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DEPARTMENT OF
WATER RESOURCES

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**IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT
OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS**

In Re SRBA	)	Subcase: See Attachment A
	)	
Case No. 39576	)	AFFIDAVIT OF DAVID A. JARVIS
_____	)	

STATE OF COLORADO	)
	)ss.
City and County of Denver	)

AFFIDAVIT

I, DAVID A. JARVIS, being of lawful age and having been first duly sworn, state the following:

1. I make the following statements based upon personal knowledge and am competent to testify thereto.

2. I am a paralegal with Labat-Anderson, Inc., a government contractor which provides paralegal services to the U.S. Department of Justice.

3. I provide paralegal support to Environment and Natural Resources Division attorneys who represent the interests for the United States in the Snake River Basin Adjudication. I have performed this role for approximately nine (9) years. As part of my duties, I act as the custodian of SRBA files for the United States Department of Justice, and am familiar with the court filings served upon the United States and the documents filed by the United States in the SRBA.

4. I attest that attached as Exhibit A are true and correct excerpt pages from the Deposition of Lyle Robert Swank in SRBA Subcase No. 01-00006, dated October 8, 2008

5. I attest that attached as Exhibit B are true and correct excerpt pages from the Deposition of Ronald Dean Carlson in SRBA Subcase No. 01-00006, dated October 7, 2008.

6. I attest that attached as Exhibit C are true and correct excerpt pages from the Deposition of Anthony Olenichak in SRBA Subcase No. 01-00006, dated October 6, 2008.

7. I attest that attached as Exhibit D is the Expert Report of Patrick McGrane.

8. I attest that attached as Exhibit E is a true and correct excerpt from Appendix E of Bureau of Reclamation, OPERATIONS DESCRIPTION FOR BUREAU OF RECLAMATION PROJECTS IN THE SNAKE RIVER BASIN ABOVE BROWNLEE RESERVOIR – APPENDICES, February 2004.

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DATED this 27 day of July, 2009.

David A. Jarvis
David A. Jarvis

SUBSCRIBED AND SWORN to before me this 27TH day of July, 2009

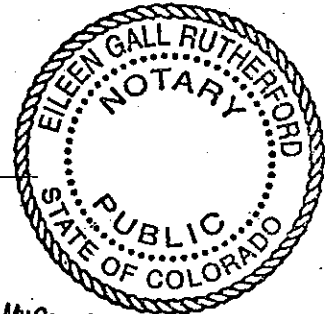
Eileen Gall Rutherford

Eileen Gall Rutherford

Notary Public for Colorado

Residing at: DENVER, COLORADO

My Commission Expires: 8/27/2012



My Commission Expires 8/27/2012

Attachment A

Subcase Nos.

01-00004
01-00005
01-00006
01-00007
01-00008
01-00009
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01-00017
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01-00213
01-02040
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01-10189
01-10225
01-10237
01-10238
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01-10482
01-10483

Exhibit A

1 IN THE DISTRICT COURT OF THE FIFTH JUDICIAL

2 DISTRICT OF THE STATE OF IDAHO,

3 IN AND FOR THE COUNTY OF TWIN FALLS

4

5 In Re SRBA)

6 Case No. 39576) Subcase No. 1-6

7 _____)

8

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10

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14 DEPOSITION OF LYLE ROBERT SWANK

15 OCTOBER 8, 2008

16

17

18

19

20 REPORTED BY:

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

22 Notary Public

23

24

25

1 THE DEPOSITION OF LYLE ROBERT SWANK, was
2 taken on behalf of A & B Irrigation District,
3 Burley Irrigation District, Milner Irrigation
4 District, North Side Canal Company, and Twin Falls
5 Canal Company, at the offices of the Department of
6 Water Resources, 900 North Skyline, Suite A, Idaho
7 Falls, Idaho, commencing at 8:11 a.m., October 8,
8 2008, before Jeff LaMar, Certified Shorthand
9 Reporter and Notary Public within and for the
10 State of Idaho, in the above-entitled matter.

11

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11 BY MR. ROBERT L. HARRIS

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15 Also Present:

16 Ronald Dean Carlson

17 James Cefalo

18

19

20

21

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23

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25

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2

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14 No. 01-2061

15

16 UNANSWERED QUESTIONS

17 PAGE LINE

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19 102 13

20

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25

1 maybe as a subset of that greater record.

2 Q. Okay. Then if the black books are the

3 most accurate reflection of water deliveries to

4 the water rights identified in the accounting

5 program, how would claims for water not identified

6 in the program be delivered? Such as if there's

7 beneficial-use claims, private leases, other

8 contractual obligations and such, how would those

9 be identified in terms of the delivery of water

10 for those obligations if they're not identified in

11 the accounting program?

12 A. Yeah, if they're beneficial-use

13 claims, those are not usually listed in the

14 watermaster's annual record book. If they do have

15 a claim, they may be able to get water when

16 there's surplus water available.

17 Q. But simply because they're not listed

18 in the watermaster's program or in the water

19 district's accounting program, doesn't necessarily

20 mean that they don't have a claim for water; isn't

21 that correct?

22 A. That's my understanding.

23 Q. And the intent of the SRBA

24 adjudication is to either validate those

25 beneficial-use claims or dismiss them; correct?

1 A. That's correct.

2 Q. Okay. Likewise, if there's any

3 contractual obligations, such as private leases or

4 other obligations, those wouldn't necessarily be

5 reflected in the accounting program either, would

6 they?

7 A. Did you say water -- or beneficial use

8 or private leases?

9 Q. Yeah, private leases or other

10 contractual obligations would not necessarily be

11 accounted for in the accounting program; correct?

12 A. That's correct.

13 Q. Okay. But those may exist outside of

14 the accounting program; correct?

15 A. That's correct.

16 Q. Okay. And does the water district in

17 any way account for those or identify those types

18 of obligations and whether water's been delivered

19 pursuant to those obligations?

20 A. In your private-lease example, we do

21 have a record of water delivered through the

22 rental pool. And it may not be in the water right

23 listing portion of the appendix, but could have

24 some standing.

25 Q. Lyle, does the accounting program

1 identify any of the rights in the program as

2 high-flow or flood-water rights?

3 A. We don't use that phrase attached to

4 the water rights. There may be -- I guess,

5 "high-flow" is kind of a layman's term, in my

6 view.

7 Q. One that's not necessary for you in

8 carrying out your duties?

9 A. Yeah, if -- I mean, as an example,

10 some people have their earliest or their primary

11 decree, and sometimes refer to a later right as

12 their canals, which also could be a decreed right,

13 and they call that their -- their high-water right

14 or flood right.

15 Q. Okay. But that designation would not

16 assist you in carrying out your duties as

17 watermaster; correct?

18 A. It's not a distinction that the

19 watermaster really has to worry about.

20 Q. Okay. Because you just simply deliver

21 water by priority; correct?

22 A. That's correct.

23 Q. Lyle, what's the relationship between

24 the water district and the Bureau of Reclamation

25 in terms of coordinating storage operations during

1 the storage season?

2 A. During the storage season, the Bureau

3 of Reclamation is really the primary

4 decision-maker for the reservoir operations and

5 releases during the winter, nonirrigation season.

6 Q. So Reclamation essentially is a

7 primary authority for controlling river operations

8 during the storage season?

9 A. Well, certainly during the winter

10 operational season. There is some storage in the

11 spring that, you know, may not be as simplistic as

12 that.

13 Q. Okay. During the spring there would

14 be more coordination between the water district

15 and Reclamation to ensure that as natural-flow

16 rights come into priority and use that there's not

17 a conflict between storage and the delivery of

18 natural flow?

19 A. That's correct.

20 Q. Okay. So in terms of the rate of fill

21 of storage, that would be a matter that you as

22 watermaster would coordinate with Reclamation on?

23 A. Yeah, the physical operation -- the

24 Bureau does have more of a primary authority for

25 exercising the Bureau's storage right during the

1 question.

2 MR. BAXTER: I do have some questions,

3 though. If you want to do your follow up now and

4 then come back to me, that's fine or --

5 MR. SIMPSON: All right.

6

7 FURTHER EXAMINATION

8 BY MR. SIMPSON:

9 Q. Lyle, Mr. Budge had you look at the

10 affidavit of Tony Olenichak and the "high water"

11 definition contained in paragraph 8 and then had

12 you look at paragraph 10.

13 Do you recall that testimony?

14 A. Yes, I do.

15 Q. And essentially, you identified that

16 high-water rights were those that received water

17 during the high-water runoff or snowmelt.

18 Do you recall that testimony?

19 A. Yes.

20 Q. Okay. My question is: If a water

21 right -- from your perspective, if a water right

22 receives water outside of the period of high

23 runoff or snowmelt, then would that water right be

24 classified as a high-water right?

25 A. I wouldn't consider a reservoir

1 storing a water right during the winter time
2 period, even if it was a fairly junior right, a
3 high-water right.

4 Q. All right. Let's just focus on
5 natural-flow rights.

6 A. Okay.

7 Q. So if a natural-flow right receives
8 water outside of the period of high runoff or
9 snowmelt, then would it be your opinion that that
10 right should not be classified as a high-water
11 right?

12 A. I think that's reasonable.

13 MR. SIMPSON: That's all I have.

14 Garrick.

15 MR. BAXTER: Take about a five-minute

16 break --

17 MR. SIMPSON: Okay.

18 MR. BAXTER: And come back?

19 Thanks.

20 (Recess.)

21

22 EXAMINATION

23 BY MR. BAXTER:

24 Q. Lyle, I just wanted to go back and

25 address a few issues that were brought up, just a

1 A. Yes.

2 Q. I'd like to look at Exhibit 10. And I

3 notice there's some red markings on this exhibit.

4 Now, if we look to the markings on the right-hand

5 side, the arrow going up to July 1st, and I

6 believe it says, "Instantaneous draft on storage."

