 A. I believe I'm taking Mr. Luke's work the
21 next step. He talked about differences in the years,
22 but he didn't quantify the differences, and that's what
23 I attempted to do.

24 Q. Okay. And were you satisfied that the
25 years that he had selected from the -- based on the

1 April 1 SWSIs were accurate years to compare?

2 A. I was until Monday, when Mr. Vincent had
3 the new SWSI and suggested we use 1994 as an analogous
4 year.

5 Q. Okay. So why did you not use 1994? Why
6 did you use 2002 instead?

7 A. I used 2002 because I know it will produce
8 a larger difference.

9 Q. So had you used 1994, the calculations
10 would have shown less of a difference?

11 A. That's -- yes.

12 Q. Okay. And so you were trying, again, to
13 set the upper bounds of what the difference would be?

14 A. Yes.

15 Q. And did you also have at the time of the --
16 of Mr. Luke's report any information about the 1931
17 delivery cuts?

18 A. No. I selected 1931 based on Mr. Vincent
19 selecting 1994 as a comparable recent year.

20 Q. Okay. So why do you think 1931 is
21 comparable to 1994?

22 A. Well, the June through September discharge
23 of the Big Wood at Hailey in 1994 was about 43,000
24 acre-feet. So I was looking for a comparable year
25 pre-groundwater development. The best match was 1926.

1 But there is no watermaster book for 1996 [sic].

2 So I selected 1931. That's about 33,000,
3 and 1937, that's about 53,000, and believe that the
4 actual difference will be between the analysis of those
5 two years.

6 Q. And where did you get these numbers from,
7 the 33, 43, 53,000 acre-feet of flow from the -- from
8 the Hailey gage at Big Wood?

9 A. I used the curtailment dates.

10 Q. No, no, no. Where did you get the total
11 volume --

12 A. Oh, pardon.

13 Q. -- from -- for each one of those three
14 years?

15 A. Yeah. From the USGS gage at Hailey.

16 Q. Okay. And so you got -- I think you said
17 you compared the 1994 date, which was suggested by
18 Mr. Vincent, and you didn't find an analogous year
19 where there was actual Black Books from the Department?

20 A. That's right.

21 Q. Or from the Water District?

22 A. That's right.

23 Q. So you looked at the two closest years you
24 could find predevelopment?

25 A. Yes.

1 Q. And those were what?

2 A. 1931 and 1937.

3 Q. Okay. And then once you had that
4 information from the Black Books, what did you do to
5 compare the 2002, which provided -- which provided a
6 greater difference than 1994 with 1931 and 1937?

7 A. As you can see in the middle column --

8 MR. RIGBY: We would object to the analysis or
9 the summary of the exhibit --

10 THE WITNESS: All right.

11 MR. RIGBY: -- that's not been allowed to be
12 included or admitted.

13 THE WITNESS: And in the Black Books there
14 are --

15 MR. FLETCHER: He needs to rule.

16 THE HEARING OFFICER: All right. I've got an
17 objection again.

18 I suppose, Mr. Barker, you're headed
19 towards re-offering this exhibit that's been marked?

20 MR. BARKER: Well, I was trying to lay a little
21 more foundation for what he did in each one without --
22 in the columns so that you would understand what we
23 were trying to accomplish here.

24 But yes, I'd be happy to offer this
25 Exhibit 42 at this time.

1 THE HEARING OFFICER: Well, I mean the argument,
2 again, has been that there was a new SWSI. And because
3 of the new SWSI on June 1st or the 1st of June, that
4 there was another analogous year, which was 1994. But
5 through some process that then was not the analogous
6 year. The analogous year that was selected was 2002.
7 So it had nothing to do with the SWSI at all.

8 MR. BARKER: Well, I --

9 THE HEARING OFFICER: And I'm sorry, but that is
10 not the analysis that Mr. Luke went through. And I
11 don't even see this as being rebuttal evidence, so --

12 MR. BARKER: I'm not -- we're not rebutting
13 Mr. Luke. As Mr. Shaw said, we're building upon --
14 taking his information, updating it with new water
15 supply information, and trying to explain the
16 consequences of his approach with the new water supply
17 information.

18 And as Mr. Shaw said, had he selected 1994,
19 which Mr. Vincent used, he would have had less
20 difference than using the 2002.

21 THE HEARING OFFICER: All right. Well, I guess
22 I will treat this, Mr. Barker, as an offer of proof.
23 And if you want to put it on and refer to the document,
24 I won't rule on its admission. But certainly at least
25 the evidence will be in the record and the document

1 will be in the record. So I don't want to tell you you
2 can't at least put it in the record as an offer of
3 proof.

4 MR. BARKER: Okay.

5 THE HEARING OFFICER: But I may disregard it
6 completely. I can't draw the connection.

7 Go ahead. You can refer to the document.

8 MR. BARKER: Thank you.

9 Q. So, Mr. Shaw, the middle column that you
10 used, explain the process that you went through.

11 A. Well, first of all, I want to make clear
12 that the 1931 year was selected because of the new
13 June 1st SWSI, because previously I had used 1937 and
14 '39 based on Mr. Luke's analysis. So --

15 Q. And why did the SWSI -- June 1 SWSI change
16 your selection of years from the ones Mr. Luke had
17 selected?

18 A. Because the -- as Mr. Vincent pointed to
19 1994, and the June, September discharge was different
20 than 1937 and 1939, and I wanted to match that
21 discharge. So I eliminated 1939 and selected 1931.
22 And now they're bookends to what the 1994 June,
23 September discharge was.

24 Q. Okay. And then when you evaluated the --
25 each one of those three years, 2002, 1937, and 1931,

1 did you look at the cut dates in the Black Books?

2 A. I did.

3 Q. Okay. And then did you compare the cut
4 dates from those years with the cut dates in 2002?

5 A. Yes.

6 Q. Okay. And what did you find with respect
7 to the junior water rights?

8 A. The junior water rights in the -- late '85
9 is kind of on the bubble of junior and senior. The
10 junior water rights had been on more days per season in
11 recent years than they were in the '30s.

12 And referring to the document again, under
13 the delta days column, some of those are negative
14 numbers. And that means those water rights were on
15 more days in 2002 than in either 1931 or 1937.

16 Q. All right. And so in Mr. Luke's report,
17 did he attempt to determine the number of days that
18 water rights were cut between the years that he had
19 selected?

20 A. I don't believe he did, no.

21 Q. And so the difference is that you're taking
22 that approach and now determining what the number of
23 cut days would have been?

24 A. Yes.

25 Q. Or were, actually?

1 A. Would have been, yes.

2 Q. And when you go through the next column,
3 the delta between '02 and '37 and '02 and '31.

4 A. Yes. I multiplied the number of days
5 difference times the diversion rate, and came up with a
6 number of acre-feet.

7 Q. So you got number delta in days, and then
8 you got delta in acre-feet column; right?

9 A. Yes.

10 Q. And then you have acre-feet per acre
11 column.

12 What does that refer to?

13 A. I tested to see if any of the numbers that
14 I calculated -- excuse me -- would provide more than
15 3 1/2 acre-feet per acre.

16 Q. And so if that occurred, what did you --
17 what did you do?

18 A. If that occurred, I reduced the total
19 amount of water to make the water available 3 1/2
20 acre-feet per acre.

21 Q. And why did you pick 3 1/2 acre-feet per
22 acre?

23 A. It -- that's not on the surface water
24 rights. I believe it's the amount on the groundwater
25 rights in annual volume. So I picked that as a full

1 water supply.

2 Q. And did you total up the differences
3 between 2002 and 1937 and 2002 and 1931?

4 A. I did.

5 Q. And what did you find the difference in
6 acre-feet between those years was?

7 A. The difference between 2002 and 1937 was
8 2781 acre-feet. The difference between 2002 and 1931
9 was 904 acre-feet.

10 Q. And so in 1937 there was about 10,000
11 acre-feet more in the river --

12 A. That's true.

13 Q. -- at Hailey?

14 A. Yes.

15 Q. Okay. And when you're trying to compare
16 what happened in the 1930s with what happened in recent
17 years, are there any -- are there any differences
18 between the operations or conditions in the Little Wood
19 between -- between those years?

20 A. In -- excuse me. In the 1931 Black Book,
21 it wasn't the part that was distributed to everyone on
22 Wednesday, but there was a table that shows the losses
23 between the old Silver Creek gage, which is near
24 Picabo, it was a little bit downstream from the
25 existing gage, and Gage 10 was 15 percent for the year.

1 MS. MCHUGH: Mr. Shaw, can you speak up?

2 Q. (BY MR. BARKER): How much was the loss in
3 the 1931?

4 A. That loss was 15 percent, the average for
5 the year.

6 Q. And you've seen Jennifer Sukow's estimate
7 of seepage loss?

8 A. Yes.

9 Q. And what is it now currently estimated to
10 be?

11 A. As I recall, her estimate was 25 to 37, or
12 something like that, percent.

13 Q. So in essence, the seepage losses in the
14 Little Wood have doubled since the 1930s?

15 A. Based on those two samples, yes.

16 Q. And what would the effect of having twice
17 as much seepage loss in the Little Wood between the
18 1930s and today have on the water supply?

19 A. It would reduce the water supply for the
20 reach of the river that these water rights were located
21 on.

22 Q. And in -- is it your understanding that the
23 operations of the Magic Reservoir have an effect on
24 flows in the river at Silver -- or sorry, in Little
25 Wood?

1 A. In the -- in the reach of the Little Wood
2 from Gage 10 to Gage 54, yes, I understand they do have
3 an impact.

4 Q. And does that have -- if there's water from
5 the Big Wood injected into the Little Wood at
6 Richfield, what does that do to relative priorities on
7 the Little Wood?

8 A. There's usually water from the Big Wood in
9 the reach from Gage 10 to Gage 54. When the Big Wood
10 has water, that increases the water supply in that
11 reach.

12 Q. Okay. And so does that mean that water
13 rights would stay in priority longer in the Little Wood
14 when the Big Wood is in -- is delivering water to
15 Richfield?

16 A. That's my understanding, yes.

17 Q. Okay. So would you take a look in the book
18 in front of you at Exhibit 28. No, no, no. The yellow
19 book. Sorry.

20 A. Which number?

21 Q. 28. South Valley/Galena Exhibit 28.

22 A. I have that.

23 Q. Okay. So tell me what Exhibit 28 depicts.

24 Well, first of all, where did you -- how
25 was Exhibit 28 generated?

1 A. Exhibit 28 came from the USGS record of
2 storage in Magic Reservoir.

3 Q. And was this something that you looked at
4 when you evaluated the years in the 1930s?

5 A. I actually looked at the data that this
6 came from.

7 Q. Okay. But this is based upon federally
8 generated data from the USGS?

9 A. Yes, it's public record.

10 MR. BARKER: Okay. I would offer Exhibit 28.

11 THE HEARING OFFICER: Any objection to the
12 admission of this document?

13 MR. RIGBY: No.

14 THE HEARING OFFICER: Based on no response, the
15 document marked as South Valley and Galena Exhibit 28
16 is received into evidence.

17 (SVGWD GGWD Exhibit 28 received.)

18 Q. (BY MR. BARKER): So what does Exhibit 28
19 tell you about the condition of Magic Reservoir in 1937
20 when the -- which was one of the years that Mr. Luke
21 used as a comparable?

22 A. 1937, the reservoir didn't quite fill. As
23 I recall, the number was 174,000 acre-feet was
24 available in Magic in 1937.

25 Q. So what would that mean for the

1 availability of water in the Little Wood in 1937?

2 A. From our understanding, it would improve
3 the water supply in the reach from Gage 10 to Gage 54.

4 Q. So if I'm comparing current years with
5 1937 -- well, first of all, in 2021 is there going to
6 be any water in Magic to get to Richfield?

7 A. No. 2021 is much like 1931.

8 Q. Okay. So '31 is a more comparable year in
9 that regard; right?

10 A. In regard to storage in Magic, it is, yes.

11 Q. Okay. So is the document that you prepared
12 that we've offered as Exhibit 42, is that intended to
13 be a demonstration of loss of supply?

14 A. It's intended to be the difference between
15 water availability based on cut dates in the '30s and
16 2002.

17 Q. And does this Exhibit 42 show injury, to
18 your understanding?

19 A. No.

20 MR. BARKER: So I -- I've heard what you said,
21 Mr. Director. I'm going to re-offer Exhibit 42 at this
22 time.

23 THE HEARING OFFICER: And I will reiterate that
24 this will at least be viewed as an offer of proof. I
25 won't receive it into evidence at this time.

1 MR. RIGBY: And we would continue to object.

2 THE HEARING OFFICER: Noted.

3 MR. BARKER: Okay. So since it's just an offer
4 of proof, there won't be any cross-examination, I take
5 it? At least that's the way a courtroom proceeding
6 works.

7 THE HEARING OFFICER: Mr. Fletcher?

8 Mr. Rigby?

9 MR. FLETCHER: Well, I would like a
10 clarification on that issue.

11 Usually with an offer of proof, the offer
12 of proof's made, and then a ruling is made on the
13 exhibit after the offer of proof. If this exhibit's
14 not going to be admitted, I will not cross on it.

15 MR. RIGBY: I agree. How can you still hold the
16 potential of it being accepted and not allow us to
17 cross-examine?

18 MR. FLETCHER: Unless you want us to
19 cross-examine as part of the offer of proof. But the
20 problem I have with this is being dropped -- I mean if
21 it was -- even if it had been to us yesterday when it
22 was prepared --

23 MR. BARKER: It was prepared last night, Kent.

24 MR. FLETCHER: Okay. It could have been sent to
25 us last night.

1 MR. BARKER: It was given to you today.

2 MR. FLETCHER: You keep interrupting me, Al.

3 THE HEARING OFFICER: Let's go off the record.

4 MR. FLETCHER: Why do you interrupt me when I'm
5 making my point?

6 THE HEARING OFFICER: I don't want all that on
7 the record.

8 (Recess.)

9 THE HEARING OFFICER: Back on the record. So
10 we're back on the record.

11 And I stated that I will consider the
12 testimony of Mr. Shaw related to the document marked as
13 South Valley and Galena Exhibit No. 42. I will
14 consider all of that as an offer of proof, and at least
15 without some additional -- well, no, as an offer of
16 proof. I'm not allowing some particular exhibit into
17 the record.

18 Thank you.

19 MR. BARKER: I'm sorry. Mr. Director, I didn't
20 hear what you said, unless -- you said unless
21 something?

22 THE HEARING OFFICER: No, I retracted that.

23 MR. BARKER: Oh, okay.

24 THE HEARING OFFICER: I'm not allowing this into
25 evidence. But it is in the record as an offer of

1 proof.

2 MS. MCHUGH: Mr. Director, this is Candice on
3 behalf of the City of Bellevue.

4 Just to clarify, the document isn't in and
5 testimony relating to the document and the document are
6 both offers of proof, or the oral testimony --

7 THE HEARING OFFICER: No, I think they're
8 both -- I think they're both a part of the offer of
9 proof.

10 MS. MCHUGH: Okay. I just wanted to understand
11 what you were doing --

12 THE HEARING OFFICER: Yeah.

13 MS. MCHUGH: -- with the oral testimony as well.

14 THE HEARING OFFICER: Yeah.

15 MS. MCHUGH: Thank you.

16 THE HEARING OFFICER: More questions for
17 Mr. Shaw?

18 MS. O'LEARY: Mr. Director.

19 MR. BARKER: Oh, sorry. Go ahead.

20 MS. O'LEARY: I just had a couple.

21 THE HEARING OFFICER: So you're finished,
22 Mr. Barker?

23 MR. BARKER: Yes.

24 THE HEARING OFFICER: Okay. Ms. O'Leary.

25 ///

1 DIRECT EXAMINATION

2 BY MS. O'LEARY:

3 Q. Good afternoon, Mr. Shaw. I just have a
4 few questions for you.

5 To the best of your knowledge, does Tim
6 Luke collect actual data? Does he go out in the field
7 and collect data, or would he rely on somebody to
8 provide him with data?

9 MR. FLETCHER: I'm going to object. That's
10 beyond the scope of direct, based upon the Director's
11 ruling, as I understand it.

12 MR. BARKER: Wait a minute. I'm going to
13 object. This witness is appearing on behalf of both
14 South Valley and Galena. So Galena's entitled to do
15 direct examination, just like you guys both directly
16 did those witnesses.

17 THE HEARING OFFICER: Let me rule.

18 Objection overruled.

19 MR. FLETCHER: Yeah. Excuse me. I made that
20 objection thinking -- is this direct examination of the
21 witness?

22 MS. O'LEARY: Yes. I represent Galena Ground
23 Water District.

24 MR. FLETCHER: Okay. No, I understand. That's
25 fine.

1 MS. O'LEARY: Okay.

2 MR. FLETCHER: I have no objection to your
3 direct examination of the witness. I'm sorry.

4 THE HEARING OFFICER: Great. Thank you.

5 THE WITNESS: Could you restate the question?

6 THE HEARING OFFICER: Go ahead, Ms. O'Leary.

7 Q. (BY MS. O'LEARY): Sure. Mr. Shaw, you
8 have a long tenure of experience in this field and with
9 the Department.

10 And based on your experience, would someone
11 in Mr. Luke's position go out into the field and
12 collect data, or would he rely on someone like the
13 watermaster to provide him with such information?

14 A. I believe in Mr. Luke's case he does both.
15 He has gone out in the field and collected data, and
16 he's relied on others, including the watermaster.

17 Q. Okay. So in your experience, it is
18 reasonable for him to use data provided to him by the
19 watermaster and not necessarily data that he computed
20 or collected himself?

21 A. Yes.

22 Q. Okay. And so if someone in this proceeding
23 was relying on data from Mr. Luke, that would mean that
24 such data may have come from the watermaster, not
25 necessarily calculations made by Mr. Luke?

1 A. You said "data" and then you said
2 "calculations."

3 So I need to clarify which you're talking
4 about.

5 Q. Sure. Let's go with calculations
6 provided -- if Mr. Luke was to provide someone in a
7 proceeding such as this with certain calculations, is
8 it reasonable to assume, based on your experience, that
9 those were not computed by him, but they could have
10 been computed by the watermaster?

11 A. I think as far as computations are
12 concerned, if Mr. Luke reported them as computations, I
13 believe they would be -- would have been made by him.
14 He may rely on water -- on data from others, including
15 the watermaster, to make the computations.

16 Q. Okay. And if he relied on data that was
17 provided by other people that was inaccurate, then it
18 would be reasonable to assume that his calculations
19 would also be inaccurate; is that fair?

20 A. That's fair.

21 MS. O'LEARY: Okay. Thank you.

22 THE HEARING OFFICER: Any other questions?

23 Group three?

24 Mr. O'Bannon, question.

25 MS. MCHUGH: I think we do.

1 THE HEARING OFFICER: Mr. Bromley.

2 MR. BROMLEY: Just one question, Director.

3 Chris Bromley.

4 THE HEARING OFFICER: Yeah.

5
6 CROSS-EXAMINATION

7 BY MR. BROMLEY:

8 Q. Mr. Shaw, what you were discussing with
9 counsel, was this just simply an alternative way of
10 looking at the ultimate question here, which is injury?

11 A. I want to emphasize this was not an injury
12 analysis. It was a difference analysis to identify the
13 water supply differences over time.

14 Q. And not an injury analysis, but a supply
15 analysis?

16 A. Yes.

17 MR. BROMLEY: Okay. Thank you.

18 THE HEARING OFFICER: Thank you, Mr. Bromley.

19 Cross-examination, Mr. Fletcher?

20 MR. FLETCHER: I have no questions.

21 THE HEARING OFFICER: Mr. Rigby?

22 MR. RIGBY: No questions.

23 THE HEARING OFFICER: Okay. Ten after 5:00.

24 What do we want to do?

25 MR. THOMPSON: So we can go off the record.

1 THE HEARING OFFICER: Do you want to go off the
2 record?

3 MR. THOMPSON: We could stay on.

4 I guess I just have a question. Has the
5 pumping data that Mr. Luke orally provided to
6 Mr. Miller represented for 2019, 2020 been provided in
7 written form? I guess the source of that data I'd like
8 to know.

9 There was a question earlier about Kevin
10 Lakey providing pumping data, Mr. Luke providing
11 pumping data. I just need to know where all of this
12 came from. I don't think we've been provided that by
13 the Department.

14 THE HEARING OFFICER: Let's go off the record.

15 (Discussion.)

16 THE HEARING OFFICER: We're on the record.

17 We're adjourned until tomorrow morning at
18 8:30.

19 Thank you.

20 (Hearing adjourned at 5:22 p.m.)

21 -oOo-

22

23

24

25

1 REPORTER'S CERTIFICATE

2 I, JEFF LaMAR, CSR No. 640, Certified Shorthand
3 Reporter, certify:

4 That the foregoing proceedings were taken before
5 me at the time and place therein set forth, at which
6 time the witness was put under oath by me.

7 That the testimony and all objections made were
8 recorded stenographically by me and transcribed by me
9 or under my direction.

10 That the foregoing is a true and correct record
11 of all testimony given, to the best of my ability.

12 I further certify that I am not a relative or
13 employee of any attorney or party, nor am I financially
14 interested in the action.

15 IN WITNESS WHEREOF, I set my hand and seal this
16 17th day of June, 2021.

17
18
19
20


21 JEFF LaMAR, CSR NO. 640

22 Notary Public

23 Post Office Box 2636

24 Boise, Idaho 83701-2636

25 My commission expires December 30, 2023

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BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO

IN THE MATTER OF BASIN 37) DOCKET No.
ADMINISTRATIVE PROCEEDING) AA-WRA-2021-001
_____)

VOLUME VI
(Pages 1381-1479)

BEFORE

HEARING OFFICER: GARY SPACKMAN

Date: June 12, 2021 - 8:38 a.m.

Location: Idaho Department of Water Resources
322 East Front Street
Boise, Idaho

REPORTED BY:
COLLEEN P. DOHERTY, CSR 345
Notary Public

APPEARANCES:

For the South Valley Ground Water District:

BARKER ROSHOLT & SIMPSON, LLP

BY MR. ALBERT P. BARKER

MR. TRAVIS L. THOMPSON

163 Second Avenue West

Post Office Box 2139

Twin Falls, Idaho 83301

apb@idahowaters.com

tlr@idahowaters.com

For Galena Ground Water District:

LAWSON LASKI CLARK, PLLC

BY MR. JAMES R. LASKI

MS. HEATHER E. O'LEARY

Post Office Box 3310

Ketchum, Idaho 83340-3310

jrl@lawsonlaski.com

heo@lawsonlaski.com

For Big Wood Canal Company:

FLETCHER LAW OFFICE

BY MR. W. KENT FLETCHER

Post Office Box 248

Burley, Idaho 83318

wkf@pmt.org

1 APPEARANCES (Continued):

2
3 For Big Wood and Little Wood Water Users Association:

4 RIGBY, ANDRUS & RIGBY, CHARTERED

5 BY MR. JERRY R. RIGBY

6 MR. CHASE T. HENDRICKS

7 25 North Second East

8 Rexburg, Idaho 83440

9 irigbv@rex-law.com

10 chendricks@rex-law.com

11 For Idaho Department of Fish and Game:

12 OFFICE OF ATTORNEY GENERAL

13 BY MR. OWEN E. MORONEY

14 Post Office Box 83720

15 Boise, Idaho 83720-0010

16 owen.moroney@ag.idaho.gov

17 For Sun Valley Company:

18 McHUGH BROMLEY, PLLC

19 BY MR. CHRIS M. BROMLEY

20 MS. CANDICE M. McHUGH

21 380 S. 4th Street, Suite 103

22 Boise, Idaho 83702

23 cbromley@mchughbromley.com

24 cmchugh@mchughbromley.com

25 ///

APPEARANCES (Continued):

For City of Hailey:

GIVENS PURSLEY LLP

BY MR. MICHAEL P. LAWRENCE

601 West Bannock Street

Boise, Idaho 83702

mpl@givenspursley.com

For Idaho Power Company:

BARKER, ROSHOLT & SIMPSON LLP

BY MR. JOHN K. SIMPSON

1010 West Jefferson, Suite 102

Post Office Box 2139

Boise, Idaho 83701-2139

jks@idahowaters.com

For Idaho Department of Water Resources:

OFFICE OF ATTORNEY GENERAL

IDAHO DEPARTMENT OF WATER RESOURCES

BY MS. MEGHAN CARTER

MR. GARRICK BAXTER

322 East Front Street

Boise, Idaho 83720

meghan.carter@idwr.idaho.gov

garrick.baxter@idwr.idaho.gov

///

APPEARANCES (Continued):

For Eagle Creek Irrigation Company:

PARSONS BEHLE & LATIMER

BY MR. NORMAN M. SEMANKO

800 West Main Street, Suite 1300

Boise, Idaho 83702

nsemanko@parsonsbehle.com

For City of Ketchum:

WHITE, PETERSON, GIGRAY & NICHOLS, P.A.

BY MR. BRIAN T. O'BANNON

5700 East Franklin Road, Suite 200

Nampa, Idaho 83687-7901

bobannon@whitepeterson.com

For Sun Valley Water and Sewer District, Eccles Window

Rock Ranch LLC, and Picabo Livestock, Inc.:

ROBERTSON & SLETTE PLLC

BY MR. J. EVAN ROBERTSON

Post Office Box 1906

Twin Falls, Idaho 83303

erobertson@rsidaholaw.com

Also Present:

Megan Jenkins, IDWR Staff

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6 - April - September Surface Water Supply	***	1464
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43 - Beaver Dam on Silver Creek, 6/9/2021 Photo	1389	1394
44 - Water Flowing to Simplot Property, 6/9/2021 Photo	1389	1395
45 - Water Flowing to Simplot Property Upstream Beaver Dam 6/9/2021 Photo	1389	1398
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CITIES/SVC		
1 - Greg K. Sullivan's Resume	***	1423
3 - Map Proposed Area of Curtilment with GW PODs SVC	***	1424
2 - Table 4 Summary of Sun Valley Company's Water Rights	***	1422

I N D E X (Continued)

E X H I B I T S (Continued)

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2 - Table 1 City of Bellevue Summary of Water Rights	***	1422
HAILEY		
1 - Table 2 City of Hailey Summary of Water Rights	***	1422
KETCHUM		
1 - Table 3 City of Ketchum Summary of Water Rights	***	1422

1 (SVGWD/GGWD Exhibits 43, 44, 45, 46 marked.)

2 THE HEARING OFFICER: Okay. Are we ready?

3 PATRICK LEONARD PURDY,

4 first duly sworn to tell the truth relating to said
5 cause, testified as follows:

6 THE HEARING OFFICER: Thank you. Please be
7 seated.

8 MR. BARKER: Good morning, Mr. Purdy.

9 THE HEARING OFFICER: And we're on the record
10 by the way. Thank you, Colleen.

11 THE WITNESS: Good morning.

12 DIRECT EXAMINATION

13 QUESTIONS BY MR. BARKER:

14 Q. Good morning, Mr. Purdy. State your name and
15 address for the record, please.

16 A. Patrick Leonard Purdy, my full-time residence
17 is actually here, in Boise, at 1800 North Montclair
18 Drive. I also have a residence in Picabo, 213 Ranch
19 Road, Picabo, Idaho.

20 Q. And what do you do for a living, Mr. Purdy?

21 A. Well, I work for Picabo Livestock as a ranch
22 manager. We also own a business here, in Boise, called
23 Purdy Enterprises, that I spend part-time here as well.

24 Q. And what does Picabo Livestock do?

25 A. We have a farm and ranch operation located in

1 Picabo. We farm approximately 5,000 acres of malt
2 barley, alfalfa hay. We run a cow/calf operation. And
3 so we have a couple other ancillary businesses in Picabo
4 as well.

5 Q. So you spend a fair amount of time in Picabo?

6 A. This time of year, almost full-time, yeah,
7 from --

8 Q. Are you familiar with the irrigation
9 operations of your farm?

10 A. Yes, intimately. Yes.

11 Q. Do you have both surface water and ground
12 water rights?

13 A. We do. We do have, yeah, a number of surface
14 water rights and three, I believe, it is ground water
15 rights.

16 Q. Do you rent ground to Mark Johnson for his
17 potato operations?

18 A. We do.

19 Q. And do you have surface and ground water
20 rights available for Mr. Johnson?

21 A. He has some ground that we lease from Heart
22 Rock Ranch that we were subleasing to him that only has
23 surface water rights off of the Big Wood River or Willow
24 Creek, a tributary to Big Wood. We're also renting some
25 of the ground on our own property to him directly that

1 is served by surface water and ground water, both.

2 Q. And that Willow Creek property do you know
3 what kind of water rights are on that?

4 A. The best right on that ground is an 1881
5 right.

6 Q. That's a pretty good water right for --

7 A. Yeah, it's one of the best on Big Wood.

8 Q. And then the water rights on the property in
9 Picabo?

10 A. Our rights -- our rights extend all the way
11 from September of '83 all the way up through the 1890s.

12 Q. Do you have some water rights that are senior
13 even to the 1883s?

14 A. We do have five cfs of perpetual right, yes,
15 as well.

16 Q. And that right would be available for,
17 potentially available for Mr. Johnson's potatoes?

18 A. Yes, if it comes to that, that's what we would
19 allocate that water to him and dry up some of our other
20 ground.

21 Q. So are you familiar with the conditions in
22 Silver Creek?

23 A. Yes, I am.

24 Q. So what can you tell us about just in general
25 about Silver Creek in the area of your properties?

1 A. So Silver Creek forms just above our property,
2 and then from The Nature Conservancy then flows into the
3 Kilpatrick Pond which is on our property. And through
4 the Kilpatrick Pond down through our ground quite a ways
5 towards Picabo, and the river is free flowing and no
6 obstructions all the way down through, it crosses
7 Highway 20, and then back around through our property
8 again, and out into some Fish and Game property, and
9 some other private ground. And then down it crosses
10 Highway 20 again to the southeast, and then flows
11 through some property owned by Harry Rinker, which we
12 farm as well.

13 And then it hits an area that we call the
14 Highway 93 intersection, where Highway 93 and where the
15 river crosses under Highway 93, there is some
16 significant issues at that location with -- we observed
17 just on Wednesday of this week a large beaver dam
18 completely blocking the stream channel with a
19 significant amount of water pouring out both to the
20 north end of the south into the desert ground owned by
21 Simplot and Rob Hennefer. I would guess just as a
22 layman's estimate, maybe ten cfs of water flowing out
23 into the desert there.

24 Q. So there is some photographs in front of you.
25 Do you see those?

1 A. Yes.

2 Q. So Exhibit 43 is that a photograph that you
3 took?

4 A. It is. I took this picture on Wednesday of
5 this week.

6 Q. Where is this photograph taken?

7 A. It's about 100 yards up from Highway 93 and
8 Silver Creek intersect.

9 Q. What does this picture depict?

10 A. A large beaver dam clear across the stream
11 channel backs the water up, I would say, between 18
12 inches and 24 inches total height.

13 Q. And this is in Silver Creek, itself?

14 A. This is directly in the stream channel, yes.

15 MR. BARKER: I would offer Exhibit 43, South
16 Valley/Galena Exhibit 43.

17 THE HEARING OFFICER: Any objection to this
18 exhibit?

19 MR. RIGBY: The only question is, I don't know
20 how they are numbered.

21 MR. FLETCHER: We don't know which is which.

22 MR. RIGBY: We don't know which is which.

23 MR. BARKER: I left them on the table. It
24 looks like they got shuffled.

25 MR. RIGBY: I'm sorry.

1 MR. BARKER: This is 43. No, that's not 43.
2 This one (indicating).

3 MR. RIGBY: This one is 43 (indicating)?

4 MR. BARKER: Yes.

5 MR. FLETCHER: May I ask one question in aid.

6 THE HEARING OFFICER: Yes.

7 MR. FLETCHER: You took this picture on
8 Wednesday of this week?

9 THE WITNESS: I did, yes.

10 MR. FLETCHER: Thank you. I have no
11 objection.

12 MR. RIGBY: No objection.

13 THE HEARING OFFICER: Okay. The document
14 marked South Valley and Galena No. 43 is received into
15 evidence.

16 (SVGWD/GGWD Exhibit 43 received.)

17 Q. (BY MR. BARKER) Exhibit 44, do you have that
18 in front of you?

19 A. I do.

20 Q. Well, first of all, did you take this
21 photograph?

22 A. I did. I took this at the same time.

23 Q. So Wednesday of this week?

24 A. Yeah. So this is a large hole in the stream
25 channel to the north flowing out onto some property

1 owned by Simplot. That's one our employees --

2 THE REPORTER: I'm sorry. I didn't hear you.

3 THE WITNESS: I'm sorry. That's one of our
4 employees standing there looking at the hole. A
5 significant stream of water flowing out into the
6 property to the north of the stream channel here.

7 Q. (BY MR. BARKER) Is this part of the 10 cfs --

8 A. Yeah.

9 Q. -- you estimate was leaving?

10 A. Yes, it is.

11 MR. BARKER: Offer Exhibit 44, South
12 Valley/Galena 44.

13 THE HEARING OFFICER: Any objection to the
14 admission of this document?

15 MR. FLETCHER: Again, did you state the date
16 this picture was taken?

17 THE WITNESS: It was taken on Wednesday by me.

18 MR. FLETCHER: Thank you. I have no
19 objection.

20 MR. RIGBY: No objection.

21 THE HEARING OFFICER: So the document marked
22 as South Valley and Galena No. 44 is received into
23 evidence.

24 (SVGWD/GGWD Exhibit 44 received.)

25 Q. (BY MR. BARKER) And then Exhibit 45, do you

1 have that in front of you, Mr. Purdy?

2 A. I do. And again this photo was taken by me on
3 Wednesday.

4 Q. Where was this photograph taken?

5 A. About 50 yards upstream of the beaver dam on
6 Exhibit 43.

7 Q. And what does this photograph depict?

8 A. It's one of several holes in the stream bank
9 to the south side of Silver Creek flowing out into again
10 Simplot's property.

11 Q. And is this part of what you estimate the 10
12 cfs loss was?

13 A. Yes. So I sent a team down there the next day
14 to do their best job to breach that beaver dam, which
15 they were able to take out about a third of it. And a
16 significant stream of water flowed backwards in from
17 this -- in from this hole. So the elevation lowered the
18 water came back into the stream channel.

19 Q. Do you have any idea how long this beaver dam
20 that you photographed in Exhibit 43 has been there?

21 A. I would guesstimate you can go see the growth
22 if we go back to that picture, you can see the growth on
23 the one side of it. There is actually weeds and grass
24 growing on it. Just based on that, I would assume that
25 it's been there at least this full season, and probably

1 into last season. We did take a dam out of this area
2 two years ago. We got permission to bring a big track
3 hoe in and tear a large dam out. There is a huge pile
4 of debris that you can't see that is off to the side
5 from the prior beaver dam that was removed. So I
6 believe my best estimate is this one has been in there
7 all season and probably in the fall of last year.

8 Q. So in your estimate, in your experience
9 rather, would this dam constitute an obstruction of
10 flows to the --

11 A. Definitely, yes.

12 Q. -- downstream Little Wood water --

13 A. Yeah, definitely given the large elevation
14 change that it was inducing in the stream, and the
15 amount of water pouring out into each side of the stream
16 bank.

17 Q. Okay. And since you've been on the property,
18 has the water district taken any efforts to do this kind
19 of beaver dam removal that you've spoke of?

20 A. Not to my knowledge. We have spent some time
21 here ourselves, the Picabo Livestock employees have been
22 trying to do work here. So at the same time we removed
23 this beaver dam this week which would have been on
24 Thursday, we also plugged -- we also plugged some of
25 these holes as best we could by hand with some straw

1 bales and just some native soil.

2 Q. Would you turn now to Exhibit 46?

3 A. Okay.

4 MR. BARKER: I'm sorry. Did I move the
5 admission of Exhibit 45? We offer Exhibit 45 at this
6 time, South Valley/Galena Exhibit 45.

7 THE HEARING OFFICER: Any objection to the
8 admission of this document?

9 MR. FLETCHER: No objection.

10 MR. RIGBY: No objection.

11 THE HEARING OFFICER: The document marked as
12 South Valley and Galena No. 45 is received into
13 evidence.

14 (SVGWD/GGWD Exhibit 45 received.)

15 Q. (BY MR. BARKER) Mr. Purdy, have you got
16 Exhibit 46 in front of you?

17 A. I do.

18 Q. Did you take this photograph?

19 A. Yes, I took this photograph about 1:30 p.m.
20 yesterday.

21 Q. And what's the location of this photograph?

22 A. So this is another beaver dam in the stream
23 channel of Silver Creek in a location called Bear Track
24 Williams. It's as near as I can tell, like a nature
25 preserve or a small park run by the Fish and Game. The

1 ditch rider who services our area mentioned to me in
2 passing on that yesterday morning that he saw another
3 beaver dam in the stream along the highway. And so we
4 drove down and took this photo.

5 Q. So this is below the Highway 93 crossing?

6 A. It is. It is highway miles maybe five miles
7 highway miles, but significantly more than that in
8 stream miles. The stream flows out and then back in
9 towards the highway, so, yeah, it is below it.

10 Q. Is this above the confluence of the Little
11 Wood?

12 A. Below, yeah, no, this would be below the
13 confluence of the Little Wood.

14 Q. So this is actually in the Little Wood and not
15 in Silver Creek?

16 A. Sorry. It is in the Little Wood, yes.

17 Q. Okay. Did you have an estimate of how large
18 this dam is?

19 A. Again, it spans the entire stream channel.
20 This was backing the water up at least three feet when
21 we arrived. Again, it looks like this beaver dam has
22 been there for quite a while. It is pretty well
23 established. It was difficult to -- the banks in this
24 area are very heavily, I guess just very heavy with
25 brush and willow, so it's difficult to see water flowing

1 out, but it was backing the water up you could tell a
2 significant distance upstream. So again, about a three
3 foot elevation change here, so...

4 MR. BARKER: I would move the admission of
5 Exhibit South Valley Ground Water/Galena Ground Water
6 Exhibit 46?

7 THE HEARING OFFICER: Any objection to the
8 admission of this document?

9 MR. FLETCHER: No objection.

10 MR. RIGBY: No objection.

11 THE HEARING OFFICER: The document marked as
12 South Valley and Galena No. 46 is received into
13 evidence.

14 (SVGWD/GGWD Exhibit 46 received.)

15 Q. (BY MR. BARKER) So did you make any effort to
16 try and do something about this beaver dam?

17 A. We did. We did. Norberto Farfan was with me.
18 So we put on our boots and spent about an hour trying to
19 tear out the center section of this dam. We had
20 reasonable success. We were able to just in the time we
21 were there, the water level dropped at least a foot from
22 its previous level. And we saw water starting to flow
23 back into the stream channel from the surrounding area.
24 It's going to take us a large piece of equipment to get
25 this one out, because the stream is fairly wide here and

1 it's a large dam.

2 Q. So when you spoke to the ditch rider, did he
3 give you any information about whether or not the water
4 district had any plans to deal with these beaver dams?

5 A. No, I didn't ask.

6 Q. Is it your understanding or is it your belief
7 based upon your observations of the stream, that this
8 beaver dam also impedes the flow to the Little Wood?

9 A. Yes, I would say pretty significantly. That
10 whatever additional water flows in from upstream is
11 going to first spread out into a very large area. It's
12 hard for me to say how large of an area, but it's going
13 to spread out into a very large area before it actually
14 flows downstream from this beaver dam.

15 Q. So do you know whether or not there are beaver
16 dams on the Little Wood that have not been taken care
17 of?

18 A. No, I don't. After observing this second dam,
19 we made the decision that early next week we're going to
20 put some people in a canoe and we're going to float the
21 stream, because it runs pretty wild out through the
22 desert. And to my knowledge, nobody looks at it. I
23 don't know that anybody has looked at inspecting or
24 doing any kind of maintenance on the stream channel. So
25 we're going to take it on ourselves to go just take a

1 look and see what we can find from the boat.

2 Q. Are you familiar with the readings that the
3 Water District maintains for Station 10?

4 A. I am.

5 Q. Have you observed those readings over the
6 course of the last week?

7 A. Yeah, I've been watching them pretty carefully
8 for the last three or four days.

9 Q. And what have you observed about the readings
10 with respect to the work you've done on these beaver
11 dams?

12 A. A pretty significant spike in the flow in
13 Silver Creek that's -- I apologize. I don't have the
14 numbers in front of me. But my recollection is they
15 were running around 10 cfs around the first and second
16 of June, and it is up consistently around 30 to 35 cfs
17 in the last five or six days -- four or five days, I
18 should say.

19 MR. BARKER: Thank you, Mr. Purdy. I don't
20 have any further questions. Thank you for coming down
21 for today.

22 THE HEARING OFFICER: Ms. O'Leary, questions?

23 MS. O'LEARY: No, Director.

24 THE HEARING OFFICER: Group 3 questions for
25 Mr. Purdy?

1 MR. BROMLEY: No.

2 THE HEARING OFFICER: Mr. O'Bannon?

3 Cross-examination, Mr. Fletcher.

4 MR. FLETCHER: Thank you.

5 CROSS-EXAMINATION

6 QUESTIONS BY MR. FLETCHER:

7 Q. Mr. Purdy, I'm Kent Fletcher. I represent Big
8 Wood Canal Company.

9 A. Nice to meet you.

10 Q. Nice to meet you. In your testimony you
11 talked about the property that you leased to
12 Mr. Johnson?

13 A. Yes.

14 Q. And Mr. Johnson is the same Mr. Johnson that
15 testified in this proceeding; is that correct?

16 A. That's correct, Mark Johnson, Silver Creek
17 Seed.

18 Q. Which of your properties did you say you
19 leased to him, or how do you identify that property?

20 A. We have a piece of property that we farm under
21 contract with Heart Rock Ranch, we call Spring Creek.
22 That's over near Timmerman Hill. That ground is fed by
23 the water from Willow Creek. We also lease two pieces
24 of ground to him on our main ranch property just a mile
25 roughly west of the town Picabo.

1 Q. How many acres are involved in the
2 Spring -- did you say, Spring Creek?

3 A. Spring Creek has, I think, it's 120 acres that
4 he's got over there.

5 Q. And on the other parcel?

6 A. It's going to be about 200, I believe, about
7 230 acres.

8 Q. So a total of about 350 acres?

9 A. I believe that's correct.

10 Q. That's how much you are leasing to him this
11 year?

12 A. Yes.

13 Q. And I could have misunderstood your testimony.
14 But did you state that what is the source of water to
15 Spring Creek? What is the source of water to Spring
16 Creek?

17 A. It's Willow Creek, which feeds into the Big
18 Wood.

19 Q. Okay. So that's surface water?

20 A. Surface water, yes, there is no ground water
21 right on that property.

22 Q. So if curtailment takes place, there will
23 still be a water supply to Spring Creek?

24 A. A ground water curtailment would not affect
25 Spring Creek, no.

1 Q. And on the other parcel you are talking about,
2 the 230 acre parcel, what is the water source for that?

3 A. The primary water source is Silver Creek, and
4 then the secondary would be ground water.

5 Q. So do you know the water rights priority date?

6 A. We have five feet of perpetual on Silver
7 Creek, and we have 20 feet of September of 1883, and
8 then we have a variety of other rights that are junior
9 to that 1883 right. We have a total of about 60 cfs of
10 right on Silver Creek.

11 Q. That are appurtenant to that property?

12 A. That's correct.

13 Q. Have the 1983 rights been curtailed?

14 A. The 1883, this year, no.

15 Q. Excuse me. 1883 rights?

16 A. No, they have not, although we've been told
17 that they are expecting curtailment on those potentially
18 this next week.

19 Q. And if those are curtailed, if there is no
20 curtailment, you would then turn on this supplemental
21 pump?

22 A. If those 1883 rights were curtailed, we would
23 have our five cfs of perpetual. And then we would
24 typically in a normal year, we would turn on our ground
25 water pumping, yes.

1 Q. And if the supplemental right is curtailed,
2 the ground water pump, you mentioned you were going to
3 get water from a different source?

4 A. It would be the five cfs of perpetual off of
5 Silver Creek that we had would be the only source of
6 water we would have as long as the September '83 rights
7 are curtailed.

8 Q. And how many of the 230 acres can you irrigate
9 with that?

10 A. He would have a difficult time finishing all
11 of that. Yeah, five -- can I do some math; is that all
12 right?

13 Q. Sure.

14 A. If we were able to deliver 100 percent of that
15 five cfs to him he could in theory finish that crop.
16 There would be enough water there if we were able to get
17 the full five cfs to him.

18 Q. Did you hear Mr. Johnson's testimony?

19 A. I did.

20 Q. Do you know if he took into account these
21 water sources when he was giving his damage testimony?

22 A. He wouldn't necessarily be aware of this
23 information, no.

24 Q. In fact, it was pretty clear he didn't really
25 understand the water right situation at all; is that

1 correct?

2 A. I would agree, yeah. He's never had to. It's
3 not been something that he's had to worry about.

4 Q. As I understand it, you observed this beaver
5 dam in Exhibit 43, Wednesday. And you tore it out
6 Wednesday; is that correct?

7 A. We did actually, yeah. I'm sorry. I said
8 Thursday, but we did actually send a crew down there on
9 Wednesday, that same day, that afternoon, yes.

10 Q. No, I think you said Wednesday.

11 A. Okay. Yes. So we did tear it out. Yeah, we
12 did tear out a portion of it on Wednesday.

13 Q. And after you tore out that portion, water
14 started flowing freely through that section you tore
15 out?

16 A. Yes. And we observed water flowing back into
17 the stream channel from the surrounding area.

18 Q. Have you gone back to that area to see if the
19 dam was reestablished?

20 A. We were just there yesterday, and we actually
21 saw the beaver. It hasn't started rebuilding it yet,
22 but it certainly will. It was right there next to it.

23 Q. Is the beaver alive to talk about this
24 incident?

25 A. Unfortunately, it is, yeah. I didn't have my

1 weapon or permission to shoot it.

2 Q. Are you familiar with beavers and how they
3 respond to running water?

4 A. I wouldn't say so, no. They don't like it, I
5 don't think.

6 Q. Have you had experience about when you tear
7 out a dam, and how a beaver responds to that?

8 A. They rebuild it.

9 Q. Yeah.

10 A. Yeah, they rebuild it.

11 Q. So it's a constant problem; correct?

12 A. Yes. Yes, the beaver is going to have to be
13 trapped out, and we're looking for permission to get
14 that done as well.

15 Q. And then on the dam referred to in your
16 Exhibit 46, you observed that also, I think you said
17 Wednesday; is that correct?

18 A. That was yesterday.

19 Q. Yesterday. And you tore out a section of that
20 dam as well?

21 A. We did. We took out as much as we could
22 physically. It's a larger more well-established dam, so
23 it's difficult to do by hand.

24 Q. Have you had a chance to go back and observe
25 whether that dam is back in place?

1 A. No, I have not.

2 MR. FLETCHER: I don't have any other
3 questions. Thank you.

4 THE WITNESS: You're welcome.

5 THE HEARING OFFICER: Mr. Rigby?

6 MR. RIGBY: Thank you.

7 CROSS-EXAMINATION

8 QUESTIONS BY MR. RIGBY:

9 Q. Mr. Purdy, Jerry Rigby representing the senior
10 surface water users.

11 A. Nice to meet you.

12 Q. Good morning.

13 A. Good morning.

14 Q. You've discussed you had three ground water
15 rights; is that correct?

16 A. Yes, we have three irrigation ground water
17 rights. We have some small stock water and municipal
18 water rights as well, but they are minor.

19 Q. Do any of those ground water rights pump
20 directly into Silver Creek?

21 A. Two of the three of them can pump directly
22 into Silver Creek, yes.

23 Q. And what's the use or purpose of doing that?

24 A. To be able to pull them out then at the
25 diversions downstream. Typically we would pump into the

1 river, if necessary, and then pull them out at
2 downstream diversions, or the pumps can be diverted and
3 pumped directly into our canals. So they have
4 two -- they have a valve on them that allows them to
5 either go into the river or into a canal depending on
6 where we need to use the water.

7 Q. And is there any time when you are pumping
8 those that you are not also diverting those? In other
9 words, you are pumping in the river and then you are
10 diverting back out?

11 A. That certainly happens, yeah, sometimes.

12 Q. Is that the intent generally?

13 A. Not necessarily. That's paying a power bill
14 for no reason, but...

15 Q. Yeah, it doesn't make sense to me. That's why
16 I'm asking.

17 A. Right. Right.

18 Q. As far as the beaver dams, themselves, you
19 said you noticed this Wednesday. Have you contacted the
20 watermaster and notified them?

21 A. I did let Kevin know on Wednesday that there
22 is a beaver dam that we tore out. And I was curious
23 what the station ten flows were. And so he just shared
24 that with me. And so I just got on myself and started
25 watching the flows, so...

1 Q. Because of your location, especially close to
2 the Simplot lands, in the past have you notified the
3 watermaster when you've seen beaver dams?

4 A. We've talked about this a lot in District 37
5 meetings, and in our water advisory board meeting, which
6 I was a member of. The district did try to participate
7 in some stream channel repair there back in the early
8 2000s, and I think got into a real jam with either DEQ
9 or Corps of Engineers. And so they've taken a definite
10 hands-off approach.

11 Q. Yeah, those nasty federal regulations; right?

12 A. Yeah. Yeah.

13 Q. You said that there was a spike in the flow
14 after you opened up the lower dam?

15 A. Yes. If you looked at the history on
16 Thursday, there was a spike, and then it kind of
17 settled, which would be the initial rush of water and
18 then kind of settled back down. And it's been running
19 about 30 plus cfs since that time.

20 Q. But you don't know what other conditions may
21 or may not have caused that spike?

22 A. Yeah.

23 Q. Clearly one was opening up a dam?

24 A. Yeah, right. Yeah.

25 Q. But you don't know that the full 35 cfs was

1 caused by this?

2 A. I don't know. There is no way for me to know.

3 MR. RIGBY: I have no further questions.

4 THE WITNESS: I would like to back up and
5 clarify if I could an answer that I gave earlier.

6 THE HEARING OFFICER: Let's have you do that
7 through redirect.

8 THE WITNESS: Okay.

9 THE HEARING OFFICER: If you have some.

10 MR. BARKER: I have one question on redirect.

11 REDIRECT EXAMINATION

12 QUESTIONS BY MR. BARKER:

13 Q. Mr. Purdy, would you like to clarify an answer
14 that you gave to Mr. Rigby?

15 A. Yeah. Well, he asked whether or not we run
16 those pumps for no reason for diversion. And we do
17 occasionally pump water into the stream when the stream
18 is suffering, frankly, to try and increase the flows to
19 maintain the fishery, the quality of the fishery. So
20 Silver Creek water temperatures the fish are very
21 sensitive to that water temperature. And so my dad will
22 occasionally turn a pump on when he's concerned about
23 the streamflows being too low and the stream
24 temperatures being too high. So we will just pay that
25 power bill, so...

1 THE HEARING OFFICER: More redirect?

2 MR. BARKER: No, Mr. Director.

3 THE HEARING OFFICER: Okay. Any other
4 questions? Okay. Back to the cross-examination.
5 Recross, Mr. Fletcher?

6 MR. FLETCHER: No.

7 THE HEARING OFFICER: Mr. Rigby?

8 MR. RIGBY: Just one.

9 RECROSS-EXAMINATION

10 QUESTIONS BY MR. RIGBY:

11 Q. Have you done that this year for that purpose?

12 A. Yes.

13 Q. When?

14 A. We turned on a couple wells this past week.
15 Sorry. We turned on one well this past week.

16 Q. Until then have you turned it on?

17 A. I'm sorry?

18 Q. For that purpose?

19 A. Yes. It's com- -- you know, we're
20 trying -- frankly, we're trying to avoid getting our
21 1883 September cut. Right. We're trying to avoid
22 getting our September '83s cut. So the more water we
23 can put in the stream channel, the less likely those
24 senior surface water rights will get cut.

25 Q. That implies, though, that then you're

1 re-diverting it because you are needing the 1883 right?

2 A. Yes. Yes.

3 MR. RIGBY: No further questions.

4 THE HEARING OFFICER: Okay. Thank you,
5 Mr. Purdy.

6 (Witness excused.)

7 THE HEARING OFFICER: Other witnesses,
8 Mr. Barker?

9 MR. BARKER: The South Valley Ground Water
10 District rests.

11 THE HEARING OFFICER: Okay. Ms. O'Leary?

12 MS. O'LEARY: The Galena Ground Water District
13 also rests, Director.

14 THE HEARING OFFICER: Thank you. Group 3
15 witnesses?

16 MR. BROMLEY: Yes. We would call Greg
17 Sullivan as we've discussed before. And maybe if we
18 could go off the record, we could deal with some of the
19 exhibits.

20 THE HEARING OFFICER: That would be fine.
21 Let's go off the record for a moment.

22 (Off the record.)

23 THE HEARING OFFICER: Mr. Sullivan, if you'll
24 raise your right hand.

25 ///

1 GREGORY K. SULLIVAN,
2 first duly sworn to tell the truth relating to said
3 cause, testified as follows:

4 THE HEARING OFFICER: Mr. Bromley.

5 MR. BROMLEY: Thank you, Director. Chris
6 Bromley on behalf of Sun Valley Company, the City of
7 Bellevue. I'm also for purposes of efficiency going to
8 ask some questions for the City of Hailey, City of
9 Ketchum, just trying to be efficient with time here,
10 Director. It's conceivable that Counsel may also have
11 questions if I miss something. And if you would just
12 indulge us with that, I would appreciate it?

13 THE HEARING OFFICER: Thank you.

14 MR. BROMLEY: And I will do my best to speak
15 up, and if I am not, if you would please remind me.

16 THE HEARING OFFICER: Okay.

17 MR. BROMLEY: Thank you.

18 DIRECT EXAMINATION

19 QUESTIONS BY MR. BROMLEY:

20 Q. Mr. Sullivan, would you please state your name
21 for the record.

22 A. Gregory K. Sullivan.

23 Q. And, Mr. Sullivan, where is your office
24 located?

25 A. 1000 Logan Street in Denver, Colorado.

1 Q. And, Mr. Sullivan, you have in front of you
2 Cities/SVC Exhibit 1. What document is that?

3 A. That's my resume.

4 Q. And if you could just please describe your
5 position, your education, and experience?

6 A. Well, I'm the president of Spronk Water
7 Engineers. I'm a senior water resources engineer. My
8 education included a bachelor of science degree from
9 Colorado State University that I obtained in 1985. I
10 got a master of science in civil engineering from the
11 University of Colorado at Denver in 1990. I'm a
12 registered professional engineer in Colorado, Idaho,
13 Nevada, and New Mexico. And you asked about work
14 experience?

15 Q. Please.

16 A. Yes. Well, right out of school in 1985, I
17 worked for a consulting firm named J. W. Patterson &
18 Associates, which is a water resources engineering firm,
19 and did a lot of water rights work. And that's when I
20 started my water rights and that sort of work in 1985.
21 In 1990, I joined Spronk Water Engineers as a staff
22 engineer, ultimately became a partner in the firm, and
23 have been with that firm ever since. And I am now the
24 president of the company.

25 Q. Okay. Mr. Sullivan, have you played a role in

1 any prior Idaho Department of Water Resources
2 administrative matters?

3 A. Yes, I've been involved in several of the
4 delivery calls, notably the delivery call on the Surface
5 Water Coalition on the Snake River; the delivery call by
6 the A & B Irrigation District, which was a call for
7 their ground water rights; and then also the delivery
8 call by the Rangen Fish Hatchery.

9 Q. And have you had any experience, Mr. Sullivan,
10 in mitigation plans that have stemmed from those
11 delivery calls?

12 A. Yes. I've been involved in reviewing many of
13 those plans, and then actually putting -- helping to put
14 together the plan for the ESPA cities that relates to
15 the Surface Water Coalition delivery call.

16 Q. And more recently I believe were you involved
17 in the Elmore County application for the storage water
18 out of the Boise?

19 A. Yes, I was reviewing that for the City of
20 Boise.

21 Q. Mr. Sullivan, are you generally knowledgeable
22 of the water rights that are owned by the cities and Sun
23 Valley Company?

24 A. Yes, I am.

25 Q. And about how long have you been involved

1 reviewing those rights?

2 A. Since 2017.

3 Q. Mr. Sullivan, have you been qualified as an
4 expert before?

5 A. Yes, numerous times.

6 Q. In what categories?

7 A. Surface water and ground water hydrology,
8 water resource engineering, surface water and ground
9 water modeling, water rights analysis, conjunctive
10 administration of ground water and surface water,
11 analysis of irrigation systems, water measurement, data
12 analysis. I think that covers most of it.

13 Q. Thank you. If you could please describe some
14 of your modeling experience?

15 A. Yes, I've been working on ground water and
16 surface water modeling for my entire career, notably for
17 up in this area. I've been a member of the Eastern
18 Snake Hydrologic Modeling Committee, which is sort of
19 overseeing and help guide the development of the ESPA
20 ground water model. I've been a member of that
21 committee since its inception, and even there was some
22 prior committees before that time that I was on.

23 Some other modeling, I was a modeling expert
24 in the Kansas v. Colorado litigation before the Supreme
25 Court, and that was a model of surface water and ground

1 water use on the Arkansas River in Colorado. I'm
2 currently the lead modeling expert for the State of New
3 Mexico in the ongoing litigation on the Rio Grande
4 involving Texas v. New Mexico.

5 Q. And, Mr. Sullivan, aside from establishing the
6 Cities and Sun Valley Company's water rights and
7 interests in this proceeding, your testimony will be
8 limited to issues regarding ground water pumping related
9 to the Bellevue triangle; is that correct?

10 A. Yes.

11 MR. BROMLEY: Director, I would tender
12 Mr. Sullivan as an expert in the fields that he's
13 identified, ground water and surface water modeling,
14 water resource engineering, ground water and surface
15 hydrology, water rights analysis and administration,
16 irrigation system analysis, and water measurement.

17 THE HEARING OFFICER: Any objection to the
18 requested qualifications?

19 MR. BROMLEY: And data analysis as well.
20 Thank you.

21 THE HEARING OFFICER: Do you have a question?

22 MR. FLETCHER: No, Director. I just for the
23 record, we had moved in limine to exclude these
24 witnesses from the Class 3 parties. The Director ruled
25 on that. I believe we may have brought that issue up

1 again seeking to exclude the witnesses. I believe the
2 Director has ruled that they may be allowed to testify.
3 So in light of the Director's ruling, we would stipulate
4 to Mr. Sullivan's expertise for the purpose of this.

5 THE HEARING OFFICER: Thank you. Mr. Rigby?

6 MR. RIGBY: The same noted original objection.
7 But with your ruling, we do not object to him being
8 qualified.

9 THE HEARING OFFICER: Any other commentary?

10 Okay. Mr. Sullivan is so recognized as an
11 expert.

12 Mr. Bromley.

13 MR. BROMLEY: Thank you, Director.

14 Q. (BY MR. BROMLEY) Mr. Sullivan, if we could
15 just look briefly at the water rights of the clients
16 that you are representing. So we have an exhibit marked
17 as BV 2 or Bellevue 2. Do you see that?

18 A. Yes.

19 Q. We also have an exhibit marked Hailey 1. Do
20 you see that?

21 A. Yes.

22 Q. We also have an exhibit marked Ketchum 1. Do
23 you see that?

24 A. Yes.

25 Q. And an Exhibit marked SVC 2. Do you see that?

1 A. Yes.

2 Q. These are all tables of water rights. Could
3 you explain how you developed these tables?

4 A. These tables are based on information that I
5 downloaded from the IDWR website. And then just
6 reviewed this information with the cities staff and
7 prepared these tables to summarize each of the entities
8 water rights.

9 MR. BROMLEY: Okay. And, Director, rather
10 than go through these one by one as we've done before, I
11 believe we have an agreement stipulation that these
12 tables would be admitted into evidence. They say what
13 they say.

14 MR. FLETCHER: Director, with the same
15 understanding that we've objected to this evidence as
16 being irrelevant for the purpose of this proceeding
17 based upon the order, the Director having ruled on that,
18 we would stipulate to the admission of these exhibits.

19 THE HEARING OFFICER: The same, Mr. Rigby?

20 MR. RIGBY: Yes, the same, Mr. Director.

21 THE HEARING OFFICER: And so those that you've
22 referred to Mr. Bromley, I wrote down, and maybe I
23 missed them, BV 2.

24 MR. BROMLEY: That's correct.

25 THE HEARING OFFICER: Hailey 1.

1 MR. BROMLEY: Yes.

2 THE WITNESS: And SVC 2.

3 MR. BROMLEY: That's correct.

4 THE HEARING OFFICER: And those are the three.
5 I also have a Ketchum summary, but that's not included
6 in what your --

7 MR. BROMLEY: I had referenced Ketchum 1. And
8 if I didn't, I intended to reference Ketchum 1.

9 THE HEARING OFFICER: It may have been my
10 oversight. I was just trying to write them, so...

11 MR. BROMLEY: I completely understand. I had
12 four. Hopefully, I went through all of them, but that's
13 the four that I would hope to be introducing and have
14 admitted.

15 THE HEARING OFFICER: So based on the
16 stipulation, and I assume there aren't any more comments
17 related to the admission of these documents. The
18 documents marked as BV No. 2, Hailey No. 1, SVC No. 2,
19 and Ketchum No. 1 are received into evidence.

20 (Exhibits BV 2, Hailey 1, SVC 2, Ketchum 1
21 received.)

22 MR. BROMLEY: And just a housekeeping matter,
23 Director, I'm not sure that I asked for admission of
24 Cities/SVC Exhibit 1, which was Mr. Sullivan's resume.
25 I would ask for admission of that.

1 THE HEARING OFFICER: I don't know that this
2 is one that I already asked for objection to, but I'm
3 assuming that everybody would allow this into the
4 record. So the document marked as Cities/SVC No. 1 is
5 received into evidence.

6 (Cities/SVC Exhibit 1 received.)

7 MR. BROMLEY: Thank you.

8 Q. (BY MR. BROMLEY) Mr. Sullivan, in front of
9 you have a map that's marked as Cities/SVC 3. Do you
10 see that?

11 A. Yes.

12 Q. Could you tell me about this map?

13 A. This was a map that was prepared under my
14 supervision. It shows the area of the Wood River
15 Valley. At the bottom of the map across there is the
16 area of the Bellevue triangle. The orange boundary
17 represents I think the initial potential curtailment
18 area that was in the Director's orders commencing this
19 proceeding. And then the cross-hatched areas, the area
20 then that I think has evolved now to the potential
21 curtailment area that Jennifer talked about.

22 And then upstream from that in going up the
23 valley, we can see that dotted line is the outline of
24 the Wood River Valley ground water model that extends up
25 the valley. And then in that area, I have plotted the

1 cities of Bellevue, Hailey, Ketchum, and the Sun Valley
2 ski area mountains, as well as the location of those
3 cities and the Sun Valley Company's points of ground
4 water diversion. So they are all upstream of the
5 curtailment area.

6 Q. Great. Thank you, Mr. Sullivan.

7 MR. BROMLEY: Would move for admission of
8 Cities/SVC Exhibit 3.

9 THE HEARING OFFICER: Any objection to the
10 admission of this document?

11 MR. FLETCHER: No.

12 MR. RIGBY: No objection.

13 THE HEARING OFFICER: Based on the responses,
14 the document marked as Cities/SVC No. 3 is received into
15 evidence.

16 (Cities/SVC Exhibit 3 received.)

17 Q. (BY MR. BROMLEY) All right. Mr. Sullivan,
18 we're going to move on to a topic about bringing
19 curtailed water down to senior water users on Little
20 Wood. Do you have the Department's Exhibit 2? It's
21 Jennifer Sukow's memo.

22 A. Yes, I do.

23 Q. Okay. And if you could turn to Table 1?

24 A. Table 1 or 2?

25 Q. Table 2. Thank you. I'm making that same

1 mistake.

2 A. Okay.

3 Q. Okay. What's in Table 2?

4 A. Table 2 is titled "Predicted responses to
5 curtailment starting July 1 within the area south of
6 Glendale Bridge." This is the results of the modeling
7 run by Jennifer Sukow using the Wood River ground water
8 model with curtailment starting on July 1. And the
9 amounts shown in the table include the amount of
10 curtailed consumptive use. That's the junior
11 consumptive use within the triangle that she curtailed.
12 And then she has summarized predicted responses from
13 that curtailment to various locations.

14 Q. Okay. If you could also have in front of you
15 South Valley/Galena Ground Water District Exhibit 27 and
16 33. They are maps. And what I'm going to ask you,
17 Mr. Sullivan, once you get there is if you could help me
18 trace that water that's going to be curtailed and
19 manifest in Silver Creek in Ms. Sukow's Table 2, and how
20 that water then would get down to the seniors?

21 A. Okay. The maps were 27 and what else?

22 Q. 33.

23 A. Okay.

24 Q. So South Valley/Galena Exhibit 33 shows the
25 gages within the system. And then South Valley/Galena

1 Exhibit 27, as I understand it, is showing the locations
2 of the calling seniors; is that what you see?

3 A. Yes.

4 Q. So if you could please, Mr. Sullivan, trace
5 that water that's going to accrue at Sportsman Access in
6 Table 2 of Ms. Sukow's exhibit, and bring that water
7 down as you understand it, it would come through the
8 system and make it down to the seniors?

9 A. Well, the curtailment up on the triangle would
10 result in the accrual of water to Silver Creek and its
11 tributaries. So that water accrues into those various
12 tributaries that we've heard testimony on. I think
13 there is a half dozen or more major tributaries to
14 Silver Creek. And so that water would accrue at various
15 points along those tributaries. And then would come
16 together at the Sportsman Access gage. Although I
17 understand there are water rights up on Silver Creek
18 that potentially could be diverting that water. So I
19 don't know how much of that water might get diverted up
20 on Silver Creek.

21 But in any event, Jennifer I think assumed
22 that all the water would make it down to the gage, and
23 that's what she has shown under the Silver Creek column
24 and in her exhibit in Table 2.

25 Q. And by the gage, do you mean the gage at

1 Sportsman's?

2 A. Yes.

3 Q. Okay. Thank you.

4 A. And then we've heard testimony that there are
5 losses in getting that water as it moves from the
6 Sportsman Access gage down to the confluence with the
7 Little Wood River, and then down the Little Wood River.
8 I think the testimony was that the losses that were
9 determined by the Department staff in 2020 ranged from
10 20 to 37 percent. So that would get the water -- so
11 there is some amount of loss to get the water to Station
12 10.

13 And then there would be additional losses
14 likely between Station 10 and Station 54, although I
15 don't think we've heard any testimony about what those
16 losses might be. So that would be get the water down to
17 this area to Station 54, and here again, potentially
18 some diversion of that water before it gets to Station
19 54 by users along the way. And then I think the seniors
20 that are alleging injury are down in the vicinity of
21 Station 54 and further down downstream. So again more
22 losses below 54 potentially, although I don't think we
23 know what those losses are.

24 Q. So were you here for the watermaster, Kevin
25 Lakey, his testimony?

1 A. Yes.

2 Q. And did you hear what Mr. Lakey said, there
3 was a flow rate that he thought would be deliverable to
4 these seniors who were calling?

5 A. Yes, Mr. Lakey described his projection of
6 what the curtailed -- the priority cuts were going to
7 be, you know, through the rest of June and the rest of
8 the season. And then I think he made some estimates of
9 how that priority cut might change if there is
10 curtailment. And then identified sort of, I guess,
11 potential priorities that I'll say are on the bubble.
12 In other words, those are priorities that are projected
13 to be cut, but may come back into priority if there was
14 curtailment.

15 Q. And there is a list of water rights in Miller
16 Exhibit 1 in Appendix B, if you have that. And does
17 that help you with your testimony explaining these
18 rights that are on the bubble?

19 A. Yes.

20 THE HEARING OFFICER: Now, you were referring
21 to what, Mr. Bromley?

22 MR. BROMLEY: Miller Exhibit 1, Appendix B,
23 which was the expert report of Mr. Eric Miller on behalf
24 of Big Wood, Little Wood, and Big Wood Canal Company.
25 And it appears Mr. Sullivan just has pieces of paper

1 that came out of that exhibit. But if you go into the
2 exhibit binder, it's the same thing.

3 THE HEARING OFFICER: Okay. I think I found
4 it, Appendix B.

5 MR. BROMLEY: That's correct, Mr. Director.

6 THE HEARING OFFICER: Thank you.

7 Q. (BY MR. BROMLEY) Okay. Mr. Sullivan, can you
8 say what you are looking at?

9 A. Yes, this Exhibit B I understand is a list of
10 the rights in the Little Wood and Silver Creek drainage
11 that was in Mr. Miller's report. And I believe it came
12 from Kevin Lakey. It's his priority list of the water
13 rights in the drainage.

14 Q. Okay. And which rights are you looking at
15 that were on the bubble?

16 A. Okay. So the rights are all listed in order
17 of priority from senior to junior. So on the first page
18 of the list, the rights that he had discussed that the
19 rights with priority dates of April 1, 1883, which they
20 start in the middle of the page. You can see that under
21 the "Priority Date" column, there is 15 rights maybe
22 that have a priority date of April 1, 1883. So he had
23 projected that those would be cut on June 30th of this
24 year. And that group of rights which total about 9 cfs,
25 I think, he was projecting that they would be among the

1 rights that would come into priority with curtailment.
2 And then I guess also this Barbara Farms right, April
3 6th, 1883, that one would come back into priority.

4 So what I did was just of those rights, I
5 think there is a three of them that were among the
6 seniors that have appeared in this case and are
7 specifically alleging injury. And those are the James
8 Ritter for 4.2 cfs, and Donald Taber for .3 cfs. And
9 then down the list a little bit, Barbara Farms for 4
10 cfs. And so those added up together are 8.5 cfs.

11 Q. Okay. So then if you go back into Table 2 of
12 the Sukow memo, she's showing simulated flow rights are
13 going to manifest in July, August, and September; is
14 that correct?

15 A. Yes.

16 Q. And so could you compare her curtailment
17 analysis to the shortages that you were -- or to the
18 water rights that you were just talking about with these
19 seniors who were on the bubble?

20 A. Yeah, so she shows flows at the Sportsman
21 Access gage in Silver Creek coming up by flow rights
22 ranging from about 23 cfs to 28 cfs in the months of
23 July, August, and September. So, for example, let's
24 look at August. So 28 cfs at the Sportsman Access gage.
25 And I think in testimony that we've heard from others,

1 people were assuming, say, I mean the losses vary, but
2 say a 25 percent loss on that water to get it down into
3 the Little Wood would reduce that to roughly 21 cfs.

4 And so if I compare that 21 cfs to the
5 shortage of the seniors that may come back on with
6 curtailment, it's only 8.5 cfs. So to me that makes it
7 look like if those are the only ones that are short,
8 then perhaps there is more water being curtailed than is
9 needed by the seniors that have alleged an injury.

10 Q. And, Mr. Sullivan, do you have a figure of
11 what you would reduce the curtailment by within the
12 triangle to meet the demands of this 8.5 cfs?

13 A. Well, just using that August number, if we
14 take 8.5 cfs divided by 28, that's roughly 30 percent,
15 so, you know, 30 percent.

16 Q. Okay.

17 A. But that's just an example of what I think the
18 calculus that ought to be done in considering how this
19 curtailment might play out.

20 Q. And in listening to the testimony as it's come
21 up through this hearing?

22 A. Yes.

23 Q. Okay. So, Mr. Sullivan, speaking of
24 curtailment, what other issues will happen in terms of
25 how long a curtailment will go?

1 A. Well, yeah, as I've listened to this
2 proceeding, there has been discussion of the effects of
3 curtailment. But I haven't heard any discussion about
4 how long this curtailment would happen. Is it just
5 during the irrigation season? Would it continue past
6 the end of the irrigation season into next year? Is it
7 forever curtailment? And would there be any monitoring
8 or accounting of the curtailment and its effects? And
9 perhaps, you know, some kind of criteria for relaxing
10 the curtailment if something happens, if flows come up,
11 or what have you. So I haven't heard any of that. But
12 I think that needs to be considered as well.

13 Q. There could be a rain event, for instance,
14 that could bring the flows up is that possible?

15 A. Yes.

16 Q. Okay. And then going back to the testimony of
17 Mr. Lakey. My understanding of his testimony when I
18 asked him some questions on cross-examination was that
19 if flows in Silver Creek and Little Wood come up, all
20 water right holders within those reaches downstream,
21 assuming they are priorities were on, would be able to
22 divert that water. Is that what you heard?

23 A. Yes, under normal priority administration.

24 Q. But not all of those water users have come
25 forward in this proceeding; is that true?

1 A. That's true. And so it seems like there could
2 be some consideration for shepherding this water to the
3 users that actually have an asserted injury here.

4 Q. And have you heard that testimony come out as
5 to how water might be shepherded down to the users who
6 have actually appeared and are calling for their rights?

7 A. No.

8 Q. Mr. Sullivan, I would like to switch gears
9 here and talk about a different topic of uncertainty,
10 and data gaps, and unknowns that you've observed in
11 looking at the documents and through testimony. Have
12 you heard of a process for determining injury and need
13 to curtail juniors involved?

14 A. Say that again.

15 Q. So has a process been described that you've
16 heard through testimony as determining who's injured,
17 and by injured, I mean injury to water rights, not
18 impacts to streams, but injury to water rights and the
19 need to curtail to remedy that injury?

20 A. No, I haven't seen any analysis of the seniors
21 that are alleging injury, whether they are actually
22 short of water for the crops and lands that they are
23 irrigating compared to their water supply. Say what
24 efficiencies they operate, are they using water
25 reasonably with reasonable efficiency and without waste?

1 That's some of the things that we would typically look
2 at in these delivery calls is making sure that the
3 seniors are, in fact, using the water efficiently.

4 Q. Okay. And Mr. Lakey was discussing an exhibit
5 that's already been admitted into evidence, which is
6 marked Bellevue 1, that's a memo. And I'm not sure if
7 you have that in front of you. I could just come up.

8 MR. BROMLEY: And, Director, if I could just
9 hand him the document I have?

10 THE HEARING OFFICER: Sure.

11 Q. (BY MR. BROMLEY) It's marked Bellevue 1, it's
12 a memorandum prepared on June 2nd of 2021. And this
13 memorandum was inquired of by Ms. McHugh in
14 cross-examination. And on page 8, if you could describe
15 what you see there?

16 A. So this is a table that was prepared by
17 Mr. Lakey based on his understanding or review of water
18 use in years that were represented to him as being
19 adequate water supply years. So those included the
20 years of 2000, 2009, and 2010. And he has then in this
21 table listed the average water use by some of the
22 seniors, senior water rights on the Little Wood River.
23 I think most of them are there. And so it shows their
24 acre-feet, average acre-feet of diversions, the acres
25 that they are irrigating, and then a computed duty of

1 that water of acre-feet per acre. And I believe these
2 acre-feet values he said are farm headgate deliveries.

3 Q. And they vary; is that true?

4 A. Yes, they vary over quite a wide range from
5 1.59 acre-feet per acre to over eight feet per acre.

6 Q. And based on your past experience would it be
7 reasonable to have a better understanding of water need
8 by calling seniors?

9 A. Yes, it would be useful to understand, well,
10 you know, what crops are these folks irrigating, and
11 what sort of irrigation systems do they have, and are
12 these application rates reasonable, and are they
13 employing, you know, reasonable efficiency? Because it
14 seems to me if we are going to be curtailing juniors,
15 one of the things we should be doing is making sure the
16 beneficiaries of the curtailment are using water
17 efficiently.

18 Q. Okay. Shifting gears a little bit to the
19 ground water model, and effective curtailing junior
20 ground water users. Can this ground water model predict
21 how much water will make it down to a senior in a river
22 reach, say?

23 A. Not to these users. The model, it stops at
24 basically the Sportsman Access gage. And so the model
25 can predict the accrual of water from curtailment to

1 Silver Creek and its tributaries, but doesn't -- there
2 is no ability in the model to route that water
3 downstream.

4 Q. And the model also does it account for
5 conveyance losses in any way?

6 A. No, the model as we heard Jennifer discuss,
7 the model represents the surface water features in a
8 simulated area as what are called river cells. So those
9 are cells where water can -- where there is interaction
10 between the ground water and the surface water that
11 water can either flow into those cells or out of those
12 cells. But those are just discrete cells in the model
13 domain. They don't connect to each other.

14 And so in order to determine these impacts,
15 say that Jennifer is computing to Silver Creek, she
16 needs to go and add up all the flow that accrues to all
17 of those river cells and sum them up. So there are
18 other packages that are available in MODFLOW that will
19 actually route the water down, you know, through the
20 stream or through the river. One of those packages is
21 called a stream package. But that package is not used
22 in this particular model. It's just those river cells.
23 And so this particular model does not have an ability to
24 route that water even within Silver Creek.

25 Q. So if the stream package were used, would you

1 have some degree of confidence that it could model, that
2 water would make it down to calling seniors?

3 A. Yes, you could model that. And then, you
4 know, if it properly calibrated, you could simulate then
5 the seepage losses of that additional flow and getting
6 it down to the Sportsman Access gage, and potentially
7 also a diversion of that water, if there are diversions.

8 Q. So, Mr. Sullivan, you said you've been
9 involved in the conjunctive management delivery calls
10 here, in Idaho. Have you been involved in the other
11 conjunctive administration delivery calls in other
12 states?

13 A. Yes, I've been involved extensively in
14 conjunctive administration in Colorado.

15 Q. And in your experience in Idaho and in
16 Colorado, have junior ground water users been afforded
17 an opportunity to mitigate or not?

18 A. Yes. And any time there has been threatened
19 curtailment, the juniors have always been afforded an
20 opportunity to develop a way of mitigating their impacts
21 and afforded that due process to develop those plans and
22 implement them before being curtailed.

23 Q. And you were here for Mr. Luke's testimony; is
24 that right?

25 A. Yes.

1 Q. And I asked Mr. Luke a question on
2 cross-examination about affording juniors an opportunity
3 to mitigate. Do you recall that question?

4 A. Yes.

5 Q. And do you remember what Mr. Luke's answer
6 was?

7 A. I think he said there would be no way to
8 mitigate.

9 Q. Have you analyzed potential ways that the
10 alleged shortages to the seniors could be mitigated?

11 A. There hasn't been time to do that in this
12 case. But it seems like there are things that could be
13 done.

14 Q. And Mr. Luke's answer that there would not be
15 a way to mitigate, is that consistent with your
16 understanding of conjunctive administration in Idaho and
17 Colorado?

18 A. Well, no, I think the users should be allowed
19 to mitigate. You know, mitigation is so much more
20 efficient in addressing the problem. You know you need
21 to curtail a lot of pumping to get the water, you know,
22 back into the stream to get it to the seniors. And
23 mitigation typically is targeted to the problem. And
24 can be done with a lot less resource than that
25 widespread curtailment.

1 Q. Shifting gears here, Mr. Sullivan, let's talk
2 about improvements to the model that you observed in
3 listening to testimony and thinking about the model.
4 Could the study period be extended?

5 A. Yes, I think that would be a great improvement
6 to the model. The current study period ends in 2014.
7 And so we have what; another six years or so of
8 potentially available data. And if the study period was
9 extended, you know, two benefits of that, at least two
10 would be, we could make use of all of that surface water
11 data that we heard about that is available on Silver
12 Creek, and I think that would be very helpful to the
13 configuration and calibration of the model.

14 And then even more importantly, we have
15 more -- I think the pumping has been measured during
16 most or all that, those additional years. So we would
17 have a lot of actual pumping data that we could put in
18 the model. You know the study period that ends now in
19 2014, I think what is it '95 to 2014, almost all of the
20 pumping in the model is estimated. And it's estimated
21 based on, you know, at least for -- it's based on the ET
22 demands, and there is assumptions of irrigation
23 efficiency for how much pumping. And then for the
24 supplemental pumping, in order to estimate that pumping,
25 Jennifer and the modelers first had to estimate the

1 consumptive use of surface water. And then it's the
2 unmet demand after the use of surface water that was
3 represented by the estimated pumping. And so there is
4 all sorts of assumptions going into that. So, you know,
5 I think by having some actual pumping data that we could
6 tack on at the end of the study period, we could get a
7 better representation of actual pumping impacts.

8 Q. Were you here for Eric Powell's testimony?

9 A. Yes.

10 Q. And did you hear what Mr. Powell said about
11 conductivity issues with the model?

12 A. Yes, he identified areas of relatively high
13 hydraulic conductivity in the model that were of concern
14 to him. That's not something I've studied in detail,
15 although he showed me what he was looking at. And, yes,
16 there are some high values, and that I think is
17 something that maybe would warrant another look in
18 reviewing the model function and its calibration.

19 Q. And what about consumptive use and irrigation
20 efficiencies?

21 A. Well, for consumptive use the model uses the
22 metric ET data, which I think is a good approach because
23 it's using a more actual ET rather than a theoretical
24 number. But as to the efficiencies, and the irrigation
25 efficiencies, so this goes into what I just talked

1 about. The model has assumed irrigation efficiencies
2 for the various ground water and surface water users.
3 And my understanding is that those were determined
4 during the calibration process. And so I think they
5 range, there were bounds set on those between 50 percent
6 and 90 percent.

7 And then the PEST program, which was an
8 automated calibration procedure was used to develop
9 those efficiencies. And I'm not sure that there was any
10 sort of reality check user by user as to whether those
11 efficiencies were reasonable considering, you know, how
12 they were irrigating, applying water, or also I think
13 Mr. Powell had a good idea. That you could actually use
14 metric, the metric data for ET, and then compare that to
15 the water that was being diverted and/or pumped, and
16 develop some actual irrigation efficiencies for the
17 years that we have that data, rather than just using a
18 calibrated values that may be accounting for other error
19 in the model that puts into those efficiency values.

20 Q. Thank you. Shifting gears then to one last
21 topic, Mr. Sullivan, about analyses that were performed
22 in this matter. Did you assist the Cities and
23 Sun Valley Company in drafting language for a request
24 for information that was filed with the Department on
25 May 21st?

1 A. I did.

2 Q. And when did that information come in?

3 A. We got some emails from the Department staff
4 on Wednesday this week.

5 Q. That would be the 9th?

6 A. Yes.

7 Q. And have you had an opportunity to review that
8 information?

9 A. No.

10 Q. Mr. Sullivan, have you been able to do a
11 thorough analysis of all of the evidence in this
12 administrative proceeding?

13 A. No, there hasn't been time for that.

14 Q. What kind of time would you have needed?

15 A. Well, you know, many months I think, and
16 similar time frames that have been afforded the parties
17 in the prior delivery calls. I think time for more
18 discovery and, you know, obtaining more information
19 about all of the issues, and then analysis of all of
20 that information. So it's not only modeling, but it's
21 also analysis of water uses by the seniors that are
22 alleging injury in these issues of administration, and
23 routing of the water, you know, downstream, you know, to
24 the users. Those are all things that we've considered
25 in other delivery calls that are not getting a thorough

1 consideration in this matter.

2 Q. Conceivably mitigation plans could have been
3 developed during that time period?

4 A. Yes, that would be something else important,
5 and has occurred in the other delivery calls. As these
6 calls were unfolding, users were kind of on parallel
7 tracks to developing mitigation plans to address, you
8 know, what would happen under a potential curtailment
9 order.

10 MR. BROMLEY: Okay. Director, I have nothing
11 further for Mr. Sullivan. I would ask counsel if they
12 have anything else before turning him over for cross, if
13 that's okay?

14 THE HEARING OFFICER: Okay. Others in Group
15 3?

16 MS. MCHUGH: I think it's been covered.

17 THE HEARING OFFICER: Mr. Lawrence?

18 MR. LAWRENCE: I just have one brief line of
19 questions. Thank you, Mr. Director.

20 DIRECT EXAMINATION

21 QUESTIONS BY MR. LAWRENCE:

22 Q. Good morning, Mr. Sullivan. Mike Lawrence for
23 the City of Hailey. And I apologize in advance. I was
24 trying to pay close attention to what Mr. Bromley was
25 asking you, and let me know if I'm covering ground he

1 already covered.

2 Mr. Sullivan, are you familiar with the
3 Department's Conjunctive Management Rules?

4 A. Yes.

5 Q. And you understand that this proceeding is not
6 occurring under the Conjunctive Management Rules; is
7 that correct?

8 A. That's my understanding.

9 Q. Are you familiar with Rule 42 in the
10 Conjunctive Management Rules?

11 A. Yes.

12 Q. And the Rule 42 contains the factors for
13 determining material injury and reasonableness of
14 diversions; is that correct?

15 A. Yes.

16 Q. Despite the fact that this is not proceeding
17 under the Conjunctive Management Rules, are the factors
18 in Rule 42 nevertheless important to evaluate when the
19 Department's determining whether to curtail junior water
20 rights?

21 A. Yes. Yes, definitely. You know, those
22 factors were developed, carefully developed and put into
23 the rules, and have guided the analysis of injury in the
24 prior delivery calls and are, I think, a reasonable list
25 of the things that ought to be considered before are

1 juniors are curtailed.

2 Q. Do you believe that those factors have been
3 adequately addressed in this proceeding?

4 A. No.

5 MR. LAWRENCE: That's all my questions. Thank
6 you.

7 THE HEARING OFFICER: Other questions,
8 Mr. Barker, Mr. Thompson?

9 MR. THOMPSON: I don't have any.

10 MR. BARKER: No.

11 THE HEARING OFFICER: Ms. O'Leary?

12 MS. O'LEARY: No, Director.

13 THE HEARING OFFICER: Mr. O'Bannon, any
14 questions.

15 MR. O'BANNON: No, Director.

16 THE HEARING OFFICER: All right. Let's take a
17 break before cross-examination. We've been here for an
18 hour and half or so.

19 (Recess.)

20 THE HEARING OFFICER: Back on the record. Are
21 we recording? Thank you, Colleen.

22 After a morning break, it is time for
23 cross-examination of Mr. Sullivan. Mr. Fletcher, are
24 you first?

25 MR. FLETCHER: Thank you. Yes, I will go

1 first.

2 CROSS-EXAMINATION

3 QUESTIONS BY MR. FLETCHER:

4 Q. Good morning, Mr. Sullivan.

5 A. Good morning. It's been a while.

6 Q. It's been a while. In this proceeding, I'm
7 representing Big Wood Canal Company, and I have a few
8 questions about your testimony. You commented quite a
9 bit on Jennifer Sukow's model work. Did you replicate
10 that work?

11 A. What do you mean by replicate?

12 Q. Did you run the model --

13 A. No.

14 Q. -- to verify her report?

15 A. I did not.

16 Q. Did you hear Mr. Powell's testimony yesterday
17 concerning his replication of her work?

18 A. Yes.

19 Q. Do you agree with his testimony that she did
20 it correctly under the current model?

21 A. That she ran the model correctly?

22 Q. Yes. Mr. Powell verified he came up with the
23 same results she did; did you hear that?

24 A. Yes, I heard that.

25 Q. Okay. Do you disagree with that?

1 A. I have no reason to disagree with that.

2 Q. You went through this analysis of the amount
3 of curtailment. And then you talked about the
4 watermaster's testimony stating that the Ritter farm,
5 Taber farm, and Barbara Farms would receive water if
6 curtailment took place, and you added up the total
7 diversions they are authorized. And I believe you said
8 that total number was 8.5 cfs; is that correct?

9 A. Yes.

10 Q. And then you went on to say that therefore,
11 that shows that if juniors were curtailed as evidenced
12 by the Sukow report, that would result in too much water
13 for mitigation, or too much water to those seniors?

14 A. Yes, if they are the only ones that are
15 entitled to receive the benefit of curtailment.

16 Q. All right. So you did hear the testimony of
17 the senior water users in this case; correct?

18 A. Some of it.

19 Q. And if more water showed up than what the
20 watermaster projects, there are other seniors involved
21 in this case that could divert that water; isn't that
22 correct?

23 A. I don't know that they have these priority
24 dates.

25 Q. No, but if there is more water that shows up

1 and other priority dates come into priority, there are
2 other seniors that could divert that water; isn't that
3 correct?

4 A. If additional water shows up, and it reaches
5 the priorities of the seniors that have appeared here,
6 then there potentially could be others.

7 Q. So I think you were trying to limit somehow
8 the amount of water that should be curtailed based upon
9 those three seniors, the Taber right, the Ritter right,
10 and the Barbara Farms. But actually there are several
11 seniors that have testified if there is more water in
12 the river that brings their priorities back into play,
13 they can use that water this year as well; correct?

14 A. Well, that's a hypothetical. But I think the
15 point I was trying to make is that that type of analysis
16 ought to be done as we are evaluating potential
17 curtailment, seeing who are the specific seniors that
18 are calling, and comparing that to what would happen in
19 curtailment, and, you know, doing that type of analysis.

20 Q. And then you made a statement of some kind
21 about shepherding water. Do you know of any authority
22 under Idaho law to shepherd water to a particular
23 priority date?

24 A. I don't know about legal authority. I'm aware
25 of that. It seems like I'm aware of that happening.

1 Water is sent down, storage water is delivered to users,
2 that sort of thing.

3 Q. Did you do any analysis of if more water was
4 delivered than required by the three senior rights that
5 you mentioned, did you do any analysis of other seniors
6 that would benefit if that water exceeded those of those
7 three seniors?

8 A. I'm not sure I quite understand your question.

9 Q. Okay. Let me try again. You'd mentioned that
10 because the three senior rights that Kevin Lakey
11 identified could only divert 8.5 cfs, that more water
12 would result from curtailment than would be required for
13 those three rights; correct?

14 A. Correct.

15 Q. Did you do any analysis of how that total
16 amount of water resulting from a total curtailment would
17 benefit other seniors that have testified in this case?

18 A. No, I understood from Mr. Lakey that these
19 were the primary priorities that he projected were on
20 the bubble, so to speak, that would be on the range of
21 priorities that would benefit from curtailment.

22 Q. So the answer is, no, you didn't do any
23 analysis; correct?

24 A. Not any additional analysis, no.

25 Q. Thank you. You have mentioned the various

1 factors that you believe should be looked at. And you
2 made some comment about efficiency of the seniors. You
3 said you only sat through the testimony of some of the
4 seniors; is that correct?

5 A. Yes.

6 Q. Is there a standard for efficiency in Idaho?
7 In other words, does an irrigation system have to meet a
8 certain percentage of efficiency in order to be lawfully
9 diverted?

10 A. Not that I'm aware of, but I think the
11 conjunctive management rules, for example, provide for
12 an evaluation before as part of conjunctive
13 administration.

14 Q. Have you heard any testimony that would
15 indicate that any of the seniors are diverting
16 inefficiently?

17 A. From them?

18 Q. Yes.

19 A. I don't -- I think it was -- all of the
20 testimony I heard was more qualitative. And so I think
21 that as we've done in other deliveries and calls, I
22 think you can look at that issue more quantitatively to
23 evaluate their use.

24 Q. Okay. I'll ask my question again. Did you
25 hear any testimony from any of the seniors that

1 indicated they were diverting inefficiently?

2 A. Not from them.

3 Q. Did you hear any testimony from any of the
4 seniors that they are wasting water?

5 A. No.

6 Q. You talked at various times about how things
7 could be better with a model. And one of those topics
8 that you discussed, you were talking about how if
9 the -- I think you called it a stream package was used
10 on the model that could shepherd water, and then show
11 how much water could be delivered to the seniors that
12 have testified in this case? Is that my understanding
13 of what your testimony was?

14 A. No, I don't think that's what I said.

15 Q. Okay. Can you explain that again, what you
16 were saying about that?

17 A. I talked about using a stream package to help
18 route water through down the stream within the modeled
19 area. But, of course, that is only going to get water
20 to the bottom of the model, roughly, for example, at the
21 Sportsman Access gage. But the model doesn't extend
22 further downstream, so there is no ability with this
23 model to route the water further down on the Little Wood
24 River.

25 Q. And that's what I wanted to clarify with you.

1 That the domain for this water ends at Picabo; doesn't
2 it?

3 A. Yes.

4 Q. You were talking about mitigation plans and
5 your history of working with mitigation plans. Based
6 upon that experience, mitigation plans should meet the
7 crop requirements of the senior users; correct?

8 A. The mitigation plan is intended to prevent an
9 injury. So there is a whole lot of things that go into
10 determining injury.

11 Q. So I'll word it a different way. The
12 mitigation plan should meet the injury of the senior
13 users?

14 A. Yeah, they are intended to mitigate any injury
15 that's determined.

16 Q. Do you agree that the model is the best tool
17 available to evaluate the issues in this case?

18 A. I think it's the best available tool to
19 evaluate the effective pumping on the flows in Silver
20 Creek, but that's where the model ends. There are these
21 other considerations on routing the water downstream,
22 and evaluating the water use by the seniors, and all
23 those other issues that I talked about that are not
24 within the realm of the model.

25 MR. FLETCHER: Thank you. I have no further

1 questions.

2 THE HEARING OFFICER: Mr. Rigby?

3 MR. RIGBY: Thank you, Mr. Director.

4 CROSS-EXAMINATION

5 QUESTIONS BY MR. RIGBY:

6 Q. Mr. Sullivan, Jerry Rigby, on behalf of the
7 senior water users. As before, Mr. Fletcher has asked
8 most of the questions we felt like we needed to ask of
9 you. So I won't belabor them except for one. And that
10 is, as I address the particular issues with each and
11 every one of the plaintiffs -- or excuse me -- senior
12 water users in this particular action, when I hear you
13 indicate that there is very little evidence of
14 improvements. Weren't you here in hearing the amount of
15 expenditures they've made in new pivots, in piping from
16 the river, in literally piping from the river to the
17 crop? Did you hear that evidence?

18 A. I heard that evidence, but I don't think I
19 testified anything about improvements.

20 Q. Oh, then I misunderstood your testimony. I
21 thought you were saying there was lack of evidence of
22 those kind of improvements. You didn't say that?

23 A. No.

24 MR. RIGBY: Okay. I have no further
25 questions.

1 THE HEARING OFFICER: All right. Redirect,
2 Mr. Bromley?

3 MR. BROMLEY: Just one piece, Director.

4 REDIRECT EXAMINATION

5 QUESTIONS BY MR. BROMLEY:

6 Q. Mr. Sullivan, when Mr. Fletcher was asking you
7 about limiting the amount of curtailment and looking at
8 particular priority dates, why were these priority dates
9 that you were looking at "on the bubble"? Does this
10 have to do with the analog year analysis that the
11 Department was doing with pre-development and
12 post-development of ground water?

13 A. Well, that's related. But I think that was
14 another way of looking at the potential impact of
15 pumping in this case, sort of an indirect way of looking
16 at it.

17 Q. Yeah. And you were building off of the
18 testimony of Mr. Lakey explaining which priority dates
19 would come back on?

20 A. Yes.

21 MR. BROMLEY: Nothing further.

22 THE HEARING OFFICER: Thank you. Any other
23 redirect questions?

24 ///

25 ///

REDIRECT EXAMINATION

QUESTIONS BY MR. LAWRENCE:

Q. Just quickly, Mr. Sullivan. I want to go back to the questions that Mr. Fletcher was asking you about Mr. Lakey's testimony, about the rights that would benefit if ground water is curtailed in this proceeding.

A. Okay.

Q. Could you turn to Miller Exhibit 1 and attachment, or sorry, Appendix B, which is the water right list?

A. Okay.

Q. You testified about this list in your direct examination with Mr. Bromley; correct?

A. Yes.

Q. And you noted, if I recall correctly, that the three rights that Mr. Lakey said would benefit if ground water is curtailed in this proceeding are the Ritter, Taber, and Barbara Farms water rights. And the Barbara Farms LLC Water Right 37-0344 has an April 6th, 1883 priority; is that correct?

A. Yes.

Q. So the Ritter and Taber rights, which are up above, just for the record, 37-00- -- my eyes are failing -- 49, and 37-0423. Did I get those right, Mr. Sullivan?

1 A. Yes, you did.

2 Q. Thank you. So those are the three rights that
3 add up to the 8.5. If there is more water that results
4 in Silver Creek and the Little Wood through curtailment
5 of ground water than is needed to benefit these three
6 rights, which are the next rights in line on this
7 priority list that would benefit, would possibly
8 benefit?

9 A. You just go down the list below Barbara Farms.

10 Q. Okay. So the next one below Barbara Farms,
11 37-344 is Big Wood Canal Company water right?

12 A. Yes.

13 Q. For what's the diversion rate on that?

14 A. .6 cfs.

15 Q. And Big Wood Canal Company, of course, is a
16 party to this proceeding?

17 A. Yes.

18 Q. And then you have priority dates after Big
19 Wood Canal Company. Do we know it has a 4-6, 1883
20 priority date just like Barbara Farms. Do you know why
21 Mr. Lakey did not include it in his testimony as a right
22 that might benefit?

23 A. I don't know.

24 Q. If you go down below that Big Wood Canal
25 Company right, we have three water rights with priority

1 dates of 6-14, 1883, and then two with 9-1, 1883. Do
2 you see that?

3 A. Yes.

4 Q. And if you just can quickly look at the
5 diversion rates for those rights that I just mentioned,
6 what do you suppose that they total to?

7 A. Roughly 30 cfs.

8 Q. So these would be the next rights that would
9 benefit if water results in Silver Creek through ground
10 water curtailment?

11 A. Yes.

12 Q. And are you aware whether the owners of those
13 rights appeared in this proceeding alleging injury?

14 A. I don't think so.

15 Q. Did you hear Mr. Purdy's testimony this
16 morning?

17 A. For Picabo Livestock?

18 Q. Correct.

19 A. Yes.

20 Q. Is Picabo Livestock the owner, according to
21 this list, of the 9-1, 1883 rights?

22 A. Yes, totaling 20 cfs.

23 Q. Correct. And Mr. Purdy this morning did not
24 allege that he desires curtailment of ground water
25 pumping; did he?

1 A. I didn't hear him say that.

2 MR. LAWRENCE: That's all the questions I
3 have. Thank you.

4 THE HEARING OFFICER: Any other questions?
5 Recross?

6 MR. FLETCHER: Just one question.

7 RECROSS-EXAMINATION

8 QUESTIONS BY MR. FLETCHER:

9 Q. You did hear Mr. Purdy say that he pumps water
10 into the river in order to keep his surface water
11 priority alive? Did you hear him to testify to that?

12 A. I did hear that.

13 MR. FLETCHER: Thank you. No further
14 questions.

15 THE HEARING OFFICER: Okay. Thank you,
16 Mr. Sullivan.

17 (Witness excused.)

18 THE HEARING OFFICER: Other witnesses from
19 Group 3?

20 MS. MCHUGH: No.

21 MR. BROMLEY: No.

22 THE HEARING OFFICER: Okay. I think we are
23 finished with witnesses now at least in the initial
24 round of examination. And we talked about some
25 additional testimony from Department staff, and there

1 may be some surrebuttal. I think that's what it's
2 called.

3 MR. RIGBY: From law school days.

4 THE HEARING OFFICER: Huh?

5 MR. RIGBY: From law school days.

6 THE HEARING OFFICER: Yeah. So how do we want
7 to proceed? Should we have the Department witness go on
8 first, Mr. Baxter?

9 MR. BAXTER: We would call Sean Vincent as a
10 rebuttal witness. Actually he has already snuck in on
11 me. He's right back there.

12 THE HEARING OFFICER: Mr. Vincent, you are
13 already under oath. If you will come forward, at least
14 I think your oath is good for that period of time.

15 SEAN VINCENT,
16 previously first duly sworn to tell the truth relating
17 to said cause, testified as follows:

18 THE HEARING OFFICER: Mr. Baxter, you may
19 examine.

20 REBUTTAL EXAMINATION

21 QUESTIONS BY MR. BAXTER:

22 Q. Good morning, Mr. Vincent. My name is Garrick
23 Baxter. I'm an attorney for the Department of Water
24 Resources. And I have a few questions for you related
25 to the testimony of Mr. Eric Miller. Did you listen to

1 the testimony of Mr. Miller?

2 A. I did.

3 Q. Did he call into question whether the SWSI for
4 the above Hailey gage is an adequate representation of
5 the water supply in the Silver Creek drainage?

6 A. He did. In fact, I believe he called it a
7 poor representation.

8 MR. BAXTER: Mr. Hearing Officer, may I
9 approach the witness?

10 THE HEARING OFFICER: Sure.

11 MR. BAXTER: Let me make sure I give you the
12 right one. Director, a copy for you.

13 Q. (BY MR. BAXTER) Mr. Vincent, I've just handed
14 you a document that's been marked as IDWR Exhibit No. 6.
15 Did you prepare this document?

16 A. I did.

17 Q. What is this document?

18 A. This is a chart that I've prepared in support
19 of my staff memorandum. And it is a plot showing data
20 for three different USGS gage locations within the Big
21 Wood River Basin for the time period 1991 through 2020,
22 which is the same time period that's covered in the SWSI
23 tables that I've relied on for my memo.

24 Q. Okay. Let's back up a little bit and orient
25 the Director and other parties here in the proceeding as

1 to what this chart shows. Could you walk us through and
2 explain the chart for us?

3 A. Yes. Well, let's start with the blue line.
4 That represents the April through September average flow
5 rate in cubic feet per second at the Silver Creek
6 Sportsman Access gage for the 30-year time period. I
7 mentioned previously there is one value for each year
8 which represents that average for the irrigation season.

9 The orange line is what I'll call the SWSI
10 volume in the case of the Big Wood River above Hailey,
11 which is the orange line. It represents the flow
12 measured at the USGS at Hailey gage over that same time
13 period. And then the gray line is the SWSI volume,
14 which does include reservoir storage. Also April
15 through September, the same time period, that's the
16 below Magic gage where that information is compiled.

17 Q. And could you just walk us through the axis
18 that you used here?

19 A. Yes. So the right axis is used for Silver
20 Creek, again that's average cfs. And the left Y axis is
21 for the SWSI volumes. The X axis is the year.

