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Attorneys for Respondents

**IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT**

**OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF GOODING**

| | |
|---|---|
| A&B IRRIGATION DISTRICT, AMERICAN FALLS RESERVOIR DISTRICT #2, BURLEY IRRIGATION DISTRICT, MILNER IRRIGATION DISTRICT, MINIDOKA IRRIGATION DISTRICT, NORTH SIDE CANAL COMPANY, and TWIN FALLS CANAL COMPANY,<br><br>Petitioners,<br><br>vs.<br><br>GARY SPACKMAN, in his capacity as Interim Director of the Idaho Department of Water Resources, and THE IDAHO DEPARTMENT OF WATER RESOURCES,<br><br>Respondents.<br><br>IN THE MATTER OF DISTRIBUTION OF WATER TO VARIOUS WATER RIGHTS HELD BY OR FOR THE BENEFIT OF A&B IRRIGATION DISTRICT, AMERICAN FALLS RESERVOIR DISTRICT #2, | Case No. CV-2008-0000551<br><br>**AFFIDAVIT OF CHRIS M. BROMLEY** |

BURLEY IRRIGATION DISTRICT, MILNER )
IRRIGATION DISTRICT, MINIDOKA IRRIGATION )
DISTRICT, NORTH SIDE CANAL COMPANY, )
AND TWIN FALLS CANAL COMPANY )
)

STATE OF IDAHO )
) ss.
County of Ada )

CHRIS M. BROMLEY, being first duly sworn upon oath, deposes and says:

1. I am one of the Deputy Attorneys General of record for the Respondent, Idaho Department of Water Resources. I am over the age of 18 and state the following based upon my own personal knowledge.

2. Attached hereto as **Attachment A** is a true and correct copy of the *Final Order Regarding Methodology for Determining Material Injury to Reasonable In-Season Demand and Reasonable Carryover.*

3. Attached hereto as **Attachment B** is a true and correct copy of the *Notice of Hearing Regarding 2008 Data.*

4. Attached hereto as **Attachment C** is a true and correct copy of the *Order Regarding April 2010 Forecast Supply (Methodology Steps 3 & 4).*

5. Attached hereto as **Attachment D** is a true and correct copy of the *Order Approving Mitigation Credits Regarding SWC Delivery Call.*

[The remainder if this page is intentionally left blank.]

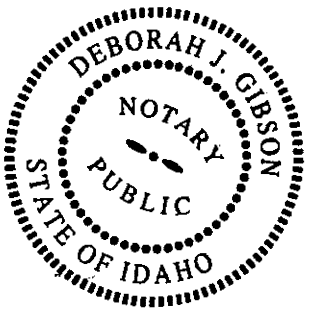
Further your Affiant sayeth naught.

DATED this 19th day of May, 2010.

CHRIS M. BROMLEY
Deputy Attorney General
Idaho Department of Water Resources

SUBSCRIBED AND SWORN TO BEFORE ME this 19th day of May, 2010.

(s e a l)




NOTARY PUBLIC for Idaho
Residing at: Parma, Idaho
My Commission Expires: 8/10/2015

## CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I am a duly licensed attorney in the state of Idaho, employed by the Attorney General of the state of Idaho and residing in Boise, Idaho; and that I served a true and correct copy of the following described document on the persons listed below by mailing in the United States mail, first class, with the correct postage affixed thereto on this 19th day of May, 2010.

Document Served: **Affidavit of Chris M. Bromley**

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| Deputy Clerk<br>Gooding County District Court<br>624 Main St.<br>P.O. Box 27<br>Gooding, ID 83330<br>Facsimile: 208-934-5085 | ☒ U.S. Mail, postage prepaid<br>☐ Hand Delivery<br>☐ Overnight Mail<br>☒ Facsimile<br>☐ Email |
| Judge Melanson (courtesy copy)<br>Idaho Court of Appeals<br>P.O. Box 83720<br>Boise, ID 83720-0101 | ☐ U.S. Mail, postage prepaid<br>☒ Hand Delivery<br>☐ Overnight Mail<br>☐ Facsimile<br>☐ Email |
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CHRIS M. BROMLEY
Deputy Attorney General

# ATTACHMENT A

**BEFORE THE DEPARTMENT OF WATER RESOURCES**

**OF THE STATE OF IDAHO**

| | | |
|---|---|---|
| IN THE MATTER OF DISTRIBUTION OF WATER TO VARIOUS WATER RIGHTS HELD BY OR FOR THE BENEFIT OF A&B IRRIGATION DISTRICT, AMERICAN FALLS RESERVOIR DISTRICT #2, BURLEY IRRIGATION DISTRICT, MILNER IRRIGATION DISTRICT, MINIDOKA IRRIGATION DISTRICT, NORTH SIDE CANAL COMPANY, AND TWIN FALLS CANAL COMPANY | ) | **FINAL ORDER REGARDING METHODOLOGY FOR DETERMINING MATERIAL INJURY TO REASONABLE IN-SEASON DEMAND AND REASONABLE CARRYOVER** |