7 That's consistent -- those markings

8 are consistent with your testimony; is that

9 correct?

10 A. Yes, we did talk about that.

11 Q. Okay. But these other markings on the

12 left-hand side, those are not your markings? And

13 I didn't recall you talking about those markings.

14 Do you recall testifying as to the markings on the

15 left-hand side?

16 A. I did not.

17 MR. BAXTER: I have no further questions.

18 MR. SIMPSON: None for me.

19 MR. ARKOOSH: I have a couple.

20

21 FURTHER EXAMINATION

22 BY MR. ARKOOSH:

23 Q. Lyle, post-1900 rights can be in

24 priority early in the year in some years, they can

25 be in priority during the middle of the season in

1 some years, and very often they're in priority

2 late in the season; is that a fair statement?

3 A. That's correct.

4 Q. So counsel asked you if Tony's

5 affidavit was true and accurate.

6 But when you reviewed Exhibit 10, did

7 you see some discussion that Tony had provided

8 that didn't show up in the affidavit about

9 possibility of these rights being available

10 throughout the year? And I would suggest the

11 second page of Exhibit 10 of the e-mails to you.

12 A. Okay.

13 Q. Actually, I think it's Exhibit 9

14 maybe.

15 Are the e-mails Exhibit 9?

16 A. (No audible response.)

17 Q. You have to answer audibly. "Yes"?

18 A. Yes.

19 Could you repeat the question, please?

20 Q. On the second page, is there some

21 discussion about when these rights were in

22 priority throughout the year?

23 A. (Reviews.)

24 Q. Let's stop there. It might be the

25 first page. It is the first page.

Exhibit B

5 In Re SRBA)
6 Case No. 39576) Subcase No. 1-6
7 _____)

14 DEPOSITION OF RONALD DEAN CARLSON
15 OCTOBER 7, 2008

20 REPORTED BY:
21 JEFF LaMAR, C.S.R. No. 640
22 Notary Public

1 THE DEPOSITION OF RONALD DEAN CARLSON, was
2 taken on behalf of A & B Irrigation District,
3 Burley Irrigation District, Milner Irrigation
4 District, North Side Canal Company, and Twin Falls
5 Canal Company, at the offices of the Department of
6 Water Resources, 900 North Skyline, Suite A, Idaho
7 Falls, Idaho, commencing at 9:13 a.m., October 7,
8 2008, before Jeff LaMar, Certified Shorthand
9 Reporter and Notary Public within and for the
10 State of Idaho, in the above-entitled matter.
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1 between these water rights and the base flow.

2 Q. Okay. So they don't depend upon that
3 base flow at all?

4 A. To the extent they rely on it, it's
5 indeterminable. One can't determine the extent of
6 the dependency.

7 Q. Okay. So they don't divert any of
8 that base flow throughout the irrigation season?

9 A. That's correct.

10 Q. Okay. Whether it be in the spring or
11 late fall --

12 A. Never.

13 Q. -- or in the irrigation season?

14 A. Never.

15 Q. So if the black books were identifying
16 that they were diverting water under any of those
17 rights identified in Exhibit A at any time of the
18 irrigation season, it would be solely upon spring
19 melt?

20 A. Well, there is, of course, a
21 possibility that for some reason Twin Falls and
22 North Side cease to divert water or reduce their
23 diversion for some reason, which would be rare.
24 But it could happen.

25 In that case, of course, the

1 be applied when administering ground water as to
2 surface water?

3 A. Well, clearly I believe that the --
4 the attempt to regulate ground water to supply
5 water to surface water is not appropriate.

6 Q. Well, it's more than that. You
7 believe that the senior surface water rights
8 should be subordinated to junior ground water
9 rights?

10 A. I'm saying that that is a potential
11 resolution in this matter that makes sense.

12 Q. To the ground water user?

13 A. No. I think to everybody.

14 Q. In paragraph 9, one of the water
15 rights listed there is 1-10034, which is a Bureau
16 of Reclamation claim pertaining to storage at
17 Minidoka Dam, Lake Walcott?

18 A. Yes.

19 Q. Just to clarify a few things, based
20 upon your experience as watermaster, you agree
21 that Lake Walcott holds 95,200 acre-feet of active
22 storage; correct?

23 A. I think that's the right number.

24 Q. And that every year it's delivered?

25 A. That's correct.

1 A. It's dependent upon location. Tony
2 used an example yesterday that -- at Willow Creek.
3 Willow Creek has some of the oldest water rights
4 in the district. 1895 priority water rights on
5 Willow Creek are high-water rights. So as to that
6 specific system, high-water rights are much
7 earlier in priority than they are other places.

8 If you go above Blackfoot, I would
9 probably agree with Tony that 1916 may be a pretty
10 good place to make a cut and say those are
11 high-water rights.

12 Below Blackfoot, it's set by the Twin
13 Falls water right, and it's 1900. And as of 1900,
14 all of the base flow in the river had been
15 appropriated by Twin Falls and North Side to
16 the -- to 3400 second-feet of water.

17 So the base flow has never, to my
18 knowledge, produced that amount of water. So all
19 of those who came later in time said, "We can use
20 some of the water, some of the spring runoff, and
21 we hope to appropriate that and use it
22 beneficially."

23 And that's where those other water
24 rights came from and the reason why they were
25 granted, because there was water available at

1 free-for-all.

2 Q. But would you disagree that water
3 represented by those rights was diverted by those
4 entities during those years?

5 A. Oh, sure.

6 Q. In August, September, and October?

7 A. Well --

8 Q. Not every year in August, September,
9 October. I'm not trying to mislead you there.

10 But some years all three months?

11 A. Absolutely.

12 Q. Some years September, October? Some
13 years August, September? So water would be
14 available for delivery during that time,
15 natural-flow water to those entities; correct?

16 A. That's correct.

17 Q. So what you think the director should
18 do or the watermaster or someone in the process of
19 administering water is try to determine what makes
20 up the supply of water in the river; correct?

21 A. No. I -- I'm not even sure that I
22 believe that. I just think there need to be
23 appropriate conditions on certain water rights
24 that limit their ability to make a call against
25 other water users.

1 water supply is dictated almost exclusively by
2 what we have in the watershed for a given year.

3 Q. But my question, Mr. Carlson, was: In
4 order for your theory to apply that you're using
5 here, this high-water theory that you want to put
6 conditions on a water right, wouldn't you have to
7 be able to quantify for everyone's water right
8 the -- I don't want to use the word "source" --
9 the nature of the supply comprising that water
10 right?

11 A. Yeah. Only -- only if there's an
12 ability to make a call against ground water. And
13 then maybe you have to do that. I did --

14 Q. So anyone that wants to make a call
15 against ground water would have to have on their
16 water right some breakdown of the components of
17 the supply of the water to them?

18 A. Right.

19 Q. And to your knowledge, has the State
20 ever undertaken that type of effort?

21 A. Not to my knowledge.

22 Q. Do you believe it's -- do you believe
23 that it's even possible to quantify those things?

24 A. I think it's about as easy to quantify
25 as it is to rely on the model to determine what

1 the flow to the river is.

2 Q. And you don't like the model. You
3 think that's irresponsible to use it, correct?

4 A. Absolutely.

5 Q. So do you think it's irresponsible,
6 then, to try to quantify the various components of
7 water in the river?

8 A. It only is not irresponsible to the
9 extent that the calls have forced you into that
10 box.

11 Q. I guess my question was: Do you
12 believe it's possible to do it?

13 A. No, I don't.

14 Q. So if it's not possible to quantify
15 the components of the water in the river, how do
16 you do it?

17 A. You pick a date. I say we use 1900
18 and put it on all those that are later in time
19 than that.

20 Q. You just pick a date?

21 A. Well, we pick a date based upon what
22 we know from experience. And that would be the
23 Twin Falls' water right.

24 Q. And it's not based upon when the water
25 right's being delivered, what time of year it's

1 Q. But that's how it works, isn't it?

2 A. Right.

3 Q. I mean, that's how the whole system
4 works, junior takes when water's available, and if
5 the senior takes it all, the junior doesn't get
6 it; right?

7 A. That's correct. But to make a -- to
8 make a water call based upon that is -- is just
9 not defensive because you don't get any more
10 water.

11 Q. But isn't that a defense that should
12 be raised in the water call, not for the purposes
13 of a water right?

14 A. Well --

15 Q. This is a defense you're attempting to
16 raise to a water call; isn't that correct?

17 A. I guess I would characterize it as a
18 preemption, yes.

19 Q. Yeah. And isn't it better taken in
20 that setting, and didn't you try to raise that
21 type of defense in the water call?

22 A. Well --

23 Q. Let me rephrase it.

24 Didn't you raise this very theory in
25 the water call setting?

1 mitigation because this water right happens to be
2 junior in time to these other ground water users."

3 Q. Aren't you -- if -- in a world that is
4 perfect to you, if we Exhibit A folks called out
5 junior pumpers because we're limited to, as a
6 practical matter, runoff water as what you call
7 the source --

8 A. Uh-huh.

9 Q. -- nobody would have to respond to our
10 call because it wouldn't provide us any more
11 water?

12 A. I agree with that.

13 Q. Isn't that what we call a futile call?

14 A. Yeah. And had the director done that,
15 that would have been wonderful.

16 Q. And wouldn't the doctrine of futile
17 call, then, provide you with what you've called
18 the ability to control who makes a call?

19 A. No, because it hasn't worked to this
20 point.

21 Q. So what you're really disappointed in
22 is the rejection of your defense in the call as
23 described by Mr. Fletcher?

24 A. No. What I'm -- it's not that. What
25 I'm disappointed in is the actions of the

1 Q. Okay. Then correct me.

2 A. Well, many of these water rights got
3 established on the basis that the Bureau of
4 Reclamation's contracts for storage were for
5 supplemental uses, which means you needed to have
6 a -- an underlying natural-flow right.