22 Q. Okay. Now, there is also an inset box there
23 in your chart. Could you explain that inset box?

24 A. That is a table of R-squared values.
25 R-squared is also sometimes referred to as the

1 coefficient of determination. For the relations, the
2 correlations between the Silver Creek at Hailey
3 irrigation season values and the above Hailey, the
4 middle column. The far right column is the R-squared
5 for the relationship between Silver Creek and the below
6 Magic SWSI volume, and there is three different time
7 periods there, 1991 to 2020, a ten-year period. 2001
8 through 2020 --

9 Q. Actually, hold on, Mr. Vincent, if you don't
10 mind.

11 MR. BAXTER: Mr. Director, I think somebody
12 isn't maybe muted on the -- it looks like Mr. Semanko
13 has muted himself now.

14 THE HEARING OFFICER: May I again remind
15 everybody to mute yourself, and we'll try to keep you
16 silent here as well. Thanks.

17 Q. (BY MR. BAXTER) I'm sorry. Mr. Vincent, I
18 apologize for that. Can you back up? I think you were
19 on the -- actually, I can't remember which year you were
20 on.

21 A. The time frames in that correlation chart, I
22 was mentioning there is three different time frames, the
23 ten-year period from '91 to 2020 -- or I'm sorry -- a
24 30-year period. There was a 20-year period from 2001 to
25 2020, and a ten-year period from 2011 to 2020.

1 Q. Okay. Mr. Vincent, why did you break those
2 coefficients up into different groups?

3 A. The different time frames sometimes I like to
4 look at that just to evaluate whether the relationship
5 has changed through time. There are factors that can
6 cause the relationship to change the further back in
7 time you go, changes in climate perhaps, or changes in
8 irrigation practices. I think I testified about that in
9 my testimony.

10 Q. Okay. What conclusion do you draw from this
11 document?

12 A. Well, I believe there is a fairly strong
13 positive relationship between the flow, the irrigation
14 season flow measured at the Silver Creek Sportsman
15 Access gage and the irrigation season flow in the Big
16 Wood River measured at the Hailey gage.

17 Q. And how was that reflected in this chart?

18 A. The R-squared values are fairly high. An
19 R-squared of zero would mean that there is essentially
20 no correlation. An R-squared of one indicates that
21 there is a perfect correlation. An R-squared that we're
22 looking at here for the different time ranges, somewhere
23 between .77 and .82. For an R-squared of .80, that
24 would mean that 80 percent of the variation in the flow
25 at the Silver Creek gage is explained by the flow

1 variation at the Hailey gage.

2 MR. BAXTER: Director, I have no further
3 questions of this witness.

4 THE HEARING OFFICER: Okay. Thank you.

5 MS. CARTER: Garrick.

6 MR. BAXTER: Mr. Director, I apologize. I
7 forgot to move to have IDWR Exhibit No. 6 admitted into
8 the record.

9 THE HEARING OFFICER: Any objection to the
10 admission of this document?

11 MR. FLETCHER: No objection.

12 MR. RIGBY: No objection.

13 THE HEARING OFFICER: As a commentary the
14 document marked as Exhibit IDWR No. 6 is received into
15 evidence.

16 (IDWR Exhibit 6 received.)

17 THE HEARING OFFICER: Thank you, Mr. Baxter.

18 Let's see. I think we'll follow the same
19 order that we followed in the beginning of this hearing.
20 Mr. Rigby, Mr. Fletcher, do you wish to question
21 Mr. Vincent?

22 MR. FLETCHER: I don't have any questions.

23 THE HEARING OFFICER: Mr. Rigby?

24 MR. RIGBY: No further questions.

25 THE HEARING OFFICER: Mr. Barker?

1 MR. BARKER: Mr. Director, I have a couple of
2 brief questions for Mr. Vincent that are not related to
3 this. But it would be something that we thought we
4 would potentially recall him on surrebuttal. May I?

5 THE HEARING OFFICER: I don't know. For
6 purposes of efficiency?

7 MR. BARKER: Yes, that's all.

8 THE HEARING OFFICER: Does anybody object to
9 Mr. Vincent answering questions, Mr. Fletcher?

10 MR. FLETCHER: No, I don't. In fact, we have
11 some other questions as well and they not dealing with
12 this topic.

13 THE HEARING OFFICER: Of Mr. Vincent?

14 MR. RIGBY: Yes.

15 MR. FLETCHER: Yes.

16 MR. BARKER: Well, go ahead then.

17 THE HEARING OFFICER: I don't care how it
18 comes in. I don't want to compromise the ability of
19 counsel to control their own testimony, and sometimes it
20 gets mixed up. But usually the attorneys discount that
21 in the interest of efficiency. But however you want to
22 do it. Do you want to go first, Mr. Fletcher?

23 MR. FLETCHER: Yeah, if that's the case, I
24 just need a minute.

25 THE HEARING OFFICER: Okay. Let's go off the

1 record.

2 (Recess.)

3 THE HEARING OFFICER: Let's go back on. We
4 are recording. Back on the record after a short break.

5 Counsel, what did you collectively decide?

6 MR. FLETCHER: We've elected not to ask any
7 further questions of Mr. Vincent. And we'll reserve our
8 right to cross.

9 THE HEARING OFFICER: Okay. Mr. Barker.

10 MR. BARKER: Thank you, Mr. Director.

11 SURREBUTTAL EXAMINATION

12 QUESTIONS BY MR. BARKER:

13 Q. Sean, would you take a look in the green
14 binder at IDWR Exhibit 5?

15 A. Okay.

16 Q. Do you recognize this as a SWSI table that you
17 provided Monday?

18 A. I do.

19 Q. Okay. The question for you is where we have
20 streamflow data from June to September in the fourth
21 column over. For all of these years except for 2021 is
22 that actual measured data for the period of June through
23 September?

24 A. It is.

25 Q. And that actual measured data comes from what

1 source?

2 A. Obviously, this is a product of the NRCS, but
3 it's based on measurements made by the USGS at the at
4 Hailey gage location.

5 Q. Okay. So the NRCS which produces this report
6 relies upon the actual measurements that are prepared by
7 the USGS, or compiled by the USGS from their gage
8 readings?

9 A. That's correct.

10 Q. So if someone went to the USGS gage readings
11 directly and not to the NRCS SWSI report, presumably
12 they would see the same information in that NRCS report?

13 A. Yes.

14 MR. BARKER: Thank you. I don't have any
15 further questions.

16 THE HEARING OFFICER: Ms. O'Leary?

17 MS. O'LEARY: Nothing from me, Director.

18 THE HEARING OFFICER: Group 3?

19 MS. MCHUGH: No.

20 MR. BROMLEY: No.

21 THE HEARING OFFICER: Mr. O'Bannon?

22 And you reserved an opportunity here,
23 Mr. Fletcher.

24 MR. FLETCHER: No questions.

25 MR. RIGBY: No questions.

1 THE HEARING OFFICER: Okay. Thank you,
2 Mr. Vincent.

3 (Witness excused.)

4 THE HEARING OFFICER: Okay. I get a little
5 confused where we are in the process, but I think we're
6 back to rebuttal from Group 1, if I'm not mistaken. Do
7 you wish to call rebuttal witnesses, Mr. Rigby,
8 Mr. Fletcher?

9 MR. FLETCHER: No, we're not going to call any
10 rebuttal witnesses.

11 MR. RIGBY: We are not.

12 THE HEARING OFFICER: Okay. And if there are
13 no rebuttal witnesses, then I assume there is no reason
14 for rebuttal from the other parties; is that correct?

15 MR. RIGBY: I think that's how it works.

16 MR. BARKER: I'm not sure how we rebut
17 nothing.

18 THE HEARING OFFICER: Yes, that's what I'm
19 saying. And it looks like Mr. Sullivan's flight is
20 probably more secure than it was before.

21 MR. FLETCHER: We were trying to help
22 Mr. Sullivan out.

23 THE HEARING OFFICER: Okay. So is that the
24 end of testimony then?

25 MR. BARKER: Yes.

1 THE HEARING OFFICER: All right. I think
2 there are some matters that I think the attorneys want
3 to address, maybe both Group 2 and Group 3. How do we
4 want to work through those? I think we have some data
5 questions that were raised, and we have some questions
6 about particularly when staff memos were filed, and I'll
7 state it this way, at least accessible to the parties.
8 And there may be some questions about service or
9 whatever. But how do you want to address those at this
10 point?

11 MR. THOMPSON: Well, I don't know, Director.
12 I was hoping we could stipulate to these days. I've got
13 a time frame, and I guess if there is a question about
14 it, we may need to recall some Department witness at
15 some point.

16 THE HEARING OFFICER: Stipulate the dates of
17 the --

18 MR. THOMPSON: When the requests were made,
19 and when the information was received or accessible.

20 THE HEARING OFFICER: Okay.

21 MR. THOMPSON: So I guess the first matter, we
22 filed a request for production of information on May 13
23 with the Department. We then filed a public records
24 request under separate statute, under the public
25 writings act, that was filed on May 20th. We received

1 an email from the Department on May 24th at 4:58 p.m.,
2 responding to that public records request, which was
3 just I think access to an FTP site where a bunch of
4 information was downloaded.

5 Sun Valley Company filed a request for
6 information related to the staff memorandums on May
7 21st. And then this week we received on June 9th,
8 emails from Ms. Carter, one, information related to the
9 Sukow and Luke memos that appeared to be seven files,
10 five Excel files, two PDF. A second email information
11 related to Tim Luke memo, which was a zip file that
12 contained 48 other files, again on June 9th. And
13 finally, a third email from Ms. Carter, information
14 related to the Vincent, Blankenau memos, and six
15 additional files, and a link to an FTP site.

16 My review of the information on the
17 Department's website, and the dates of the staff memos
18 are all May 17th. We didn't receive the memos on May
19 17th. I looked on the Department's website. They were
20 available sometime in the afternoon. I don't know when
21 on the 18th. We requested files supporting Jennifer
22 Sukow's memo. We received an email on May 19th with
23 corrupt files. We received a second email on May 21st,
24 that did have files that were not corrupt that we were
25 able to access.

1 THE HEARING OFFICER: Okay. Well, I can't
2 verify all of the dates that you have just mentioned.
3 And I don't know how we go through a verification
4 process. I thought the question might be more narrowly
5 at least from Group 2, Mr. Thompson, would be focused on
6 the staff memos, and that's what we had discussed
7 previously. I know the focus may be a little larger for
8 Sun Valley Company at least, because of the May 21st
9 request. But it certainly was their request, and maybe
10 you are trying to cover all of those in your narrative.

11 MR. THOMPSON: No, we had a request, too. And
12 I guess one last piece of information related to Tim
13 Luke's communications on ground water pumping data
14 provided to Mr. Miller. We did receive an email this
15 morning from Garrick Baxter that appears to have total
16 pumping data from Water District 37 for 2016, '17, '18,
17 '19, and '20 over 635 individual WMIS numbers. I know
18 there is different numbers of flow meters. So that's
19 not the number of, I guess, readings, but that needs to
20 be determined. But that was received this morning.

21 My point, I guess getting back to our original
22 requests for production, just I think those dates were
23 stated. And if there is a dispute as to those dates or
24 when the information was provided, I don't know how we
25 address that. I guess we could call Department

1 witnesses next week.

2 THE HEARING OFFICER: Well, let me at least
3 verify based on what I know. I requested that the memos
4 be submitted to me with staff memos on the 17th. And I
5 received them on the 17th of May. They were posted to
6 our website on the 20th -- I'm sorry -- on the 18th of
7 May.

8 And if everyone will remember, the notice
9 required that those wanting to participate needed to
10 file with us on the 19th, a notice of intent to
11 participate in the hearing. So the documents were
12 posted to the website ahead of when the Department would
13 know who the Department needed to serve, and then or at
14 least distribute to.

15 And then on the 20th, I understand that there
16 is an email that then notified those who had filed a
17 notice of intent to participate directing them to the
18 website for those staff memos. So at least that's the
19 timing of what I know about staff memos.

20 Now, the other dates related to submittal of
21 data, were updates, and the last I think submittal by
22 Tim Luke, or by Tim Luke's staff today. And I
23 understood was in response to a question internally
24 about where data came from, whether it came from Lakey
25 or whether it came from Tim Luke that arose during the

1 hearing, itself.

2 MR. THOMPSON: Well, and I --

3 THE HEARING OFFICER: Mr. Thompson.

4 MR. THOMPSON: Yes. And I think it goes to
5 the information we requested, all communications between
6 the Department and representatives for the seniors. And
7 we did understand that communication was made verbally
8 to Mr. Miller, but that data regarding that information
9 was provided today.

10 MR. BAXTER: Mr. Director, may I?

11 THE HEARING OFFICER: Yes.

12 MR. BAXTER: A question for Mr. Thompson, can
13 you point us to the document where you asked for that
14 data in advance, because the first time we understood a
15 request for the data came through was yesterday?

16 MR. THOMPSON: Yes. I guess request for
17 production we filed on May 13, No. 9, all communications
18 concerning water supply and injury analysis with any
19 water right holder and their representatives including
20 Eric Miller, whose rights the Department considered may
21 be injured concerning injury analysis.

22 MR. BAXTER: Mr. Director, I think that goes
23 to communications about the surface water users. I
24 think the data underlying that is ground water data, if
25 I understand correctly. So I don't know if it's

1 responsive to that particular request.

2 THE HEARING OFFICER: Well, I suppose all of
3 those things can be. I guess they can be part of
4 arguments if folks think there is a legal deficiency.
5 And at least it's clear to you, Mr. Baxter, what
6 Mr. Thompson interpretation is.

7 MR. THOMPSON: I guess that does go to the
8 point. I mean, we submit this request on the 13th. We
9 get no response to it until we filed a public records
10 request when information like this isn't provided,
11 so...

12 THE HEARING OFFICER: Well, that's part of the
13 argument. Mr. Thompson, if you feel there is a fatal
14 legal error in what's happened, those arguments can be
15 tendered in -- well, depending on what the decision is I
16 guess, or, you know, certainly in the briefing.

17 Now, we've talked about some of those dates.
18 Mr. Bromley, or Group 3, do you want to further
19 elaborate here?

20 MR. BROMLEY: No, I have nothing to add on the
21 dates. The dates that Mr. Thompson referenced as to the
22 requests that were made by Sun Valley Company are
23 correct.

24 THE HEARING OFFICER: Okay.

25 MS. MCHUGH: I do just have something for the

1 record. Candice McHugh on behalf of the City of
2 Bellevue. Just the record reflects that the City of
3 Bellevue filed a motion to participate on the 11th, and
4 we filed a motion to dismiss, or rather a motion for
5 clarification and/or a more definite statement on May
6 14th, served the parties that we knew had filed notices
7 of intent to participate at that point. But documents
8 were not served on the City of Bellevue consistently by
9 the parties in the matter. And there is a bunch of
10 things that I understand that until May 19th, we didn't
11 know who was participating.

12 But the fact is is the only way for a party,
13 who had filed a notice of intent to participate, like
14 the City of Bellevue and also a motion, was to go and
15 check the Department's website because people were not
16 consistently serving people with documents that were
17 actually being filed in the proceeding. And we did not
18 know who to serve fully, frankly, until May 24th at the
19 pre-hearing conference on who actually appeared at that
20 point.

21 In an effort for the City to comply with
22 notice requirements, and I think all parties had the
23 ability to do this, including the Department, we filed
24 people that we knew were directly impacted, including
25 the seniors because we knew their lawyers, and including

1 the juniors because we knew their lawyers, and anybody
2 else that we knew in the area. So that's how the City
3 of Bellevue did it, and we did not receive all parties
4 documents by all other participating parties.

5 And frankly, I'm not so sure we've actually
6 considered or landed on a full and complete and correct
7 certificate of mailing because all of us have used
8 something different. So if we need to delineate that
9 and how things happened, and who wasn't served when, we
10 can certainly do that in more detail. But I did want to
11 make a record, that I don't think any of us have used a
12 consistent certificate of mailing.

13 On June 8th, the City of Bellevue did request
14 all written materials and memos regarding Meghan's
15 confirmation to the Director that he could proceed under
16 Idaho Code 42-237a.g. It was denied on June 9th without
17 qualification citing Idaho Code 74104(1) and 502, with
18 the idea that we had the ability to appeal that denial
19 to enforce our right to get that information, which we
20 will consider. For the record I believe that part of
21 the attorney/client privilege or any privilege that the
22 Department may assert has been waived given the fact
23 that it was not cc'd to your attorneys and made part of
24 the public record. But whether we will appeal that is a
25 different question. But I wanted to make clear for the

1 record that that request was denied in full. And that's
2 all I have to add.

3 THE HEARING OFFICER: Okay. Thank you.

4 Do we need to talk about anything else today?

5 Mr. Rigby?

6 MR. RIGBY: Yes, Mr. Director. As you can
7 appreciate, the timing is very critical to my clients.
8 And I'm going to actually ask for a novel request, which
9 is that because the Director is very familiar with what
10 has occurred, in his capacity as the Hearing Officer,
11 but also the Director of the Department of Water
12 Resources, and your duty to administer, we would request
13 that we not have any briefing, but rather that this be
14 submitted as of today.

15 THE HEARING OFFICER: I will allow, Mr. Rigby,
16 for a short briefing period. Simultaneous briefs due by
17 Friday, let's see -- yesterday was the 10th, so I guess
18 that's the 17th; right?

19 MS. MCHUGH: Yesterday was the 11th.

20 THE HEARING OFFICER: Oh, I'm mixing my days.
21 So that would be the 18th, Friday the 18th, simultaneous
22 briefs, one submittal. Do you want a page limit?

23 MR. THOMPSON: Four.

24 THE HEARING OFFICER: Four pages.

25 MR. FLETCHER: We'll stipulate.

1 MR. RIGBY: Done.

2 MR. LAWRENCE: Including the certificate of
3 mailing.

4 MR. FLETCHER: Yeah, including the certificate
5 of mailing. Mr. Lawrence had a great idea.

6 THE HEARING OFFICER: And all attachments.
7 All right. Friday is the deadline.

8 Well, thanks to everybody for working hard.
9 And it's been harder on all of you, than it has been on
10 me. And I recognize how hard all of you have worked, so
11 thank you. And we'll close the record at this point.
12 Thanks everybody. Let's go home and enjoy at least half
13 a day for those that are close to home.

14 (Proceedings concluded at 11:17 a.m.)
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1 REPORTER'S CERTIFICATE

2 I, COLLEEN P. DOHERTY, CSR No. 345, Certified
3 Shorthand Reporter, certify:

4 That the foregoing proceedings were taken
5 before me at the time and place therein set forth, at
6 which time the witness was put under oath;

7 That the testimony and all objections made were
8 recorded stenographically by me and transcribed by me or
9 under my direction;

10 That the foregoing is a true and correct record
11 of all testimony given, to the best of my ability;

12 I further certify that I am not a relative or
13 employee of any attorney or party, nor am I financially
14 interested in the action.

15 IN WITNESS WHEREOF, I set my hand and seal this
16 17th day of June, 2021.

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COLLEEN P. DOHERTY, CSR 345

Notary Public

P.O. Box 2636

Boise, Idaho 83701-2636

My commission expires September 7, 2023.

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EASEMENT AND RIGHT OF WAY

This agreement, made on the date last mentioned below between Jess O. Smith and Addie B. Smith, husband and wife, first parties, of ^{Picabo} ~~Emmett~~, Idaho, and T. H. Gooding, Emmett Kelly, and W; R. Patterson, second parties, witnesseth that:

Whereas second parties are the duly appointed and acting members of the advisory board of Water District No. 11-A.B. of Blaine, Lincoln and Gooding Counties, Idaho, and are acting herein as such board on behalf of and as trustees for the water users of said water district.

First parties, in consideration of the sum of \$750.00 to be paid to them as hereinafter specified, hereby grant to second parties and their successors in office as such representatives of the water users of said district 11-A.B. having interests and rights in and to the water flowing through the channel of Silver Creek at the point where Silver Creek passes through the hereinafter mentioned lands an easement and right of way over and across the following described land of first parties, namely:

Two strips of land each 20 feet in width being one strip on each side of Silver Creek through the $W\frac{1}{2}$ $NW\frac{1}{4}$ and ^{SE $\frac{1}{4}$ NW $\frac{1}{4}$} ~~NE $\frac{1}{4}$ NW $\frac{1}{4}$~~ , Sec. 20, Twp. 2 S, R. 21, E. B. M. Blaine. County, Idaho, the said strips to be measured from the natural and normal waters edge of the respective sides of Silver Creek. The purpose hereof is to enable the interested water users of Silver Creek to reconstruct, build up, repair and maintain the banks and dredge and keep in order the channel of such creek to prevent loss of irrigation water by overflowing. Second parties shall have the right at any and all reasonable and proper times to go upon said strips of land with men, horses, machinery, and equipment, and shall have the right to remove from said strips of land such amounts of earth, gravel, stones, trees and timber as may be necessary to maintain the banks of Silver Creek at

sufficient heights to restrain the waters of said creek within its banks and permit the flow of such stream to pass to the water users down stream, provided, however, that the parties of the first part shall have the right to take and use such trees and shrubs as may be by the second parties cut from said rights of way, provided, however, that in such event the parties of the first part must promptly remove such cut trees and timber from said rights of way. Second parties shall have the right to dredge the channel of said stream and deposit the material so taken from the bed of the stream on said strips for the purpose of building up the banks of Silver Creek; and second parties shall have the right to erect and maintain embankments of earth, timber, stone or concrete upon said strips of land upon which the easement and right-of-way are so granted to second parties; and second parties shall have the right from year to year to enter upon said strips of land for the purpose of repairing, constructing and maintaining said embankments, provided, however, that the right to use said 20ft. strip shall give the parties of the second part no right to enter upon the remaining portions of the first parties' said tract of land.

In consideration of the rights herein given to the parties of the second part, the parties of the second part agree that the water master of the said water district shall, on or before July 20, 1941, pay to the first parties the sum of \$500 from the water master's funds of such district and also the sum of \$250 from the same source on or before May 1, 1942. It is agreed that the failure to make either of said payments at said specified times shall, at the option of the parties of the first part, terminate the rights of parties of the second part in and to said strips of land and each of them. In the event that after the payment of the said \$500 has been made, the rights of the second parties in said rights of way are terminated by reason of the failure of the second parties to make the \$250 payment, then and in that event the \$500 payment

shall be retained as liquidated and stipulated damages.

It is expected that the watermaster of said district will on or about April 1st, 1942, raise the banks of said Silver Creek through certain portions of the aforesaid lands of the parties of the first part and when such work is done it is understood and agreed that said watermaster will at said time construct in the east bank of said stream at the point where the waters of said stream have in the past broken out of said bank and flowed into a lake bed east of said stream on said lands, which said headgate shall be constructed of substantial planks and have a width of eight feet, and in this connection it is understood and agreed that if at any time in the future during the irrigation season it becomes impossible to hold all of the waters of said stream in the banks thereof on said lands, the watermaster shall open said headgate and permit such surplus to escape into said old lake bed. The purpose of this provision is to prevent the waters of said stream from flowing out upon any portion of the said lands of the parties of the first part except upon the said lake bed. In this connection it is further understood and agreed that during the nonirrigation season the parties of the first part shall themselves have the right to open said headgate when it becomes necessary to do so in order to prevent the waters of said stream breaking out of said stream bed and flooding the remaining portion of the said lands of the parties of the first part.

This agreement shall be binding upon the successors and assigns of all parties and shall be deemed a covenant running with the above described tract of land.

Given under our hands the 30 day of June 1941.

Jess A. Smith
Addie B. Smith

Parties of the First Part

[Handwritten signatures]

Parties of the Second Part.

STATE OF IDAHO)
 (SS.
COUNTY OF BLAINE)

On this 30 day of June, in the year 1941, before me, the undersigned, a Notary Public in and for said county, personally appeared Jess O. Smith and Addie B. Smith, known to me to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

[Handwritten signature: Mabel G. Jones]

Notary Public in and for the
State of Idaho; Residing at
Shoshone, Idaho.

My commission expires Nov. 24: 1942

Groundwater-Flow Model for the Wood River Valley Aquifer System, Version 1.1

Idaho Department of Water Resources
Allan Wylie, Jennifer Sukow, Mike McVay, and James Bartolino



Abstract

This report documents the design, development, and calibration of the Wood River Valley (WRV) Aquifer Model Version 1.1. The objective of this update to WRV Aquifer Model 1.0 was to include data collected between 1/1/2011 and 12/31/2014 while preserving the basic design of the groundwater model developed by Fisher and others (2016). The geologic interpretations, groundwater-flow system understanding, and model layering and grid remain as described by Fisher. The model boundary was adjusted to include three additional irrigation wells.

The calibration data include river gain and loss records calculated using nine continuous gages. Three of the gages are on the Big Wood River, four of the gages measure tributary inflow to the Big Wood River and two measure discharge from springs that arise within the model boundary. Aquifer water-level data include 1,314 water-levels collected in 332 wells.

Adjustable parameters for the WRV Aquifer Model calibration include aquifer transmissivity, storage coefficient, riverbed conductance, drain conductance, irrigation efficiency, and tributary-aquifer underflow.

The calibration period (1/1/1998 through 12/31/2014) includes some of the wettest and driest years on record, indicating that the stresses the model is calibrated to include the range of stresses that can realistically be expected for most analyses. The fit between field observations and model output is good, suggesting that the model reasonably represents the hydrogeologic system.

Along with adding four additional years of data to the model period, the recalibration resulted in an improved representation of the length of the Big Wood River that becomes dry during the summer and the length of time it remains dry annually.

The length of the Big Wood River in hydrologic communication with the aquifer varies substantially during most years, making development of a numerical-superposition model inadvisable.

Keywords:

Aquifer river interaction, MODFLOW-USG, PEST, METRIC

Acknowledgements

The Idaho Department of Water Resources (IDWR) would like to thank the Idaho Water Resource Board for funding this project and for their guidance throughout the project. We also thank the Modeling Technical Advisory Group (MTAC) for their participation, input, and local insight.

Introduction

This report documents the design, development, and calibration of Wood River Valley (WRV) Aquifer Model Version 1.1. The objective of the WRV Aquifer Model Version 1.1 project was to include data collected between 1/1/2011 and 12/31/2014 with the original calibration period of 1/1/1998 through 12/31/2010 while updating the Wood River Valley aquifer model developed by Fisher and others (2016). Adding the years between 1/1/2011 and 12/31/2014 incorporates years during which more groundwater level and streamflow data were collected in the WRV than in any other four-year span in the calibration period. During this period the U.S. Geological Survey (USGS) conducted a mass measurement of wells in the WRV, conducted three seepage surveys on the Big Wood River and Silver Creek, and installed stream gages on the Big Wood River and four tributary streams. In addition, The IDWR installed pressure transducers in several wells, and significantly increased the number of wells routinely measured in the valley.

Descriptions of the study area, groundwater-flow system, and groundwater-flow model can be found in Fisher and others (2016). The geologic interpretations, the groundwater-flow system understanding, and the model layering and grid size used in WRV Aquifer Model Version 1.0 remain unchanged.

The boundary of the model was adjusted to include three irrigation wells near the Sportsman's Access Gage on Silver Creek. The added areas are within the circles in Figure 1.

The intent of this project is to update and improve upon the WRV Aquifer Model Version 1.0 calibration by including more years with higher data density while preserving the basic design of the model developed by Fisher and others (2016).

Model Development

WRV Aquifer Model Version 1.1 was calibrated using PEST (Doherty, 2016), an automated parameter estimation program. The goal of WRV model calibration is to adjust aquifer parameters within reasonable ranges until model-generated aquifer head, and gains to the Big Wood River, Willow Creek and Silver Creek match observed values. The adjustable parameters included riverbed conductance, drain conductance, irrigation-entity efficiency, tributary underflow, aquifer transmissivity, and aquifer storage. Transmissivity and aquifer storage were estimated using the PEST pilot points system (Doherty, 2003). PEST was only allowed to adjust parameters between assumed uncertainty bounds. For example, PEST could only adjust layer-one storage coefficients between 0.10 and 0.30 because those were assumed to be reasonable bounds based on available geologic information. Groundwater flow was simulated using MODFLOW-USG (Panday and others, 2013), a numerical model for simulating three-dimensional, steady-state and transient groundwater flow. Because the model is run many times during the parameter-estimation process, it was necessary to limit model run times. Substantial savings in model run times were achieved by simulating transient flow in the WRV aquifer system using a specified saturated thickness.

The following sections describe the parameter-estimation tools used for the WRV Aquifer Model calibration, as well as the observation data. Final model parameters and a comparison between model-predicted values and observed values are discussed in the subsequent "Model Calibration" section.

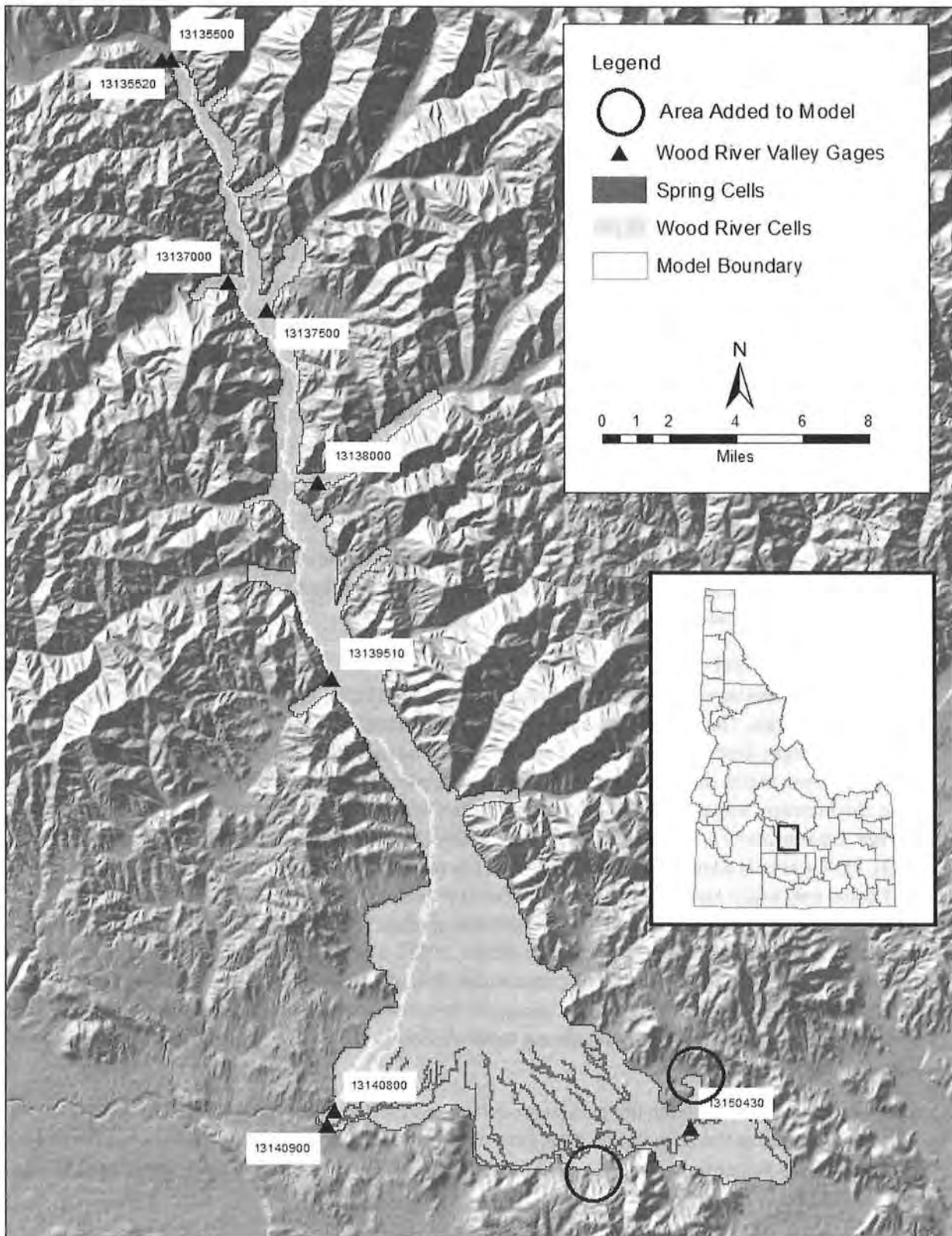


Figure 1. Location map and continuous river gages.

Parameter estimation tools

PEST, a nonlinear, least-squares inverse modeling program (Doherty, 2016) was used to calibrate the WRV Aquifer Model Version 1.1. During calibration, PEST runs MODFLOW-USG thousands of times, comparing model-generated values with field observations. The goal is to minimize the weighted, sum of the squared residuals, or difference between the model-generated values and the field observations.

River gain and loss data

River-gain and loss data consist of river-gaging information used to calculate gains from the aquifer to the river or losses from the river to the aquifer along the Big Wood River, Willow Creek, and Silver Creek and its tributaries. Streamflow measurements are available from the following nine continuous recording stations (Figure 1):

1. Big Wood River near Ketchum (USGS 13135500),
2. North Fork Big Wood River near Sawtooth NRA Headquarters (USGS 13135520),
3. Warm Springs Creek near Ketchum (USGS 13137000),
4. Trail Creek at Ketchum (USGS 13137500),
5. East Fork Big Wood River at Gimlet (USGS 13138000),
6. Big Wood River at Hailey (USGS 13139510),
7. Big Wood River at Stanton Crossing (USGS 13140800),
8. Willow Creek near Spring Creek Ranch (IPCO 13140900), and
9. Silver Creek at Sportsman Access (USGS 13150430).

Although most of these gages were not in operation during the entire model period, correlations with the gage at Hailey allow calculation of streamflow for the entire model period for Big Wood River near Ketchum, North Fork Big Wood River at Sawtooth NRA Headquarters, Warm Springs Creek near Ketchum, Trail Creek at Ketchum, and East Fork Big Wood River at Gimlet (Sukow, 2014). Semi-annual gaging of Silver Creek near Picabo (Wylie, 2019) and historic seepage surveys (Moreland, 1977) indicates that the gains between Sportsman Access and the model boundary are negligible. Thus the gages allow calculation of average monthly reach gains for five river reaches:

1. Big Wood River near Ketchum to at Hailey (240 observations between 1995-2015),
2. Big Wood River at Hailey to Stanton Crossing (219 observations between 1996-2015),
3. Willow Creek (173 observations between 2000-2015),
4. Silver Creek above Sportsman Access (240 observations between 1995-2015), and
5. Silver Creek Sportsman Access to Model Boundary (negligible based on a few streamflow measurements).

The USGS conducted three seepage surveys of the Big Wood River and Silver Creek. Each survey consisted of a single measurement at 28 different streamflow and diversion sites within the model domain. The seepage surveys were conducted in August 2012, October 2012, and March 2013

(Bartolino, 2014). Although each of the seepage surveys represent a single moment in time, they were conducted during the model-calibration period, and can be used to calculate reach gains and losses for shorter subreaches of the Big Wood River and Silver Creek.

Aquifer water level data

The calibration targets include water-levels collected by the USGS, IDWR, other cooperators, and water-well drillers. These measurements include mass measurements collected during October 2006 and October 2012. A total of 1,314 water-level measurements collected in 332 different wells were used in the model calibration. These observations fall into two categories:

- 1) Observation Well measurements. Measurements collected in wells with multiple water-level measurements (1,101 water-levels in 119 wells) (Figure 2), and
- 2) Geolocated Well measurements. Measurements obtained from driller logs (213 water-level measurements). The corresponding wells either have a GPS location provided by the driller or were geolocated using an addresses provided for the well by the driller (Figure 2).

Evapotranspiration

Evapotranspiration (ET), the sum of evaporation and plant transpiration, is a significant component of aquifer discharge in the WRV. Traditional ET estimation methods such as the FAO Penman-Monteith method (Allen and others, 1998) proved unreliable in the WRV because the county crop mix was not representative of the crops grown in the WRV. Therefore, ET for the WRV model was estimated using remote sensing techniques. Using ET estimates based on the METRIC algorithm (Allen and others, 2010) circumvented most of the problem. Where METRIC estimates for ET were not available for a model irrigation season, ET was estimated using Normalized Difference Vegetative Index (NDVI) (Allen and others, 2010). NDVI is a normalized ratio of the difference between red and infrared wavelengths reflected from the earth's surface and serves as an indicator of viable plant cover. ET is strongly dependent on the presence of growing plants, enabling the development of strong correlations between NDVI and ET (McVay, 2014).

Model Calibration

Model calibration involves adjustment of model parameters to minimize the difference between model output and field observations. This section describes the adjustable parameters and the results. For the WRV Aquifer Model Version 1.1, the simulation period extends from 1/1/1995 through 12/31/2014 and the calibration period extends from 1/1/1998 through 12/31/2014. The period 1/1/1995 through 12/31/1997 provides the model with a three year warm-up before matching model output with field observations.

Transient calibration procedure

Each calibration iteration consisted of: first running the WRV water budget tool (Fisher and others, 2016), which calculates net recharge and writes a MODFLOW-USG well file, and then running MODFLOW-USG to calculate aquifer heads and aquifer-stream exchanges. Starting heads for each transient MODFLOW-USG simulation are calculated during an initial steady-state stress period. The well file for the initial steady-state stress period is generated using average water-budget data from April 2004 through March 2005. The steady-state stress period is used only to generate starting heads for the

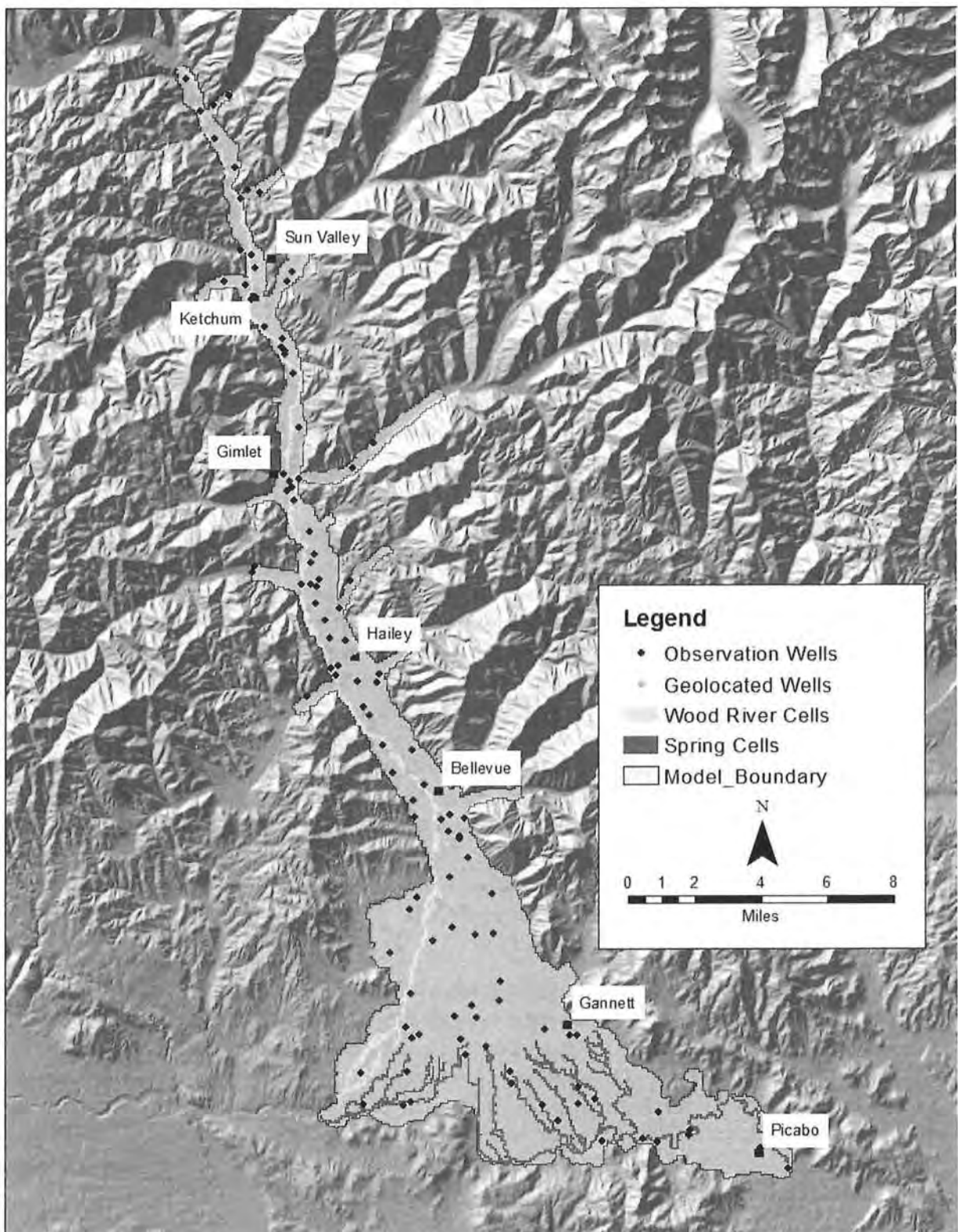


Figure 2. Observation and geolocated wells.

transient simulation. The model has a three-year warm-up period to recover from inaccuracies in the starting head field. PEST does not begin attempting to match modeled output with field observations until 1/1/1998. PEST adjusts recharge parameters as well as aquifer properties. The Modeling Technical Advisory Committee (MTAC) agreed to adjustment, within the bounds of uncertainty, on two of the components of recharge during model calibration. Adjustable components include irrigation-entity efficiency and tributary underflow. Irrigation entity efficiency describes what percentage of water diverted by an irrigation entity is consumptively used by crops. Tributary underflow is water entering the modeled aquifer system as groundwater from an adjacent aquifer.

Irrigation entity efficiency

An irrigation efficiency was assigned to all 89 irrigation entities. Conveyance losses were subtracted from the diverted volume before calculating entity efficiency for those entities with extensive canals (Figure 3). The lower and upper bounds for irrigation efficiency were set at 50% and 90%. Exceptions were made for entities the MTAC felt might benefit from natural sub-irrigation and for entities where water-measurement data indicated that entity efficiency could be outside the original bounds.

Tributary underflow

Prescribed-flux boundaries were used to represent tributary underflow for the major tributary valleys. Figure 4 shows the location of the 23 modeled tributary-underflow boundaries. Each tributary was assigned an initial long-term average underflow estimate as described in Appendix E of Fisher and others (2016). Tributary underflow was adjustable through three parameters: 1) a scalar that is multiplied with the initial long-term average estimate, 2) a moving average time span, and 3) an amplitude-reduction factor. Each tributary has a unique initial underflow estimate and a unique adjustable scalar. The moving average time span and amplitude-reduction factor are global and apply to all tributary valleys. Thus the flux at each tributary is unique, however the annual cycle (i.e., moving average and amplitude-reduction factor) are the same for all tributaries. This simplification is necessary because the data density in the tributary valleys is insufficient to allow adjustment of three unique tributary-underflow parameters for each of the 23 tributary valleys. The lower bound for each tributary scalar was set to 0.01 and the upper bound was set to a factor that would yield a product equal to 20% of the average annual precipitation within the tributary basin. The table in Figure 4 shows the average annual precipitation volume in each tributary basin and the modeled average annual underflow.

Aquifer hydraulic conductivity

The aquifer hydraulic conductivity distribution was estimated using a pilot-point parameterization method (Doherty, 2003). Parameter values were estimated for 271 pilot points and interpolated to the centroid of each model cell within the active model grid. Layer-one and Layer-three are divided into zones. The Layer-one zones separate the tributary valleys from the WRV (zone 1), and the Layer-three zones separate the alluvial aquifer (zone 1) from the basalt (zone 2). Layer-two consists of one zone. The delineation of the boundary between the lacustrine sediments, the sand and gravel, and the basalt portions of Layer-two is accomplished during calibration. Figures 5a through 5c show the various zones. The zones were defined based on geologic interpretation of driller logs.

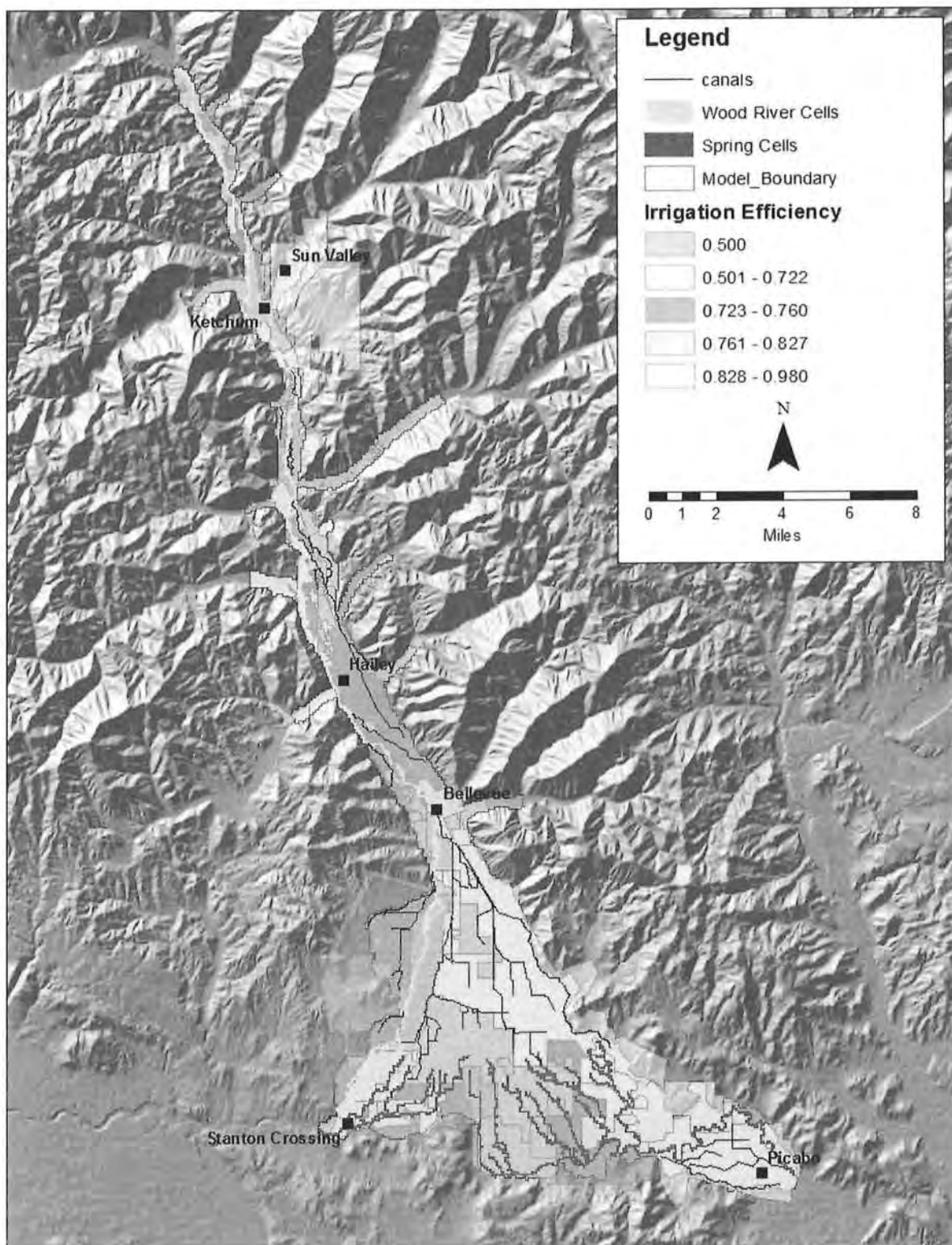


Figure 3. Irrigation entity efficiency.

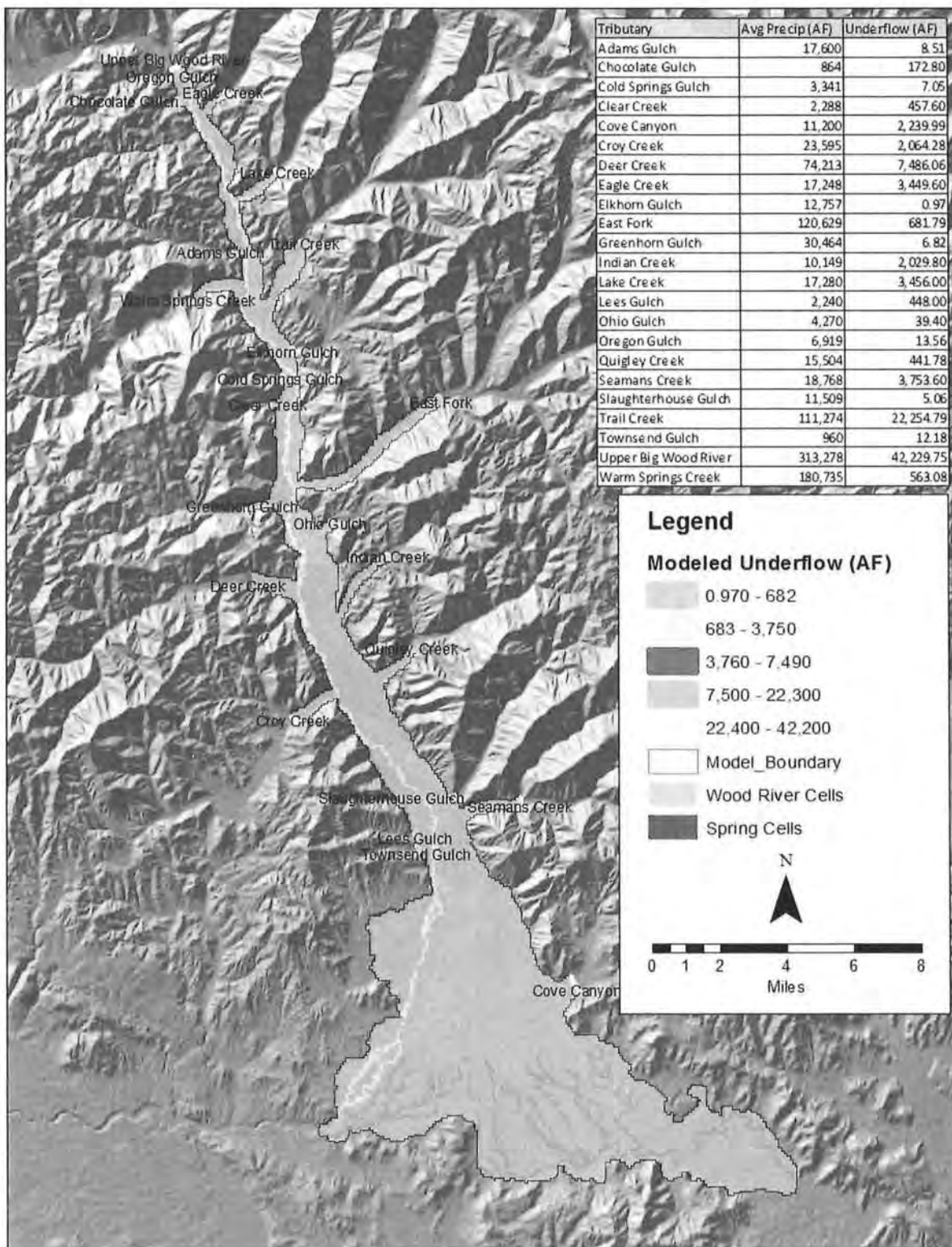


Figure 4. Tributary underflow.

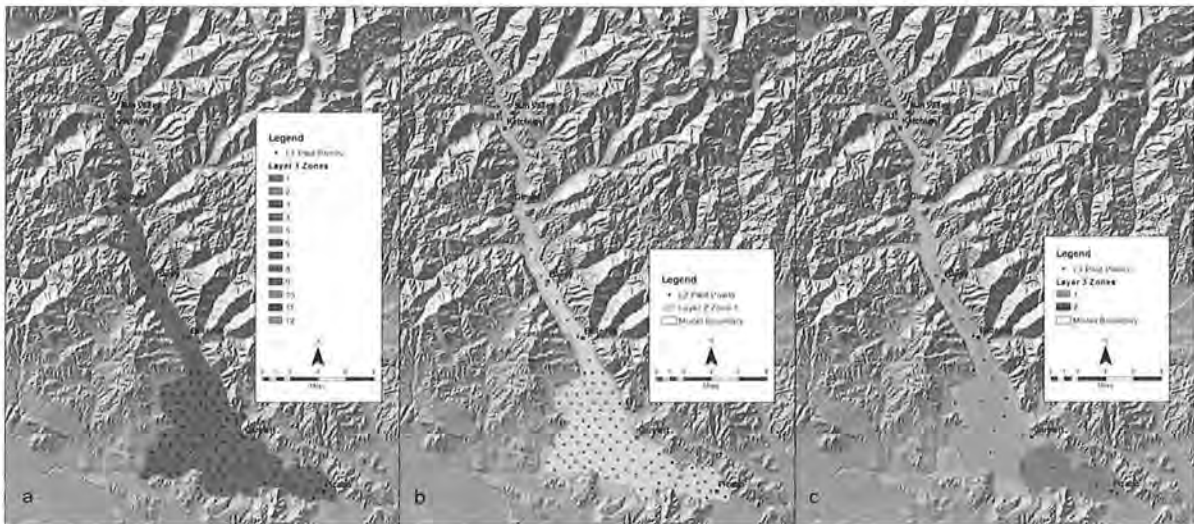


Figure 5. Hydraulic conductivity zones for Layers 1 (5a), 2 (5b), and 3 (5c).

Figures 6a through 6c show the calibrated hydraulic conductivity for Layer-one through Layer-three. Comparing Figure 3b from Fisher and others (2016) with Figure 6b in this document shows that for Layer-two, the calibration generally supports the delineation determined from the well logs. The major change is that calibration extends the lacustrine clays farther east toward Picabo. The resulting extent of the confining layer is consistent with earlier delineations of the confined aquifer (Moreland, 1977).

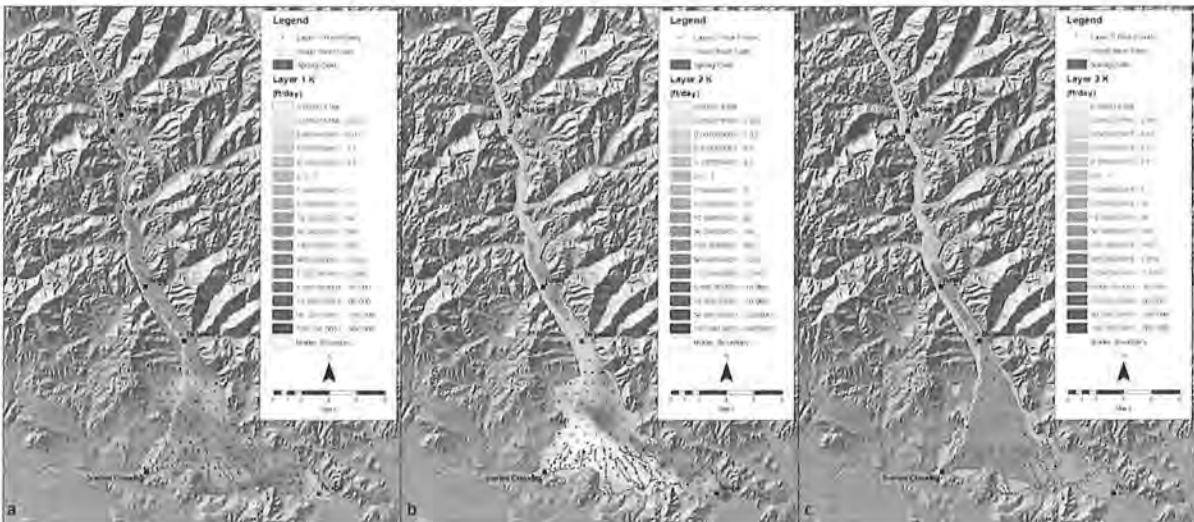


Figure 6. Calibrated hydraulic conductivity for Layers 1, 2, and 3.

Storage coefficient

The aquifer-storage coefficient distribution was calculated using a pilot-point parameterization method similar to the method used for the aquifer hydraulic conductivity distribution. The calibrated values are shown in Figures 7a through 7c.

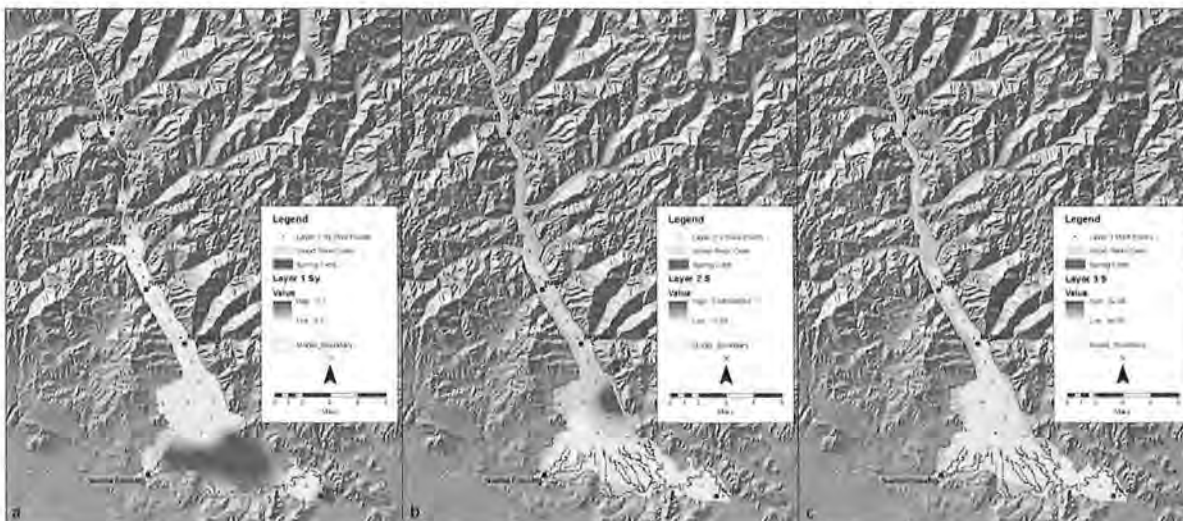


Figure 7. Calibrated aquifer storage coefficient for layers 1, 2, and 3, note that the color ramp is different for each layer.

All model layers were simulated using a fixed saturated thickness, so the storage coefficient for Layer-one is equivalent to a specific yield value. The calibrated storage coefficient values for Layer-one ranges from 0.10 to 0.30, consistent with literature estimates for alluvium (Freeze and Cherry, 1979). The calibrated values for Layers two and three range from $1.0\text{e-}6$ to $9.7\text{e-}4$.

Head-dependent river boundaries

Head-dependent boundaries are typically used to represent surface-water bodies which are hydraulically connected to an aquifer. Head-dependent boundaries include river boundaries, at which the flux may be either recharge or discharge from the aquifer, and drain boundaries, at which the flux may only be discharged from the aquifer (Panday and others, 2013). If the aquifer head in a river cell is above the water-surface elevation in the river (river stage), water flows from the aquifer into the river (aquifer discharge or river gain). If the aquifer head in a river cell is below the river stage, water enters the aquifer from the river (aquifer recharge or river loss).

For the purposes of this study, a river reach is a stretch of a river or stream defined by an upstream and downstream streamflow gage, or other means of determining flow. A subreach is a stretch of river or stream with an upstream and downstream measurement collected during one or more of the three seepage surveys conducted by the USGS during 2012 and 2013 (Bartolino, 2014). The Big Wood River, Silver Creek, and Willow Creek are represented by 2,551 river cells divided into five river reaches. The five river reaches (Figure 8a) are further subdivided into 21 subreaches (Figure 8b).

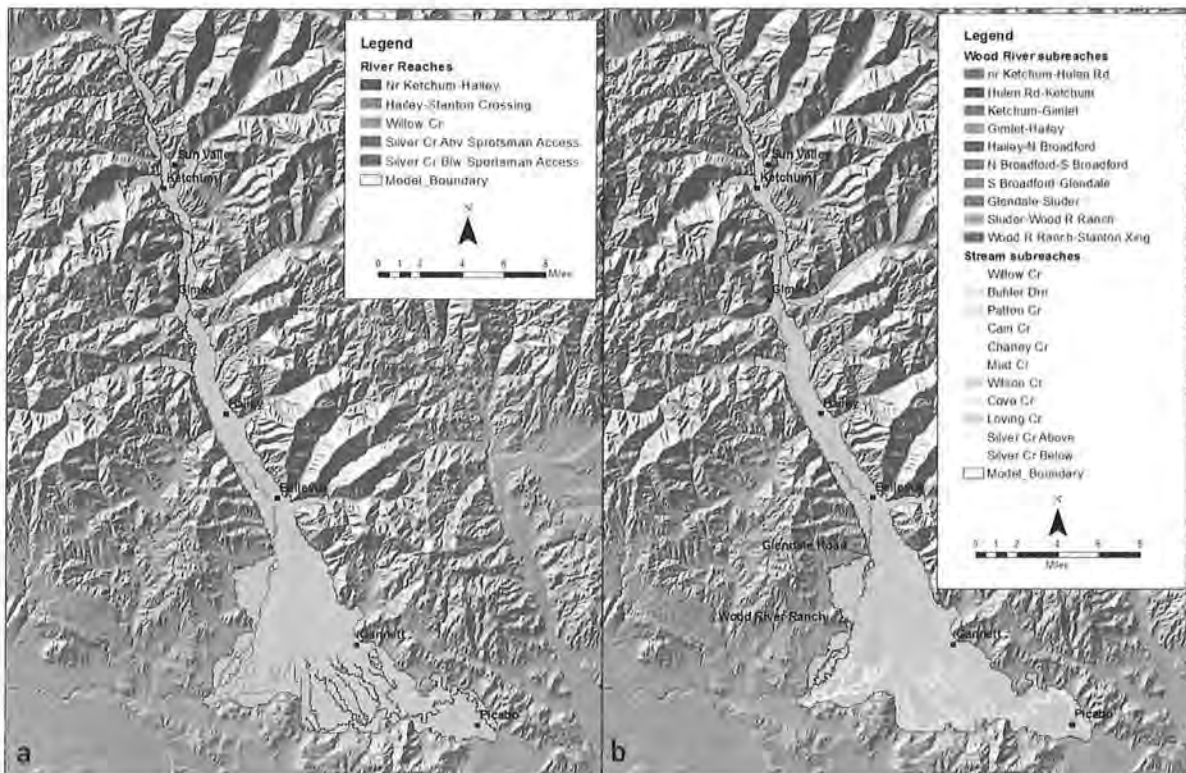


Figure 8. River reaches and subreaches.

River stage changes with each stress period along the Big Wood River. This is accomplished by interpolating between adjacent gages down to Glendale Road (Figure 8b). Landsat photos and water district records of priority cuts in surface-water rights are used to infer historical river conditions between Glendale Road and Stanton Crossing. When water district records indicate that the river was dry between Glendale Road and Wood River Ranch, river stage was set equal to the river bottom so the river head differential is zero and no water can leak from the river. When Landsat photos indicate water was flowing between Glendale Road and Wood River Ranch, river stage was set above the river bottom so water can seep from the river. When Landsat photos indicate that water is flowing between Wood River Ranch and Stanton Crossing, river stage is interpolated between Stanton Crossing and Wood River Ranch. When Landsat photos indicate that the river is dry, river stage is set equal to the river bottom.

The riverbed-conductance parameters are adjustable parameters that help govern seepage into and out of the river. Riverbed conductance is constant through time for most subreaches. The seepage from the river to the aquifer or from the aquifer to the river is a function of river stage, aquifer head, and riverbed conductance.

Generally, flow in a river is a function of stage in the river; the higher the stage, the higher the flow (Sanders, 1998). However, in the Glendale Road to Sluder Road and Sluder Road to Wood River Ranch subreaches, the river stage does not increase significantly as flow increases rather, the river spreads laterally. To approximate this phenomenon, different riverbed conductance parameters were provided when the average monthly river stage at Hailey exceeded certain values. When the average monthly river stage at Hailey was less than three feet, a riverbed-conductance term representing normal flow

conditions was used; when the average monthly river stage exceeded three feet, a riverbed-conductance term representing high-flow conditions was used; and when the average monthly river stage exceeded 4.5 feet, a riverbed-conductance term representing especially high-flow conditions was used. Thus, there are three riverbed-conductance parameters used for the Glendale Road to Sluder Road subreach and three riverbed-conductance parameters use for the Sluder Road to Wood River Ranch subreach and the parameter that is used depends on the river stage recorded at the Hailey gage. Figure 1 shows the location of the gages, Figure 8b shows the location of the subreaches, and Figure 9 shows the recorded average monthly stage at the Hailey gage.

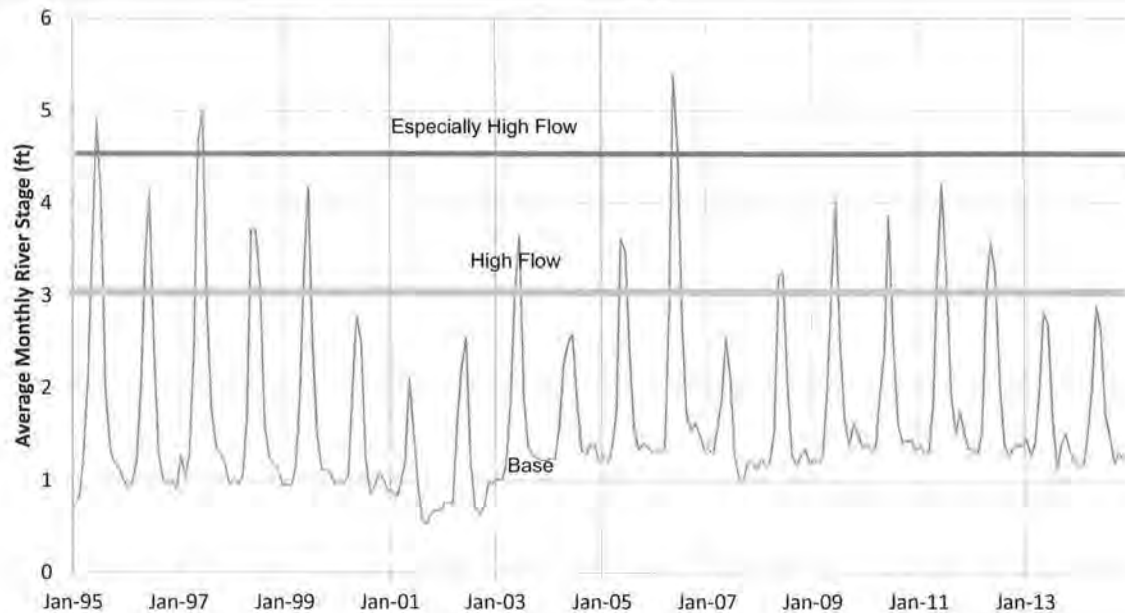


Figure 9. Average monthly stage recorded at Hailey.

Figure 10a shows the range of calibrated riverbed-conductance values for the Big Wood River with the base riverbed conductance for the Glendale Road to Sluder Road and Sluder Road to Wood River Ranch subreaches. Figures 10b and 10c show the riverbed conductance for higher flow conditions.

Figure 11 shows the range of calibrated riverbed-conductance values used to simulate aquifer and river interactions for Silver Creek and Willow Creek.

Figure 12a through 12d show the observed river gains and losses. Note that the gains depicted in Figure 12a frequently contain gaps during the spring. This is because of gage error at high flow and because there are several ungaged ephemeral tributary streams that likely contributed flow to the Big Wood River during this time; thus, not all the ungaged gains were contributions from the WRV aquifer system. The lack of tributary-stream measurements in these ephemeral streams and the possibility of gage error at high flows precludes calculation of reach gains and losses during these periods.

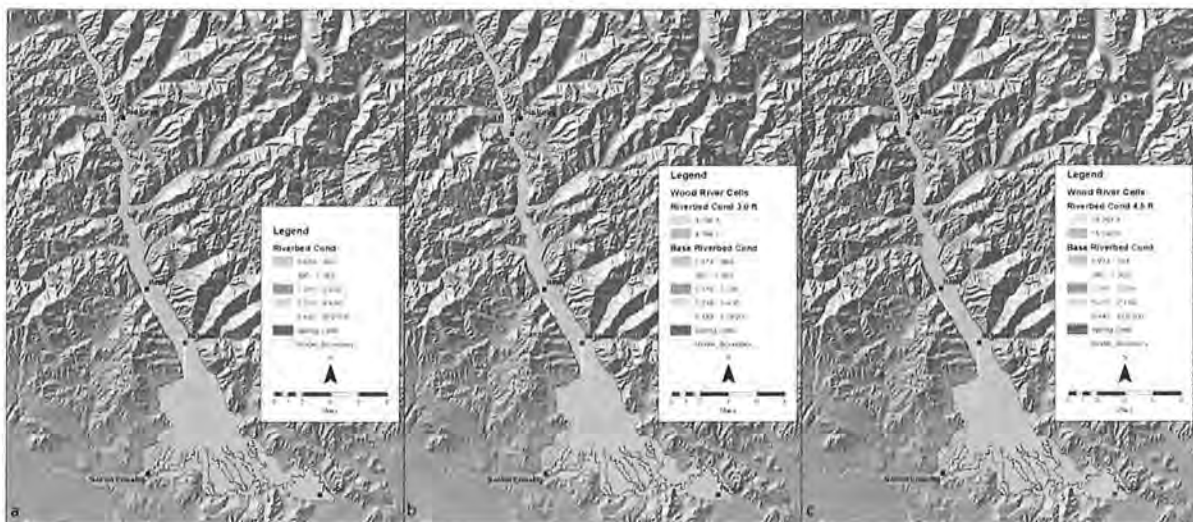


Figure 10. Calibrated riverbed conductance for the Big Wood River.

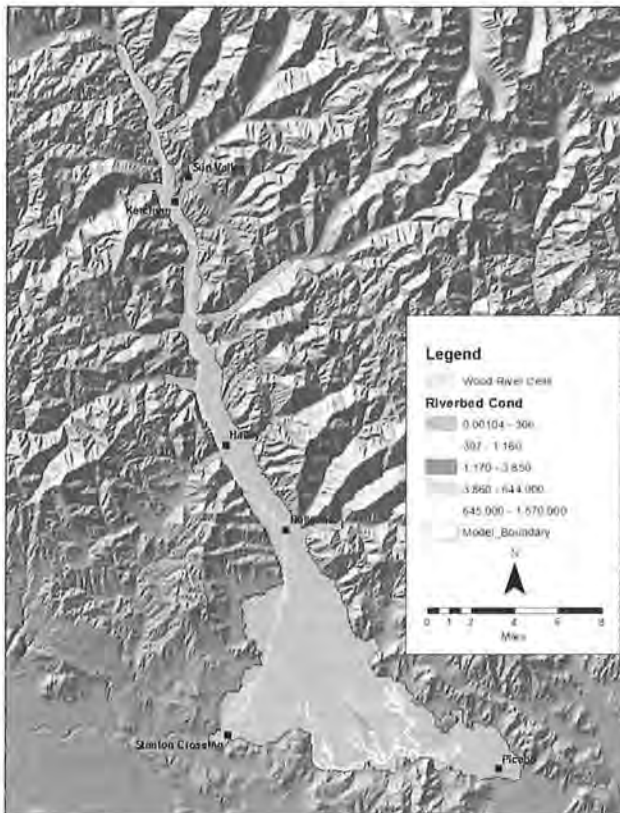


Figure 11. Calibrated riverbed conductance for Willow Creek and Silver Creek.

4,000-53,000 AF (Fisher and others, 2013).

Head-dependent outlet boundaries

Groundwater leaves the WRV aquifer system as subsurface outflow at the Stanton Crossing and Silver Creek outlet boundaries (Figure 13). This was represented using drain cells in the WRV Aquifer Model Version 1.1. MODFLOW drain cells function much like MODFLOW river cells, except water can only flow from the aquifer out through the drain. No water can flow into the aquifer through the drain.

Drains were emplaced in each active model layer at both boundaries (one layer at the Stanton Crossing outlet boundary, three layers at the Silver Creek boundary). The table in Figure 13 shows the calibrated drain-conductance values. The average modeled discharge out the Stanton Crossing boundary is 275 AF (0.38 cfs); the average discharge out the Silver Creek boundary is 22,942 AF (31.7 cfs). Previous estimates of discharge beneath Stanton Crossing by other researches range from 0-300 AF and previous estimates of discharge beneath Silver Creek range from

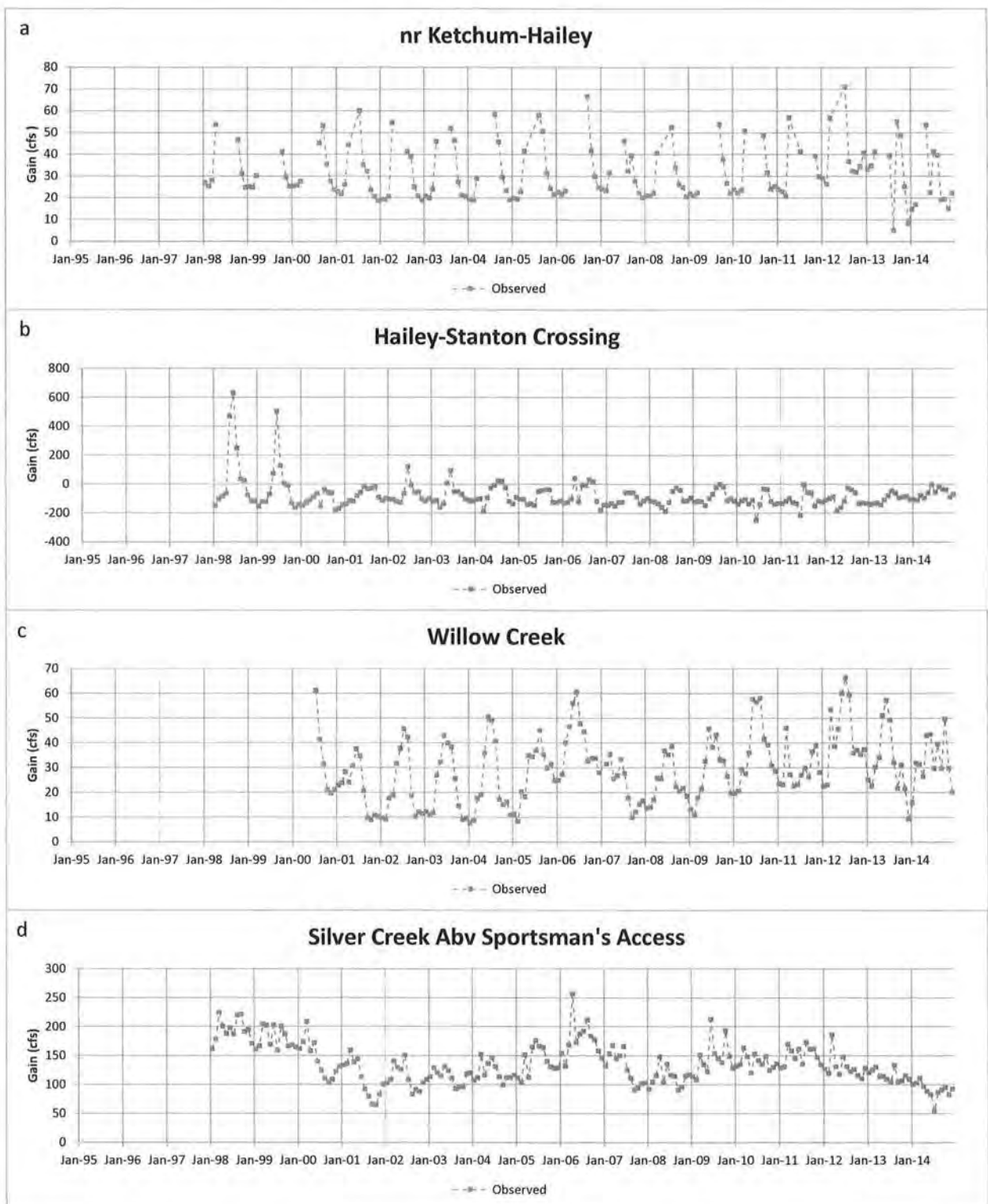


Figure 12. Observed river gains.

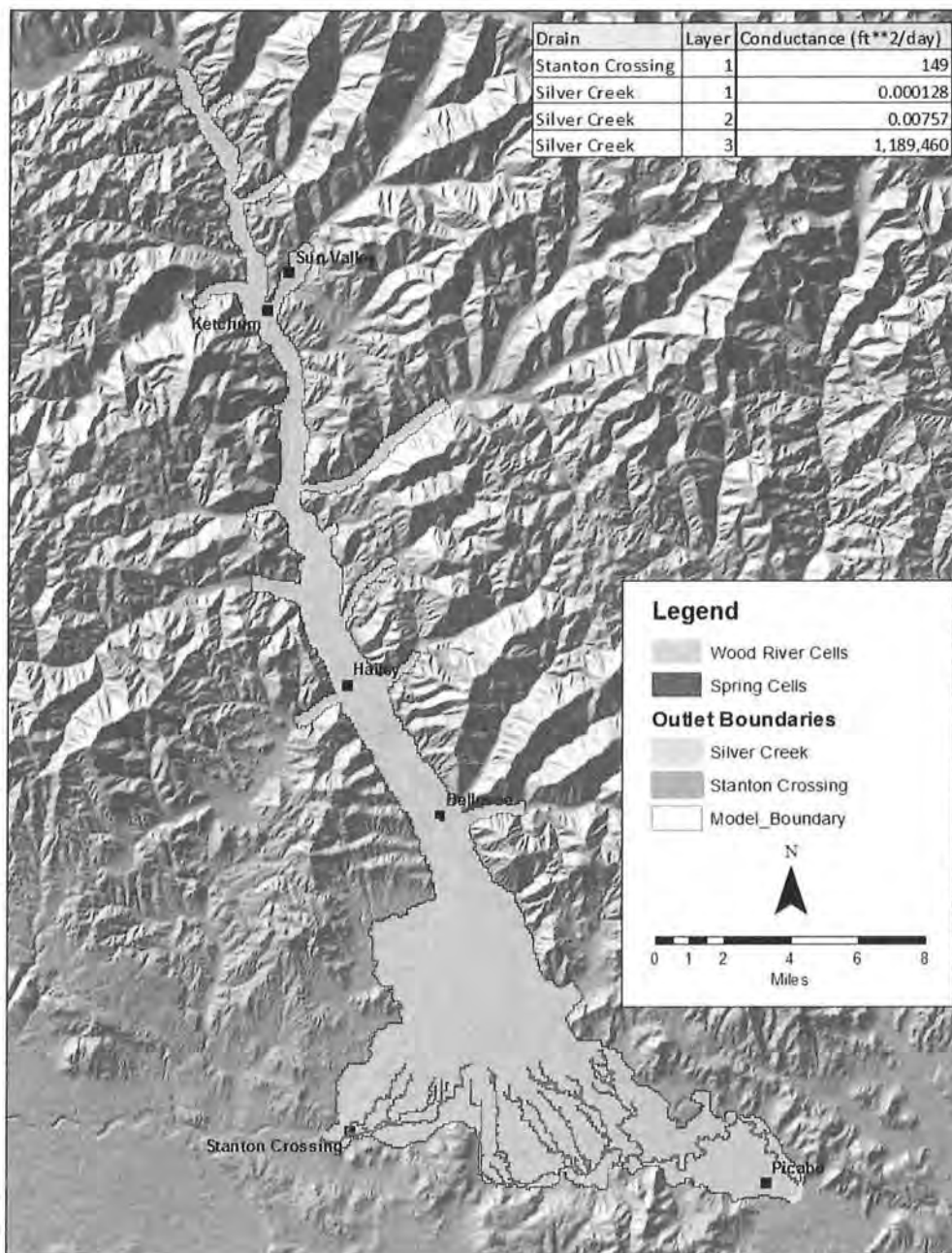


Figure 13. Model drain locations.

Assessment of Model Calibration

One of the measures of the quality of an aquifer model calibration is how closely the simulated data match with the field observations. This section describes the modeled and observed match for the various observation groups. When working with PEST, the residual, or the difference between the observed value and the modeled value is calculated by subtracting the modeled value from the observed value (Doherty, 2016); thus, a negative residual indicates that the modeled value is too high.

River gain and loss data

Figure 14a through 14d show simulated and observed gains for the Near Ketchum-Hailey, Hailey-Stanton Crossing, Willow Creek, and Silver Creek above Sportsman's Access reaches. Field data indicate that Silver Creek below Sportsman's Access gage has no interaction with the regional aquifer system (Wylie, 2019). Figure 8a shows the location of the reaches.

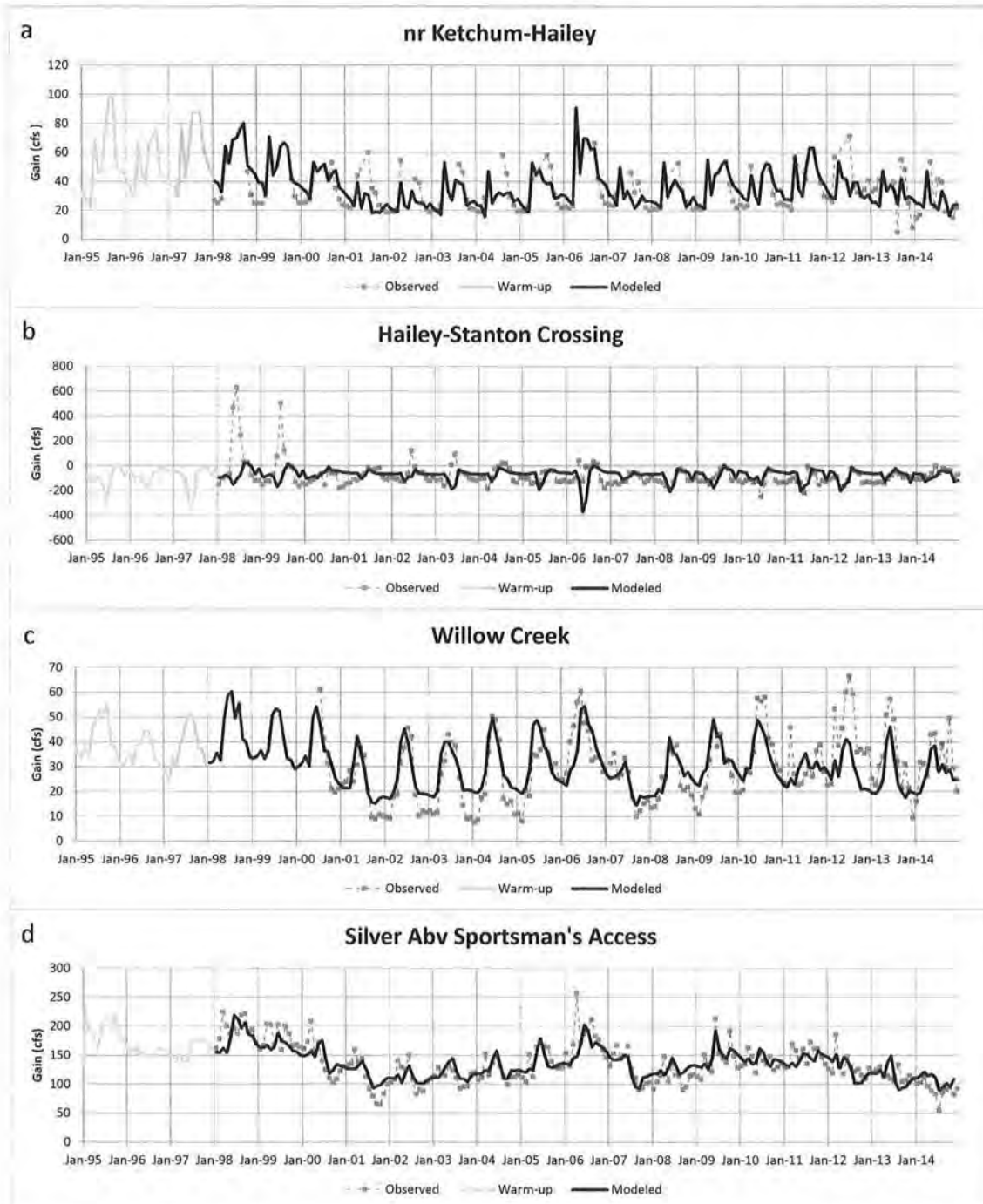


Figure 14. Modeled and observed river gains and losses.

Big Wood River

During the calibration period (1998-2014), the fall through early spring river-aquifer exchange in the near Ketchum-Hailey reach of the Big Wood River (Figure 8a) were calculated; however, because of gage error and ungaged tributary stream contributions, the spring and early summer aquifer and river interactions could not be determined. Figure 14a shows that the observed gains tend to be high in the spring, occasionally more than 60 cfs, and taper down to 20 cfs during the winter months. The WRV Aquifer Model Version 1.1 tends to capture the general character but misses the early season gains in some years. For example the WRV Aquifer Model Version 1.1 does not match the peak gains during the springs of 2001 and 2002.

Ungaged tributary stream contributions to the Hailey-Stanton Crossing reach (Figure 8a) during the late spring and summer are expected to be negligible, allowing calculation of year-round calibration targets. This reach tends to lose water to the aquifer; however, during the summers of 1998, 1999, 2002, 2003, 2004, and 2006 the field data show gains from the aquifer. The calculated gains may be the result of gage error during high flow. The modeled data match the seasonal highs and lows adequately; however, the field measurements tend to gradually decline throughout the summer and winter, while the modeled data drops abruptly. In reality, the Big Wood River gradually dries up between Glendale Road and Wood River Ranch, but in the model, the river either has water, or does not have water. Perhaps the inability to match the gradual decline is due to these abrupt changes in the model river file in the Glendale Road to Wood River Ranch subreach that are intended to simulate the change from high flow conditions during spring runoff to a dry riverbed at the end of summer.

Willow Creek

Willow Creek originates as springs within the model area and is gaged near the southwestern corner of the model (Figure 1). Figure 14c shows the field observations and the modeled match for Willow Creek. The modeled gains match the general shape of the field observations and match the timing of the peak discharge; however, the modeled data does not match the observed seasonal amplitude. The observed data almost certainly contain some runoff from spring snowmelt, which is not represented in the model.

Silver Creek

Silver Creek originates as springs within the model area and is measured at the Sportsman's Access gage shown in Figure 1. Figure 14d shows the field observations and the modeled match. The modeled gains follow the general shape of the field observations but under-predict the seasonal amplitude. Perhaps the mismatch is because peak flows contain some runoff from spring snowmelt.

Several streamflow measurements collected in Silver Creek just north of Picabo suggest that there is minimal aquifer-river interaction between Silver Creek and the WRV aquifer downstream (east) of the Sportsman's Access gage (Wylie, 2019). This finding is consistent with historic seepage studies (Moreland, 1977).

Seepage surveys

Improved resolution of the aquifer-river interaction along the Big Wood River and Silver Creek is possible through incorporating the results of the August 2012, October 2012, and March 2013 seepage surveys (Bartolino, 2014). The modeled match with the three seepage surveys is shown in Figure 15. One of the challenges associated with including the seepage surveys is that the field results are point measurements influenced by daily or even hourly water-management decisions, while the model is responding to average monthly water use. Even so, the cross plot in Figure 15 shows that the model

output matches reasonably well. If the model output were to match the field observations perfectly, the data would fall on the 45° line. The fact that the data do not all fall on the 45° line may be, in part, because the diversions and returns fluctuated from the average during the seepage survey.

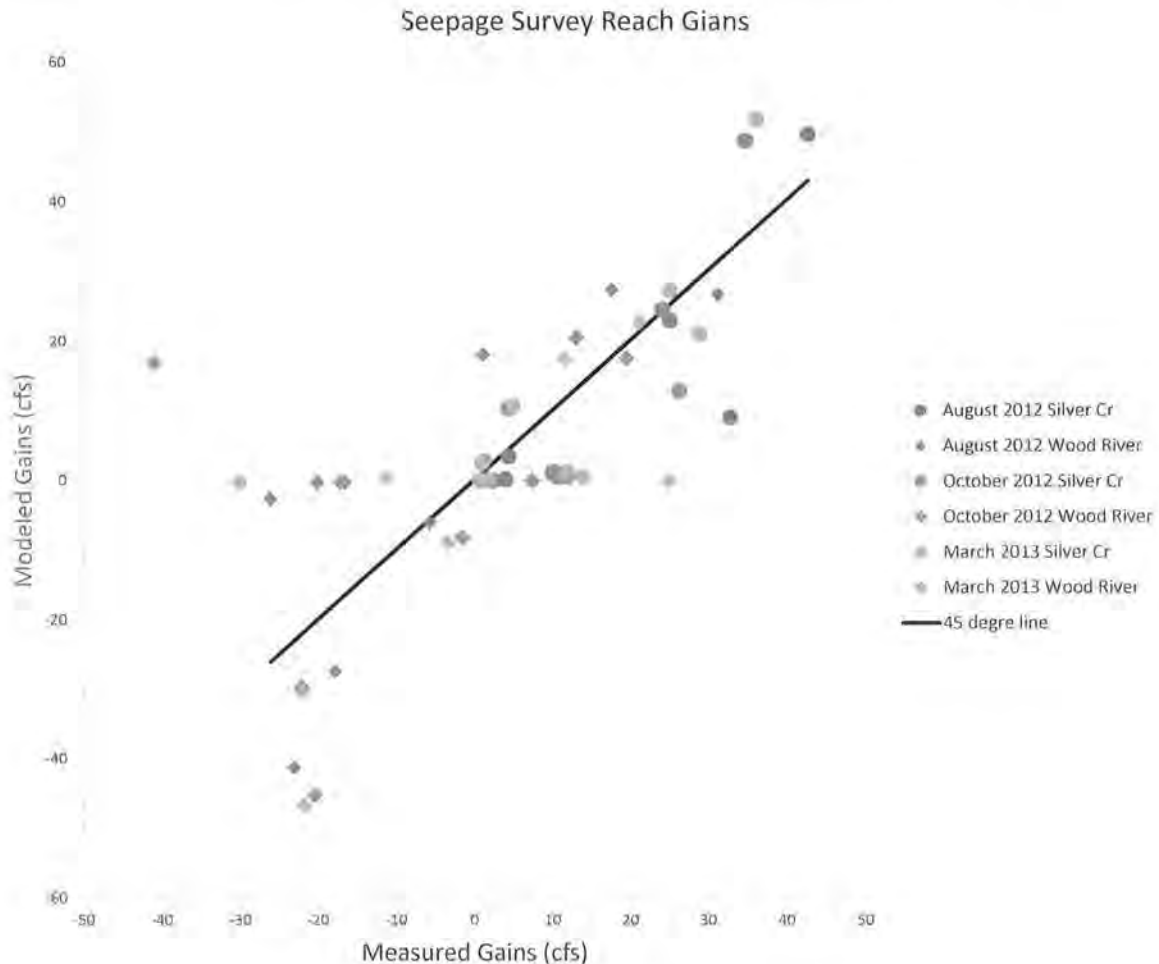


Figure 15. Cross plot of modeled and observed seepage survey reach gains.

Heart Rock Ranch-Stanton Crossing gains

When the flow downstream of the Heart Rock Ranch point of diversion on the Big Wood River is zero, the flow measured at the Stanton Crossing gage represents the gains accrued between the Heart Rock Ranch point of diversion and the Stanton Crossing gage (Figure 16). This situation happened 89 times during the simulation period, and the chart in Figure 16 shows the field observations compared with the modeled values. Some of the mismatch is due to the fact that the seasonal changes to the modeled river are more granular than in the actual river. The Big Wood River between Wood River Ranch and Stanton Crossing is modeled as containing water when Landsat images show water in more than half the reach. The real world situation is much more complex and the wetted length of the river can change daily. This likely explains the deviation between modeled and measured data in the winter of 2007-2008.

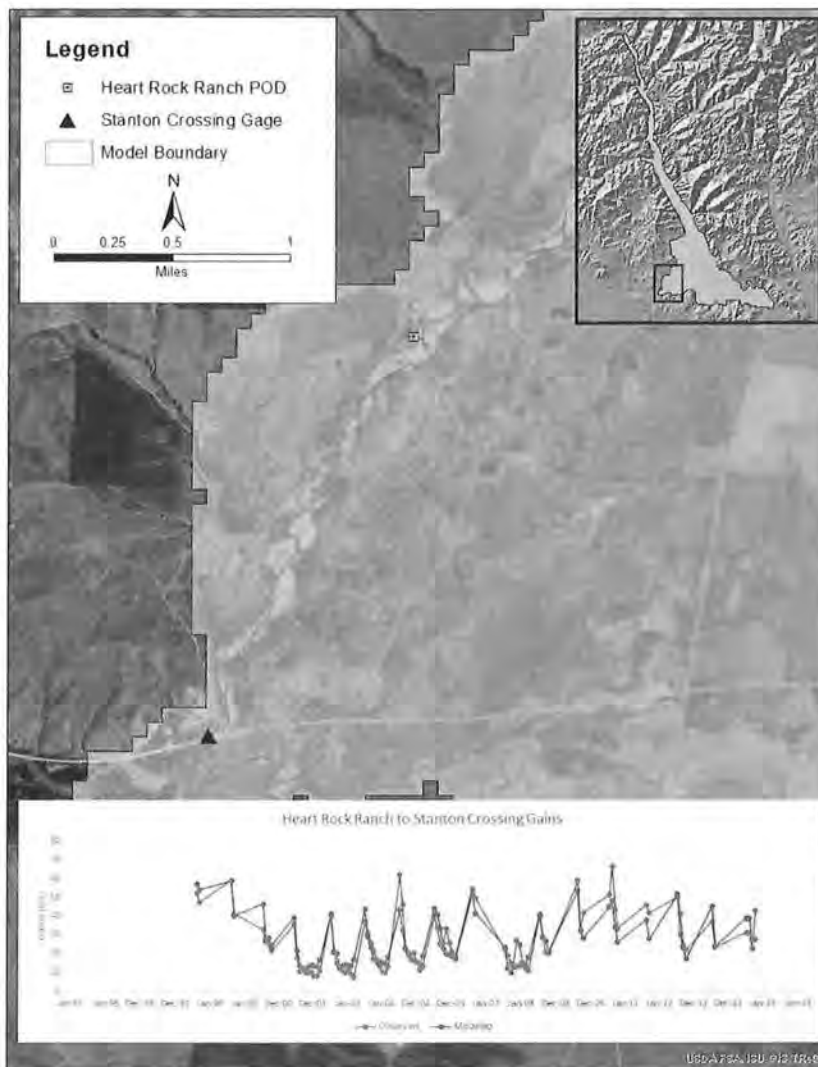


Figure 16. Heart Rock Ranch to Stanton Crossing gains.

the standard deviation is 5.92 feet. The 95% confidence interval for the mean is ± 0.35 feet; thus the confidence interval extends from +0.20 to -0.50 and includes zero. Therefore the possibility that the mean residual is zero cannot be excluded.

Aquifer head in observation wells

One thousand one hundred one water levels collected in the 129 wells shown in Figure 17 were used as calibration data. The wells were surveyed using a real-time kinematic and fast-static differential global positioning surveying system capable of sub-foot elevation accuracy. Water levels were collected using an electric measuring tape, a steel tape, a pressure gage, or a pressure transducer. The resulting water-level elevations are considered accurate to ± 1.0 ft.

This carefully documented water-level dataset provides excellent calibration data. The water level calibration statistics are presented in the table in Figure 17. The mean difference between modeled and observed water levels is -0.15 feet, the median difference is 0.18 feet, and

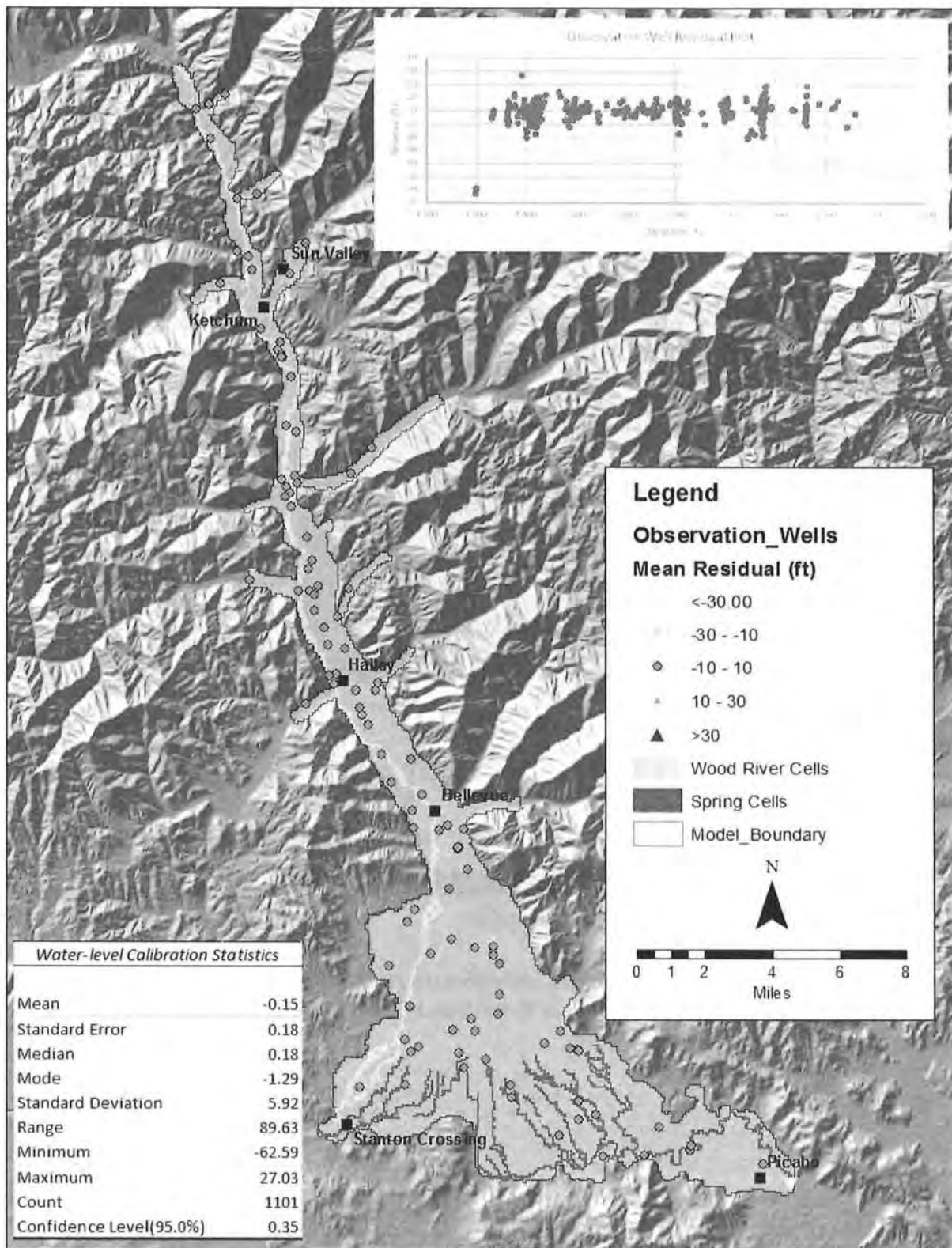


Figure 17. Residual plot and calibration statistics for observation well data.

The residual-plot in Figure 17 is a graph of the difference between observed and modeled water levels plotted with the observed elevation on the X axis. Assuming a perfect match between measured and modeled water levels, the blue circles representing individual water level observations would all fall on the zero line. There are two significant deviations from the zero line, one at the elevation of 4,700 feet, which correlates to the yellow downward-pointing triangle east of Picabo in Figure 17. There are four observations in this well and the model is unable match them and match the observations in the well just north of Picabo with 19 observations. The other deviation shown in the residual-plot in Figure 17 is near the elevation of 4,900 feet. It corresponds to the purple upward pointing triangle near Stanton Crossing. The well is modeled as being completed in the unconfined aquifer and perhaps, in reality, it was completed in the confined aquifer.

Figure 18a through 18c show hydrographs of modeled water levels with observed water levels for three wells. Hydrographs showing the modeled match with field observations for all wells with more than four field measurements are included in Appendix A.

Geolocated well driller water-levels

The Geolocated wells were all measured by a well driller after completing a well. The well locations were determined by either a hand-held GPS measurement provided by the driller, or an address for the lot on which the well was drilled (Figure 19). The land-surface elevation was determined from a digital elevation model. The method for obtaining the water level is unknown. The assumed accuracy for the Geolocated wells is ± 7.0 ft. These water-levels were not collected with the documented accuracy of the Observation wells and none of the wells have repeated measurements. However, this dataset is useful because, as Figure 20 shows, it provides measurements during a time when the Observation well dataset is sparse. The mean difference between modeled and measured values is -4.00 feet, the median is -0.74 feet, and the standard deviation is 29.02 ft. The 95% confidence interval for the mean is ± 3.92 feet; thus the 95% confidence interval extends from -0.08 to -7.92 ft.