## FINDINGS OF FACT

### I. Procedural Background

1. On September 5, 2008, the Director of the Department of Water Resources ("Director" or "Department") issued a final order in this matter ("2008 Final Order"), in which he ruled on all issues raised at hearing, with the exception of stating his methodology for determining material injury to the Surface Water Coalition's ("SWC") reasonable in-season demand ("RISD") and reasonable carryover. R. Vol. 37 at 7386.[1]

2. On July 24, 2009, the Honorable John M. Melanson issued his *Order on Judicial Review*, which found that the Director's decision to bifurcate his orders was unlawful under the IDAPA. *Order on Judicial Review* at 32. The court remanded this issue "for further proceedings consistent with this decision." *Id.* at 33. Petitions for rehearing were filed by the City of Pocatello ("Pocatello") and the Idaho Ground Water Appropriators, Inc., North Snake Ground Water District, and Magic Valley Ground Water District (collectively referred to herein as the "IGWA"). At times, this order will refer to IGWA and Pocatello collectively as "ground water users" or "GWU."

3. On March 4, 2010, the court issued its *Order Staying Decision on Petition for Rehearing Pending Issuance of Revised Final Order*. The order was issued pursuant to Idaho

[1] For purpose of convenience, all citations in this Final Order are to material that was admitted during the hearing and is part of the final agency record on appeal, which was lodged with the Fifth Judicial District Court on February 6, 2009.

Appellate Rule 13(b)(14) and tasked the Director to issue a final order determining material injury to RISD and reasonably carryover by March 31, 2010. On March 29, 2010, the court extended the deadline to April 7, 2010. *Order Granting Unopposed Motion for Extension of Time to File Order on Remand.*

4. The purpose of this Final Order is to set forth the Director's methodology for determining material injury to RISD and reasonable carryover to members of the SWC.

## II. Methodology For Determining Material Injury To Reasonable In-Season Demand

### A. Background to Reasonable In-Season Demand

5. The May 2, 2005 Amended Order ("May 2005 Order") and its progeny used the concept of a minimum full supply to quantify the amount of water members of the SWC needed during an irrigation season to ensure a reasonable supply. The minimum full supply was established by reviewing diversion records over a fifteen-year period (1990-2004), and selecting a single year with the smallest annual diversion amount that had full headgate deliveries without leasing any storage space. R. Vol. 37 at 7065. The year that best fit these criteria was 1995. *Id.* at 7066.

6. The May 2005 Order and its progeny were the subject of a fourteen-day hearing before hearing officer Gerald F. Schroeder ("Hearing Officer"). During the hearing, the Department presented its use of the minimum full supply analysis for determining material injury to in-season diversions. The parties presented competing proposals that were based on a water budget method. R. Vol. 37 at 7096.

7. In his April 29, 2008 *Opinion Constituting Findings Of Fact, Conclusions Of Law And Recommendation* ("Recommended Order"), the Hearing Officer stated that he could not reconcile the water budget methods advanced by the parties. R. Vol. 37 at 7096-97. The Hearing Officer stated that "the Department must modify the minimum full supply analysis as a method of establishing a baseline of predicted water need for projecting material injury." R. Vol. 37 at 7098. Reasons for modifying the Director's method were as follows:

> Predictions of need should be based on an average year of need, subject to adjustment up or down depending upon the particular water conditions for the irrigation season. This is the initial concept behind the minimum full supply. The development of an acceptable baseline subject to adjustment for changing conditions retains the value of having senior rights while providing some level of protection against unnecessary curtailment. The concept is good, but the minimum full supply identified by the Director has no defenders from the parties. A brief summary of objections to the Director's minimum full supply can be stated:
>
> > a. It is based on a wet year. To get to an average moisture year an adjustment would be necessary to determine how much greater the minimum full supply would be if the weather equated to an average year when an adequate amount of water was delivered.

b. It is based on a decade old year that does not reflect current efficiencies such as the increased use of sprinkler irrigation and computer monitoring or changes in the amount of land irrigated.

c. It has an emphasis on supply rather than need. That is the amount of water that provided full headgate deliveries. Those may or may not have been needed in that wet year.