7 So applications were, I think, even
8 required by the Department saying, "We need to
9 have the point of diversion under where you're
10 going to take that identified on a water right of
11 some kind. So make it application."

12 The application then was -- was, you
13 know, considered that -- that application will
14 identify the point of diversion, the amount of
15 water that's going to be taken, all of the
16 elements of the water right, but what's going to
17 be taken at that point will predominantly be
18 storage.

19 And so we have many, many late
20 priority water rights that have never received
21 water that are on the books because they
22 established the point of diversion in the system
23 and they -- but they are -- they're supplied by
24 storage. And so I think that's consistent with
25 what I've told Mr. Simpson.

1 Q. And if you'll note in the what I'll
2 call the "remarks" section of the license, there's
3 a reference to water right 1-13 for Falls
4 Irrigation District. And I'll just read it for
5 the purposes of the record since everyone doesn't
6 have a copy of this.

7 "This right when combined with decree
8 No. 01-0013 shall provide no more than 0.02 cubic
9 feet per second per acre, no more than 3.5
10 acre-feet per annum per acre to the described
11 lands above."

12 And my question was: The -- well, let
13 me make sure I understood your last answer.

14 You believe that water that may have
15 been diverted to the Falls Irrigation District
16 under this right was storage water, was derived
17 from storage?

18 A. I'm assuming that that priority is for
19 the Snake River. I didn't look at that.

20 Q. Yeah, it's 153 cfs.

21 A. Okay. No, there was no storage water
22 delivered under that right. All I'm saying is
23 that stored water was being delivered to that
24 point of diversion.

25 Q. Okay. I'm not sure I follow the

1 distinction.

2 A. Okay. Let's suppose that it's 2008.

3 We have -- we have no expectation that we could
4 ever deliver a 2008 priority water right. You
5 come in to the office and say, "I want to put a
6 pump here, and I want to be able to pump storage
7 for this tract of land."

8 What the Department typically would do
9 is they need to make an application for permit.
10 The application for permit would establish the
11 elements of that diversion. There's no
12 expectation that any natural flow would be
13 delivered, although if natural flow were ever
14 available at the time when you could divert it,
15 when you diverted it, you would get to divert
16 under that water right.

17 But it's the document that's used as
18 the descriptor of the water right -- or the
19 diversion that's being administered by the
20 watermaster. If it's -- if it were just for
21 storage and we didn't have some underlying water
22 right, we wouldn't have any description of what it
23 is that we're delivering to.

24 And so the permit serves a useful
25 purpose from a water distribution standpoint, even

1 though water is not being delivered to it or it
2 has never been delivered to it.

3 Q. Let me see if I can put this in a more
4 colloquial way.

5 Are you saying that a permit or a
6 license such as this is effectively the
7 Department's identification of the place where
8 stored water that's been released is caught, so to
9 speak, and taken out of the river?

10 A. It's -- it's the descriptor of a point
11 of diversion where primarily storage water will be
12 delivered. But it will not be delivered under
13 that right. It will be delivered under a contract
14 with the Bureau of Reclamation.

15 Q. So if we were to produce records
16 showing that water had been diverted at this site,
17 your characterization of that water would be it
18 was storage?

19 A. That's correct.

20 Q. And that would apply equally to water
21 right 1-0013?

22 A. I believe that's true.

23 What is that number you just gave me?

24 Q. 1-0013.

25 A. I don't find it. I don't find it on

1 the list. But if it's -- but if the situation's
2 the same, I guess that would be true, if it's a
3 late-priority water right. But I don't find it on
4 the list of objections.

5 Q. And off the top of my head, I don't
6 know what the priority year of 0013 is.

7 MR. SIMPSON: Ron, it's on your Exhibit A.

8 MR. STANISH: It's '39.

9 MR. FLETCHER: 100 what? 13?

10 MR. BAXTER: 1-13.

11 MR. FLETCHER: It's a decree for Falls
12 Irrigation District, 1939.

13 THE WITNESS: Yeah, we didn't object to
14 that one.

15 MR. FLETCHER: You did object to the
16 source.

17 THE WITNESS: But yes, I believe that it
18 would apply.

19 Q. (BY MR. GEHLERT): Earlier in response
20 to questions from Mr. Fletcher, you talked about
21 water right 1-10034, which is one of the Lake
22 Walcott water rights. It's the junior of the two,
23 219 being the senior one. And you indicated that
24 you believe that water had been delivered under
25 the senior water right essentially every year.

1 Is that an accurate --

2 A. That's accurate.

3 Q. Are you aware of what the director
4 recommended for that water right, the senior water
5 right at Walcott?

6 A. I'm not.

7 Q. Okay. If I represent to you that the
8 director recommended that the quantity be limited
9 to 41,700 acre-feet, would you say that that was
10 an error?

11 A. My assumption is, then, the remainder
12 of the 90,000 was made up by the second water
13 right?

14 Q. That's how I understand the director
15 to have recommended it out.

16 A. My -- my belief is, is that that's not
17 the way we've delivered it.

18 Q. Okay. And you've been -- your
19 understanding is that you've been delivering water
20 under the senior water right and only the senior
21 right?

22 A. Right.

23 Q. And that's why the junior water
24 right's on your list as never having been
25 delivered to?

1 A. Right.

2 Q. Okay. Are you familiar with Walcott
3 Park?

4 A. Yes.

5 Q. And are you familiar with whether it's
6 irrigated?

7 A. Yes.

8 Q. And how it's irrigated?

9 A. Yes.

10 Q. Can you describe to me how it's
11 irrigated?

12 A. As I recall, there's a small pump that
13 pumps water for the park.

14 Q. If I were to represent to you that
15 there's a 400 gpm pump, does that sound about
16 right?

17 A. That sounds right.

18 Q. Do you know what water right those
19 pumps divert water under?

20 A. My recollection is is that it's
21 storage that comes from the Minidoka project.

22 Q. Storage from the Minidoka project?

23 A. Yeah. There's -- as I recall,
24 there's -- I don't remember there being a water
25 right sufficient to deliver water to that outside

1 questions.

2 MR. FLETCHER: Randy, before you start, I
3 just have one housekeeping question to ask him.

4

5 FURTHER EXAMINATION

6 BY MR. FLETCHER:

7 Q. Can you look at that chart of yours,
8 the exhibit to your affidavit on water right 219.
9 And that's the Lake Walcott 1909 right.

10 A. Okay.

11 Q. On the footnote -- you put a
12 footnote 1 by that water right. And footnote 1 is
13 basically your source objection, that the claimed
14 water right's entitled to be filled only by
15 high-surface-water runoff from snowmelt or rain.

16 A. Right.

17 Q. Does that apply to the Lake Walcott
18 storage right? Did you intend for that? I mean,
19 what I'm asking is: Was that a mistake or --
20 because this is the only storage right listed on
21 here in this decree, I believe, unless there's at
22 American Falls. I don't know if any of those are
23 storage rights or not -- of Falls, I mean.

24 MR. GEHLERT: No. They're natural flow.

25 THE WITNESS: I don't remember why that was

1 singled out.

2 Q. (BY MR. FLETCHER): Because the Lake
3 Walcott storage right is senior to the American
4 Falls storage rights; correct?

5 A. That's true. Yeah, I can't tell you
6 why that's on here.

7 Q. Okay. Should that objection apply to
8 that storage right?

9 A. Based on what I know today, I don't
10 think so.

11 Q. Okay. Thanks. That's just something
12 I forgot to ask you earlier. Thanks.

13 A. And I'm assuming this is based on a
14 decree.

15 Q. Yeah. It's the 19- -- this is the
16 1909 storage right at Walcott, the 219 one.

17 A. Yeah.

18 Q. I mean, there's some confusion about
19 this, obviously, as we've talked about the way it
20 was recommended and how it's been administered.

21 A. Right.

22 Q. But this is the Lake Walcott storage
23 right that I don't think anybody has any -- I
24 didn't know anybody had any objection to.

25 A. No, I can't recall any reason why that

Exhibit C

1 IN THE DISTRICT COURT OF THE FIFTH JUDICIAL

2 DISTRICT OF THE STATE OF IDAHO,

3 IN AND FOR THE COUNTY OF TWIN FALLS

4

5 In Re SRBA)

6 Case No. 39576) Subcase No. 1-6

7 _____)

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14 DEPOSITION OF ANTHONY OLENICHAK

15 OCTOBER 6, 2008

16

17

18

19

20 REPORTED BY:

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

22 Notary Public

23

24

25

1 THE DEPOSITION OF ANTHONY OLENICHAK, was
2 taken on behalf of A & B Irrigation District,
3 Burley Irrigation District, Milner Irrigation
4 District, North Side Canal Company, and Twin Falls
5 Canal Company, at the offices of the Department of
6 Water Resources, 900 North Skyline, Suite A, Idaho
7 Falls, Idaho, commencing at 1:09 p.m., October 6,
8 2008, before Jeff LaMar, Certified Shorthand
9 Reporter and Notary Public within and for the
10 State of Idaho, in the above-entitled matter.

11

12 APPEARANCES:

13 For A & B Irrigation District, Burley Irrigation
14 District, Milner Irrigation District, North Side
15 Canal Company, and Twin Falls Canal Company:

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21 For Minidoka Irrigation District:

22 FLETCHER LAW OFFICE

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3 For American Falls Reservoir District No. 2:

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9 UNITED STATES DEPARTMENT OF JUSTICE

10 ENVIRONMENT & NATURAL RESOURCES DIVISION

11 NATURAL RESOURCES SECTION

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3 For State of Idaho:

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7 P.O. Box 83720

8 Boise, Idaho 83720-0010

9 Also Present:

10 Ronald Dean Carlson

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21

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1 A. That is correct.