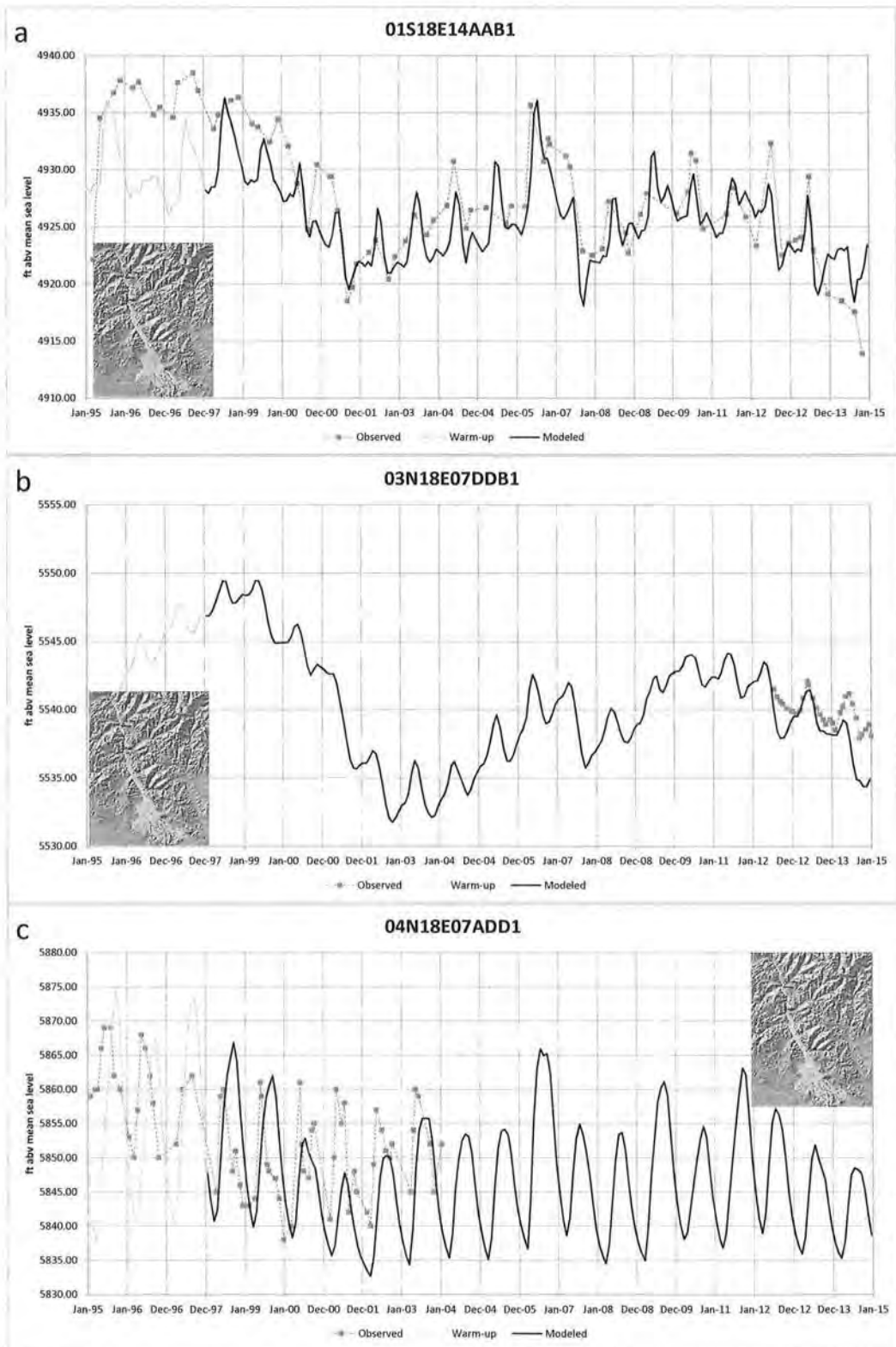


Figure 18. Match between modeled and observed water levels.

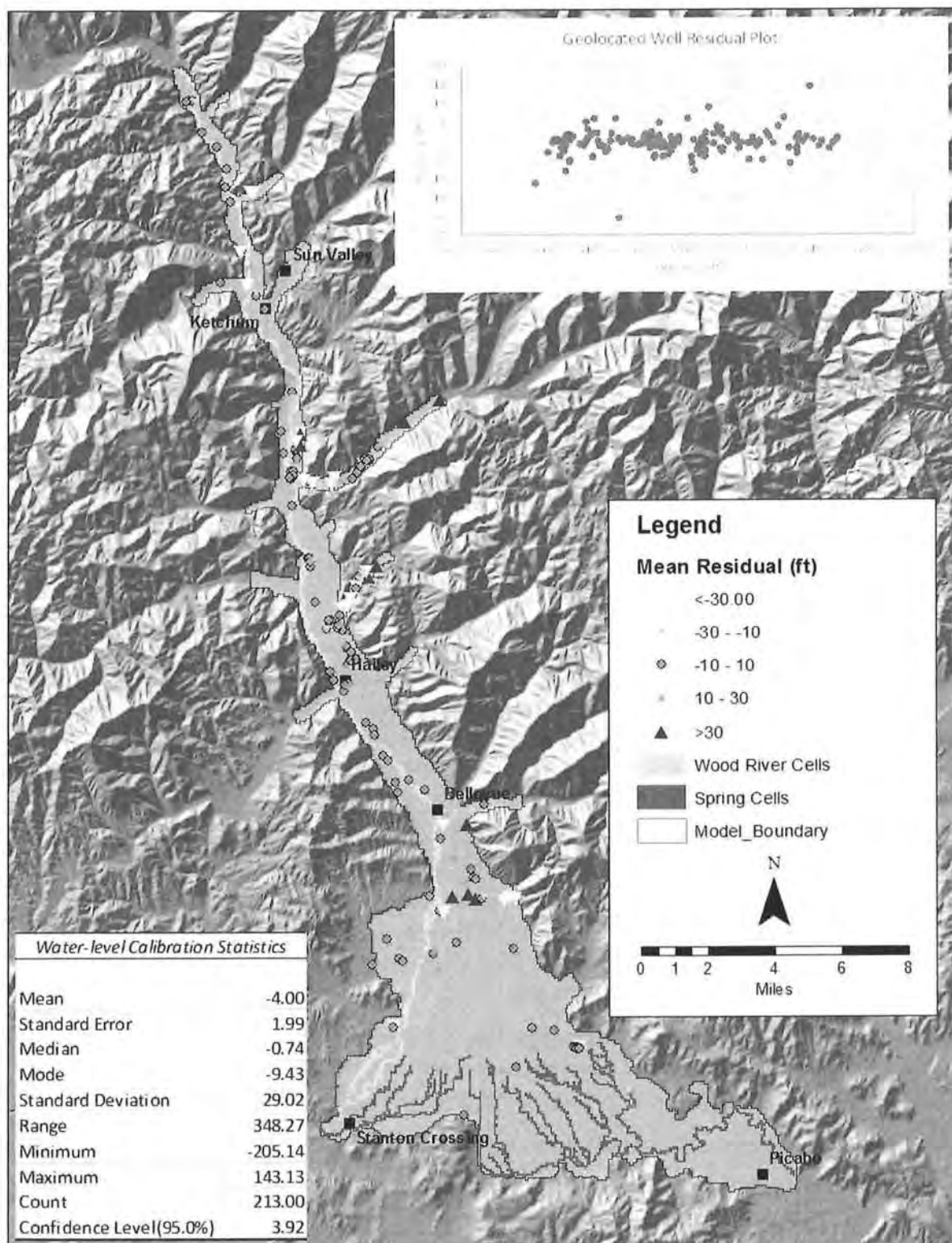


Figure 19. Residual plot and calibration statistics for geolocated well data.

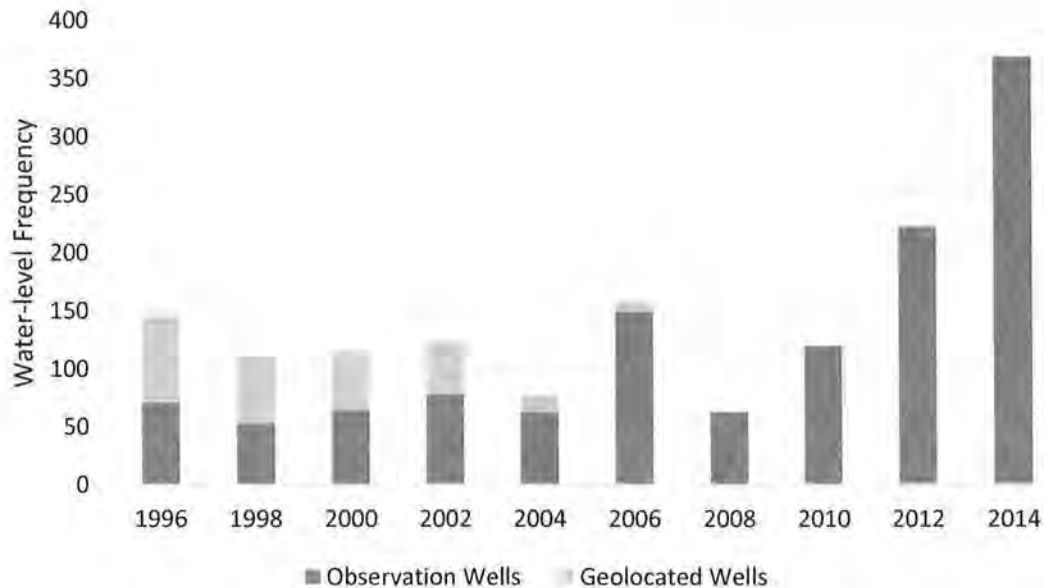


Figure 20. Frequency of water level observations through time.

Conclusions

This report documents the recalibration of the WRV Aquifer Model. WRV Aquifer Model Version 1.1 was calibrated to 16 years of data (1998-2014) as compared to 12 years for WRV Aquifer Model Version 1.0 (1998-2010). The Version 1.1 calibration period includes some of the driest years on record (2001, 2004 and 2007) and some of the wettest years on record (1996 and 2006). Calibration to data from a wide range of hydrologic conditions increases the likelihood that the model will accurately simulate the response of the river and aquifer system to a broad range of stresses.

The goal of this recalibration was to develop a more robust representation of the basin hydrogeology. Some of the improvements include an improved representation of the areal and temporal extent of reaches within the Big Wood River that seasonally go dry. Improved calibration data include a mass measurement conducted in 2012, 18 wells with pressure transducers, and the inclusion of the Heart Rock Ranch to Stanton Crossing reach-gain target.

Despite these enhancements our understanding of the WRV Aquifer System remains imperfect and more work needs to be done. Several significant gaps in data or in the understanding of the underlying hydrologic system have become apparent during this project. Suggestions for future work include:

- a) Install transducers in as many tributary valley wells as possible,
- b) Monitor several of the ephemeral streams in the tributary valleys above Hailey to determine the duration of spring runoff,
- c) Monitor and archive recharge events within the WRV,
- d) Continue annual fall seepage studies on Trail Creek and Warm Springs Creek,

- e) Continue stream gaging at the Big Wood River near Ketchum, Big Wood River at Hailey, Big Wood River at South Broadford Bridge, Big Wood River at Stanton Crossing, North Fork Big Wood River near Sawtooth National Recreation Area, Trail Creek Near Sun Valley, Trail Creek at Ketchum, Warm Springs Creek at Gates Road, Warm Springs Creek near Ketchum, East Fork Big Wood River at Gimlet, Willow Creek near Spring Creek Ranch, and Silver Creek at Sportsman Access,
- f) Continue Big Wood River stage measurements at Hulen Road Bridge, at Ketchum, at Gimlet, at Glendale Bridge, and at Wood River Ranch,
- g) Continue monitoring a minimum of 45 observation wells in the WRV, and
- h) Continue annual (at a minimum) gaging of Silver Creek at the North Picabo Road Bridge.

Although every groundwater model is a simplification of a complex hydrologic system, WRV Aquifer Model Version 1.1 is the best available tool for evaluating the interaction between groundwater and surface water in the Wood River Valley. The science underlying the production and calibration of the WRV Aquifer Model Version 1.1 reflects the best knowledge of the aquifer system available at this time. The WRV Aquifer Model Version 1.1 was calibrated to 1,314 aquifer water-level measurements and 1,026 river gain-and loss-calculations. Calibration statistics indicate a good fit to the observed data, providing confidence that the updated model provides an acceptable representation of the hydrologic system in the Wood River Valley.

With the Eastern Snake Plain Aquifer Model, the length of the Snake River in hydraulic communication with the Eastern Snake Plain Aquifer remains nearly constant through time allowing the development of a numerical superposition version of that model. However, in the WRV, the length of the Big Wood River in hydrologic connection with the aquifer system varies seasonally, thus a numerical superposition model based on the WRV Aquifer Model should not be developed (Hubbel and others, 1997). All analyses with the WRV Aquifer Model should be conducted using a fully populated transient model.

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Appendix A

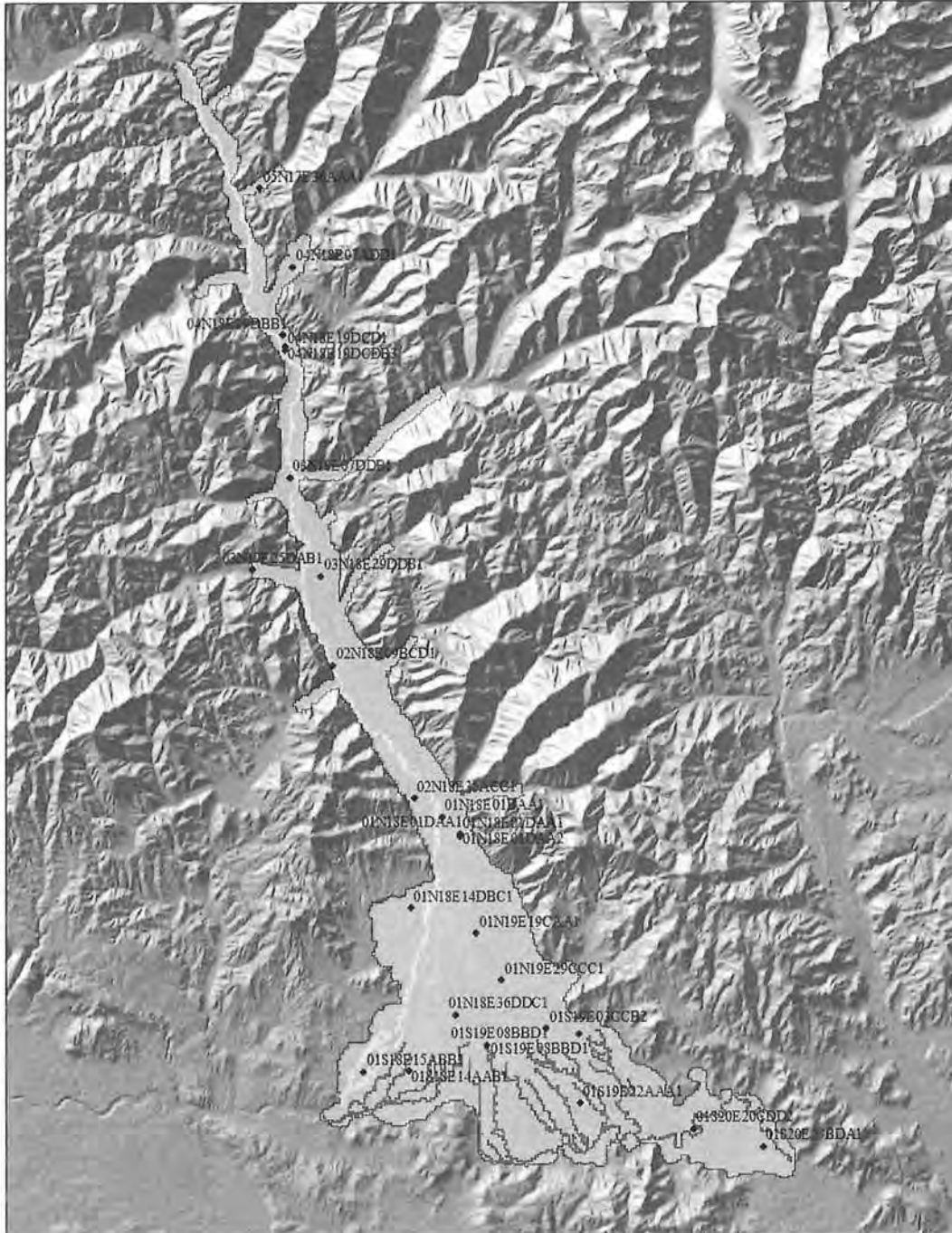
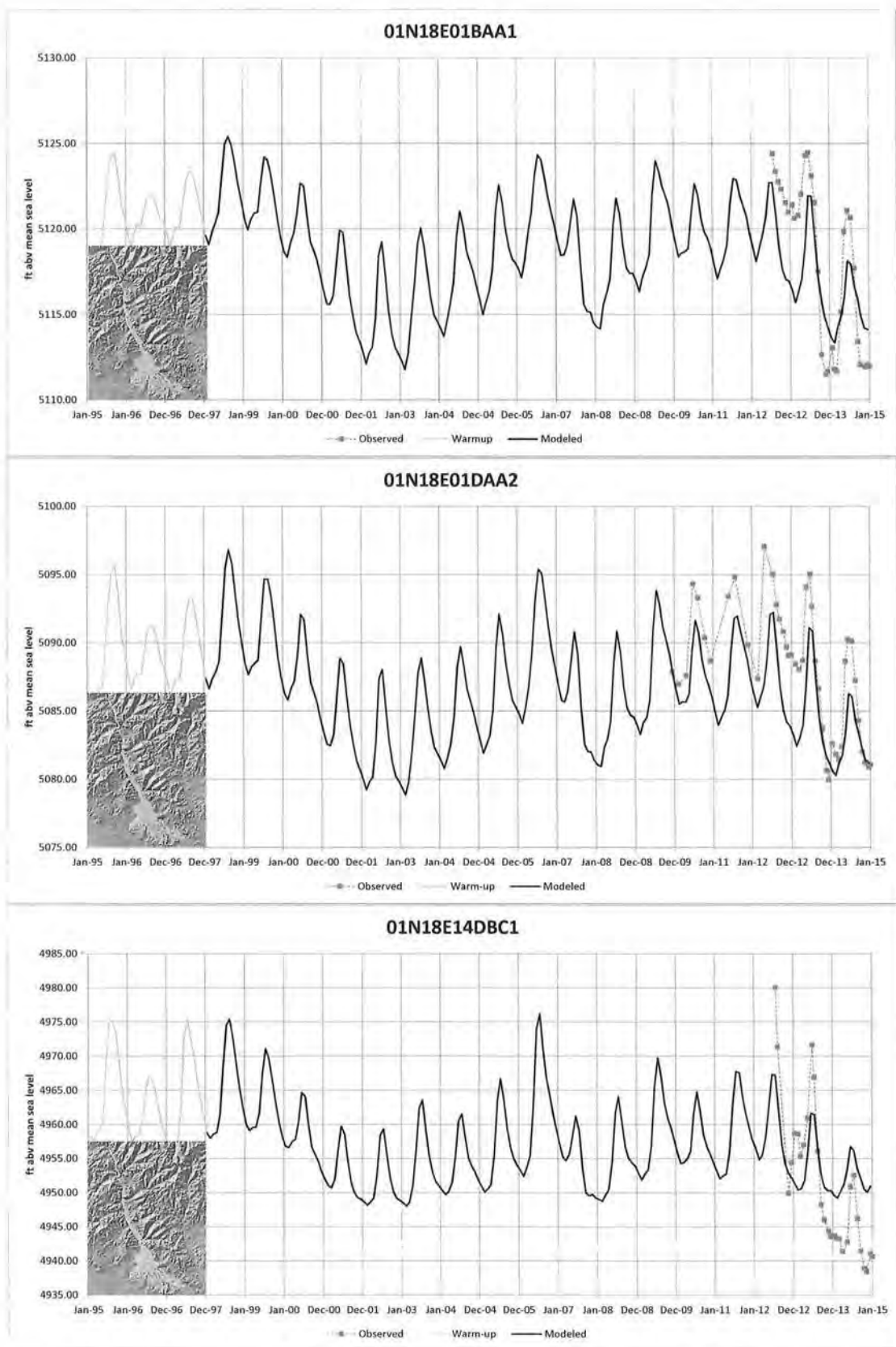
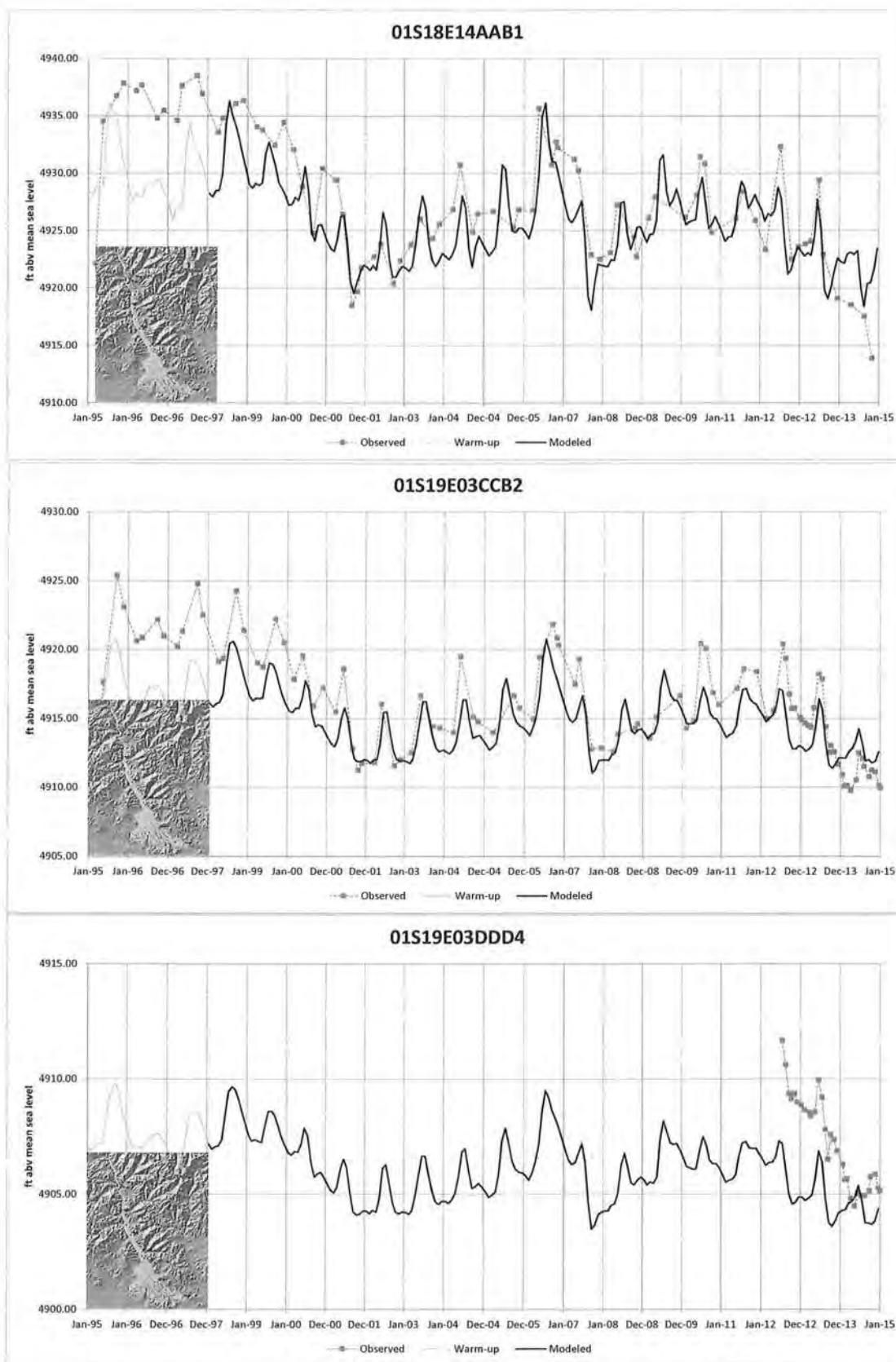
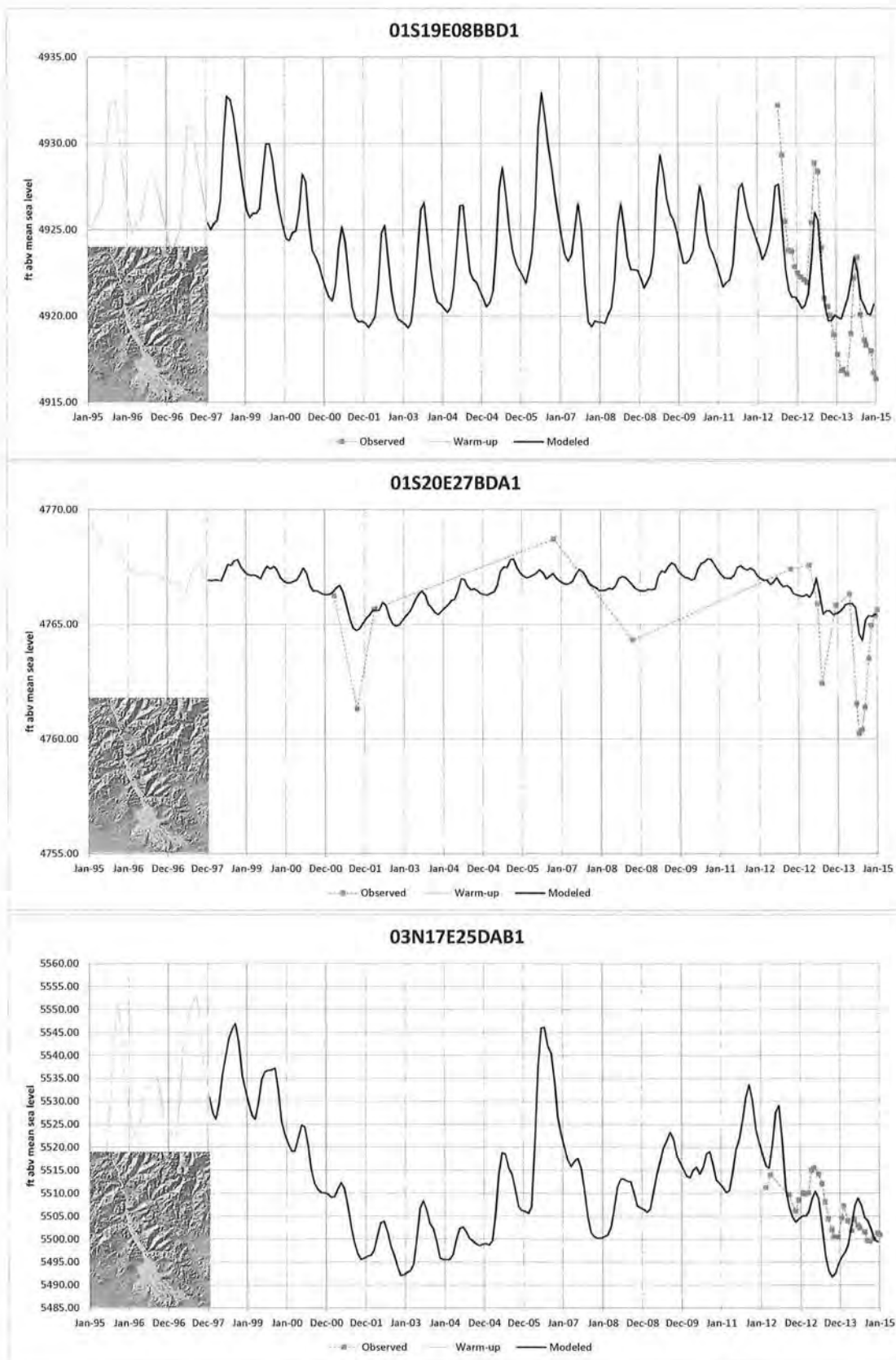
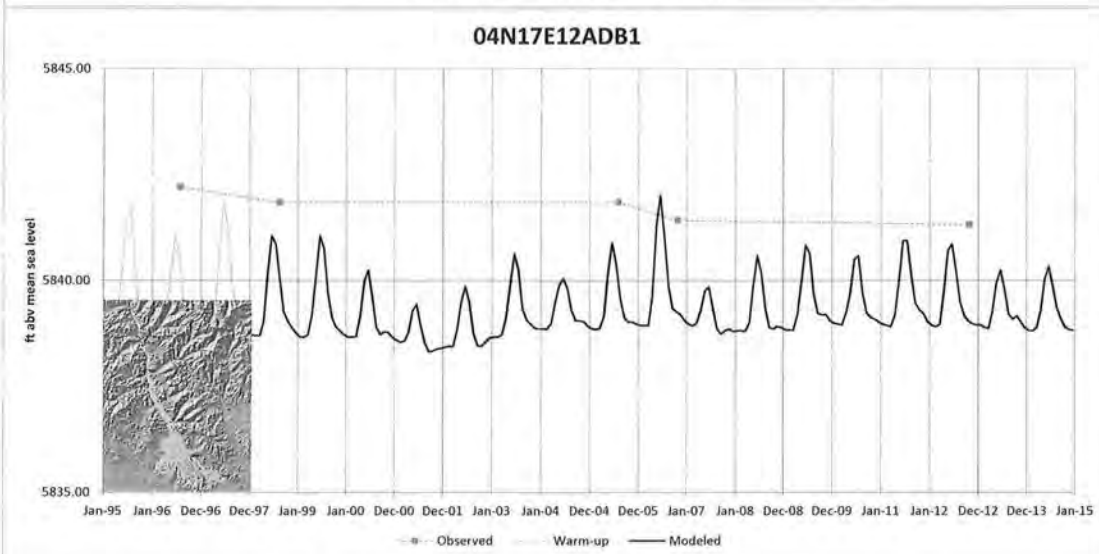
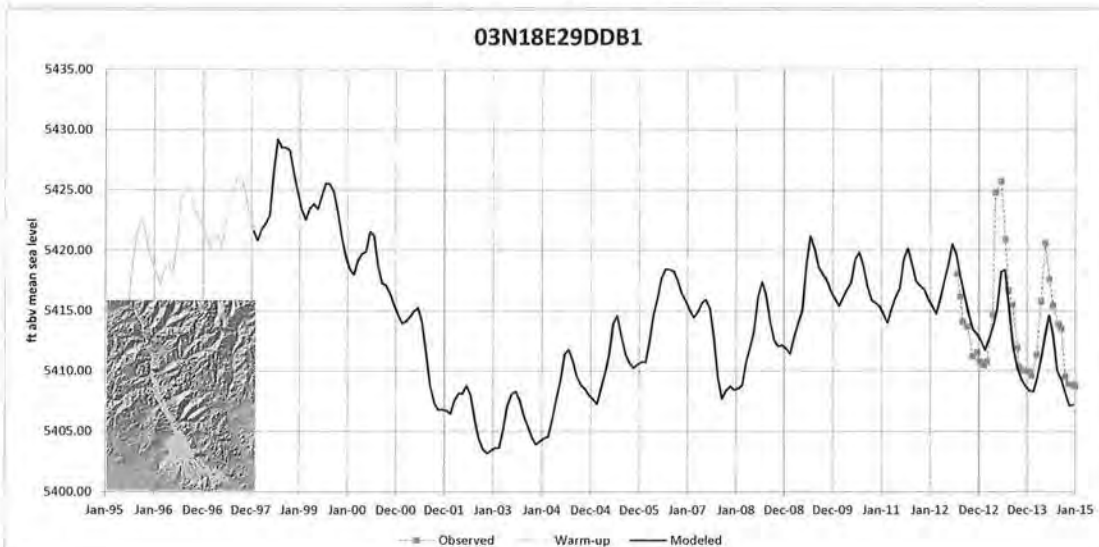
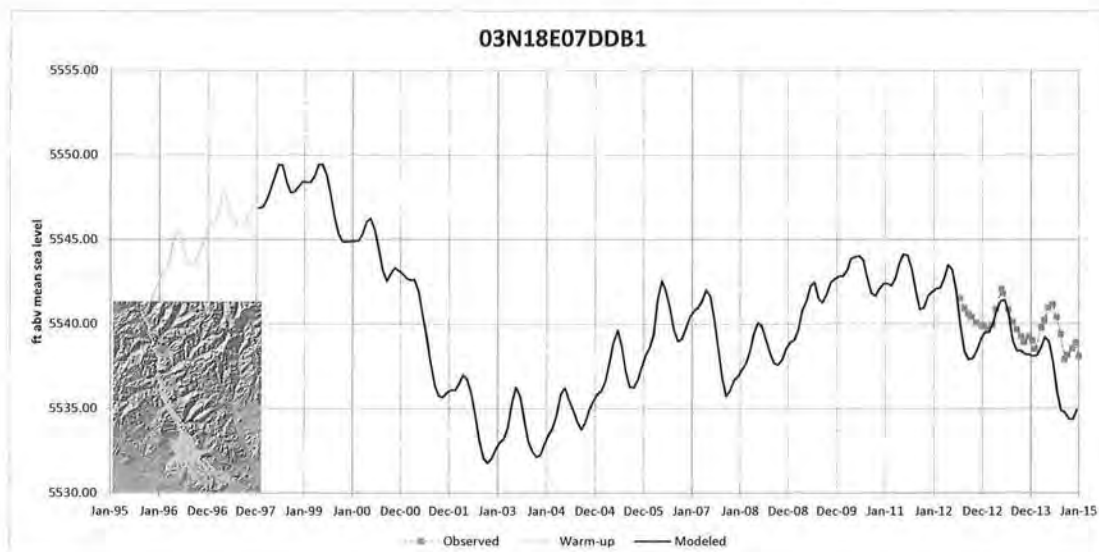


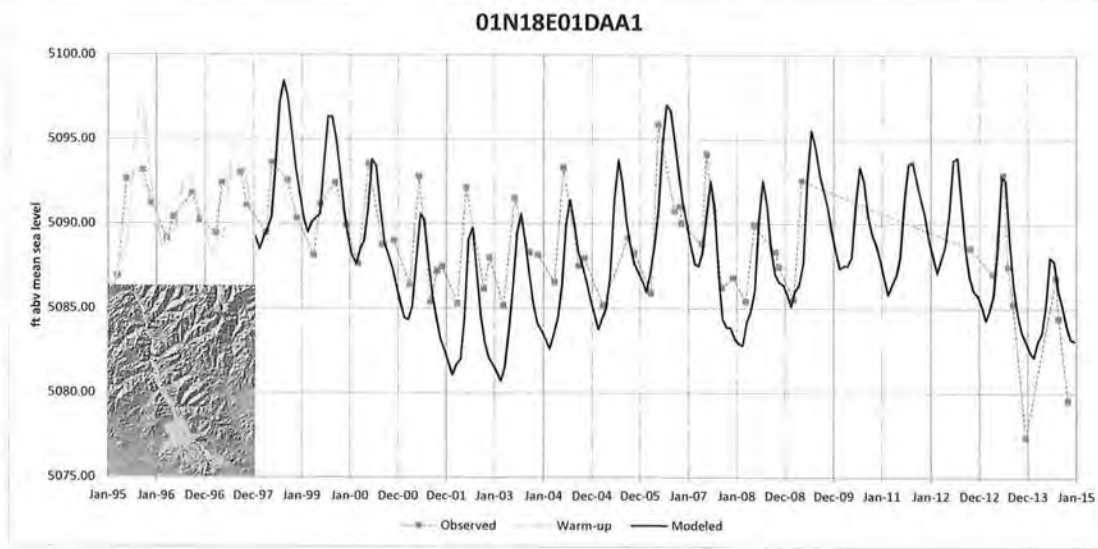
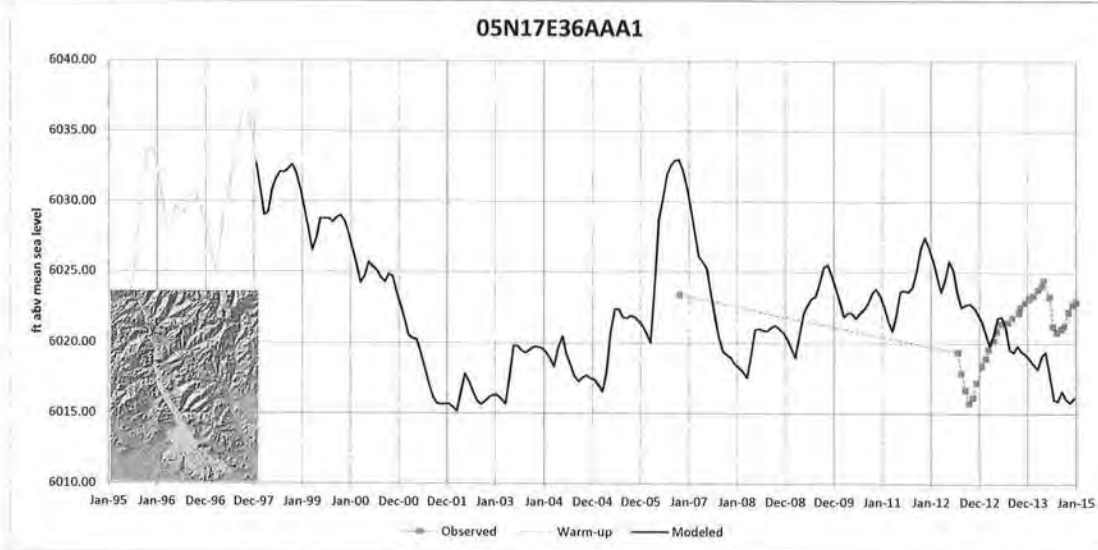
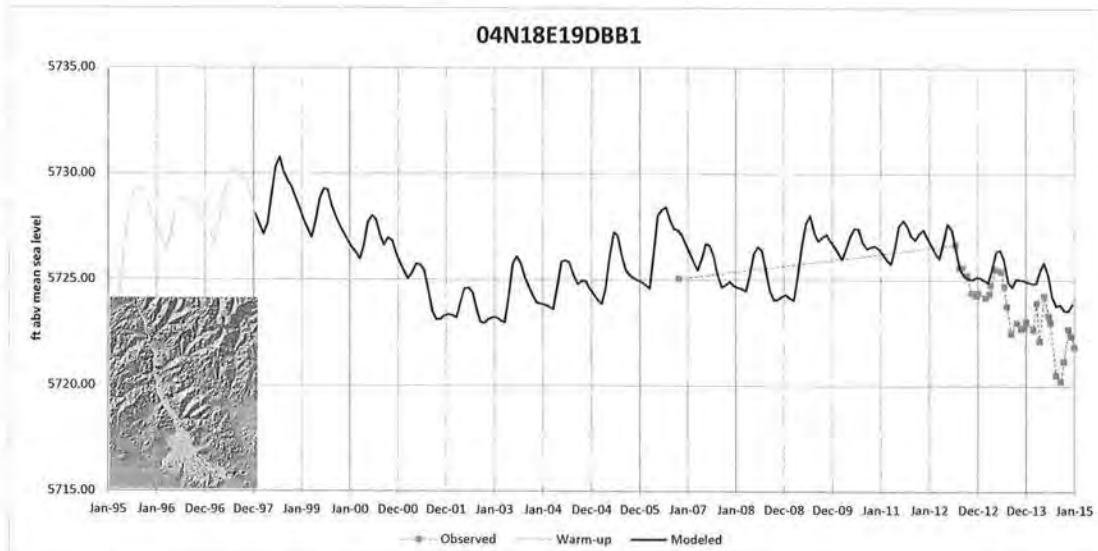
Figure 21. Locations of wells with more than four observations.

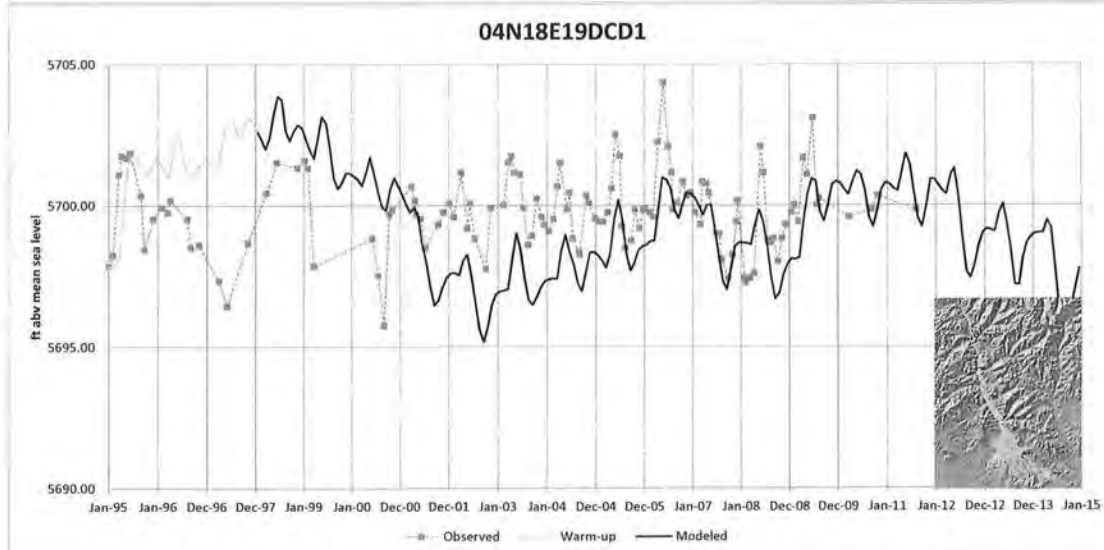
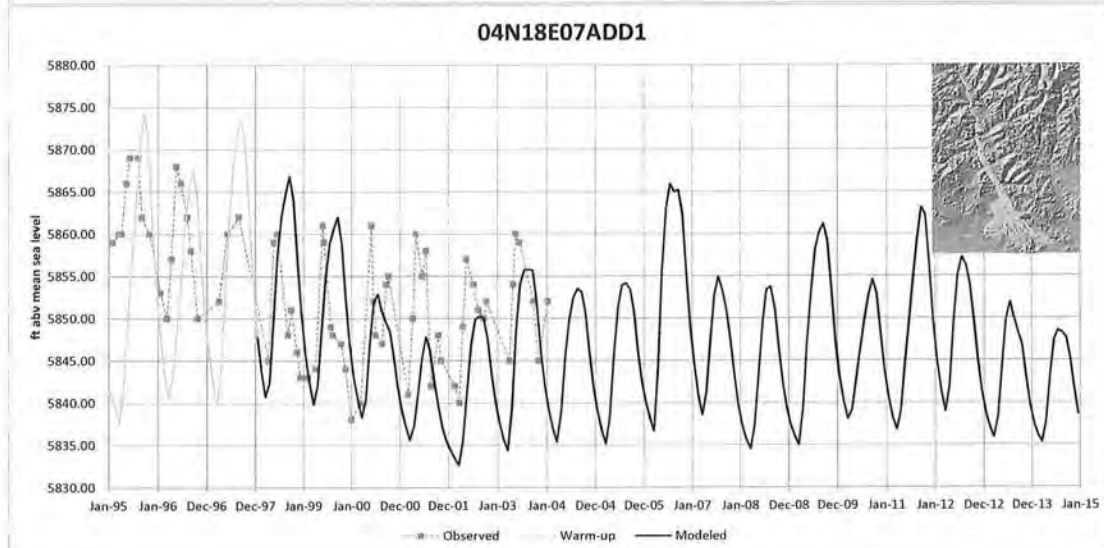
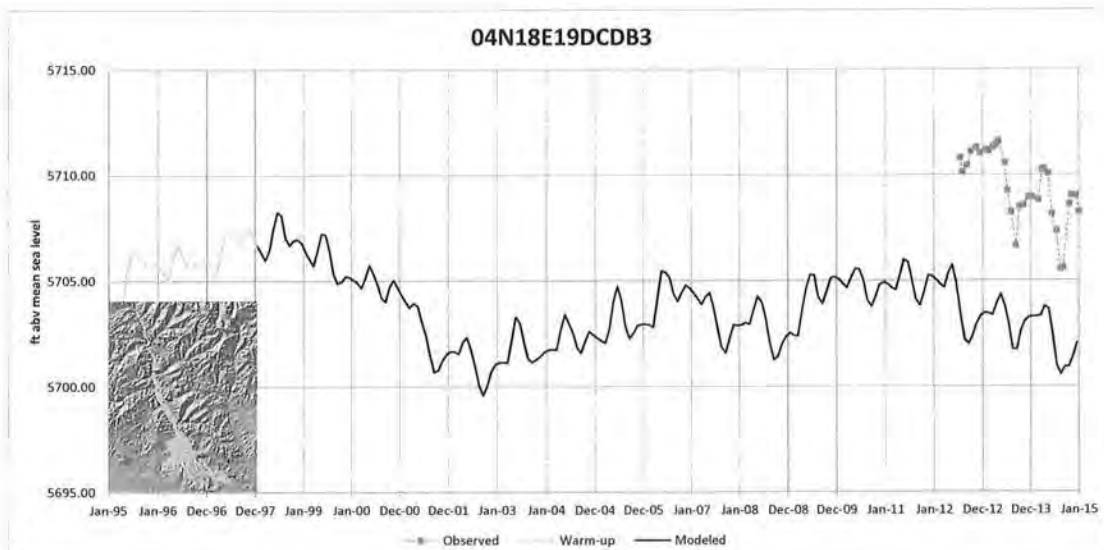


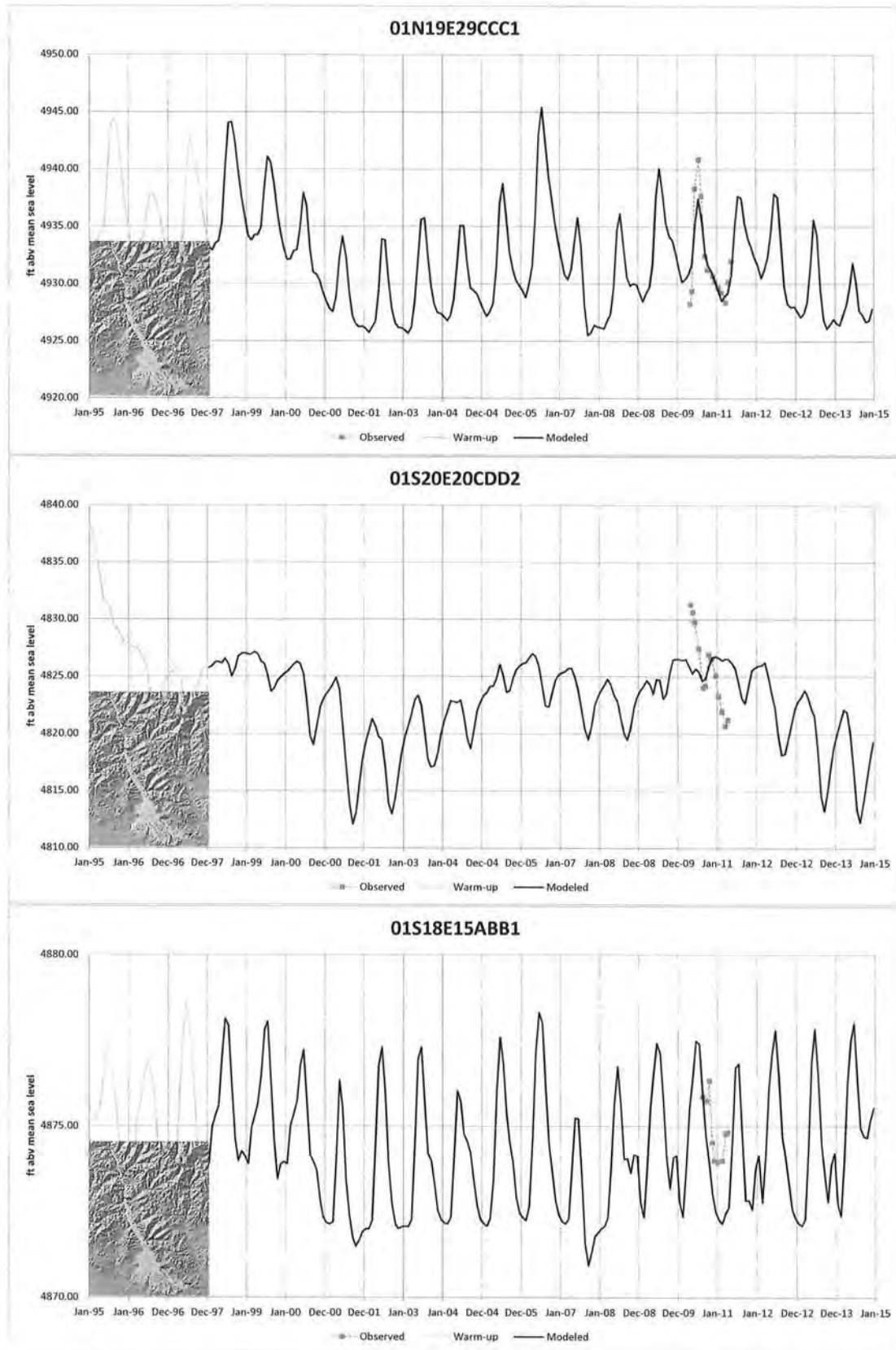


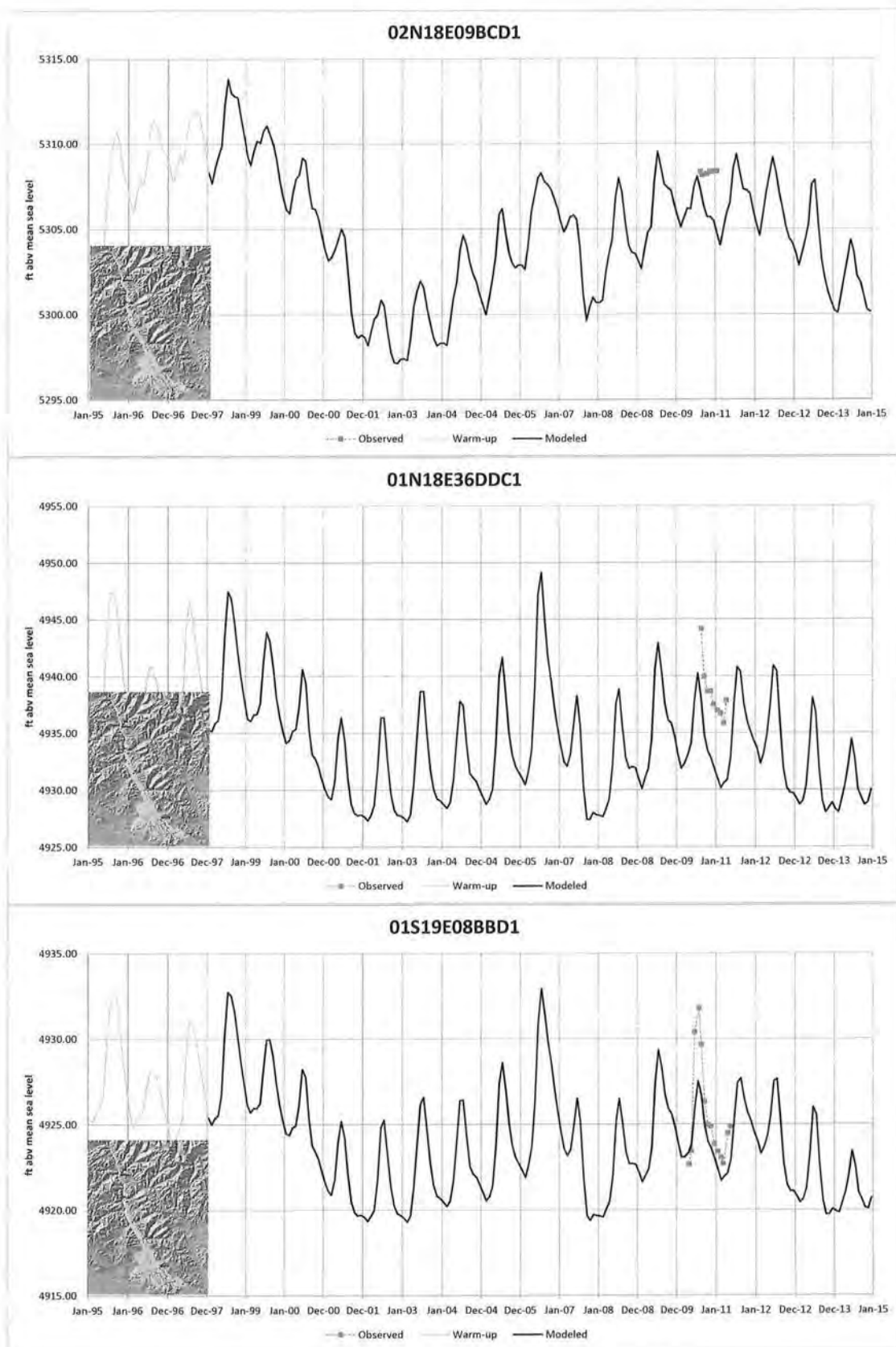


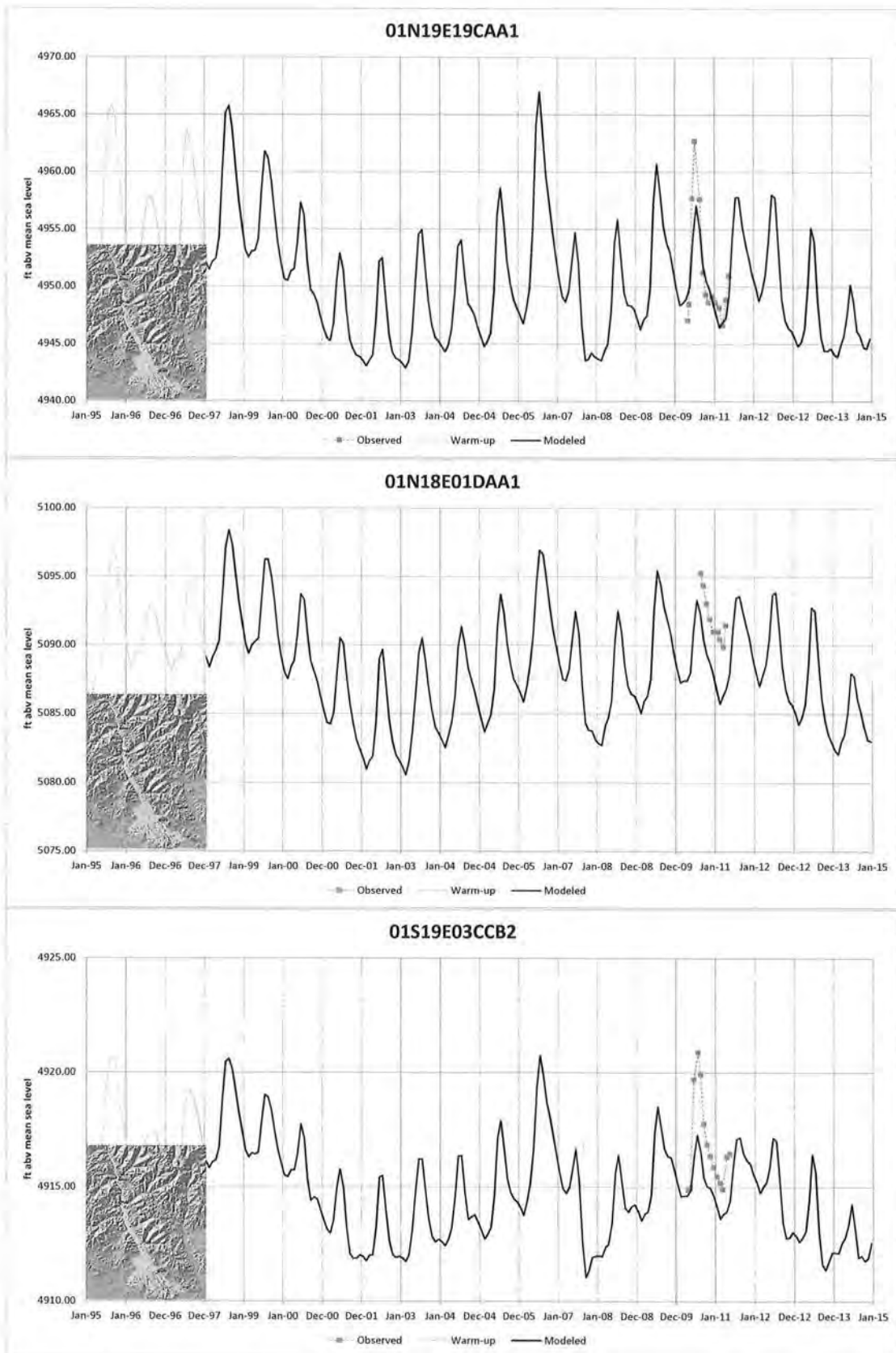


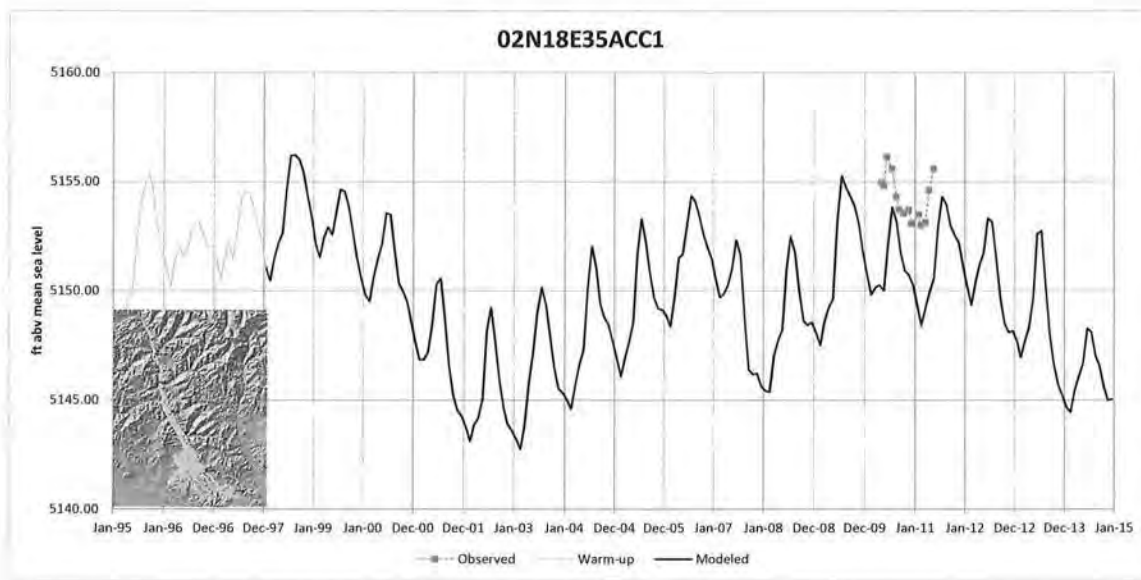












Idaho Department of Water Resources
Open-File Report



Summary of Ground Water Conditions in the Big Wood River Ground Water Management Area

2019 Update

By
Allan Wylie

September 2019

Introduction

The Idaho Department of Water Resources maintains a groundwater level monitoring network for the Big Wood River Groundwater Management Area (GWMA) in the Wood River and Camas Creek Valleys, Idaho. The monitoring network currently consists of 70 wells that are visited on a semi-annual basis (Figure 1). Forty-one of the wells are equipped with transducers. The wells are labeled in Figures 2-4. Figures 2-4 focus on different areas within the GWMA. The purpose of the groundwater monitoring program is to observe water levels within the Big Wood GWMA and to provide data for a future recalibration of the Wood River Valley Aquifer Model (Wylie and others, 2019). The GWMA was designated on June 28, 1991, to address the connection between ground and surface water within the Camas Creek, Silver Creek, and Big Wood River drainages above Magic Reservoir.

A groundwater model by Fisher and others (2016) subsequently updated by Wylie and others (2019) was developed since designation of the GWMA to evaluate the groundwater and surface water connection with the Big Wood River and Silver Creek drainages. The United States Geological Survey (USGS) published several earlier studies of the hydrogeology of the Big Wood River and Camas Creek basins. USGS studies of the Big Wood River basin include Stearns and others (1938), Jones (1952), Smith (1959), Smith (1960), Moreland (1977), Frenzel (1989), Skinner and others (2007), Bartolino (2009), Bartolino and Adkins (2012), Hopkins and Bartolino (2013), and Bartolino (2014). The Wood River Valley Aquifer System consists of an unconfined aquifer that extends throughout the valley and a confined system below a clay layer in the southwest portion of the valley shown in Figure 2.

USGS studies of the Camas Creek basin include Stearns and others (1938), Jones (1952), Smith (1960), Walton (1962), Young (1978), and Young and others (1978). The Camas Creek basin also includes an unconfined and a confined aquifer system.

A management plan has not been developed for the GWMA, nor has an advisory committee been formed. An advisory committee for development of the Wood River Valley Groundwater Flow Model was established in April, 2013 and continues to meet on a regular basis to monitor model use, model performance, and help maintain and upgrade the model. Currently, data from this monitoring network provides input for the Wood River Valley Groundwater Flow Model and is a source of information for management of the groundwater resource.

Purpose and Scope

The purpose of this report is to provide an updated summary of the status of the groundwater monitoring network and to present water level data collected over the network's history.

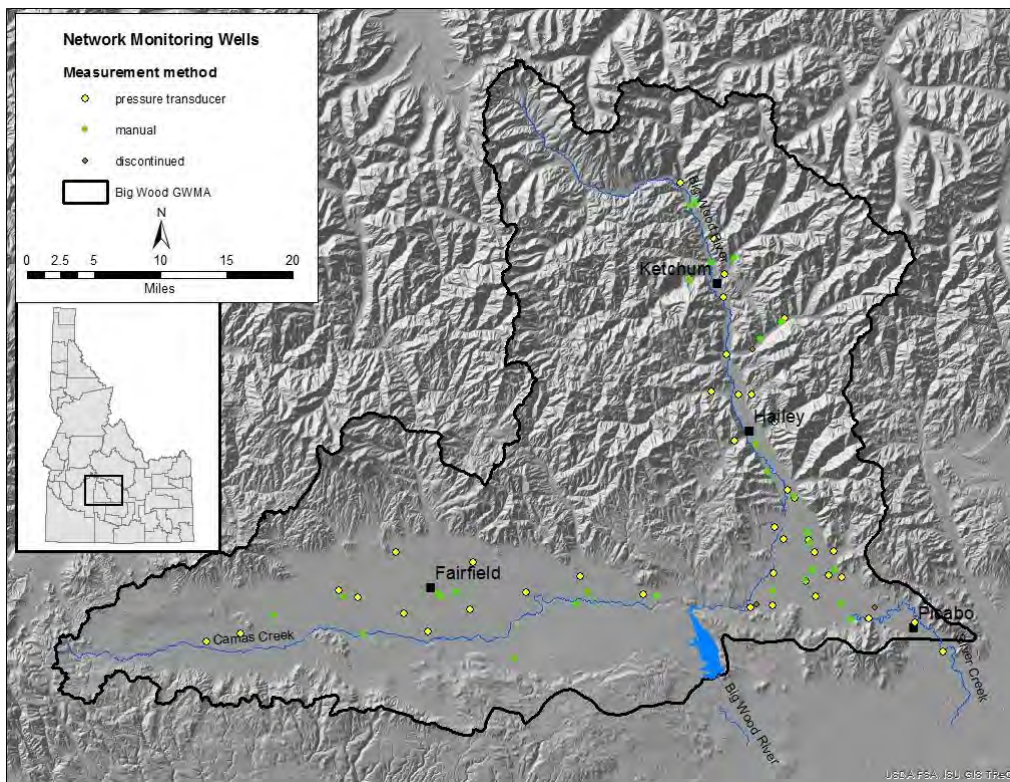


Figure 1. Current Big Wood GWMA monitoring network.

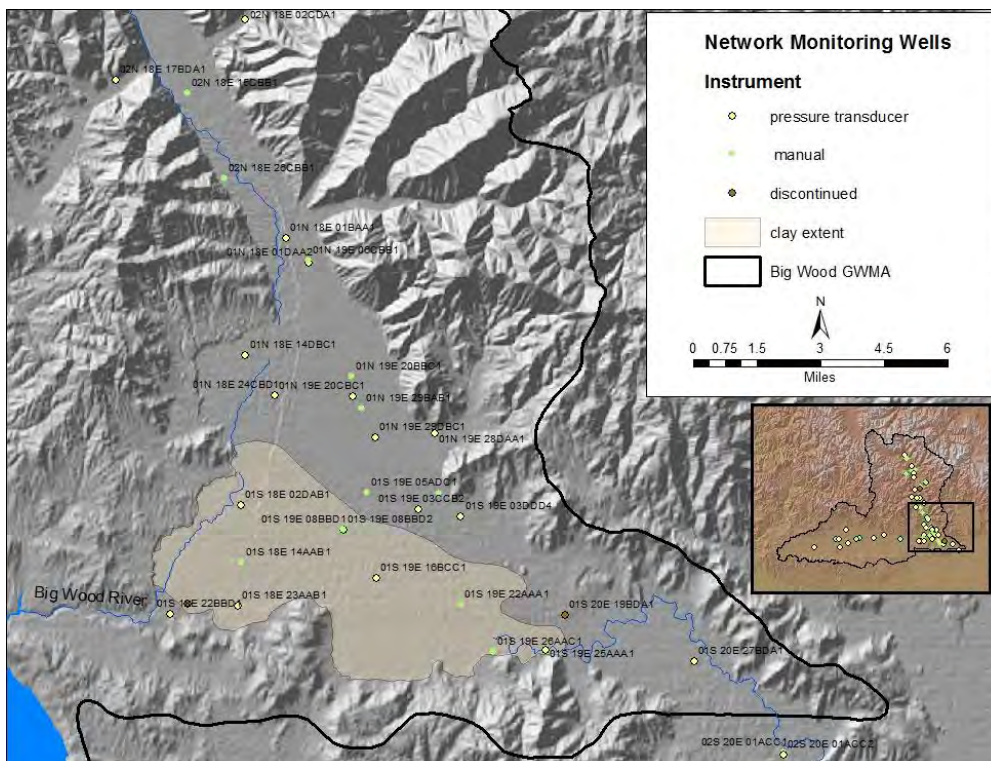


Figure 2. Southeast portion of the Big Wood groundwater monitoring network.

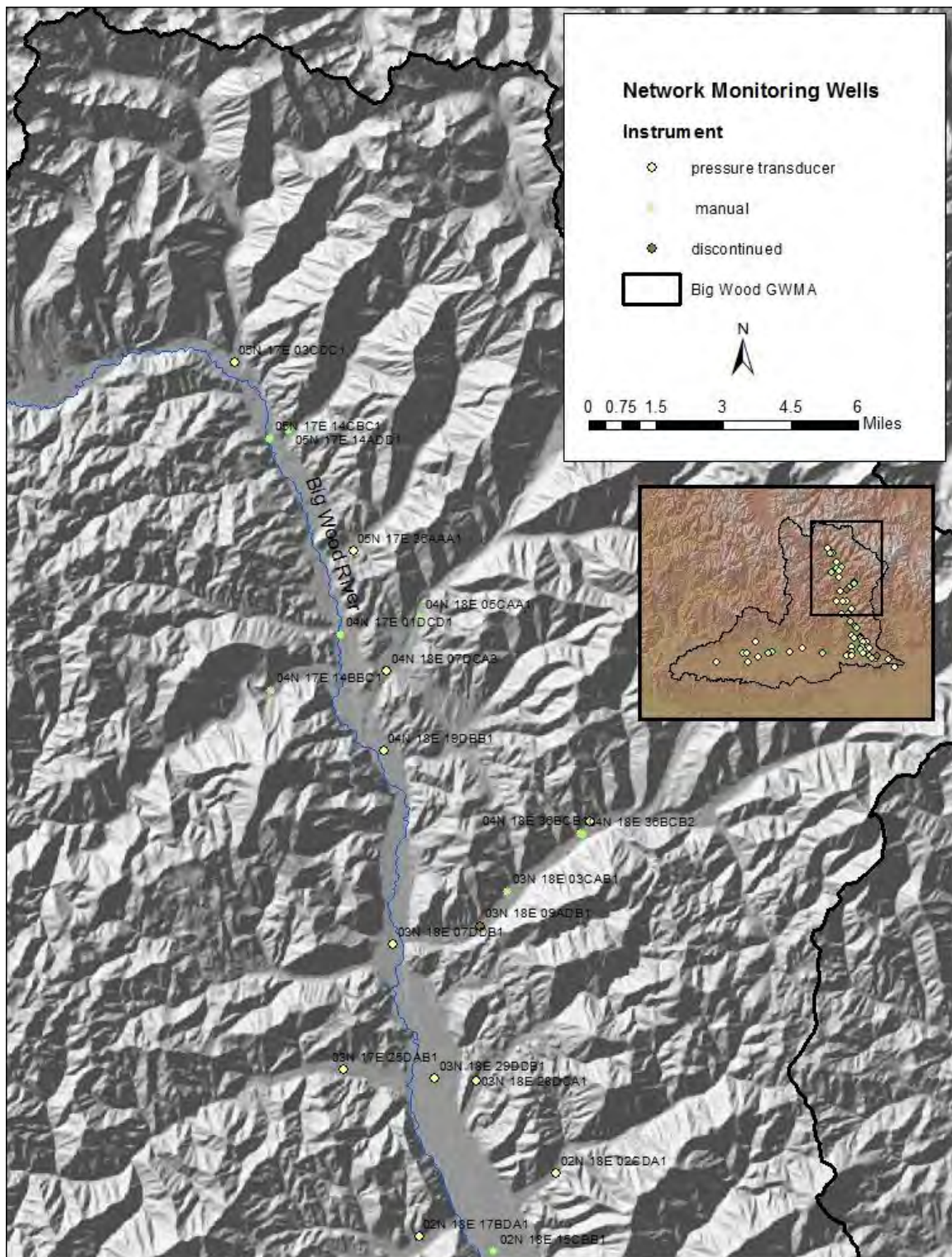


Figure 3. Northeast portion of the Big Wood GWMA groundwater monitoring network.

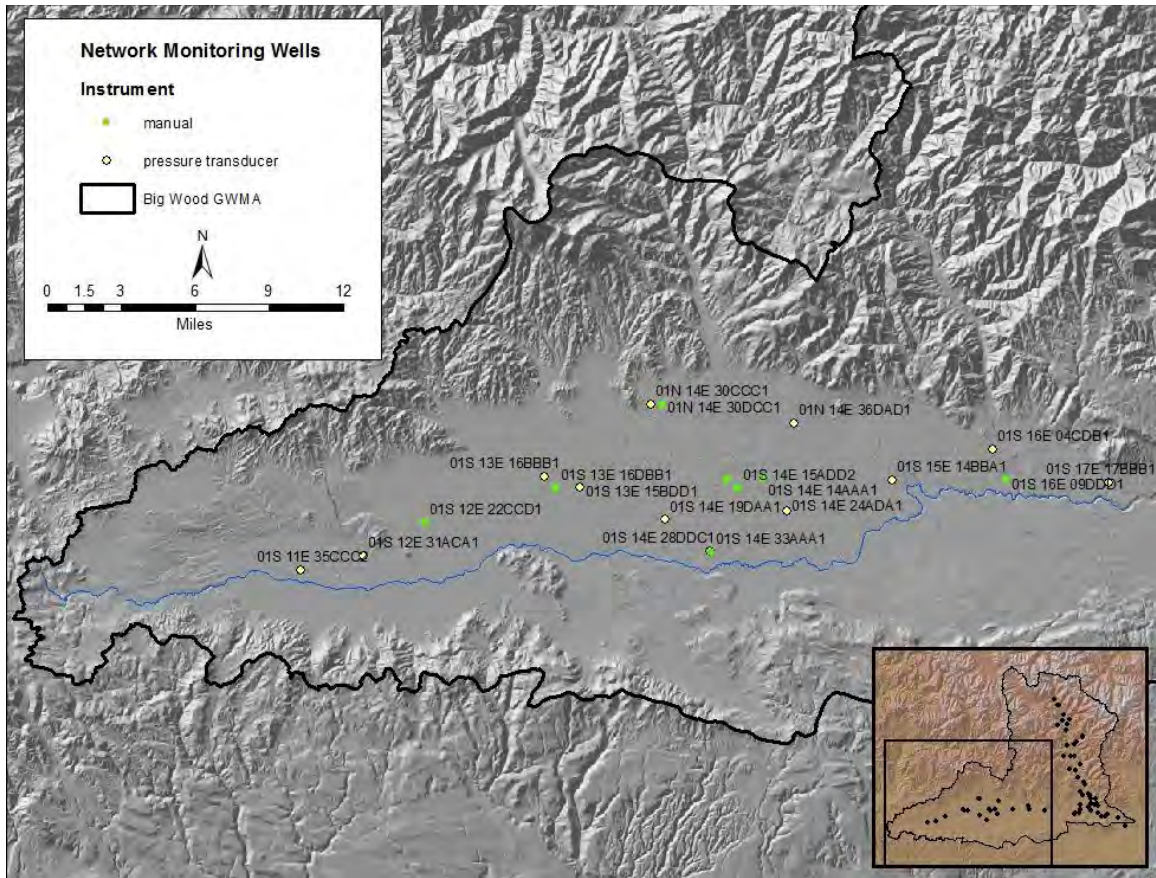


Figure 4. Western portion of the Big Wood groundwater monitoring network.

Status of the Monitoring Network

Monitoring data exists dating back to 1952 (Table 1). Forty-one of the wells have transducers installed (Figures 1-4). Most of the transducers are programmed to collect water levels twice a day, some collect water levels hourly. This water level network is not static, the wells included in the network change as circumstances indicate more need for wells in specific areas. Two wells have no water-levels because they were added recently, while well 01S 19E 03CCB2 has 7,324 because it has been in the network since 1954 and had a transducer installed in it in July, 2012. The average number of water-levels per well is 1,368. The average period of record is about 29 years.

Table 1. Summary of wells in the Big Wood monitoring network. The Well Number corresponds to the well labels in Figures 2-4.

Well Number	WL Date Min	WL Date Max	Site Status	# of water-levels (WL) & comments
01N 18E 01BAA1	5/21/1955	10/23/2018	Active	4606 WL Transducer installed Jul 2012
01N 18E 01DAA2	7/14/1954	10/23/2018	Active	4630 WL Transducer installed Jul 2012
01N 18E 14DBC1	7/11/2012	10/23/2018	Active	3642 WL Transducer installed Jul 2012
01N 18E 24CBD1	10/16/2014	10/22/2018	Active	2939 WL Transducer installed Oct 2014
01N 19E 06CBB1	9/30/1952	10/23/2018	Active	21 WL
01N 19E 20BBC1	5/8/1963	10/23/2018	Active	43 WL

01N 19E 20CBC1	7/5/2017	10/23/2018	Active	838 WL Transducer installed Jul 2017
01N 19E 28DAA1	5/19/1970	10/23/2018	Active	1048 WL Transducer installed May 2017
01N 19E 29BAB1	5/8/1963	10/23/2018	Active	13 WL
01N 19E 29DBC1	3/18/2016	1/17/2019	Active	1026 WL Transducer installed May 2016
01S 18E 02DAB1	4/15/1953	10/22/2018	Active	1750 WL Transducer installed Dec 2014
01S 18E 14AAB1	7/12/1954	10/22/2018	Active	406 WL
01S 18E 15DCC2	5/7/1970	4/11/2017	Discontinued	3 WL
01S 18E 22BBD1	11/1/2017	10/22/2018	Active	138 WL Transducer installed May 2018
01S 18E 23AAB1	7/29/1975	10/22/2018	Active	2931 WL Transducer installed Oct 2014
01S 19E 03BDD1	9/30/1952	10/22/2018	Active	25 WL
01S 19E 03CCB2	7/23/1954	10/22/2018	Active	7324 WL Transducer installed Jul 2012
01S 19E 03DDD4	7/12/2012	11/5/2018	Active	4192 WL Transducer installed Jul 2012
01S 19E 05ADC1	9/18/1952	10/22/2018	Active	58 WL
01S 19E 08BBD1	7/11/2012	10/22/2018	Active	4599 WL Transducer installed Jul 2012
01S 19E 08BBD2	7/11/2012	10/22/2018	Active	11 WL
01S 19E 16BCC1	4/29/1970	10/22/2018	Active	1742 WL Transducer installed May 2015
01S 19E 22AAA1	8/11/1954	10/22/2018	Active	1053 WL Transducer installed Nov 2015
01S 19E 25AAA1	10/17/2014	10/22/2018	Active	2937 WL Transducer installed Oct 2014
01S 19E 26AAC1	5/5/1970	10/22/2018	Active	40 WL
01S 20E 19BDA1	5/15/1963	4/3/2018	Discontinued	30 WL
01S 20E 27BDA1	9/10/1954	10/22/2018	Active	3440 WL Transducer installed Jun 2014
02N 18E 02CDA1	10/23/2018	11/5/2018	Active	1 WL Transducer installed Nov 2018
02N 18E 15CBB1	10/24/2006	10/23/2018	Active	16 WL
02N 18E 17BDA1	10/24/2006	10/23/2018	Active	1684 WL Transducer installed Jul 2016
02N 18E 26CBB1	7/20/1983	10/23/2018	Active	17 WL
02S 20E 01ACC1	9/10/1954	10/22/2018	Active	20 WL
02S 20E 01ACC2	10/18/1954	10/22/2018	Active	5790 WL Transducer installed Jul 2012
03N 17E 25DAB1	2/15/2012	10/23/2018	Active	4369 WL Transducer installed Nov 2012
03N 18E 03CAB1	10/25/2006	10/23/2018	Active	4 WL
03N 18E 07DDB1	7/12/2012	11/5/2018	Active	4589 WL Transducer installed Jul 2012
03N 18E 09ADB1	10/25/2006	11/2/2017	Discontinued	10 WL
03N 18E 28DCA1	10/25/2006	10/23/2018	Active	1570 WL Transducer installed Aug 2016
03N 18E 29DDB1	7/12/2012	10/23/2018	Active	4571 WL Transducer installed Jul 2012
04N 17E 01DCD1	4/9/1986	10/24/2018	Active	7 WL
04N 17E 14BBC1	8/19/1983	10/24/2018	Active	109 WL
04N 18E 05CAA1	10/24/2006	10/24/2018	Active	12 WL
04N 18E 07DCA3	10/1/2015	10/24/2018	Active	2237 WL Transducer installed Oct 2015
04N 18E 19DBB1	4/10/1986	11/5/2018	Active	4596 WL Transducer installed Jul 2012
04N 18E 25CCC1	6/17/2015	10/24/2018	Active	1870 WL Transducer installed May 2016
04N 18E 36BCB1			New	Dept of Lands Monitoring Well 20
04N 18E 36BCB2			New	Dept of Lands Monitoring Well 21

05N 17E 03CDC1	7/12/2012	10/24/2018	Active	4516 WL Transducer installed Jul 2012
05N 17E 14ADD1	10/23/2006	10/24/2018	Active	16 WL
05N 17E 14CBC1	8/25/1983	10/24/2018	Active	17 WL
05N 17E 36AAA1	10/23/2006	11/5/2018	Active	4595 WL Transducer installed Jul 2012
01N 14E 30DCC1	7/28/1977	4/2/2018	Active	14 WL
01N 14E 36DAD1	3/24/1977	10/25/2018	Active	1633 WL Transducer installed Oct 2016
01S 11E 35CCC2	6/22/2016	10/25/2018	Active	1440 WL Transducer installed Oct 2016
01S 12E 22CCD1	10/25/1995	10/25/2018	Active	11 WL
01S 13E 16BBB1	4/17/1978	10/25/2018	Active	1168 WL Transducer installed Nov 2017
01S 14E 15ABB2	6/13/2000	10/25/2018	Active	6 WL
01S 14E 24ADA1	3/16/1978	4/2/2018	Active	469 WL Transducer installed Nov 2017
01S 14E 28DDC1	6/17/1974	10/25/2018	Active	1741 WL Transducer installed Oct 2016
01S 16E 09DDD1	4/2/2018	10/25/2018	Active	3 WL
01S 17E 16BCA1	10/31/2018	10/31/2018	Active	1 WL
01S 17E 17BBB1	12/24/1974	10/25/2018	Active	1677 WL Transducer installed Oct 2016
01S 14E 19DAA1	6/8/1977	11/14/2018	Active	7 WL Transducer installed Oct 2018
01S 12E 31ACA1	10/31/2018	10/31/2018	Active	1 WL Transducer installed Oct 2018
01N 14E 30CCC1	3/17/1977	6/8/1993	Active	15 WL Transducer installed Oct 2018
01S 13E 15BDD1	3/25/1977	9/18/1991	Active	8 WL Transducer installed Oct 2018
01S 13E 16DBB1	11/12/1976	5/29/1983	Active	7 WL
01S 14E 14AAA1	4/26/1977	9/19/1977	Active	5 WL
01S 14E 15ADD2	6/4/1977	10/31/2018	Active	7 WL
01S 14E 33AAA1	12/6/1976	10/25/2018	Active	8 WL
01S 15E 14BBA1	1/18/1977	10/31/2018	Active	18 WL Transducer installed Oct 2018
01S 16E 04CDB1	7/23/1957	10/31/2018	Active	10 WL Transducer installed Oct 2018

Water-Level Analysis

A review of the data from the wells included in the current monitoring network was conducted to generate potentiometric maps, determine trends, evaluate seasonal water-level fluctuations, and establish short and long-term changes. Appendix A contains hydrographs of the wells shown in Figure 2, Appendix B contains hydrographs of the wells shown in Figure 3, and Appendix C contains wells shown in Figure 4. Hydrographs in Appendices A-C with a record beginning prior to year 2000 have a second hydrograph beginning in 2000. Figure 5 is a map showing the location of the wells with at least 20 years of record without significant gaps. The hydrographs for these wells along with a computed trend line and p^1 value for the slope in the trend line are shown in Appendix D. Wells 04N 17E 14BBC1 and 02S 20E 01ACC2 are not completed in the WRV aquifer. 04N 17E 14BBC1 is completed in a geothermal aquifer and 02S 20E

¹ The p-value is the probability of obtaining the existing dataset when in fact the null hypothesis is true. In this case the null hypothesis is that the water-level trend is flat. If the p-value is less than 0.05, then the null hypothesis is rejected at the 95% confidence level.

01ACC2 is completed in the Eastern Snake Plain Aquifer. In Figure 5, wells with a declining trend have a brown halo, wells with an increasing trend have an orange halo. If the record for the well begins prior to 1991, when the Big Wood GWMA was formed, there is a second hydrograph beginning in 1991 with a trend line and a post-1991 slope and p-value.

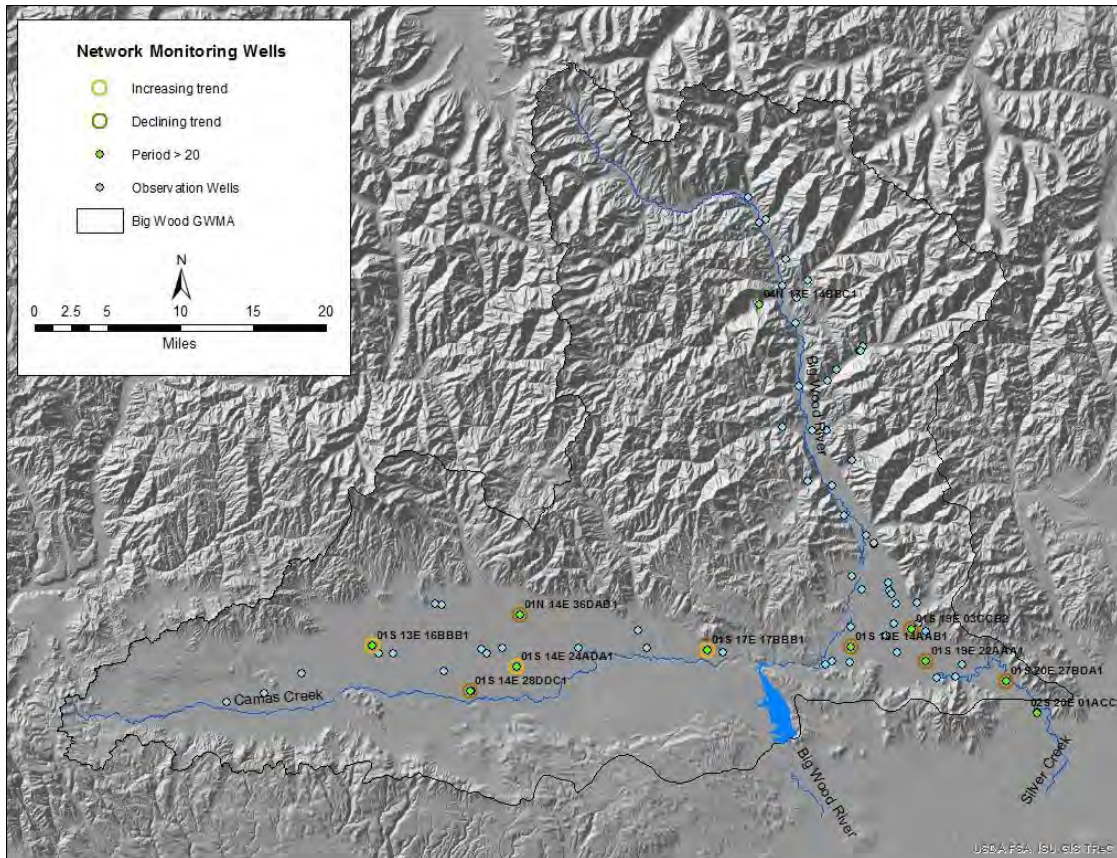


Figure 5. Wells with a record of over 20 years and at least 100 observations.

Potentiometric Analysis

Figures 6a-c are potentiometric maps for the unconfined Wood River Valley aquifer for October 2006, October 2012, and October 2018. These maps indicate that groundwater flows from the north to the south and out the basin to the east and west. The water table contours also show that the water table tends to be stable within the Wood River Valley portion of the Big Wood GWMA. This may be because the Big Wood River is in direct hydraulic communication with the unconfined aquifer and the river is depleted to sustain the unconfined aquifer.

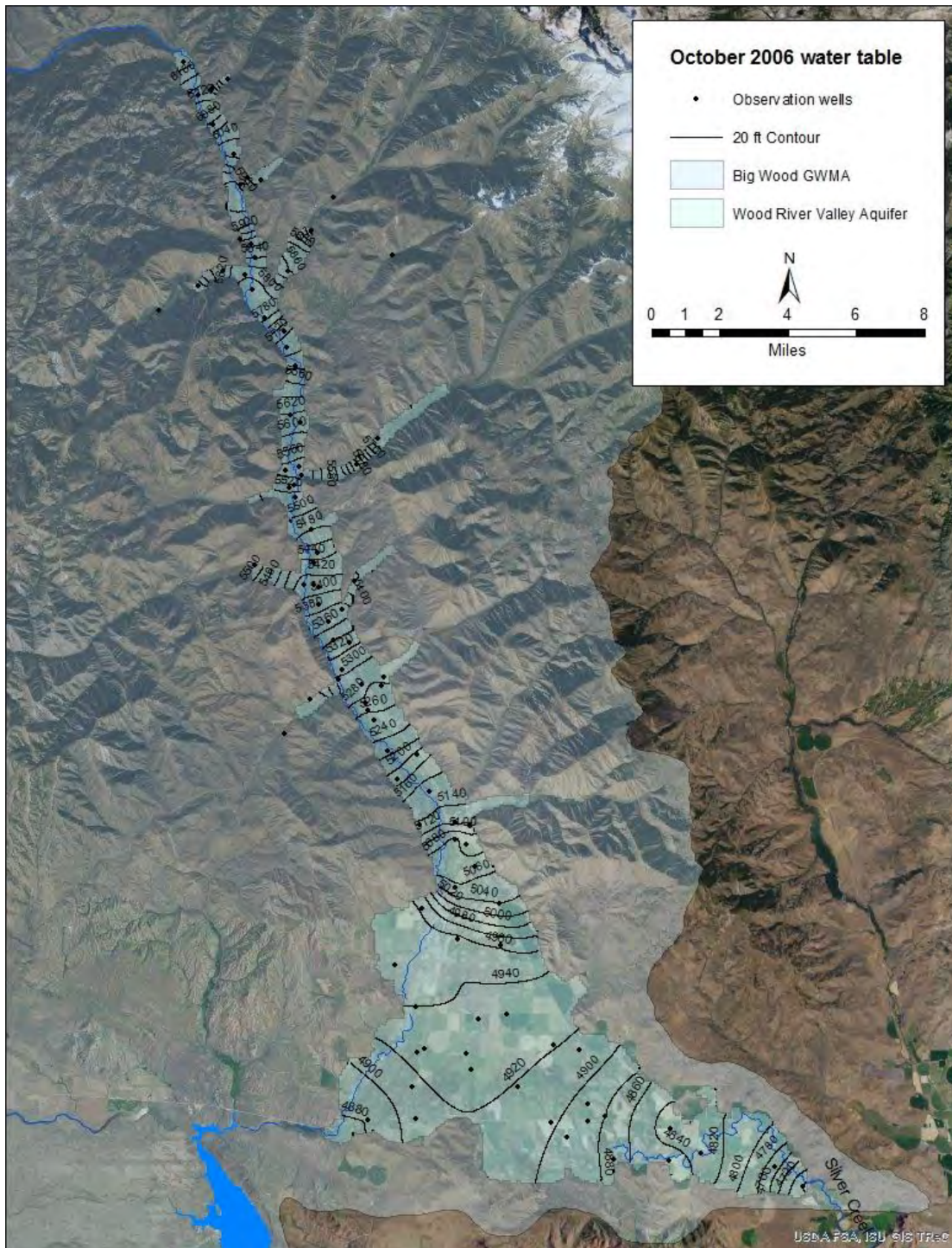


Figure 6a. Potentiometric surface for the unconfined aquifer in the Wood River Valley from October 2006.

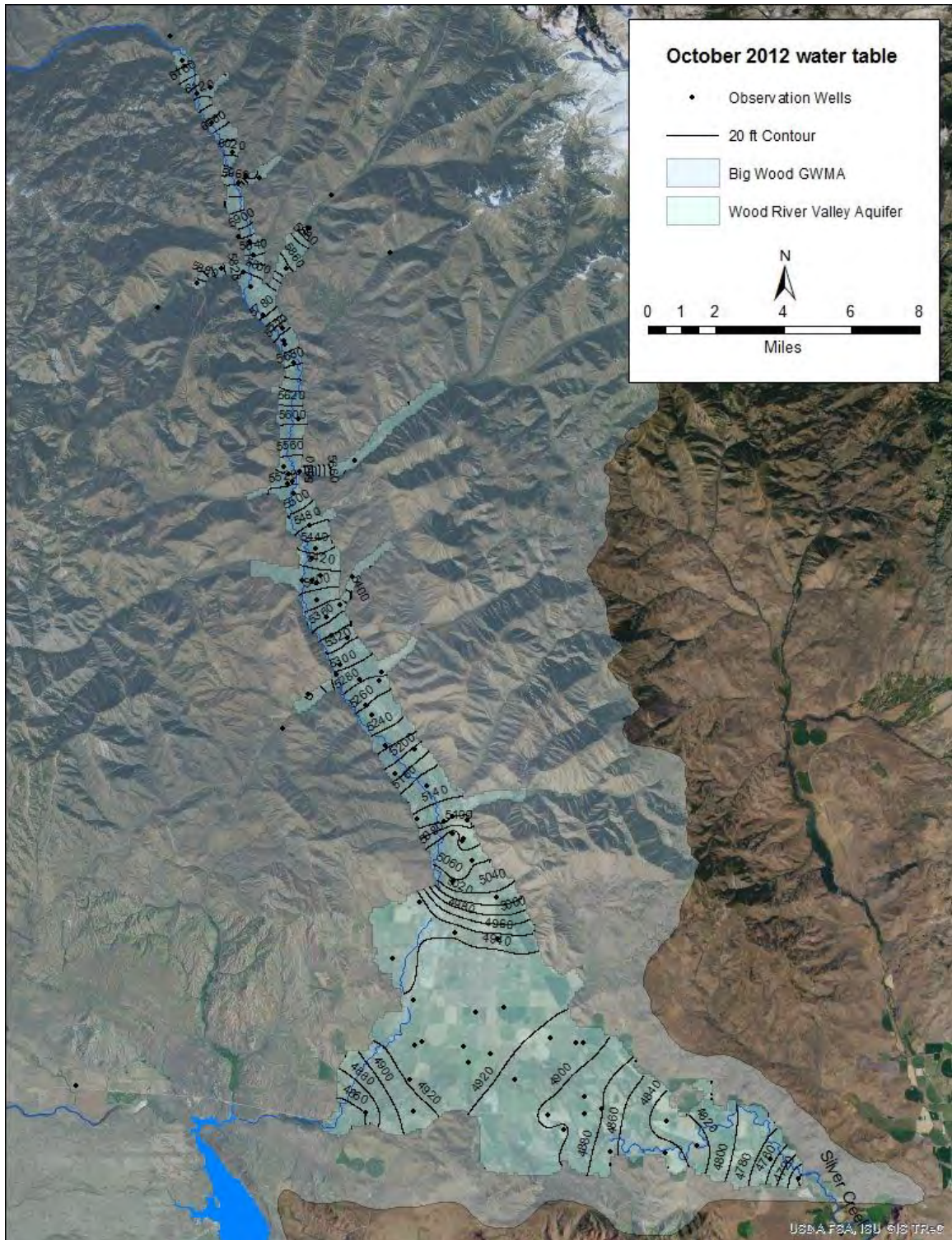


Figure 6b. Potentiometric surface for the unconfined aquifer in the Wood River Valley from October 2012.

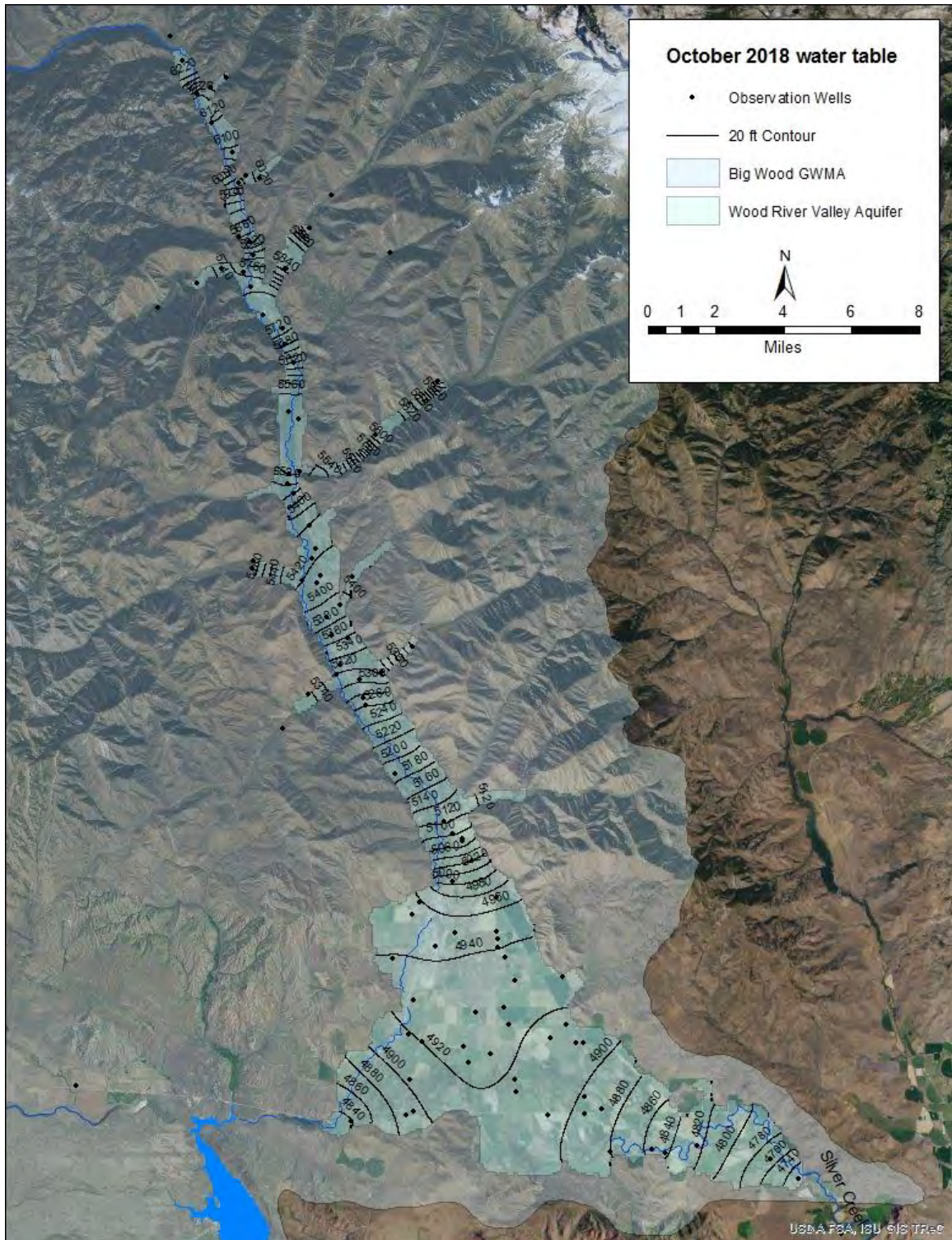


Figure 6c. Potentiometric surface for the unconfined aquifer in the Wood River Valley from October 2018.

The Camas Prairie can also be divided into shallow unconfined and deep confined aquifer systems. Figure 7 shows wells with water-levels collected during October 2018 in the Camas Prairie shallow and deep aquifer systems. The maps indicate that groundwater

flow direction in both the unconfined aquifer and the confined aquifer is from the west to the east.

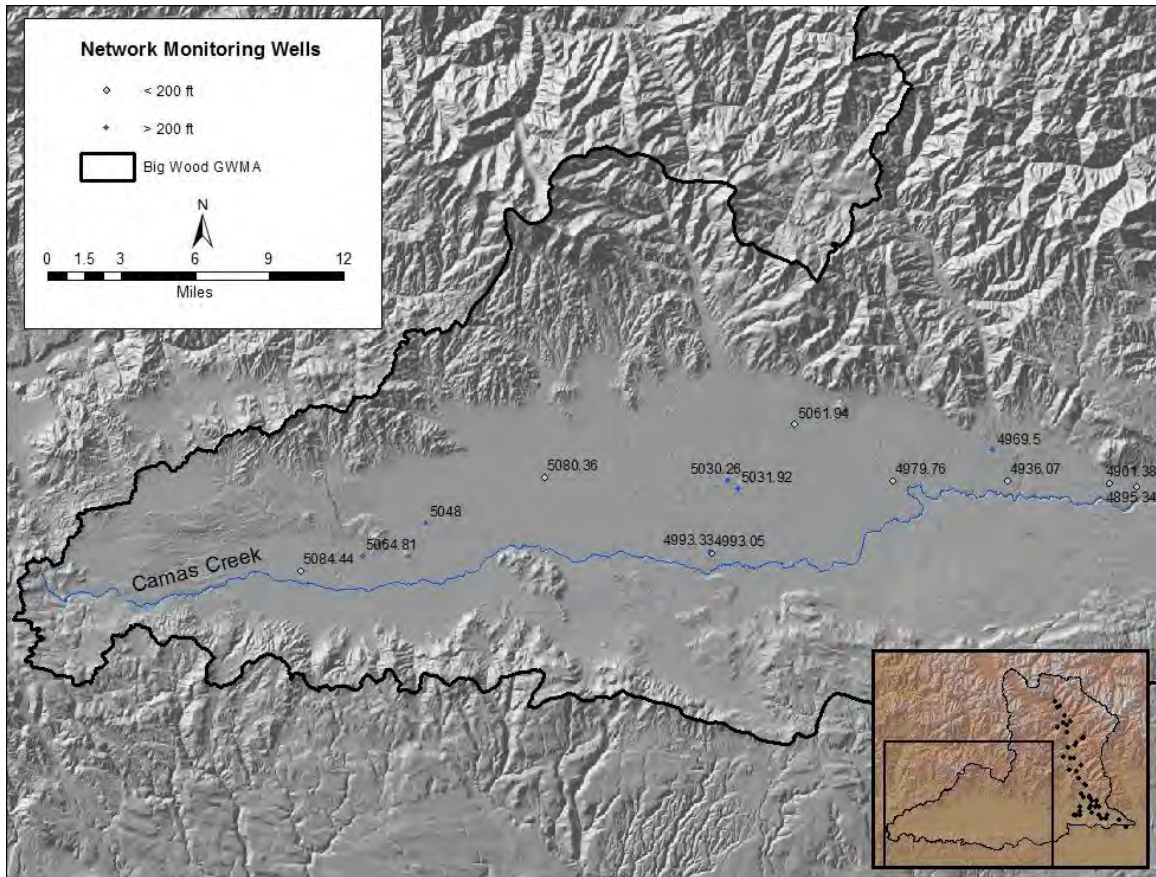


Figure 7. Water-levels in the shallow unconfined and deep confined aquifers in the Camas Prairie.

General Water-Level Elevation Analysis

To critically evaluate aquifer health in an aquifer system in which a river is in direct hydraulic communication with the aquifer, the wells not in immediate hydraulic communication with the river system need to be examined. There are four such wells in the Wood River Aquifer system with a significant measurement period: 01S 18E 14AAB1, 01S 19E 03CCB2, 01S 19E 22AAA1, and 01S 20E 27BDA1 (Figure 2). Wells 01S 18E 14 AAB1 and 01S 19E 22AAA1 are in a confined aquifer, well 01S 19E 03CCB2 is about four miles from either the Big Wood River or Silver Creek, and well 01S 20E 27BDA1 is in an area where Silver Creek is perched and not in direct communication with the aquifer. These wells are identified in Figure 2 and Figure 5 and their hydrographs are shown in Appendix D with trend lines and p-values for the slope of the trend line. All four are declining over the entire period of record, which begins in 1954 for all of these wells, and the p-values are less than 0.05, indicating that the decline is statistically significant at the 95% confidence interval. However, since 1991, when the area became a GWMA, the rate of decline is significantly less for 01S 18E 14AAB1 and 01S 19E 22AAA1, and positive for 01S 19E 03 CCB2 and 01S 20E 27BDA1.

In the Camas Prairie water-level trends in the unconfined system show increasing water-levels as shown by wells 01S 13E 16BBB1, 01S 14E 24DA1, and 01S 17E 17BBB1. Wells 01S 14E 28DDC1 and 01N 14E 36DAD1 completed in the confined system show declining trends. Appendix D contains hydrographs along with trend lines and p-values for the trend lines.

Seasonal Fluctuations

Responses to seasonal hydrologic changes are apparent in the hydrographs for each of the wells presented in Appendix D. In general, the hydrographs show similar responses over time. The average seasonal fluctuations for each well were determined by finding the difference between the summer and fall measurements (Figure 8). The average seasonal fluctuation for the selected wells is 6.8 ft. The average water-level change since the Wood River GWMA was established in 1991 is an increase of 1.31 ft and the average long-term change is a decline of 3.40 ft.