R. Vol. 37 at 7096.

8. For purposes of future administration, the Hearing Officer provided the following guidance:

**a. To the extent 1995 is utilized it should be adjusted to determine how much the need for irrigation water was depressed by the well-above average precipitation and how much less loss from evaporation there would have been from depressed temperatures compared to a normal temperature year.** This would result in an increase in the baseline utilized by the Director. The objection that arriving at a baseline by using the amount delivered in a specific year emphasized supply rather than need is worthy of consideration. However, the evidence does not establish waste in the use of water in 1995. Absent evidence of waste it is appropriate to assume that the water was applied to a beneficial use.

**b. If there have been significant cropping changes resulting in either greater or less need for water, those should be factored.** This is an area of caution. Cropping decisions are matters for the irrigators acting within their water rights. Those decisions should be driven by the market. The fact that a particular crop may take less water does not dictate that it be planted.

**c. Changes in facilities, diversion, conveyance, and irrigation practices from earlier years should be considered, e.g. the extent to which conversions to sprinklers have affected water use over time.** This again must be considered with caution to avoid rewriting a water right through the process of determining a baseline water need for predictions of material injury. There may be legitimate reasons to revert to gravity flow in the future or change other practices.

**d. Analysis of soil conditions to determine how water is retained or lost is a factor.** Soil may hold water to be used by crops in the future. The fact that water may be applied to the ground when there are no plants growing does not mean the water is wasted. That depends on the nature of the soil and the amount of soil. Some soil retains water well, other does not. This affects the timing and extent of water delivery.

**e. Non-irrigated acres should not be considered in determining the irrigation supply necessary for SWC members.** IGWA has established that at least 6,600 acres claimed by TFCC in its district are not irrigated. Similar information was submitted concerning the Minidoka Irrigation District, indicating that the claimed

acreage of 75,152 includes 5,008 acres not irrigated and Burley Irrigation District has some 2,907 acres of the 47,622 acres claimed not irrigated. These amounts may, of course, change as acreage is removed from irrigation or possibly added back.

**f. Calculation of a water budget should be based on acres, not shares.** The allocation of water within a district is a matter of internal management, but the calculation of a water budget in determining if there will be curtailment should be based on acres not shares.

**g. Full headgate delivery for Twin Falls Canal Company should be calculated at 5/8 inch instead of 3/4 inch.** The former Director accepted Twin Falls Canal Company's response that 3/4 inch constituted full headgate delivery, and TFCC continued to assert that position at hearing. This is contradicted by the internal memoranda and information given to the shareholders in the irrigation district. It is contrary to a prior judicial determination. It is inconsistent with some of the structural facilities and exceeds similar SWC members with no defined reason. Any conclusions based on full headgate delivery should utilize 5/8 inch.[2]

R. Vol. 37 at 7099-7100 (emphasis in original).

9. According to the Hearing Officer, "it is time for the Department to move to further analysis to meet the goal of the minimum full supply but with the benefit of the extended information and analysis offered by the parties and available to its own staff." R. Vol. 37 at 7098. In the 2008 Final Order, the Director recognized the Hearing Officer's recommendations and stated his intention of adjusting his future analysis for determining material injury to RISD and reasonable carryover. R. Vol. 39 at 7386.

10. The methodology for determining material injury to RISD and reasonable carryover should be based on updated data, the best available science, analytical methods, and the Director's professional judgment as manager of the state's water resources. In the future, climate may vary and conditions may change; therefore, the methodology may need to be adjusted to take into account a different baseline year or baseline years.

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[2] This recommendation was accepted by former Director Tuthill in his Final Order. R. Vol. 39 at 7392. In his July 24, 2009 *Order on Judicial Review*, Judge Melanson found that the Director exceeded his authority in making this determination. *Order on Judicial Review* at 31. The court based its decision on the filing of the *Director's Report* in the Snake River Basin Adjudication, which "recommend[ed] ¾ of an inch per acre." *Id.* at 31. In its *Opening Brief on Rehearing*, IGWA asked the court to "clarify that the Director has the authority to determine that in times of shortage Twin Falls Canal Company may not be entitled to its full decreed (or recommended amount)[.]" This issue has been stayed and held in abeyance until after the Director issues his final order regarding his methodology for determining material injury to RISD and reasonable carryover. *Order Staying Decision on Petition for Rehearing Pending Issuance of Revised Final Order* at 3.

## B. Brief Overview of the Methodology for Determining Material Injury to the SWC's Reasonable In-Season Demand and Reasonable Carryover

11. In-season demand shortfalls will be computed by taking the difference between the RISD and forecast supply ("FS"). Initially RISD will be equal to the historic demands associated with a baseline year or years ("BLY") as selected by the Director, but will be corrected during the season to account for variations in climate and water supply between the BLY and actual conditions. The above description is represented by the following equation:

- In-Season Demand Shortfall = RISD – FS

12. Reasonable carryover shortfall will be computed by taking the difference between reasonable carryover and actual carryover, where reasonable carryover is defined as the difference between a baseline year demand and projected typical dry year supply.