2 Q. Okay. Under paragraph 10 you use the

3 term "primarily," that "The source of supply for

4 high-water rights consists primarily of snowmelt

5 and spring runoff."

6 What does "primarily" mean to you?

7 A. When those water rights are filled,

8 it's generally during the snowmelt runoff. We can

9 see that. There are exceptions to that, like you

10 pointed out. In the fall when senior diversions

11 start to curtail, we can fill some of those junior

12 water rights, which may be defined as high-water

13 rights in the springtime, may not be -- because of

14 high water in the fall, it's just simply a matter

15 of the senior rights being curtailed -- or not

16 curtailed, but just deciding not to divert this

17 water.

18 Q. Under paragraph 10 when you use the

19 term "primarily," does that mean that the

20 high-water right is entirely snowmelt and spring

21 runoff?

22 A. No. But certainly the greatest

23 percentage is due to that.

24 Q. Okay. And so what else is

25 contributing to those high-water rights besides

1 snowmelt and spring runoff?

2 A. If it happens during a time when

3 canals are irrigating, it could be return flows

4 from flood irrigation. It could be spring flows.

5 Those are about the two other secondary most

6 common sources.

7 Q. It could be anything contributing

8 water to the Snake River, basically; isn't that

9 correct?

10 A. Correct.

11 Q. And is there some percentage to

12 determine whether it's primarily snowmelt or

13 spring runoff or -- I mean, how do you know at

14 what point it's primarily snowmelt or spring

15 runoff?

16 A. Well, we can monitor the snowpack, and

17 you can see the snowpack melting. And as the

18 snowpack melts, you can see the water in the

19 rivers rise. So therefore, I'm sure it's due

20 mostly to the melting of the snowpack. We don't

21 sit down each day and determine what the

22 percentage is.

23 Q. So you don't have any history or any

24 records showing what is making up this water

25 that's in the Snake River, whether it's snowpack

1 Do you administer beneficial-use

2 rights?

3 A. We do not.

4 Q. Okay. So beneficial-use rights could

5 have been diverted or may be diverted, but you're

6 not administering those?

7 A. The water right accounting program

8 only delivers to those decreed, permitted,

9 licensed rights. Any diversion above those rights

10 or outside the priority shows up as a storage

11 diversion.

12 Q. Okay. In your last paragraph of your

13 affidavit in 13, you talk about "...it is assumed

14 that the amount of water taken is under the

15 earliest priority right, then the second earliest

16 water right, then the third earliest water right

17 and so on."

18 Do you mean by each individual water

19 user, do you assume they're diverting their most

20 senior right first? Is that what this means?

21 A. What I took it to mean is that each

22 day we determine the amount of natural flow that's

23 available. We deliver to the senior right that's

24 currently diverting water first. And then if

25 there's remainder water, we deliver the second

1 talking about water rights with priority dates of
2 1916 and after?

3 A. Well, specifically, the water rights
4 listed in paragraph 12 is what I was referring to.
5 And I believe they are all junior to 1916.

6 Q. So when you were making these
7 comments, you weren't referring to Minidoka
8 Irrigation District's 1903 right or 1908 right?
9 You weren't referring to Burley Irrigation
10 District's 1903 right or 1908 right or any of Twin
11 Falls rights? It could be through all these. But
12 the bottom line is you're only referring to the
13 1916 --

14 A. The only rights I was referring to was
15 the ones listed in 12.

16 Q. Okay. And do you happen to know off
17 the top of your head the priority dates for those
18 rights?

19 A. If I recall, I think most of them were
20 1965, 1940, in that range.

21 Q. Okay. Now, two of the rights that are
22 listed on here deal with Lake Walcott storage:
23 1-219 and 1-10034. They're both listed on the
24 attachment to your affidavit. And I'm not trying
25 to sandbag you here if you didn't realize that

1 Lake Walcott storage was stuck in here for some
2 reason.

3 I assume -- well, why don't you tell

4 me. Do you believe that Lake Walcott storage

5 rights are high-water rights?

6 A. What are the priorities on that water

7 right?

8 Q. The 1-219 is December 14, 1909, and

9 the one on 10034 is March 15, 1911.

10 A. No, I wouldn't consider those a

11 high-water right.

12 Q. Do you know whether the Lake Walcott

13 storage rights are delivered every year?

14 A. They are.

15 Q. Do you know off the top of your head

16 roughly how much storage there is at Lake Walcott?

17 A. Approximately 90,000 acre-feet of

18 active storage.

19 Q. And how is that handled in the

20 accounting program -- do you know? -- the delivery

21 of Lake Walcott storage?

22 A. Yes. The gains upstream of Lake

23 Walcott Dam, if sufficient to fill the 1909

24 priority, would go towards filling the Lake

25 Walcott storage account with a maximum of 2500 cfs

1 per day, I believe.

2 Q. And is that handled on a daily basis

3 in the accounting program like other storage

4 rights?

5 A. Yes.

6 Q. And when -- is the water taken out of

7 Lake Walcott handled -- is it handled different in

8 the program than other storage rights in the

9 system?

10 A. No.

11 Q. So -- so it's -- as it's taken out of

12 the reservoir and delivered, it shows up on a

13 daily basis under the accounting program?

14 A. Not as it's being delivered. As it's

15 accruing storage. Once it is filled, the canals'

16 that have the rights to that storage are allocated

17 100 percent, or minus evaporation losses.

18 And then the first storage that they

19 use comes out of that Lake Walcott account. Now,

20 physically, Lake Walcott remains full through most

21 of the irrigation season, and the water is

22 exchanged from an upstream reservoir, generally.

23 Q. Okay. Now, in Ron Carlson's

24 affidavit, he claims that the March 1911 right has

25 never been delivered out of Lake Walcott.

1 Are you familiar with that statement?

2 A. I'm not aware of a 1911 water right.

3 Q. Well, that's the 1 -- 1-10034 that I

4 was talking to you about. That's March of 1911.

5 It's for 53,500. It's a component of the 90,000

6 you were talking about.

7 A. I'm not familiar with that right. I

8 was under the assumption the entire right for Lake

9 Walcott was 1909.

10 Q. Okay. So you believe the whole 90,000

11 is under the 1909 right?

12 A. I thought it was.

13 Q. Okay. Maybe that explains the

14 problem.

15 Do you agree with the ground water

16 district's assertion in this case that some kind

17 of notation needs to be made on these water

18 rights?

19 A. No.

20 Q. Why doesn't that need to happen?

21 A. When Water District 1 calculates the

22 amount of natural flow each day, we deliver that

23 based on priority date. There's no distinction

24 between what is high water, whether it's computed

25 from spring water, from snowmelt. We simply

1 the attachment were on the Snake River?

2 A. I didn't know that the subcase

3 referred to the water rights in my affidavit.

4 Q. Okay. So I don't want to beat this

5 into the ground, but your affidavit is only

6 addressing the water rights in paragraph 12?

7 A. Yes.

8 Q. Only those water rights?

9 A. Yes.

10 Q. And you have no intention to address

11 any of the other water rights listed on Exhibit A

12 to your affidavit?

13 A. Correct.

14 Q. Okay. I see. I see. The Exhibit A

15 was attached simply because it's part of the

16 pleading in this case; is that correct? That's

17 the caption of the case?

18 A. I thought the purpose of my affidavit

19 was for these rights she listed in the affidavit

20 only.

21 MR. FLETCHER: Okay. I don't think I have

22 any other questions. Thanks.

23 MR. ARKOOSH: I have a few. Would you like

24 to break or would you like to proceed?

25 THE WITNESS: I'm fine. I want to

1 water for a specific purpose. A diversion
2 structure, particularly on the natural channel,
3 may also include a check structure in the
4 channel."

5 Q. That's page 2; is that correct?

6 A. Correct.

7 Q. And would you read the definition of

8 "source" on page 4?

9 A. "Source is the water body at the point
10 of diversion. Examples are Salmon River, Squaw
11 Creek, spring, ground water, et cetera."

12 Q. And that definition differs from the
13 way you use the word "source" in paragraph 10?

14 A. Yes.

15 Q. Okay. I'm going to show you what I've

16 marked as Exhibit 5.

17 (Exhibit 5 marked.)

18 Q. (BY MR. ARKOOSH): Exhibit 5, I will

19 represent, is the diagram I drew to illustrate our

20 discussion earlier about the 1-6 right; is that

21 correct?

22 A. Yes.

23 Q. Okay. And Exhibit 5 shows a diversion

24 of 850 cfs of natural flow prior to July 1 and 850

25 acre-feet of storage prior to July 1; is that

1 which may be a junior priority.

2 MR. ARKOOSH: Okay. I have no further
3 questions.

4

5 EXAMINATION

6 BY MR. GEHLERT:

7 Q. Mr. Olenichak, I'm David Gehlert I
8 represent the United States, in particular the
9 Bureau of Reclamation, in these subcases. I
10 appreciate your patience today, and I have really
11 just a few questions for you. I wanted to follow
12 up on a couple of points that you had addressed
13 earlier.

14 I understood you to say that the water
15 rights listed in the paragraph 12 of your
16 affidavit are not in the accounting system?

17 A. That's correct.

18 Q. Are there other water rights that are
19 not in the accounting program?

20 A. Other beneficial-use rights? -Yes.

21 There are no beneficial-use rights in the water
22 right accounting program.

23 Q. And what do you consider to be a
24 beneficial-use right?

25 A. A right that is not decreed,

1 permitted, or licensed.

2 Q. But it's a right because it has been

3 being used?

4 A. That's how you establish a

5 beneficial-use right.

6 Q. And I thought I understood you to say

7 that Lake Walcott fills almost every year; is that

8 correct?

9 A. That's correct.

10 Q. When -- and I also understood you to

11 say that there's a distinction between filling on

12 paper and filling physically when we're talking

13 about a storage reservoir?