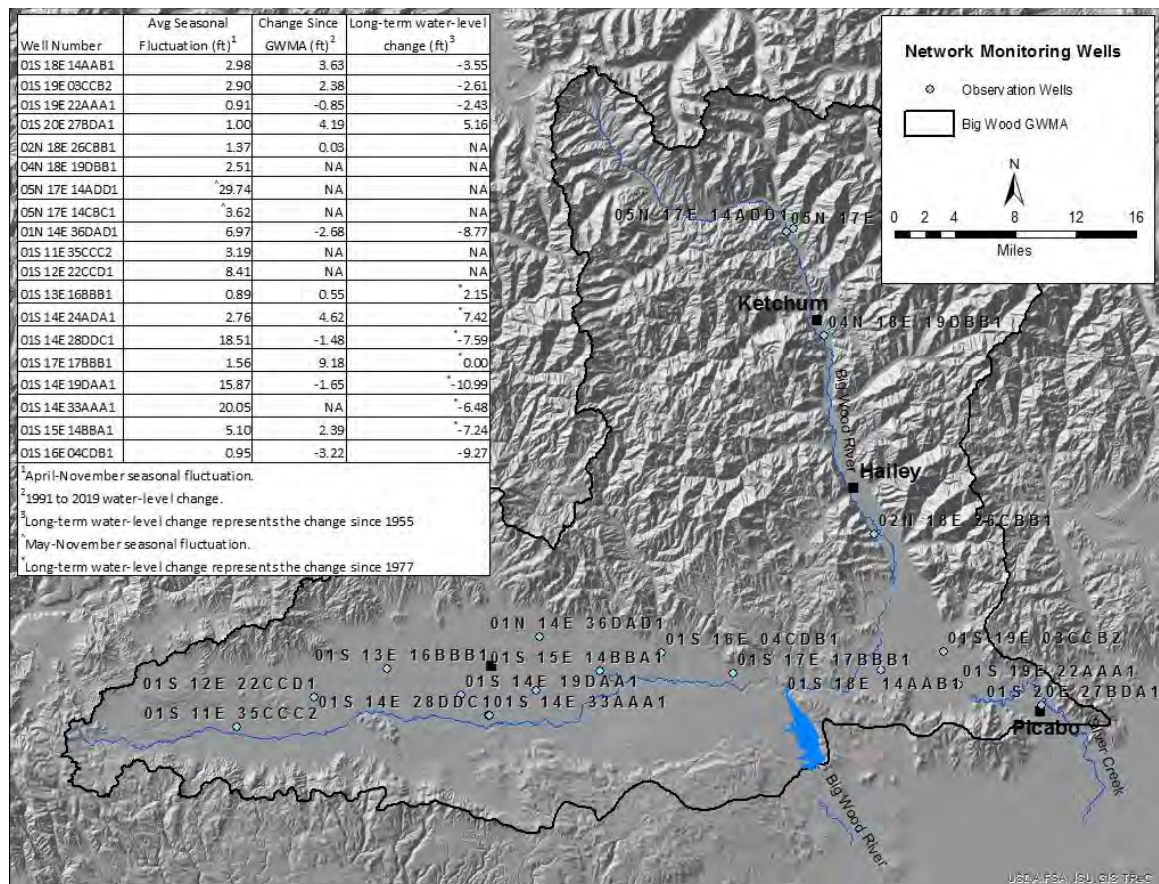


Figure 8. Summary of water-level changes in the Big Wood GWMA.

Mann-Kendall Trend Analysis

The Mann-Kendall test is a nonparametric test for trend that allows missing values and is widely used in environmental sciences (Gilbert, 1987). The Regional Mann-Kendall incorporates numerous wells in one analysis to determine the presence or absence of a district wide long-term rising or falling trend. The USGS KENDALL program by Helsel and others (2005), performs a Regional Kendall test for trend in which numerous wells

within an area are evaluated to test for a consistent trend. The IDWR typically collects water-levels at least twice a year, spring and fall so three datasets were prepared from wells within the Wood River Valley (Figures 2 and 3) consisting of water-levels collected in October, November, and April.

The data in Table 2 displays the results of the Mann-Kendall analysis beginning in 1968, where:

locations – number of wells included in the analysis

τ – a measure of correlation where 1.0 is perfectly correlated

S – if S is positive, the water-table is rising with time, if S is negative (-) the water-table is declining with time

z – if z is positive, the water-table is rising with time, if z is negative (-) the water-table is declining with time. The z statistic can also be used to determine critical points for a two tailed statistical test.

p – if less than 0.05, the data supports the trend at a 95% confidence interval

Δ – the average change in water-level in feet per year

Since the S and z statistics are negative for all three datasets presented in Table 2 and p is less than 0.05 in all three datasets, the trend since 1968 for water-levels collected in October, November, and April indicate a declining water-table at a 95% confidence level. The decline is between 0.22 and 0.10 ft per year.

Table 2. Mann-Kendall analysis for Wood River Valley wells beginning in 1968.

Kendall Statistics	October	November	April
locations	45	43	42
τ	-0.341	-0.405	-0.267
S	-406	-883	-273
z	-5.073	-6.507	-3.541
p	0	0	0.0004
Δ	-0.1702	-0.217	-0.102

The same analysis conducted for the wells in the Camas Creek drainage (Figure 4) is presented in Table 3. The number of wells is smaller, the correlations (τ) are weaker, and the history is shorter (beginning in 1968 in the Wood and 1976 in the Camas). The p value is significant for the April data, but the October and November data do not show a consistent trend. The April data has a stronger τ , a more significant S and z, and a p value statistically significant at the 95% confidence interval indicating declining water-table trend of about 0.06 ft/yr.

Table 3. Mann-Kendall analysis for Camas wells beginning in 1976.

Kendall Statistics	October	November	April
locations	19	17	18
τ	-0.026	-0.032	-0.195
S	-7	-38	-164
z	-0.215	-0.428	-2.598
p	0.8294	0.6688	0.0094
Δ	-0.02625	-0.01639	-0.06257

The Big Wood GWMA was formed in 1991, in part because the water-table was declining, so a declining water-table for a period beginning prior to 1991 is not unexpected. A more useful analysis would be to evaluate the trend since formation of the GWMA to determine if the administrative action is having its intended impact. Table 4 shows the Mann-Kendall statistics for wells in the Wood River Valley (Figures 2 and 3) including only data collected since 1991. τ , S , z , and Δ are all positive indicating rising groundwater-levels. However p is only statistically significant at the 95% confidence interval for the April data; the October and November data do not show a statistically significant trend. Perhaps the October and November data contain enough noise that the trend is masked, or perhaps there is no trend and the water-table is stable. The April groundwater increase is about 0.18 ft/yr.

Table 4. Mann-Kendall analysis for Wood River Valley wells beginning in 1991.

Kendall Statistics	October	November	April
locations	46	43	43
τ	0.111	0.041	0.182
S	55	29	67
z	1.644	0.538	2.356
p	0.1001	0.5908	0.0185
Δ	0.09833	0.062	0.18

The results for the Mann-Kendall analysis for the Camas Prairie wells beginning in 1991 is presented in Table 5. Neither October, November, nor April have a statistically significant p -value at the 95% confidence interval. τ is positive for October and November, but negative for April. S is positive for October and November, but negative for April; z is zero for October, positive for November, and negative for April. As indicated by the p -values, there is no trend at the 95% confidence interval for any of these datasets. These data might be inconclusive because, as noted previously, the water-table is rising in the unconfined aquifer and declining in the confined system and there is therefore no regional trend at a 95% confidence interval.

Table 5. Mann-Kendall analysis for Camas Prairie wells beginning in 1991.

Kendall Statistics	October	November	April
locations	18	15	18
T	0.008	0.247	-0.064
S	1	67	-31
z	0	1.943	-0.708
p	1	0.052	0.4786
Δ	0.01944	0.184	-0.02067

Conclusions and Recommendations

In the Wood River Valley portion of the GWMA, the water-table has declined at rate of about 0.17 ft/yr since 1968 (Table 2). However, since formation of the GWMA in 1991 the water-table appears to be either reasonably stable or recovering at a rate of about 0.18 ft/yr (Table 4).

Interpretation of the data from the Camas side of the GWMA is less clear. The data in Table 4 for April water-levels indicate a water-table declining at about 0.06 ft/yr since 1976. The data gathered since formation of the GWMA from the Camas show no discernable trend. Perhaps this is because water-levels in the unconfined aquifer are rising while water-levels in the confined system are declining.

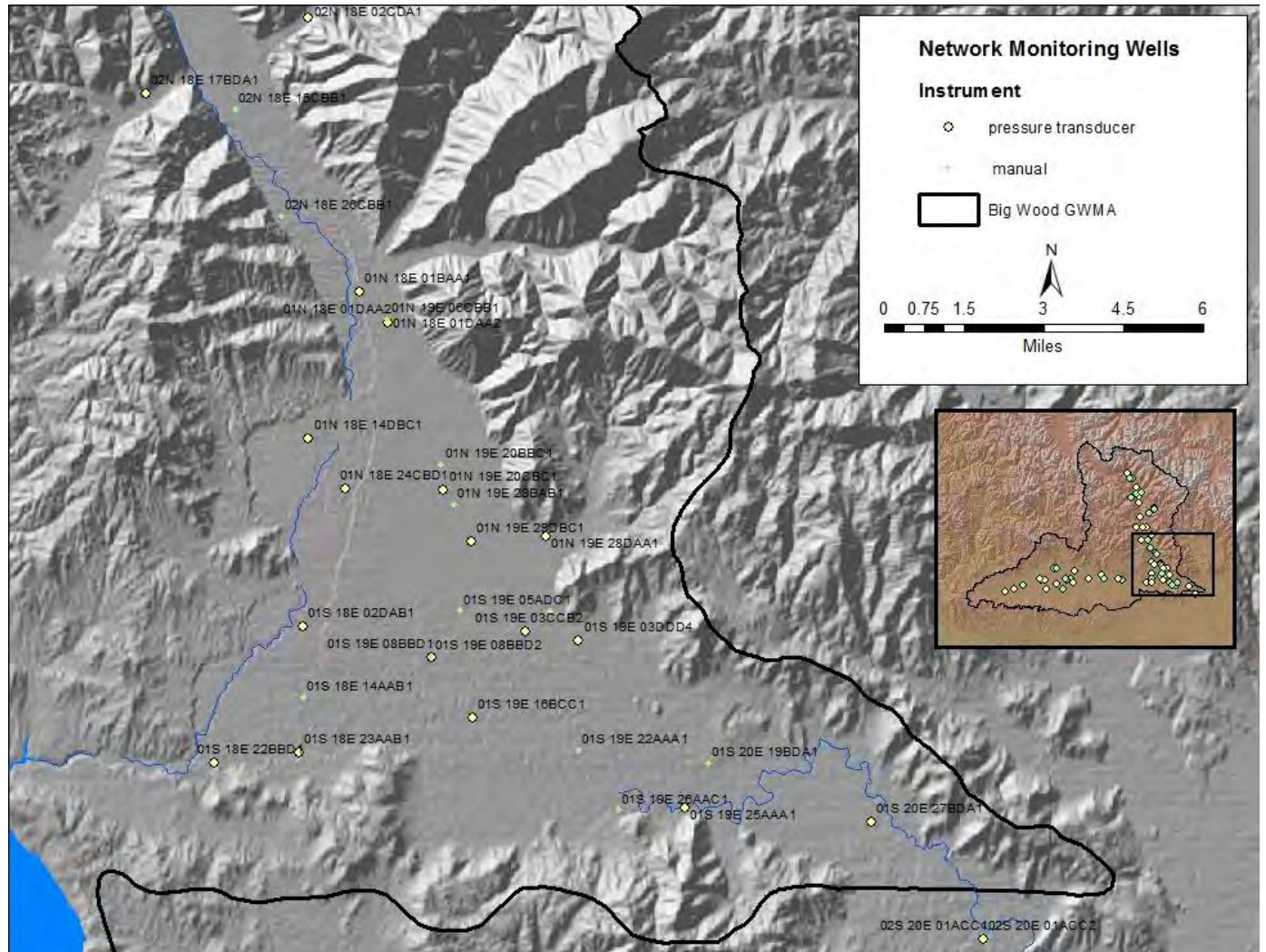
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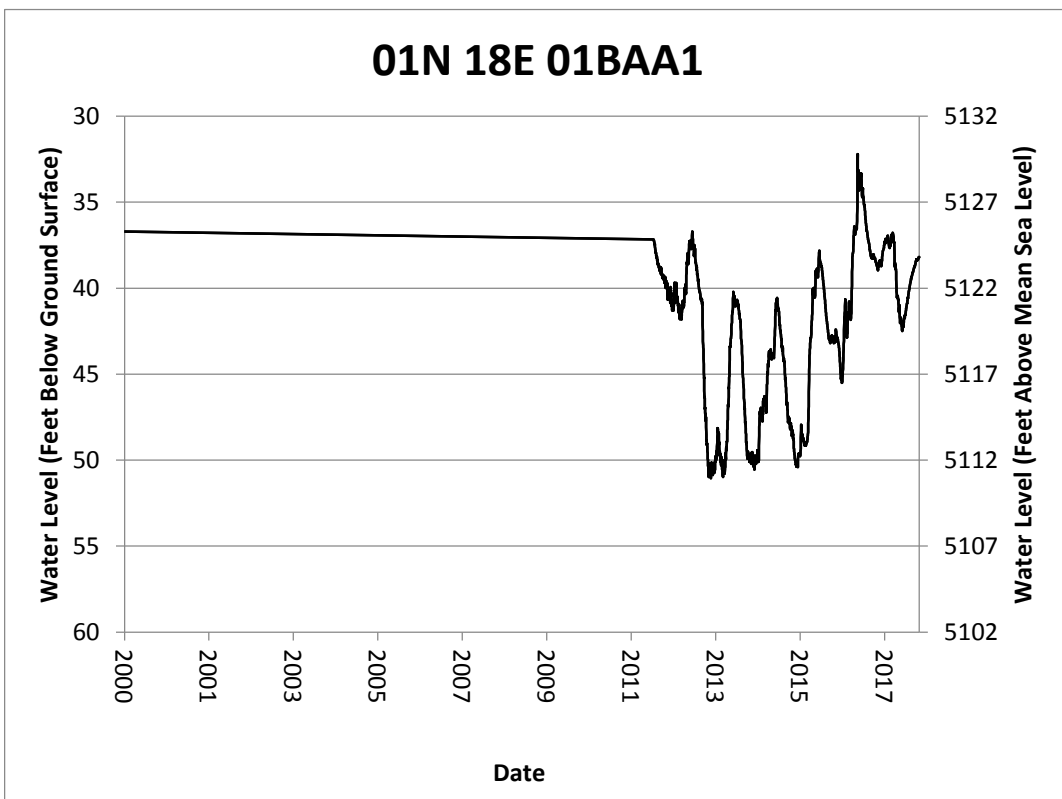
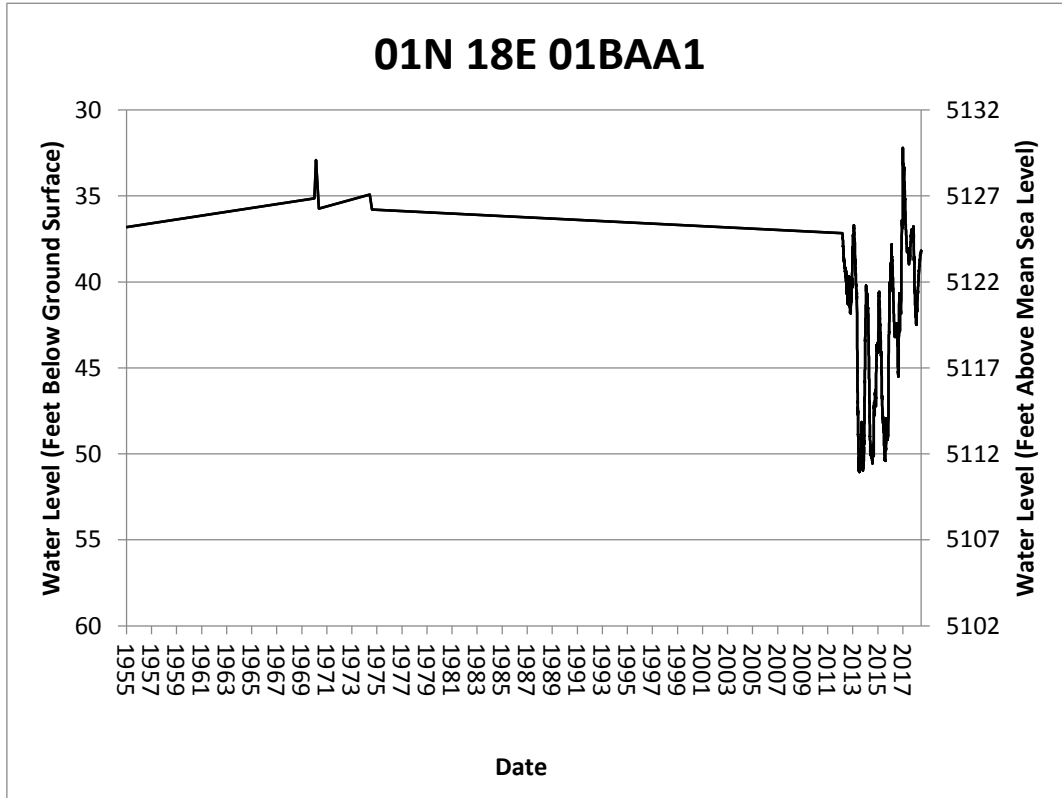
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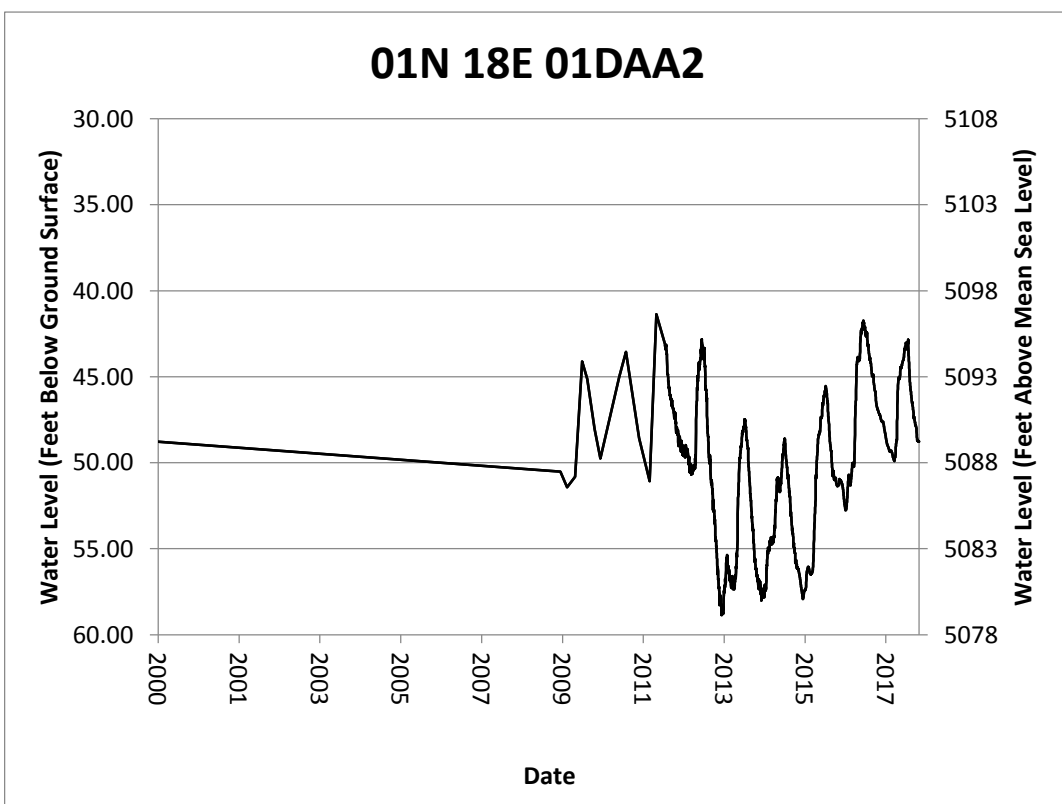
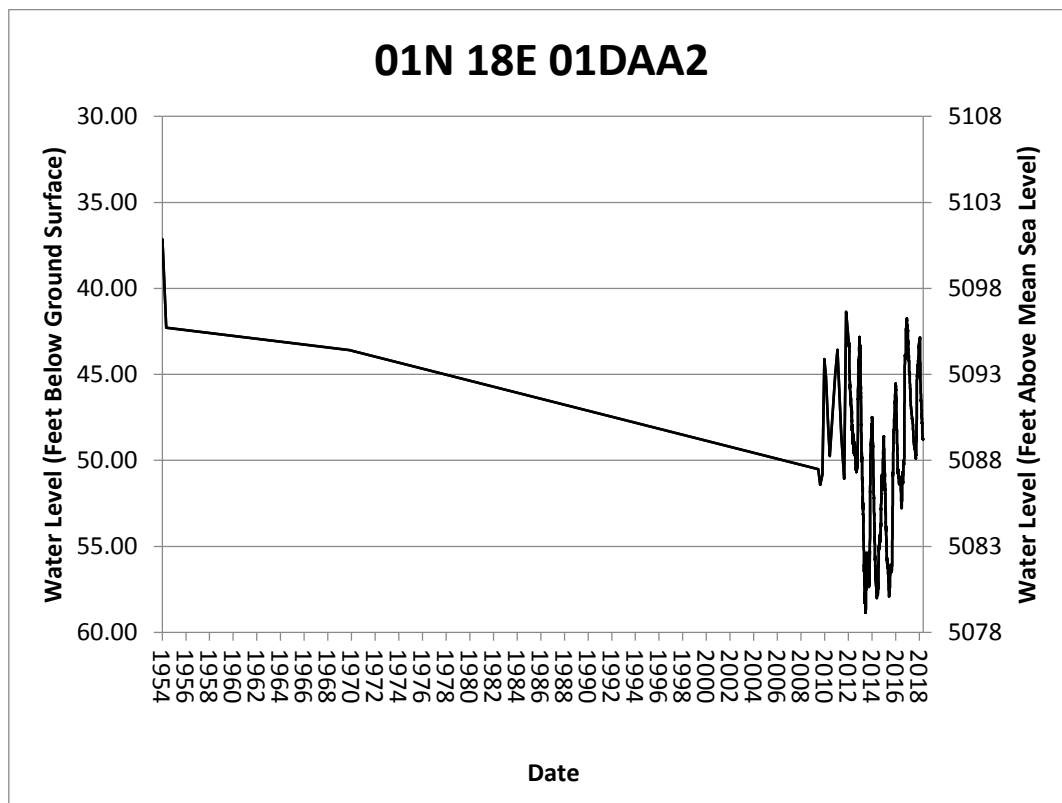
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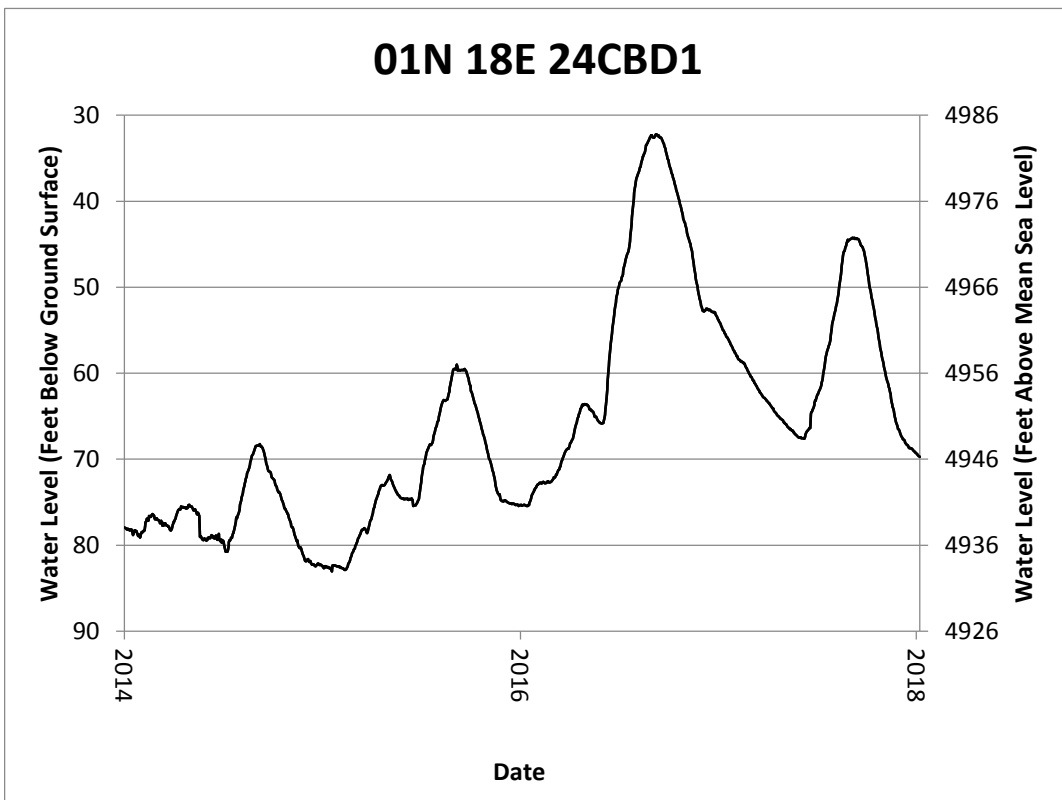
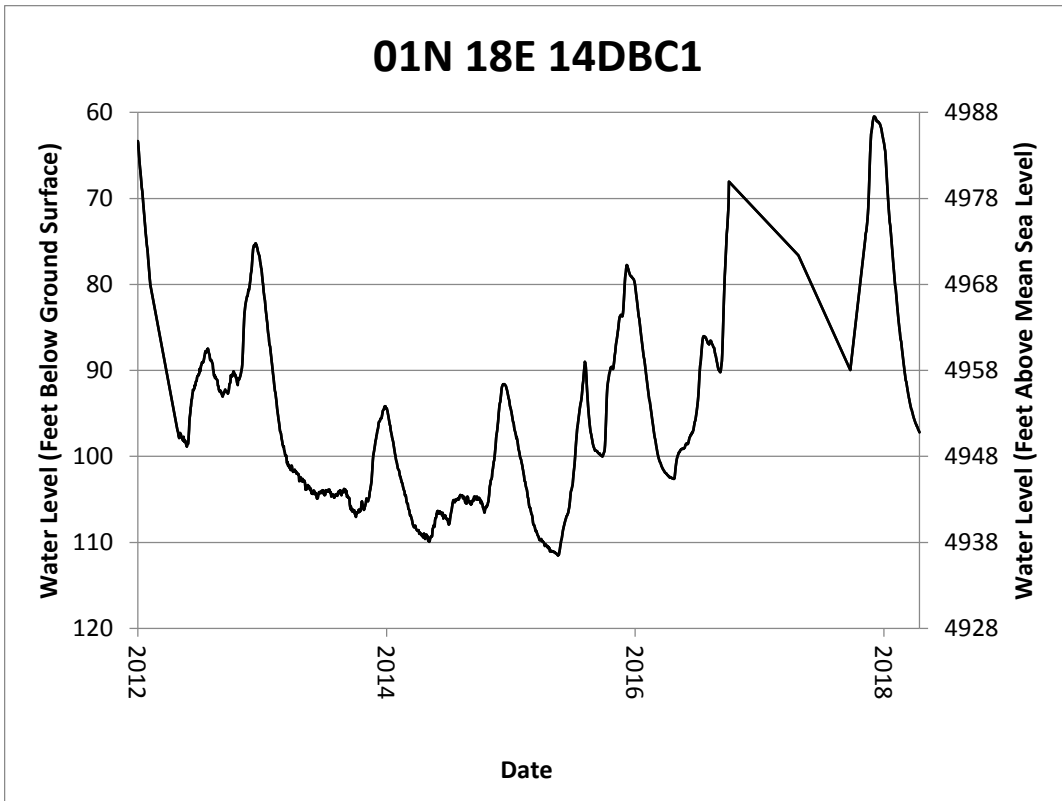
APPENDIX A

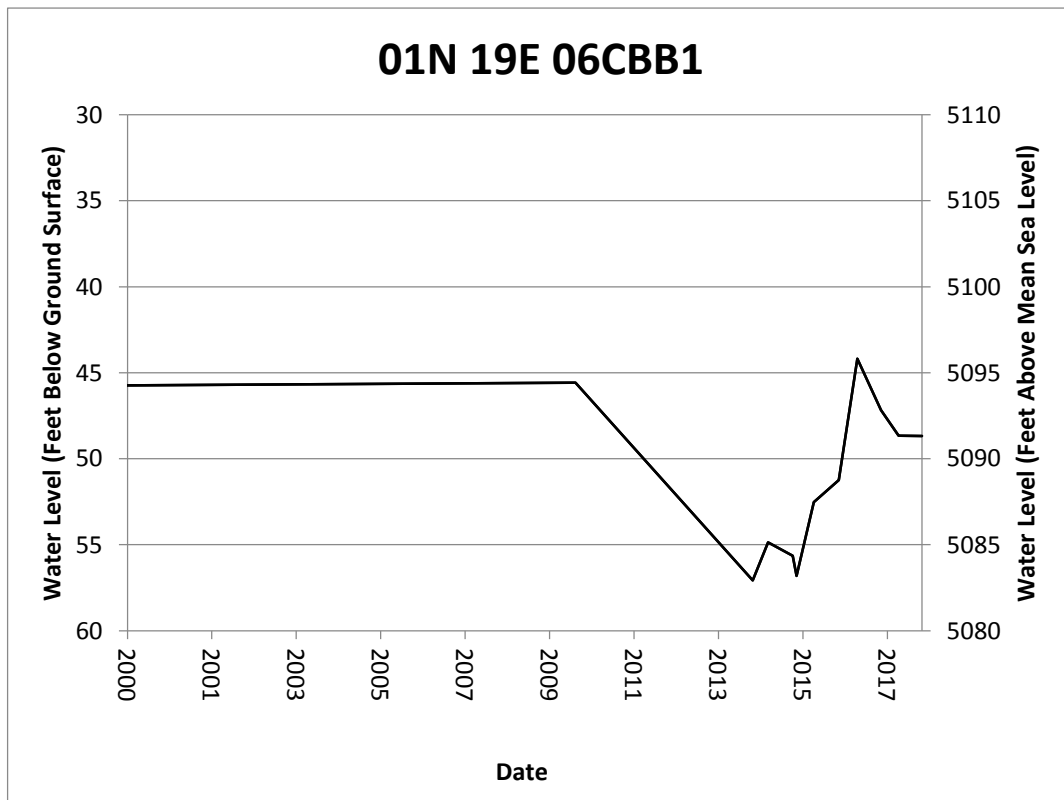
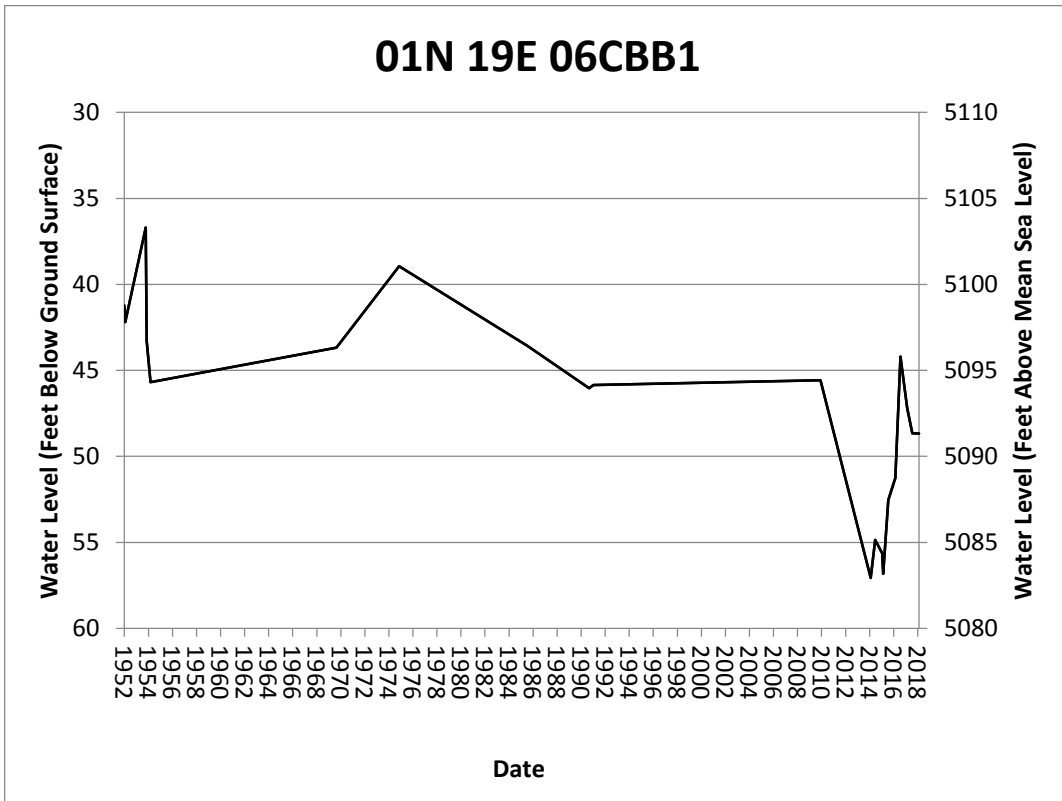
SOUTHEAST BIG WOOD GWMA HYDROGRAPHS

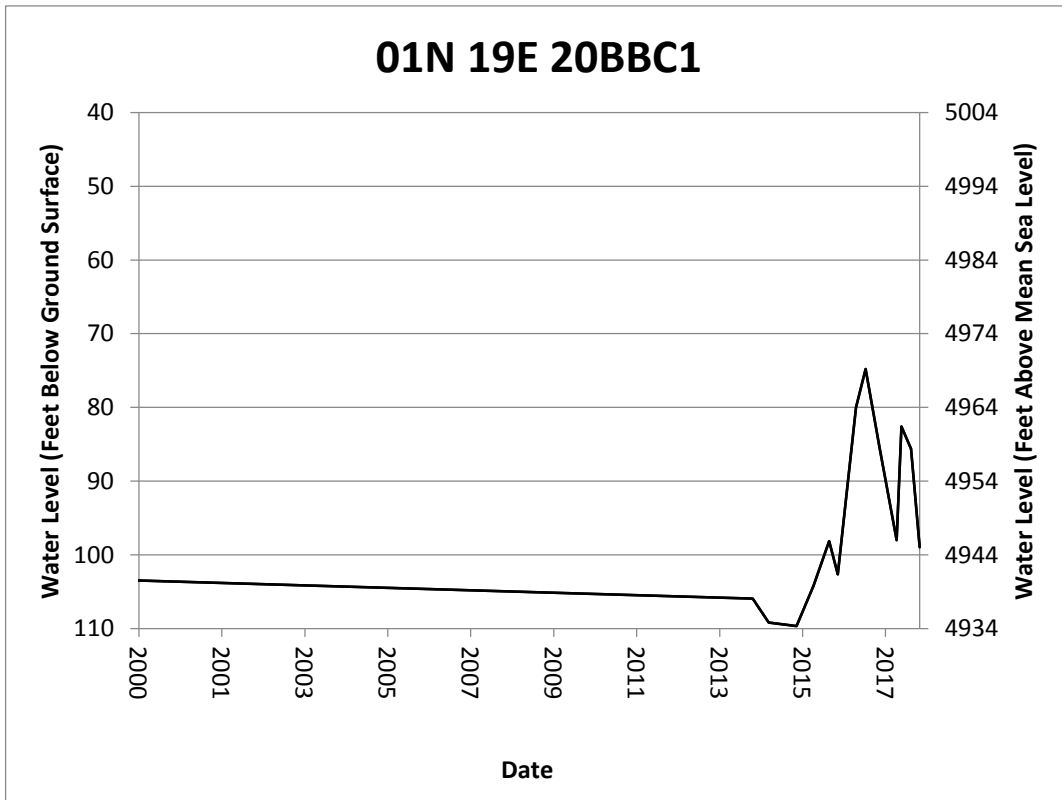
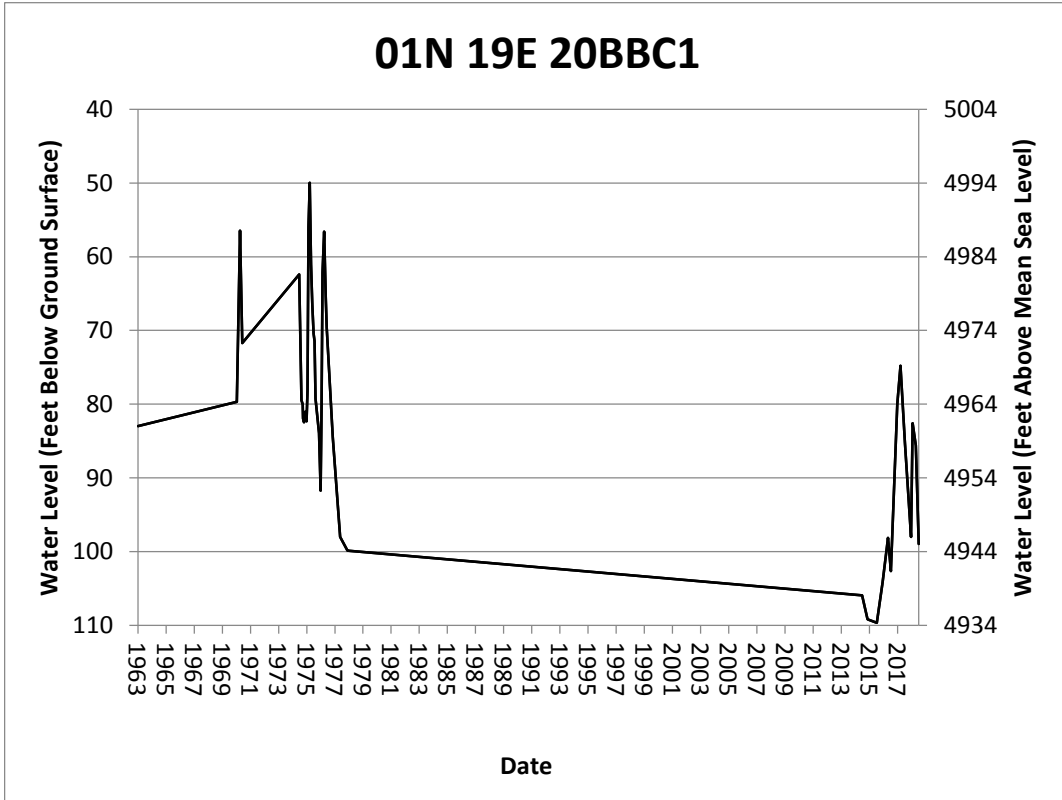


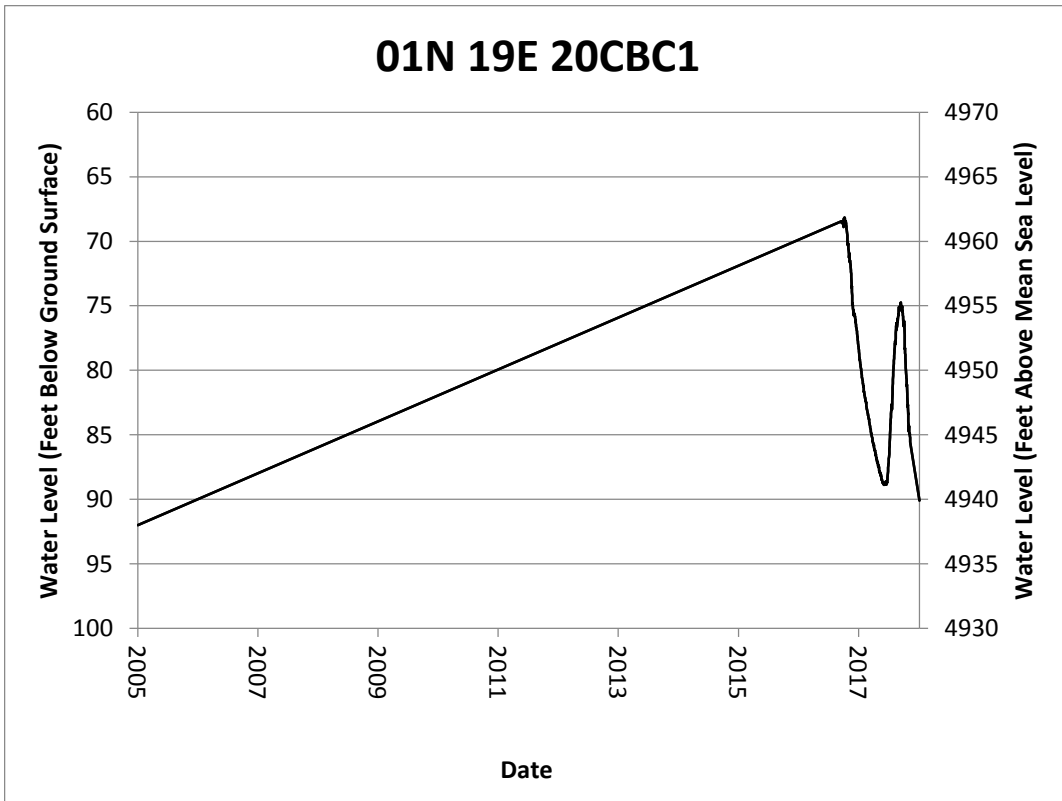


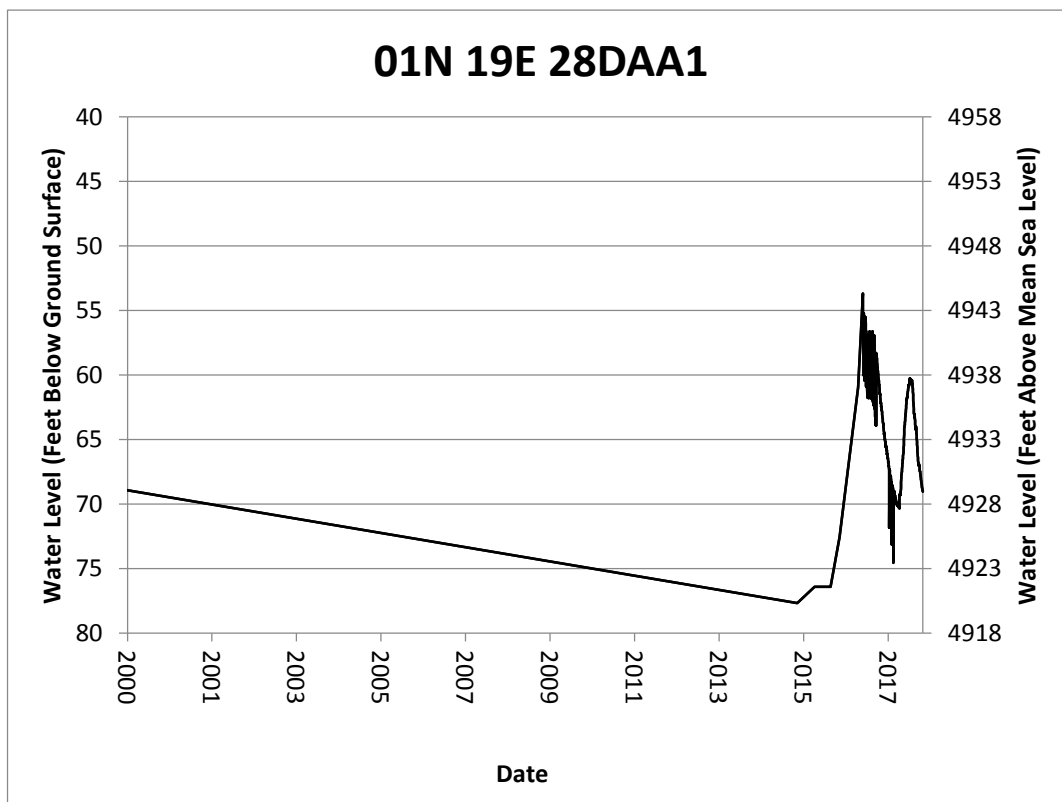
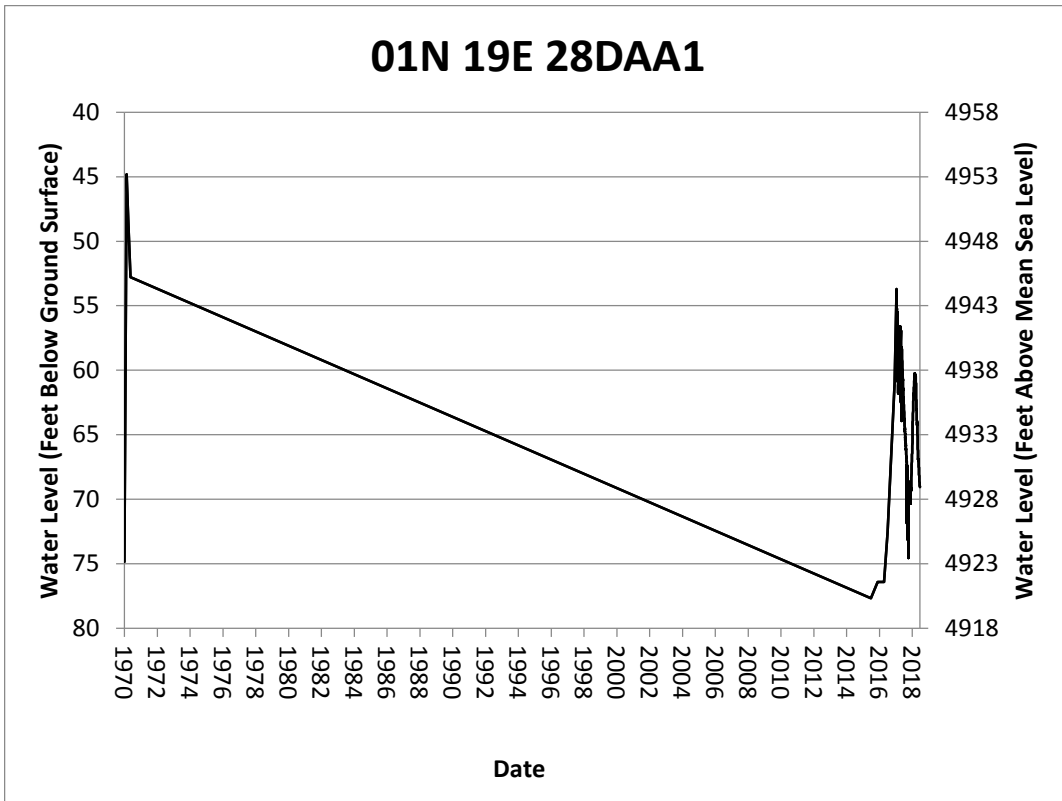


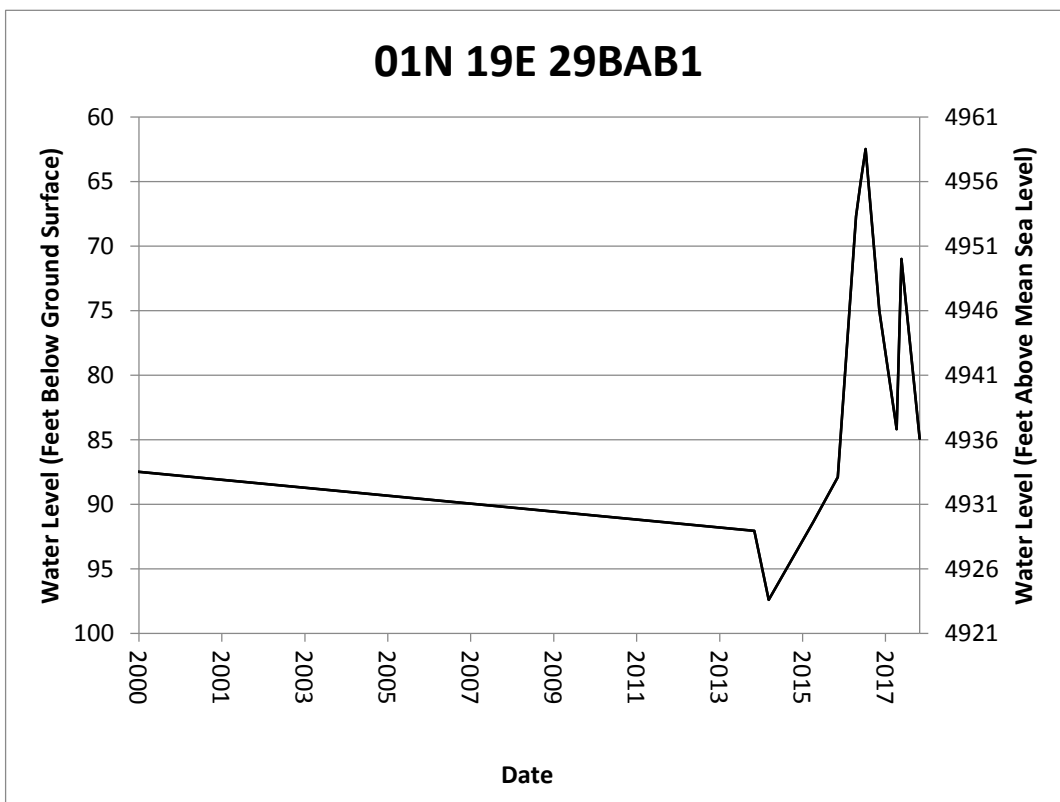
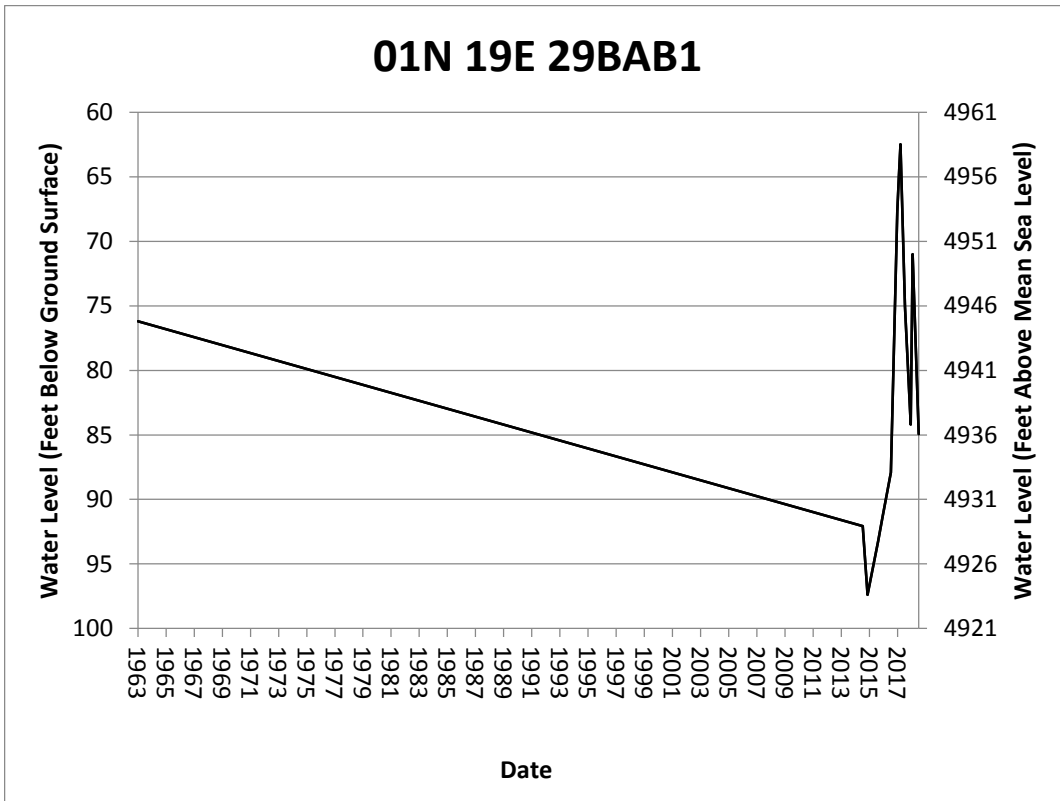


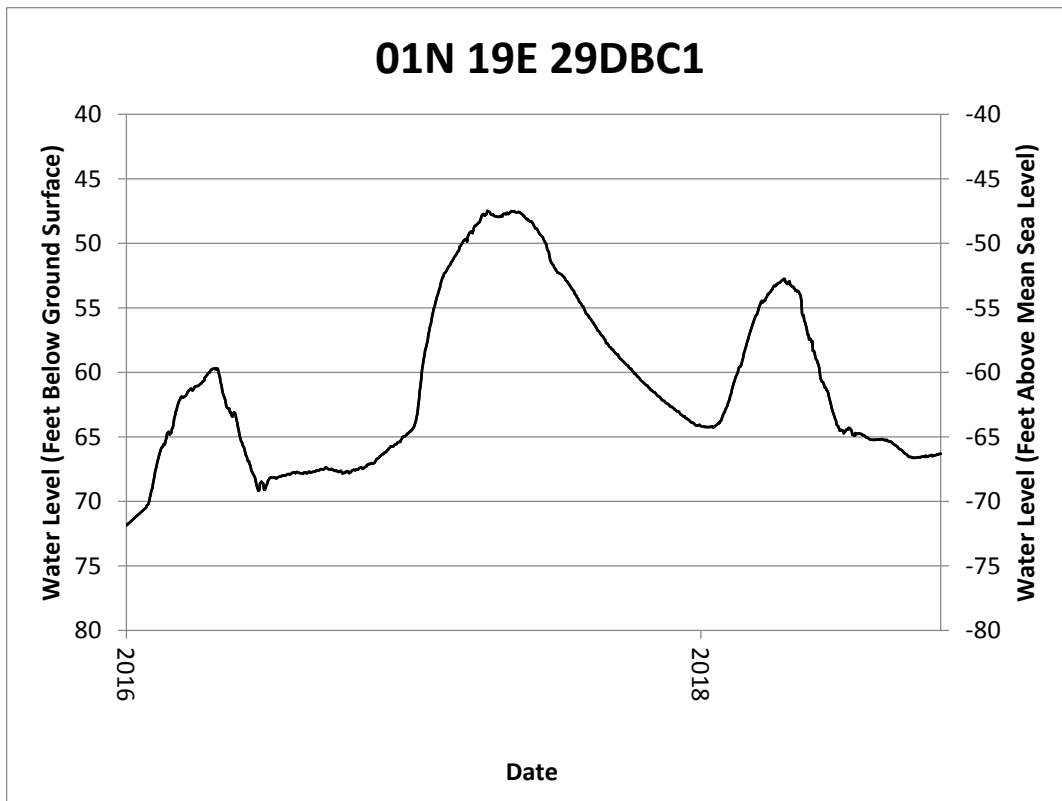


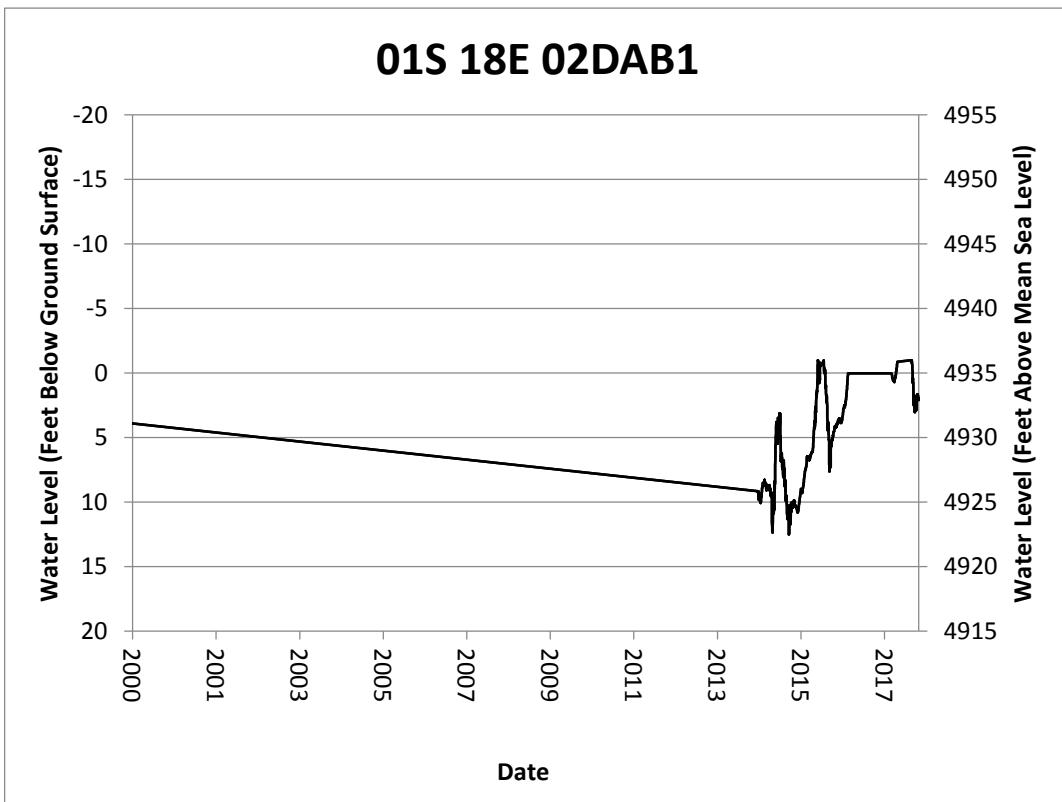
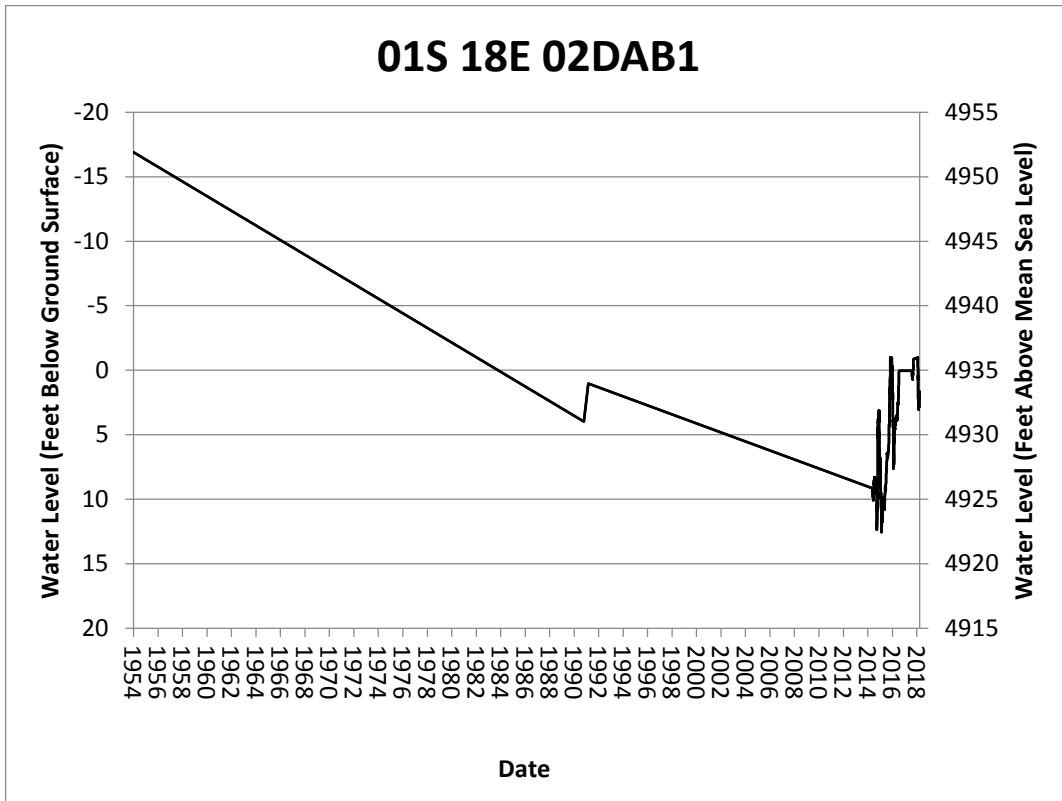


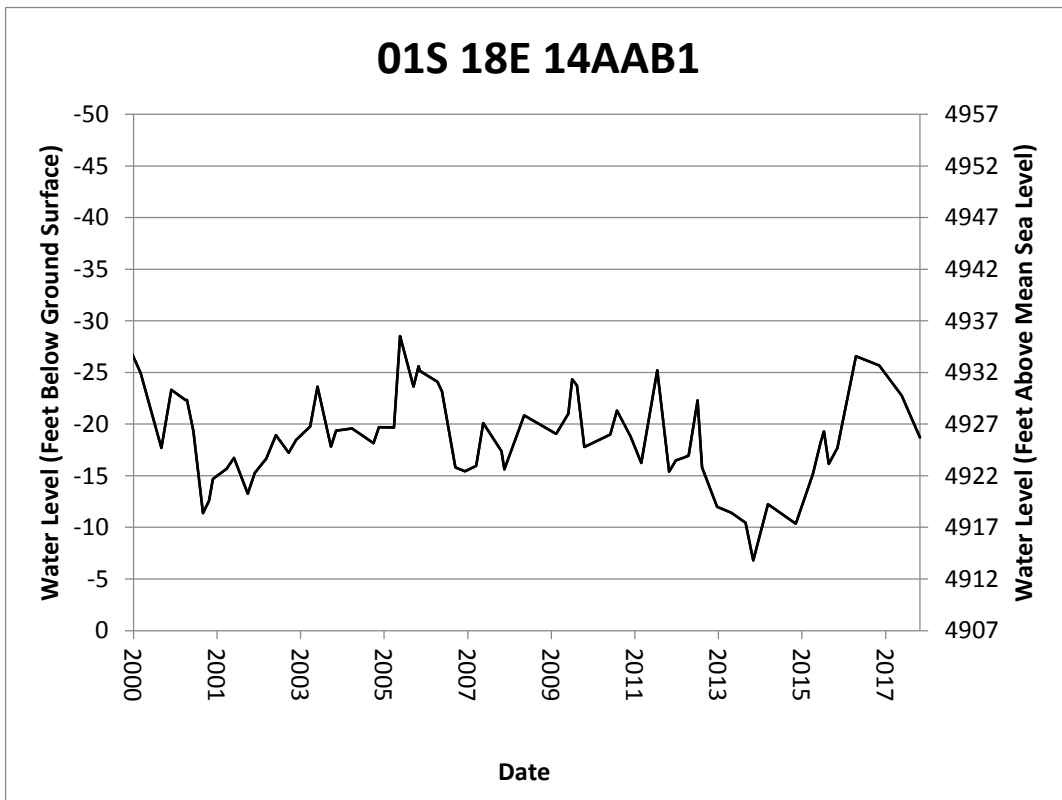
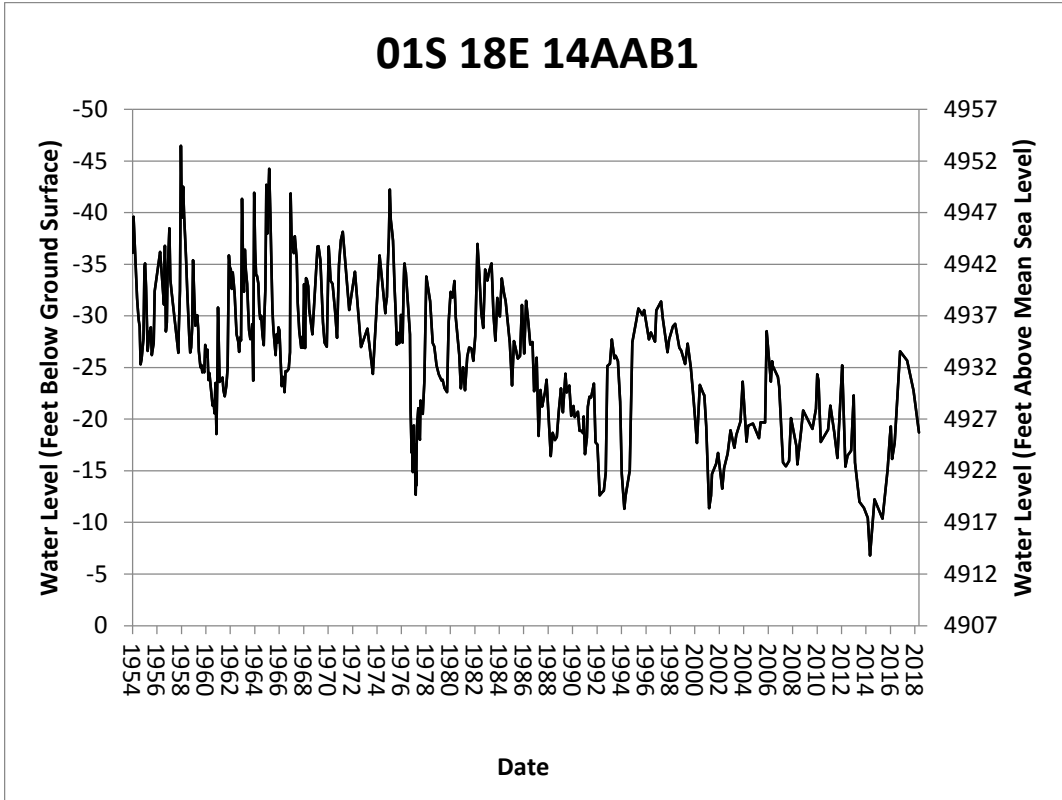


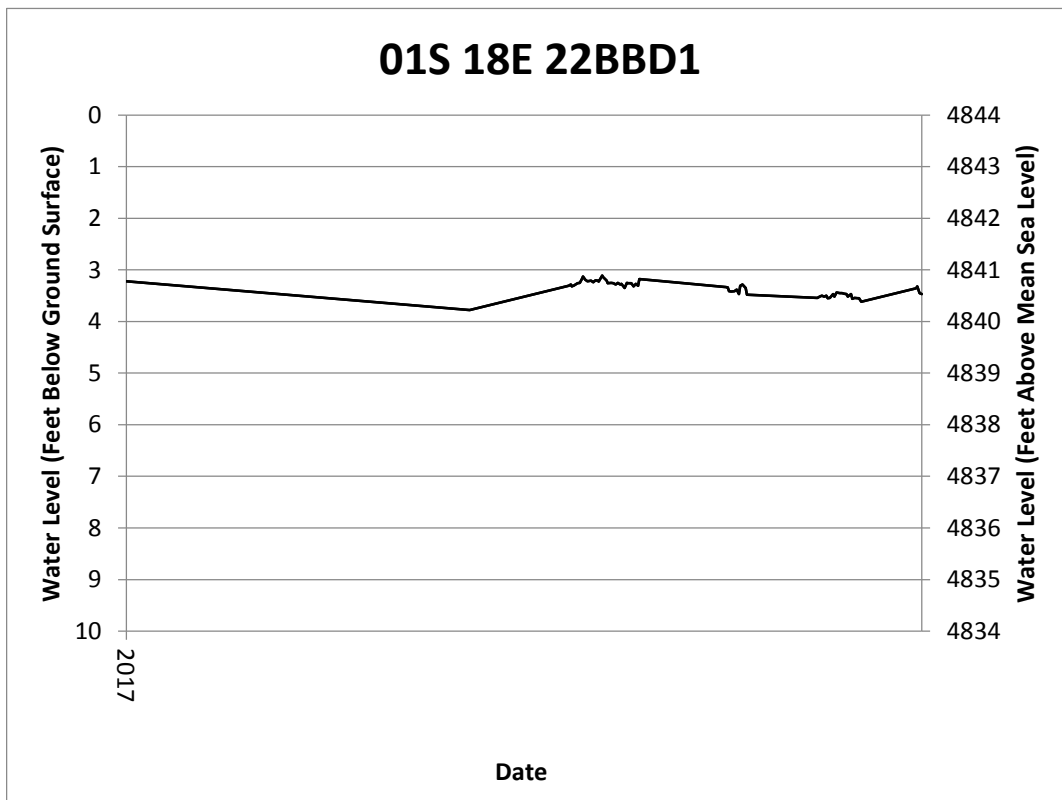
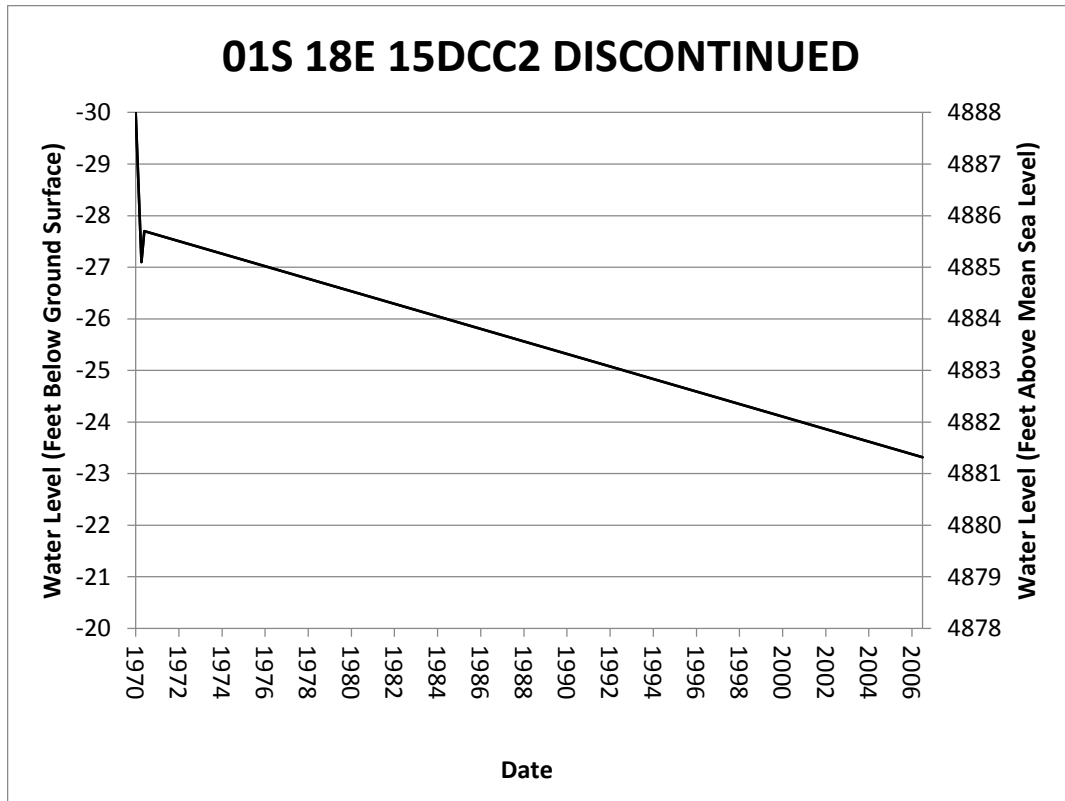


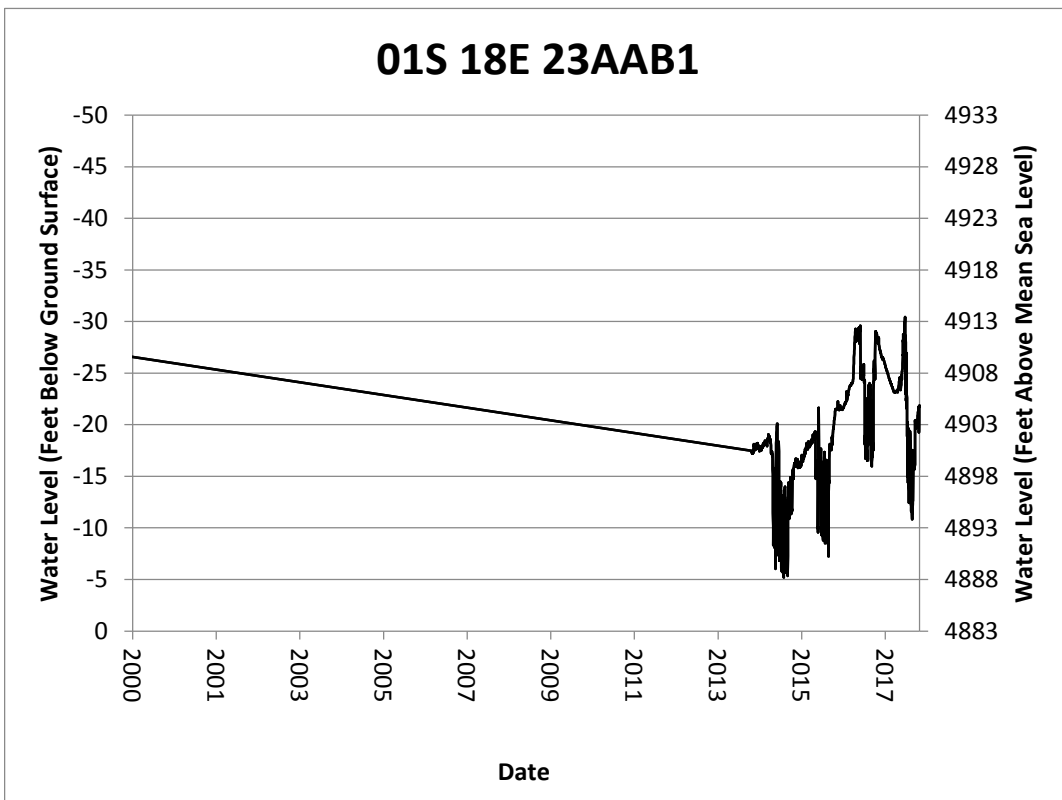
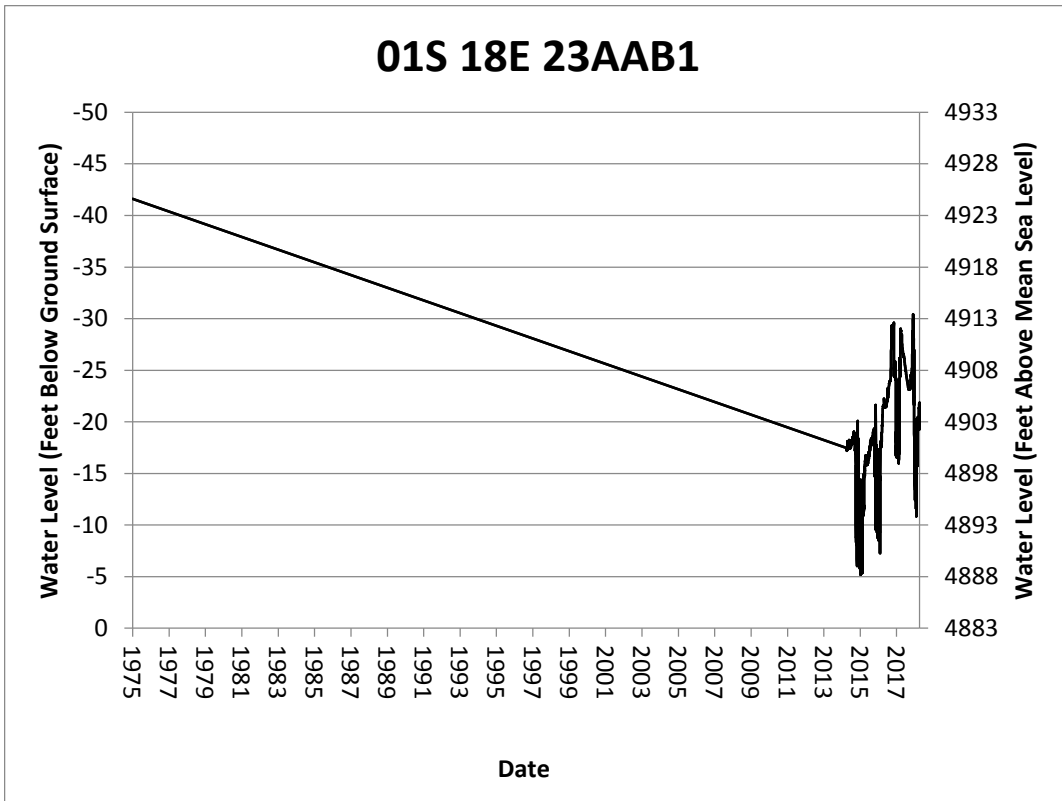


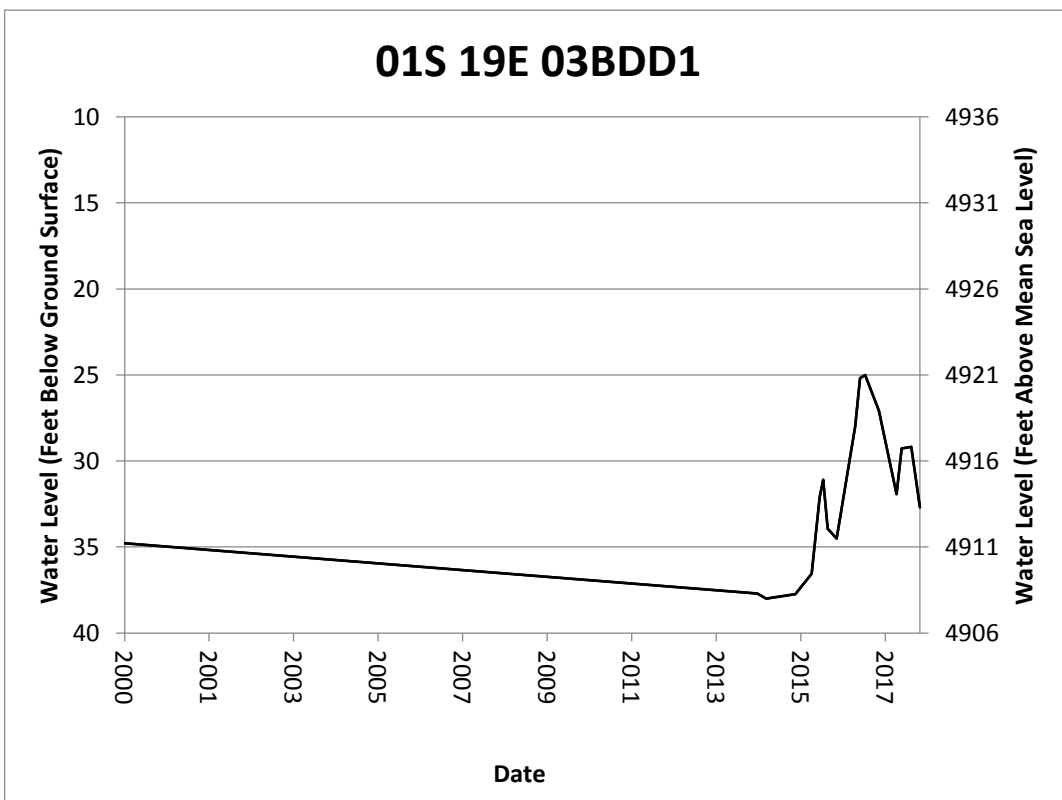
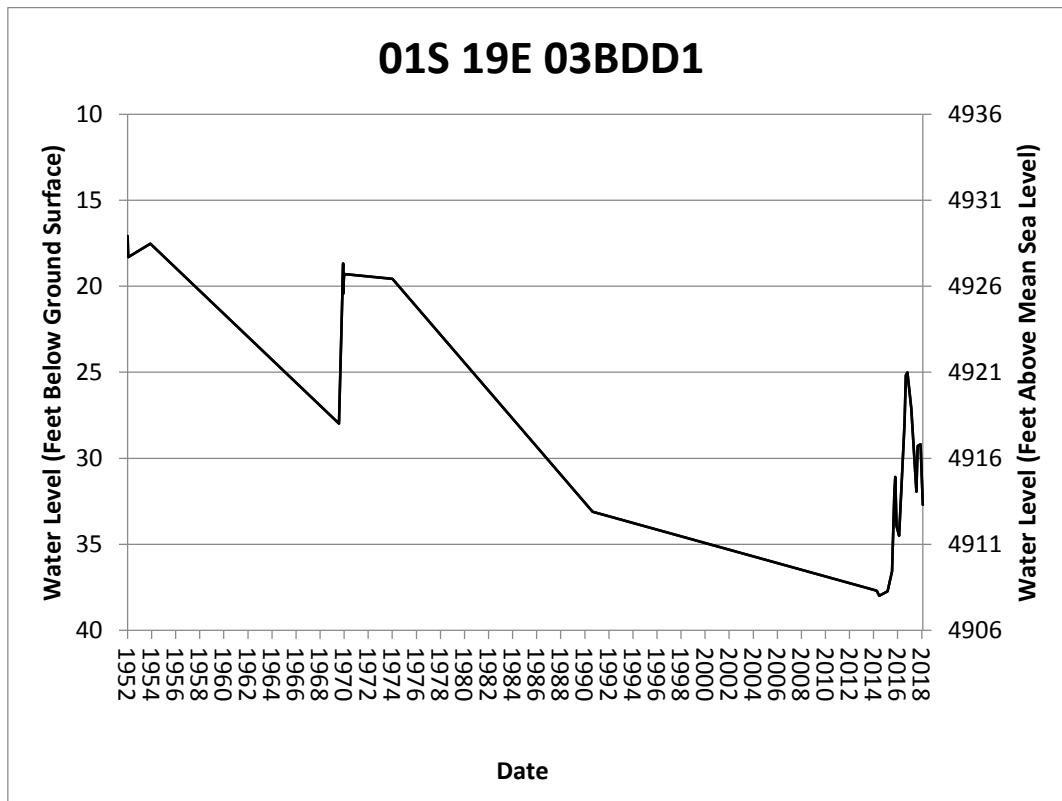


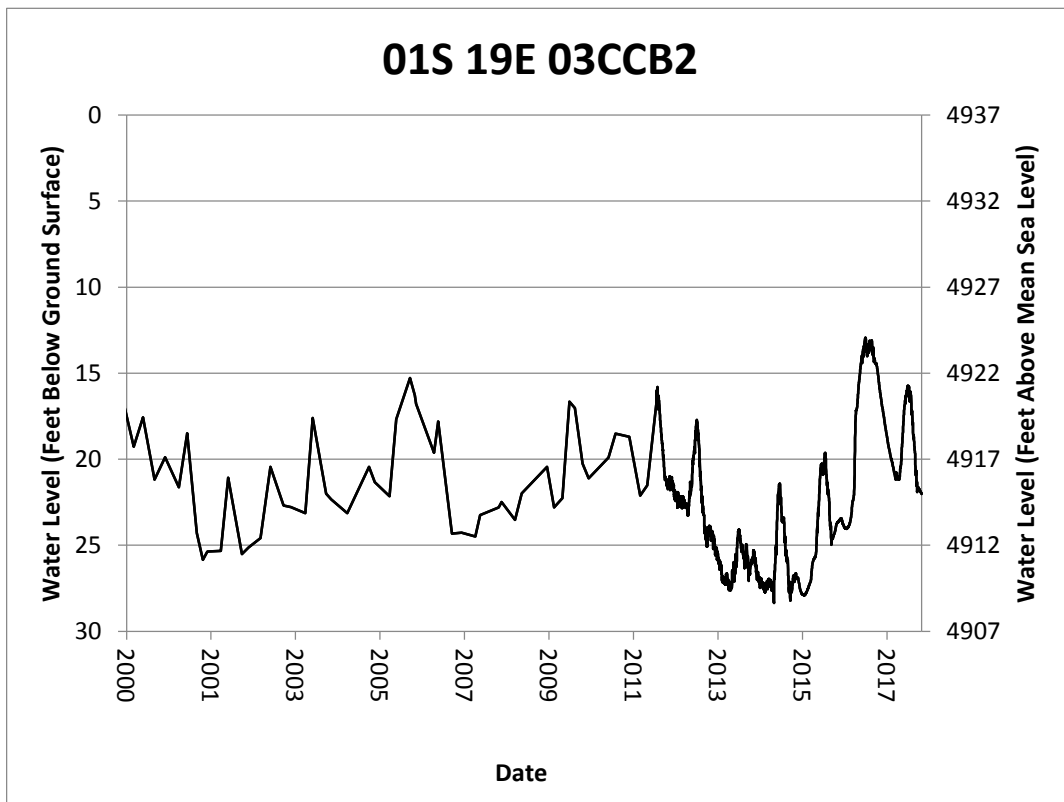
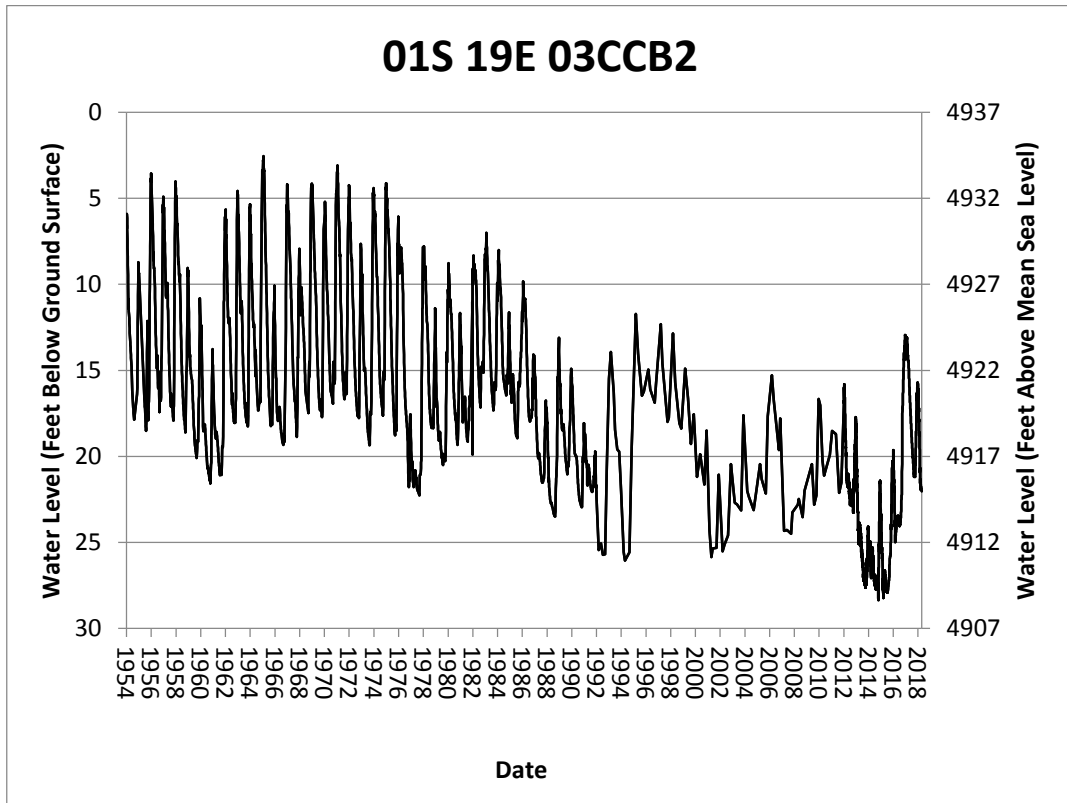


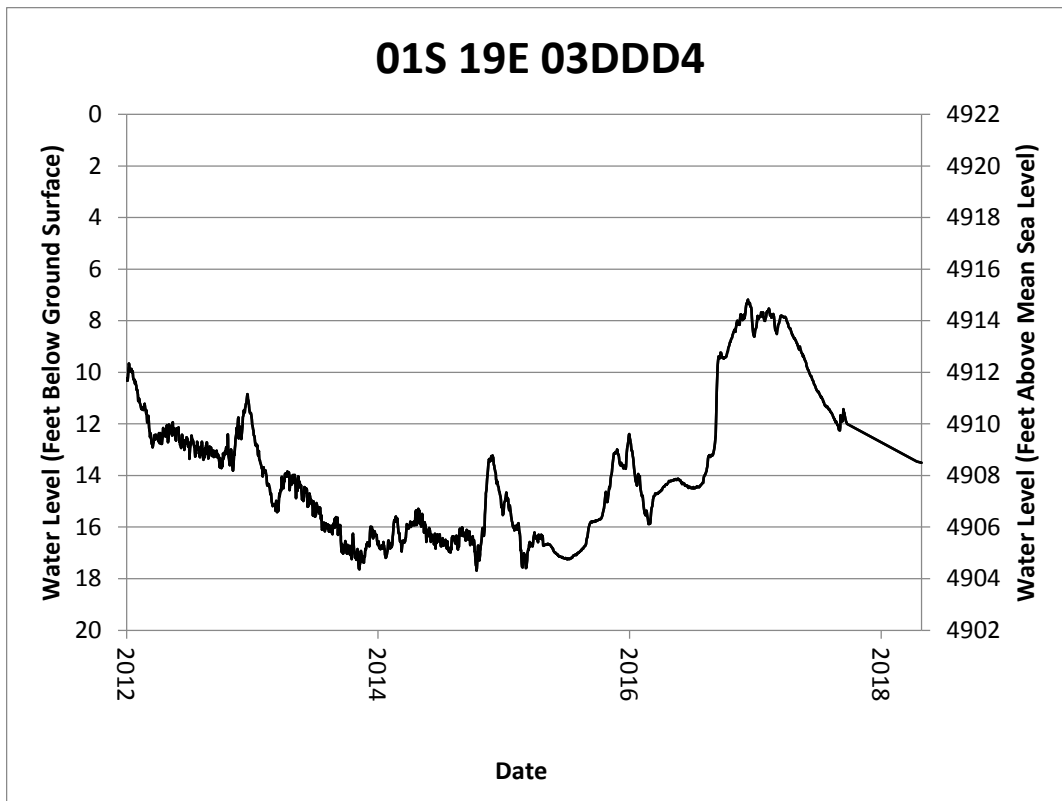


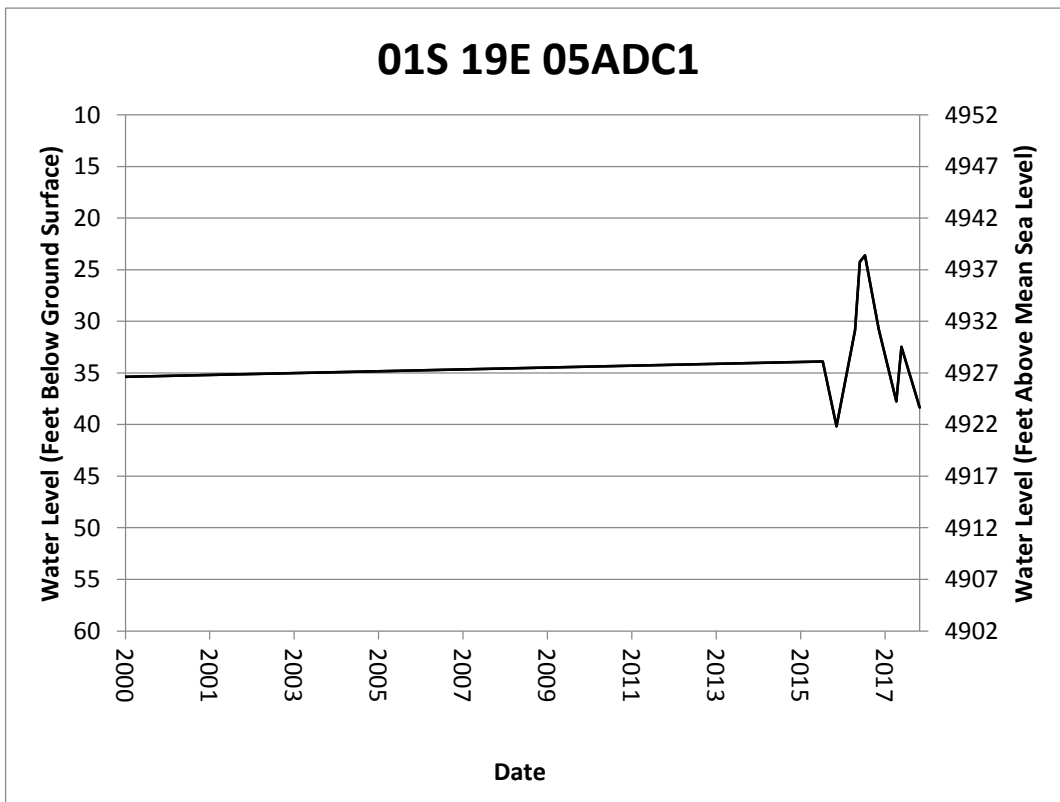
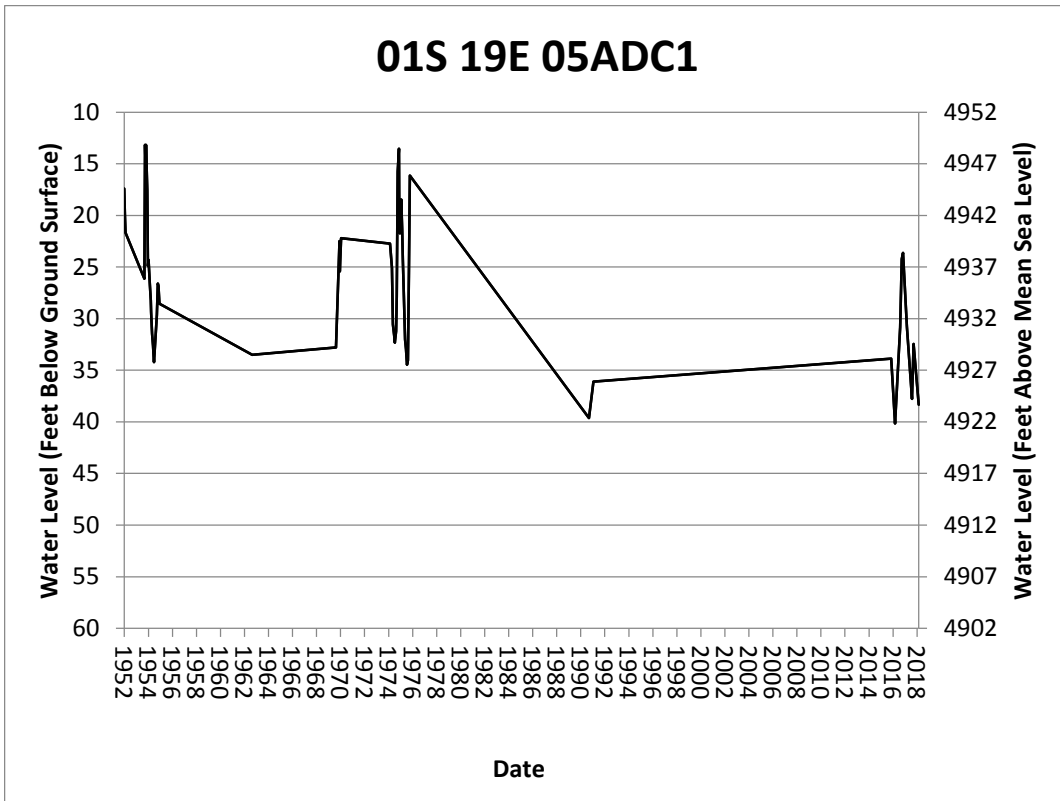


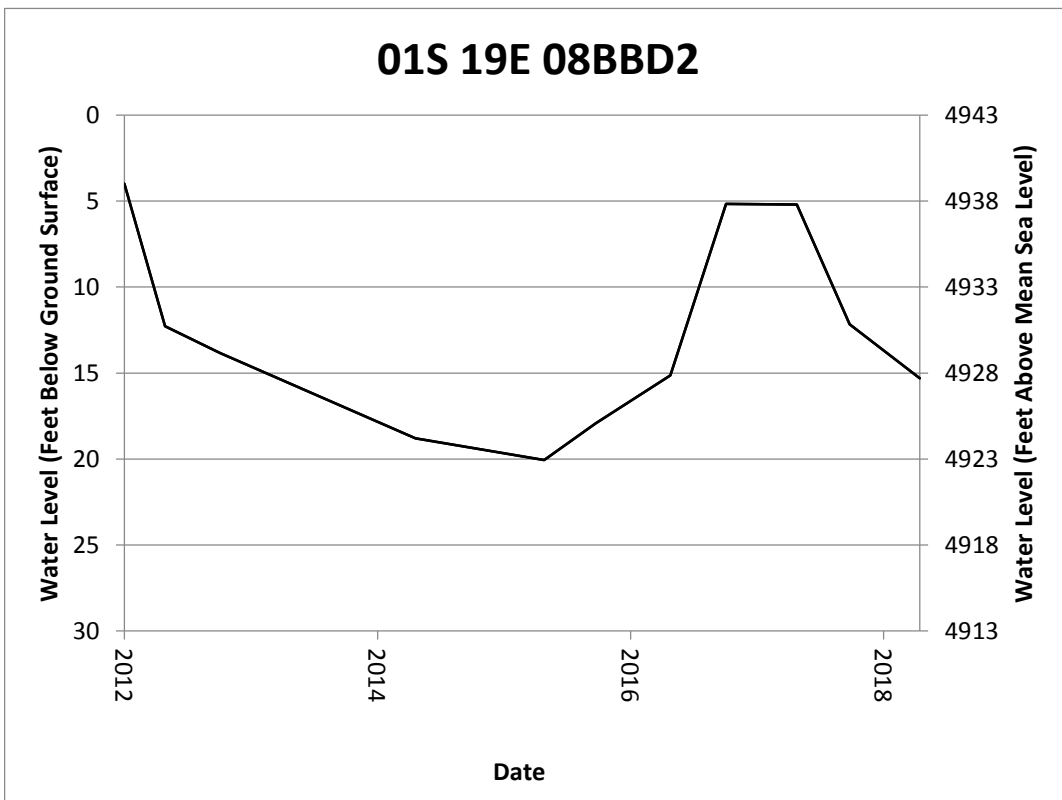
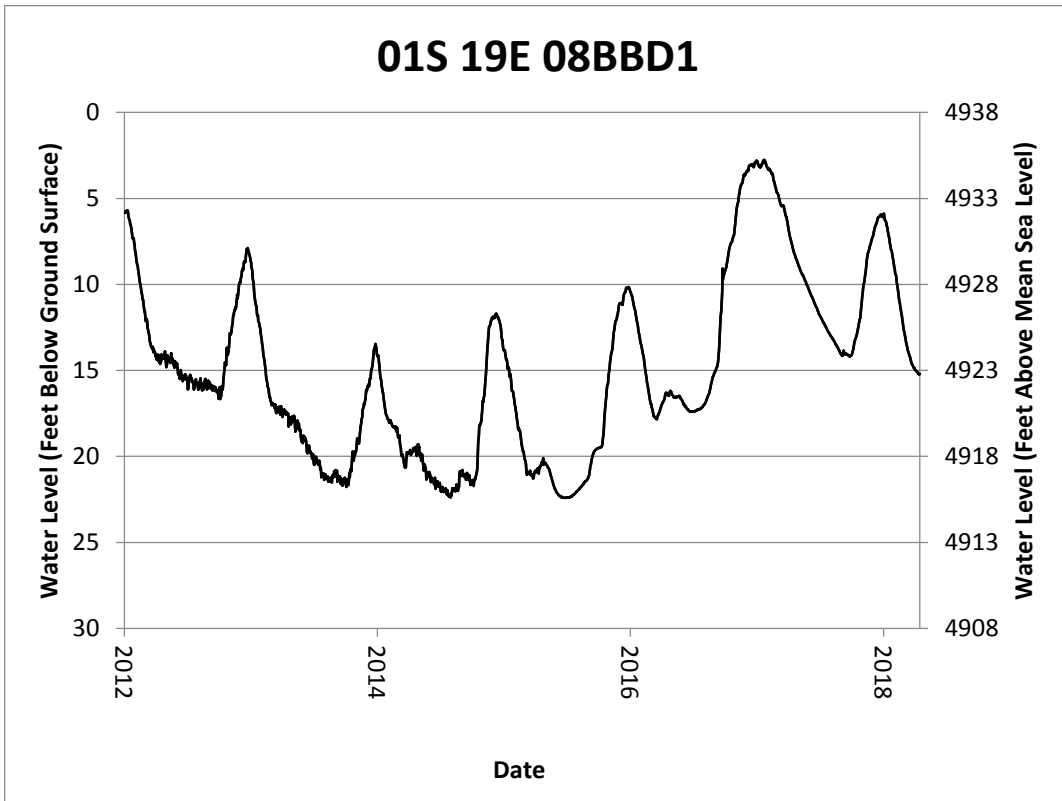


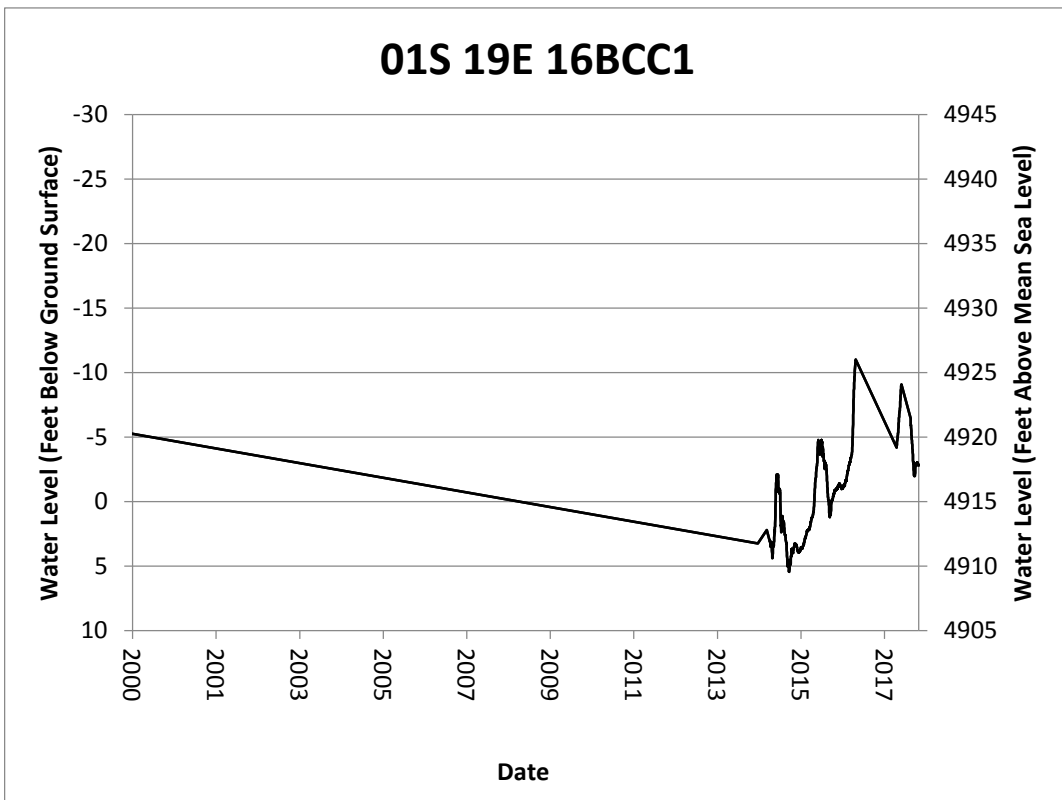
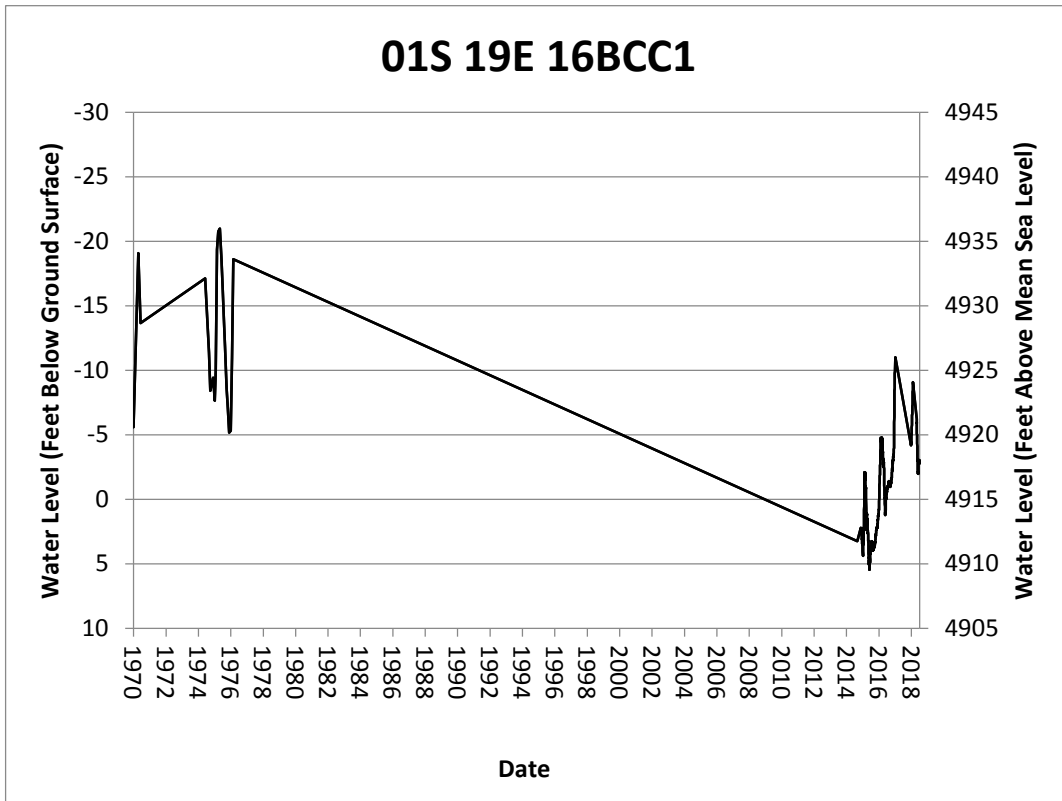


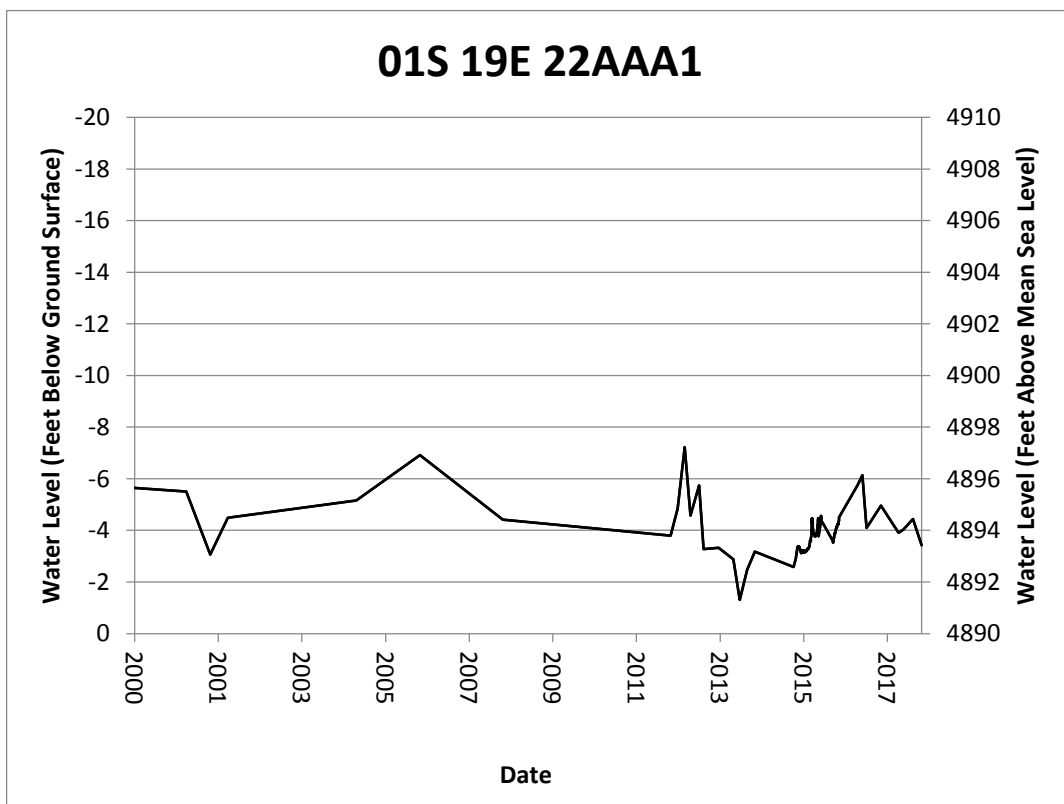
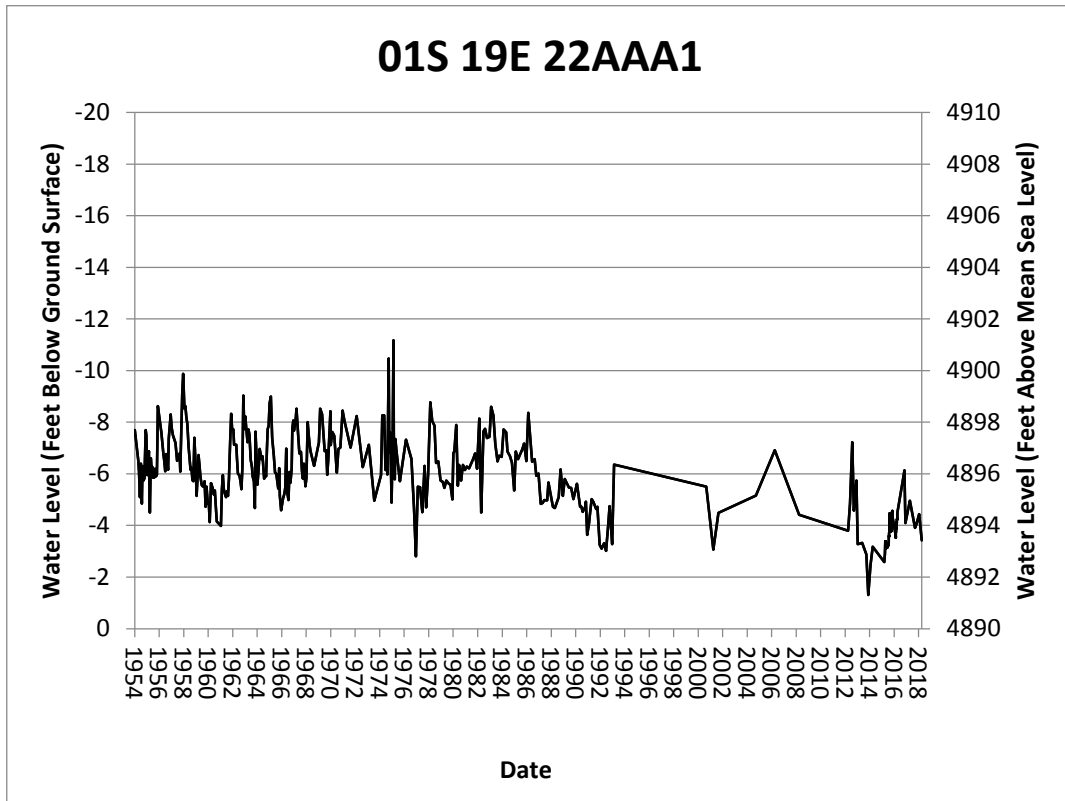


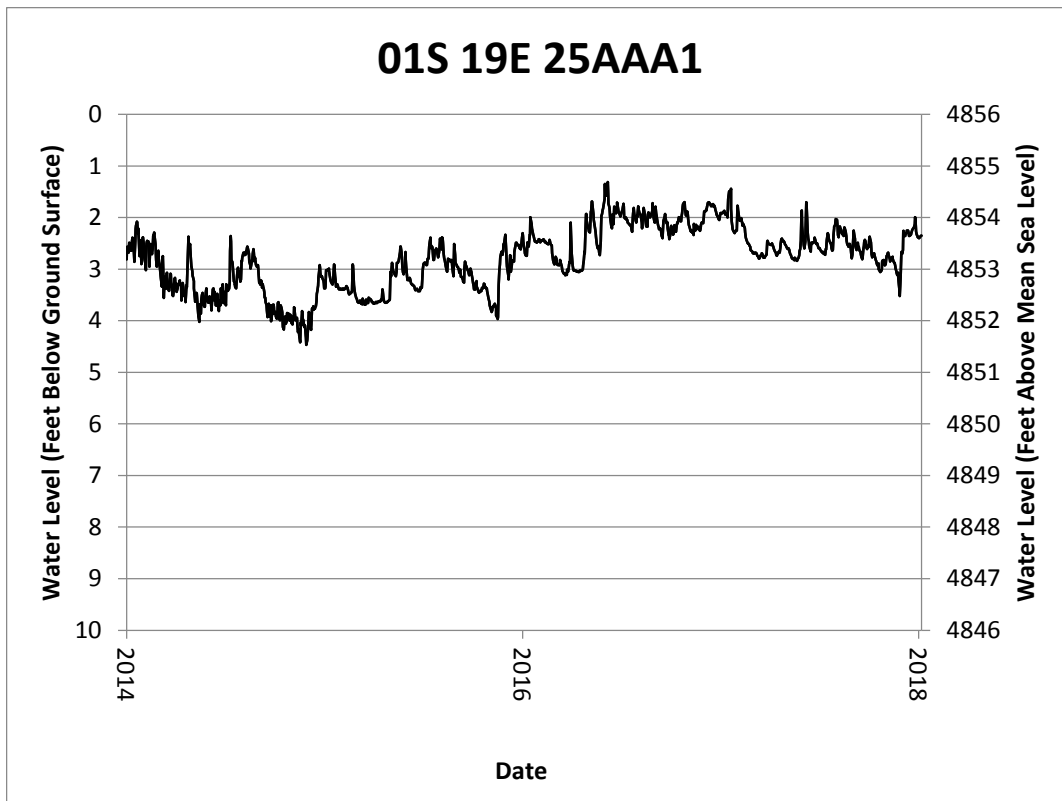


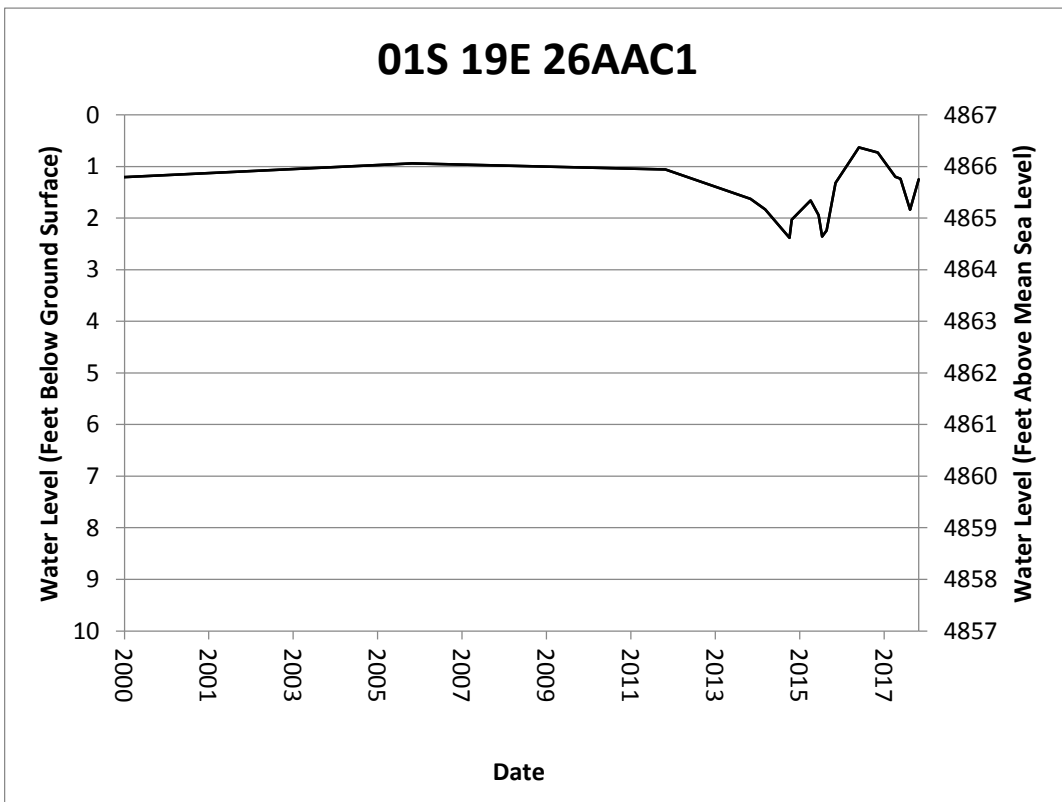
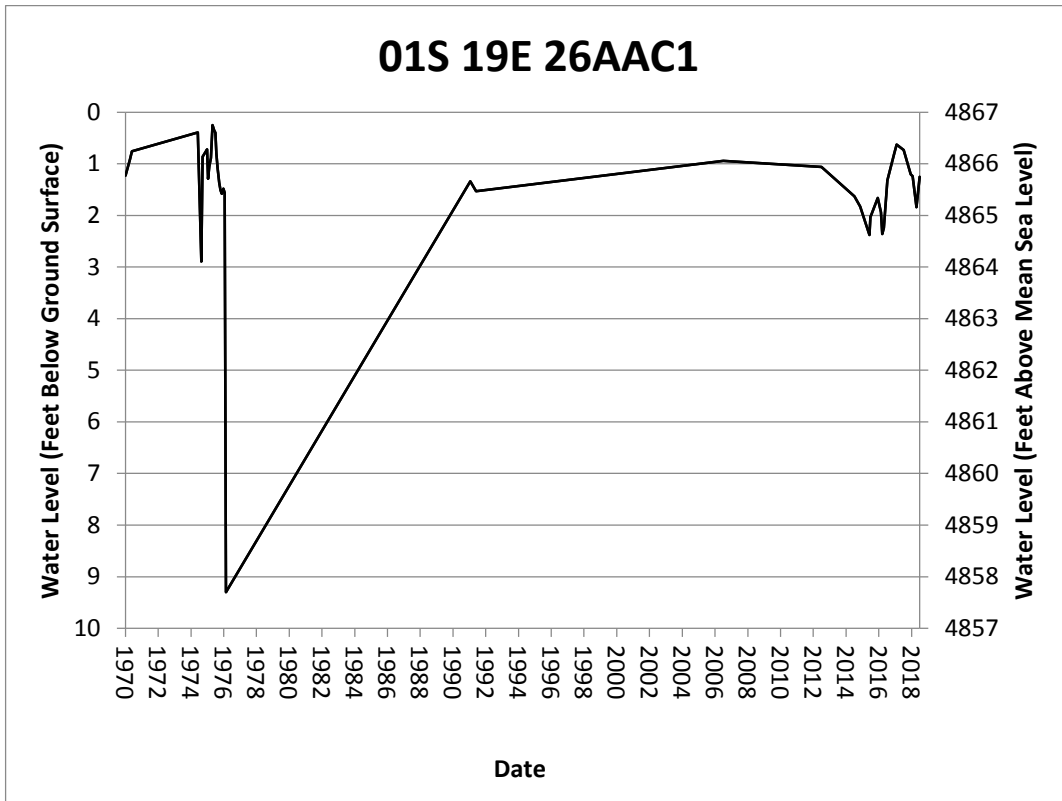


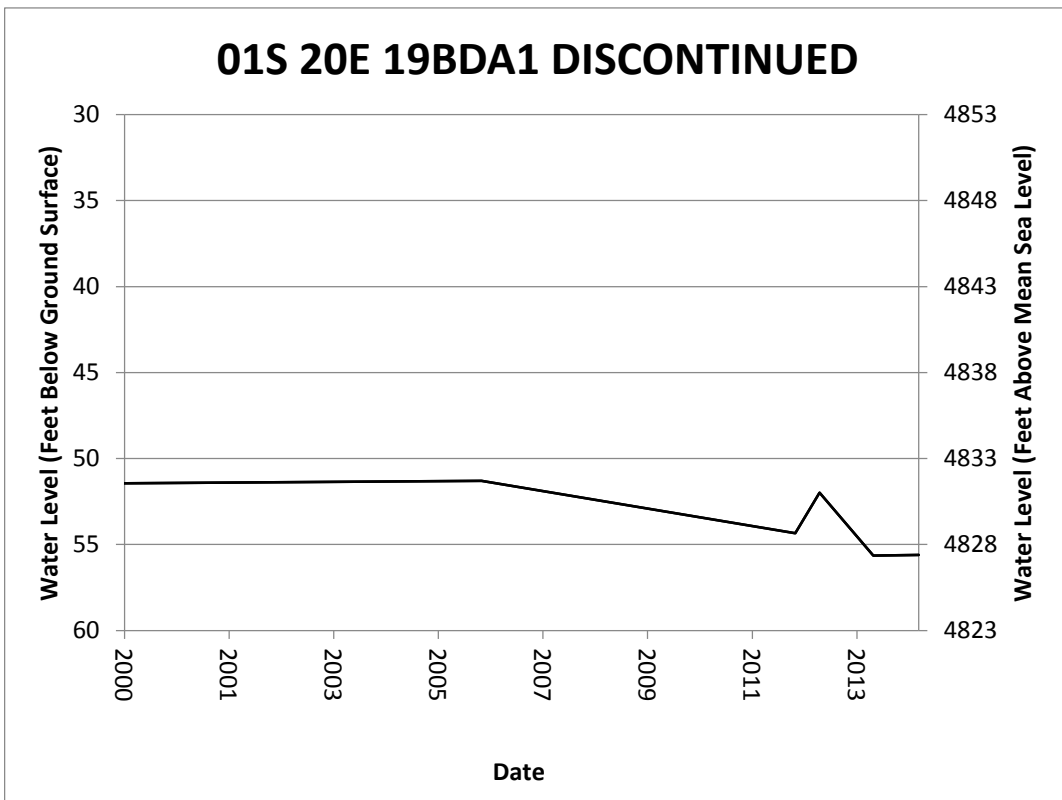
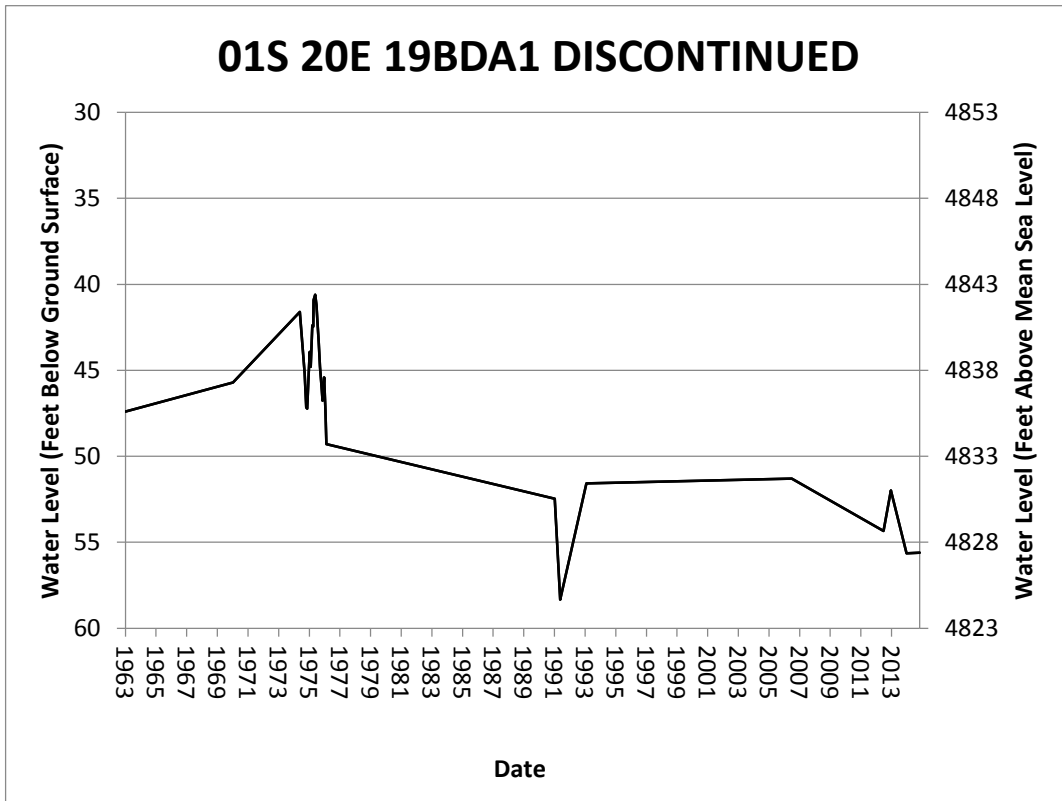


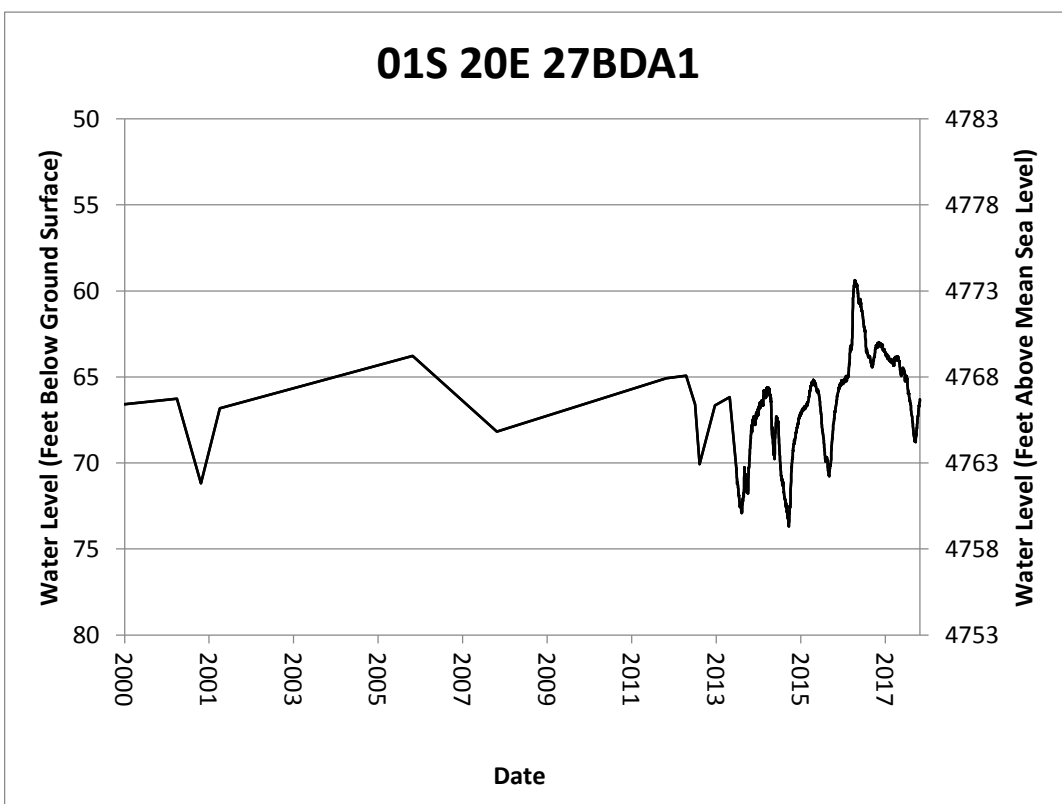
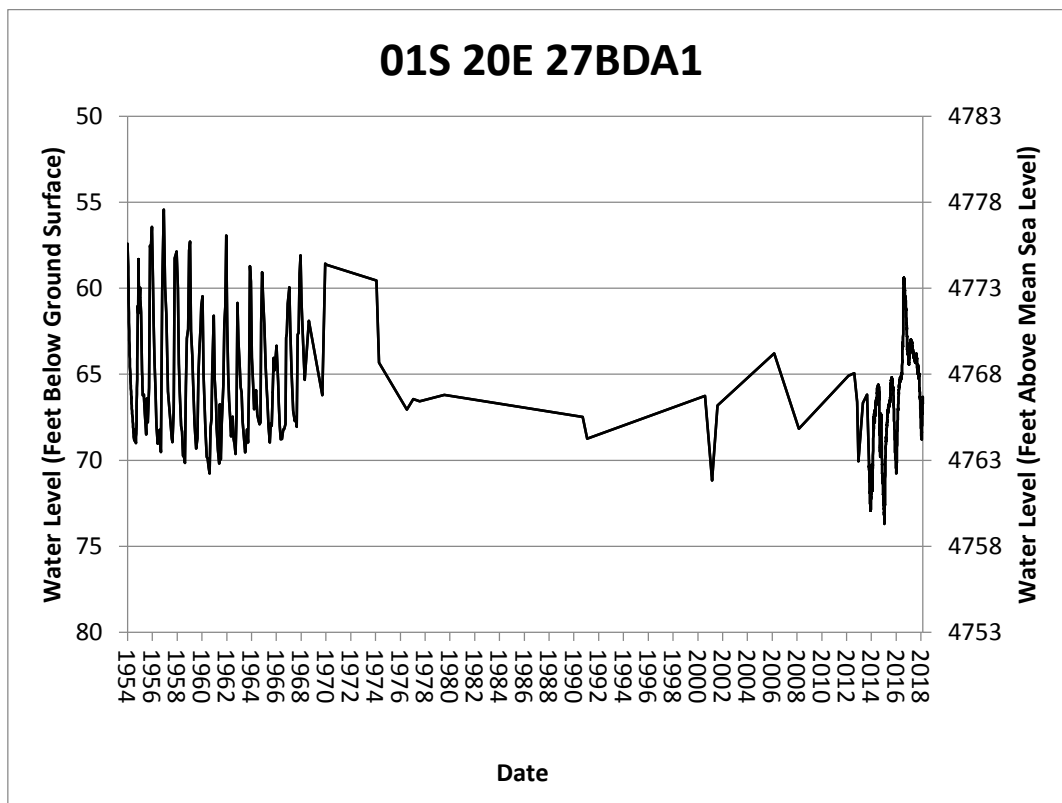


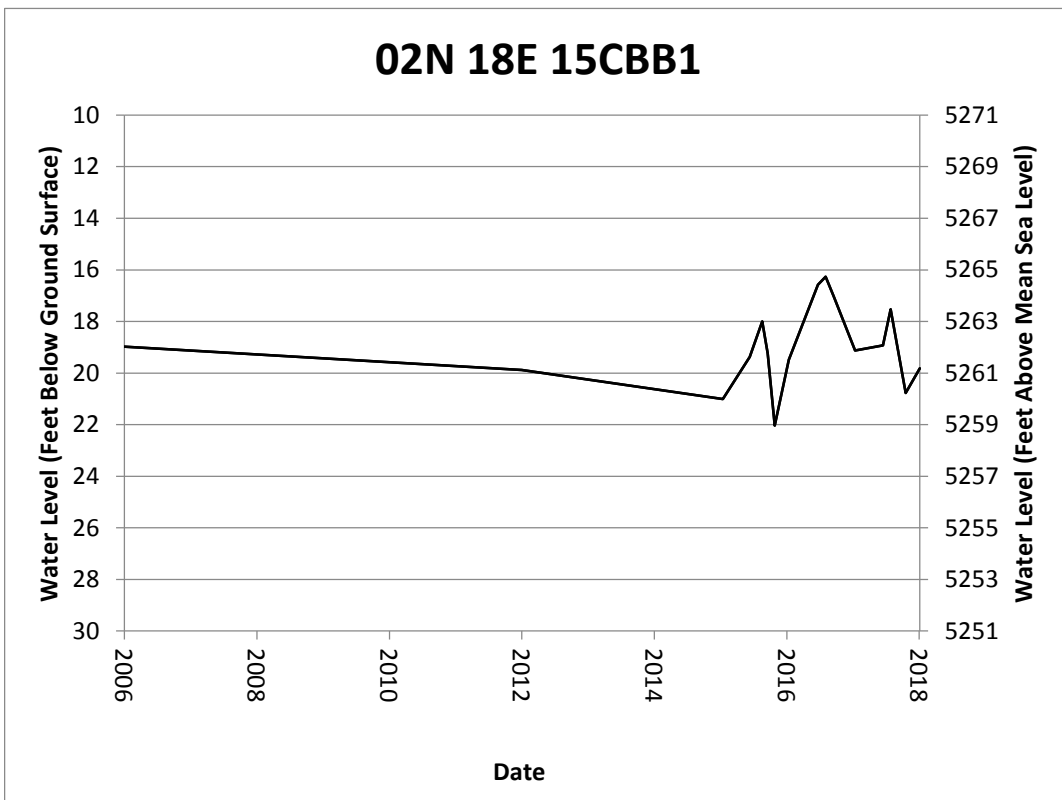
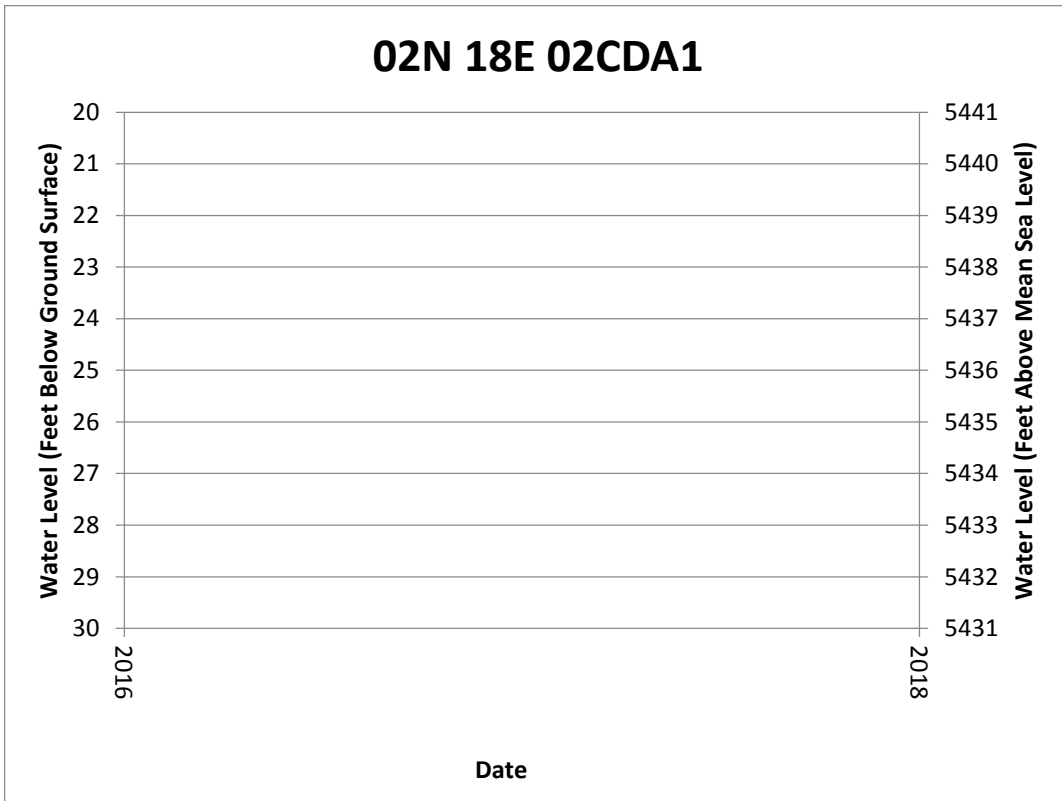


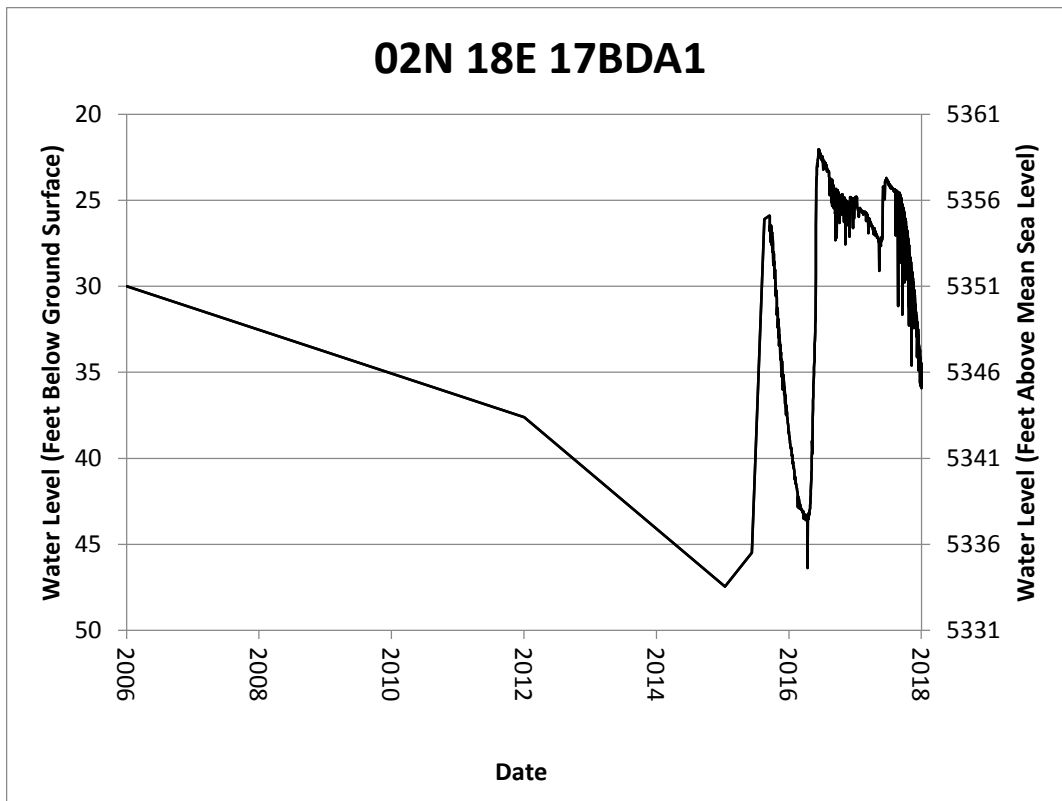


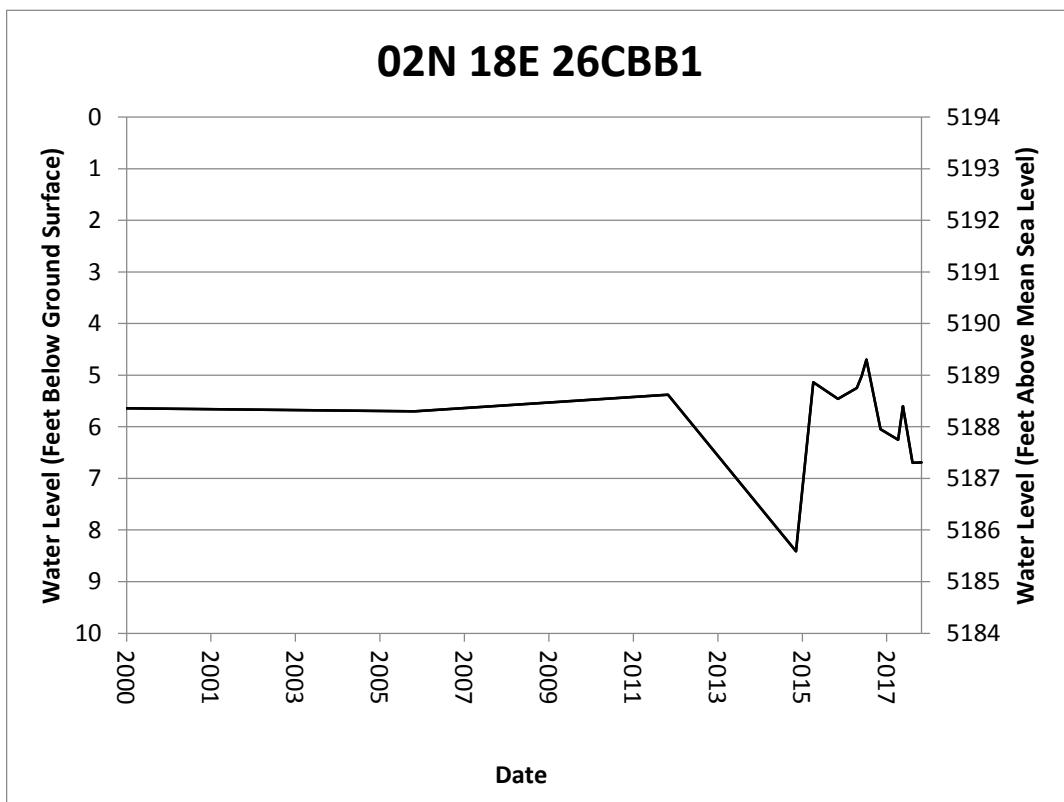
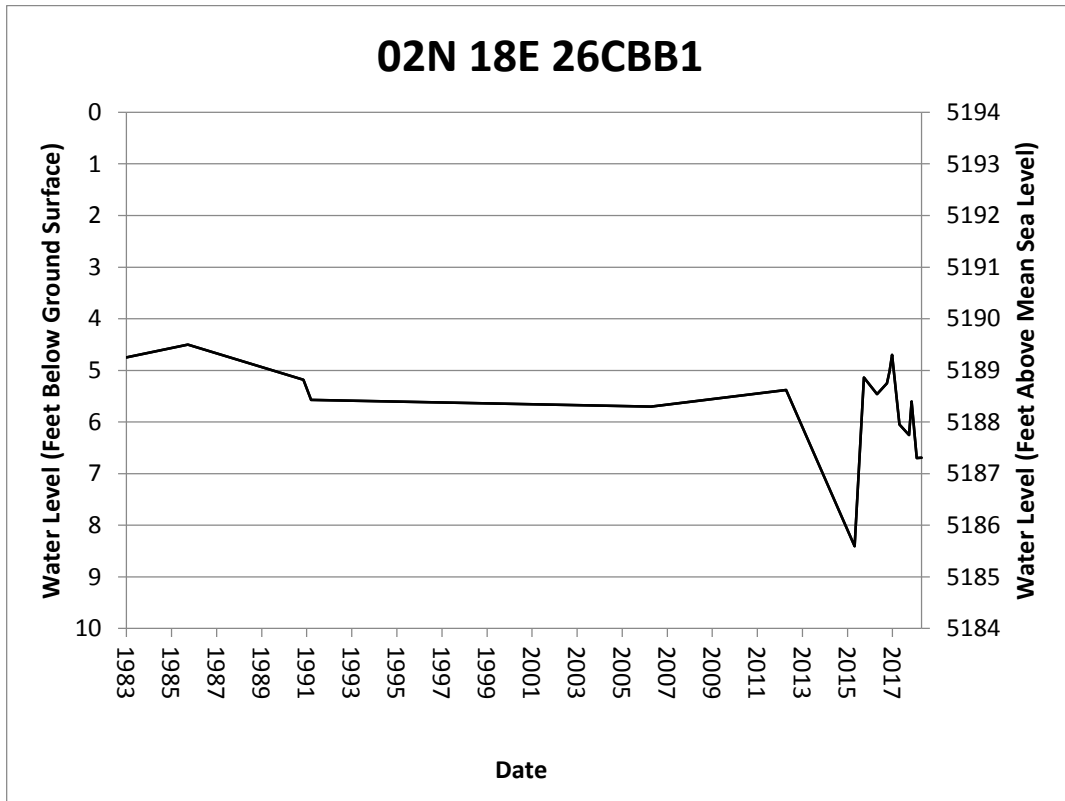


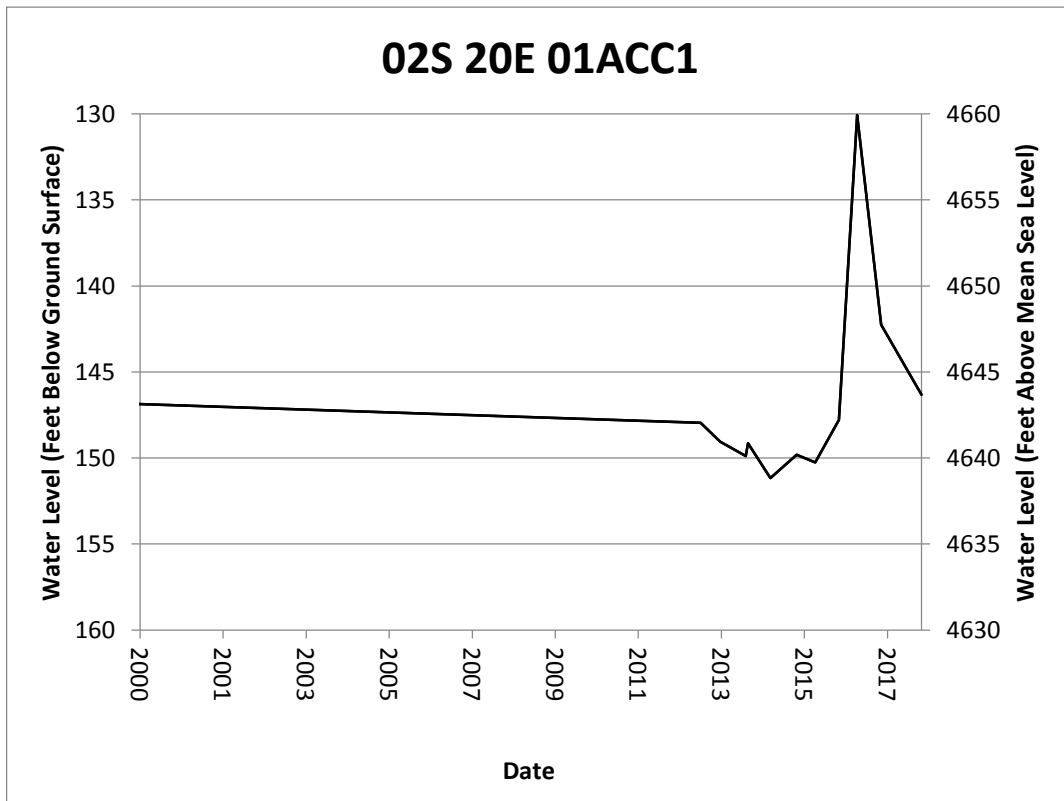
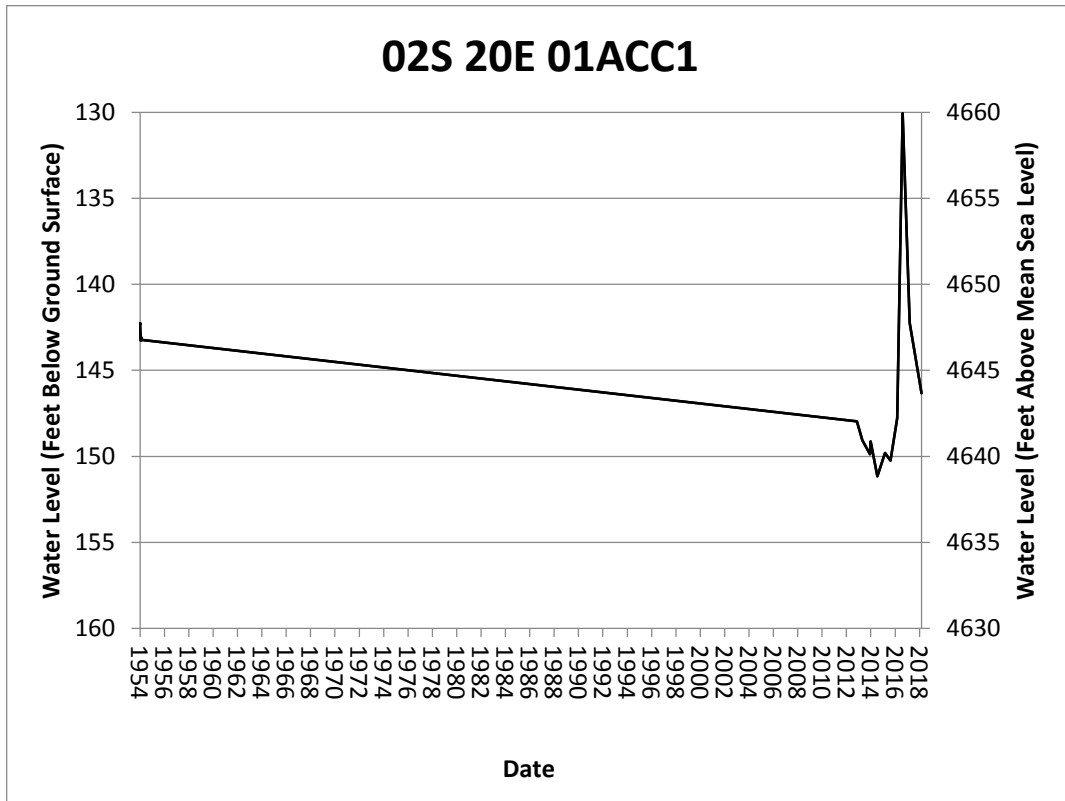


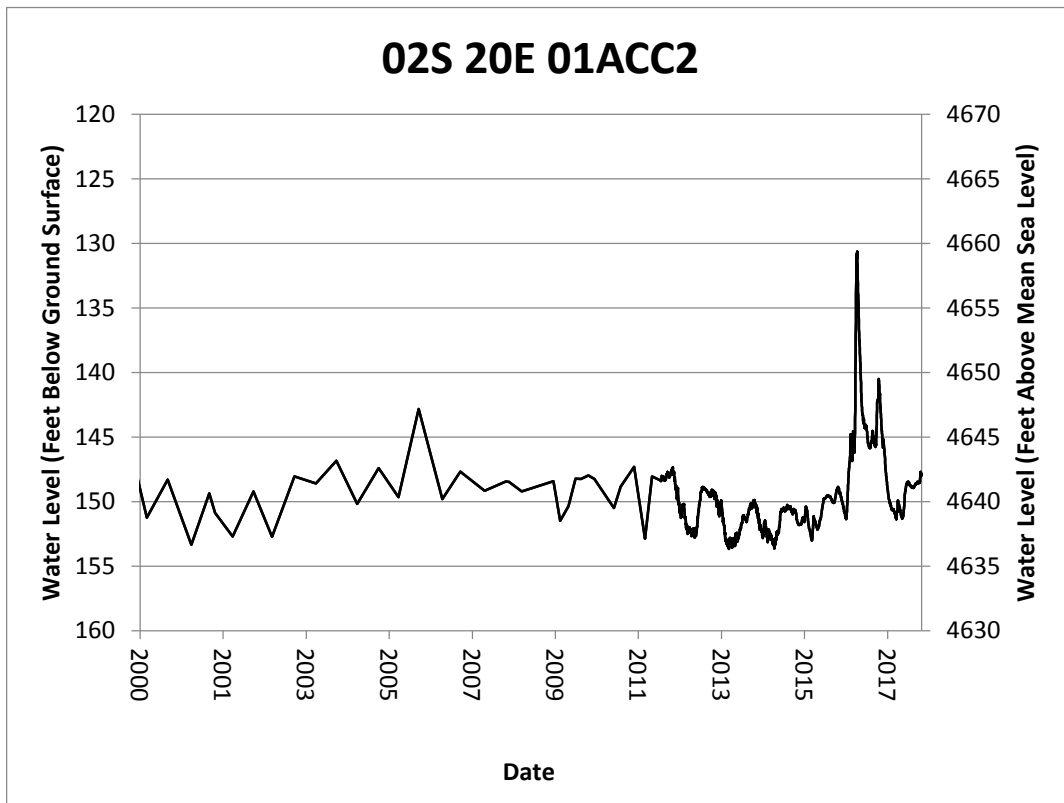
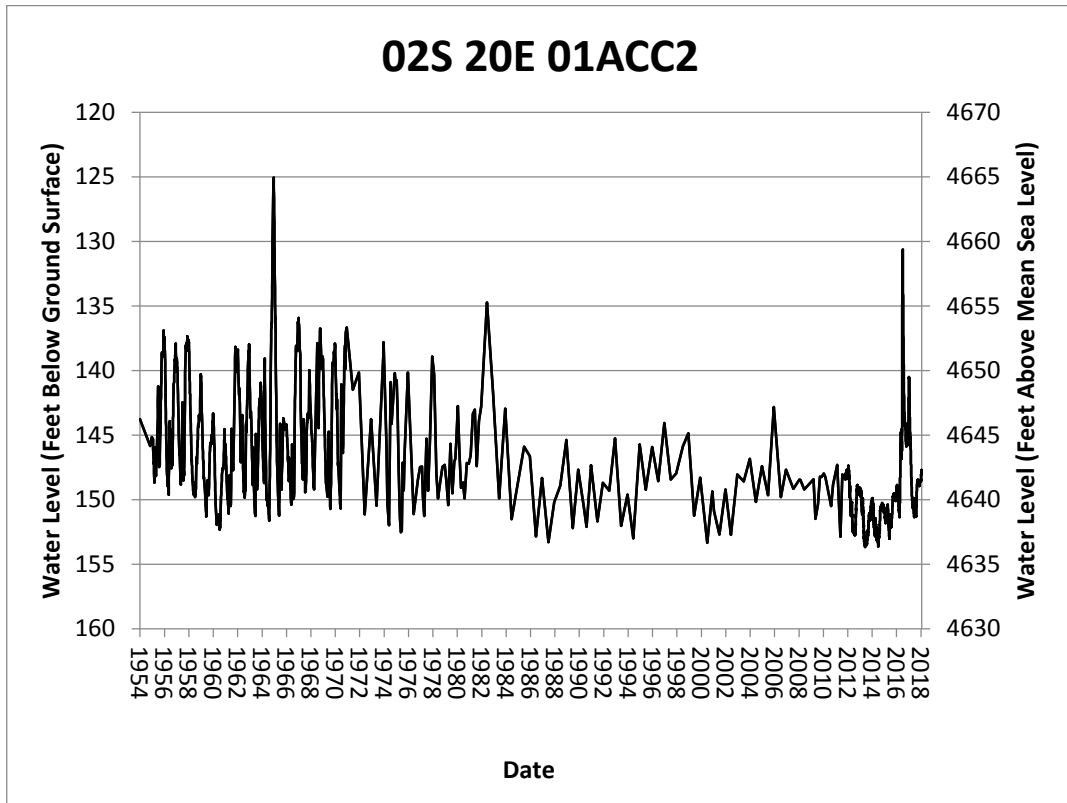




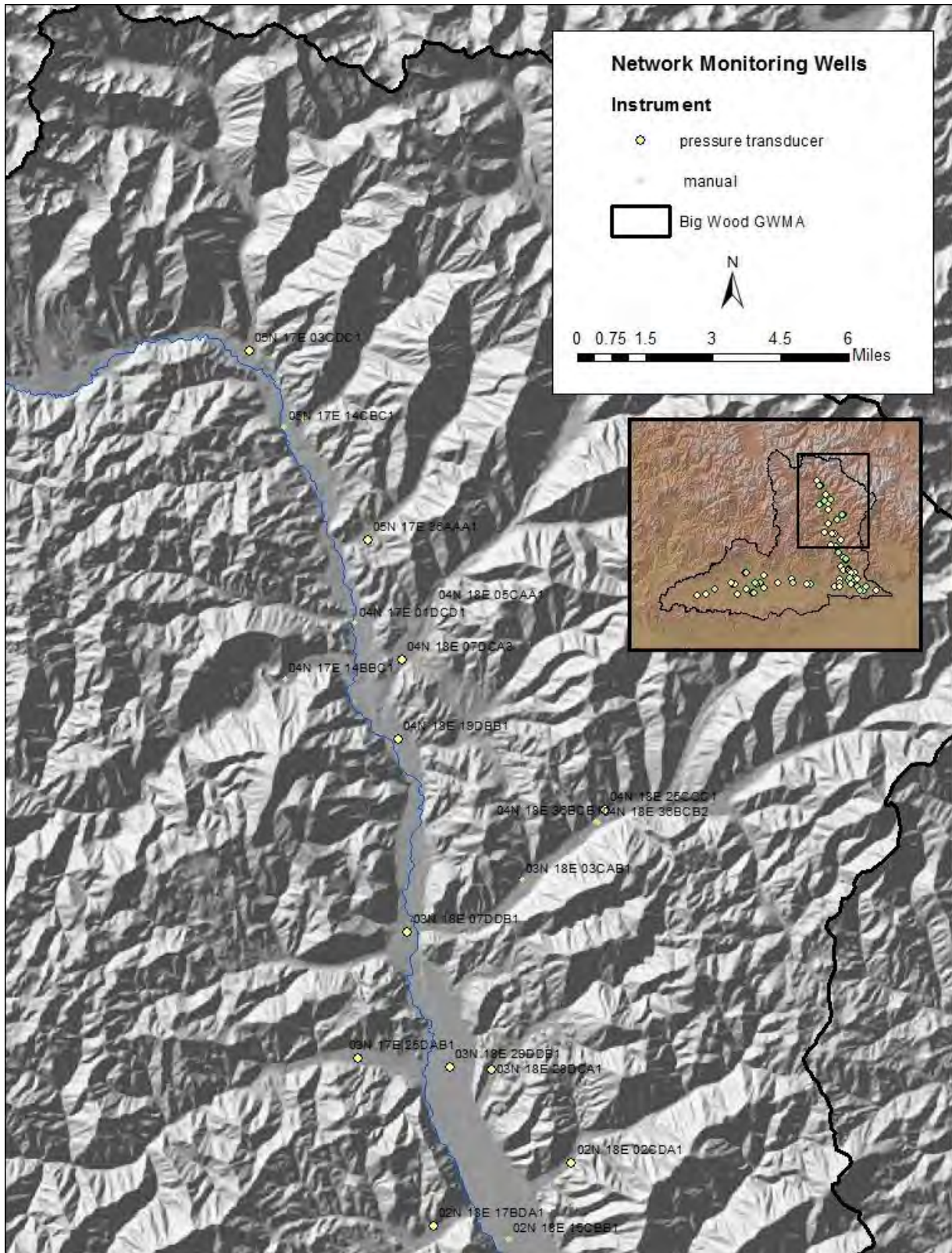


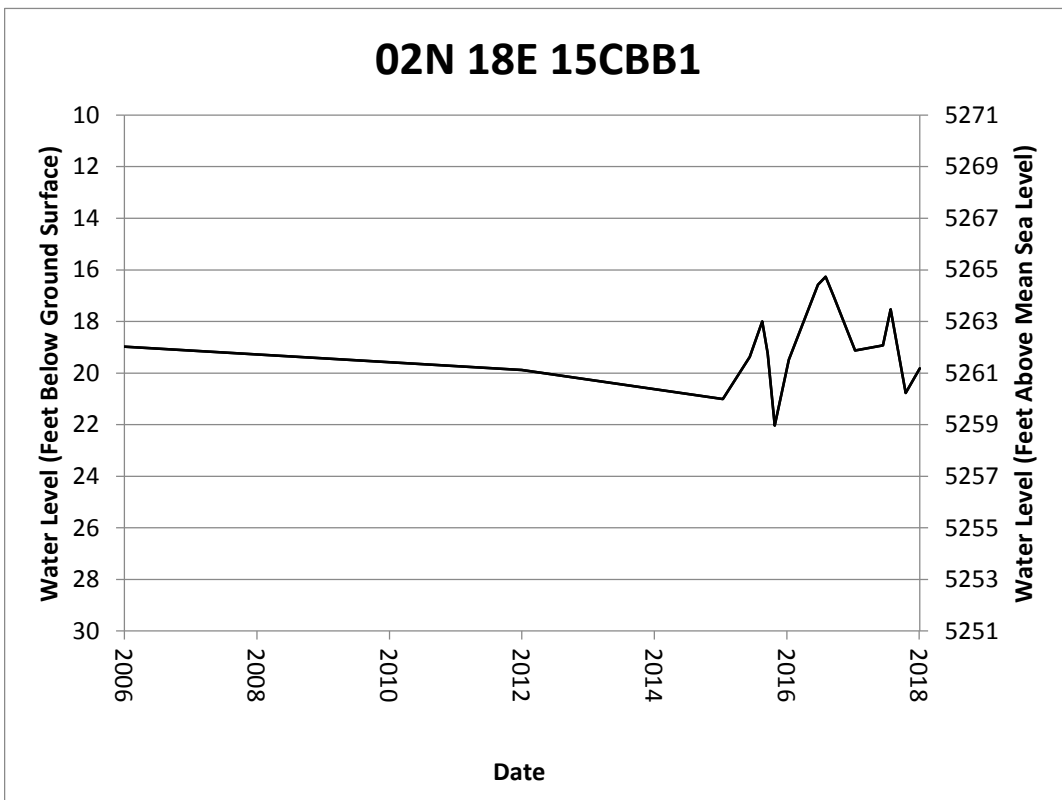
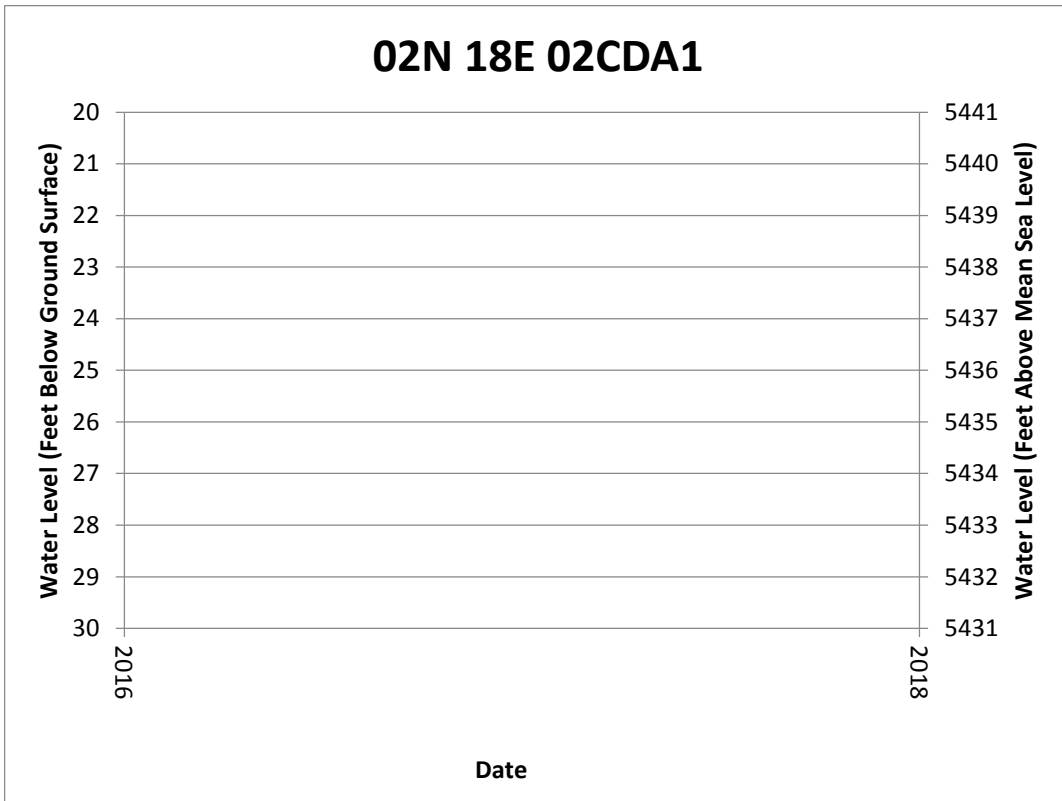


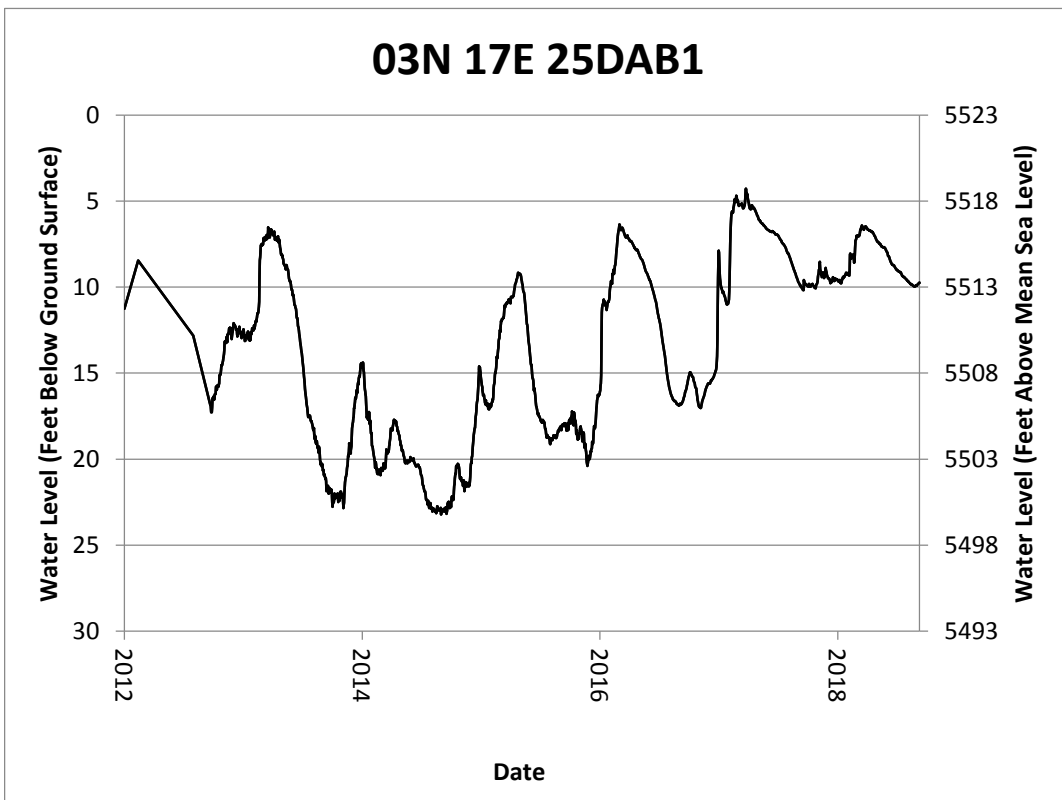
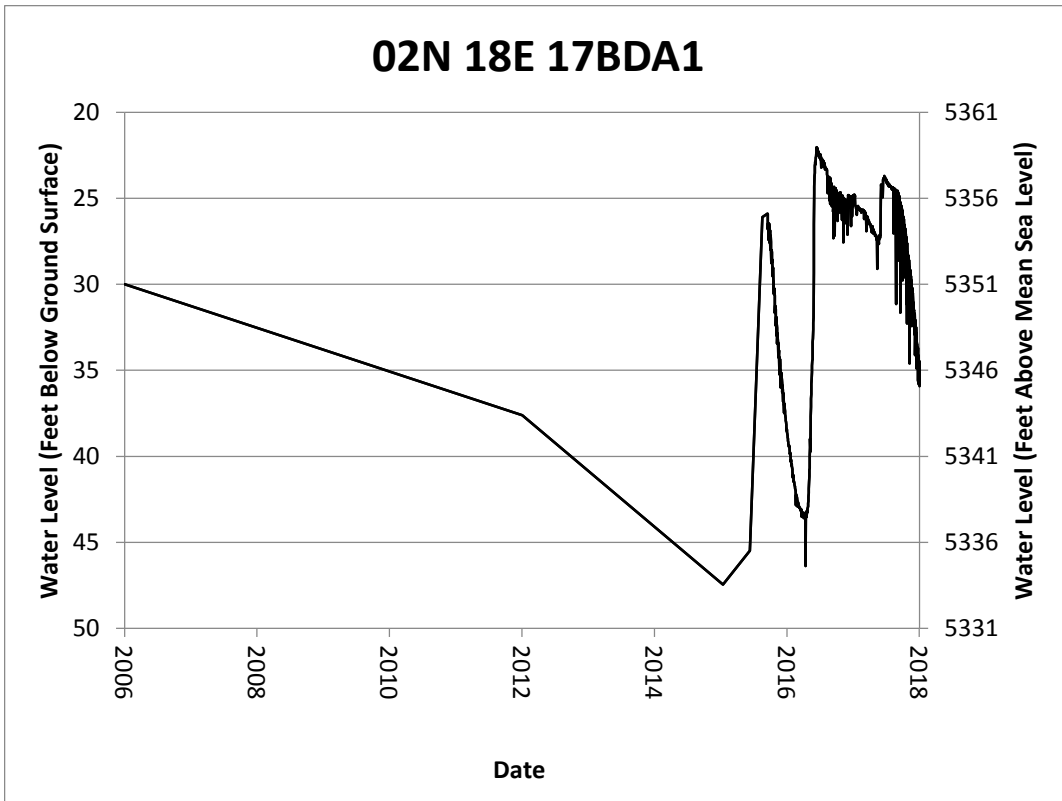


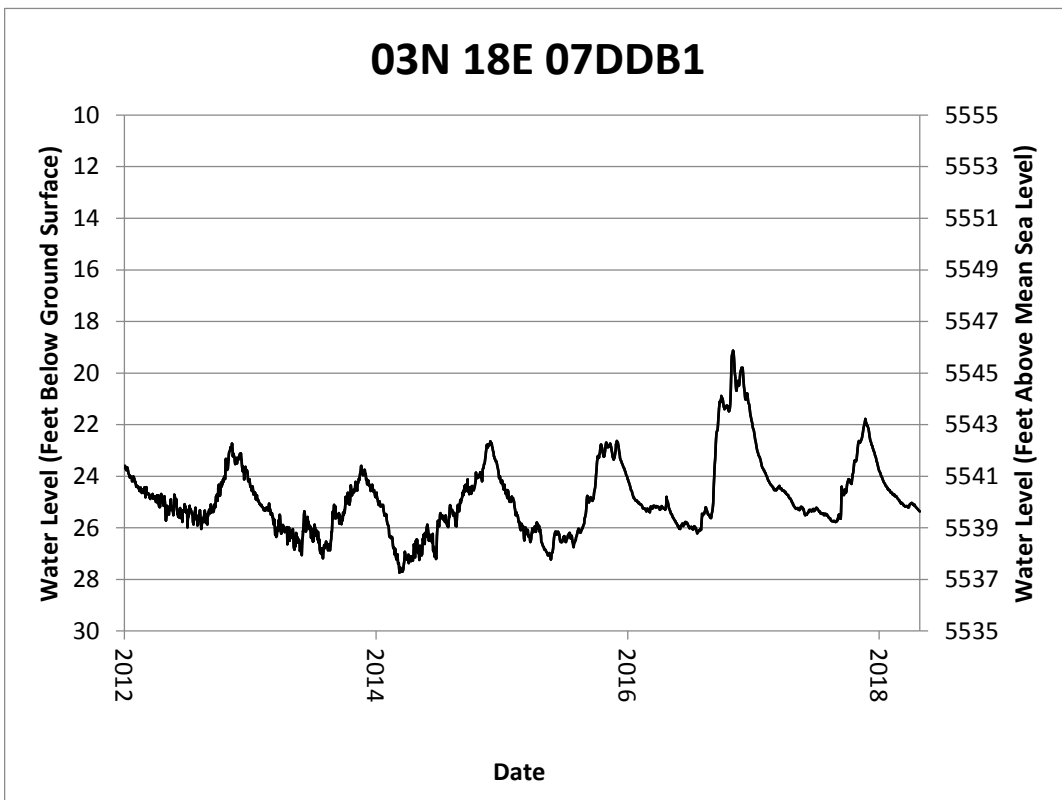
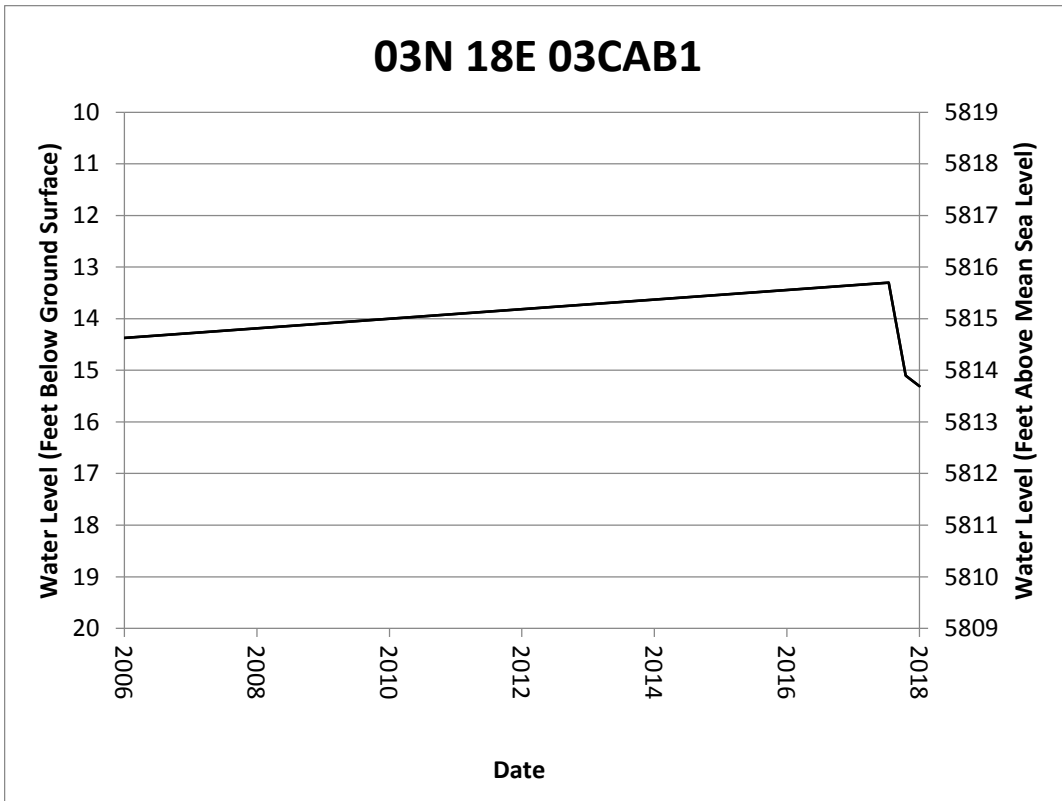


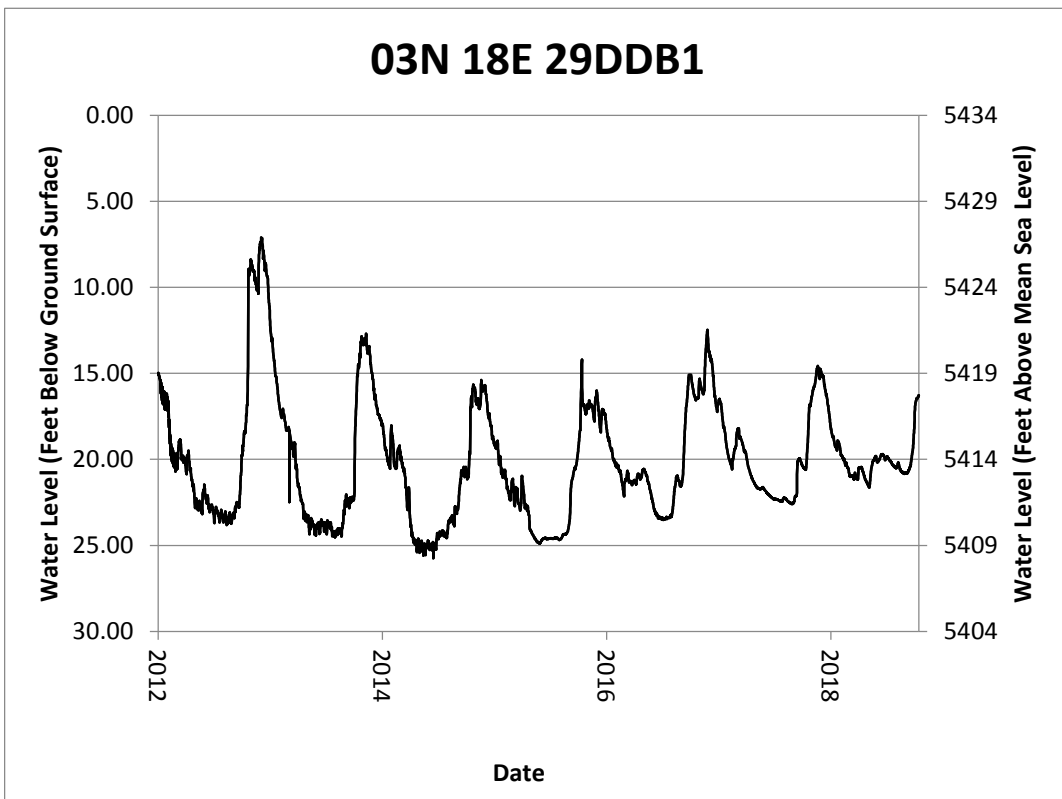
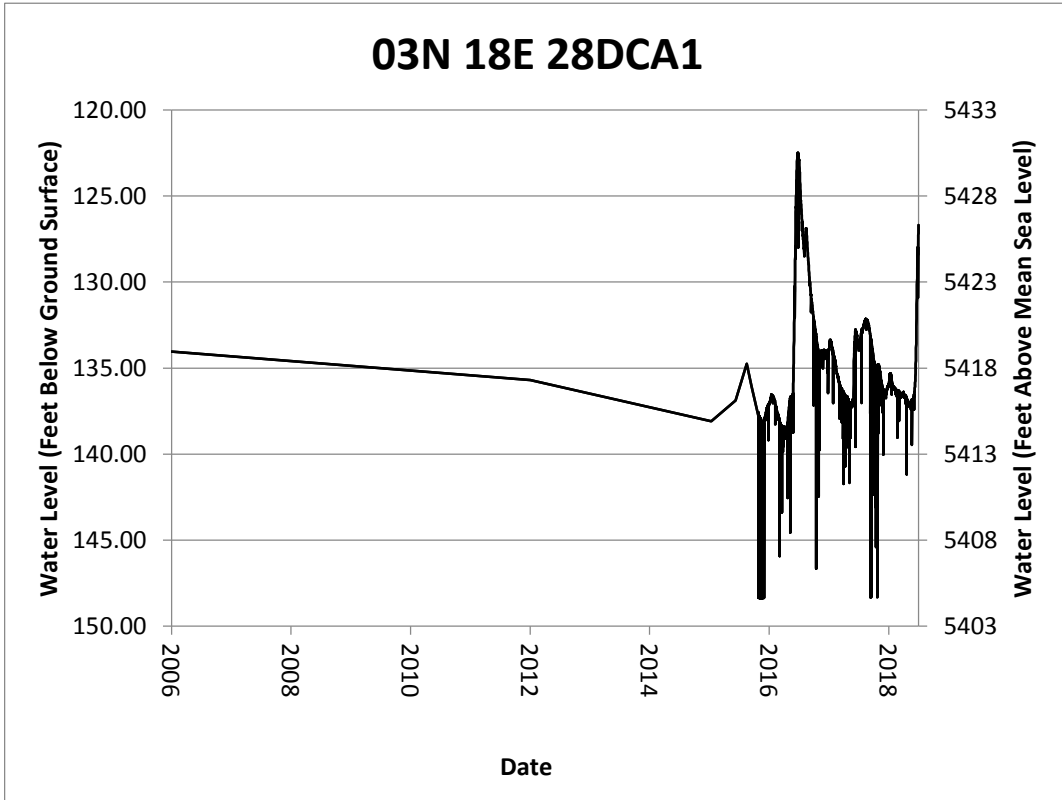
APPENDIX B
NORTHEAST BIG WOOD GWMA HYDROGRAPHS

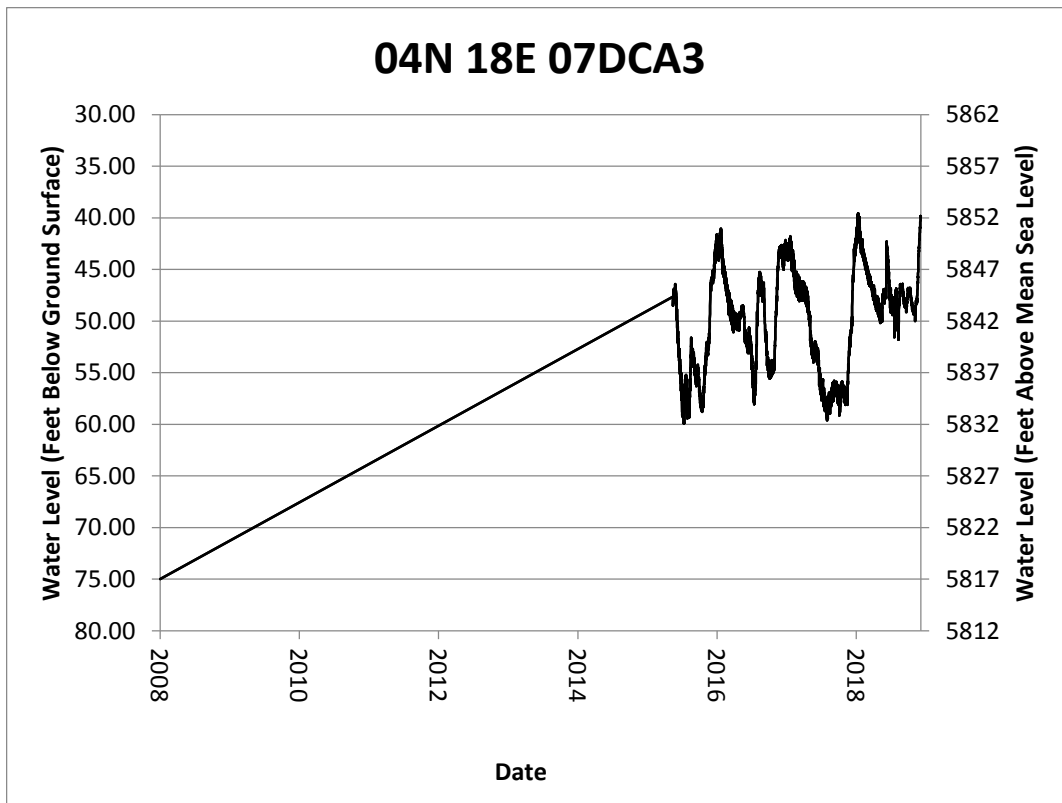


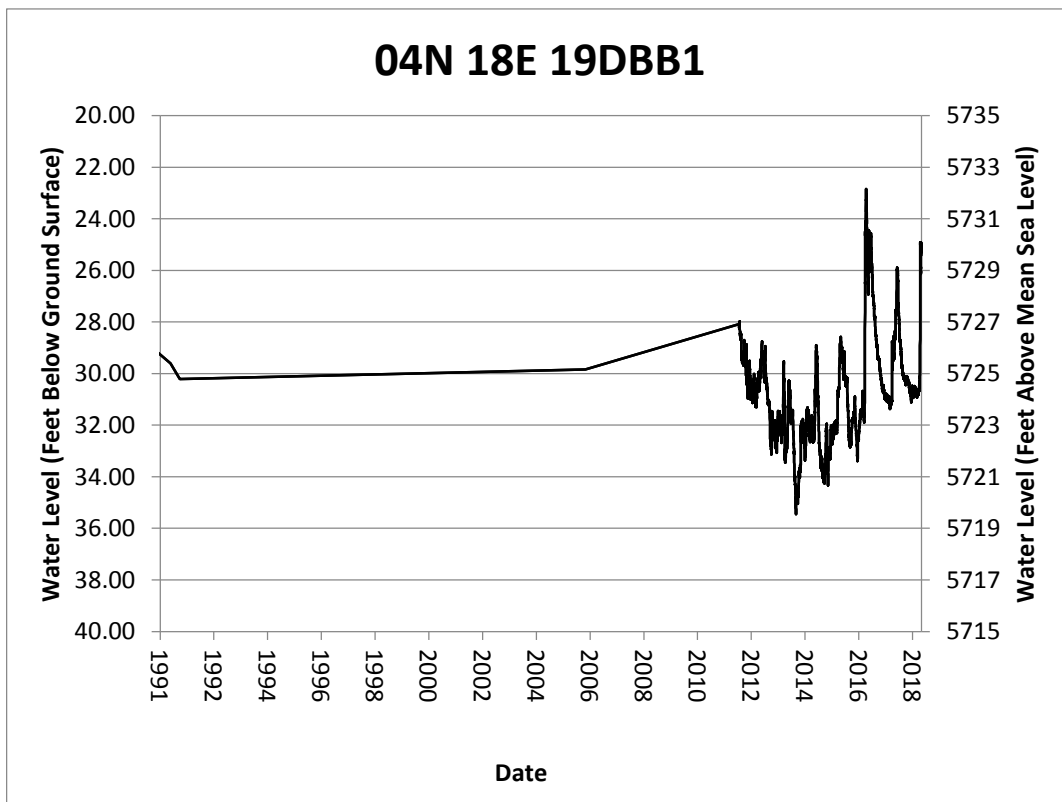
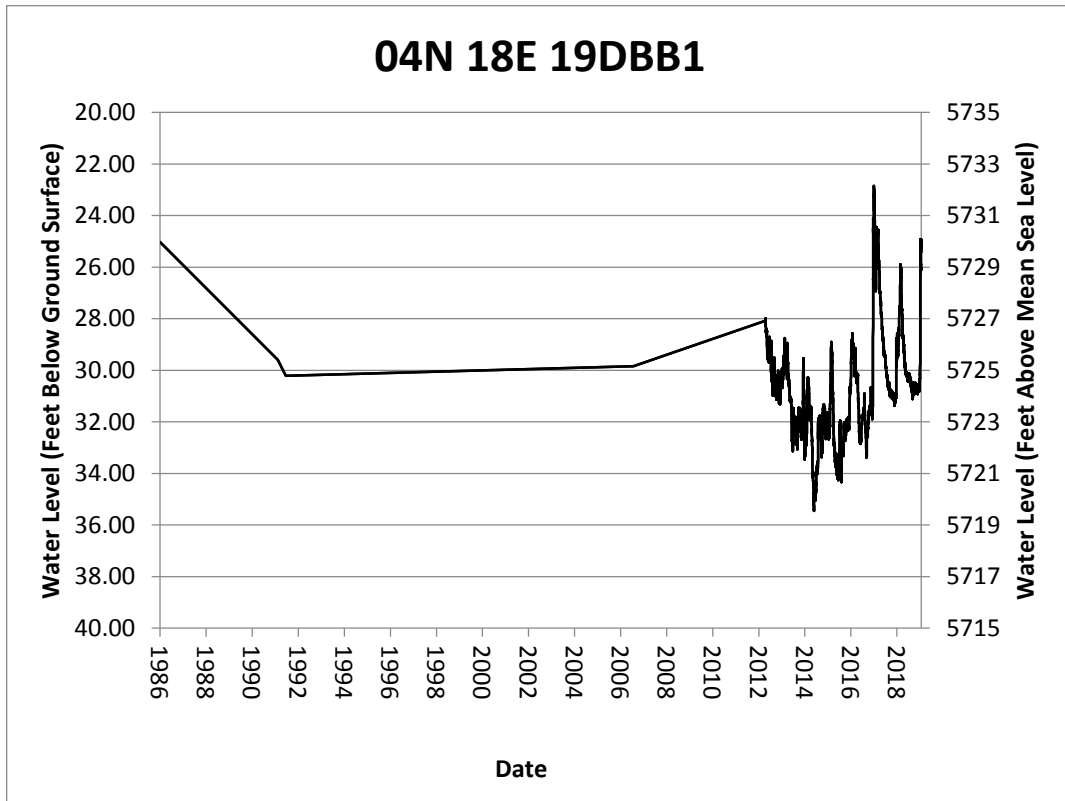


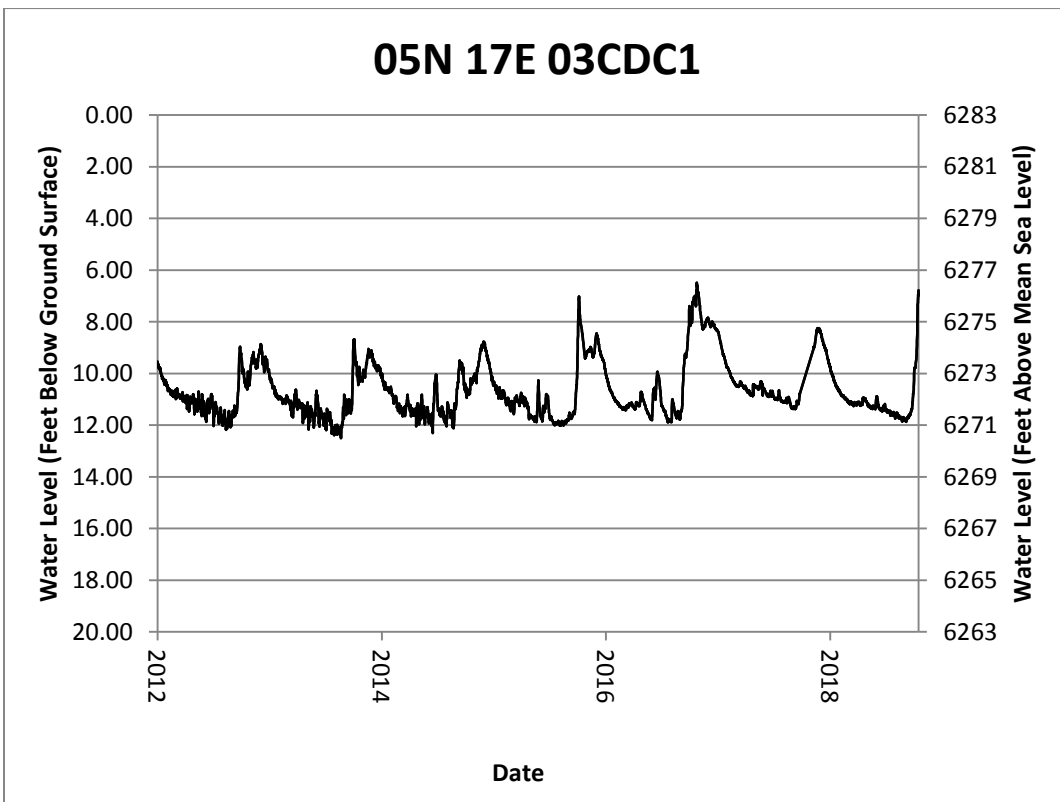
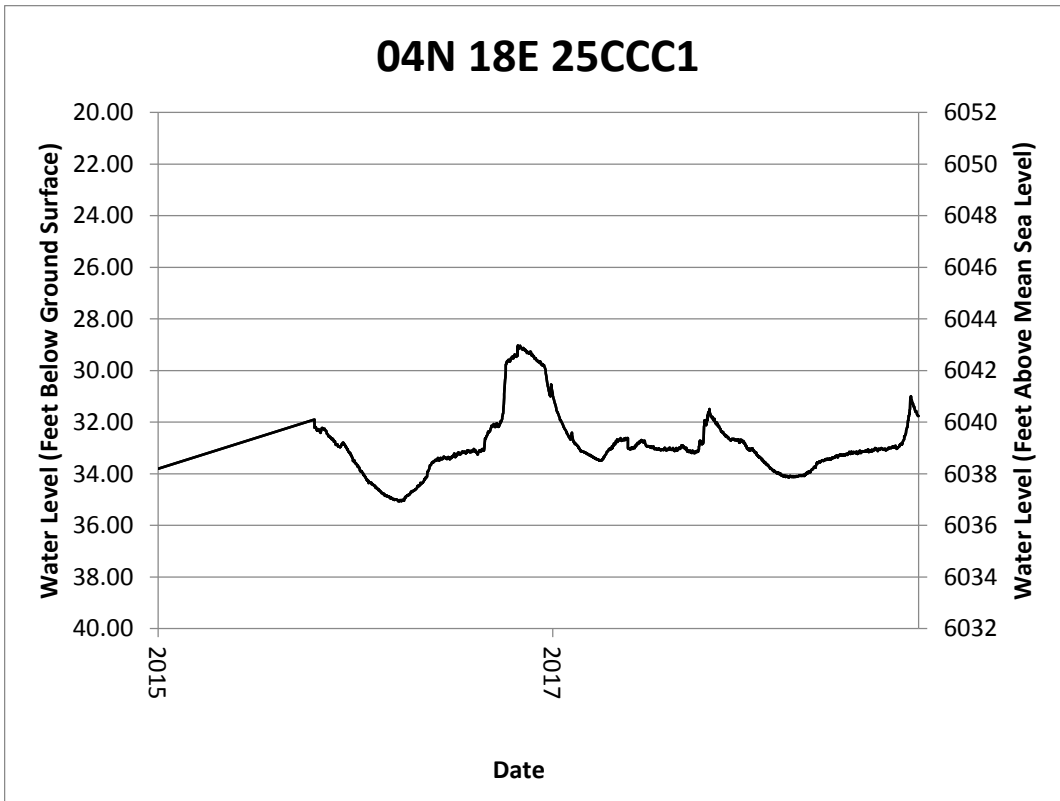


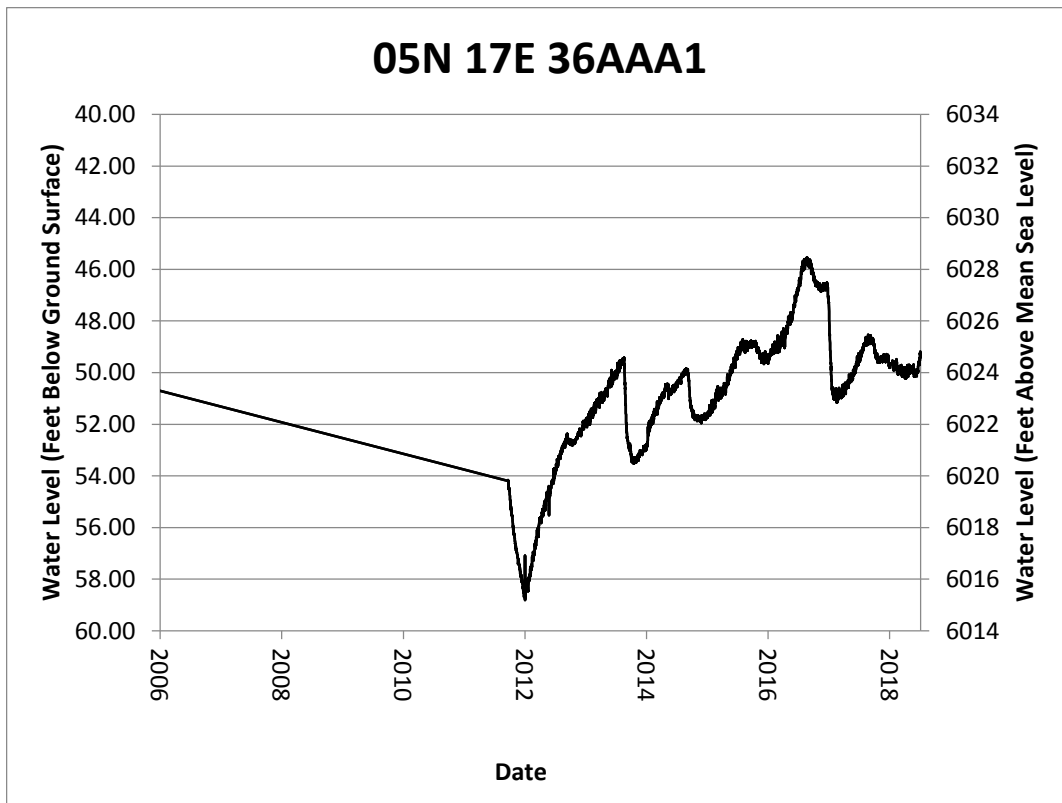




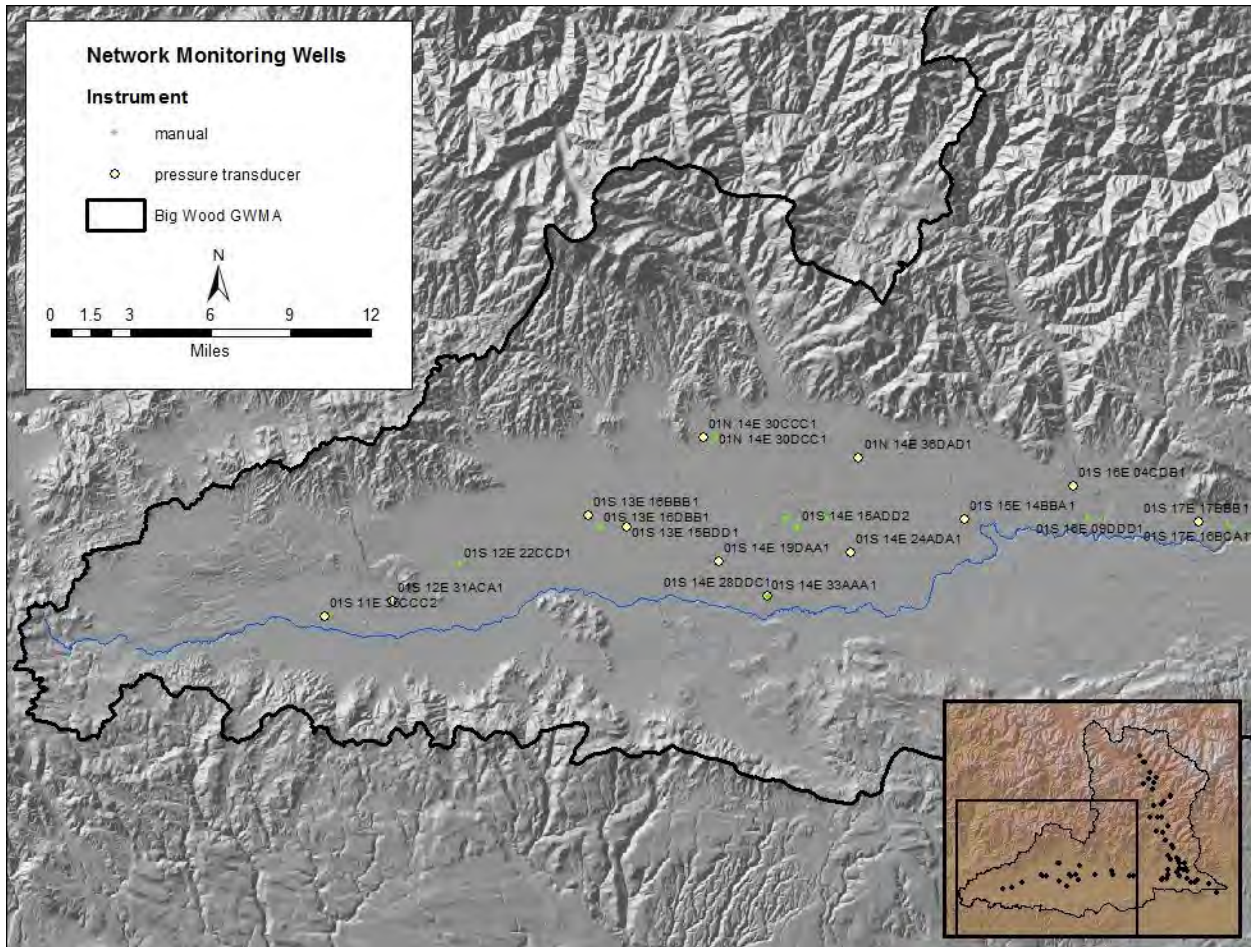


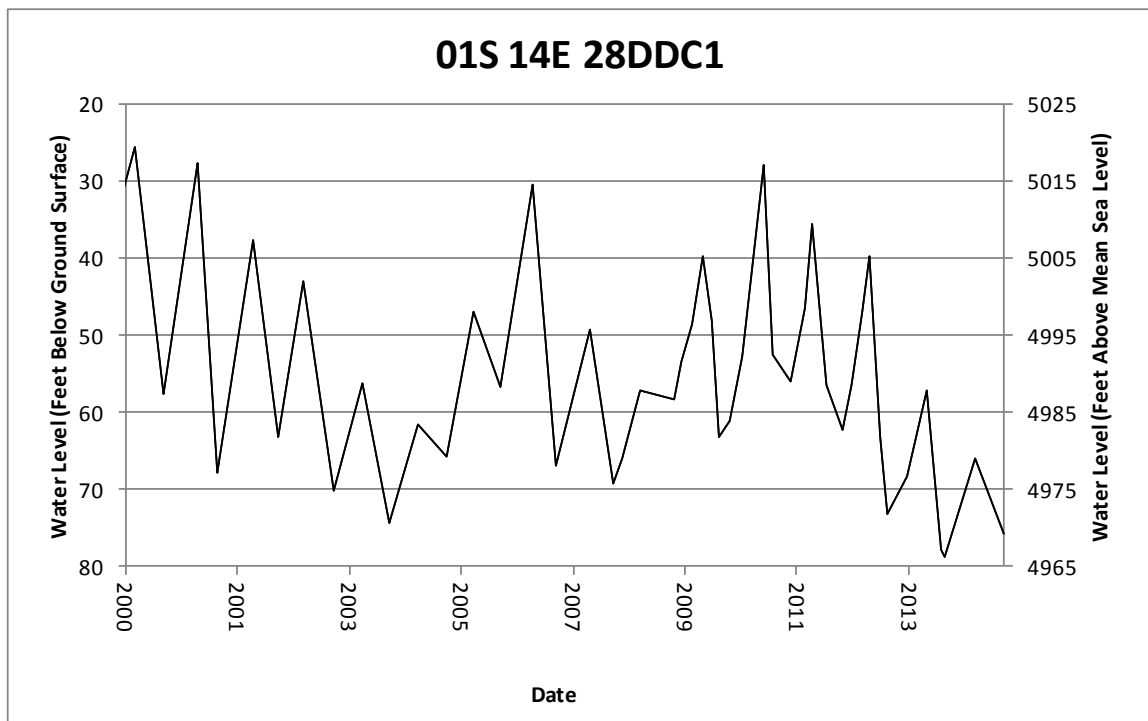
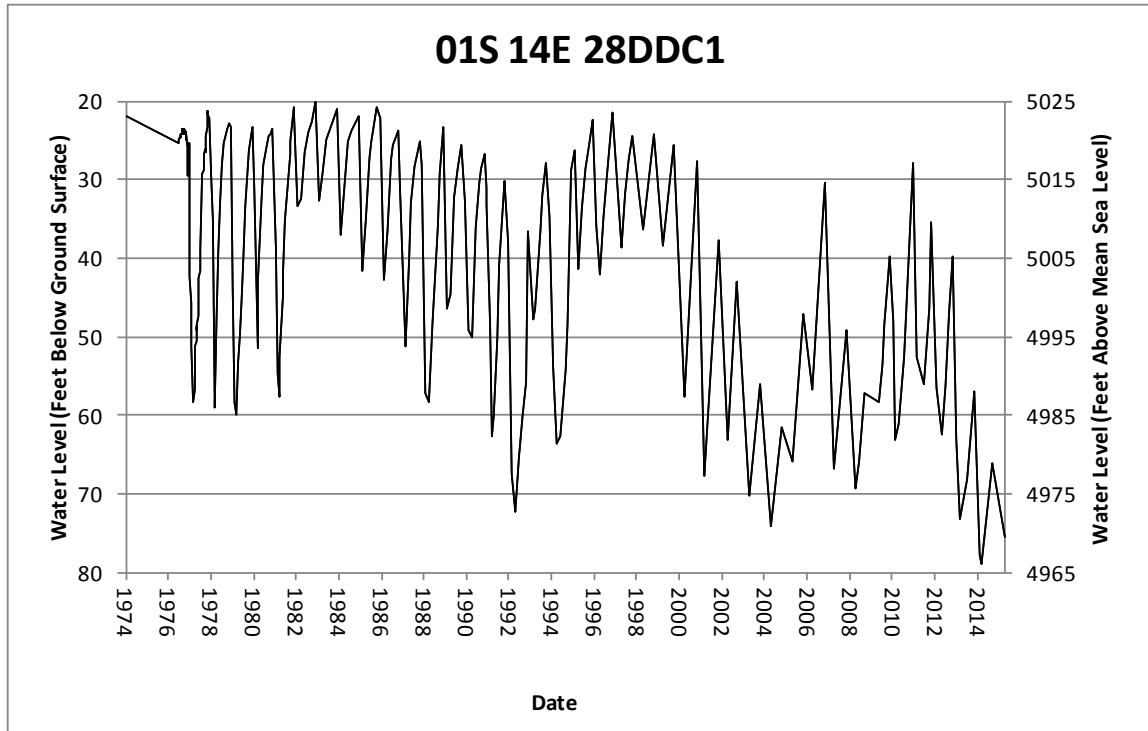