14 A. Correct.

15 Q. When you say it fills almost every

16 year, were you talking about it filling on paper,

17 physically, or both?

18 A. Lake Walcott?

19 Q. Yes.

20 A. Yes, both.

21 Q. Okay. And you considered it to be

22 filled under the 1909 right?

23 A. Yes.

24 Q. And you mentioned that it fills up to

25 approximately 90,000 acre-feet?

1 those rights that typically don't have water for

2 the whole irrigation season, the later priority

3 rights?

4 A. Yes.

5 Q. And when did that type of conversation

6 occur? Is that a regular occurrence throughout

7 the time that you've worked for Water District 01

8 that water users would commonly refer to

9 high-water rights?

10 A. Yes.

11 Q. And so that's basically not anything

12 new or unusual, but that's a standard terminology

13 used by the water users themselves?

14 MR. ARKOOSH: I'd object to the form.

15 THE WITNESS: Yeah. I would say it's

16 commonly used as a standard, and there is no

17 standard.

18 Q. (BY MR. BUDGE): And would that

19 terminology, "high-water rights," does that

20 discussion come out in the context of some of the

21 committee-of-nine meetings?

22 A. No, I don't recall any discussion

23 coming out --

24 Q. What's the context that that term

25 "high-water right" is used?

1 A. Generally, it's in my conversation
2 with canal managers or water-users. When I refer
3 to a -- one of those junior rights, they often
4 dismiss it as a high-water right.

5 Q. And when you say "canal managers,"
6 would that include North Side Canal Company or
7 Twin Falls Canal Company or Milner Irrigation or
8 Burley Irrigation or AFRD 2, would it be some of
9 their managers that commonly use that term?

10 A. I don't remember specifically having
11 conversations with those managers about high-water
12 rights.

13 Q. So it would be other watermasters up
14 and down the river?

15 A. Yes.

16 Q. Has that term "high-water right" been
17 used as long as you've worked for Water
18 District 1?

19 A. I didn't even know what the term meant
20 until I began working in Water District 1 and I
21 heard people refer to "high-water rights." And I
22 later became aware that they were often referring
23 to those 1916, 1939 priorities.

24 Q. You were also asked some questions by
25 Mr. Fletcher about the Eagle decree, which you

Exhibit D

EXPERT WITNESS REPORT OF PATRICK C. MCGRANE, P.E.

(BUREAU OF RECLAMATION)

I, PATRICK C. MCGRANE, have been requested by the United States Department of Interior, Bureau of Reclamation to serve as its expert witness in the above-captioned matter, and I hereby provide the following expert witness report.

QUALIFICATIONS

Educational Background. Master of Science Degree, Civil Engineering, May 1991; Bachelor of Science Degree, Watershed Science, December 1975.

Professional Licenses. Professional Engineer, State of Washington, June 28, 1996.

Experience.

November 1999 – Present. Program Manager, River and Reservoir Operations Group, Pacific Northwest Region Office, U. S. Bureau of Reclamation, Boise, Idaho. Manage staff of 17 engineers, hydrologists, computer specialists, and technicians in performing real-time reservoir operations, hydrology and hydraulic engineering studies, and hydrologic data collection for over 50 reservoirs in the Pacific Northwest, assisting area offices in determining water releases from reservoirs, planning flood control operations, performing refill studies, and performing hydrologic analyses for compliance with the National Environmental Policy Act and Endangered Species Act. This includes hydrological analysis for preparation of biological assessments on the operation of Reclamation projects located within the Snake, Deschutes, Umatilla, and Rogue river basins; and the Federal Columbia River Power System. Oversee surface and ground water hydrologic modeling studies to determine impacts of operational changes at project dams and reservoirs.

May 1991 – November 1999. Hydraulic Engineer, Seattle District, U. S. Army Corps of Engineers. Promoted to technical lead of the Water Management Section in 1996 and group leader in 1998. Performed ground water flow and contaminant transport modeling, real-time reservoir operations, and reservoir system modeling studies. Performed hydrologic analysis, flood control studies, reservoir optimization, and ground water computer modeling. Studies included the Kootenai River flood control study (1997), Lake Pend Oreille early refill study (1996), International Joint Commission

Kootenai Lake study (1995), Columbia River System Operation Review flood control study (1994), Flathead Lake flood control study (1993), Mud Mountain Dam flood control study (1992), and Fort Lewis Logistics Center groundwater modeling study (1991). Responsible for coordinating reservoir operations and water releases for five multi-purpose federal dams in the Pacific Northwest including Howard Hanson, Mud Mountain, Lake Washington Ship Canal, Libby, and Albeni Falls. As water management group leader, managed staff of two hydraulic engineers, a meteorologist, a meteorologic technician, and a hydrologic technician in performing water management and water quality functions for the Seattle District.

Training.

- Project Management, George Washington University, ESI International, 2005;
- HEC-RAS Hydraulic Modeling, West Consulting, 2003;
- Visual Basic Programming, Renton Technical College, Renton, Washington, 1998;
- Reservoir System Simulation with HEC-5, Seattle, Washington, 1994;
- Risk Analysis in Water Resource Planning and Management, Washington, D.C., 1994;
- Advanced HEC-1, Madison, Wisconsin, 1993;
- Flood Plain Hydrology (HEC-1, HEC-2), Davis, California, 1992;

Publications.

- "Kootenai River Flood Control Study, Analysis of the Local Impacts of the Proposed VARQ Flood Control Plan" in *Status Report: Work to Date on the Development of the VARQ Flood Control Operation at Libby and Hungry Horse Dam*, U.S. Army Corps of Engineers, Northwestern Division, Portland, Oregon, January 1999.
- "Local Effect of the Proposed VARQ Flood Control Plan at Hungry Horse Dam, Montana" in *Status Report: Work to Date on the Development of the VARQ Flood Control Operation at Libby and Hungry Horse Dam*, U.S. Army Corps of Engineers, Northwestern Division, Portland, Oregon, January 1999.
- *Columbia River System Operation Review Final Environmental Impact Statement Appendix E, Flood Control*, U.S. Army Corps of Engineers, Bonneville Power Administration, and U.S. Bureau of Reclamation, November 1995.

Compensation Received. Regular compensation as an employee of the federal government.

Prior Lawsuits in Which the Witness has Testified as an Expert. None.

OPINIONS AND ANALYSIS

1. Depletions to the Snake River caused by Ground Water Pumping. In reaches of the Snake River where the Eastern Snake Plain Aquifer (ESPA) contributes water to the river, termed a "gaining reach," withdrawal of ground water from the ESPA has intercepted and will continue to intercept (unless ground water pumping is curtailed) water that would have flowed to the Snake River; similarly, in reaches of the Snake River where water is lost to the aquifer, termed a "losing reach," ground water pumping increases the hydraulic gradient away from the river causing more water to be removed or lost from the river.

The basis for this opinion follows from the recognition that a hydraulic connection exists between the ESPA and the Snake River. The relationship between hydraulically connected ground and surface water sources is accurately characterized by Karl Dreher, Director of the Idaho Department of Water Resources (IDWR), in his Amended Order:

24. Hydraulically-connected ground water sources and surface water sources are sources that within which, ground water can become surface water, or surface water can become ground water, and the amount that becomes one or the other is largely dependent on ground water elevations.

25. When water is pumped from a well in the ESPA, a conically-shaped zone that is drained of ground water, termed a cone of depression, is formed around the well. This causes surrounding ground water in the ESPA to flow to the cone of depression from all sides. These depletionary effects propagate away from the well, eventually reaching one or more hydraulically-connected reaches of the Snake River and its tributaries. When the depletionary effects reach a hydraulically-connected reach of the Snake River, reductions in river flow begin to occur in the form of losses to the river or reductions in reach gains to the river. Amended Order, p. 6, ¶¶ 24 and 25 (May 2, 2005).

Stated differently, as ground water pumping removes water from aquifer storage, the effects of drawdown in the aquifer ultimately extend to the Snake River, resulting in less water in the Snake River, either in the form of reduced reach gains or increased reach losses.

Data and information which support the foregoing opinion is documented in the following reports completed by the United States Geological Survey (USGS): Mundorff, *Ground Water in the Vicinity of American Falls Reservoir, Idaho*, USGS Water Supply Paper 1846 (1967); Garabedian, *Hydrology and Digital Simulation of the Regional Aquifer System, Eastern Snake Plain, Idaho*, USGS Water Supply Paper 1408-F (1992); Kjelstrom, *Streamflow Gains and Losses in the Snake River and Ground-Water Budgets for the Snake River Plain, Idaho and Eastern Oregon*, USGS Water Supply Paper 1408-C (1995); and Lindholm, *Summary of the Snake River Plain Regional Aquifer-System Analysis in Idaho and Eastern Oregon*, USGS Water Supply Paper 1408-A (1996). These reports describe the hydraulic connection between the ESPA and the Snake River.

2. Amount of Depletions. The volume of water consumptively used as a consequence of ground water pumping from the ESPA will, over time, result in an equal reduction of water in the Snake River, either in the form of reduced gains to the Snake River or increased losses from the river. This opinion is consistent with the finding made by Director Dreher in his Amended Order which states that "essentially all depletions of ground water from the ESPA cause reductions in flows in the Snake River equal in quantity to the depletions over time." *Amended Order* p. 6, ¶ 27.

This opinion is supported by the study performed by the Idaho Water Resources Research Institute (IWRRI) entitled *SNAKE RIVER PLAIN Aquifer Model Scenario: Hydrologic Effects of Curtailment of Ground Water Pumping "Curtailment Scenario"* Technical Report 04-023 (2004) ("curtailment scenario report"). According to the curtailment scenario report, "[a]s time passes and the collective impacts of ground water pumping of the eastern Snake River Plain propagate throughout the aquifer system, less of the removed water is coming out of aquifer storage and more is coming from the river, either in the form of reduced spring discharges, decreased aquifer discharges to the river,

or increased losses from the river. Ultimately, however, all of the ground water pumped and consumptively used for irrigation will come from the Snake River.”