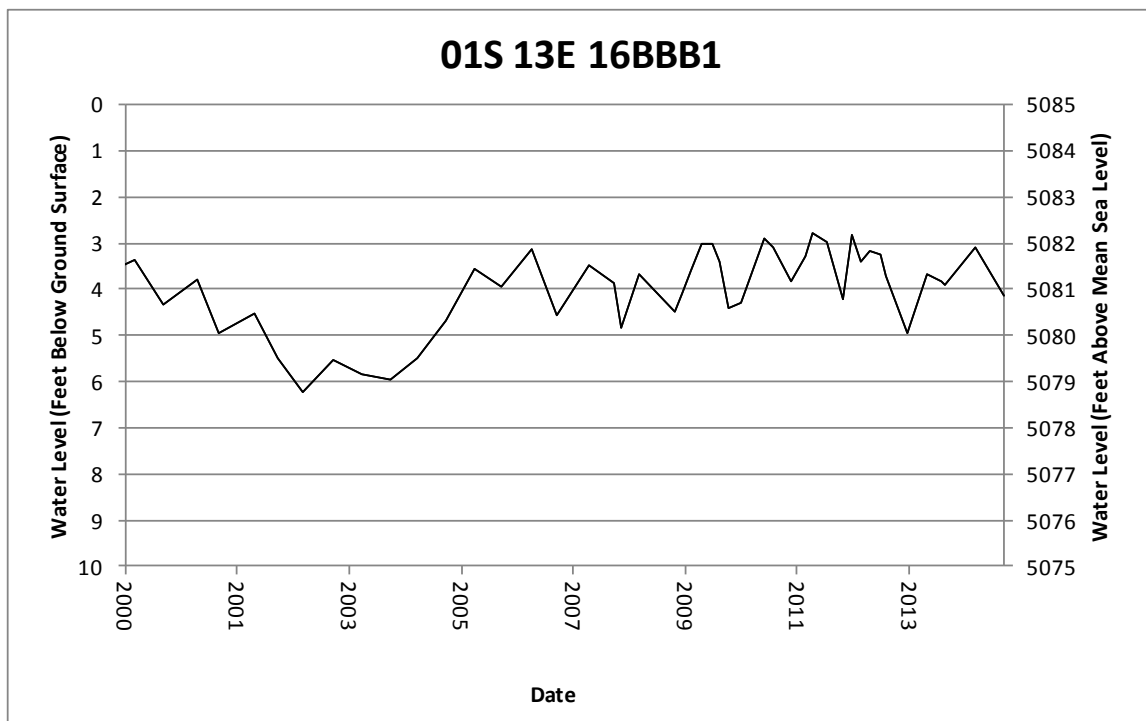
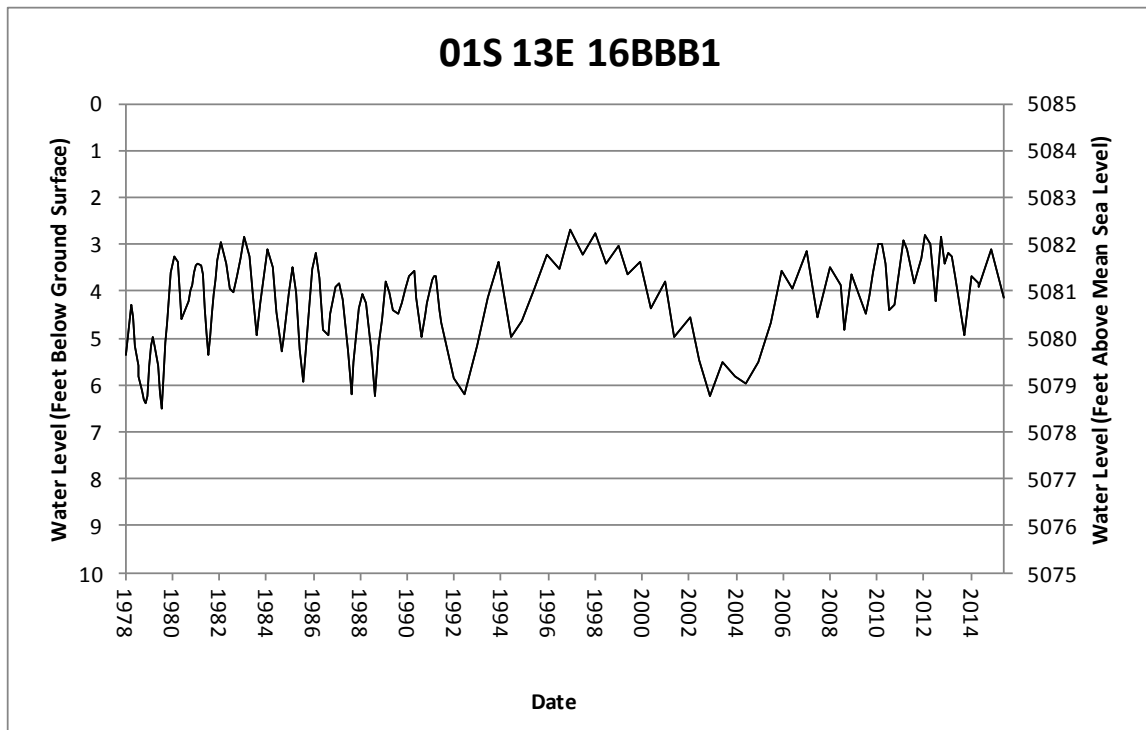


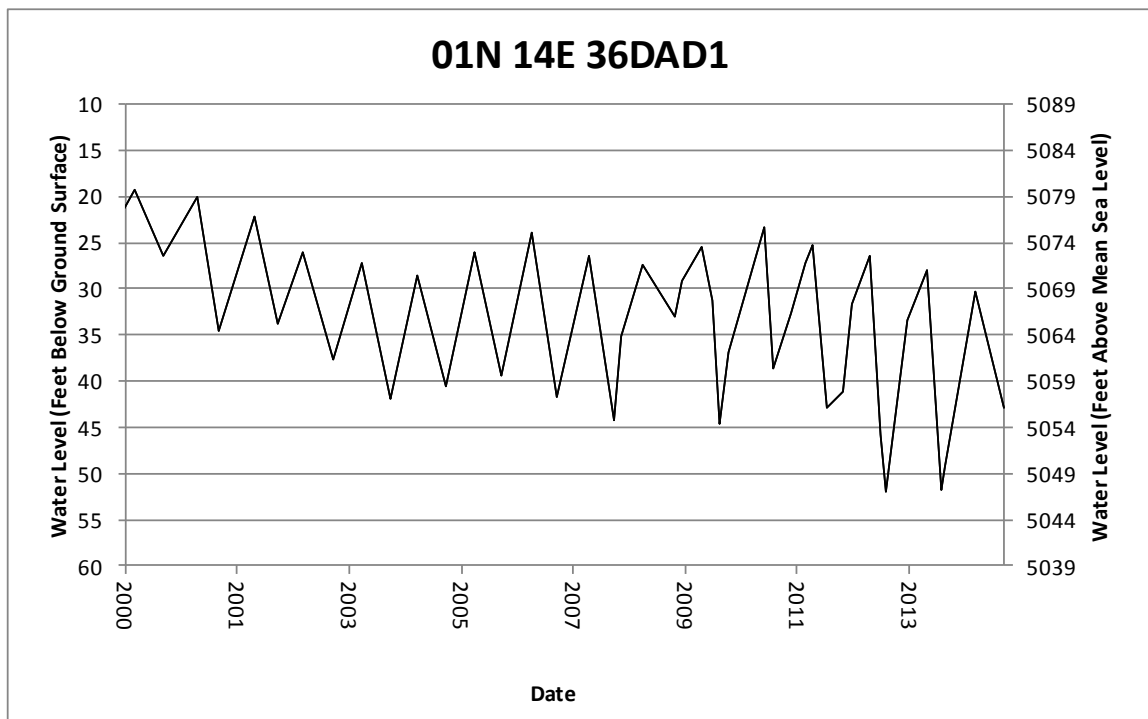
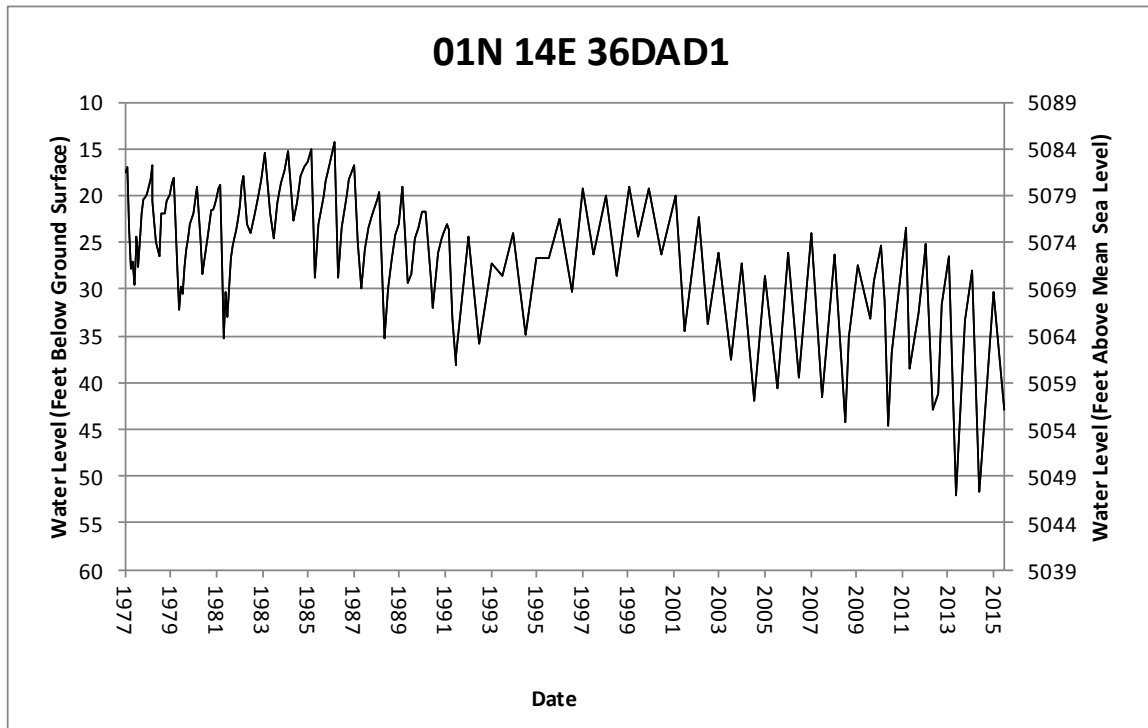


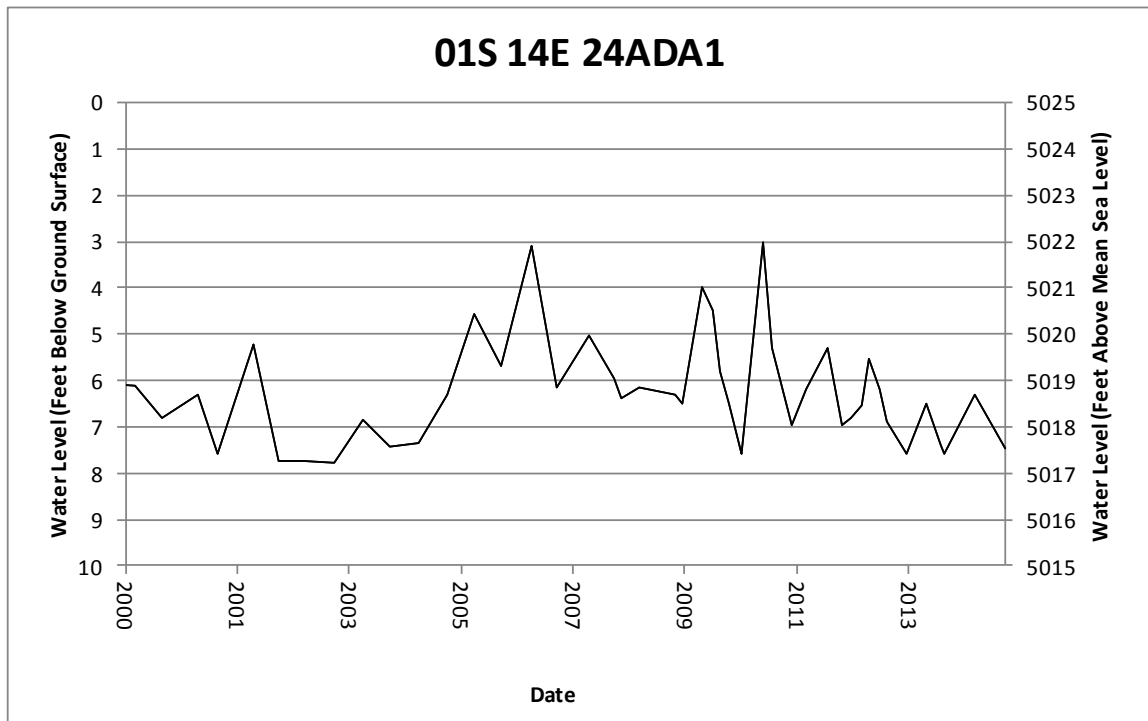
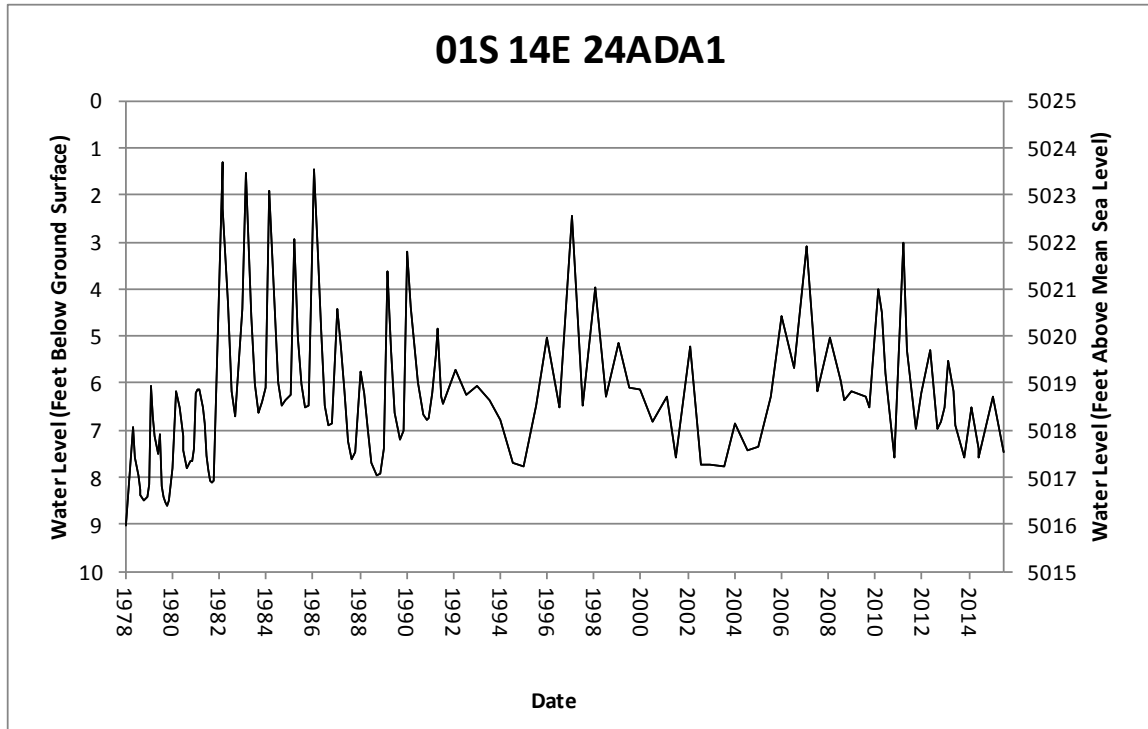
APPENDIX C
CAMAS PRAIRIE HYDROGRAPHS

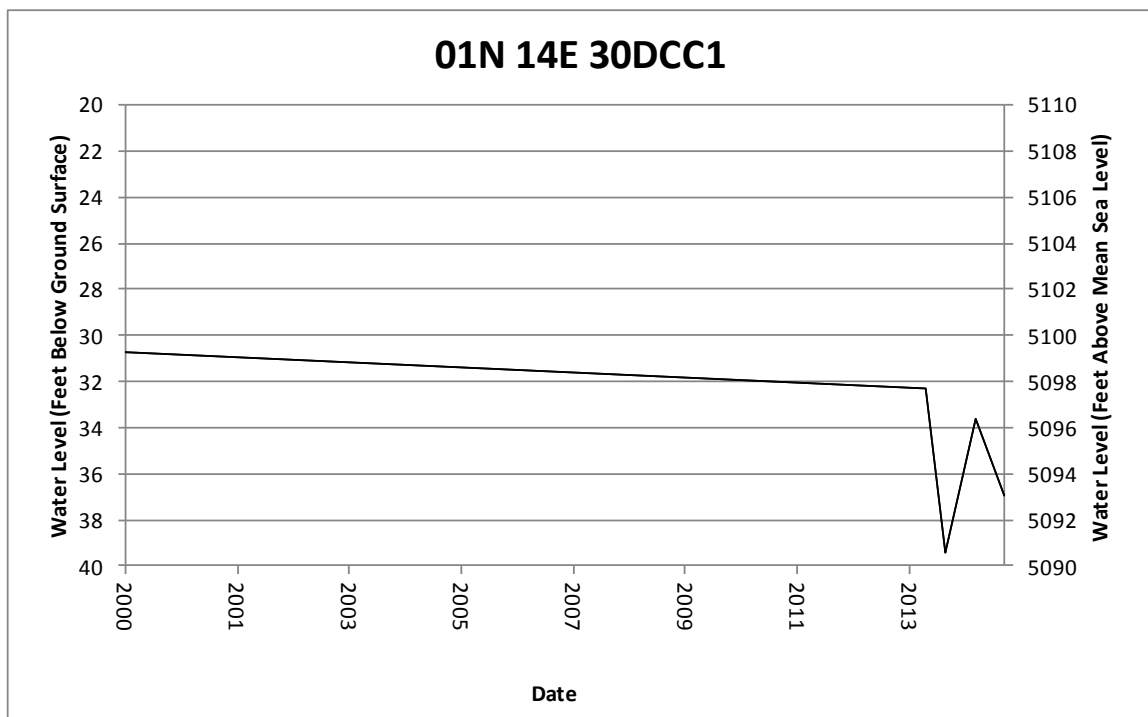
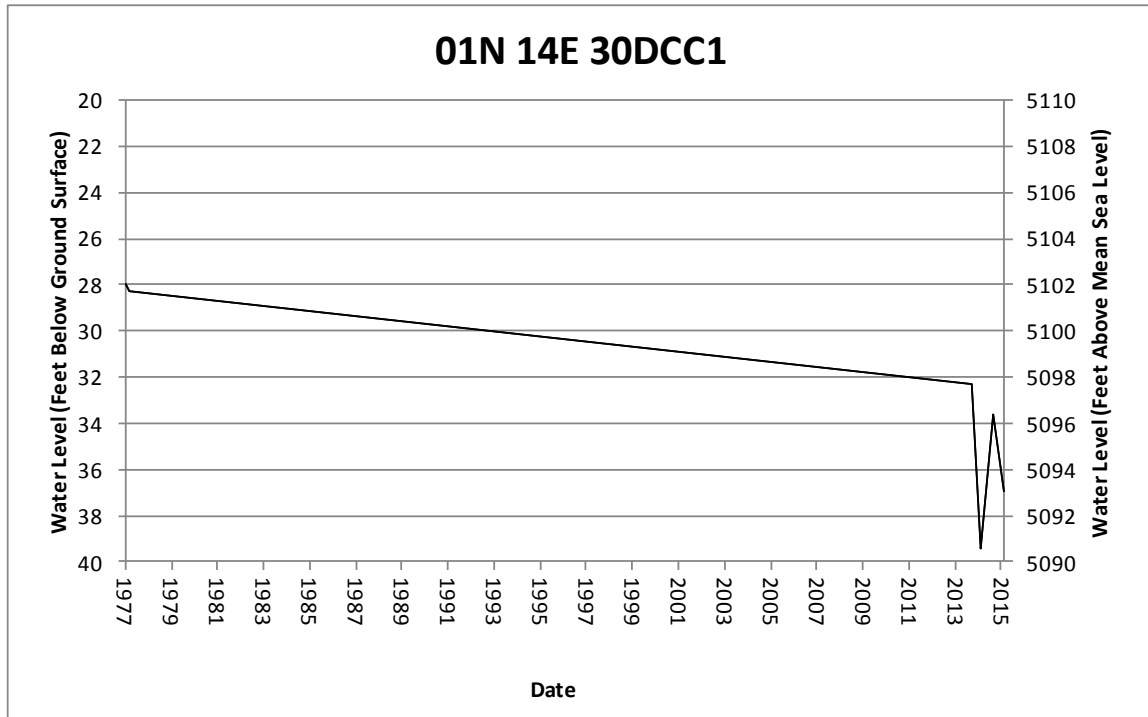


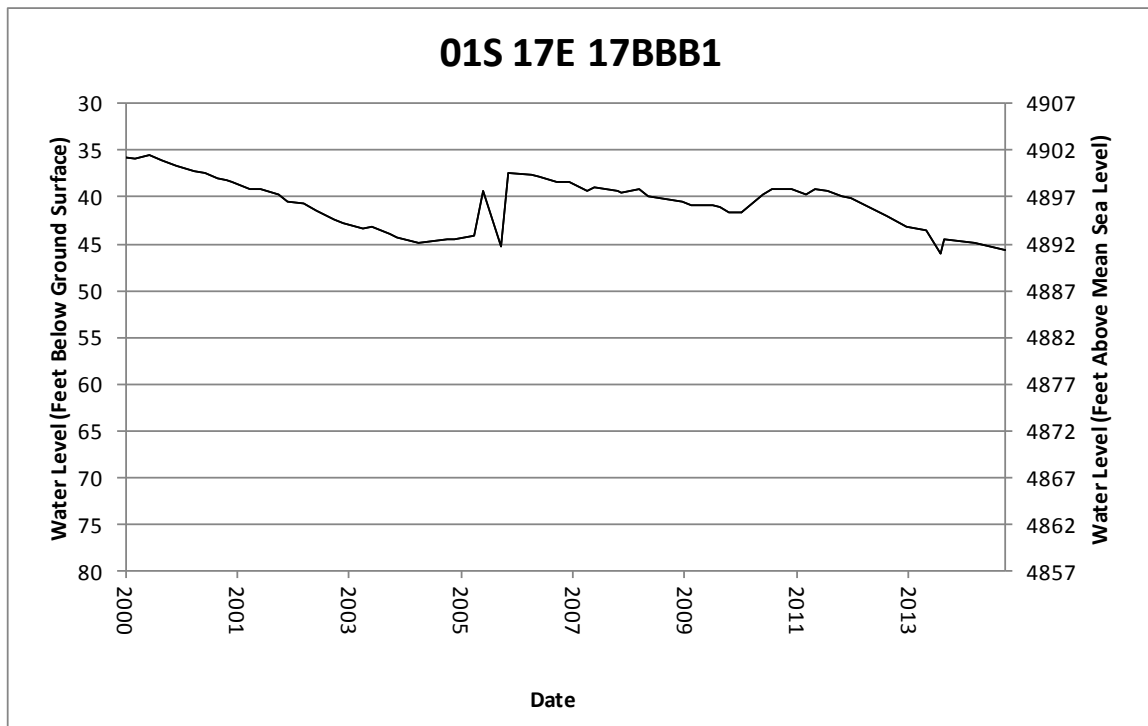
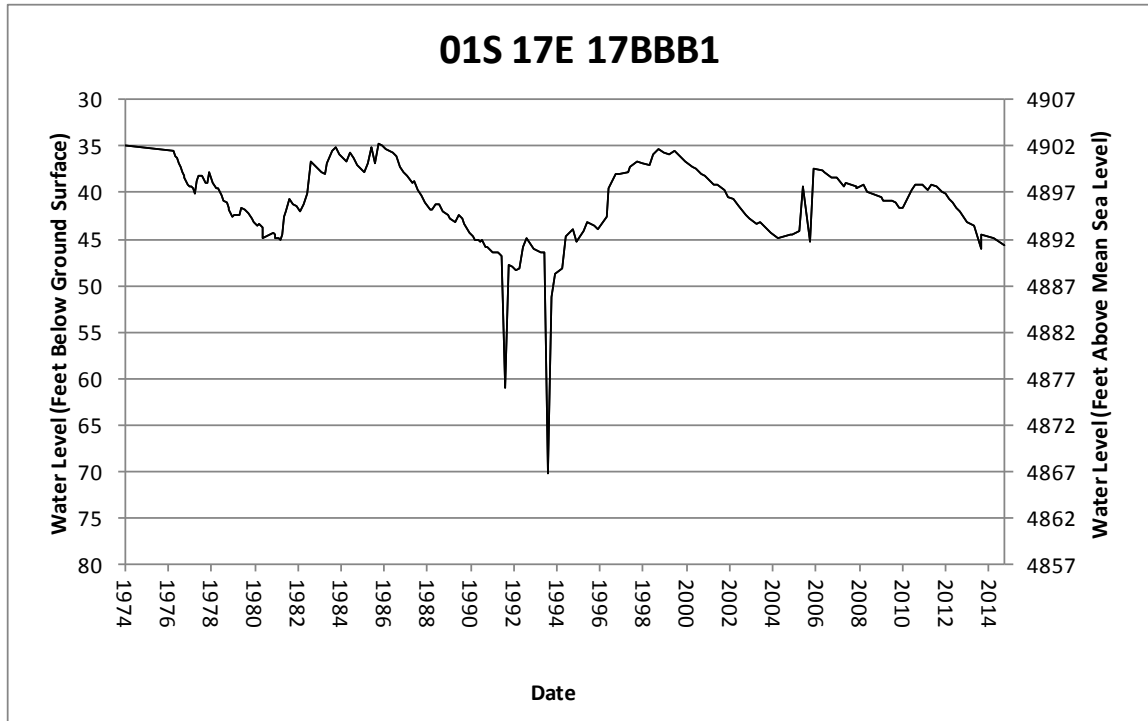


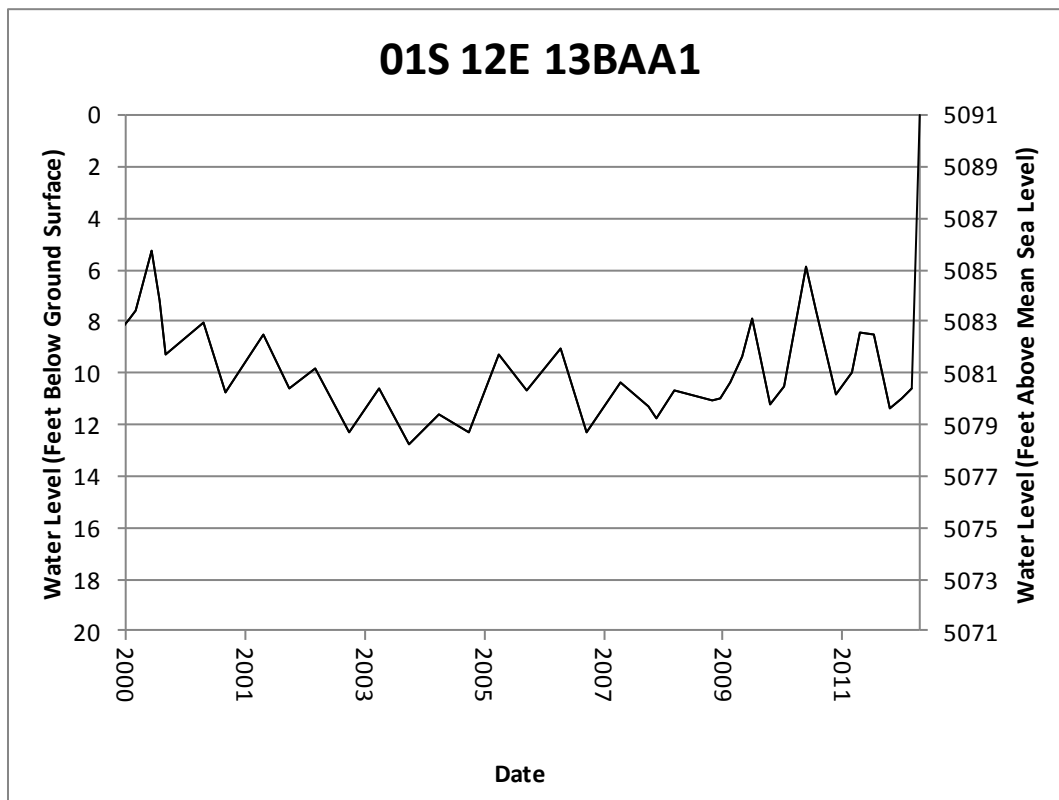
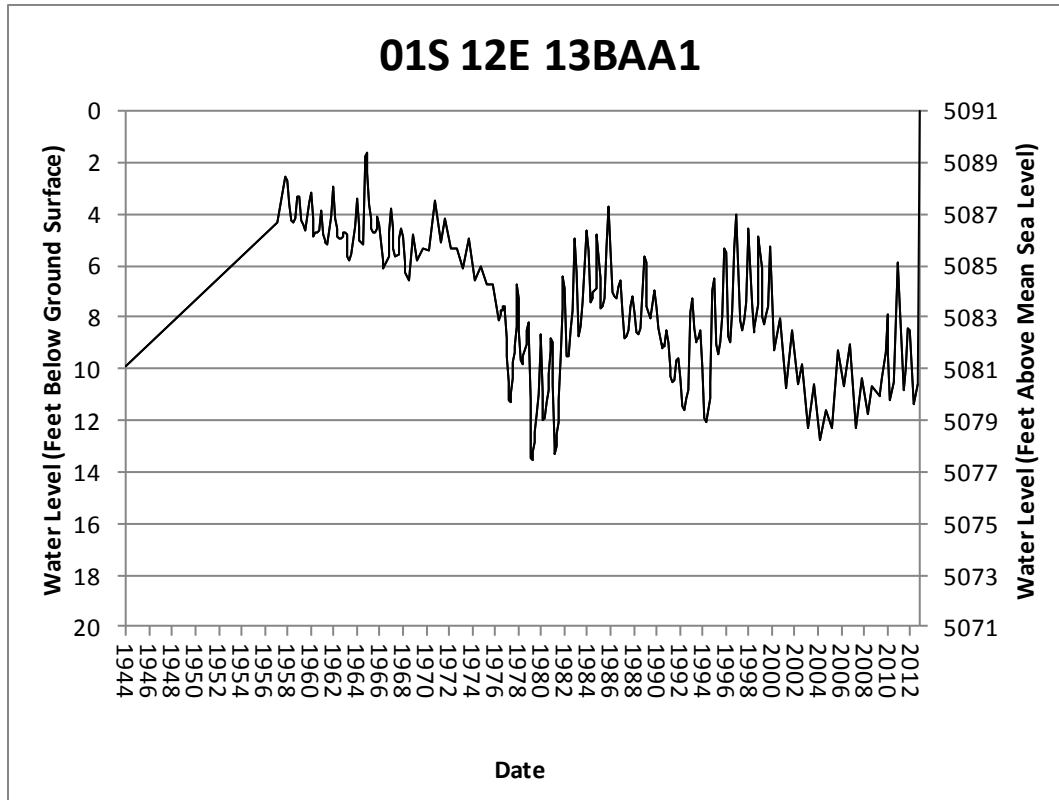


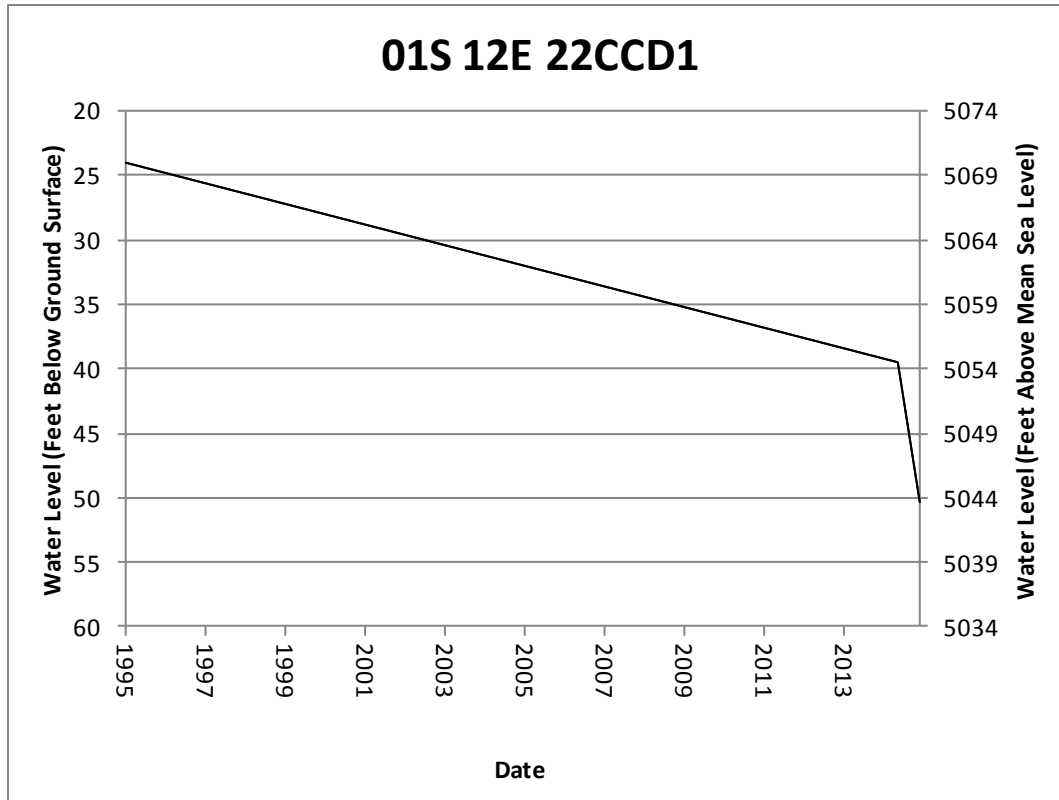




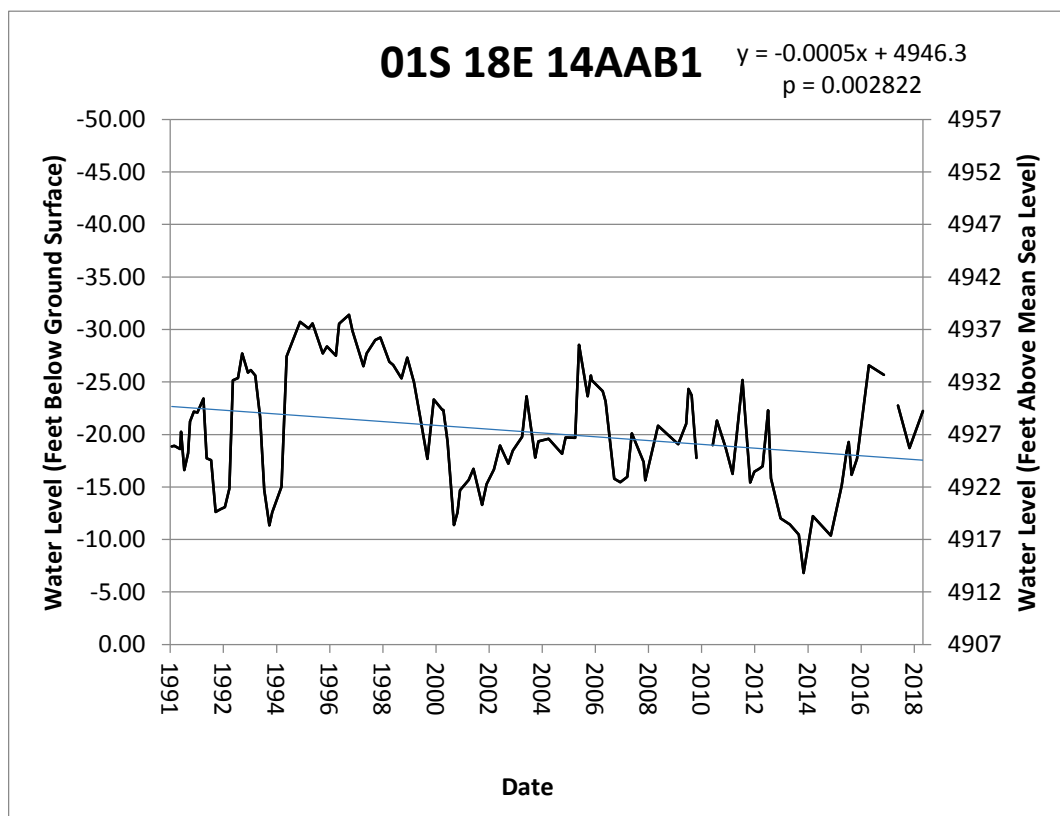
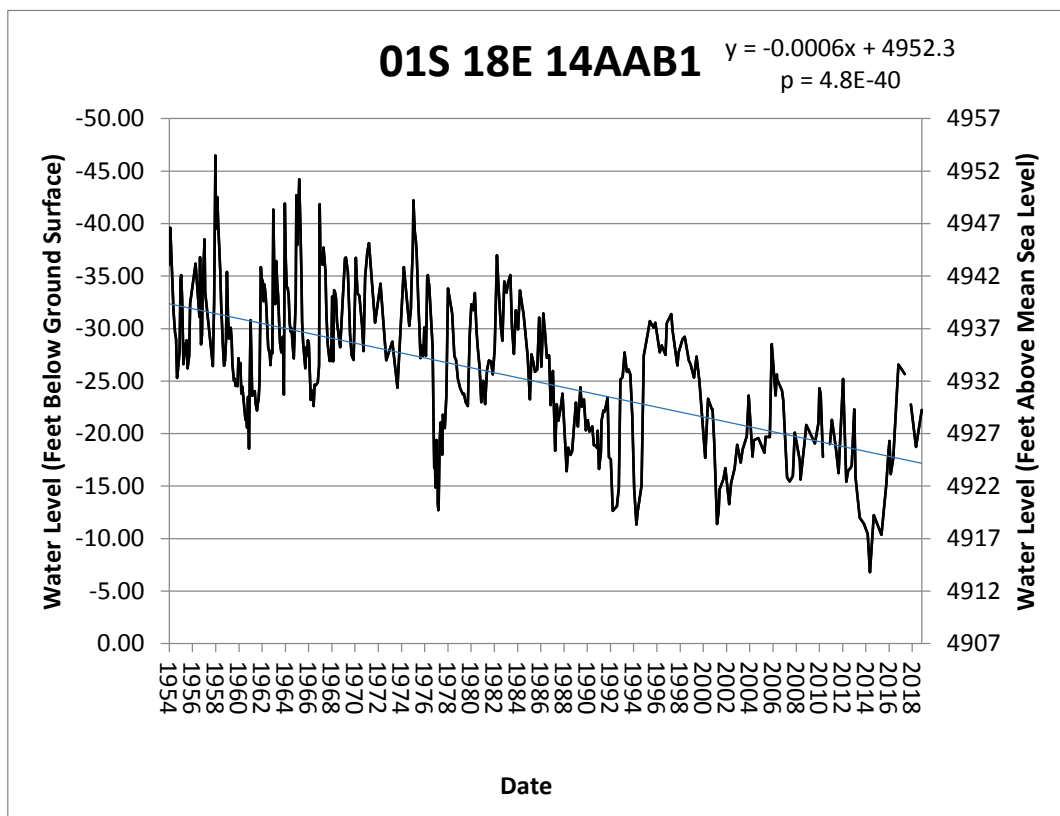


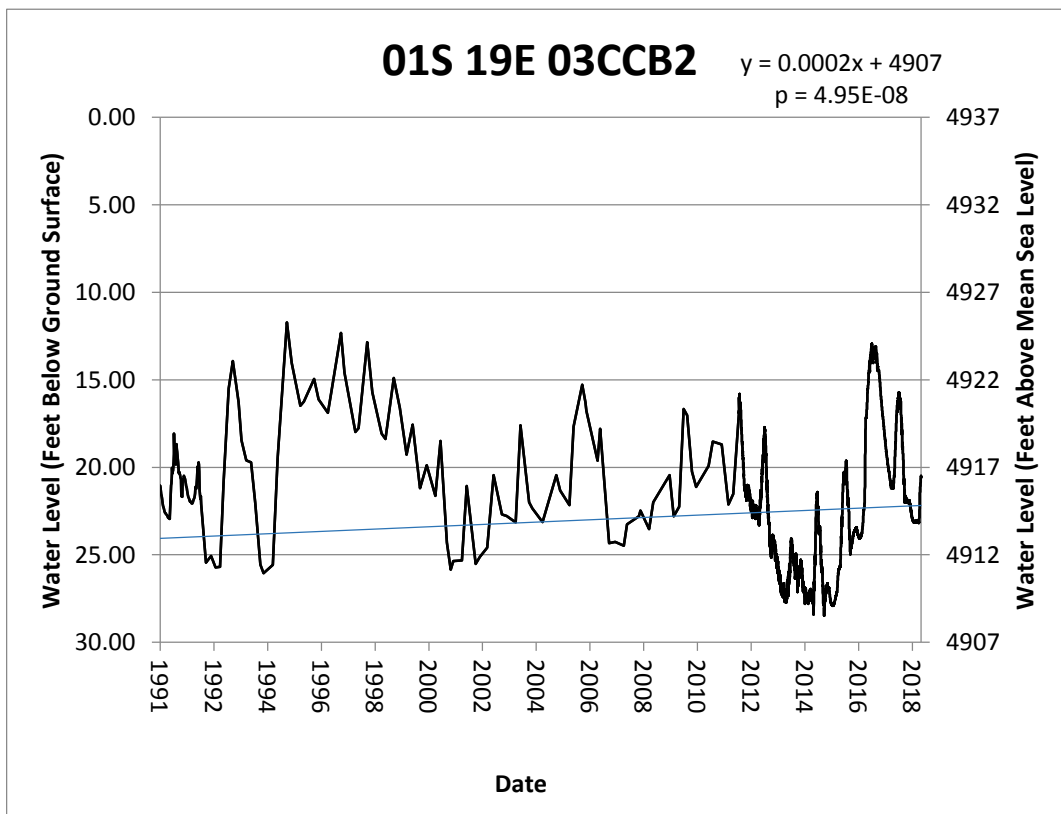
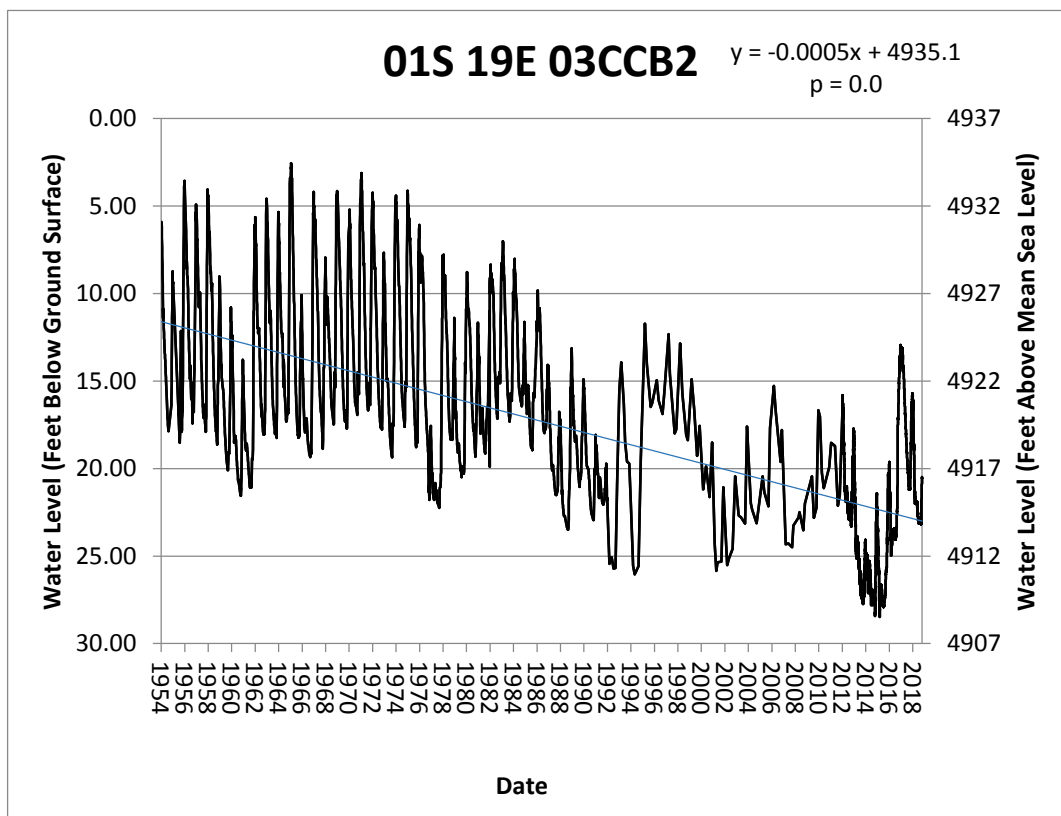


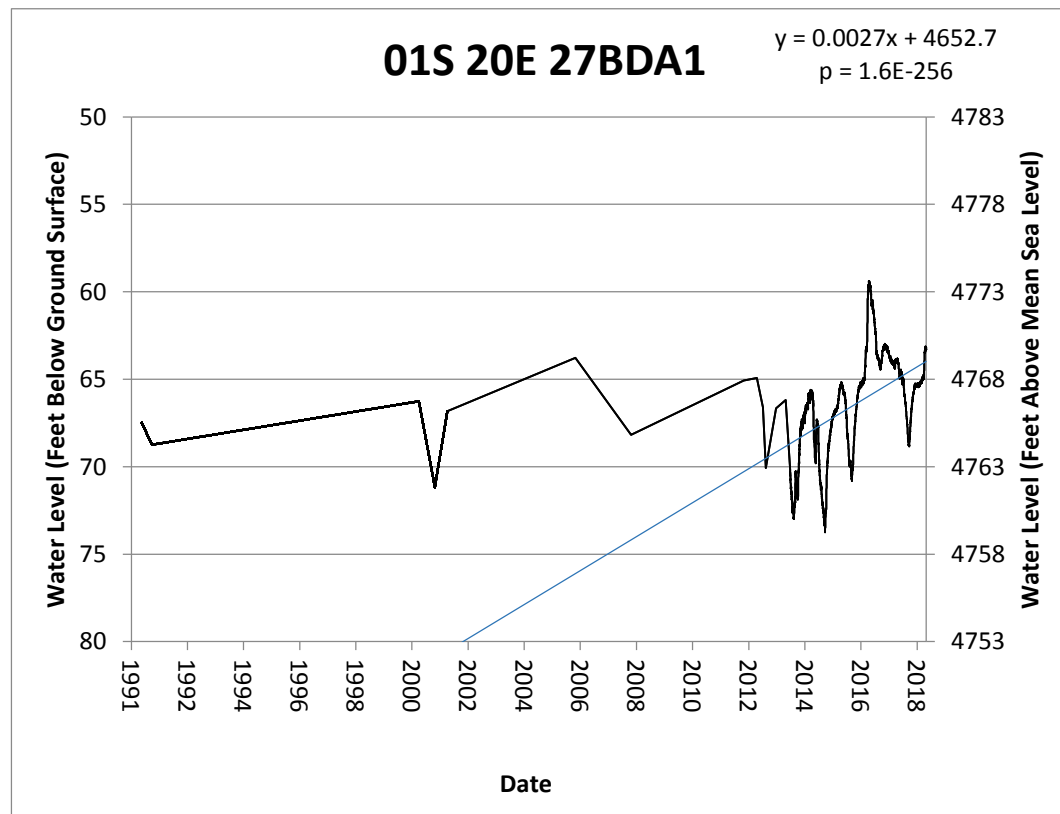
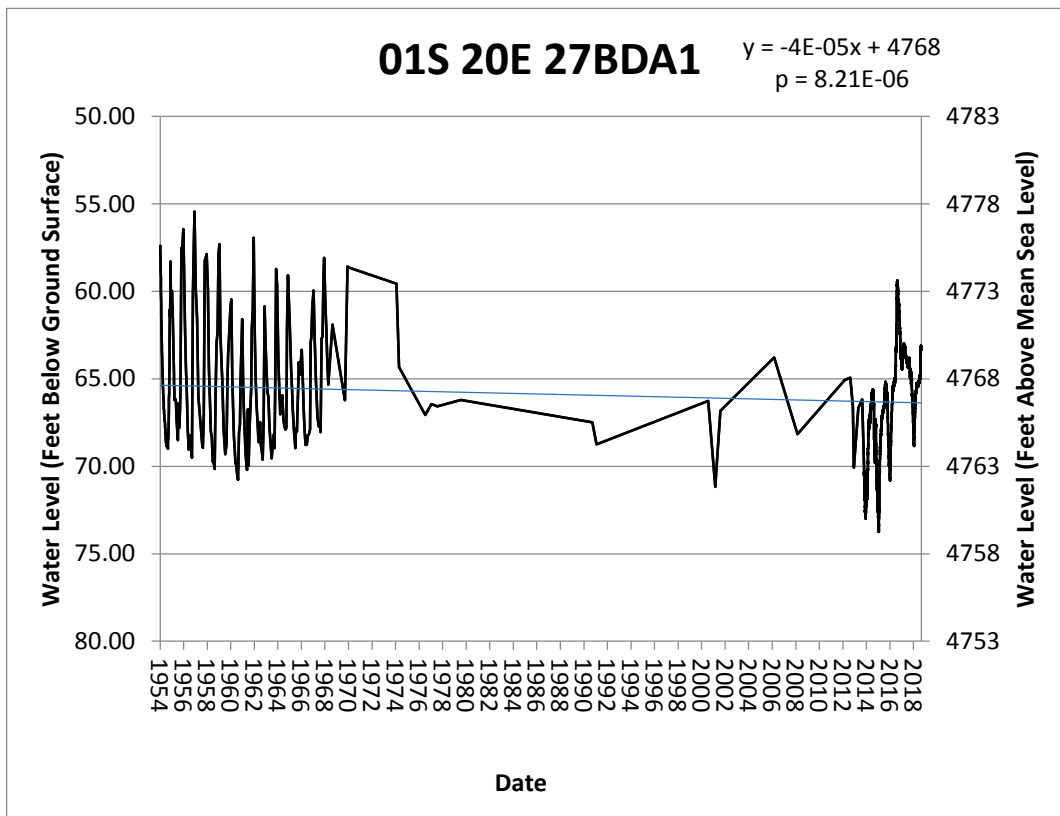


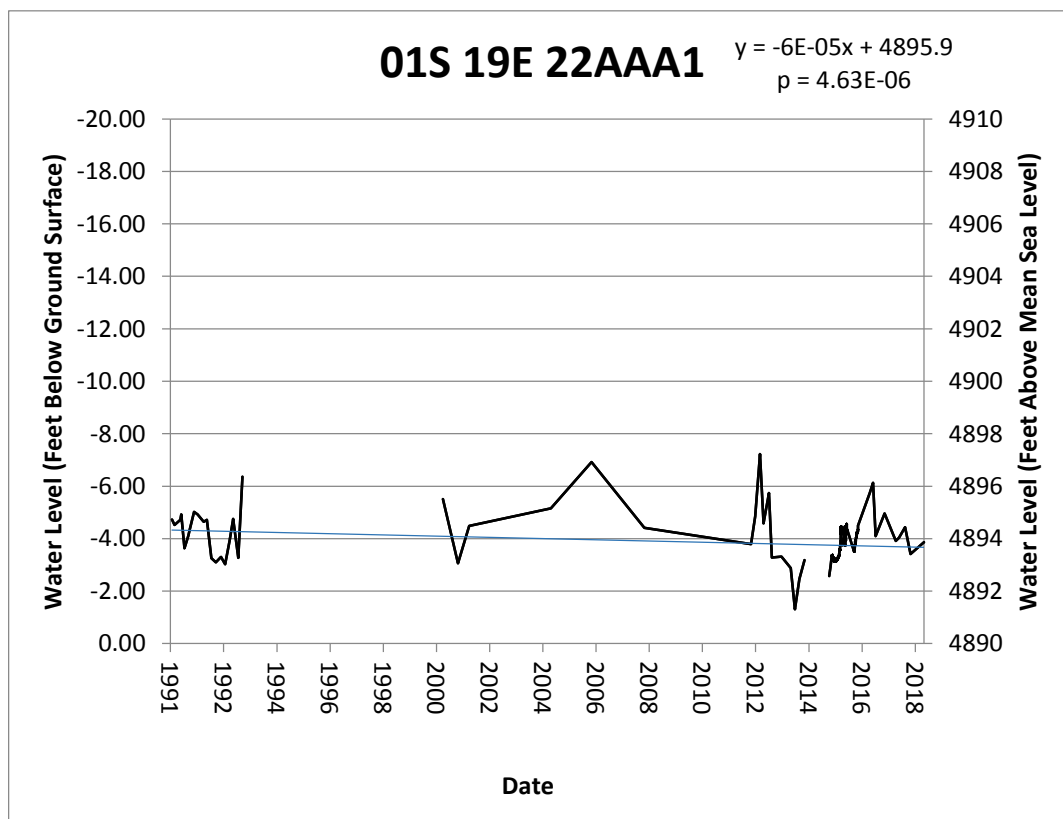
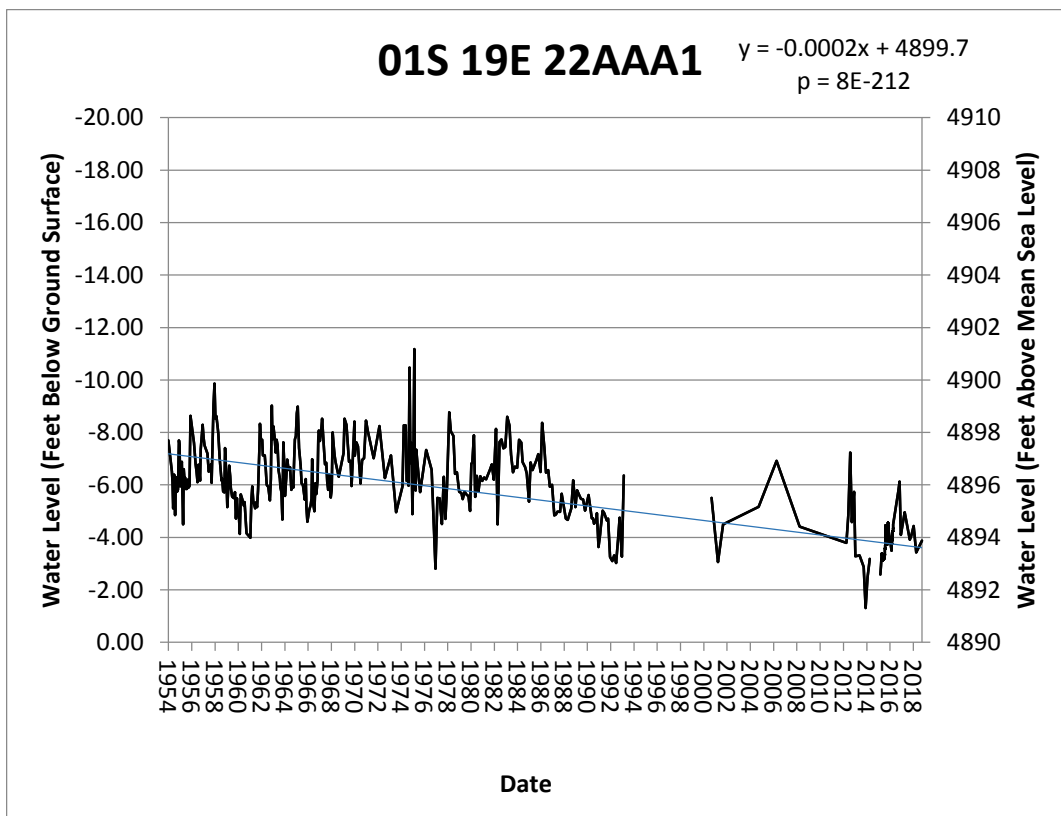


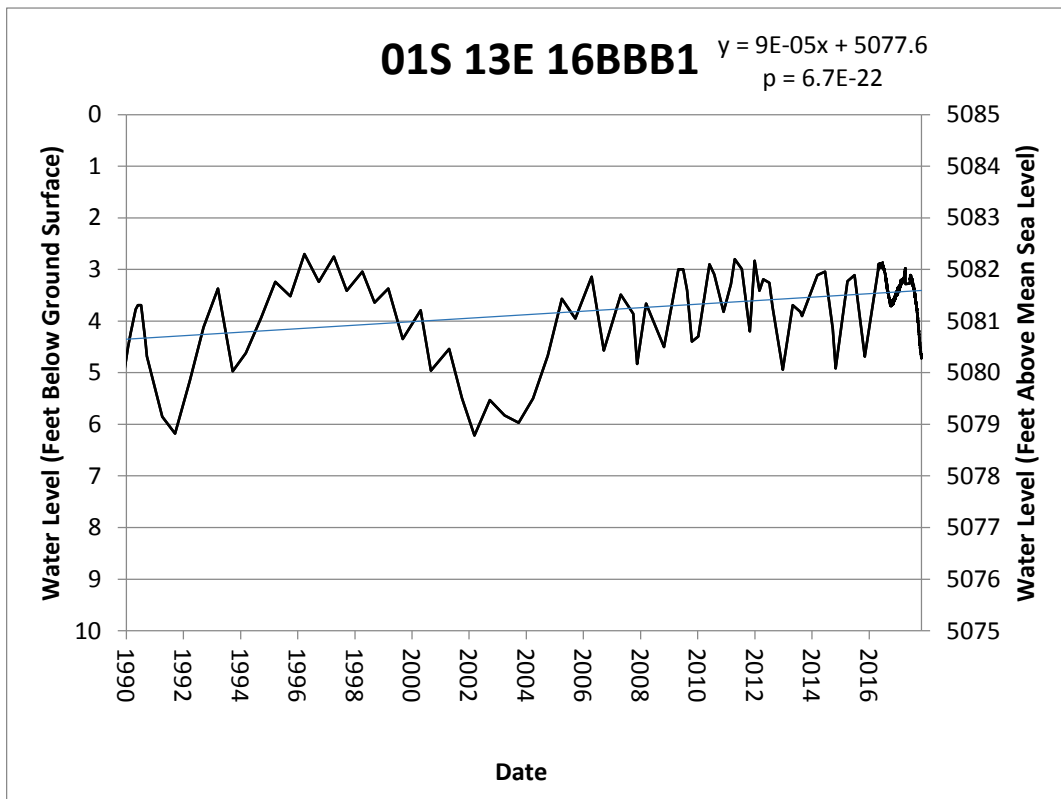
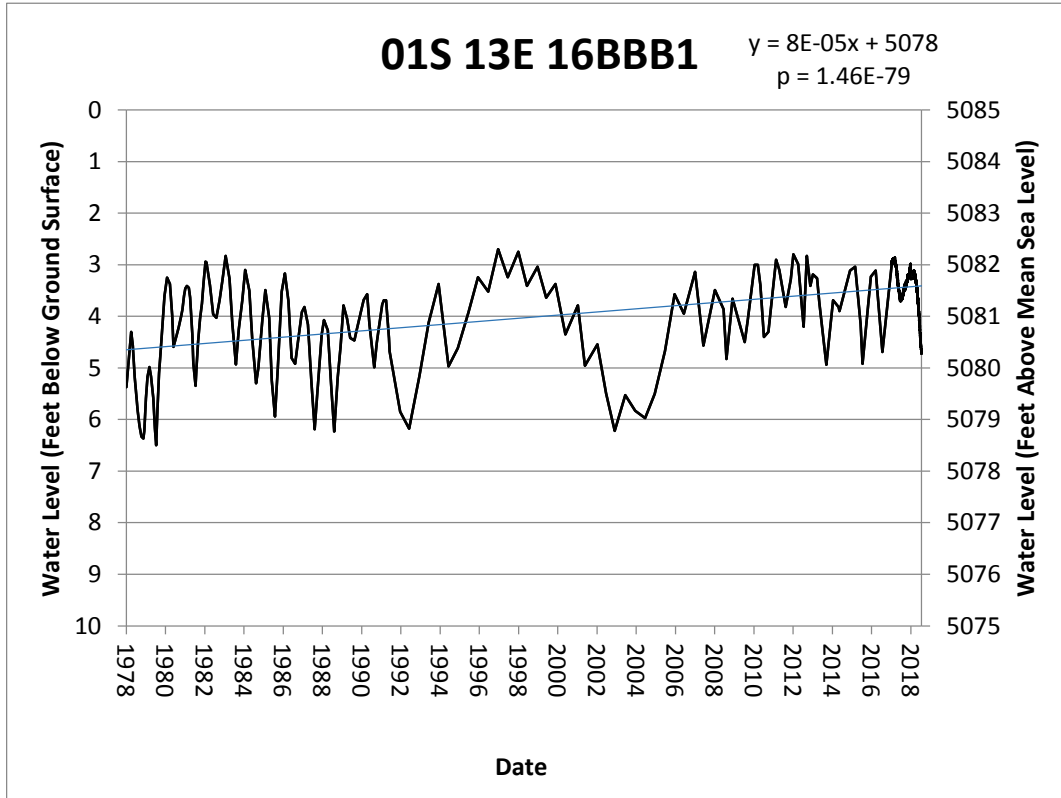
APPENDIX D
HYDROGRAPHS AND TRENDLINES

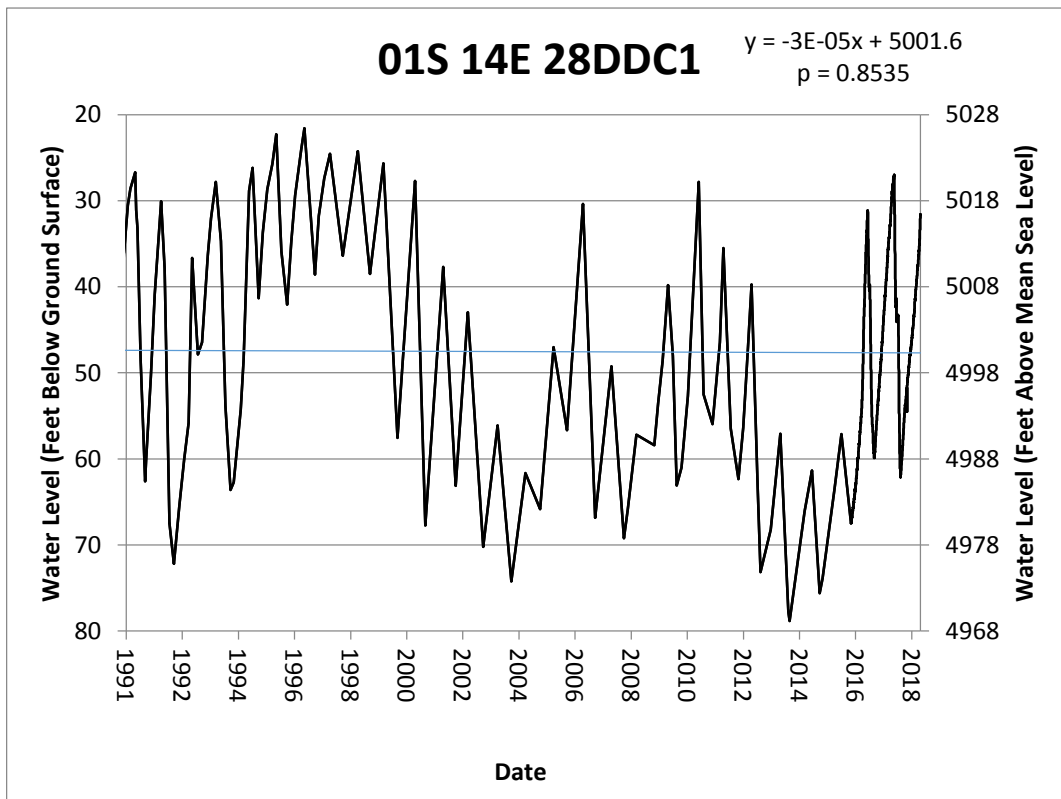
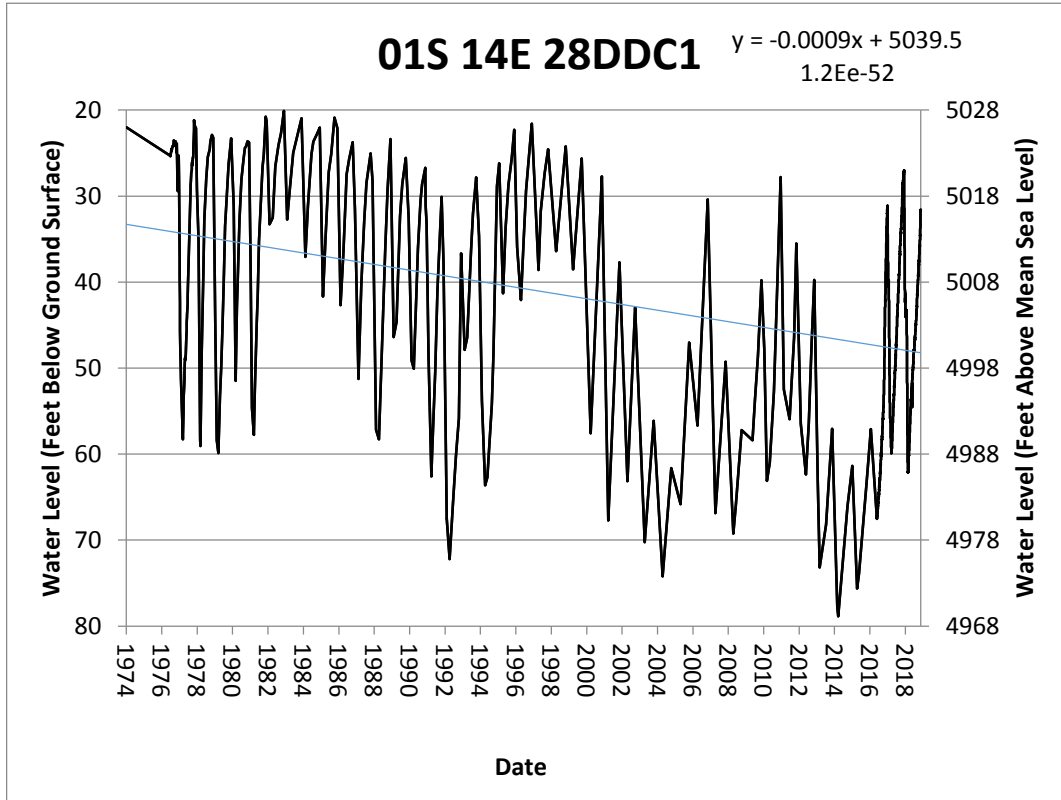


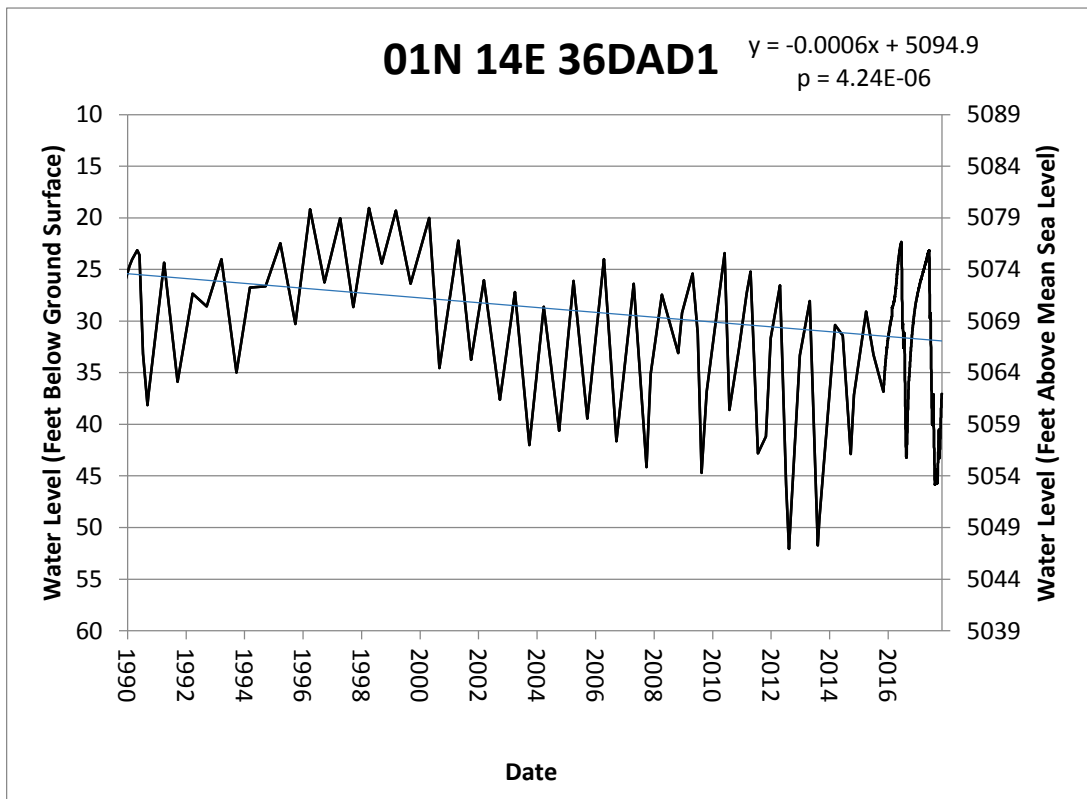
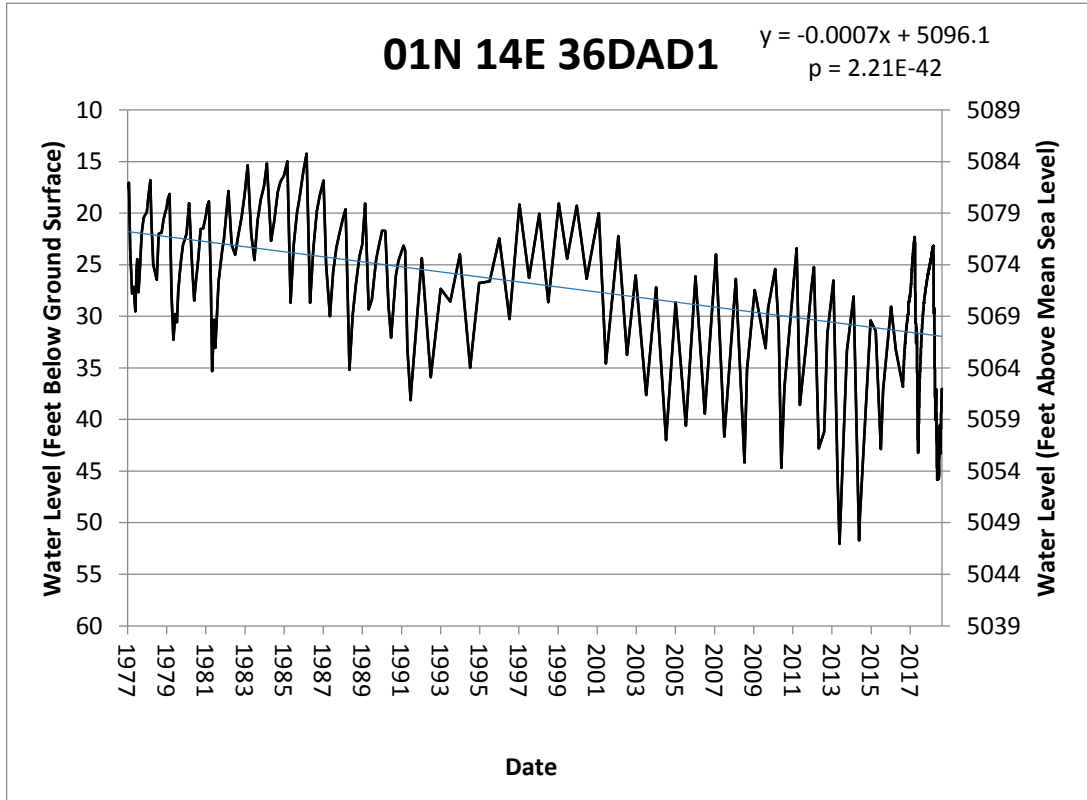


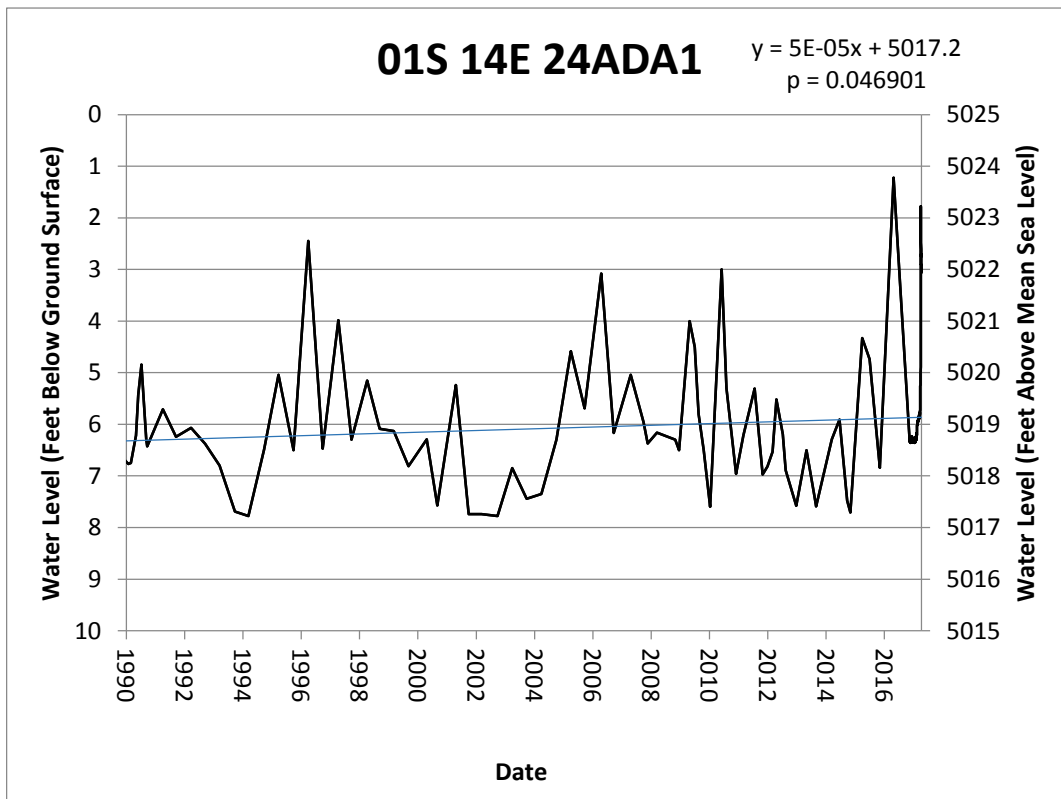
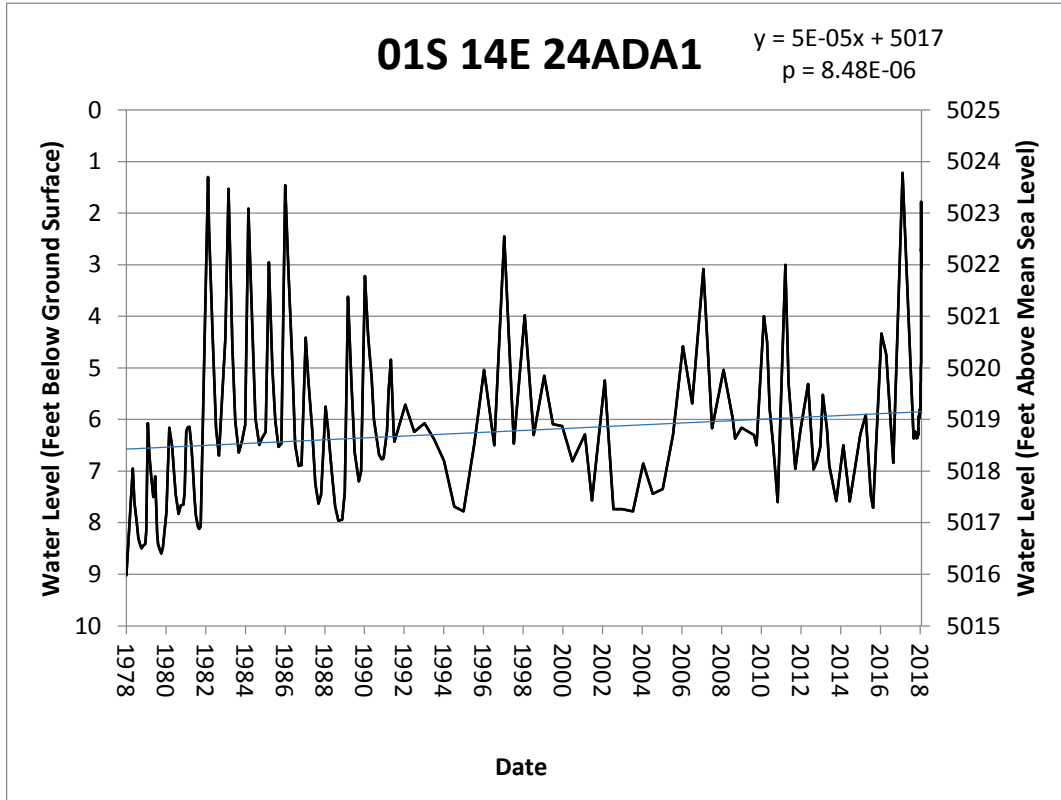


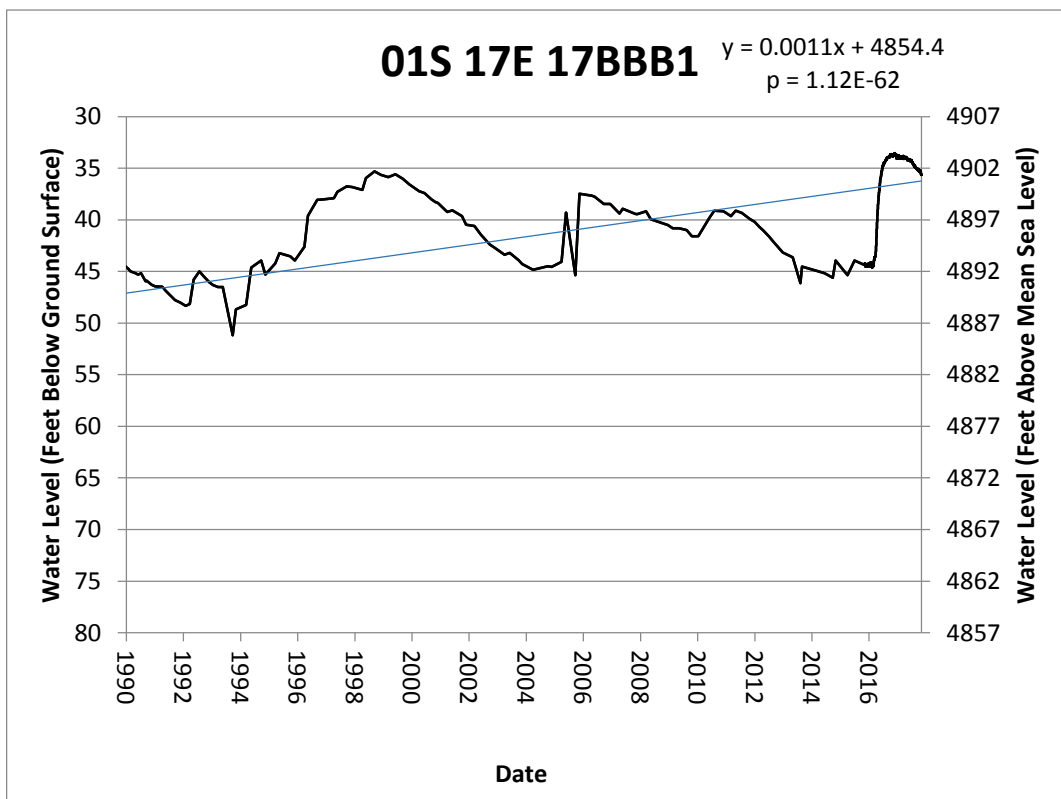
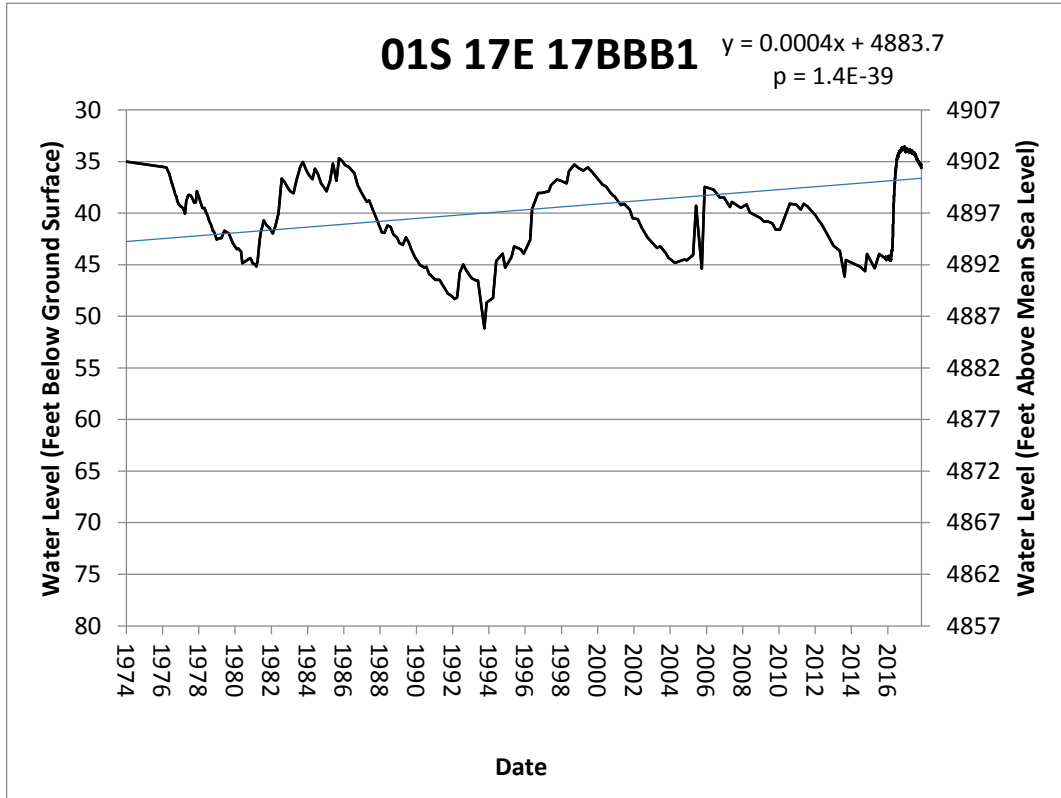












1931 BB

DISTRICT 7-AB AND 11-AB

This report is the writer's fifteenth annual report on Big Wood River and the fourteenth annual report on Silver Creek and Lower Little Wood River. The various water sheds, in compliance with the statutes of Idaho, have been divided into water districts. Where the streams are long the water shed is sometimes divided into two or more sub-districts. In most cases, however, this is not advisable.

The writer, under the supervision of the Commissioner of Reclamation, has charge of the distribution of water in Districts 7-AB and 11-AB. District 7-AB includes all of Big Wood River. District 11-AB includes Silver Creek and Little Wood River below the junction of the two streams. A complete description of these districts will be found in the 1927 annual watermaster report for these districts.

Copies of the annual reports on Big and Little Wood Rivers and Silver Creek for the years 1917 to 1931 will be found in the files in the office of the Commissioner of Reclamation at Boise, also, in the office of the watermaster at Shoshone, Idaho.

ORGANIZATION AND COST

The organization maintained to distribute the water in the two above named districts will be found described in detail in the 1927 watermaster report. Efforts have been made in the past to work out some plan whereby the cost of operation could be decreased. During 1931 the assistant watermaster was dispensed with and his work was done by the writer with the assistance of the field deputies. During a normal water year it is doubtful whether his services could be discontinued without very materially decreasing the efficiency of distribution and thus resulting in an injury to the waterusers.

The operation cost for watermaster services for 1931 for districts 7-AB and 11-AB are given in the following tabulations:

DISTRICT 7-AB

<u>NAME</u>	<u>TITLE</u>	<u>SALARY</u>	<u>TOTAL COST</u>
S. H. Chapman	Watermaster	\$2,652.00	
Chas. Bradley	Deputy Watermaster	1,074.00	
James D. vancey	Deputy Watermaster	910.00	
F. D. Wright	Deputy Watermaster	210.00	
H. M. McClure	Special	72.00	
Fred S. ree	Special	13.50	
Jim Stitt	Special	6.00	
J. Darling	Special	6.50	
T. M. Rizzi	Special	18.00	
F. D. Jones	Special	104.27	
J. A. Wheeler	Special	15.97	
B. W. Canal Co.	Gage Reading, etc.	658.35	\$5,740.59

Expenses

S. H. Chapman	\$ 706.84	
Chas. Bradley	359.10	
James D. vancey	240.68	
Kelly Motor Co.	178.78	
Base Line Canal	119.00	
Syms-York Co.	37.92	
F. D. Jones	19.00	
J. A. Wheeler	4.20	
B. W. Canal Co.	25.00	
Francis Jones	84.79	\$1,775.31

GRAND TOTAL \$7,515.90

1928, 1929 and 1930 COST

1928.	\$10,081.27
1929.	8,740.83
1930.	8,064.10

DISTRICT 11-AB

NAME	TITLE	SALARY	TOTAL COST
S. H. Chapman	Watermaster	\$1,348.00	
Robert Scanlan	Deputy Watermaster	1,372.50	
Ed McDowell	Deputy Watermaster	823.50	
G. H. Bowersock	Deputy Watermaster	1,545.85	
John Noyes	Special	90.00	
John Worrington et al	Special	294.70	
Frank Clark	Special	32.00	
Roy Denny et al	Special	74.75	
William Jensen	Special	20.00	
W. M. Frans	Special	12.00	
Roy Denny	Special	8.00	
B. W. Canal Co.	Gage Reading, Etc.	<u>559.65</u>	\$6,180.95

Expenses

S. H. Chapman	360.29	
James Devaney	18.94	
G. H. Bowersock	19.15	
Kelly Motor Co.	90.87	
Syms-York Co.	<u>19.28</u>	\$ 508.53
GRAND TOTAL.		\$6,689.48

1928, 1929 and 1930 COST

1928.	\$7,160.45
1929.	6,127.19
1930.	6,866.97

The Statutes of the State of Idaho provide that the charges for water-master services shall be made by levying a charge against every water user, whether it be an individual or corporation, in proportion to the amount of water delivered.

The cost of any part of the watermaster organization that pertains to any one district is paid by that district. The cost of the part of the water-master organization that affects both districts is charged as follows:

District 7-AB.66.3 percent
District 11-AB33.7 percent

Charge is made against storage water the same as against natural water. This method is in compliance with Section 5614, as amended by Section 1, Chapter 81 of 1927 Idaho Session Laws.

THE WATER SUPPLY FOR 1931

The water supply for 1931 was the smallest that we have any record of. The normal annual flow into Magic Reservoir is 352,000 acre feet over a period of 23 years. The total inflow for the year ending September 30th, 1931 was 63,300 acre feet, 56,700 acre feet less than the previous shortest water year, namely, 1924. The yield of Silver Creek was 31,300 acre feet. The normal yield is 56,000 acre feet and the previous minimum yield was 34,900 acre feet in 1926.

During 1931 another storage contract was entered into between the Big Wood Canal Company and the decreed water users on Big Wood River below Magic Reservoir. The storage period was from April 1st to May 5th. Again considerable benefits were derived by the parties in interest.

American Falls Reservoir Water

Water first arrived at Little Wood River from American Falls Reservoir on June 3d, but enough to be of value as an irrigation head did not arrive until June 19th. The Milner-Gooding canal losses were very heavy at first but due to the energetic and efficient work carried on by the engineers in charge the canal losses were very materially decreased. By the last of July sufficient water was delivered through the canal to supply the South Gooding Tract and considerable acreage on the North Gooding Tract as well as supplying water to the decreed lands entitled to the same. An examination of Table No. 46 will show how the losses decreased as the season advanced.

The flume crossing the lava field between Little Wood River and Big Wood River was completed in July and the first water from American Falls Reservoir was delivered into the channel of Big Wood River on July 15th.

The water came too late to save early crops but considerable late alfalfa and pasture was produced and some seeding was made possible. With the completion of the canal to connect up with the North Gooding Canal this supplemental water supply should give the Big Wood Project and decreed lands below the canal an adequate water supply. The following is a tabulation of the amount of water received from American Falls Reservoir during the irrigation season of 1931.

Amount Delivered on Big Wood River

Second Feet

CANAL NAME	JUNE	JULY	AUGUST	SEPTEMBER	TOTAL
Silva	0	19.1	117.4	61.5	198.0
Butler	0	115.8	382.7	189.6	688.1
Peck	0	14.9	38.0	18.6	71.5
Sims	0	52.9	336.7	177.4	567.0
Kaiser	0	154.7	656.0	366.7	1177.4
Robertson	0	158.8	693.0	404.2	1256.0
Union	0	380.6	1292.1	737.3	2410.0
Savage	0	37.6	91.5	65.5	194.6
Poorman	0	234.6	801.3	438.7	1474.6
Silk	0	12.3	0	0	12.3
Silk-Gooding	0	34.2	72.0	54.4	160.6
Walters	0	87.2	411.9	184.1	683.2
Jones	44.6	114.2	156.0	74.8	389.6
Hash	1.3	3.7	2.5	1.3	8.8
Frost	0	26.2	69.6	27.8	123.9
Thorp	58.2	89.6	245.6	113.2	506.6
Justice	19.2	72.6	191.1	99.7	382.6
	123.3	1609.0	5557.7	3014.8	10304.8

Amount Delivered on Little Wood River

Second Feet

Dietrich	0	383.5	652.0	309.0	1344.5
Lane	0	8.4	11.2	0	19.6
Anderson-Baugh	0	0	4.1	1.2	5.3
Gooding-Mott	39.4	50.0	94.9	37.8	222.1
Village	0	0	6.0	0	6.0
Myers	7.3	51.0	54.6	0	112.9
Hunter	15.8	12.0	19.0	24.2	71.0
Winters	4.8	1.4	13.5	7.3	27.0
Prosser	4.0	0	0	0	4.0
Hitchcock	13.1	32.1	41.0	12.0	98.2
South Gooding	2102.0	3444.0	5233.0	2726.0	13505.0
B-1	259.2	558.3	800.5	377.5	1995.5
Devaney	32.7	26.6	47.7	38.1	145.1

Amount Delivered on Little Wood River
Second Feet (Continued)

CANAL NAME	JUNE	JULY	AUGUST	SEPTEMBER	TOTAL
Kelly	18.1	44.2	70.5	46.0	178.8
Bower	0	29.8	55.7	22.9	108.4
Hunt	7.3	12.5	24.0	10.6	54.4
Silva	0	10.0	3.4	18.7	32.1
Slough	84.5	135.3	256.2	124.3	600.3
City	12.0	28.7	39.7	8.2	88.6
Woodworth	14.9	32.8	63.2	45.8	156.7
Carpenter	1.9	2.6	0	0	4.5
TOTAL	2617.0	4863.2	7490.2	3809.6	18780.0
GRAND TOTAL	2740.8	6472.2	13047.9	6824.4	29084.8

The total amount of water diverted directly from the Milner-Gooding Canal for the Dietrich Tract was 2991 second feet. This added to the above makes a total amount of 32075.8 second feet or 64,152 acre feet of water delivered from the American Falls Reservoir water, for the months June to September, inclusive. The total amount of water at the head of the canal during this period, after deducting the water delivered to the North Side Project, was 189,194 acre feet. The percentage of loss on this water from the head of the canal at Milner to the various diversion points diverting from Big and Little Wood Rivers was 66.09 percent. This loss will be very materially reduced in the future as will be shown from a study of Table No. 40.

LOSSES

The losses in the various sections of Big Wood River below Magic Reservoir will be found on charts No. 36 and 37. Charts Nos. 38 and 39 give the loss in the various sections of Silver Creek and Lower Little Wood River. Chart No. 40 gives the loss in the Milner-Gooding Canal from the diversion at Milner to Station No. 56, near the Little Wood River crossing. The following tabulation gives the loss in the channel of Big Wood River from Hailley to Station No. 2, just above the back waters of Magic Reservoir.

MEAN LOSS OR GAIN IN CUBIC FEET PER SECOND

Stations No. 19 to No. 2						
Year	May	June	July	August	September	Mean for Period
1918			+132.0	+ 85.0		+109.6
1919		+ 64.3	+ 54.6	+ 18.9	- 17.3	+ 30.2
1920	- 73.2	+ 8.5	+ 55.2	+ 24.2	+ 17.3	+ 6.3
1921	- 72.0	- 15.2	+ 84.5	+ 98.5	+ 41.4	+ 26.2
1922	- 10.8	- 74.0	+137.0	+125.0	+ 82.0	+ 29.3
1923	-116.0	- 6.6	+105.0	+ 92.0	+ 81.0	+ 14.8
1924	- 9.6	+ 25.1	+ 1.7	- 12.6	- 13.8	0.0
1925	-150.0	+ 11.7	+107.0	+101.0		+ 16.6
1926	+ 19.5	+ 54.1	+ 35.6	+ 9.9	+ 21.5	+ 28.7
1927	+ 1.1	- 19.4	+150.0	+ 97.8	+ 65.1	+ 58.9
1928	- 18.0	+101.0	+103.0	+ 45.8	+ 20.5	+ 50.3
1929	- 55.4	+ 12.8	+ 55.5	+ 5.4	+ 25.0	+ 8.5
1930	- 71.0	+ 78.9	+ 6.1	+ 80.2	+ 55.0	+ 47.6
1931	- 10.4	+ 23.9	- 9.9	- 14.7	- 16.0	- 5.5

IMPROVEMENTS

Some improvement work was made on Silver Creek to decrease channel losses. This work was in the nature of bank building to keep the creek from overflowing its banks and the water finding its way into sink holes. The work was authorized at the watermaster election in March and a committee was appointed to advise with the watermaster as to the advisability of the work to be done. The amount of money voted to be spent was \$1000.00. The actual amount expended for this work was \$147.00. The creek was so low during 1931 that the affects of the work would hardly show up but the indications are that during a normal year the savings will be well worth the expenditure. The heading at the head of the upper By-pass was repaired at a cost of \$253.25. A new concrete front; new gates and lifts and other improvements were made on the gate. The cost was apportioned against the parties interested in the by-pass saving

A new gage house and concrete well was constructed at Station No. 10 on Little Wood River near Richfield, Idaho. A new gaging station was established above the Milner-Gooding Canal on Little Wood River, and a Station on the Milner-Gooding feeder for the north side of Big Wood River. This was established at a point a short distance below the Little Wood River crossing.

DECISIONS OF COMMISSIONER OF RECLAMATION

When the water from American Falls Reservoir became available for distribution in Little Wood River in June 1931 the Big Wood Canal Company requested the watermaster to supply the natural flow rights below the said canal with the storage water from American Falls Reservoir and in lieu of this the same amount of water was asked to be turned into the Dietrich Canal and other canals having a right to the waters of the Big Wood Canal Company. Certain water users having adjudicated water rights on the stream objected to this change of point of use, and set up the claim that they would be unable to get their water out of the stream unless their dams were repaired, which they claimed, under normal conditions, were adequate. The watermaster took the position that this change would constitute a change of point of diversion and could not be done to the injury of other appropriators. The matter was presented to the Commissioner of Reclamation, and Mr. R. W. Faris, Commissioner, came to Shoshone and after going over the stream ordered the request to be granted providing the dams were repaired by the parties benefited by the use of the water proposed to be diverted. The water users on the Dietrich Tract repaired the dams and kept same in shape and the water was diverted into the Dietrich Canal and other canals as requested. The water thus diverted resulted in considerable benefit to the parties interested.

When Big Wood River became very low and the loss from the mouth of the upper By-pass to the Black Diversion Point was very large the water users on the Base-Line Canal requested the watermaster to divert the water through Canal No. 55-F and thence by means of an extended by-pass deliver the water to the head of the Black Ditch and to give the said Base-Line Canal the savings. Objections were made by the Big Wood Canal Company on the grounds that the inflow into Magic Reservoir would be decreased and would result in an injury to them. Other objections were made by other water users. The Base-Line Canal Company had a permit from the Commissioner of Reclamation to make this saving but in view of the objections it was thought advisable on the part of the watermaster to get instructions from the Commissioner of Reclamation and Mr. Paris came on the grounds and after an investigation instructed the watermaster to hold up the execution of the permit and to see if something could not be worked out that would be to the satisfaction of all parties in interest. After considerable negotiating a plan was worked out and the saving was made. The water thus saved amounted to approximately 18 second feet and this was the amount determined in making distributions. The savings were distributed as follows: The members of the Base-Line Canal Company were to get 6/18 of the saving and the remainder of the savings was to be delivered to the water users above Magic Reservoir in a fair and just manner.

An agreement was to be signed by all parties receiving any of the water saved. In this agreement each and everyone receiving any of the water saved were to pay a like amount to the Big Wood Canal Company from their decreed rights during the irrigation season of 1932 at a time when the Big Wood Canal Company should make such demand. This agreement gave the watermaster full power to execute same and the signed original is now on file in the office of watermaster at Shoshone. This agreement has a clause which provides that no future claims can be set up based on the distribution of the water saved.

After the terminations of the provisions of the agreement relative to the distribution of the water saved, namely, on September 30th, 1931, the rights of all parties should be the same as if the agreement had never been entered into. No future claims could be set up based on the use of this by-pass for the season of 1931. The water thus saved was of considerable value in saving gradens and trees.

DATE PRIORITIES EXPIRED.

District 7-AB

The method used in determining from time to time what priorities could be supplied can be found in the 1927 watermaster report under the heading of "Distribution."

The following table gives the dates the several priorities here listed expired on Big Wood River, District 7-AB, during the irrigation season of 1931.

PRIORITY	WHEN PRIORITY EXPIRED	WHEN PRIORITY WAS AGAIN SUPPLIED	REMARKS
8 - 1-84	April 12		Above Res.
7 -10-84	April 22		Above Res.
10 -15-84		April 30, 50%	Above Res.
8 - 1-86		May 1 , part	Above Res.
6 -15-86		May 6 , part	Above Res.
4-30-89	May 6		Below Res.
11-31-89		May 13	
5- 1-87	May 18		
6-12-86	May 21		50%
6-12-86	May 22		
5- 1-86	May 23		
5-12-86		May 24	50%
5- 1-87		May 27	
6-12-86	May 29		50%
12-15-87		June 9	Due to rain
6-12-86	June 10		
5- 1-86	June 11		
10-15-84	June 16		
8-11-84	June 17		
8-30-84		June 18	
4-30-84	June 20		
6-15-83	June 28		
5- 1-83	June 29		
3-24-83	July 6		40%

PRIORITY	WHEN PRIORITY EXPIRED	WHEN PRIORITY WAS AGAIN SUPPLIED	REMARKS
3-24-83	July 8		70%
3-10-83	July 9		
12-19-82	July 17		
8- 1-82	July 19		50%
6- 1-82	July 21		
7-31-81	July 24		
4-15-81	July 28		
7- 1-81		July 31	
4-15-81	August 11		
4-15-81		August 20	

District 11-AB

Under the heading "Distribution" in the 1927 watermaster report covering this district will be found the method used from time to time to determine what priorities can be supplied from the available natural flow at any particular time.

The following table gives the dates when priorities here listed expired in 1931:

PRIORITY	WHEN PRIORITY EXPIRED	WHEN PRIORITY WAS AGAIN SUPPLIED	REMARKS
12-24-06	April 15		Part
5-15-90	April 20		
4- 1-86	April 30		
4- 1-85	May 8		
5-15-84	May 15		
4-15-84	June 2		
4-30-84		June 3	
5- 5-84		June 11	5.1 S.F.
4-15-84	July 21		
4- 1-84	July 24		28%
4- 1-84		August 17	

During the latter part of September, due to the older rights ceasing irrigation above Richfield and those below not repairing their dams after the American Falls Water was off, any priority desiring water was supplied.

WATER LITIGATIONS

The action brought against the watermaster by A. W. Warr in 1930 to compel him to deliver certain waters to the water users in the Hiawatha Canal, was ordered canceled by the court and the deliveries reverted back to the status prior to the action.

PRECIPITATION RECORDS.

The following tables gives the accumulative precipitation of rain and water content of snow on Soldier Range Station above Camas Prairie for the years 1910-11 to 1930-31, The table gives the accumulated amount at the end of the month in inches:

YEAR	OCT. & NOV.	DECEMBER	JANUARY	FEBRUARY	MARCH	A. F. Run-off
1910-11	5.8	7.2	13.5	17.2	18.8	
1911-12	4.6	6.2	8.9	10.0	13.7	115,230
1912-13	3.6	4.7	13.2	13.4	14.6	93,720
1913-14	6.8	10.6	16.7	18.6	18.7	112,320
1914-15	3.4	4.5	6.5	10.3	10.6	33,420
1915-16	3.5	7.6	16.8	20.9	23.3	235,020
1916-17	4.0	9.3	11.1	18.5	21.4	207,520
1917-18	3.1	7.3	8.9	13.9	16.4	40,070
1918-19	4.6	5.7	9.3	15.5	18.5	107,300
1919-20	4.3	8.4	9.1	9.7	11.8	21,040
1920-21	8.0	13.8	18.1	21.1	22.4	177,020
1921-22	4.5	7.9	8.6	10.7	14.4	172,720
1922-23	1.5	8.8	12.9	15.5	17.1	95,420
1923-24	4.8	8.1	8.2	10.2	11.6	28,230
1924-25	6.0	9.8	14.3	20.9	22.5	165,720
1925-26	4.2	6.5	8.6	12.8	13.5	15,670
1926-27	10.8	12.6	17.0	26.3	27.5	197,420
1927-28	8.8	11.6	12.7	12.8	15.8	69,700
1928-29	3.6	6.8	9.8	11.3	12.0	77,880
1929-30	0.3	8.2	10.8	13.8	15.8	37,960
1930-31	4.2	4.5	6.1	7.4	10.5	16,600

A study of the table shows that the run-off varies considerable different years. This cannot be explained by the difference in depth of precipitation. However, some idea may be arrived at by a comparison of the depth of precipitation, for any year, with the record here given.