3. Timing of Depletions. The time required for the depletions caused by ground water pumping from the ESPA to impact flows in the Snake River varies depending on the proximity of wells to the river, the well pumping rates, and the hydrogeologic characteristics of the aquifer and the riverbed. The full effects of past ground water withdrawals from the ESPA have not yet been manifested in the Snake River.

This point is illustrated in IWRRI’s curtailment scenario report. IWRRI developed river response functions for the curtailment analysis to help quantify the effects on reach gains caused by curtailing ESPA ground water rights with priority dates junior to five different years: 1870, 1949, 1961, 1973, and 1985. For each of these years, Figure 1 shows the curtailment response functions for the Near Blackfoot to Neeley reach of the Snake River, which includes American Falls Reservoir. Full hydrologic response is indicated on Figure 1 when the respective lines become horizontal.

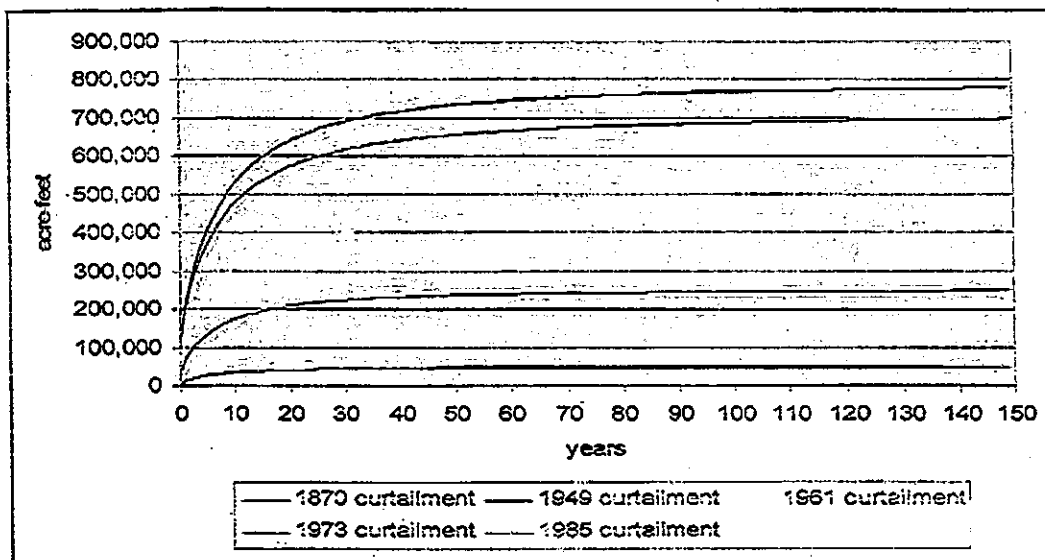


Figure 1. Curtailment scenario response functions for the Near Blackfoot to Neeley reach (Schmidt 2005)¹.

¹ Schmidt, *Application of ESPA Model Curtailment Scenario Results to Estimate Impacts of Groundwater Pumping on Snake River Depletions above Minidoka Dam* (2005), Bureau of Reclamation, Pacific Northwest Region River and Reservoir Operations Group. 12/16/05.

The full hydrological response to the Snake River caused by ground water pumping from the ESPA can span over a hundred years. Using data developed by IWWRI for the curtailment scenario report,² R. D. Schmidt, a ground water hydrologist and member of my staff, performed an analysis to determine 1) how much of the depletions caused by ESPA ground water pumping has already impacted the river prior to 2005 and 2) how much of those groundwater depletions will impact the river in the future. The procedure used for this analysis is briefly summarized below and presented in more detail in the following report, which is attached as Appendix B: Schmidt, *Application of ESPA Model Curtailment Scenario Results to Estimate Impacts of Groundwater Pumping on Snake River Depletions above Minidoka Dam* (2005).

Schmidt created five interval response functions to describe the expected response to curtailment of only those wells developed during five specified intervals, 1870 to 1949, 1949 to 1961, 1961 to 1973, 1973 to 1985, and 1985 to 2005. An average start year is selected for new ground water pumping in each interval. The assumption of an average start year implies year by year uniformity in the spatial and temporal distribution of pumping within each interval. The interval response functions were then used to calculate the past and future river depletion effects attributable to that interval of pumping.

² This data was provided to Reclamation by IWWRI in a series of EXCEL spreadsheets. These spreadsheets are available on the IDWR ftp web site, <ftp://ftp.state.id.us/IDWR/Outgoing/SWCoalition/Curtailment.zip>

Depletions Near Blackfoot to Neeley							
pumping interval	average start year	years from average start year until 2005	steady state response to pumping (cfs)	response prior to 2005 (cfs)	response remaining in 2005 (cfs)	pct. response prior to 2005 (%)	pct. response remaining in 2005 (%)
1870-1949	1945	60	115.59	111.06	4.53	96.1	3.9
1949-1961	1955	50	347.71	321.04	26.68	92.3	7.7
1961-1973	1967	38	276.74	248.87	27.87	89.9	10.1
1973-1985	1979	26	275.27	242.15	33.13	88.0	12.0
1985-2005	1990	15	72.48	56.37	16.10	77.8	22.2
Totals:			1087.79	979.49	108.31	90.0	10.0

Table 1. Pre- and post-2005 river depletions in the Near Blackfoot to Neeley reach due to five intervals of ESPA ground water pumping. (Schmidt 2005)

Table 1 shows the results of applying this procedure in the Near Blackfoot to Neeley reach of the Snake River. The average start year for new pumping in each of the five intervals is indicated in this table, as are the number of years from the average start year until 2005. The steady-state response to pumping and the response prior to 2005 are taken directly from the curtailment interval response functions. The response remaining in 2005 is the difference between the two. The percentage distribution of pre- and post-2005 depletive effects refers to the percentage of total (steady-state) response before and after November 2005. As Table 1 indicates, as of November 2005, about 90 percent of the total expected depletions caused by ESPA ground water pumping have already occurred in the Near Blackfoot to Neeley reach of the Snake River, and about 10 percent, or 108 cfs of ground water depletion, remains to occur.

Figure 2 summarizes the results of applying this procedure to the five upper reaches of the Snake River. The five upper reaches of the Snake River include the Near Blackfoot to Neeley reach represented in Table 1, as well as four other reaches including Ashton to Rexburg, Heise to Sheiley, Shelley to Near Blackfoot, and Neeley to Minidoka. These five reaches represent the upper Snake River upstream of Minidoka Dam, which is the most downstream Reclamation storage facility on the upper Snake River.

Total depletions to the Snake River in the five upper reaches, as a result of ground water pumping from the ESPA as of 2005, is estimated to be 1,379,000 acre-feet per

year. The depletion that has yet to occur in the five upper river reaches is estimated to be 142,000 acre-feet per year. Over 9 percent of the total response remains to occur as of 2005.

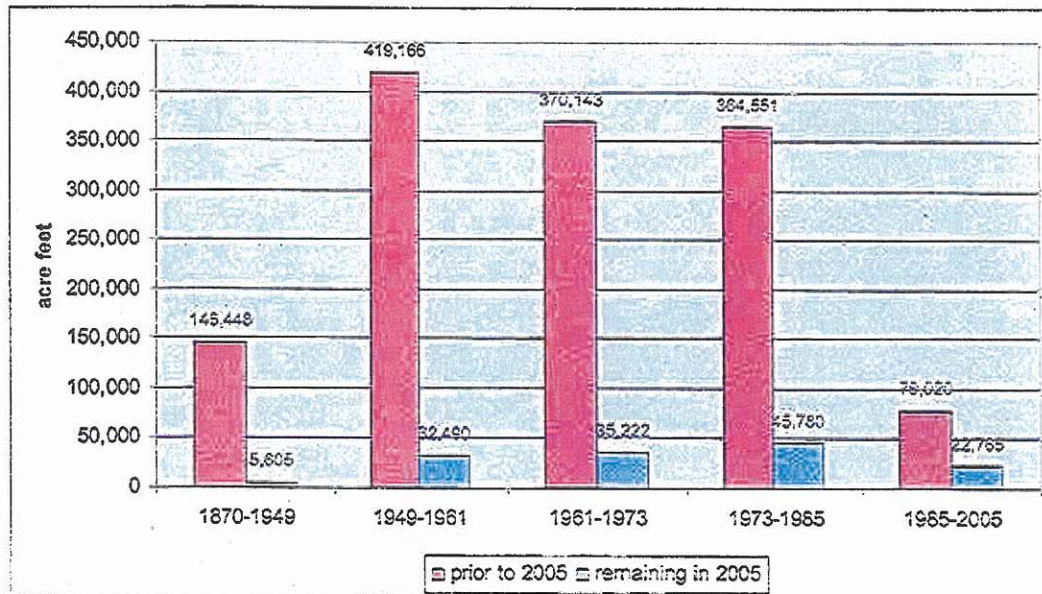


Figure 2. Pre- and post-2005 river depletions above Minidoka Dam due to five intervals of ESPA ground water pumping (Schmidt 2005).

4. Effect on Storage Reservoirs from Curtailment of Ground Water Pumping.

Curtailment of junior ground water rights on the ESPA will result in more water being stored in Reclamation reservoirs.³ If junior ground water rights are curtailed, the associated volume of water consumptively used as a result of ground water pumping will no longer be removed from the interconnected system of the ESPA and the Snake River. In the absence of junior ground water pumping more water will accrue to the river in gaining reaches and less water will leave the river in losing reaches. Consequently, more water will be available for diversion under natural flow water rights and more water will be stored in the seven Reclamation reservoirs above Minidoka Dam under Reclamation's storage rights.

³ These reservoirs include American Falls, Grassy Lake, Island Park, Jackson Lake, Lake Walcott, Palisades, and Ririe, which have a combined active storage capacity of 4,045,695 acre-feet.

The following hypothetical example illustrates this point. Assume that IDWR conjunctively administered ESPA ground water rights from March 2001 to November 2005 by curtailing ground water rights junior to 1949. The year 1949 is a useful reference point because the priority dates for most of Reclamation's storage water rights on the upper Snake River predate this date, whereas most ground water development did not occur until after this date.

Figure 3 shows the 4 ½ year response—from March 2001 to November 2005—to curtailment of all ground water pumping junior to 1949 in five river reaches above Minidoka Dam (Schmidt 2005). The largest effect on gains to the river as a result of curtailment occurs in the Near Blackfoot to Neeley river reach, which includes Reclamation's American Falls Reservoir. The other four reaches, Ashton to Rexburg, Heise to Shelley, Shelley to Near Blackfoot, and Neeley to Minidoka also experience increased gains to the river as a result of curtailment of junior ground water rights.

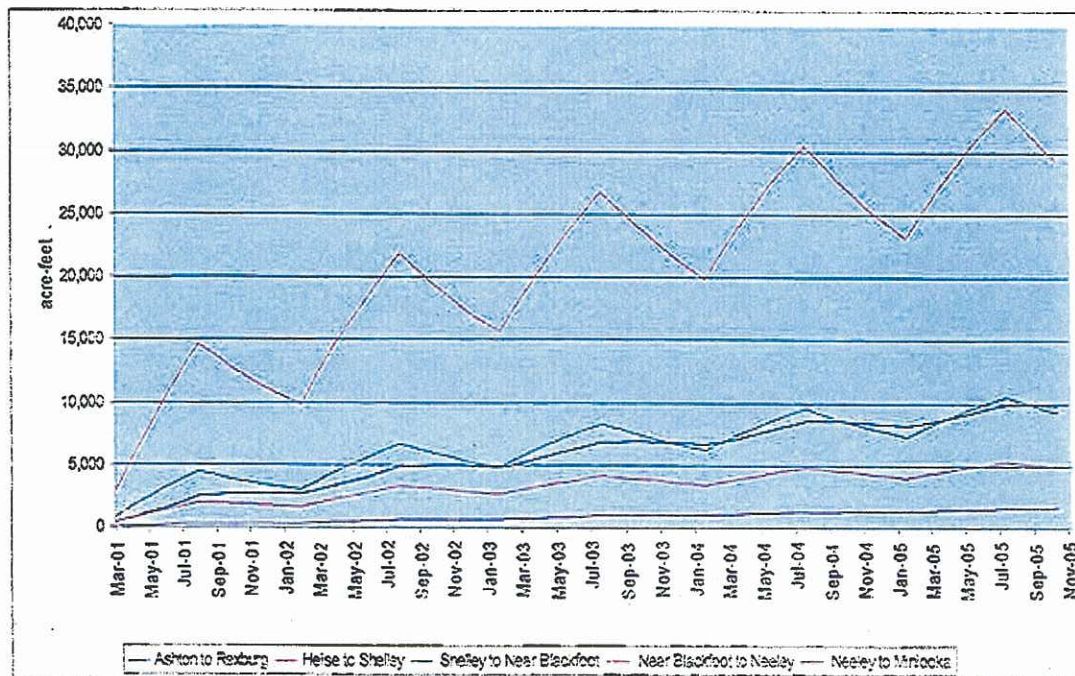


Figure 3. Cumulative reach responses resulting from curtailment of post-1949 priority ground water rights from 2001 to 2005. (Schmidt 2005)

Table 2 shows the quantity of increased gains per month for each of the five river reaches above Minidoka as a result of curtailment of junior ground water rights from

March 2001 to November 2005 (Schmidt 2005). Table 2 also separates out from each year the additional gains which would accrue to the river during the storage season of November 1 to March 31, termed "winter gains."

For purposes of illustrating the effects of ground water curtailment on storage reservoirs in this hypothetical example, it is necessary only to focus on winter gains. One could argue that curtailment of ground water pumping would also make more water available for storage during the irrigation season (April 1 to October 31) because of the increased gains accruing to the river during that time period. However, the quantity of water actually available for storage during the irrigation season depends in large part on how senior irrigation users would respond to additional river flows. Reclamation is not in a position to predict with precision the response of senior water users. By focusing solely on winter gains, the debate surrounding senior irrigation uses is avoided. All winter gains above Neeley accruing to the river during the storage season are available for storage unless evacuation of the reservoirs for flood control is necessary.

Acre feet per month gains associated with March 1, 2001 curtailment of groundwater pumps junior to 1949										
End of Month	Ashton to Roxburg monthly response (acre-feet)	Halse to Shelley monthly response (acre-feet)	Shelley to Near Blackfoot monthly response (acre-feet)	Near Blackfoot to Neeley monthly response (acre-feet)	Neeley to Minidoka monthly response (acre-feet)	Sum of gains above Minidoka (acre-feet)	abv Minidoka April through October (acre-feet)	abv Minidoka November through March (acre-feet)	abv Neeley November through March (acre-feet)	End of Month
February-01	0	0	0	0	0	0				February-01
March-01	343	345	830	2,764	44	4,325		4,325	4,281	March-01
April-01	687	691	1,677	5,509	88	8,650				April-01
May-01	1,115	1,028	2,417	7,940	133	12,842				May-01
June-01	1,544	1,382	3,168	10,300	179	16,833				June-01
July-01	1,994	1,679	3,791	12,481	227	20,183				July-01
August-01	2,445	1,997	4,426	14,592	276	23,733				August-01
September-01	2,554	1,948	4,140	13,670	282	22,588				September-01
October-01	2,657	1,995	3,855	12,748	288	21,443	125,073			October-01
November-01	2,670	1,831	3,608	11,930	294	20,332				November-01
December-01	2,692	1,767	3,361	11,111	300	19,221				December-01
January-02	2,691	1,700	3,175	10,485	305	18,306				January-02
February-02	2,640	1,632	2,988	9,819	310	17,390				February-02
March-02	2,551	1,914	3,082	12,080	358	20,565		66,215	94,647	March-02
April-02	3,201	2,195	4,377	14,301	408	24,540				April-02
May-02	3,032	2,473	6,002	16,327	455	27,908				May-02
June-02	4,043	2,761	6,627	18,352	504	31,277				June-02
July-02	4,454	3,016	6,185	20,112	554	34,302				July-02
August-02	4,856	3,282	6,784	21,872	605	37,328				August-02
September-02	4,803	3,186	6,330	20,665	613	35,735				September-02
October-02	5,010	3,088	5,974	19,458	621	34,142	225,232			October-02
November-02	4,913	2,985	5,168	18,389	628	32,643				November-02
December-02	4,817	2,880	5,343	17,339	630	31,145				December-02
January-03	4,888	2,777	5,097	16,487	642	29,890				January-03
February-03	4,330	2,674	4,850	15,634	647	28,636				February-03
March-03	5,104	2,924	5,402	17,896	696	31,912	154,227	150,978		March-03
April-03	5,370	3,174	6,134	19,758	744	35,188				April-03
May-03	5,735	3,423	6,712	21,827	793	38,291				May-03
June-03	6,062	3,672	7,291	23,496	842	41,393				June-03
July-03	6,470	3,913	7,787	25,118	893	44,180				July-03
August-03	6,948	4,153	8,284	26,738	943	46,967				August-03
September-03	6,883	4,034	7,881	26,416	951	45,159				September-03
October-03	6,819	3,915	7,478	24,088	959	43,351	294,530			October-03
November-03	6,863	3,789	7,120	22,910	966	41,657				November-03
December-03	6,902	3,661	6,760	21,740	972	39,962				December-03
January-04	6,723	3,543	6,501	20,788	976	38,520				January-04
February-04	6,633	3,421	6,223	19,830	983	37,080				February-04
March-04	6,890	3,654	6,836	21,807	1030	40,208	197,452	192,524		March-04
April-04	7,128	3,880	7,449	23,779	1077	43,320				April-04
May-04	7,458	4,120	8,001	25,566	1125	46,271				May-04
June-04	7,709	4,354	8,553	27,352	1174	49,222				June-04
July-04	8,143	4,580	9,025	28,888	1223	51,888				July-04
August-04	8,499	4,806	9,497	30,443	1272	54,615				August-04
September-04	8,500	4,673	9,071	29,043	1279	52,576				September-04
October-04	8,521	4,541	8,645	27,644	1285	50,637	348,407			October-04
November-04	8,443	4,404	8,274	26,409	1291	48,821				November-04
December-04	8,365	4,266	7,903	25,174	1296	47,004				December-04
January-05	8,257	4,133	7,608	24,161	1300	45,457				January-05
February-05	8,148	4,000	7,308	23,140	1304	43,909				February-05
March-05	8,376	4,223	7,602	22,664	1349	46,514	232,105	226,565		March-05
April-05	8,603	4,446	8,490	26,970	1395	49,910				April-05
May-05	8,915	4,669	9,031	28,713	1442	52,760				May-05
June-05	9,227	4,893	9,565	30,446	1488	55,610				June-05
July-05	9,552	5,109	10,020	31,942	1536	58,170				July-05
August-05	9,897	5,326	10,476	33,436	1584	60,721				August-05
September-05	9,892	5,185	10,034	31,982	1588	58,692				September-05
October-05	9,886	5,044	9,593	30,546	1593	56,663	302,551			October-05
November-05	9,791	4,899	9,207	29,267	1597	54,761				November-05

Table 2. Calculated monthly gains in the reaches above Minidoka as a result of curtailing in March (data from Schmidt 2005).