BIG WOOD PROJECT

Duty at River Headgate

Tract	Crop Acreage	MAGIC RESERVOIR		AMERICAN FALLS		TOTALS	
		Ac.Ft.	Duty	Ac.Ft.	Duty at	Ac.Ft.	Duty at
		Delvd.	at head	Delvd.	Head	Delvd.	Head
Richfield	10,816	10,734	0.99	00	.00	10,734	0.99
Dietrich	6,603	6,199	0.94	7,356	1.11	13,555	2.05
Shoshone	6,291	6,834	1.09	2,810	0.45	9,644	1.53
North Gooding	6,897	5,877	0.85	11,198	1.62	17,075	2.48
South Gooding	10,832	5,696	0.53	30,906	2.85	36,602	3.38
Sub-Total	41,439	35,340	0.85	52,270	1.26	87,610	2.11
River Div.	1,439	1,213	0.84	3,520	2.45	4,733	3.29
TOTAL	42,878	36,553	0.85	55,790	1.30	92,343	2.15

Duty at Farm Head Gate

Richfield	10,816	6,921	0.64	00	00	6,921	0.64
Dietrich	6,603	3,548	0.54	5,256	0.80	8,804	1.33
Shoshone	6,291	4,353	0.69	2,404	0.38	6,757	1.07
North Gooding	6,897	4,733	0.69	9,272	1.34	14,005	2.03
South Gooding	10,832	4,493	0.42	26,398	2.44	30,891	2.85
Sub-Total	41,439	24,048	0.58	43,330	1.05	67,378	1.63
River Div.	1,439	1,213	0.84	3,520	2.45	4,733	3.29
TOTAL	42,878	25,261	0.59	46,850	1.09	72,111	1.68

Percentage Loss On Tracts

Tract	Magic Reservoir	American Falls Reservoir Water	Total
Richfield	35.52%	00	35.52
Dietrich	42.76	28.55	35.05
Shoshone	36.30	14.45	29.94
North Gooding	19.47	17.20	17.98
South Gooding	21.12	14.59	15.60
TOTAL	31.95	17.10	23.09

NOTE: The above tabulation are figures compiled by S. T. Brer, Manager
Big Wood Canal Co.

CONCLUSIONS

A large amount of data not incorporated in this report is available in the office of watermaster at Shoshone. This data is available to anyone wishing more detailed information.

The Milner-Gooding Canal will undoubtedly be completed during 1932 and with the American Falls Reservoir water available for the lands covered by this canal the water shortages of the past should be eliminated. Latest information indicates that when the canal is completed it is going to show good efficiency.

This report has an index giving the important records and where they may be found in the watermaster reports for the year 1917 to 1930, inclusive; and it is indexed so that losses, canal deliveries, and various other information can be readily found.

The tables have been prepared with the idea in view that any desired, detailed information can be obtained by a study of the several tables in conjunction with each other.

Owner	Source	WRN	Priority	Q	Use	Acres	Cut Dates			Δ Days		Δ Acre-Feet		AF/Acre		Δ Acre-Feet	
							2002	1937	1931	02/37	02/31	02/37	02/31	02/37	02/31	02/37	02/31
SCHOEN, LAWRENCE	GW / Wilson Ck	37-352B	6/15/1887	0.13	Irrigation		5/15 - 6/3 6/18	5/14 - 9/26	4/30	-12	-30						
SCHOEN, LAWRENCE	GW / Wilson Ck	37-351B	6/1/1886	0.16	Irrigation	14.4	5/15 - 6/3 7/1	5/14 - 9/26	4/30	-25	-43						
ALTON & PAULA HUYSER TRUST	Little Wood River	37-10561A	5/5/1884	4	Irrigation		5/15 - 6/3 7/16	-	6/2 - 6/11 7/21	95	15	754	119	3.7	0.6		
ALTON & PAULA HUYSER TRUST	Little Wood River	37-10561B	5/5/1884	2.2	Irrigation	311.6	5/15 - 6/3 7/16	-	6/2 - 6/11 7/21	95	15	415	65	3.7	0.6	1091	184
MATHENEY, JOE;	Little Wood River	37-1125	5/20/1908	3.2	Irrigation	21	5/15	5/14	4/15	-1	-30						
MATHENEY, MELISSA	Little Wood River	37-1126	4/8/1908	0.8	Irrigation	40	5/15	5/14	4/15	-1	-30						
LEGG, CARL; LEGG, SUSAN DIANE	Little Wood River	37-21135	4/15/1985	0.78	Irrigation	23.2	5/15	5/14	4/15	-1	-30						
NEWELL, CHARLES E	Little Wood River	37-321	4/30/1884	3	Irrigation	173	5/15 - 6/3 7/16	-	7/21	95	24	565	143	3.3	0.8	565	143
7 MILE RANCH LLC	Little Wood River	37-344A	4/6/1883	4	Irrigation	219.9	-	-	-								
BARBARA FARMS LLC	Little Wood River	37-432	4/15/1885	2.6	Irrigation	54	5/15 - 6/3 7/9	5/15 - 6/19 6/25 - 7/1 7/20-9/12	5/8	7	-43	36		0.7		36	
NEWELL, CHARLES E	Little Wood River	37-471	4/30/1884	2	Irrigation	100	5/15 - 6/3 7/16	-	7/21	95	24	377	95	3.8	0.2	350	95
MATHENEY, JOE;	Little Wood River	37-472	4/1/1884	1.2	Irrigation	48.9	7/23	-	7/24 - 8/17	69	45	164	107	3.4	2.2	164	107
MATHENEY, MELISSA	Little Wood River	37-423	4/1/1883	0.3	Irrigation												
HUBSMITH, KAYSI	Little Wood River	37-424	4/1/1884	2.2	Irrigation	295	7/23	-	7/24 - 8/17	69	45	301	196	1.0	0.7	301	196
SHARON; HUBSMITH, RODNEY FRED	Little Wood River	37-425	4/1/1887	2.2	Irrigation		5/15 - 6/3 7/1	5/14 - 9/26	4/30	-25	-43						
RITTER, JAMES B; RITTER, LINDA	Little Wood River	37-973	4/1/1884	2	Irrigation	82	7/23	-	7/24 - 8/17	69	45	274	179	3.3	2.2	274	179
BARBARA FARMS LLC	Little Wood River	37-423	4/1/1883	0.3	Irrigation												
Taber, Don	Little Wood River	37-424	4/1/1884	2.2	Irrigation	295	7/23	-	7/24 - 8/17	69	45	301	196	1.0	0.7	301	196
Taber, Don	Little Wood River	37-425	4/1/1887	2.2	Irrigation		5/15 - 6/3 7/1	5/14 - 9/26	4/30	-25	-43						
																Totals	2781 904
																Above Station 54	1381 541
																Below Station 54	1446 363

SUBMIT / GOWN
EX. 42





EXHIBIT
N

43





MEMO



CORRECTED 6/8/2021

State of Idaho

Department of Water Resources

322 E Front Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 287-4800 Fax: (208) 287-6700

Date: May 17, 2021

To: Gary Spackman, P.E., Director

Cc: Sean Vincent, P.G., Hydrology Section Manager

From: Jennifer Sukow, P.E., P.G.

Subject: Predicted hydrologic response in Silver Creek and the Little Wood River to curtailment of groundwater use in 2021, Basin 37 Administrative Proceeding, AA-WRA-2021-001

On May 4, 2021, the Director of the Idaho Department of Water Resources (IDWR) initiated an administrative proceeding concerning water rights in Basin 37 (Wood River Basin).¹ Because a drought is predicted for the 2021 irrigation season and the water supply in Silver Creek and its tributaries may be inadequate to meet the needs of surface water users, the Director initiated the administrative proceeding to determine whether water is available to fill junior groundwater rights within the Wood River Valley south of Bellevue. If the Director concludes water is not available to fill groundwater rights, the Director may order the groundwater rights curtailed for the remainder of the 2021 irrigation season.

This memorandum provides technical information relevant to prediction of the hydrologic response in Silver Creek and the Little Wood River to the potential curtailment of groundwater use during the 2021 irrigation season. This memorandum addresses items 1, 4, 5, 6, and 7 from the Request for Staff Memorandum dated May 11, 2021.

¹ <https://idwr.idaho.gov/legal-actions/administrative-actions/basin-37.html>

Hydrology and hydrogeology

The hydrology and hydrogeology of the Big and Little Wood River basin was described in a staff memorandum for a previous proceeding (Sukow, 2015).² The previous memorandum (Attachment A) describes the occurrence of aquifers within Basin 37 and their interaction with surface water (Figure 1). The Wood River Valley aquifer system is hydraulically connected to Silver Creek and its tributaries above the Sportsman Access gage. Water use within the Wood River Valley aquifer system affects Silver Creek reach gain from groundwater, and thus affects streamflow in Silver Creek and in the Little Wood River downstream of Silver Creek. Other aquifers within Basin 37, including the Camas Prairie aquifer system and the Eastern Snake Plain Aquifer, do not interact with Silver Creek or the Little Wood River; therefore, water use within the other aquifers does not affect streamflow in Silver Creek or the Little Wood River below Silver Creek.

Since the 2015 memorandum was written, IDWR has continued to collect water level data in both the Wood River Valley and Camas Prairie aquifer systems. Wylie (2019a)³ provided an update on groundwater conditions in the Big Wood River Ground Water Management Area (BWRGWMA), which encompasses these aquifer systems. Moody (2018a)⁴ discussed a synoptic measurement of water levels in 103 wells during late October 2018. IDWR has also performed seepage surveys to measure aquifer discharge from the Camas Prairie aquifer system to lower Camas Creek (Moody, 2018b;⁵ Moody, 2020).⁶ Wylie (2019a) concluded there has been a long-term groundwater level decline in the Wood River Valley aquifer system since 1968, but that water level trends appear to have stabilized since the formation of the BWRGWMA in 1991. Seepage measurements by Moody (2018; 2020) confirmed the results of previous seepage surveys, which indicate the Camas Creek aquifer system discharges to lower Camas Creek and provides inflow to Magic Reservoir.

² Sukow, J., 2015, *Hydrology, hydrogeology, and hydrologic data, Big Wood & Little Wood Water Users Association delivery calls, CM-DC-2015-001 and CM-DC-2015-002*. Idaho Department of Water Resources, August 28, 2015, 25 p., <https://idwr.idaho.gov/files/legal/CM-DC-2015-001/CM-DC-2015-001-20150828-WRCall-Hydro-Memo-w-Attach.pdf>.

³ Wylie, A., 2019a, *Summary of Ground Water Conditions in the Big Wood River Ground Water Management Area, 2019 Update*. Idaho Department of Water Resources, 79 p., <https://idwr.idaho.gov/files/publications/20190920-Summary-Groundwater-Conditions-Big-Wood-River-GWMA-2019-Update.pdf>.

⁴ Moody, A., 2018a, *Wood River Groundwater Level Synoptic, Fall 2018*. Idaho Department of Water Resources, 20 p., <https://idwr.idaho.gov/files/publications/20190809-Wood-River-groundwater-level-synoptic-2018.pdf>.

⁵ Moody, A., 2018b, *Camas Creek Seepage Survey, Fall 2017*. Idaho Department of Water Resources, 6 p., <https://idwr.idaho.gov/files/publications/20180108-OFR-Camas-Creek-Seepage-Survey.pdf>.

⁶ Moody, A., 2020, *Camas Creek Seepage Survey, Fall 2018*. Idaho Department of Water Resources, 5 p., <https://idwr.idaho.gov/files/publications/202011-OFR-Camas-Creek-Seepage-Survey.pdf>.

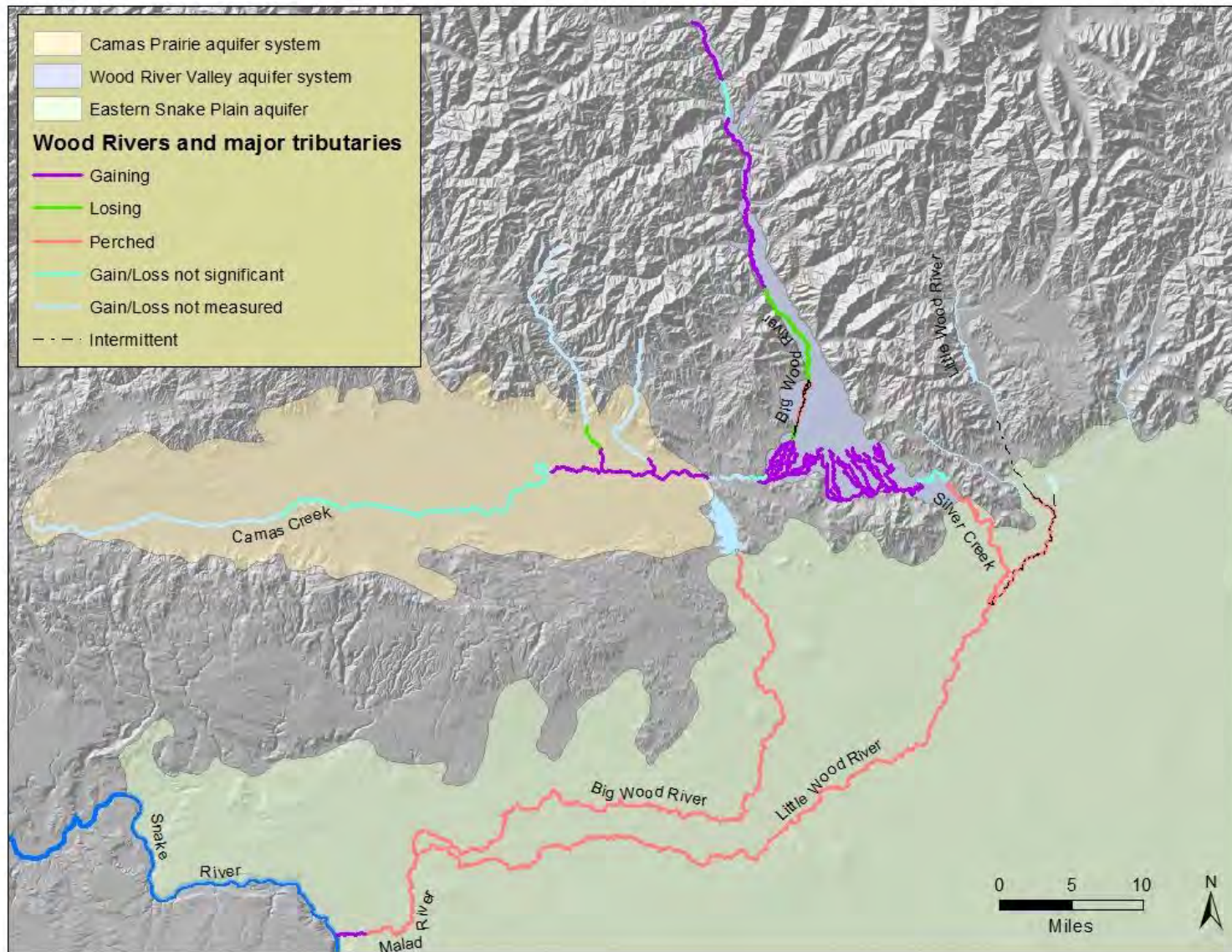


Figure 1. Generalized location of aquifers and interaction with surface water (from Sukow, 2015).

Wylie (2019a) identified four wells in the Bellevue Triangle with long water-level monitoring records beginning in the 1950s (Figure 2). Figure 3 through Figure 6 show the water level data for these four wells updated through the spring of 2021. Recent water level measurements indicate that water levels in both the unconfined and confined aquifer have declined since 2019, in response to a low water supply year in 2020. Aquifer water levels are affected by multiple sources of aquifer stress, including natural recharge from tributary underflow and infiltration of precipitation, canal seepage and incidental recharge of surface water applied in excess of crop water needs, groundwater withdrawals for irrigation, and natural discharge through evapotranspiration in wetlands and riparian areas. During years with low water supply, a combination of reduced natural recharge, reduced recharge from seepage of irrigation water, and groundwater withdrawals for irrigation all contribute to decreases in aquifer head and aquifer discharge to streams.

Discharge from the Wood River Valley aquifer system is the primary source of water for Silver Creek and Willow Creek (Sukow, 2015). Direct precipitation and snowmelt runoff provide some additional water seasonally. Well 01S 18E 14AAB1 (Figure 2, Figure 3), which is completed in the confined aquifer, and Well 01S 19E 03CCB2 (Figure 2, Figure 4), which is completed in the unconfined aquifer, have sufficient records of measurement between 1995 and 2014 to show the relationship between the aquifers and Silver Creek reach gains (Figure 7, Figure 8). Water levels at both locations correlate well with the Silver Creek reach gain from groundwater (Figure 9). Water levels at both locations have weaker correlation with the Willow Creek reach gain from groundwater (Figure 10). Water level measurements in the unconfined aquifer within the Willow Creek drainage area would be expected to correlate well with Willow Creek reach gain, but this relationship cannot be evaluated because there are not sufficient measurements of the unconfined aquifer in this area.

Streamflow measurements from October 2012 (Figure 11) and March 2013 (Figure 12) show the relative contribution of tributaries to Silver Creek streamflow at the Sportsman Access gage (Bartolino, 2014)⁷. Nearly 80% of the aquifer discharge to the Silver Creek drainage system occurred in tributaries upstream of Highway 20. Cove Creek and Loving Creek provided over half of the streamflow during these measurement events.

⁷ Bartolino, J., 2014, Stream Seepage and Groundwater Levels, Wood River Valley, South-Central Idaho, 2012-2013. U.S. Geological Survey, Scientific Investigations Report 2014-5151, 34 p., <https://pubs.usgs.gov/sir/2014/5151/>.

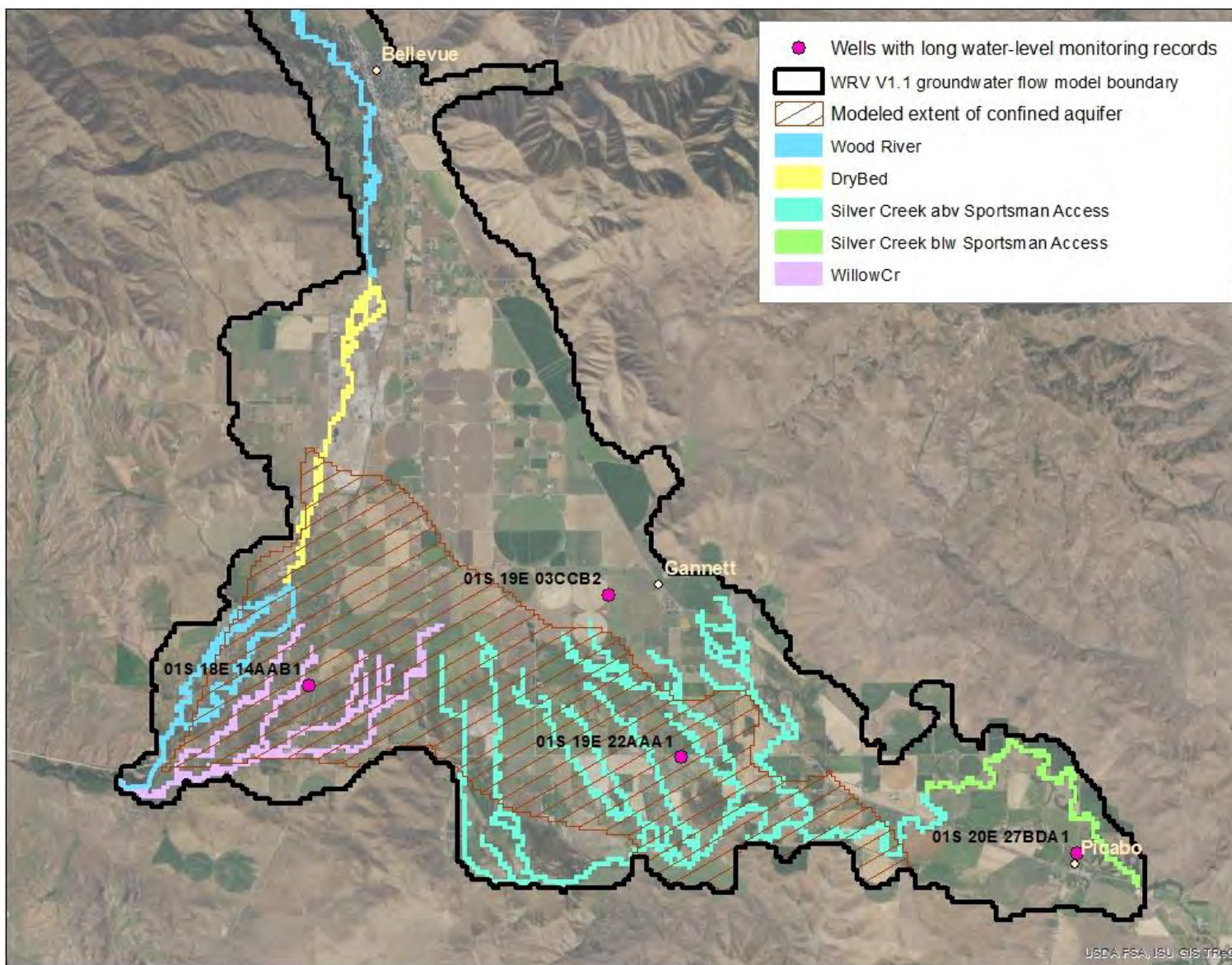


Figure 2. Wells in Bellevue Triangle with long water-level monitoring records

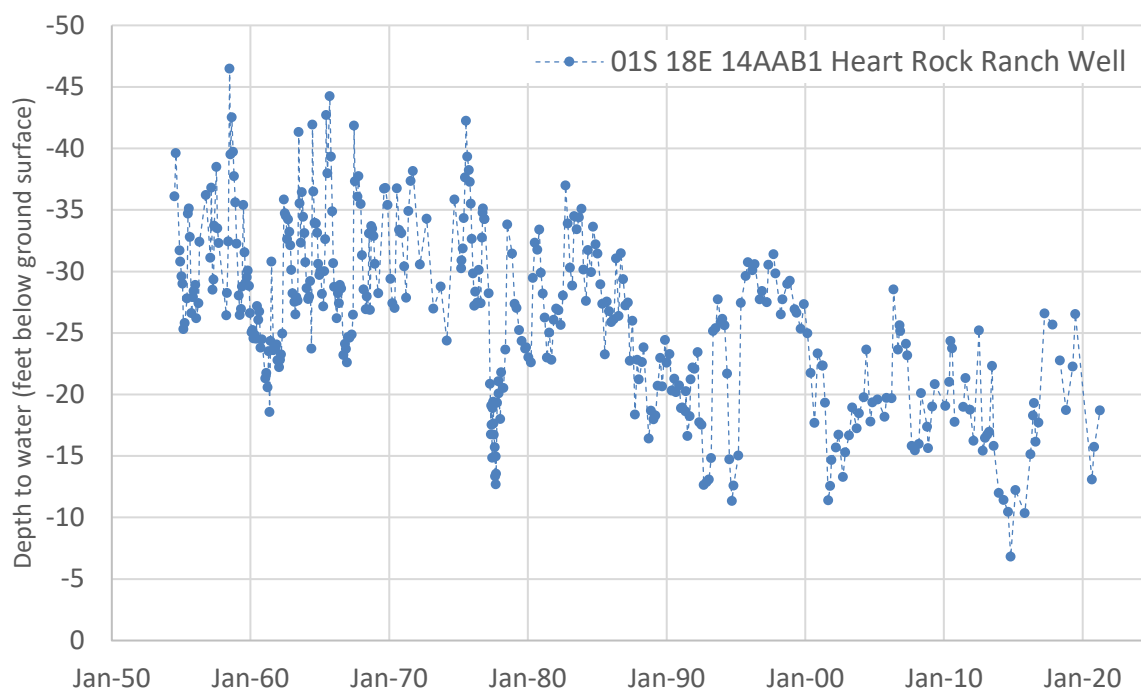


Figure 3. Updated water-level monitoring data for well 01S 18E 14AAB1 (confined aquifer)

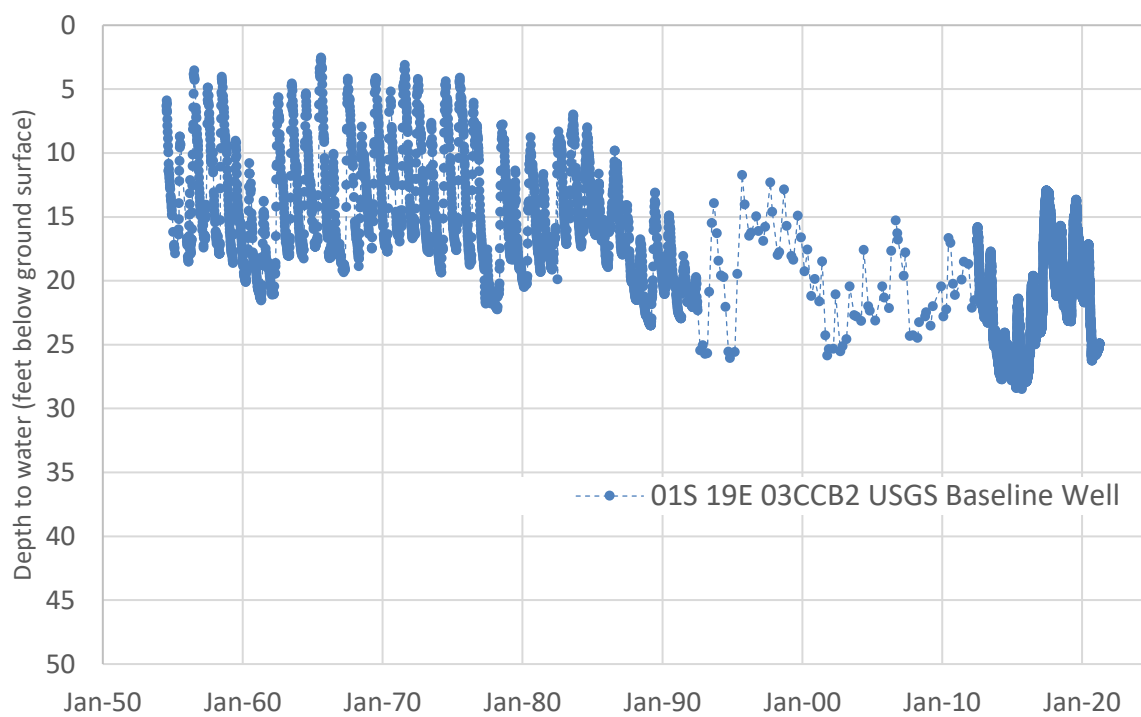


Figure 4. Updated water-level monitoring data for well 01S 19E 03CCB2 (unconfined aquifer)

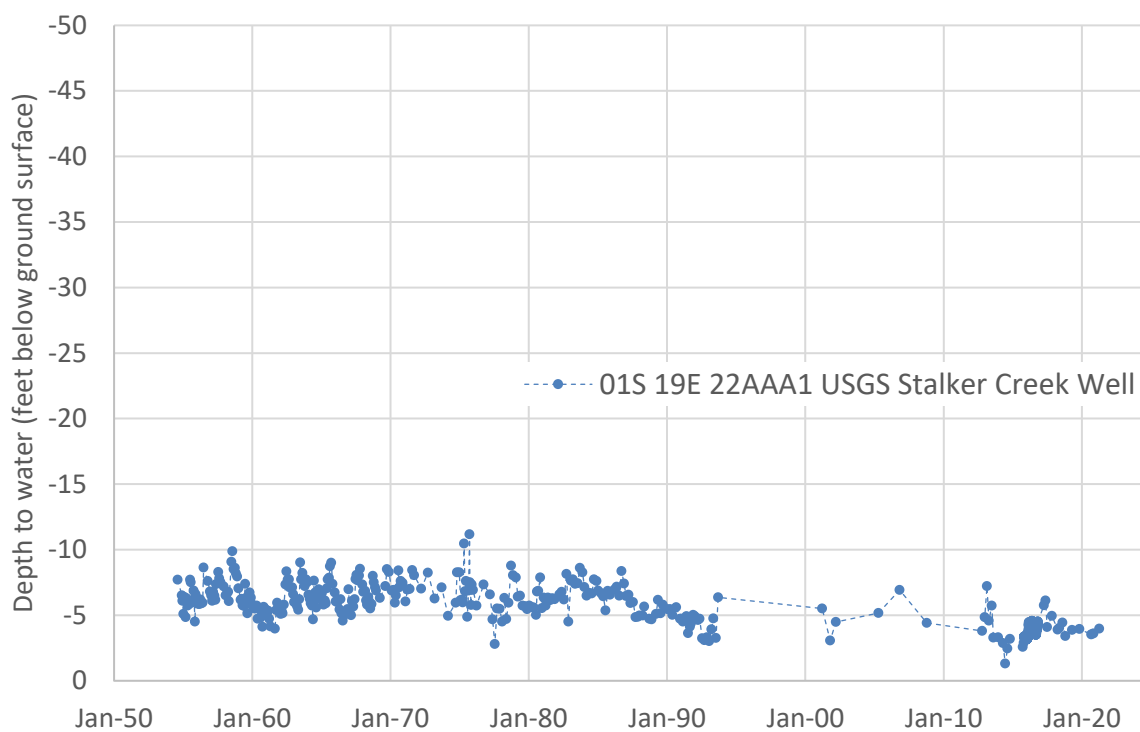


Figure 5. Updated water-level monitoring data for well 01S 19E 22AAA1 (confined aquifer)

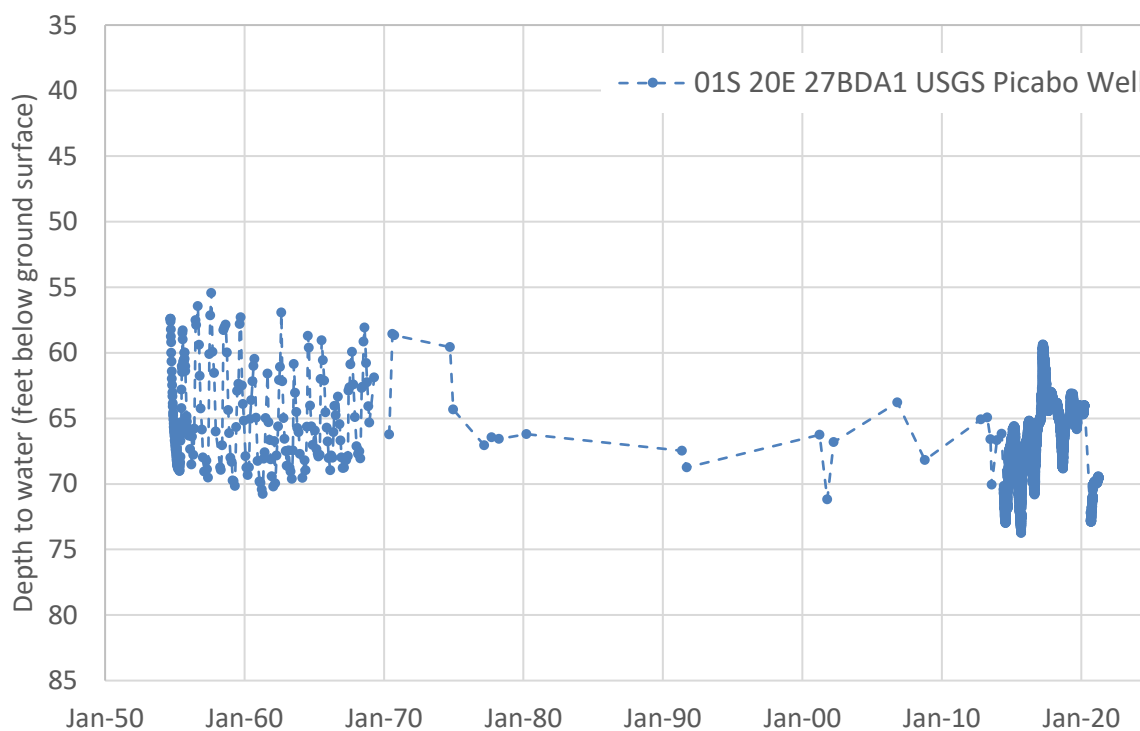


Figure 6. Updated water-level monitoring data for well 01S 20E 27BDA1 (unconfined aquifer)

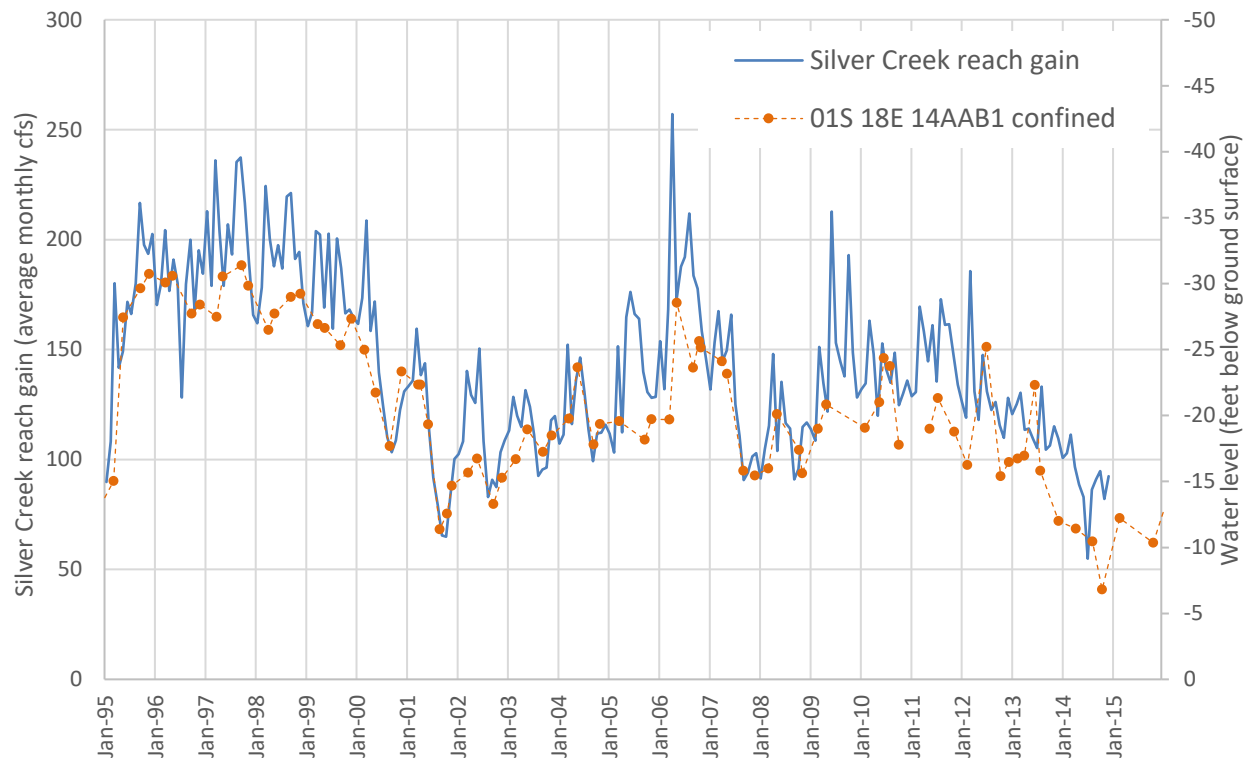


Figure 7. Silver Creek reach gain and water level in well 01S 18E 14AAB1 (confined aquifer)

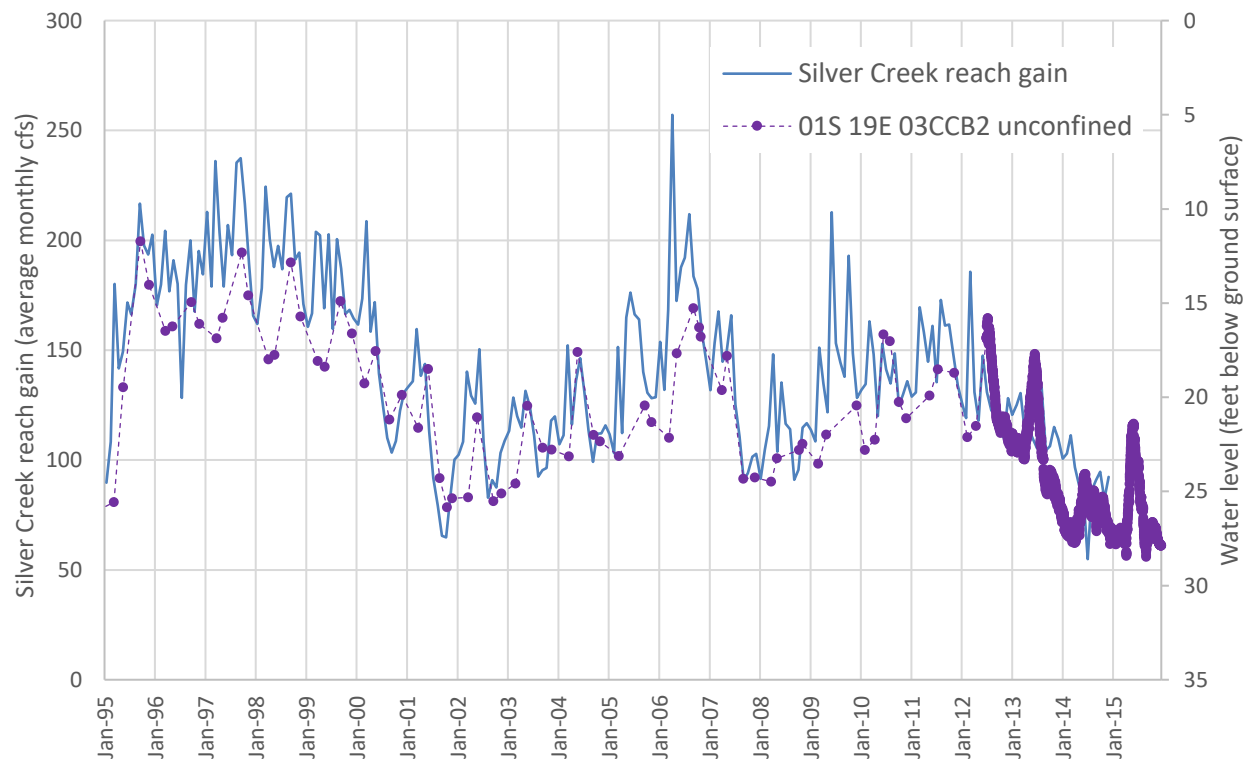


Figure 8. Silver Creek reach gain and water level in well 01S 19E 03CCB2 (unconfined aquifer)

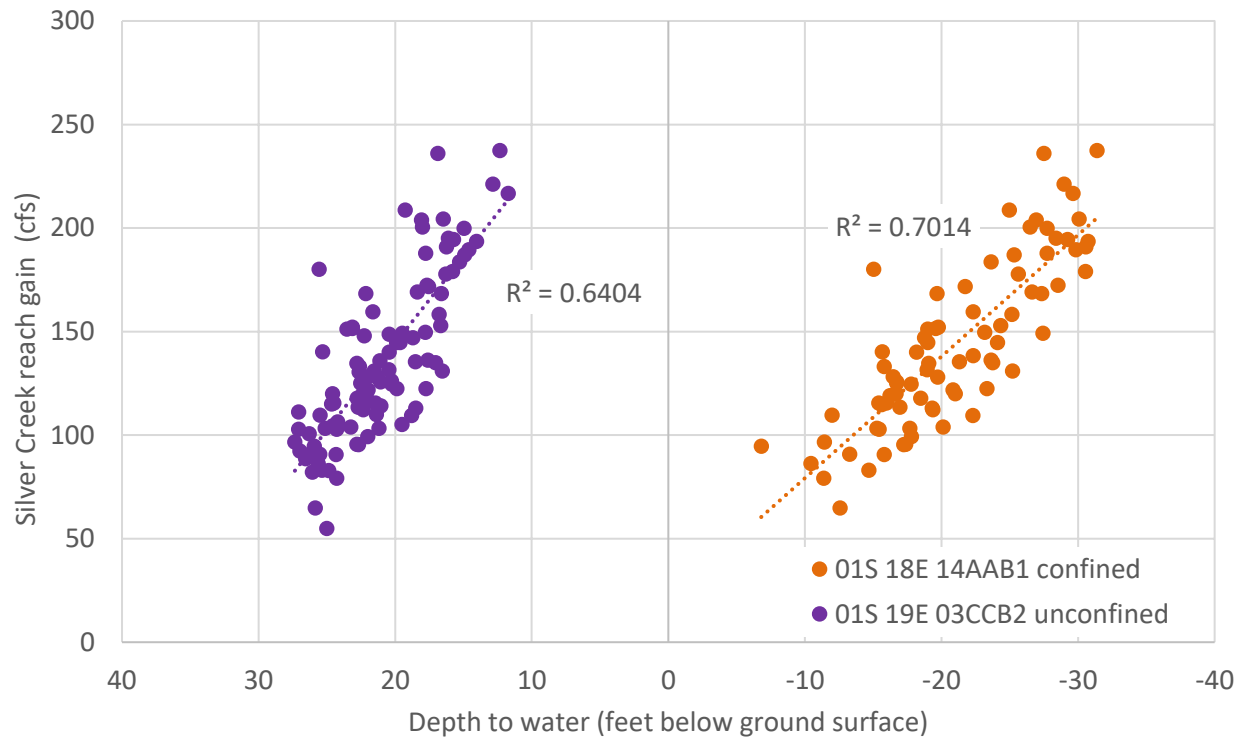


Figure 9. Correlation between Silver Creek reach gain and water levels

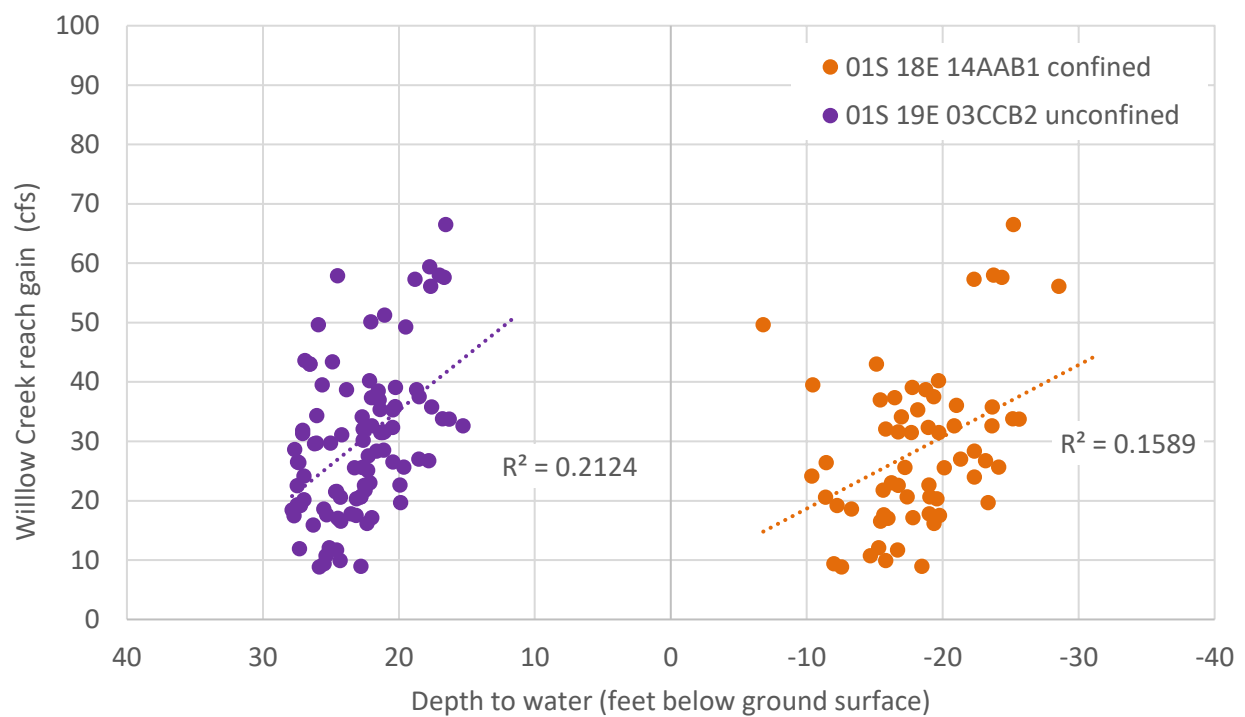


Figure 10. Correlation between Willow Creek reach gain and water levels

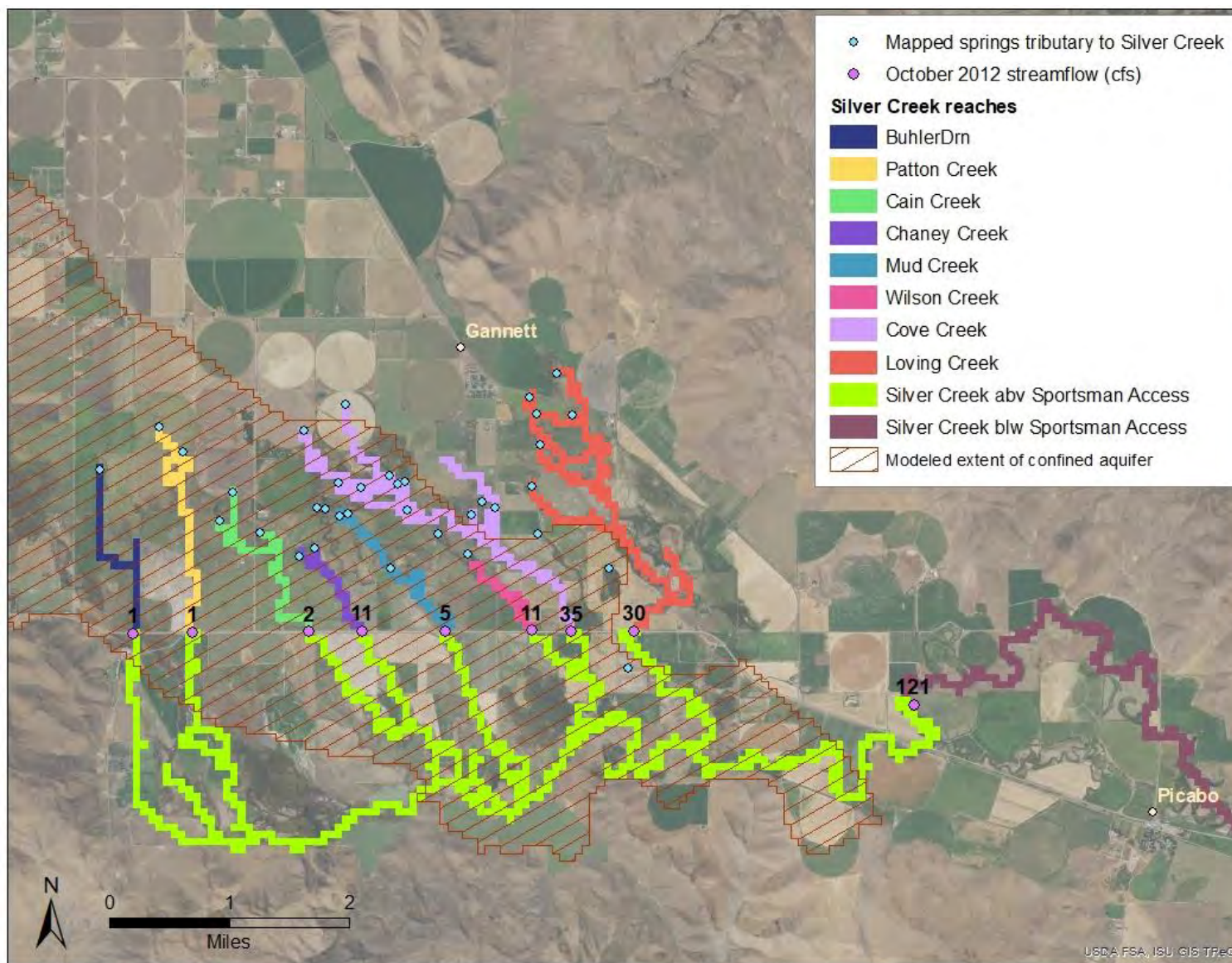


Figure 11. October 2012 streamflow measurements above Sportsman Access

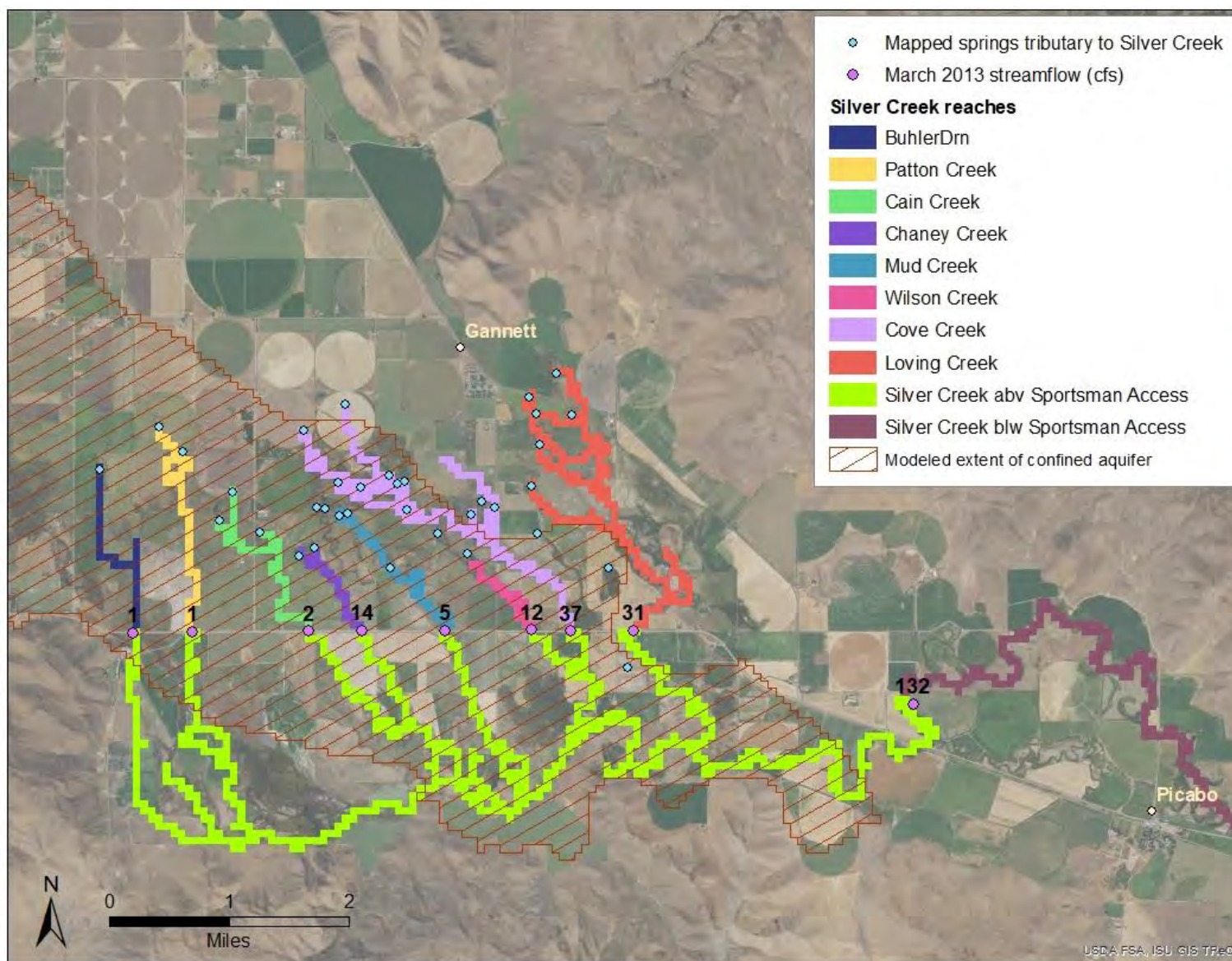


Figure 12. March 2013 streamflow measurements above Sportsman Access

Development of groundwater use

Groundwater development in the Camas Prairie aquifer system was discussed in Sukow (2015). As previously noted, the Camas Prairie aquifer system is not hydraulically connected to Silver Creek or the Little Wood River, and is not discussed further in this memorandum. Water right priority dates in the Wood River Valley aquifer system (Figure 13) provide a basis for evaluating historic groundwater development trends. Although Figure 13 shows groundwater rights for approximately 16 cfs with priority dates senior to 1900, those water rights were originally developed from a surface water source and are conditioned such that, “*Diversification of groundwater is limited to those times water is available for diversion under this right and priority from [surface water source].*” The groundwater rights with priority dates prior to 1900 are mitigated by non-use of the original surface water source, and are administered in priority with other surface water rights by Water District 37.

Based on priority dates for water rights where groundwater was the original source, groundwater development in the Wood River Valley aquifer system for municipal use began around 1907 when the Cramer Water Company in Hailey constructed a well equipped with two triplex electric pumps.⁸ Groundwater development for irrigation use began around 1912 when two hand dug wells were constructed near Broadford Road and equipped with Parma Water Lifter pumps.⁹ Groundwater development for irrigation in the Bellevue Triangle began around 1930. Significant development of the confined aquifer for irrigation began in the late 1940s. In 1961, the Idaho Department of Reclamation (predecessor to IDWR) designated the Silver Creek Critical Ground Water Area in the Bellevue Triangle in response to concerns about reduced pressure head in flowing artesian wells. The designation was rescinded in 1966 (IDWR, 2020).¹⁰

⁸ Documentation of water use and priority date for water right 37-22670, https://idwr.idaho.gov/apps/ExtSearch/DocsImages/yb5w01_.PDF.

⁹ Adjudication claim file for water right 37-22243, https://idwr.idaho.gov/apps/ExtSearch/DocsImages/nt4_01_.PDF.

¹⁰ IDWR, 2020, *Historical review of Big Wood River Ground Water Management Area*. Presentation to the BWRGWMA Advisory Committee, November 18, 2020, <https://idwr.idaho.gov/files/groundwater-mgmt/big-wood-gwma-advisory-comm/20201118-Big-Wood-GWMA-Advisory-Committee-Meeting-Materials.pdf>.

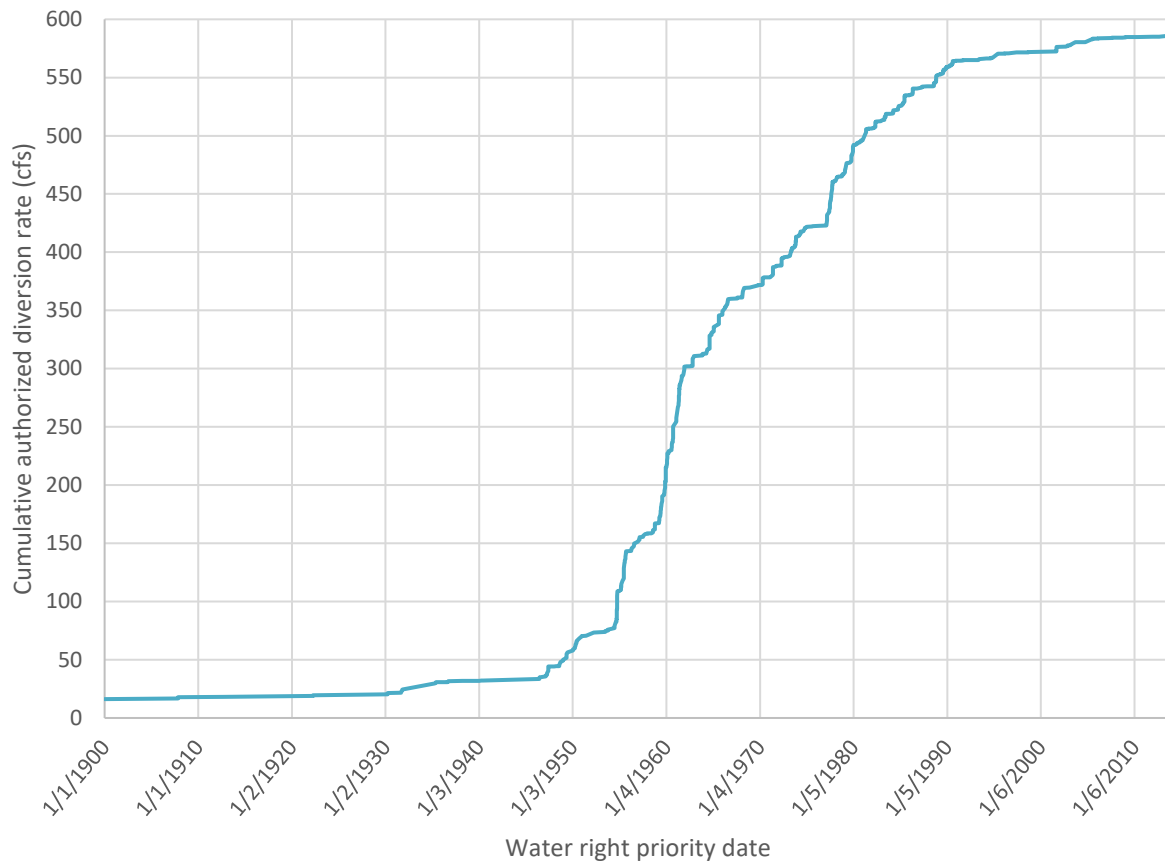


Figure 13. Cumulative authorized groundwater diversion rate for irrigation and municipal uses within the WRV1.1 model boundary

Figure 13 shows groundwater development increased steadily between the late 1940s and 1991. The BWRGWMA was designated by IDWR in 1991 because of concerns about the impacts of groundwater use on senior water users who rely on streamflow or inflow to Magic Reservoir.¹¹ Following the 1991 designation, the approval of new groundwater uses within the Wood River Valley aquifer system has generally been limited to non-consumptive or fully-mitigated uses. This is consistent with Wylie (2019a), who observed long-term water level trends in the Wood River Valley aquifer system declined between 1968 and 1991, while groundwater development was continuing to increase, then stabilized after 1991 when additional development was restricted.

Between 1995 and 2014, an average of approximately 42,000 acres of land in the Wood River Valley were irrigated for agriculture or partially irrigated for residential or urban uses.

¹¹ <https://idwr.idaho.gov/files/legal/orders/1991/19910628-Big-Wood-River-GWMA-Order.pdf>

Groundwater was the sole source of supply for approximately 9,000 acres and a second source of supply for approximately 27,000 acres (Sukow, 2017).¹²

Groundwater flow model development

Sukow (2015) mentioned the pending development of a groundwater-flow model of the Wood River Valley aquifer system. The U.S. Geological Survey (USGS) published the first version of the Wood River Valley groundwater flow model in 2016 (Fisher et al., 2016).¹³ During development of the first version of the model, IDWR and the USGS expanded monitoring of aquifer water levels and streamflow to address data gaps. IDWR released a recalibrated version of the groundwater flow model in 2019 (Wylie et al., 2019),¹⁴ which superseded the first version. The primary purpose of the model recalibration was to incorporate additional time-series data for aquifer head and streamflow that were measured between 2011 and 2014, with the intent of improving the model's ability to predict the timing of aquifer head and streamflow responses to aquifer stress. The model recalibration also refined the representation of the Dry Bed of the Big Wood River to facilitate prediction of streamflow responses above and below the Dry Bed. The model representation of the eastern extent of the confining layer and confined aquifer was also improved during the recalibration. The recalibrated model is referred to as Version 1.1 of the Wood River Valley groundwater flow model (WRV1.1).

Both versions of the model were constructed using MODFLOW-USG, a numerical model for simulating three-dimensional transient groundwater flow, and were calibrated using PEST, an automated parameter estimation program. Both versions of the model were developed with the input of a Modeling Technical Advisory Committee (MTAC), which was established to provide transparency in model development and to serve as a vehicle for stakeholder input (Bartolino and Vincent, 2013; Fisher et al., 2016; Wylie et al., 2019). Twenty-two MTAC meetings were convened between March 2013 and January 2019 to facilitate a transparent and open process of data collection, model construction, and model calibration.¹⁵

¹² Sukow, 2017, Preliminary updated water budget for calibration of Wood River Valley groundwater model version 1.1. Presented to the Wood River Valley Modeling Technical Advisory Committee, <https://idwr.idaho.gov/files/projects/wood-river-valley/20170524-WaterBudgetUpdates.pdf>.

¹³ Fisher, J.C., J.R. Bartolino, A.H. Wylie, J. Sukow, M. McVay, 2016, *Groundwater flow model for the Wood River Valley aquifer system, south-central Idaho*. U.S. Geological Survey Scientific Investigations Report 2016-5080, 84 p., <https://pubs.er.usgs.gov/publication/sir20165080>.

¹⁴ Wylie, A., J. Sukow, M. McVay, J. Bartolino, 2019, *Groundwater flow model for the Wood River Valley aquifer system, Version 1.1*. Idaho Department of Water Resources, 39 p., <https://idwr.idaho.gov/files/projects/wood-river-valley/20190627-Groundwater-Flow-Model-forthe-Wood-River-Valley-Aquifer-System.pdf>.

¹⁵ <https://idwr.idaho.gov/water-data/projects/wood-river-valley/meetings.html>

Both versions of the model were developed to serve as a tool for water rights administration and water resource management and planning (Bartolino and Vincent, 2013;¹⁶ IDWR and USGS, 2014;¹⁷ Fisher et al., 2016). Wylie et al. (2019) provided the following statement regarding the use of WRV1.1 as a tool for evaluating groundwater and surface water interactions in the model area.

“Although every groundwater model is a simplification of a complex hydrologic system, WRV Aquifer Model Version 1.1 is the best available tool for evaluating the interaction between groundwater and surface water in the Wood River Valley. The science underlying the production and calibration of the WRV Aquifer Model Version 1.1 reflects the best knowledge of the aquifer system available at this time. The WRV Aquifer Model Version 1.1 was calibrated to 1,314 aquifer water-level measurements and 1,026 river gain-and loss-calculations. Calibration statistics indicate a good fit to the observed data, providing confidence that the updated model provides an acceptable representation of the hydrologic system in the Wood River Valley.”

Because every groundwater model is a simplification of complex hydrologic system, there is uncertainty in all groundwater model predictions. An evaluation of the predictive uncertainty of the WRV1.1 model was performed and documented by Wylie (2019b).¹⁸ The evaluation included five analyses, in which the injection of water into a single model cell was simulated for a period of 10 months and the predictive uncertainty of the streamflow response at a selected river reach was evaluated. The predictive uncertainty ranged from +/- 0.54% to +/- 22% of the volume recovered in the target reach. The lowest predictive uncertainty was for an analyses where water was injected at a location north of Hailey. The highest predictive uncertainty was for three analyses where water was injected at locations south of Bellevue (+/- 15% to +/- 22% of the recovered volume).

Because the model was developed to serve as a tool to inform the conjunctive management and administration of groundwater and surface water, a curtailment scenario was performed and

¹⁶ Bartolino, J. and S. Vincent, 2013, *Groundwater Resources of the Wood River Valley, Idaho: A Groundwater-Flow Model for Resource Management*. U.S. Geological Survey Fact Sheet 2013-2005, 4 p., <https://pubs.usgs.gov/fs/2013/3005/>.

¹⁷ IDWR and USGS, 2014, *Design Objectives, Wood River Valley Aquifer System Groundwater-Flow Model*. Draft by the USGS/IDWR Modeling Team, January 14, 2021, 3 p., <https://idwr.idaho.gov/files/projects/wood-river-valley/20140131-WRV-Design-Objectives.pdf>.

¹⁸ Wylie, A., 2019b, *Wood River Valley Aquifer Model Version 1.1 Uncertainty Analysis*. Idaho Department of Water Resources, 20 p., <https://idwr.idaho.gov/files/projects/wood-river-valley/20190702-WRV-Uncertainty-Analysis-v1.1.pdf>.

documented by IDWR (Sukow, 2019).¹⁹ The curtailment scenario simulated the cumulative impacts of the consumptive use of groundwater on streamflow from 1995 through 2014. The effects of curtailing groundwater use for a single irrigation season during the water years of 2007 and 2012 were also simulated. The curtailment simulations excluded groundwater use mitigated by non-use of surface water and exempt domestic water use with irrigation of less than ½-acre. Where groundwater diversion data were lacking, the consumptive use of groundwater was estimated by calculating the groundwater irrigation demand from land use, evapotranspiration, precipitation, and surface water diversion data as described in the model documentation (Fisher, et al., 2016; Sukow, 2019). Where measured surface and groundwater diversions to a service area exceeded the irrigation demand, groundwater consumptive use was estimated by multiplying the ratio of groundwater diversions to total diversions by the total consumptive use. Figure 14 shows the volume of curtailed consumptive use simulated in the Sukow (2019) scenario.

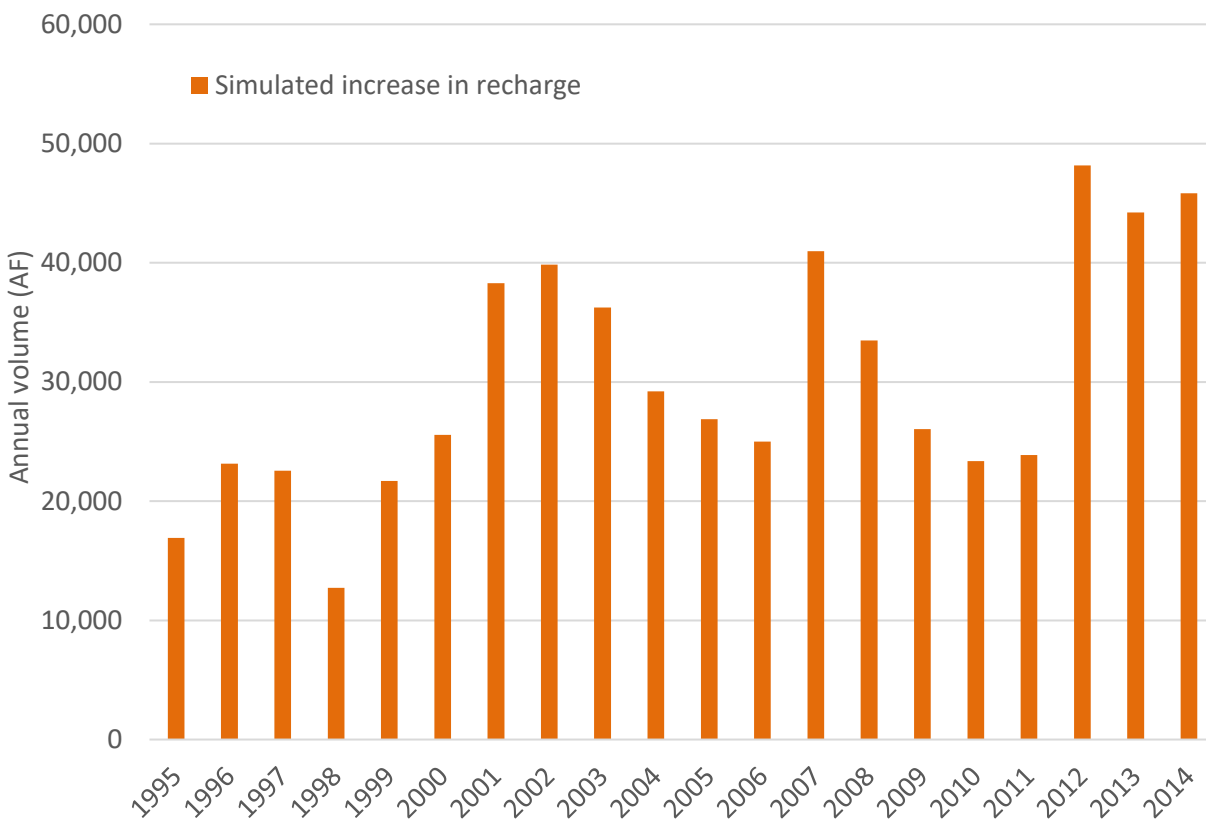


Figure 14. Volume of curtailed consumptive use simulated in Sukow (2019)

¹⁹ Sukow, J., 2019, *Groundwater-Flow Model for the Wood River Valley Aquifer System, Version 1.1, Simulated Curtailment of Groundwater Use*. Idaho Department of Water Resources, July 31, 2019, 19 p., <https://idwr.idaho.gov/files/projects/wood-river-valley/20190731-Report-WRV-V11CurtailSim.pdf>.

Analyses for 2021 Basin 37 Administrative Proceeding

The WRV1.1 model was used to simulate the impact of curtailing consumptive use of groundwater for agricultural, municipal, residential, and commercial irrigation during the 2021 irrigation season. The year 2002 was used as a baseline dry year for the model simulation. Exempt self-supplied domestic water use for irrigation of less than 1/2-acre was excluded from the curtailment simulation. Groundwater use that is already mitigated by non-use of surface water or is otherwise already regulated in priority with surface water diversions by Water District 34 was also excluded from the curtailment simulation. Methods and pre-processing tools used to model the curtailment are described in detail by Sukow (2019).

Curtailment of irrigation was simulated with different starting dates of May 1, June 1, July 1, and August 1. Results for all four starting dates are provided in Attachment B and the supporting files. Because the hearing for the Basin 37 Administrative Proceeding is scheduled for June 7-11, 2021, results from the simulated curtailment starting July 1 are discussed in the text of this memorandum. Curtailment was simulated within two areas (Figure 15). The first area was the WRV1.1 model boundary. Although the effects of the curtailment were simulated with the model for a period of approximately 12 years, the WRV1.1 model predicts most of the impacts to streamflow are realized in less than 2 years (Figure 16). Because the Basin 37 Administrative Proceeding was initiated to address water delivery during the 2021 irrigation season, the results presented in the text of this memorandum focus on the hydrologic responses that are predicted to occur by the end of September.

While a significant portion (66%) of the curtailed water use remains in aquifer storage on October 1, the predicted July through September increases in streamflow are also significant (Table 1). Predicted increases to the average monthly streamflow during the 2021 irrigation season range from 23 to 28 cfs in Silver Creek, 10 to 16 cfs in the Big Wood River above the Dry Bed, and 2 to 7 cfs in the Big Wood River below the Dry Bed. Increases in streamflow in Silver Creek would be available for diversion in priority to water users on Silver Creek and the Little Wood River. Potential seepage losses within the Silver Creek and Little Wood River system are discussed later in this memorandum.

Increases in streamflow in the Big Wood River above the Dry Bed would likely be diverted in priority by water users with Big Wood River diversions above Glendale Road or off of the Bypass Canal system. If the additional predicted Big Wood River streamflow of 10 to 16 cfs (Table 1) is diverted onto the Bellevue triangle, this would likely provide some additional in-season streamflow in Silver Creek because a portion of the diversions will be lost to the aquifer via canal seepage and on-field infiltration. However, any additional benefit to streamflow in Silver Creek

would be dependent on the inefficiency of senior surface water users, who cannot be required to “waste” water to benefit other water users downstream.²⁰ Prediction of potential additional benefits to Silver Creek would require predicting where, when, and how efficiently the additional water would be applied, and was not attempted for this analysis.

Increases in streamflow in the Big Wood River below the Dry Bed reach, which includes Willow Creek and its tributaries, is expected to result in an increase in inflow to Magic Reservoir. Kevin Lakey, Water District 37 Watermaster, indicated during the March 24, 2021 meeting of the BWRGWMA Advisory Committee that diversion demands are generally already met in this part of the system, and that any increases in reach gains are likely to result in additional inflow to Magic Reservoir.

²⁰ Idaho case law has established that downstream water users cannot compel upstream users to continue wasting water. *Hidden Springs Trout Ranch v. Hagerman Water Users*, 101 Idaho 677, 680-681 (1980).

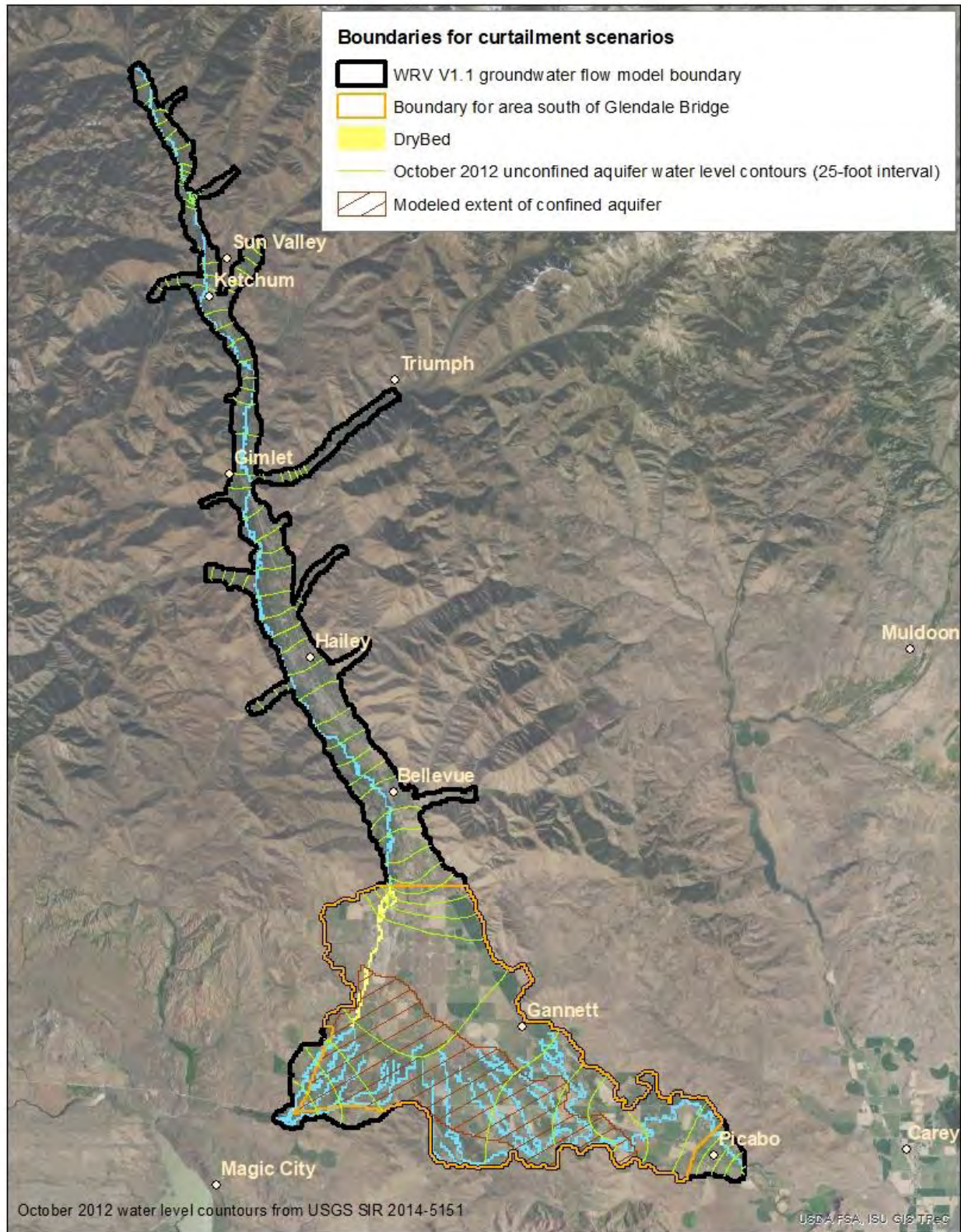


Figure 15. Areas of curtailment simulated with WRV1.1

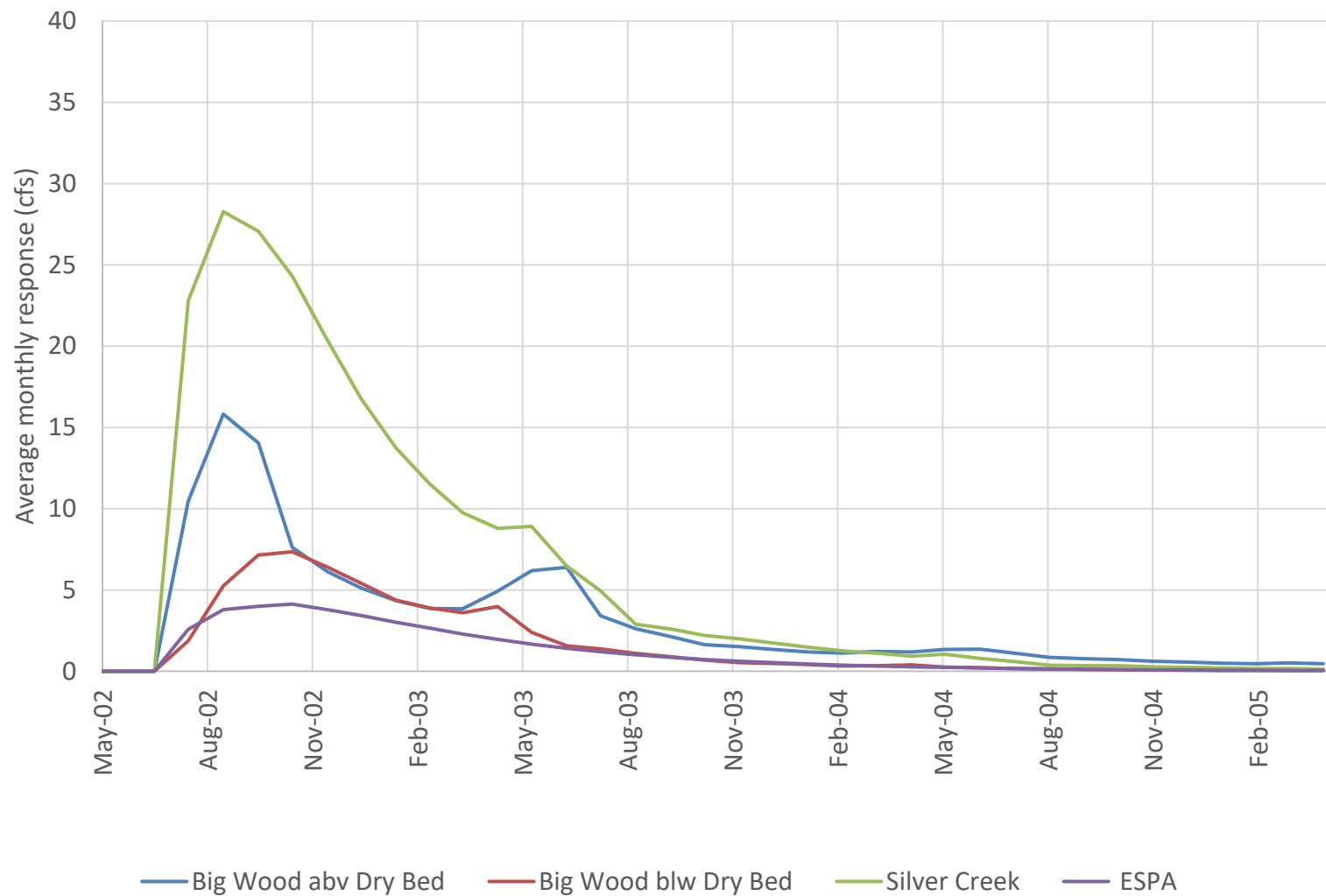


Figure 16. Predicted increase in aquifer discharge resulting from curtailment starting July 1 within the WRV1.1 model boundary

Table 1. Predicted responses to curtailment starting July 1 within the WRV1.1 model boundary

Month	Curtailed consumptive use	Silver Creek		Big Wood above Dry Bed		Big Wood below Dry Bed		Groundwater underflow to ESPA		Increase in aquifer storage	Model convergence error
		cfs	AF	cfs	AF	cfs	AF	cfs	AF		
May	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0
July	10,144	22.8	1,403	10.5	644	1.9	116	1.6	98	7,883	1
Aug	9,613	28.3	1,738	15.8	973	5.3	323	2.8	174	6,405	0
Sep	<u>5,221</u>	27.1	<u>1,611</u>	14.0	<u>836</u>	7.2	<u>425</u>	3.1	<u>184</u>	<u>2,164</u>	<u>1</u>
Sum	24,978		4,752		2,452		864		456	16,452	2
	100%		19%		10%		3%		2%	66%	0%

The second area for which curtailment was simulated comprised most of the model area south of Glendale Bridge (Figure 15, Figure 17). The second area excludes areas where groundwater pumping has minimal impact on streamflow in Silver Creek. Glendale Bridge crosses the Big Wood River at the north end of the Dry Bed. Aquifer water levels deepen at the northern margin of the triangle between Bellevue and Glendale Bridge. Between Glendale Bridge and the south end of the Dry Bed, interaction between the Big Wood River and the aquifer is generally limited to perched seepage from the Big Wood River during spring runoff, particularly during years with low water supply. North of Glendale Bridge, groundwater pumping primarily impacts streamflow in the Big Wood River above the Dry Bed. South of Glendale Bridge, groundwater pumping primarily impacts streamflow in Silver Creek, the Big Wood River below the Dry Bed, and/or underflow to the Eastern Snake Plain Aquifer (ESPA). Areas where pumping primarily impacts underflow to the ESPA or the Big Wood River below the Dry Bed were excluded from the curtailment simulation area south of Glendale Bridge.

Silver Creek and its spring-fed tributaries interact with the aquifer upstream of the Sportsman Access gage. Between the gage and the model boundary, Silver Creek is generally perched above the aquifer and streamflow measurements made by the USGS and IDWR indicate gains or losses in this reach are less than the streamflow measurement error. Aquifer water levels deepen significantly in the vicinity of Picabo (Figure 17). Groundwater pumping near the southeastern model boundary primarily impacts underflow to the Eastern Snake Plain Aquifer and has minimal effect on streamflow in Silver Creek.²¹ This area was excluded from the curtailment simulation area south of Glendale Bridge.

The location of the confining unit and confined aquifer affect the distribution of the impacts of groundwater pumping. WRV1.1 model simulations²¹ show groundwater withdrawals from the confined aquifer have significant in-season impacts to streamflow in Silver Creek, even in the area underlying Willow Creek. Groundwater pumping in the unconfined aquifer in this area would primarily impact streamflow in Willow Creek, but review of available well logs (Attachment C) and the early priority dates of water rights in this area both suggest that wells supplying irrigation water in this area are developed in the confined aquifer. Areas outside of the modeled extent of the confined aquifer in the vicinity of the southwestern model boundary were excluded from the curtailment simulation area south of Glendale Bridge.

The simulation of curtailment indicates that 99% of the predicted in-season benefit to Silver Creek streamflow can be achieved by curtailing 70% of the consumptive groundwater use within the

²¹ In-season transient response functions were calculated for selected model cells to examine the effect of groundwater pumping in the unconfined and confined aquifers on streamflow. Model files and results are provided in the supporting files.

model domain by reducing the area of curtailment to the area south of Glendale Bridge (Figure 17). The predicted benefits to the Big Wood River and the ESPA are reduced significantly by excluding pumping in areas north of Glendale Bridge and along the southeastern and southwestern model boundaries (Figure 18). As with the full model boundary curtailment simulation, a significant portion (67%) of the curtailed water use remains in aquifer storage on October 1, but the predicted July through September increases in Silver Creek streamflow (23 to 28 cfs) are also significant (Table 2).

The simulated curtailment in the areas south of Glendale Road would affect the groundwater supply for approximately 23,000 acres of land, including approximately 4,000 acres where groundwater is the sole source of irrigation water, and approximately 19,000 acres where both groundwater and surface water are sources of irrigation water.

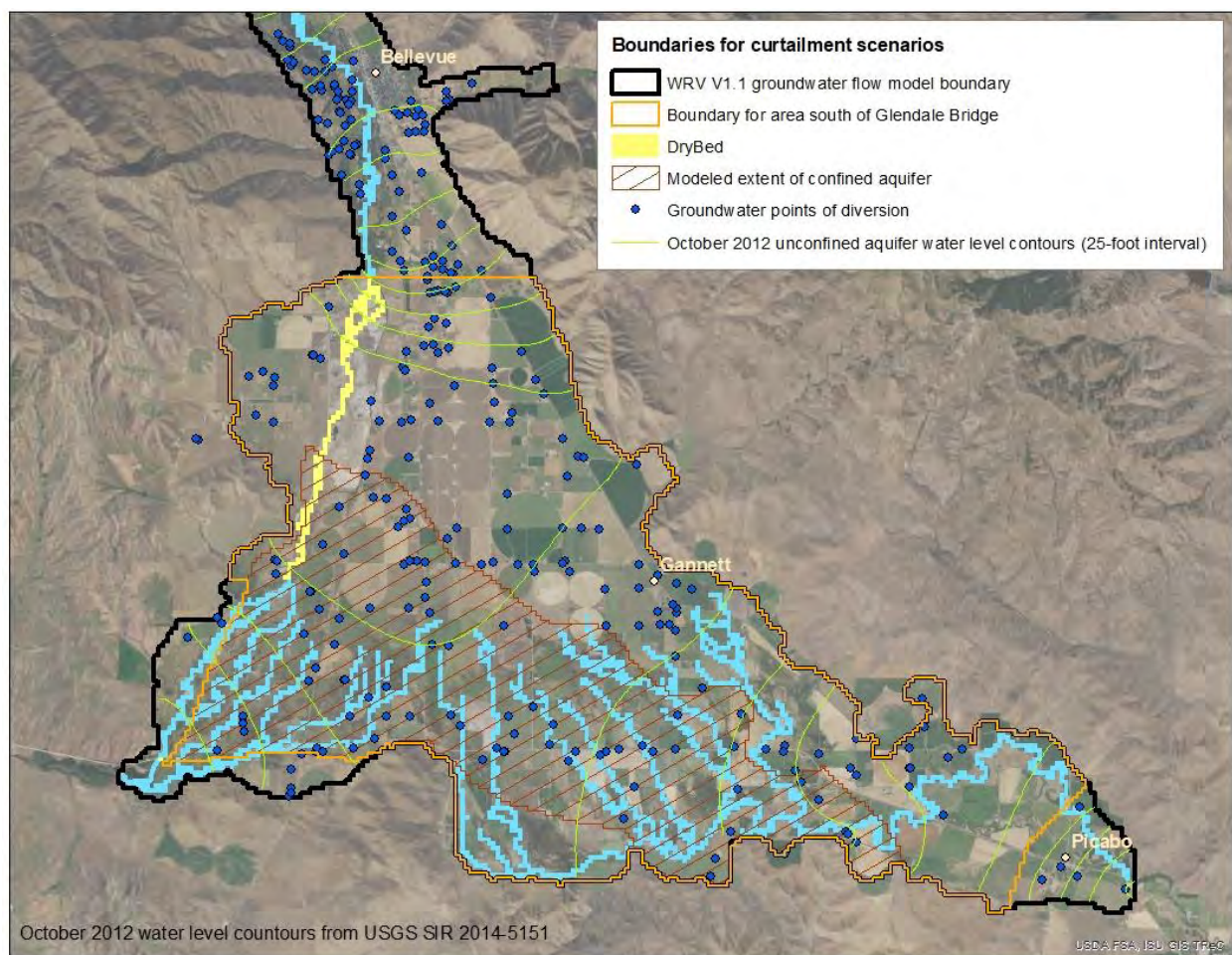


Figure 17. Simulated curtailment area south of Glendale Bridge

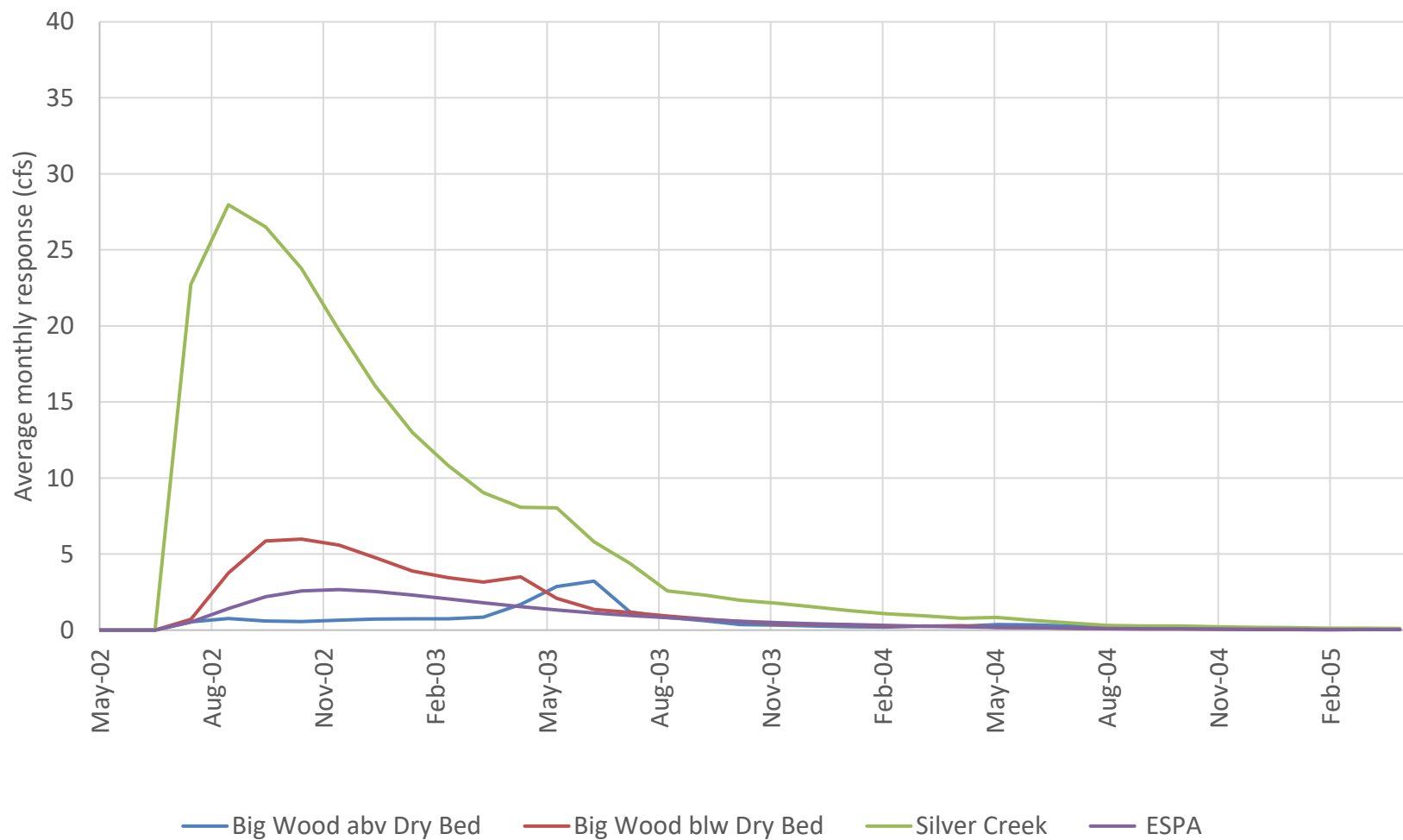


Figure 18. Predicted increase in aquifer discharge resulting from curtailment starting July 1 within the curtailment simulation area south of Glendale Bridge

Table 2. Predicted responses to curtailment starting July 1 within the area south of Glendale Bridge

Month	Curtailed consumptive use	Silver Creek		Big Wood above Dry Bed		Big Wood below Dry Bed		Groundwater underflow to ESPA		Increase in aquifer storage	Model convergence error
		cfs	AF	cfs	AF	cfs	AF	cfs	AF		
May	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0
July	7,214	22.7	1,398	0.5	33	0.7	43	0.5	32	5,706	2
Aug	6,737	28.0	1,720	0.8	47	3.8	231	1.4	87	4,652	0
Sep	<u>3,502</u>	26.5	<u>1,578</u>	0.6	<u>36</u>	5.9	<u>348</u>	2.2	<u>130</u>	<u>1,409</u>	<u>1</u>
Sum	17,453		4,695		116		623		249	11,767	3
	100%		27%		1%		4%		1%	67%	0%

Additional streamflow in Silver Creek may benefit water users at different locations within the Silver Creek and Little Wood River system. As shown in Figure 1, Silver Creek and its tributaries gain water from the Wood River Valley aquifer system upstream of the Sportsman Access gage. Between the Sportsman Access gage and the North Picabo Road Bridge the creek becomes perched above the Wood River Valley aquifer system and periodic streamflow measurements indicate minimal interaction with the aquifer (Wylie, 2019c,²² Fisher et al. 2016, Wylie, et al., 2019). The USGS also measured no significant seepage loss between the Sportsman Access gage and a location about 1.5 miles downstream of the Highway 20 Bridge in March 2013 (Bartolino, 2014).²³

Between the WRV1.1 model boundary and Station 10 on the Little Wood River (Figure 19), both Silver Creek and the Little Wood River are perched above the Eastern Snake Plain aquifer system. The Little Wood River above Silver Creek flows intermittently and generally only contributes to the flow below Silver Creek during periods of high surface runoff (Sukow, 2015). During the irrigation season in relatively dry years, canals in the upper Little Wood River valley generally divert the entire flow of the upper Little Wood River. Silver Creek is expected be the only source of water for the Little Wood River at Station 10 during the 2021 irrigation season.

For the 2020 irrigation season, average monthly seepage losses between the Sportsman Access gage and Little Wood River Station 10 were calculated using the USGS recorded streamflow at the Sportsman Access gage and Water District 37 records of streamflow at Little Wood River Station 10, thirty diversions from Silver Creek, and two inflows to Silver Creek (Table 3). Estimated seepage losses range from 16 cfs to 46 cfs and from 20% to 37% of the inflow to the reach. Reliable evaluation of seepage losses is frustrated by measurement uncertainty at the gages, the large number of diversions, and lack of winter-season maintenance and calibration of the Station 10 gage. IDWR is currently working with Water District 37 to improve the future year-round operation and maintenance of the Station 10 gage.

²² Wylie, A., 2019c, *Seven Silver Creek Flow Measurements Collected at North Picabo Bridge between October 2014 and November 2018*. Idaho Department of Water Resources, 10 p., <https://idwr.idaho.gov/files/projects/wood-river-valley/20190627-SilverCreekNrModelBound0619.pdf>.

²³ Bartolino, J., 2014, *Stream Seepage and Groundwater Levels, Wood River Valley, South-Central Idaho, 2012-2013*. U.S. Geological Survey, Scientific Investigations Report 2014-5151, 34 p., <https://pubs.usgs.gov/sir/2014/5151/>.

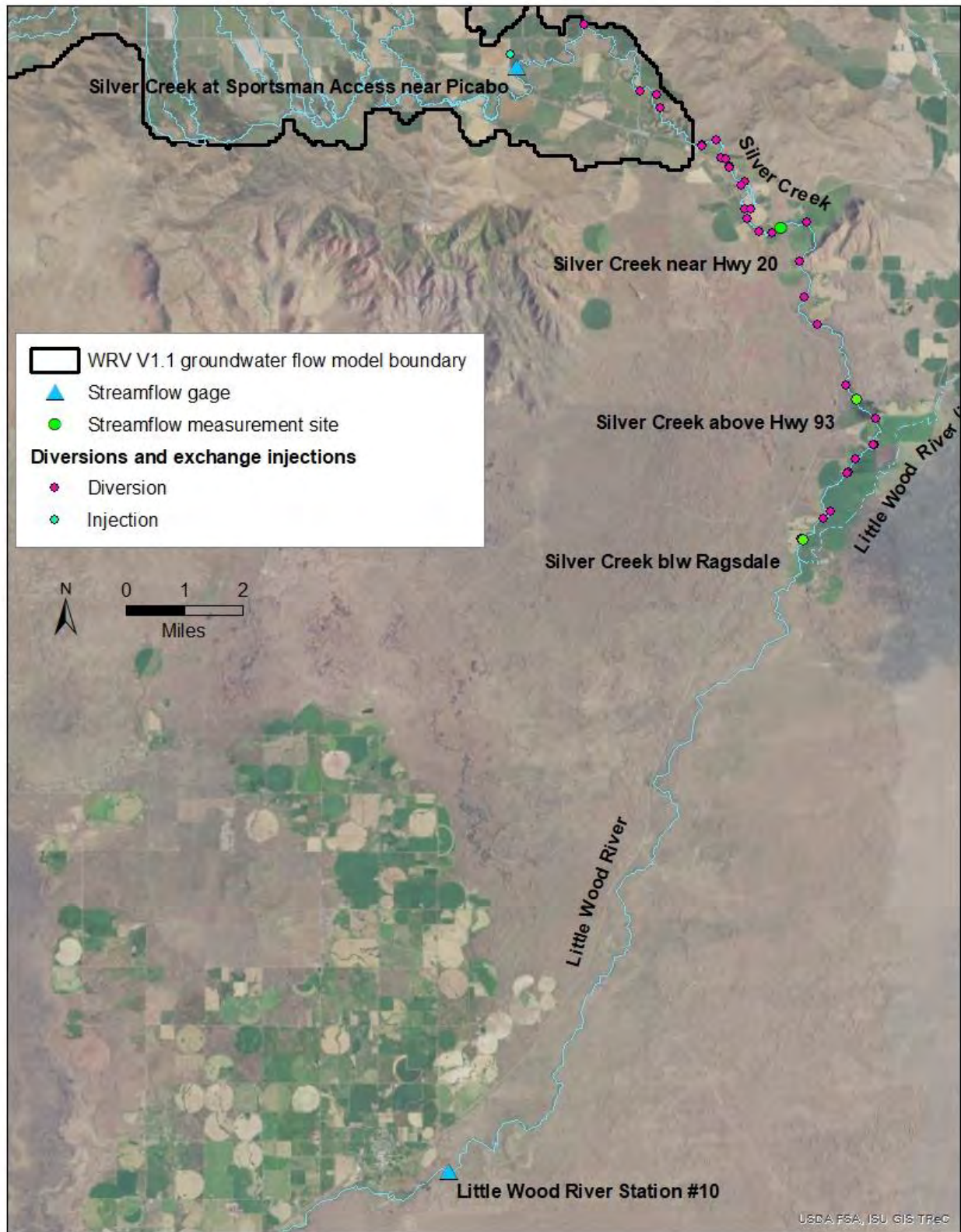


Figure 19. Silver Creek at Sportsman Access to Little Wood River Station 10

Table 3. Calculated seepage losses between Silver Creek at Sportsman Access and Little Wood River Station 10

Month	Inflows			Outflows		Calculated seepage loss (cfs)	% of inflow
	Silver Creek at Sportsman Access (cfs)	Exchange well 16P (cfs)	Little Wood River into Silver Creek 11C (cfs)	Diversions (cfs)	Little Wood River at Station 10 (cfs)		
May-20	118.3	4.9	5.3	31.5	51.2	45.8	36%
Jun-20	109.5	6.5	6.8	33.2	44.1	45.5	37%
Jul-20	83.2	6.4	6.8	35.3	29.5	31.7	33%
Aug-20	68.5	6.3	4.7	35.8	28.0	15.7	20%

As previously mentioned, seepage losses appear to be minimal between the Sportsman Access gage and where Highway 20 crosses Silver Creek. Seepage losses in the vicinity of the Highway 93 Bridge have been identified by water users as a concern, and losses in the range of 7 cfs to 15 cfs have reportedly been measured by Water District 37²⁴ between sites located approximately 0.5 mile upstream and 2.5 miles downstream of the bridge (Figure 19). IDWR has requested additional information regarding streamflow measurements at these sites, but has not received the data as of the date of this memorandum.

Conclusions

The Wood River Valley aquifer system is hydraulically connected to Silver Creek and its tributaries above the Sportsman Access gage, and consumptive use of groundwater within the Wood River Valley aquifer system has a significant impact on Silver Creek streamflow. Other aquifer systems in Basin 37 do not interact with Silver Creek or the Little Wood River. The WRV1.1 groundwater flow model is the best available tool for evaluating the interaction between groundwater and surface water in the Wood River Valley. The science underlying the development and calibration of WRV1.1 reflects the best knowledge of the aquifer system available at this time.

Curtailling groundwater use beginning July 1 within the WRV1.1 model boundary is predicted to result in increases in Silver Creek reach gain of approximately 23 cfs, 28 cfs, and 27 cfs during the months of July, August, and September (Table 1). Curtailling groundwater use within the reduced area south of Glendale Road delineated in Figure 15 and Figure 17 is predicted to result in similar increases, yielding approximately 99% of the benefit to Silver Creek reach gain while curtailing approximately 70% of the consumptive use within the WRV1.1 model boundary (Table 2, Attachment B).

Uncertainty is inherent in predictions made by all numerical and analytical models. Predictive uncertainty analyses of the WRV1.1 groundwater flow model performed by Wylie (2019b) found uncertainty of +/- 22% of the predicted response with a 95% confidence interval for predictions involving the impact of aquifer stress at selected locations in the Bellevue Triangle on reach gain in Silver Creek. The Wylie (2019b) predictive uncertainty analyses explored the predictive uncertainty associated with 10-month simulations. Because the simulations of curtailment beginning July 1 are shorter 3-month simulations, the predictive uncertainty associated with these predictions may be higher than +/- 22% at a 95% confidence interval.

²⁴ BWRGWMAAC, 2020, *Meeting minutes of the Big Wood River Groundwater Management Area Advisory Committee*, December 15, 2020, 3 p., <https://idwr.idaho.gov/files/groundwater-mgmt/big-wood-gwma-advisory-comm/20201215-Big-Wood-GWMA-Advisory-Committee-Meeting-Notes.pdf>.