For purposes of comparison, the yearly winter gains to the Snake River above Neeley as set out in Table 2 are carried over onto Table 3, which compares those winter gains with actual reservoir space as of April 1 of each year from 2001 to 2005. Table 3 compares the increased winter gains as a result of curtailment with the available reservoir space in American Falls as well as the combined available reservoir space in the seven Reclamation reservoirs on the upper Snake—American Falls, Grassy Lake, Island Park, Jackson Lake, Palisades, Lake Walcott and Ririe.

Date	Increased Winter Gains Above Neeley Associated with 1949 Curtailment (acre-feet)	Space Available in American Falls Reservoir (acre-feet)	Space Available in the 7 Reclamation Reservoirs on Upper Snake (acre-feet)
April 1, 2001	4,281	13,953	921,026
April 1, 2002	94,647	300,631	1,923,307
April 1, 2003	150,978	320,077	1,773,723
April 1, 2004	192,524	413,626	2,007,022
April 1, 2005	225,565	268,703	1,811,621

Table 3. Comparison of reservoir space and winter gains (November 1 to March 31) above Neeley associated with curtailment of 1949 ground water rights beginning in March 1, 2001.

As shown in Table 3, on April 1 of each year from 2001 to 2005, the space available in American Falls Reservoir, alone, exceeded the increased winter gains that would have resulted from curtailment of ground water rights junior to 1949. The gap between available reservoir storage space and increased winter gains widens significantly when the available space in all seven Reclamation reservoirs is taken into account. For instance, in 2004 the available storage space in the seven reservoirs totaled 2,007,022 acre-feet compared to 192,524 acre-feet of increased winter gains.

Table 3 illustrates the positive effects that ground water curtailment would have on Reclamation's upper Snake River storage reservoirs. It shows that had IDWR administered junior ground water rights in priority by curtailing post-1949 ground water rights during the drought period of 2001 through 2005, there would have been increased gains in the river and reservoir space was available to store the increased winter gains. Based on my knowledge and experience in Reclamation reservoir operations, Reclamation would have stored these increased winter gains in its upper Snake River

reservoirs during 2002 through 2005. For example, on April 1, 2005, there was 268,703 acre-feet of available space in American Falls Reservoir compared to 225,565 acre-feet of additional winter gains that would have accrued to the river upstream of American Falls Dam (Neeley gage) as a result of curtailing post-1949 ground water rights. All of these increased winter gains would have been diverted and stored in American Falls Reservoir by April 1, 2005. Similarly, the winter gains accruing to the river in 2002, 2003, and 2004 because of the post-1949 curtailment would have been stored in Reclamation reservoirs without spilling in any of those years.

DATED this 28th day of December, 2005.

A handwritten signature in dark ink, appearing to read "Patrick C. McGrane", is written over a horizontal line.

PATRICK C. MCGRANE, P.E.

Exhibit E

February 2004

Baker Project

Boise Project

Burnt River Project

Little Wood River Project

Mann Creek Project

Michaud Flats Project

Minidoka Project

Owyhee Project

Palisades Project

Ririe Project

Vale Project



Operations Description for Bureau of Reclamation Projects in the Snake River Basin above Brownlee Reservoir

Appendices



U.S. Department of the Interior
Bureau of Reclamation

Pacific Northwest Region
Boise, Idaho

Snake River Area
Boise, Idaho

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- Appendix B.** Photographs of Facilities, Graphs of Storage and Outflow, and Summary Hydrographs
- Appendix C.** River Mile Index: Upper Snake River Basin above Brownlee Reservoir
- Appendix D.** Stream Gauges Index
- Appendix E.** Spaceholder Contracts: Minidoka Project and Palisades Projects and Boise Project

APPENDIX E.

SPACEHOLDER CONTRACTS:

MINIDOKA AND PALISADES PROJECTS

AND BOISE PROJECT

E.1 Minidoka and Palisades Projects

Spaceholders	American Falls Reservoir (acre-feet)	Jackson Lake (acre-feet)	Palisades Reservoir (acre-feet)	Total Space (acre-feet)
Lower Valley Organizations				
A&B ID	46,826		90,800	137,626
American Falls Reservoir Dist. ^{1/}	445,577	13,042		458,619
American Falls Reservoir Dist. 2	393,550			393,550
Burley ID ^{2/}	155,395		39,200	194,595
Hillsdale ID	40,482			40,482
Idaho Power Co.	44,275			44,275
Milner ID	44,951		44,500	89,451
Minidoka ID ^{2/}	82,216	186,030	35,000	303,246
North Side Canal Co., Ltd. ^{3/}	116,471	312,007	116,600	545,078
Upper Valley Organizations				
Aberdeen-Springfield Canal Co. ^{3/}	29,771	57,661	143,278	230,710
Andrus, Ray	187	110		297
Artesian Irrigation, Inc.	2,794			2,794
Blackfoot Irrigating Co.	12,558	7,370	4,050	23,978
Burgess Canal & Irrigating Co.	9,343	10,603	31,400	51,346
Butte & Market Lake Canal Co.	4,591	2,695	44,000	51,286
Clement Brothers, a partnership	70	196		266
Corbett Slough Ditch Co.	3,342	1,961	6,300	11,603
Dilts Irrigation Co., Ltd.	871	511	1,200	2,582
Enterprise Canal Co., Ltd.	8,779	11,252	19,600	39,631
Enterprise ID	10,024	5,883		15,907
Falls ID	22,925		40,900	63,825
Harrison Canal & Irrigation Co.	11,832	11,943	23,500	47,275
Idaho ID	22,541	13,230	58,800	94,571
Lenroot Canal Co.	3,805	5,234	7,850	16,889
Michaud Div., Fort Hall Indian Res.	46,931		83,900	130,831
New Sweden ID	27,290	22,516	37,000	86,806
Osgood Canal Co., Ltd.	3,930	7,771		11,701
Peoples Canal & Irrigation Co.	21,070	20,365	35,000	76,435
Poplar ID	662	1,589	1,550	3,801
Progressive ID	12,284	7,209	28,500	47,993
Reid Canal Co.	2,507	1,472	3,150	7,129
Rudy Canal Co., Ltd.	2,606	3,530	15,700	21,836
Snake River Valley ID	25,942	30,225	35,300	91,467
Trego Ditch Co.	1,293	758	3,200	5,251
Woodville Canal Company	5,949	3,491	6,000	15,440

Table continued on following page.

APPENDIX E

Spaceholders	American Falls Reservoir (acre-feet)	Jackson Lake (acre-feet)	Palisades Reservoir (acre-feet)	Total Space (acre-feet)
Organizations Without Space in American Falls Reservoir				
Butler Island Canal Co., Ltd.			250	250
City of Pocatello			50,000	50,000
Clark & Edwards Canal or Irrigation. Co.			800	800
Craig-Mattson Canal Co.			1,440	1,440
Danskin Ditch Co.			2,350	2,350
F.M.C. Corporation			5,000	5,000
Farmers Friend Canal Co., Ltd.		2,000	9,400	11,400
Island Irrigation. Co.			4,700	4,700
J. R. Simplot Co.			2,500	2,500
Labelle Irrigation. Co.			800	800
Liberty Park Irrigation. Co.			2,350	2,350
Long Island Irrigation. Co.			5,000	5,000
Lower Slough Canal Co., Ltd.		1,040	1,600	2,640
Mitigation, Inc. ^{4/}			18,980	18,980
New Lava Side Ditch Co.			11,750	11,750
North Rigby Irrigation. & Canal Co.			1,200	1,200
Owners Mutual Irrigation. Co.		200		200
Palisades Water Users, Inc.			53,630	53,630
Parks & Lewisville Canal Irrigation. Co.			5,500	5,500
Parsons Ditch Co., Ltd.			994	994
Rigby Canal & Irrigation. Co.			6,300	6,300
Riverside Ditch Co.			1,500	1,500
Sunnydell ID		4,000	6,300	10,300
Texas Slough Irrigation. Canal Co.			2,350	2,350
Twin Falls Canal Co. ^{3/}		97,183		97,183
Watson Slough Irrigation. Co. & Watson Slough Ditch Co., Ltd.			2,056	2,056
Wearyrick Ditch Co.			600	600
West Labelle Irrigation. Co.			1,000	1,000
West Side Mutual Canal Co.			2,350	2,350
Wyoming, State of			33,000	33,000
<i>Contracted Space Totals</i>	<i>1,663,640</i>	<i>843,077</i>	<i>1,189,978</i>	<i>3,696,695</i>
<i>Uncontracted Space Totals</i>	<i>8,951</i>	<i>3,923</i>	<i>10,022</i>	<i>22,896</i>
Total Active Capacity^{5/}	1,672,590	847,000	1,200,000	3,719,590
^{1/} American Falls Reservoir District holds: 22,492 af in American Falls Reservoir and 13,042 af in Jackson Lake for Aberdeen-Springfield Canal Co.; 274,338 af in American Falls for North Side Canal Co.; and 148,747 af in American Falls for Twin Falls Canal Co. ^{2/} Burley ID holds 33.5 percent and Minidoka ID holds 66.5 percent of the water accruing to store in Lake Walcott (Minidoka Dam), which is not accounted for in this table. Lake Walcott has an active storage capacity of 95,200 af. Winter power releases may be curtailed by the USBR to make additional water available for storage purposes in American Falls, Island Park, and Palisades Reservoirs in any year when these reservoirs fail to fill. The first 45,000 af of such curtailed saved water is credited to Island Park. Crediting is contingent upon spaceholders paying for power replacement. ^{3/} Also has space through American Falls Reservoir District. ^{4/} Mitigation, Inc. also holds 80,500 af in Ririe Reservoir. ^{5/} Totals for American Falls and Total Space columns do not add due to rounding. Fremont-Madison ID holds 135,000 af of the storage capacity in Island Park Reservoir and 15,200 af in Grassy Lake, which are not accounted for in this table and make up the Upper Snake River Storage Division of the Minidoka Project.				