The simulated curtailment in the area south of Glendale Road would affect the groundwater supply for approximately 23,000 acres of land, including approximately 4,000 acres where groundwater is the sole source of irrigation water, and approximately 19,000 acres where both groundwater and surface water are sources of irrigation water.

Seepage losses would not be expected to affect delivery of water to senior users upstream of the Highway 20 Bridge. The reach between the Highway 20 crossing of Silver Creek and Little Wood River Station 10 loses water via seepage to the Eastern Snake Plain Aquifer, and seepage losses would be expected to reduce the amount of water that can be delivered to senior users on lower Silver Creek and the Little Wood River to some extent. Reliable estimation of seepage losses in this reach is frustrated by measurement uncertainty associated with the gages, particularly the Station 10 gage, and the large number of diversions from Silver Creek. Gage and diversion records from the 2020 irrigation season suggest seepage losses may be between 20% and 37% of the reach inflow, but there is high uncertainty in this estimate. Streamflow gains to Silver Creek resulting from curtailment of groundwater use can be expected to incur similar rates of seepage loss if conveyed between the Highway 20 Bridge and Station 10. Additional streamflow measurement data collected by Water District 37 or their contractor may help inform the estimation of seepage rates, but was not available to IDWR as of the date of this memorandum.

ATTACHMENT A. SUKOW (2015) STAFF MEMORANDUM

MEMO

State of Idaho

Department of Water Resources

322 E Front Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 287-4800 Fax: (208) 287-6700

Date: August 28, 2015
To: Gary Spackman, P.E., Director
Cc: Sean Vincent, P.G., Hydrology Section Manager
From: Jennifer Sukow, P.E., P.G., Hydrology Section
Subject: Hydrology, hydrogeology, and hydrologic data, Big Wood & Little Wood Water Users Association delivery calls, CM-DC-2015-001 and CM-DC-2015-002

This memorandum responds to the Hydrology, Hydrogeology, and Hydrologic Data section of the Request for Staff Memoranda dated June 12, 2015. The Director requested Department staff review data and information in possession of the Department, and prepare a staff memorandum addressing the following:

1. Any hydrologic or hydrogeologic data or publications collected by or available to the Department that may assist the Director in understanding surface and ground water interactions in the Big and Little Wood River basins.
2. A conceptual description of the interaction between ground water and surface water in the Camas Creek drainage, the Big Wood River drainage, the Silver Creek drainage, the Little Wood River drainage, and any other hydrologic units that may be hydraulically connected to the ground water and surface water in the larger Big Wood River and Little Wood River basins.
3. Identification of diversion records for junior ground water pumping available to the Department.
4. Identification of methods and data available for analyzing consumptive use associated with junior ground water pumping.
5. Identification of any hydrologic or hydrogeologic methods or modeling tools that may be employed in analyzing the impacts of junior ground water pumping on calling senior-priority surface water right holders.

Section 1. Hydrologic or hydrogeologic data or publications

Hydrologic, geologic, and hydrogeologic reports

Hydrology and early irrigation development in the Big and Little Wood River drainages was described by Ross (1900). In 1902, Jay D. Stannard measured gains and losses in the Big Wood River, Silver Creek, and the Little Wood River (Ross, 1902). Between 1920 and 1922, S.H. Chapman discussed hydrology and the interaction of surface and groundwater in early watermaster reports pertaining to the Big Wood River, Silver Creek, and lower Little Wood River (Water Districts 7 & 11, 1920-1922). The Idaho Bureau of Mines and Geology published an early study of the hydrogeology of Camas Prairie (Piper, 1925). The geology of the Magic Reservoir area was described or mapped by Struhsacker et al. (1982), Leeman (1982), and Kauffman and Othberg (2007, 2008).

The U.S. Geological Survey (USGS) published several studies of the hydrology and hydrogeology of the Big Wood River, Little Wood River, Silver Creek, and Camas Creek basins. USGS studies of the Big Wood River basin include Stearns et al. (1938), Jones (1952), Smith (1959), Smith (1960), Schmidt (1962), Moreland (1977), Frenzel (1989), Skinner et al. (2007), Bartolino (2009), Bartolino and Adkins (2012), Hopkins and Bartolino (2013), and Bartolino (2014). USGS studies of the Little Wood River basin include Stearns et al. (1938), Jones (1952) and Smith (1960). The Silver Creek basin was investigated by Stearns et al. (1938), Jones (1952), Smith (1959), Smith (1960), Schmidt (1962), Moreland (1977), Skinner et al. (2007), Bartolino (2009), Bartolino and Adkins (2012), Hopkins and Bartolino (2013), and Bartolino (2014). The Camas Creek basin was investigated by Stearns et al. (1938), Jones (1952), Smith (1960), Walton (1962), Young (1978), and Young et al. (1978).

Publications by other organizations include Idaho Department of Water Resources (IDWR) studies of the Big Wood River area by Castelin and Chapman (1972) and Castelin and Winner (1975), reports describing a hydrologic and stream temperature model constructed for The Nature Conservancy (Loinaz, 2012a; Loinaz, 2012b), and reports describing a groundwater flow model constructed for The Nature Conservancy (Brockway and Kahlown, 1994; Wetzstein and others, 1999; Brown, 2000).

An excellent summary of previous work in the upper Big Wood River and Silver Creek basins is included in Bartolino and Adkins (2012). This report also provides an excellent description of the hydrogeologic framework of the Wood River Valley aquifer system. Bartolino and Vincent (2013) provide a short, concise summary of the hydrology and hydrogeology of the Wood River Valley aquifer system. Bartolino (2014) describes recent USGS investigations regarding

groundwater levels and interaction between groundwater and surface water in the Wood River Valley.

The USGS, in collaboration with IDWR, is currently developing a MODFLOW numerical groundwater-flow model of the Wood River Valley aquifer system (Bartolino and Vincent, 2013). The USGS is scheduled to publish the model and supporting documentation in December 2015.

Hydrologic and hydrogeologic data

The USGS and Idaho Power Company (IPCO) collect, or have collected, continuous streamflow data at the sites listed in Table 1. Gage locations are shown in Figure 1. USGS data are available at <http://waterdata.usgs.gov/nwis/sw>. IPCO data are available at <https://www.idahopower.com/OurEnvironment/WaterInformation/StreamFlow/stationList/basins/tationList.cfm?selectS=3>.

Site Number	Site Name	Dates	Agency
13135500	Big Wood River nr Ketchum	6/1948-9/1971; 4/2011-present	USGS
13135520	North Fork Big Wood River nr Sawtooth NRA HQ	4/2011-present	USGS
13137000	Warm Springs Creek nr Ketchum	1/2011-present	USGS
13137500	Trail Creek at Ketchum	11/2010-present	USGS
13138000	East Fork Big Wood River at Gimlet	10/2010-present	USGS
13139510	Big Wood River at Hailey, total flow	7/1915-present	USGS
13140800	Big Wood River at Stanton Crossing	9/1996-present	USGS
13140900	Willow Creek nr Spring Creek Ranch	6/2000-present	IPCO
13141000	Big Wood River nr Bellevue	7/1911-9/1996	USGS
13141500	Camas Creek nr Blaine	6/1912-present	USGS
13142000	Magic Reservoir nr Richfield (storage)	4/1909-present	USGS
13142500	Big Wood River bl Magic Dam nr Richfield	4/1911-present	USGS
13150430	Silver Creek at Sportsman Access	10/1974-9/2006; 10/2007-present	USGS
13150500	Silver Creek nr Hwy 20 nr Picabo	6/1920-12/1962	USGS
13151000	Little Wood River nr Richfield	1/1911-9/1972	USGS
13151500	Little Wood River at Shoshone	4/1922-12/1959	USGS
13152500	Malad River nr Gooding	3/1916-present	USGS

Table 1. Period of record for continuous recording gaging stations.



Water District 37 and its predecessors monitor streamflow at additional sites on the Little Wood River and Big Wood River from April through September each year. Bound watermaster reports containing the additional streamflow data are available for inspection at the IDWR State Office (Water Districts 7 & 11, various years, 1920-1970; Water Districts 37 & 37M, various years, 1971-2013). In 2014, IDWR began gaging stage in the Little Wood River year-round at water district station 10 (formerly USGS station 13151000) and at water district station 54 (Figure 2). IDWR reestablished year-round gaging to obtain data on seepage from the Little Wood River to the Eastern Snake Plain Aquifer (ESPA) during the winter months. IDWR has not yet processed the data. Raw stage data are included in the supplemental files accompanying this memorandum.



Figure 2. Watermaster gaging stations with year-round gages installed by IDWR.

Surface water diversions from the Big Wood River, Silver Creek, and the lower Little Wood River have been recorded by water districts since 1920. Bound watermaster reports are available for inspection at the IDWR State Office (Water Districts 7 & 11, various years, 1920-1970; Water Districts 37 & 37M, various years, 1971-2013).

Groundwater level measurements collected by the USGS are available at <http://nwis.waterdata.usgs.gov/id/nwis/gwlevels>. Groundwater level measurements collected by both the USGS and IDWR are stored in IDWR's database and are available at <http://idwr.idaho.gov/hydro.online/gwl/>. Bartolino (2014) provides a recent evaluation of groundwater level measurements in the Wood River Valley aquifer system. Bartolino (2014) compared water level measurements collected in over 90 wells in October 2006 and October 2012. Bartolino (2014) also evaluated long term water level trends at five wells measured semi-annually. IDWR increased the frequency of water level monitoring at representative sites in the Wood River Valley between 2012 and 2014.

IDWR staff compiled selected groundwater level measurements in the Camas Prairie aquifer system for this memorandum. Sixteen Camas Prairie wells were measured at least 50 times by the USGS or IDWR between 1944 and 2013. Well locations and selected hydrographs are shown on Attachment A¹.

Well drillers' logs filed with IDWR are available for numerous wells in the Wood River Valley and Camas Prairie. A shapefile of approximate well locations is available at <http://idwr.idaho.gov/GeographicInfo/GISdata/wells.htm>. Drillers' logs are available at http://idwr.idaho.gov/WaterManagement/WellInformation/DrillerReports/dr_default.htm.

Section 2. Conceptual description of interaction between groundwater and surface water

Overview

Aquifers underlying the Wood Rivers area include the Camas Prairie aquifer system, the Wood River Valley aquifer system, the ESPA, and small local aquifers in the upper Little Wood River valley. Figure 3 illustrates the general location of the primary aquifers and denotes stream reaches where gains from groundwater or losses to groundwater have been documented. Figure 3 also denotes perched reaches, where the rivers lose water to groundwater at a rate independent of groundwater elevation. The delineation of gaining, losing, and perched reaches is approximate. Transitions between gaining, losing, and perched reaches may move upstream or downstream seasonally and year to year with fluctuations in streamflow, aquifer recharge, and groundwater withdrawals. Figure 3 also shows intermittent reaches of the Big and Little Wood Rivers. These reaches generally lose water to the aquifer when water is flowing in the rivers, but are dry during low water periods because of diversions and/or seepage losses.

¹ Water level data used to generate hydrographs are provided in supplemental files accompanying this memorandum.

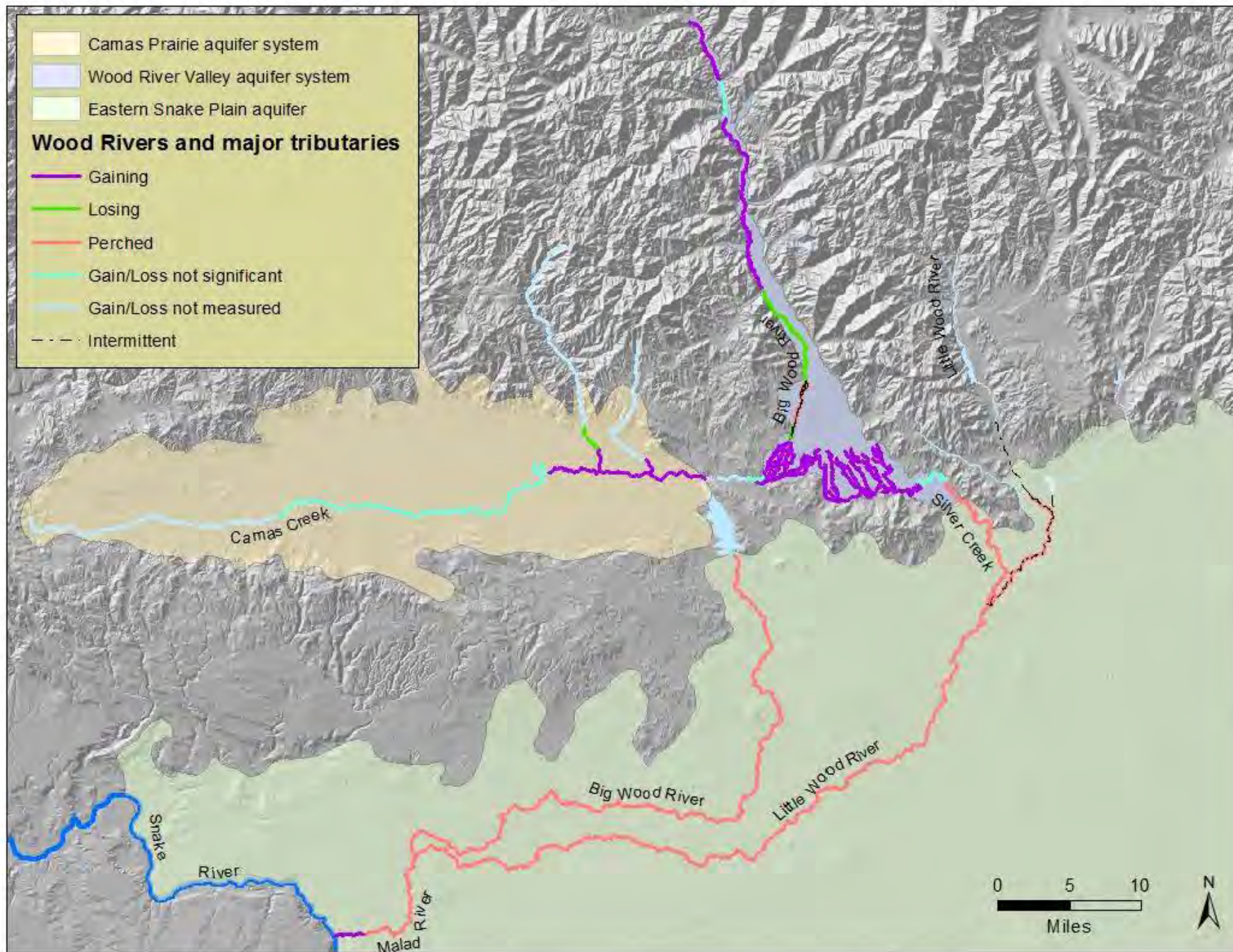


Figure 3. Generalized location of aquifers and interaction with surface water.

Interaction between Camas Prairie aquifer system, Camas Creek, and Magic Reservoir

USGS scientists investigated the hydrogeology of Camas Prairie in 1957 (Walton, 1962) and in 1977 (Young, et al., 1978; Young, 1978). The Camas Creek drainage basin is an eastward trending intermontane basin of approximately 730 square miles. The principal aquifers in the basin are located beneath the Camas Prairie in a structural depression approximately 40 miles long and 8 miles wide. The basin is bounded by mountains and uplands on the north, west, and south. Camas Creek flows eastward through the basin, joining the Big Wood River at Magic Reservoir (Figure 4).

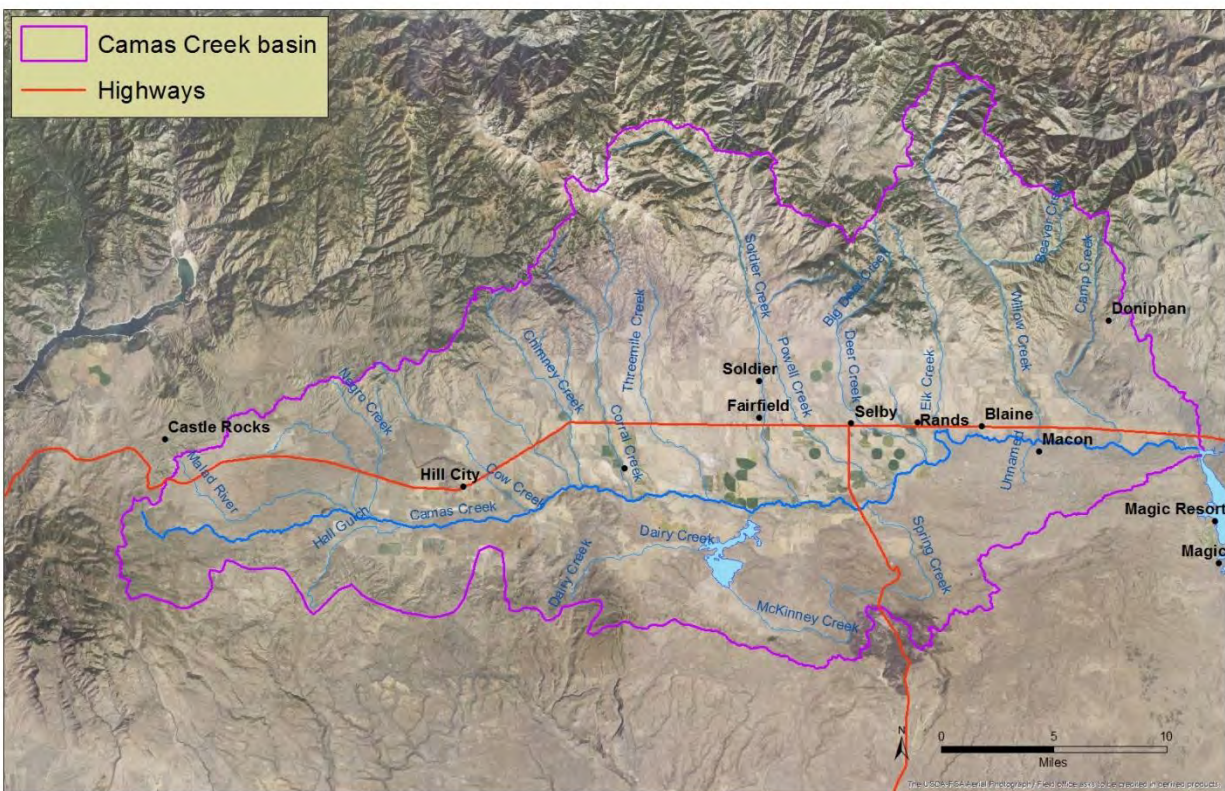


Figure 4. Camas Prairie hydrography

During the Pliocene and Pleistocene periods (between approximately 10,000 and 5 million years ago) lava flows intermittently blocked the basin's outlet to the east, resulting in deposition of valley fill sediments exceeding thicknesses of 500 feet in some locations. The valley fill includes alluvial (stream-deposited) and lacustrine (lake-bed) sediments. The alluvial sediments consist of interbedded clay, silt, sand, and gravel. The lacustrine deposits consist of silt and clay. Snake River Group basalt is exposed along the eastern, western, and southern margins of the

Camas Prairie. The basalt consists of a sequence of separate lava flows, and has permeable zones along contacts between lava flows, joints, and other crevices.

The principal aquifers in the Camas Creek basin are composed of sand and gravel within the valley fill sediments and Quaternary basalt of the Snake River Group. Walton (1962) and Young (1978) describe a moderately permeable shallow unconfined aquifer to depths of about 40 feet. Between depths of approximately 40 and 120 feet, silt and clay lenses within the alluvial valley fill result in locally confined conditions. Between depths of approximately 120 feet and 210 feet, low permeability lake-bed sediments form a significant confining unit with an average thickness of 90 feet. The confining unit is underlain by two zones of permeable sand and gravel. The upper zone, referred to by Walton (1962) as the “upper artesian aquifer” averages approximately 50 feet in thickness. The lower zone, referred to by Walton (1962) as the “lower artesian aquifer” occurs at the base of the valley fill and averages approximately 85 feet in thickness. Walton (1962) also noted confined conditions within the basalt. Most irrigation wells in the Camas Prairie withdraw water from the confined aquifers. In 1957, artesian pressure in confined aquifers beneath much of the Camas Prairie was sufficient to cause wells to flow at ground surface (Walton, 1962). By 1977, Young (1978) noted declines in pressure head in response to increased pumping for irrigation.

The Camas Prairie aquifer system is recharged primarily by direct infiltration of precipitation and seepage from streams. Groundwater beneath the Camas Prairie generally flows from recharge areas along the foot of the Soldier Mountains and Mount Bennett Hills toward Camas Creek, then eastward toward the basin outlet (Walton, 1962; Young, 1978). The confining units are leaky and allow upward flow of water from the deeper confined aquifers to the shallow unconfined aquifer. At the east end of the Camas Prairie, where Willow Creek and Camas Creek are incised into the basalt, groundwater discharges to the creeks and possibly the Camas Creek arm of Magic Reservoir (Figure 5). The elevation of Camas Creek drops from approximately 4,974 feet above mean sea level at the Elk Creek confluence to approximately 4,800 feet at the location of Young’s Station 14. Walton (1962) noted, “*Water-level data for wells at Magic show that most of the underflow from the prairie discharges into Camas Creek or Magic Reservoir. Little, if any, of the underflow reaches the Snake River Plain.*”

Geologic mapping in the vicinity of Magic Reservoir (Kauffman and Othberg, 2007; 2008) and the relatively small to negligible underflow from the Wood River Valley aquifer system to Magic Reservoir (Smith, 1959; Brockway and Kahlown, 1994; Bartolino and Adkins, 2012) suggest there is not a significant hydraulic connection between the Camas Prairie and Wood River Valley aquifer systems. While both aquifer systems contribute to the inflow of Magic Reservoir, groundwater levels in the Camas Prairie aquifer system are not expected to affect groundwater levels in the Wood River Valley aquifer system and vice versa.



Figure 5. Camas Creek measurement sites on the east end of Camas Prairie.

Both Walton (1962) and Young (1978) performed seepage studies to evaluate the interaction between groundwater and streamflow in the Camas Prairie. In November 1957, Walton (1962) measured a 1.3 cfs gain from groundwater to Camas Creek between the Soldier Creek confluence and Willow Creek confluence. A gain of 4 cfs from groundwater was measured in the vicinity of lower Willow Creek. Walton (1962) did not attempt to measure gains in Camas Creek between the confluence with Willow Creek and Magic Reservoir.

In May 1977, Young (1978) measured small reach losses to groundwater from Camas Creek between Cow Creek and Elk Creek. Corral Creek, Soldier Creek, Deer Creek, and upper Willow Creek also lost water to the aquifer. Between the confluence with Elk Creek and Magic Reservoir, where Camas Creek is incised into basalt, the creek gained approximately 5 cfs from groundwater. Total groundwater discharge to lower Camas, Willow, and Camp Creeks at the east end of the Camas Prairie was slightly more than 10 cfs. Young (1978) did not measure downstream of Station 14 (Figure 5), which was located near the upper extent of Magic Reservoir backwater. Additional groundwater discharge may occur directly to Magic Reservoir.

The USGS has one active stream gaging station on Camas Creek. Discharge measurements at Station 13141500, Camas Creek near Blaine (Figure 5) began in June of 1912. Between 1912

and 1944, data were not collected during the winter months. Year-round operation of the gaging station began in 1945. The gaging station is located downstream of the confluence with Willow Creek and measured streamflow includes surface runoff and groundwater discharge to lower Willow Creek and part of Camas Creek. Flow may be affected by upstream diversions of surface water during the irrigation season. During periods with little or no surface runoff, discharge from the Camas Prairie aquifers maintains the streamflow at the gage site (Young, 1978). Monthly average discharge measured at the gage site between 1945 and 2014 ranged from 1.3 cfs in June 1992 to 3,300 cfs in April 1952. Between July and February, flow at the gage site is commonly between 2 and 50 cfs. Additional groundwater discharge to Camp Creek and Camas Creek occurs downstream of the gage site. In May 1977, Young, et al. (1978) measured a reach gain of 5 cfs from groundwater to Camas Creek between the gage site and Magic Reservoir, and an inflow of 1 cfs from Camp Creek. Approximately half of the groundwater reach gains measured in May 1977 occurred downstream of the Camas Creek gage. Additional groundwater discharge may occur directly to Magic Reservoir downstream of the location measured by Young et al. (1978).

Water District 37 currently determines inflow from Camas Creek to Magic Reservoir using the flow measured at the Camas Creek gage. Aquifer discharge to the creek or reservoir downstream of the gage is not included in this measurement. In 1922, the watermaster S.H. Chapman reported adding 20 cfs to the calculation of Magic Reservoir inflow to account for “*normal gain in the reservoir section as found from past investigation.*” This practice apparently continued for decades (Lakey, 2015), but was abandoned prior to the tenure of the current watermaster (Kevin Lakey, personal communication).

USGS studies performed by Walton (1962), Young (1978), and Young et al. (1978) document the interconnection between the Camas Prairie aquifer system and streamflow in lower Camas Creek. The seepage survey described in Young (1978) and Young et al. (1978) found a significant portion of the aquifer discharge to Camas Creek occurs downstream of the USGS gage on Camas Creek. This portion of the aquifer discharge is not measured and is not included in Water District 37’s calculation of inflow to Magic Reservoir.

Interaction between Wood River Valley aquifer system and surface water

The hydrogeologic framework of the Wood River Valley aquifer system is described in detail by Bartolino and Adkins (2012). The primary aquifer system is composed of alluvial sediments and basalt. The aquifer system includes an unconfined aquifer underlying the entire valley and a deeper confined aquifer present only in the southwestern portion of the valley. Sediment thicknesses range from less than a foot at the margins of tributary valleys to about 350 feet in the

central Bellevue fan. Bartolino and Vincent (2013) provide a summary of the hydrogeologic framework and observed hydrologic trends.

The Wood River Valley aquifer system interacts with the Big Wood River, Silver Creek, and tributary streams (Figure 3). Between the confluence with the North Fork of the Big Wood River and Hailey, the Big Wood River generally gains water from the aquifer (Bartolino and Adkins, 2012; Bartolino, 2014). Between Hailey and Black Slough, the Big Wood River loses water to the aquifer. Between Glendale Road and Black Slough, the river is perched above the aquifer and is typically dry part of the summer. Between Black Slough and Willow Creek, the river gains water from the aquifer via seeps and tributary springs. Willow Creek, which enters the Big Wood River below the Stanton Crossing gage station, is fed primarily by the aquifer through seeps and tributary springs. Figure 6 shows the location of springs identified on USGS topographic maps.

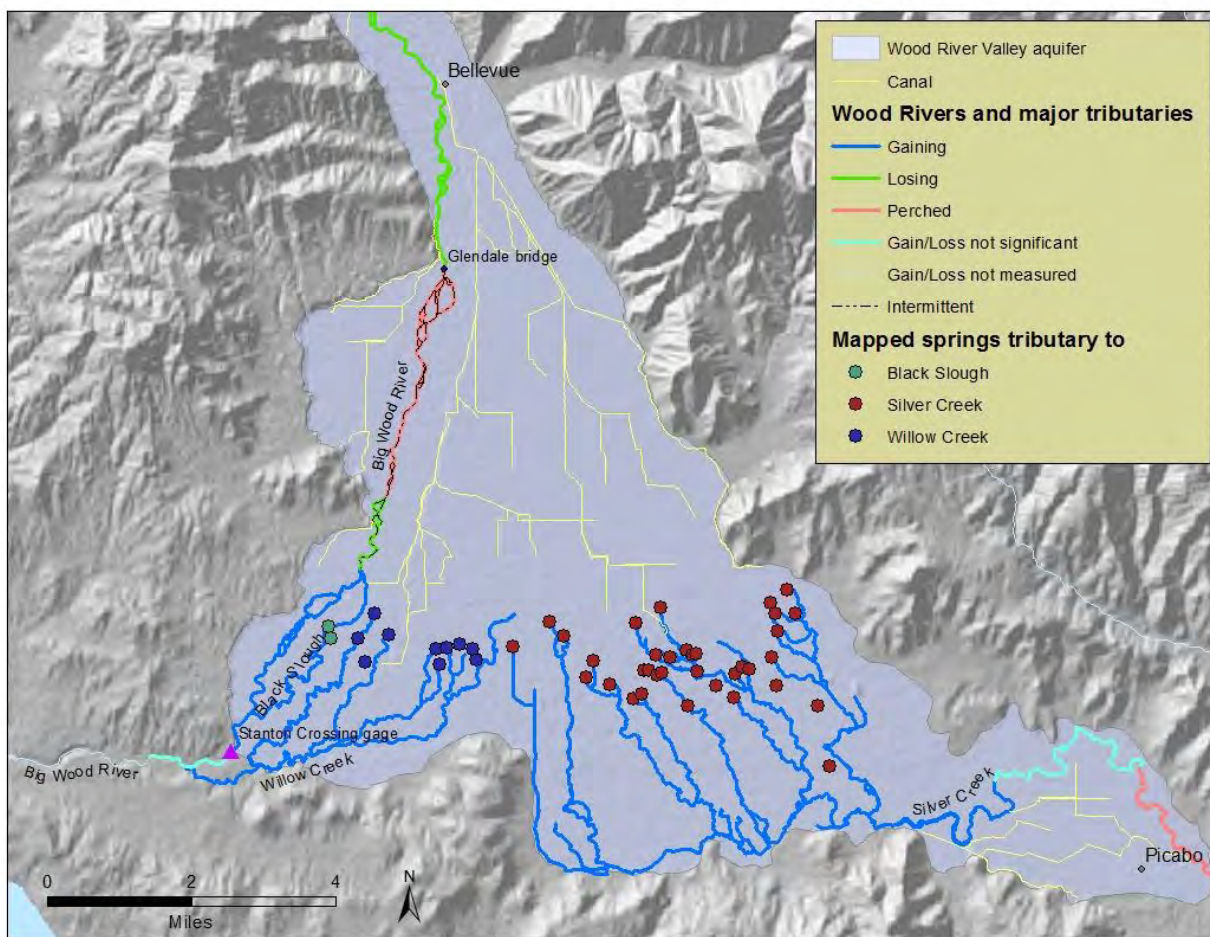


Figure 6. Mapped springs tributary to the Big Wood River and Silver Creek

Underflow beneath the Big Wood River between Stanton Crossing and Magic Reservoir appears to be negligible because of shallow, low-permeability bedrock (Bartolino and Adkins, 2012). Water District 37 determines inflow from the Big Wood River to Magic Reservoir by summing measured streamflow in the Big Wood River at Stanton Crossing and measured streamflow in Willow Creek (Kevin Lakey, personal communication). During high flow periods, both surface water flow and aquifer discharge contribute to the inflow. During low flow periods, Water District 37 diverts the entire flow of the Big Wood River into the Baseline Bypass Canal. While water can be returned from the Baseline Bypass Canal to the Big Wood River, the entire flow is typically diverted by senior water users until October. During low flow periods, aquifer discharge to springs and seeps is the primary source of the inflow from the Big Wood River to Magic Reservoir.

Discharge from the Wood River Valley aquifer system is the primary source of water for Silver Creek. Direct precipitation and snowmelt provide some additional water seasonally. Figure 6 shows the location of mapped springs emanating from the aquifer to form the tributaries of Silver Creek.

Throughout the year, groundwater elevation in the Wood River Valley aquifer affects discharge to seeps and springs feeding the Big Wood River below Black Slough, Willow Creek, and Silver Creek. Because the impacts of aquifer recharge and withdrawals propagate outward radially from the location of the applied stress, recharge or withdrawal at a single location within the aquifer affects discharge to springs tributary to both the Big Wood River and Silver Creek. Groundwater elevation and corresponding aquifer discharge to seeps and springs is influenced by a number of factors, including, but not limited to:

- volume of seepage from the Big Wood River recharging the aquifer between Hailey and Black Slough,
- volume of irrigation diversions from the Big Wood River and corresponding volume of aquifer recharge via canal seepage and incidental infiltration,
- volume of streamflow in the Big Wood River at Hailey available for riverbed seepage and diversions,
- volume of groundwater consumptively used for irrigation of agricultural fields and landscaping,
- volume of evapotranspiration from wetlands and riparian vegetation.

Groundwater elevation decreases rapidly where the Wood River Valley aquifer system discharges into the ESPA, and Silver Creek is perched above the ESPA (Figure 3). Several researchers have estimated the volume of underflow from the Wood River Valley aquifer system to the ESPA. Estimates range from 4,000 AF/yr (Bartolino and Adkins, 2012) to 53,000 AF/yr

(Garabedian, 1992). The Bartolino and Adkins (2012) estimate is based on more data than was available to prior researchers, and is likely the best estimate of underflow to the ESPA.

Interaction between the ESPA and Big and Little Wood Rivers

The Big and Little Wood Rivers and the upper Malad River are perched above the ESPA (IDWR, 2013). Depth to groundwater in the vicinity of these rivers generally exceeds 50 feet. The Big and Little Wood Rivers and the upper Malad River lose water to the ESPA via riverbed seepage, but the rate of seepage is independent of aquifer water level. The lower Malad River becomes hydraulically connected to the ESPA where the river enters an incised canyon approximately 2 miles before the confluence with the Snake River (Figure 3). The ESPA discharges large volumes of water to the lower Malad River (IDWR, 2013). Changes in water levels and groundwater use within the ESPA will affect flow in the lower Malad River and Snake River, but will not significantly affect streamflow in the Big and Little Wood Rivers.

Interaction between the Little Wood River and small local aquifers in the upper valley

Upstream of the confluence of Silver Creek with the Little Wood River, the Little Wood River is generally dry except during periods of high surface runoff (Water Districts 7 and 11, 1922; Jones, 1952; Claire, 2005; BOR 2010). East Canal and West Canal, below Little Wood River dam divert the entire flow of the Little Wood River during the irrigation season, and most non-irrigation season flow is stored in the reservoir. The entire flow of Fish Creek is similarly diverted or stored (Jones, 1952).

Small local aquifers in the upper Little Wood valley may interact with the upper Little Wood River and tributary creeks, but are not expected to affect streamflow in the Little Wood River downstream of the confluence with Silver Creek when the channel is dry between the East Canal diversion and Silver Creek. Because surface water supply shortages in the Little Wood River are not expected to occur during peak runoff, groundwater use in the upper Little Wood River valley does not appear to be relevant to the Little Wood Water Users Association delivery call. Water levels and groundwater use in upper Little Wood valley aquifers will affect groundwater underflow from the Little Wood basin into the ESPA and discharge from the ESPA to the Snake River and tributary springs, including the lower Malad River.

Section 3. Identification of diversion records for junior ground water pumping available to the Department

Groundwater use in the Wood River Valley

Prior to 2013, most groundwater diversions in the Wood River Valley were not measured or recorded. Water District 37 regulated and recorded a few groundwater diversions north of Bellevue. Water District 37M regulated and recorded exchange well diversions conveyed through Silver Creek. These data are included in the watermaster reports (Water Districts 7 & 11, various years, 1920-1970; Water Districts 37 & 37M, various years, 1971-2013). Larger municipal water providers in the Wood River Valley measure and record their diversions for their own use. Prior to 2013, municipal diversions were not reported to the water district, but municipal providers did submit monthly diversion data to the USGS to assist with development of the Wood River Valley Groundwater Flow Model. These data will be included in the model data sets when the USGS publishes the model.

In 2013, water users began installing flowmeters to comply with a measuring device order, and Water District 37 began recording annual groundwater diversions in the Wood River Valley. Data collected for 2013 and 2014 are stored in IDWR's Water Management Information System (WMIS) (<https://www.idwr.idaho.gov/apps/wm/WMIS/>). Many groundwater diversions in the Wood River Valley were still unmeasured in 2013 and 2014.

Unmeasured groundwater diversions from the Wood River Valley from 1995 through 2010 are being estimated for development of the Wood River Valley Groundwater Flow Model. Estimated monthly groundwater diversions are calculated using evapotranspiration (ET), precipitation, surface water diversion data, and estimated irrigation efficiency. ET and precipitation data are used to calculate irrigation water demand within subareas of the model boundary. In areas served only by groundwater, consumptive use of groundwater is assumed to be equal to the irrigation water demand and groundwater diversions are assumed to be equal to the irrigation water demand divided by irrigation efficiency. In areas served by both surface water and groundwater, the portion of the irrigation demand met by surface water is estimated by deducting canal seepage and irrigation inefficiency from recorded surface water diversions. The remaining irrigation demand not met by surface water is assumed to be met by groundwater. Because the irrigation efficiency is unknown, it is an adjustable parameter during calibration of the groundwater flow model. Estimated groundwater diversions used to calibrate the groundwater flow model will be included in the model data sets when the USGS publishes the model.

Groundwater use on the Camas Prairie

Prior to 1923, groundwater use on the Camas Prairie was limited to a few wells used for stockwater and domestic water supply. Early agriculture on the Camas Prairie consisted primarily of non-irrigated wheat (Piper, 1925; Walton, 1962). Between 1923 and 1924, about 50 deep wells were drilled into the upper artesian aquifer (Walton, 1962). Flowing wells developed during this time period yielded between 2 and 100 gallons per minute (gpm). Total groundwater diversions in 1924 were estimated to be approximately 600 acre-feet (AF). Groundwater development increased in the early 1950s. In 1957, Walton (1962) estimated groundwater withdrawals for irrigation and municipal use were approximately 1,350 AF. Walton (1962) also performed an inventory of flowing wells, and estimated the total discharge from flowing wells and springs was about 200 AF.

Another significant increase in groundwater withdrawals for irrigation occurred between 1974 and 1977 (Young, 1978). In 1977, Young (1978) quantified groundwater use using totalizing flowmeters, discharge measurements, power records, and estimates of municipal use. Groundwater withdrawals for irrigation and municipal use were approximately 9,500 AF in 1977, approximately seven times the estimated 1957 withdrawals.

In 2014, groundwater withdrawals reported in the Water District 37B Watermaster's Report (Kramer, 2015) total approximately 13,800 AF, an increase of approximately 45% over the 1977 withdrawals. In 2014, most of the wells were measured using totalizing flow meters. Some withdrawals were determined using power consumption coefficients. A few small diversions were estimated. The watermaster did not report the number of acres irrigated by groundwater in 2014.

Water right priority dates and cumulative maximum diversion rates shown in Figure 7 are generally consistent with the periods of groundwater development described by Walton (1962) and Young (1978). Water right records² suggest much of the groundwater development in the Camas Creek basin occurred between 1968 and 1979.

² Water right priority dates and diversion rates were extracted from IDWR's database on April 21, 2015. Data are provided in supplemental files accompanying this memorandum.

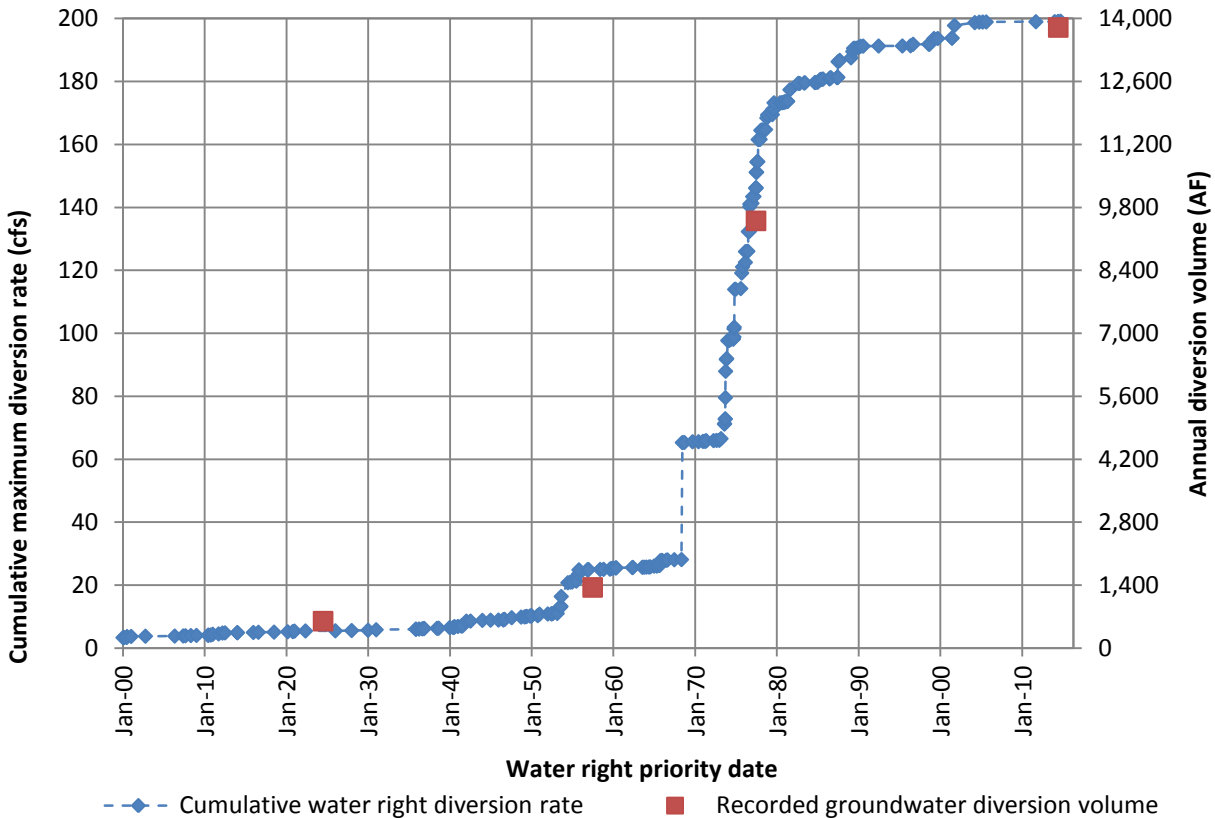


Figure 7. Cumulative maximum groundwater right diversion rate and recorded groundwater pumping in the Camas Creek basin.

Section 4. Identification of methods and data available for analyzing consumptive use associated with junior groundwater pumping

Wood River Valley

As discussed in the previous section, consumptive use associated with groundwater pumping in the Wood River Valley is being estimated for development of the Wood River Valley Groundwater Flow Model. Consumptive use is being calculated monthly for 1995 through 2010 using ET, precipitation, and surface water diversion data, and modeled irrigation efficiency. The data sets, programming code used to calculate groundwater demand, and estimated groundwater diversions will be included with the model when it is published by the USGS.

Camas Prairie

Consumptive use associated with groundwater pumping from the Camas Prairie aquifer system can be estimated from ET, precipitation, and water right place of use. ET rasters generated using

Mapping EvapoTranspiration at High Resolution and Internalized Calibration (METRIC) are available for the irrigation seasons of 1996, 2000, 2002, 2006, 2008, 2009, 2010, and 2011. Raster files are available at <http://idwr.idaho.gov/ftp/gisdata/Spatial/Projects/METRIC/>. Because METRIC ET does not assume ideal growing conditions nor require knowledge of crop type and management, use of METRIC ET to quantify irrigation season ET is generally preferable to use of other ET data sources such as ET Idaho. Winter ET varies less with crop type. Winter ET data are available from ET Idaho for the Fairfield Agrimet station, Fairfield National Weather Service (NWS) station, and Hill City NWS station (<http://data.kimberly.uidaho.edu/ETIdaho/>). Annual and monthly precipitation rasters are available from the PRISM Climate Group at Oregon State University (<http://www.prism.oregonstate.edu/>). Precipitation data for the Fairfield Agrimet station, Fairfield NWS station, and Hill City NWS station are available from ET Idaho (<http://data.kimberly.uidaho.edu/ETIdaho/>). Water right place of use data are available from IDWR at http://idwr.idaho.gov/GeographicInfo/GISdata/water_rights.htm.

Consumptive use associated with groundwater pumping from the Camas Prairie aquifer system in 2014 can also be estimated from groundwater pumping records (Kramer, 2015) by assuming a reasonable value for irrigation efficiency. Some information on surface water availability for mixed source lands is also provided in the 2014 Watermaster's Report.

Section 5. Identification of any hydrologic or hydrogeologic methods or modeling tools that may be employed in analyzing the impacts of junior ground water pumping on calling senior-priority surface water right holders

Wood River Valley

IDWR staff anticipates the impact of changes in groundwater use in the Wood River Valley can be simulated with the Wood River Valley Groundwater Flow Model after the model is published by the USGS. The Wood River Valley Groundwater Flow Model is a mathematical approximation of the aquifer developed using the numerical model program MODFLOW-USG (Panday et al., 2013), which is freely available to the public at <http://water.usgs.gov/ogw/mfusg/>. Numerical models are recognized by the USGS as the most robust approach for analyzing the effects of groundwater pumping on streamflow (Barlow and Leake, 2012). The model is expected to predict impacts of changes in consumptive groundwater use on aquifer discharge to the Big Wood River, Willow Creek, Silver Creek, and the ESPA.

Camas Prairie

Because the recognized outlets for net groundwater discharge from the Camas Prairie are limited to ET and discharge to Camas Creek and Magic Reservoir, the impacts of changes in groundwater use on inflow to Magic Reservoir are equal to the change in consumptive use at steady state. Analytical or numerical modeling is not needed to quantify the impacts of consumptive groundwater use at steady state.

Analytical methods could be employed to estimate the seasonal timing of the impacts, but will require several simplifying assumptions regarding aquifer properties and geometry. Predictions of timing are highly dependent on hydraulic conductivity and the coefficient of storage. A wide range of predictions can be generated using the range of reasonable assumptions for hydraulic conductivity and coefficients of storage applicable to the Camas Prairie aquifer system.

Because seasonal measurements of aquifer discharge to lower Camas Creek and Magic Reservoir are not available to correlate changes in aquifer discharge with changes in groundwater use, there are not sufficient data available to calibrate a numerical model to predict the timing of impacts.

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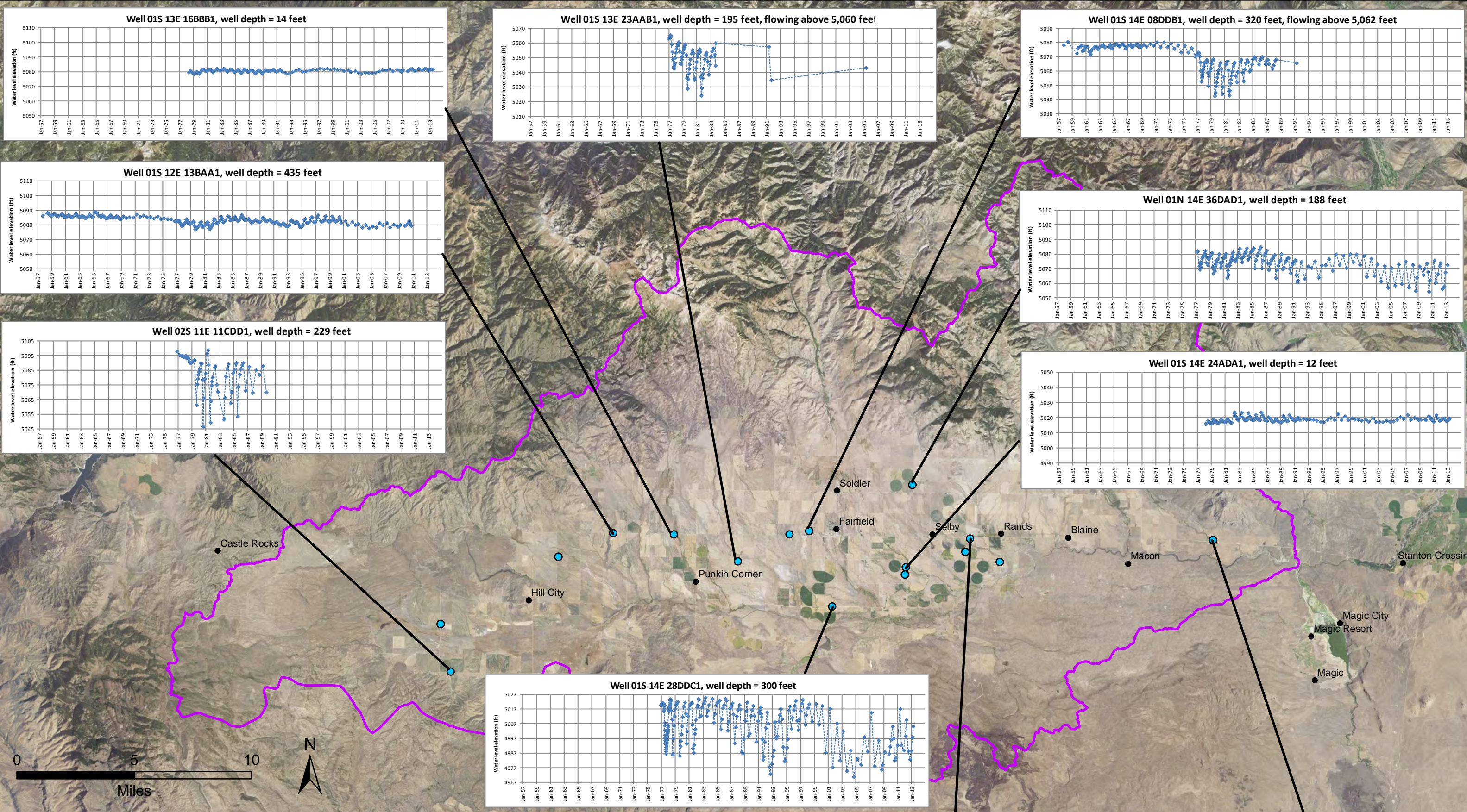
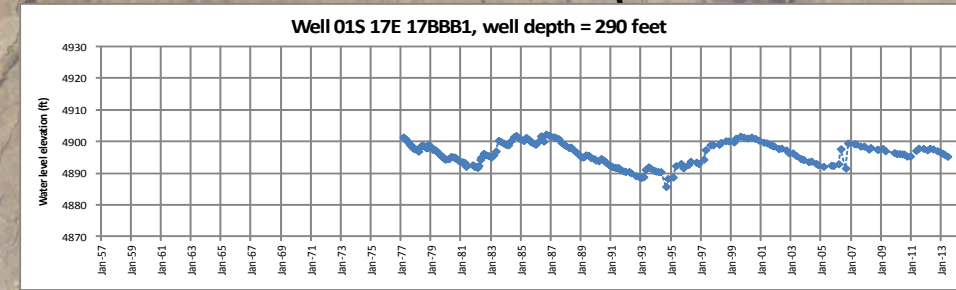
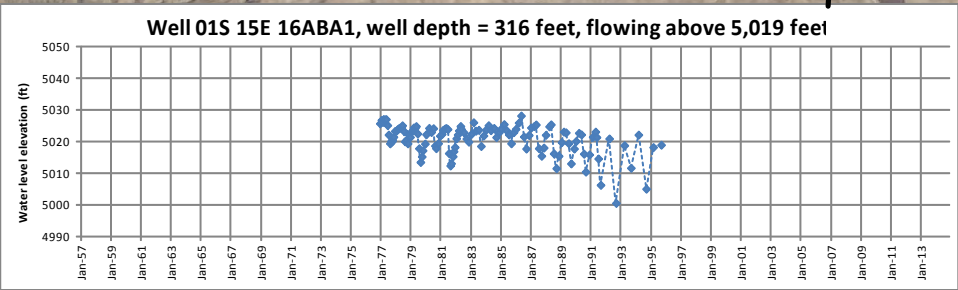
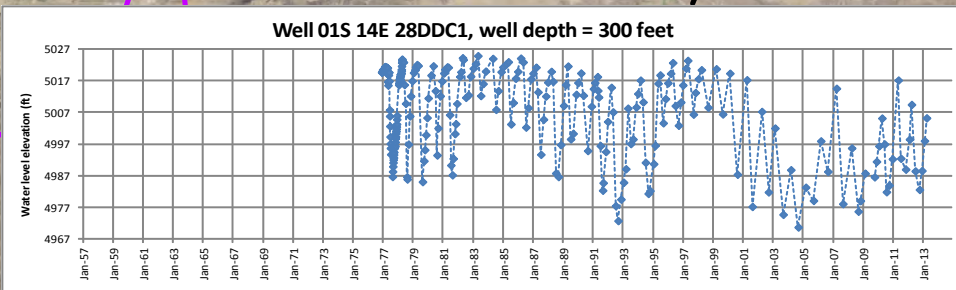
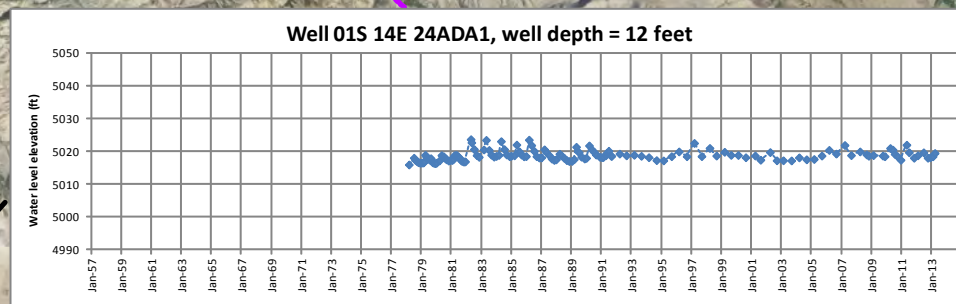
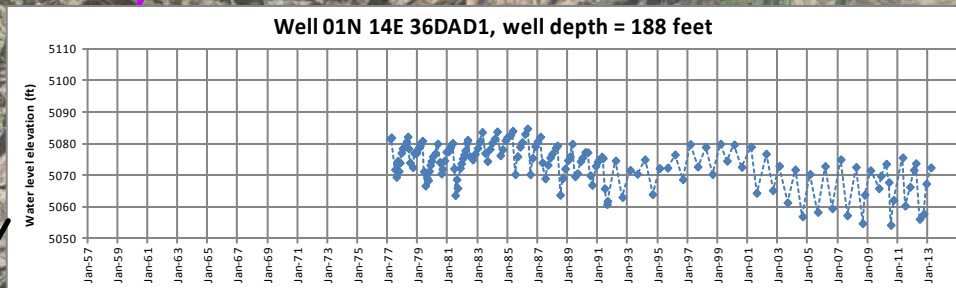
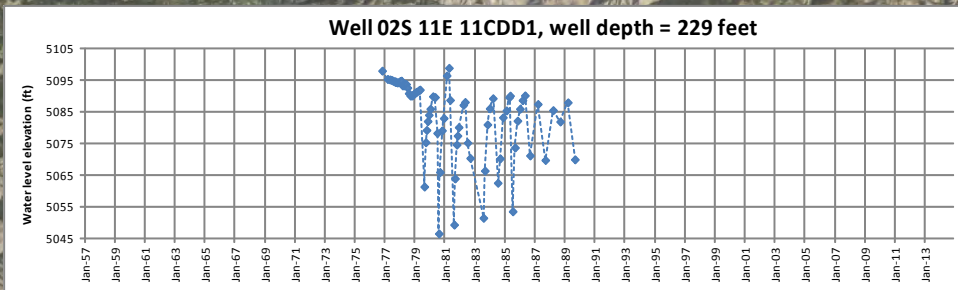
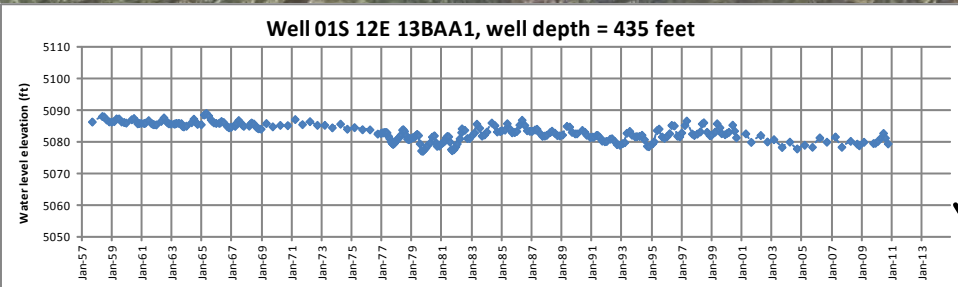
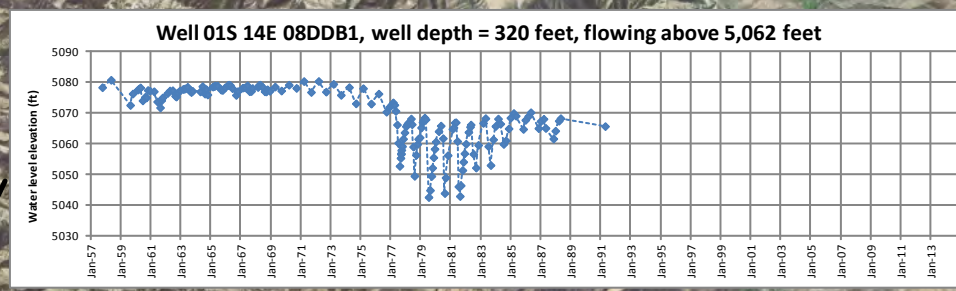
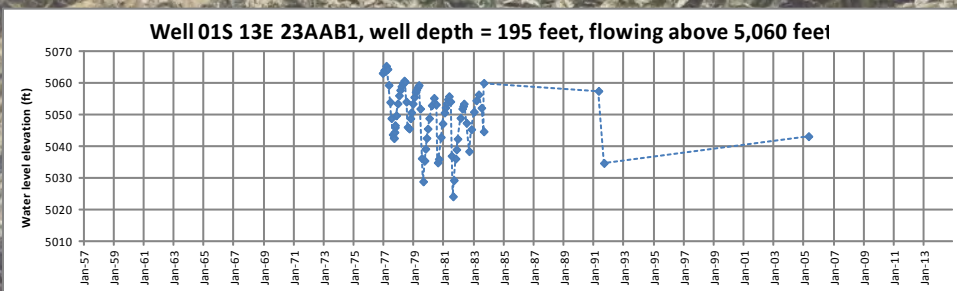
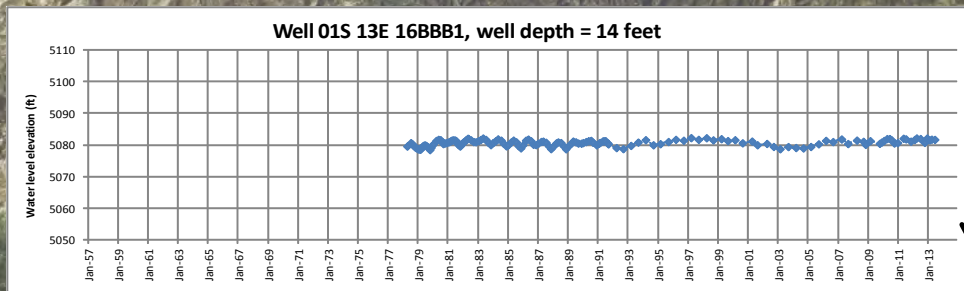
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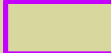
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ATTACHMENT A.

 Camas Creek basin

 Wells with 50 or more water level measurements

ATTACHMENT B. RESULTS OF MAY 1, JUNE 1, JULY 1, AND AUGUST 1
CURTAILMENT SIMULATIONS FOR BOTH SIMULATION AREAS

Predicted responses to curtailment starting May 1 within the WRV1.1 model boundary

Month	Curtailed consumptive use	Silver Creek		Big Wood above Dry Bed		Big Wood below Dry Bed		Groundwater underflow to ESPA		Increase in aquifer storage	Model convergence error
	AF	cfs	AF	cfs	AF	cfs	AF	cfs	AF	AF	AF
May	3,206	5.6	347	6.3	384	0.9	54	0.4	26	2,393	2
June	5,224	17.4	1,038	11.1	661	1.5	92	1.0	60	3,373	0
July	10,144	32.7	2,012	15.2	937	3.8	231	2.6	159	6,805	0
Aug	9,613	35.1	2,157	19.1	1,177	6.9	426	3.8	233	5,620	0
Sep	<u>5,221</u>	32.1	<u>1,911</u>	16.6	<u>985</u>	8.5	<u>505</u>	4.0	<u>238</u>	<u>1,581</u>	<u>1</u>
Sum	33,407		7,464		4,145		1,308		715	19,772	3
	100%		22%		12%		4%		2%	59%	0%

Predicted responses to curtailment starting May 1 within the area south of Glendale Bridge

Month	Curtailed consumptive use	Silver Creek		Big Wood above Dry Bed		Big Wood below Dry Bed		Groundwater underflow to ESPA		Increase in aquifer storage	Model convergence error
	AF	cfs	AF	cfs	AF	cfs	AF	cfs	AF	AF	AF
May	1,846	5.6	346	0.2	14	0.1	4	0.2	11	1,470	1
June	3,311	17.4	1,033	1.5	89	0.0	-1	0.6	34	2,156	0
July	7,214	32.5	1,996	0.9	57	2.0	124	1.3	80	4,955	2
Aug	6,737	34.6	2,126	1.1	65	5.1	314	2.3	139	4,094	0
Sep	<u>3,502</u>	31.3	<u>1,865</u>	0.8	<u>46</u>	7.0	<u>416</u>	3.0	<u>179</u>	<u>996</u>	<u>1</u>
Sum	22,611		7,366		271		857		442	13,670	5
	100%		33%		1%		4%		2%	60%	0%

Predicted responses to curtailment starting June 1 within the WRV1.1 model boundary

Month	Curtailed consumptive use	Silver Creek		Big Wood above Dry Bed		Big Wood below Dry Bed		Groundwater underflow to ESPA		Increase in aquifer storage	Model convergence error
	AF	cfs	AF	cfs	AF	cfs	AF	cfs	AF	AF	AF
May	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0
June	5,224	13.2	786	8.3	493	0.8	49	0.6	36	3,859	1
July	10,144	30.0	1,843	13.6	839	3.1	189	2.2	135	7,138	0
Aug	9,613	33.1	2,034	18.0	1,106	6.4	392	3.4	211	5,870	0
Sep	<u>5,221</u>	30.6	<u>1,819</u>	15.7	<u>933</u>	8.1	<u>480</u>	3.7	<u>218</u>	<u>1,771</u>	<u>1</u>
Sum	30,202		6,482		3,370		1,110		600	18,638	2
	100%		21%		11%		4%		2%	62%	0%

Predicted responses to curtailment starting June 1 within the area south of Glendale Bridge

Month	Curtailed consumptive use	Silver Creek		Big Wood above Dry Bed		Big Wood below Dry Bed		Groundwater underflow to ESPA		Increase in aquifer storage	Model convergence error
	AF	cfs	AF	cfs	AF	cfs	AF	cfs	AF	AF	AF
May	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0
June	3,312	13.2	784	0.9	55	-0.4	-25	0.3	17	2,480	1
July	7,213	29.8	1,833	0.8	47	1.5	90	1.0	60	5,182	1
Aug	6,737	32.7	2,008	0.9	58	4.6	286	1.9	119	4,266	0
Sep	<u>3,502</u>	29.9	<u>1,779</u>	0.7	<u>42</u>	6.6	<u>394</u>	2.7	<u>161</u>	<u>1,125</u>	<u>1</u>
Sum	20,763		6,403		202		745		357	13,054	2
	100%		31%		1%		4%		2%	63%	0%

Predicted responses to curtailment starting July 1 within the WRV1.1 model boundary

Month	Curtailed consumptive use	Silver Creek		Big Wood above Dry Bed		Big Wood below Dry Bed		Groundwater underflow to ESPA		Increase in aquifer storage	Model convergence error
	AF	cfs	AF	cfs	AF	cfs	AF	cfs	AF	AF	AF
May	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0
July	10,144	22.8	1,403	10.5	644	1.9	116	1.6	98	7,883	1
Aug	9,613	28.3	1,738	15.8	973	5.3	323	2.8	174	6,405	0
Sep	<u>5,221</u>	27.1	<u>1,611</u>	14.0	<u>836</u>	7.2	<u>425</u>	3.1	<u>184</u>	<u>2,164</u>	<u>1</u>
Sum	24,978		4,752		2,452		864		456	16,452	2
	100%		19%		10%		3%		2%	66%	0%

Predicted responses to curtailment starting July 1 within the area south of Glendale Bridge

Month	Curtailed consumptive use	Silver Creek		Big Wood above Dry Bed		Big Wood below Dry Bed		Groundwater underflow to ESPA		Increase in aquifer storage	Model convergence error
	AF	cfs	AF	cfs	AF	cfs	AF	cfs	AF	AF	AF
May	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0
July	7,214	22.7	1,398	0.5	33	0.7	43	0.5	32	5,706	2
Aug	6,737	28.0	1,720	0.8	47	3.8	231	1.4	87	4,652	0
Sep	<u>3,502</u>	26.5	<u>1,578</u>	0.6	<u>36</u>	5.9	<u>348</u>	2.2	<u>130</u>	<u>1,409</u>	<u>1</u>
Sum	17,453		4,695		116		623		249	11,767	3
	100%		27%		1%		4%		1%	67%	0%

Predicted responses to curtailment starting August 1 within the WRV1.1 model boundary

Month	Curtailed consumptive use	Silver Creek		Big Wood above Dry Bed		Big Wood below Dry Bed		Groundwater underflow to ESPA		Increase in aquifer storage	Model convergence error
	AF	cfs	AF	cfs	AF	cfs	AF	cfs	AF	AF	AF
May	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0
June	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0
July	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0
Aug	9,613	13.6	839	11.2	688	2.3	144	1.5	93	7,849	1
Sep	<u>5,221</u>	17.5	<u>1,040</u>	10.7	<u>638</u>	4.5	<u>266</u>	1.8	<u>107</u>	<u>3,169</u>	<u>1</u>
Sum	14,834		1,879		1,326		410		200	11,018	2
	100%		13%		9%		3%		1%	74%	0%

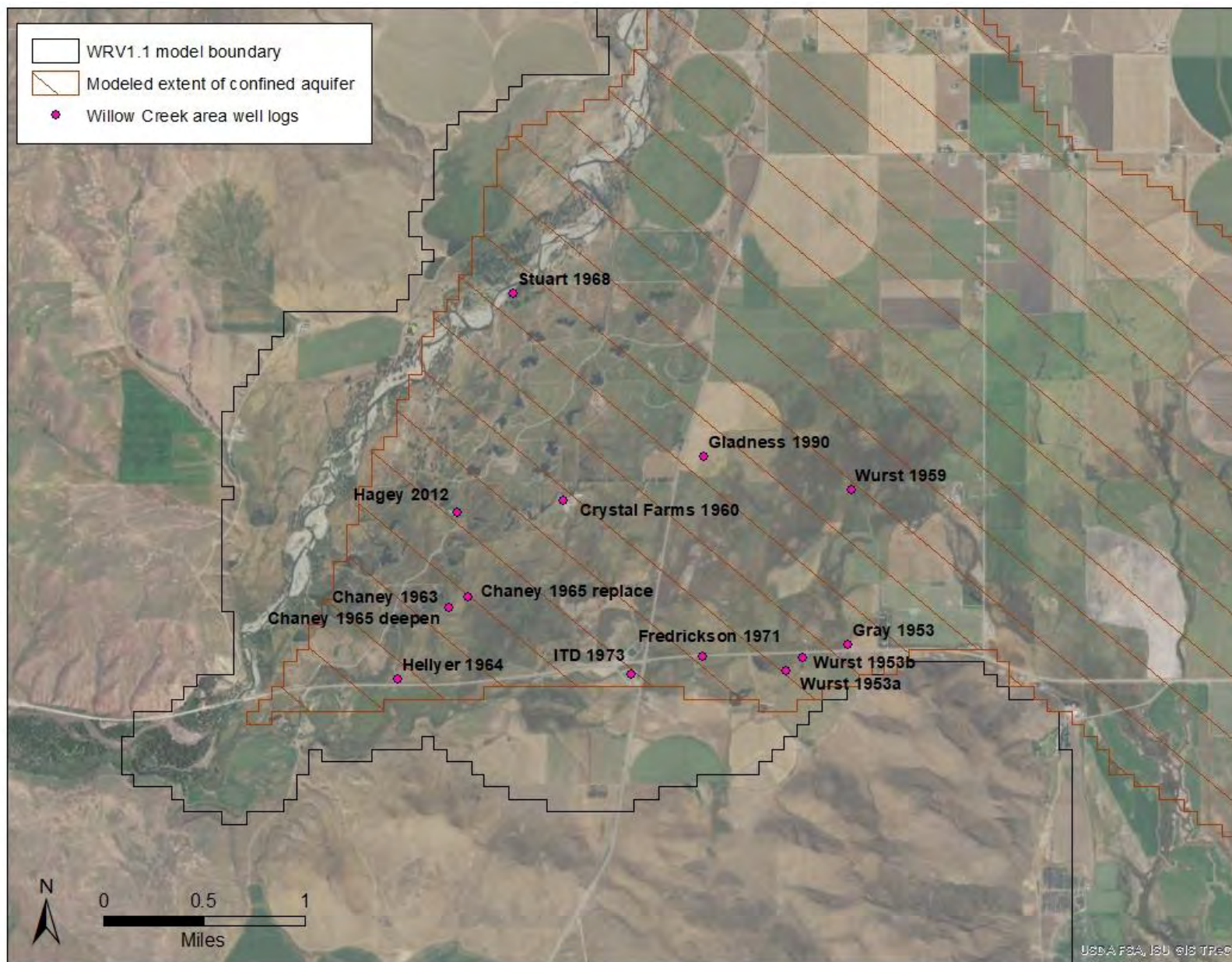
Predicted responses to curtailment starting August 1 within the area south of Glendale Bridge

Month	Curtailed consumptive use	Silver Creek		Big Wood above Dry Bed		Big Wood below Dry Bed		Groundwater underflow to ESPA		Increase in aquifer storage	Model convergence error
	AF	cfs	AF	cfs	AF	cfs	AF	cfs	AF	AF	AF
May	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0
June	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0
July	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0
Aug	6,737	13.6	834	0.3	18	1.4	86	0.5	31	5,767	1
Sep	<u>3,502</u>	17.3	<u>1,030</u>	0.3	<u>17</u>	3.5	<u>208</u>	1.1	<u>67</u>	<u>2,179</u>	<u>1</u>
Sum	10,239		1,864		34		295		98	7,946	2
	100%		18%		0%		3%		1%	78%	0%

ATTACHMENT C. WILLOW CREEK AREA WELL LOGS

Well driller's logs available for Willow Creek area

Owner	Date	Well Use	Production (gpm)	Static water level (ft)	Casing Diam. (in)	Casing Depth (ft)	Total Depth (ft)
WINTON S GRAY	7/23/1953	Irrigation	685	-37	8	150	153
HENRY L WURST	8/11/1953	Irrigation	396	-37	6	139	144
HENRY L WURST	8/31/1953	Irrigation	396	-37	6	141	144
HENRY L WURST	6/22/1959	Irrigation	2,080	flowing (<0)	8	155	156
CRYSTAL FARMS INC	10/27/1960	Domestic	900	-33	6	105	105
JAMES CHANEY	12/26/1963	Irrigation	1,058	flowing (<0)	8	102	102
K F HELLYER	1/9/1964	Domestic		flowing (<0)	6	70	72
JAMES CHANEY	8/9/1965	Irrigation	150	flowing (<0)	8	118	128
CHANEY RANCH	8/18/1965	Irrigation	720	flowing (<0)	8	96	96
E HADLEY STUART JR	11/14/1968	Domestic	50	flowing (<0)	8	115	132
J F FREDRICKSON	3/13/1971	Domestic	1,600	flowing (<0)	6	126	140
STATE OF IDAHO	7/12/1973	Irrigation	1,330	flowing (<0)	6	112	118
SPRING OF GLADNESS RANCH INC	11/14/1990	Stock	850	flowing (<0)	6	121	124
HARRY HAGEY	5/1/2012	Heating	254	flowing (<0)	6	110	110



WELL LOG AND REPORT TO THE
STATE RECLAMATION ENGINEER OF IDAHO
AUG 26 1953
Department of Reclamation

Log No. 034520
Rec. , 19
Well No.
Permit No. S-24503 V

(DO NOT FILL IN)

Owner WINTON GRAY Driller EUGENE W. WALKER
Address SUN VALLEY Address TWIN FALLS Lic. No. 15
Location of Well SE 1/4 Sec. 13, T15 N, R. 18 E BLAINE County.
and 250 feet N/S, and 500 feet E/W from NW corner of SE 1/4 Sec. 13
Water will be used for DOMESTIC - IRRIGATION Total depth of well 153
Size of drilled hole 8 inch Weight of casing per linear foot 25 lb
Thickness of casing .277 Casing material BLACK PIPE
Diameter, length and location of casing 150 ft 8 inch - surface to water
(Casing 12" in diameter and under give inside diameter; casing over 12" in diameter give outside diameter.)

Number and size of perforations None located feet to feet
from surface of ground.

Other perforations:

If flowing well, give flow in c.f.s. or g.p.m. 685 and shut in pressure 16 -

If non-flowing well, give depth of standing water from surface

If flowing well, describe control works 6" FLANGE VALVE
(Type and size of valve, etc.)

On pumping test delivery was g.p.m. or c.f.s. Drawdown was feet

Length of time pumped during check was hr. min. Water temp. 49 ° Fahrenheit.

Date of commencement of well July 15, 1953 Date of completion of well July 23, 1953

Type of well rig CHURN

CASING RECORD

Diam. Casing	From Feet	To Feet	Length	"Remarks" — Seals, Grouting, Etc.
8"	0	150	150	Set in clay

GENERAL INFORMATION — Pumping Test, Quality of Water, Etc.

Well has not been measured; G.P.M. are
Based on a mathematical formula
Water started flowing 12 AM July 23
Well was capped 25 July 1953
SESE S13 15 NE
JOURNAL

WELL LOG

From Feet	To Feet	Type of Material	Drilling Time		Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
			Hrs.	Min.		
0	5	Surface - top soil		30	no	no
5	17	River gravel	3		yes	none
17	29	Sandy Brown Clay	2	30	no	no
29	37	Brown Running Sand - fine	3		yes	no
37	49	" " Sand - fine	3		"	no
49	60	Blue " "	2	30	yes	no
60	79	Blue Clay	2	30	yes	no
79	89	Blue Clay	2	30	no	no
89	99	" "	2		no	no
99	125	Blue Clay	4		no	no
125	138	Heavy Blue Clay	3		no	no
138	148	" " "	3		no	no
148	150	Brown Clay - sticky	3		no	no
150	152	Gravel - "	8		yes	no
152	153	Blue Clay	4			

If more space is required use Sheet No. 2

WELL DRILLERS STATEMENT

This well was drilled under my jurisdiction and the above information is true and correct to the best of my knowledge and belief.

Signed Eugene F. Walber
By _____

By _____

License No. 15

Dated _____, 19____.

Subscribed and sworn before me this _____ day of _____, 19____.

Notary Public

My commission expires.

Residing at

NOTARIZATION NOT NECESSARY
UNDER NEW LAW.

RECEIVED

WELL LOG AND REPORT TO THE STATE RECLAMATION ENGINEER OF IDAHO Department of Reclamation

Log No. _____
Rec. _____, 19____
Well No. 034537
Permit No. 4-25056

(DO NOT FILL IN)

Owner HENRY L. WURST Driller EUGENE WALKER
Address _____ Address TWIN FALLS Lic. No. 15
Location of Well SW 1/4 SE 1/4 Sec. 13, T. 1 N, R. 18 E BLAINE County.
and 500 feet N, and 225 feet E from SW corner of SW 1/4 SE 1/4 Sec. 13
Water will be used for DOMESTIC - IRRIGATION Total depth of well 144
Size of drilled hole 6 inch Weight of casing per linear foot 19
Thickness of casing .280 Casing material BLACK PIPE
Diameter, length and location of casing 6" 139-4" ft - surface to water
(Casing 12" in diameter and under give inside diameter; casing over 12" in diameter give outside diameter.)
Number and size of perforations NONE located _____ feet to _____ feet
from surface of ground.
Other perforations: none
If flowing well, give flow in c.f.s. _____ or g.p.m. 396 and shut in pressure 16+
If non-flowing well, give depth of standing water from surface _____
If flowing well, describe control works 6" Sewer Valve - gate
(Type and size of valve, etc.)
On pumping test delivery was _____ g.p.m. or _____ c.f.s. Drawdown was _____ feet
Length of time pumped during check was _____ hr. _____ min. Water temp. 49 ° Fahrenheit.
Date of commencement of well Aug. 3 1953 Date of completion of well Aug 11 1953
Type of well rig CHURN

CASING RECORD

Diam. Casing	From Feet	To Feet	Length	Remarks — Seals, Grouting, Etc.
<u>6</u>	<u>0</u>	<u>139-4</u>	<u>139-4"</u>	<u>Set in clay</u>

GENERAL INFORMATION — Pumping Test, Quality of Water, Etc.

Well has not been measured; 9 P.M. are
Based on a mathematical formula

SWSE 8-13 IS 18E

WELL LOG

[illegible]

WELL DRILLERS STATEMENT

This well was drilled under my jurisdiction and the above information is true and correct to the best of my knowledge and belief.

**NOTARIZATION NOT NECESSARY
UNDER NEW LAW**

Signed

By

Dated _____, 19____.

License No. _____

Subscribed and sworn before me this _____ day of _____, 19_____.

Notary Public

My commission expires _____

Residing at

RECEIVED
JUL 16 1964

WELL LOG AND REPORT OF THE
STATE RECLAMATION ENGINEER OF IDAHO

Department of Reclamation

034519

Permit No. 927968 Well No. _____ County Blaine

Owner Henry L Wurst

Address Gannett

Driller EUGENE W. WALKER

Address 624 Pierce St. Twin Falls, Idaho

Well location SW 1/4 SE 1/4 Sec. 13, T. 1 N, R. 18 E

Size of drilled hole 6 in

Locate well in section

NW 1/4	NE 1/4
SW 1/4	SE 1/4

Total depth of well 144

Give depth to standing water from the ground _____ Water temp. 46 °Fahr.

On "Pumping Test" delivery was 396 g.p.m. or _____ c.f.s. Drawdown was _____ feet.

Size of pump and motor used to make test _____

Length of time of test _____ hours _____ minutes.

If flowing well, give flow _____ c.f.s. or _____ g.p.m. and of shut off pressure 16-18

If flowing well, described control works Gate Valve
(TYPE AND SIZE OF VALVE, ETC.)

Water will be used for Irrigation Weight of casing per lineal foot 19 lb

Thickness of casing 280 Casing material Steel
(STEEL, CONCRETE, WOOD, ETC.)

Diameter, length and location of casing 6 in 144 ft
(CASING 12" IN DIAMETER OR LESS, GIVE INSIDE DIAMETER;
CASING OVER 12" IN DIAMETER, GIVE OUTSIDE DIAMETER)

CASING RECORD

Diam. Casing	From Feet	To Feet	Length	Remarks—seals, grouting, etc.
6	0	144	144	

Number and size of perforations None located _____ feet to _____ feet from ground

Date of commencement of well Last July 1953 Date of completion of well Early Aug 1953

SWSE 5.13 151RE

WELL LOG

From Feet	To Feet	Type of Material	Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
0	3	Surface	No	No
3	15	River Gravel	Yes	No
15	20	Brown Clay	No	No
20	45	Brown Running Sand		
		Under Pressure	Yes	No
45	60	Blue Running Sand	Yes	No
60	138	Blue Clay	No	No
138	141	Brown Sticky Clay		
141	144	Gravel Artesian Water	Yes	No
144		Blue Clay	No	No

If more space is required use Sheet No. 2

WELL DRILLER'S STATEMENT

This well was drilled under my supervision and the above information is complete, true and correct to the best of my knowledge and belief.

Signed

By

Dated

License No.

15-

WELL LOG AND REPORT TO THE
STATE RECLAMATION ENGINEER OF IDAHO

Log No. _____
Rec. Department _____, 19____
Well No. _____
Permit No. 227968
034536

(DO NOT FILL IN)

Owner Henry Wurst Address Gannett
Driller Eugene Walker Address Twin Falls Lic. No. 15
Location of Well: NE 1/4 NE 1/4 Sec. 13, T. 1 NS, R. 18 E 1/4 BLAINE County,
and _____ feet N/S, and _____ feet E/W from _____ Corner of _____ 1/4 _____ 1/4 Sec. _____
Size of Drilled Hole 8 in Total depth of Well 156
Give depth of standing water from surface _____ Water Temp. 49 °Fahrenheit
On pumping test delivery was _____ g.p.m. or _____ c.f.s. Drawdown was _____ feet.
Size of pump and motor used to make the test _____
Length of time pumped during check was _____ hr., _____ minutes.
If flowing well, give flow in c.f.s. 4.4 or g.p.m. 2080 and shut in pressure unknown
If flowing well, describe control works Gate Valve
(TYPE AND SIZE OF VALVE, ETC.)
Water will be used for Irrigation Weight of casing per linear foot 25 lb
Thickness of casing 277 Casing material Steel
E.G., PIPE, CONCRETE, WOOD.
Diameter, length and location of casing 8 in - 155
(CASING 12" IN DIAMETER AND UNDER GIVE INSIDE DIAMETER;
CASING OVER 12" IN DIAMETER GIVE OUTSIDE DIAMETER.)
Number and size of perforations none located _____ feet to _____ feet
from surface of ground.
Other perforations none
Date of commencement of well 15 June Date of completion of well 22 June 59
Type of well rig Crown

CASING RECORD

DIAM. CASING	FROM FEET	TO FEET	LENGTH	"REMARKS" -- SEALS, GROUTING, ETC.
8	0	155	155	

GENERAL INFORMATION—Pumping Test, Quality of Water, Etc.

NENE S.13 IS 18E

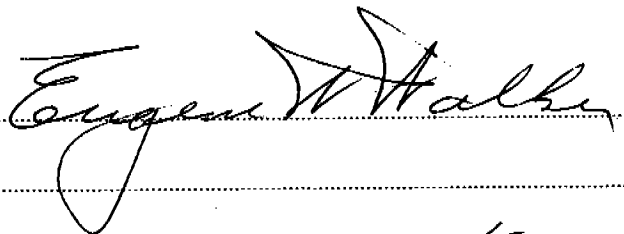
WELL LOG

From Feet	To Feet	Type of Material	Drilling Time		Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
			Hrs.	Min.		
0	4 1/2	Surface	1		No	No
	4 1/2	Water			Yes	
4 1/2	40	Layers of River Gravel & Clay - Lots of Water	11		Yes	No
40	70	Brown Running Sand	6		Yes	No
70	121	Blue Running Sand	12		Yes	No
121	143	Light Sandy Blue Clay	4		No	No
143	155	Sticky Brown Clay	2		No	No
155	155 1/2	Artesian Water				
155 1/2	156	Clay & gravel	1		?	No
156	?	Second Strata Artesian Water				
If more space is required use Sheet No. 2						

WELL DRILLER'S STATEMENT

This well was drilled under my jurisdiction and the above information is true and correct to the best of my knowledge and belief.

Signed



By

Dated

1 Oct

19 59

License No.

15

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DEC 6 1960

Department of Reclamation

WELL LOG AND REPORT OF THE
STATE RECLAMATION ENGINEER OF IDAHO

034521

Permit No. _____ Well No. _____ County BlaineOwner Crystal Farms Inc - Harry BettsAddress Gannett IdahoDriller Engene A Walker

Address _____

Well location NE 1/4 NW 1/4 Sec. 14, T. 1 N/S, R. 18 E/WSize of drilled hole 6 inTotal depth of well 105

Locate well in section

NW 1/4	NE 1/4
SW 1/4	SE 1/4

Give depth to standing water from the ground _____ Water temp. 50 °Fahr.

On "Pumping Test" delivery was _____ g.p.m. or _____ c.f.s. Drawdown was _____ feet.

Size of pump and motor used to make test _____

Length of time of test _____ hours _____ minutes.

If flowing well, give flow _____ c.f.s. or 900 g.p.m. and of shut off pressure 14 1/2If flowing well, described control works Gate Valve
(TYPE AND SIZE OF VALVE, ETC.)Water will be used for Domestic Weight of casing per lineal foot 19 lbThickness of casing 288 Casing material Steel
(STEEL, CONCRETE, WOOD, ETC.)Diameter, length and location of casing 6 in - 105
(CASING 12" IN DIAMETER OR LESS, GIVE INSIDE DIAMETER;
CASING OVER 12" IN DIAMETER, GIVE OUTSIDE DIAMETER)

CASING RECORD

Diam. Casing	From Feet	To Feet	Length	Remarks—seals, grouting, etc.
6	0	105	105	

Number and size of perforations None located _____ feet to _____ feet from groundDate of commencement of well 21 Oct Date of completion of well 27 Oct

NENW S.14 / S 18E

WELL LOG

[illegible]

WELL DRILLER'S STATEMENT

This well was drilled under my supervision and the above information is true and correct to the best of my knowledge and belief.

Signed.

Eugene W. Walker

By.

Dated:

1 Dec, 1960

License No.

15

RECEIVED
JUN 15 1964

**WELL LOG AND REPORT OF THE
STATE RECLAMATION ENGINEER OF IDAHO**

Department of Reclamation

034523

Permit No. 231541 Well No. _____ County Blaine

Owner James Charney

Address Box 535

Driller _____

Address _____

Well location NE 1/4 SE 1/4 Sec 15, T. 1 N/S, R. 18 E/W

Size of drilled hole 8 inch

Total depth of well 102

Give depth to standing water from the ground _____ Water temp. 46 °Fahr.

On "Pumping Test" delivery was _____ g.p.m. or _____ c.f.s. Drawdown was _____ feet.

Size of pump and motor used to make test _____

Length of time of test _____ hours _____ minutes.

If flowing well, give flow _____ c.f.s. or 1058 g.p.m. and of shut off pressure Unknown

If flowing well, described control works Gate Valve
(TYPE AND SIZE OF VALVE, ETC.)

Water will be used for Domestic & Irrigation Weight of casing per lineal foot 24 lb

Thickness of casing 277 250 Casing material Steel
(STEEL, CONCRETE, WOOD, ETC.)

Diameter, length and location of casing 8 in
(CASING 12" IN DIAMETER OR LESS, GIVE INSIDE DIAMETER;
CASING OVER 12" IN DIAMETER, GIVE OUTSIDE DIAMETER)

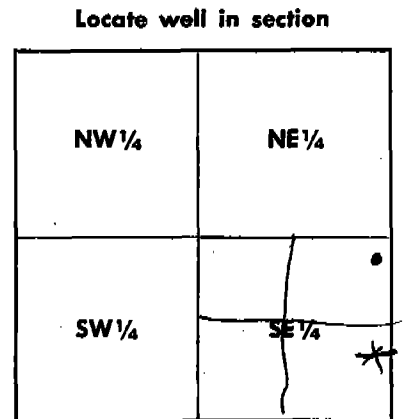
CASING RECORD

Diam. Casing	From Feet	To Feet	Length	Remarks—seals, grouting, etc.
8	0	102	102	

Number and size of perforations None located _____ feet to _____ feet from ground

Date of commencement of well 7 Dec 63 Date of completion of well 12/26/63

NESE S. 15 1 S 1 P E



WELL LOG

From Feet	To Feet	Type of Material	Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
0	4	Surface		
4	26	Gravel & sand Clay	yes	No
26	50	Light Blue Clay	No	No
50	65	Blue Running Sand	yes	No
65	88	Blue clay		
88	93	Decomposed Granite - Running Sand	yes	No
93	98	Brown Clay - (Tough)	No	No
98	102	Artesian Water - gravel	yes	No

If more space is required use Sheet No. 2

WELL DRILLER'S STATEMENT

This well was drilled under my supervision and the above information is true and correct to the best of my knowledge and belief.

Signed

By.

Dated

License No.

15

RECEIVED
JUN 15 1964

**WELL LOG AND REPORT OF THE
STATE RECLAMATION ENGINEER OF IDAHO**

Department of Reclamation

034525

Permit No. _____ Well No. _____ County Blaine

Owner R.F. Kelly

Address Gannett

Driller _____

Address _____

Well location 1/4 SE 1/4 Sec. 15, T. 1 N, R. 18 E

Size of drilled hole 6 in

Total depth of well 72

Locate well in section

NW 1/4	NE 1/4
SW 1/4	SE 1/4

Give depth to standing water from the ground _____ Water temp. 46 °Fahr.

On "Pumping Test" delivery was _____ g.p.m. or _____ c.f.s. Drawdown was _____ feet.

Size of pump and motor used to make test _____

Length of time of test _____ hours _____ minutes.

If flowing well, give flow unknown c.f.s. or _____ g.p.m. and of shut off pressure unknown

If flowing well, described control works Gate Valve
(TYPE AND SIZE OF VALVE, ETC.)

Water will be used for Domestic Weight of casing per lineal foot 19 lb.

Thickness of casing 28" Casing material Steel
(STEEL, CONCRETE, WOOD, ETC.)

Diameter, length and location of casing 6 in 0 to 70 ft
(CASING 12" IN DIAMETER OR LESS, GIVE INSIDE DIAMETER;
CASING OVER 12" IN DIAMETER, GIVE OUTSIDE DIAMETER)

CASING RECORD

Diam. Casing	From Feet	To Feet	Length	Remarks—seals, grouting, etc.
6	0	70	70	

Number and size of perforations None located _____ feet to _____ feet from ground

Date of commencement of well 12-27-63 Date of completion of well 1-9-64

SE 5.15 / 5.18E

used

WELL LOG

[illegible]

WELL DRILLER'S STATEMENT

This well was drilled under my supervision and the above information is complete, true and correct to the best of my knowledge and belief.

Signed Eugene W. Walker
By _____

Dated 11 June, 1964.

License No. 15

RECEIVED
NOV 30 1965WELL LOG AND REPORT OF THE
STATE RECLAMATION ENGINEER OF IDAHOPermit No. 26994 Well No. Old Well County Blaine

034522

Owner James ChaneyAddress KetchumDriller EUGENE W. WALKER624 Pierce St.
Twin Falls, Idaho

Address _____

Well location NE 1/4 Sec 15, T 15 N 18 E 1/4Size of drilled hole 8 inTotal depth of well 128

Locate well in section

NW 1/4	NE 1/4
SW 1/4	SE 1/4

Give depth to standing water from the ground _____ Water temp. 46 °Fahr.

On "Pumping Test" delivery was _____ g.p.m. or _____ c.f.s. Drawdown was _____ feet.

Size of pump and motor used to make test _____

Length of time of test _____ hours _____ minutes.

If flowing well, give flow 150 c.f.s. or 150 g.p.m. and of shut off pressure _____If flowing well, described control works 6 in Gate Valve
(TYPE AND SIZE OF VALVE, ETC.)Water will be used for _____ Weight of casing per lineal foot 23Thickness of casing 250 Casing material Steel
(STEEL, CONCRETE, WOOD, ETC.)Diameter, length and location of casing 8 in - 99 to 118 New Hole
(CASING 12" IN DIAMETER OR LESS, GIVE INSIDE DIAMETER;
CASING OVER 12" IN DIAMETER, GIVE OUTSIDE DIAMETER)

CASING RECORD

Diam. Casing	From Feet	To Feet	Length	Remarks—seals, grouting, etc.
8	0	118	118	

Number and size of perforations None located _____ feet to _____ feet from groundDate of commencement of well 26 July Date of completion of well 9 Aug 65

NESE S. 15 IS 18E depicted

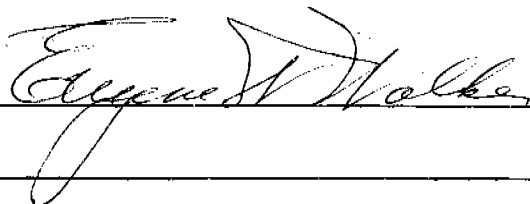
WELL LOG

From Feet	To Feet	Type of Material	Water-bearing Formation Ans. Yes or No	Casing Perforated Ans. Yes or No
0	102	Old Well		No
102	105	Clay & Sand	no	No
105	118	Layers of Gravel, sand & Clay, Flowed some Water from each layer of gravel - Would not flow the Original Amount		No
		Well Flowed sand & Lumps of Clay for 1½ days then quit flowing.		
		to Formations appeared to Have Broken down away from lower end of casing.		
118	128	Sand + Clay	yes	No
If more space is required use Sheet No. 2				

WELL DRILLER'S STATEMENT

This well was drilled under my supervision and the above information is complete, true and correct to the best of my knowledge and belief.

Signed



By

Dated 20 Aug., 1965.

License No. _____

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NOV 30 1965

WELL LOG AND REPORT OF THE
STATE RECLAMATION ENGINEER OF IDAHO

Department of Reclamation

Permit No. 231541 Well No. _____ County Bernie 034524
Owner Chaney Ranch - James Chaney Locate well in section
Address Ketchum Idaho
Driller EUGENE W. WALKER
624 Pierce St.
Twin Falls, Idaho
Address _____
Well location NE 1/4 SE 1/4 Sec. 15, T. 1 N. 34 S, R. 18 E NW
Size of drilled hole 8 in Replacement
Well Total depth of well 96

NW 1/4	NE 1/4
SW 1/4	SE 1/4

Give depth to standing water from the ground _____ Water temp. 46 °Fahr.
On "Pumping Test" delivery was _____ g.p.m. or _____ c.f.s. Drawdown was _____ feet.
Size of pump and motor used to make test _____
Length of time of test _____ hours _____ minutes.
If flowing well, give flow 720 c.f.s. or _____ g.p.m. and of shut off pressure _____
If flowing well, described control works Gate Valve - 8 in
(TYPE AND SIZE OF VALVE, ETC.)
Water will be used for Irrigation Weight of casing per lineal foot 23
Thickness of casing 250 Casing material Steel
(STEEL, CONCRETE, WOOD, ETC.)
Diameter, length and location of casing 8 in 96 ft - Complete
(CASING 12" IN DIAMETER OR LESS, GIVE INSIDE DIAMETER;
CASING OVER 12" IN DIAMETER, GIVE OUTSIDE DIAMETER)

CASING RECORD

Diam. Casing	From Feet	To Feet	Length	Remarks—seals, grouting, etc.
8	0	96	96	Stopped in Clay

Number and size of perforations None located _____ feet to _____ feet from ground
Date of commencement of well 10 Aug 65 Date of completion of well 18 Aug 65

NESE S. 15 15 18E

WELL LOG

[illegible]

WELL DRILLER'S STATEMENT

This well was drilled under my supervision and the above information is complete, true and correct to the best of my knowledge and belief.

Signed

Eugene N Walker

By:

Dated _____

20 Aug, 1965.

License No.

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DEC 24 1968

REPORT OF WELL DRILLER State of Idaho

Department of Reclamation

State law requires that this report shall be filed with the State Reclamation Engineer within 30 days after completion or abandonment of the well.

WELL OWNER:

Name E. Haddy Stuart
Address Gannett Idaho

Owner's Permit No. _____

NATURE OF WORK (check): Replacement well ☐
New well ☒ Deepened ☐ Abandoned ☐

Water is to be used for: domestic

METHOD OF CONSTRUCTION: Rotary ☐ Cable ☒
Dug ☐ Other _____

(explain)

CASING SCHEDULE: Threaded _____ Welded _____
8" Diam. from 0 ft. to 115 ft.
"Diam. from _____ ft. to _____ ft.
"Diam. from _____ ft. to _____ ft.
"Diam. from _____ ft. to _____ ft.

Thickness of casing: 1/2" Material: _____

Steel ☒ concrete ☐ wood ☐ other ☐

(explain)

PERFORATED? Yes ☒ No ☐ Type of perforator used: _____

Size of perforations: _____ by _____
40 perforations from 97 ft. to 110 ft.
perforations from _____ ft. to _____ ft.
perforations from _____ ft. to _____ ft.
perforations from _____ ft. to _____ ft.

WAS SCREEN INSTALLED? Yes ☐ No ☒

Manufacturer's name _____

Type _____ Model No. _____

Diam. _____ Slot size _____ Set from _____ ft. to _____ ft.

Diam. _____ Slot size _____ Set from _____ ft. to _____ ft.

CONSTRUCTION: Well gravel packed? Yes ☐

No. ☒ size of gravel _____ Gravel

placed from _____ ft. to _____ ft. Surface seal

provided? Yes ☐ No ☐ To what depth?

_____ ft. Material used in seal: _____

Did any strata contain unusable water? Yes ☐

No. ☒ Type of water: _____

Depth of strata _____ ft. Method of sealing

strata off: _____

Surface casing used? Yes ☐ No ☐

Cemented in place? Yes ☒ No ☐

Locate well in section

X			

Sec. _____

LOCATION OF WELL: County Blaine

NW 1/4 NW 1/4 Sec. 11 T. 1 S R. 18 E

Size of drilled hole: 8 Total
depth of well: 132 Standing water
level below ground: Flow Temp.
Fahr. 50 ° Test delivery: 50 gpm
or _____ cfs Pump? ☐ Bail ☐
Size of pump and motor used to make test: _____

Length of time of test: _____ Hrs. _____ Min.
Drawdown: _____ ft. Artesian pressure: _____ ft.
above land surface _____ Give flow _____ cfs
or 50 gpm. Shutoff pressure: 14
Controlled by: Valve ☒ Cap ☒ Plug ☐
No control ☐ Does well leak around casing?
Yes ☐ No ☒

DEPTH MATERIAL 39516 WATER
FROM TO YES OR NO
FEET FEET

0	4	Surface	
4	10	Gravel Sand	10 ft
10	26	Gravel - Sand & Clay	4 in
26	40	Light Tan Clay	
40	60	Sandy Clay	
60	95	Sand with some clay	
95	96 1/2	Barren Clay	4 in
96 1/2	107	Clay & decomposed granite	4 in
107	115	Sand & Clay	7 in
115	132		7 in

Work started: 9 Oct 1968
Work finished: 14 Nov 1968
Well Driller's Statement: This well was drilled under my supervision and this report is true to the best of my knowledge.
Name: Ernest K. Walker
Address: 624 Pine St
Signed by: Tom Falls Idaho
License No. 15 Date: 13 Dec 1968

Use other side for additional remarks

USGS

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MAY 12

WELL DRILLER'S REPORT

State law requires that this report be filed with the State Reclamation Engineer within 30 days after completion or abandonment of the well. Den

Department of _____

[illegible]

WELL DRILLER'S REPORT

State law requires that this report be filed with the Director, Department of Water Resources
within 30 days after the completion or abandonment of the well.

Klg

1. WELL OWNER

Name SPRING OF GLADNESS RANCH, INC.
Address P. O. Box 102, Jerome, Idaho 83338
Owner's Permit No. 37-90-S-124 OK

7. WATER LEVEL

Static water level 0 feet below land surface.
Flowing? ☒ Yes ☐ No G.P.M. flow APPROX 850
Artesian closed-in pressure 8 lbs p.s.i.
Controlled by: ☒ Valve ☐ Cap ☐ Plug
Temperature 48 °F. Quality _____
Describe artesian or temperature zones below.

2. NATURE OF WORK

- ☒
- New well
- ☐
- Deepened
- ☐
- Replacement
-
- ☐
- Well diameter increase
-
- ☐
- Abandoned (describe abandonment procedures such as materials, plug depths, etc. in lithologic log)

8. WELL TEST DATA None☐ Pump ☐ Bailer ☐ Air ☐ Other _____

Discharge G.P.M.

Pumping Level

Hours Pumped

3. PROPOSED USE

- ☐
- Domestic
- ☐
- Irrigation
- ☐
- Test
- ☐
- Municipal
-
- ☐
- Industrial
- ☒
- Stock
- ☐
- Waste Disposal or Injection
-
- ☐
- Other _____ (specify type)

4. METHOD DRILLED

- ☒
- Rotary
- ☐
- Air
- ☐
- Hydraulic
- ☐
- Reverse rotary
-
- ☐
- Cable
- ☐
- Dug
- ☐
- Other _____

5. WELL CONSTRUCTION

Casing schedule: ☒ Steel ☐ Concrete ☐ Other _____

Thickness	Diameter	From	To
<u>2.50</u> inches	<u>6 5/8</u> inches	<u>0</u> feet	<u>2</u> feet
<u>3.75</u> inches	<u>6 5/8</u> inches	<u>+1</u> feet	<u>-19</u> feet
<u>2.50</u> inches	<u>6 5/8</u> inches	<u>-19</u> feet	<u>-121</u> feet

Was casing drive shoe used? ☒ Yes ☐ NoWas a packer or seal used? ☐ Yes ☒ NoPerforated? ☐ Yes ☒ NoHow perforated? ☐ Factory ☐ Knife ☐ Torch ☐ Gun

Size of perforation _____ inches by _____ inches

Number	From	To
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet
_____ perforations	_____ feet	_____ feet

Well screen installed? ☐ Yes ☒ No

Manufacturer's name _____

Type _____ Model No. _____

Diameter _____ Slot size _____ Set from _____ feet to _____ feet

Diameter _____ Slot size _____ Set from _____ feet to _____ feet

Gravel packed? ☐ Yes ☒ No ☐ Size of gravel _____

Placed from _____ feet to _____ feet

Surface seal depth 18 Material used in seal: ☐ Cement grout☐ Bentonite ☒ Puddling clay ☐ _____Sealing procedure used: ☐ Slurry pit ☐ Temp. surface casing☐ Overbore to seal depthMethod of joining casing: ☐ Threaded ☐ Welded ☐ Solvent

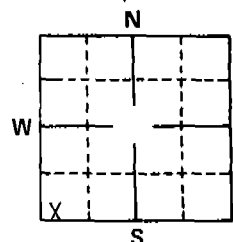
Weld

☐ Cemented between strata

Describe access port _____

6. LOCATION OF WELL

Sketch map location must agree with written location.



Subdiv. _____

AUG 29 1991

Lot No. _____ Block No. _____

County Blaine

SW 1/4 SW 1/4 Sec. 12, T. 1S, R. 18E, W. 1E

11. DRILLERS CERTIFICATION

I/We certify that all minimum well construction standards were
complied with at the time the rig was removed.Firm Name SMITH DRILLING & FIRMING CO., INC.Address JeromeDate 11/14/90

Signed by (Firm Official) _____

and

(Operator) Melton H. Robison

AD

* Signature of Principal Driller and rig operator are required.

2021/9