- Reasonable Carryover Shortfall = Actual Carryover – Reasonable Carryover

13. The concepts underlying the selection of the BLY, determination of in-season demand shortfall, and reasonable carryover shortfall will be discussed in detail below.

## C. Reasonable In-Season Demand

### i. Considerations for the Selection of a Baseline Year

14. A BLY is a year(s) that represents demands and supplies that can be used as a benchmark to predict need in the current year of irrigation at the start of the irrigation season. The purpose in predicting need is to project an upper limit of material injury at the start of the season.

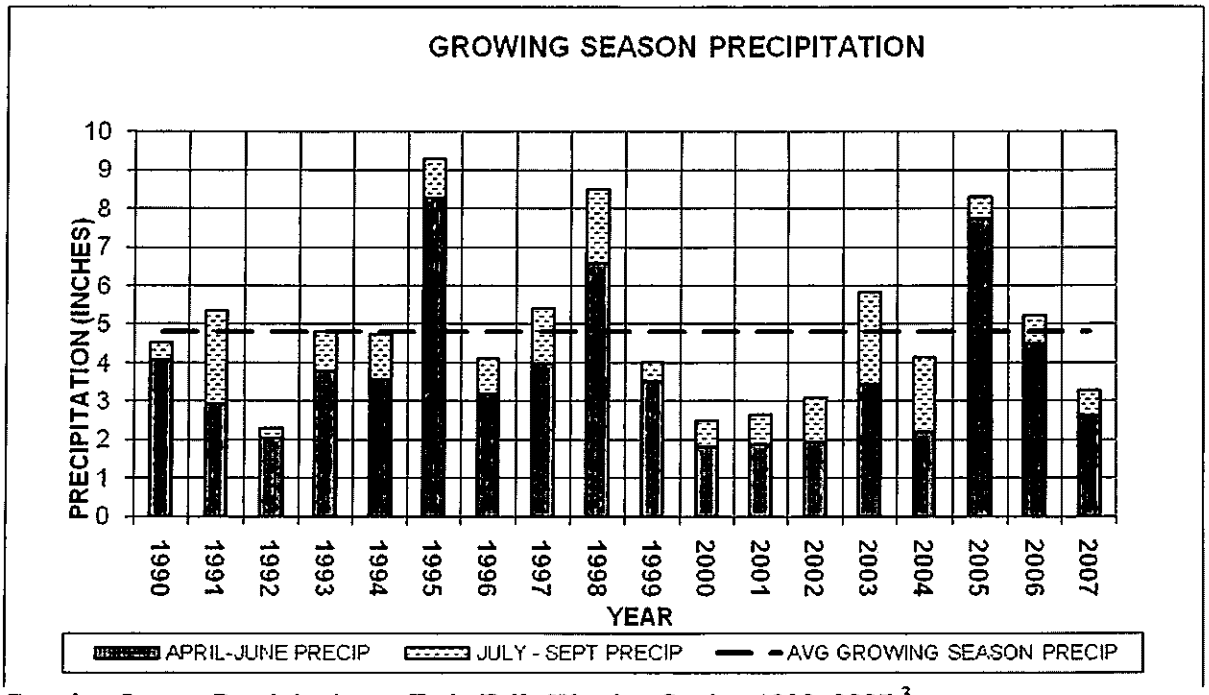
15. A BLY is selected by analyzing three factors: (1) climate; (2) available water supply; and (3) irrigation practices. R. Vol. 37 at 7098. To capture current irrigation practices, identification of a BLY is limited to years subsequent to 1999. *Id.* at 7096.

16. The historic diversion volumes from the BLY, along with the predicted supply forecast at the start of the irrigation season, are used to predict the initial in-season demand shortfall, where demand shortfall is the difference between the BLY demand ("BD") and the FS. Demand shortfall increases in magnitude the greater the difference between BD and FS; demand shortfall increases with increases in BD, decreases in FS, or both. Assuming constant irrigation practices, crop distributions, and total irrigated acres, demand for irrigation water typically increases in years of higher temperature, higher evapotranspiration ("ET"), and lower precipitation. If a year(s) exactly representing average conditions is used for predicting demand shortfall at the start of the season, which turns out to be a high demand season, demand shortfall will be under estimated at the start of the season. Therefore, a BLY should represent a year(s) of above average diversion, and to avoid years of below average diversions. Above average diversion year(s) selected as the BLY should also represent year(s) of above average temperatures and ET, and below average precipitation to ensure that increased diversions were a function of crop water need and not other factors. In addition, actual supply (Heise natural flow and storage) should be analyzed to assure that the BLY is not a year of limited supply.

### a. Climate

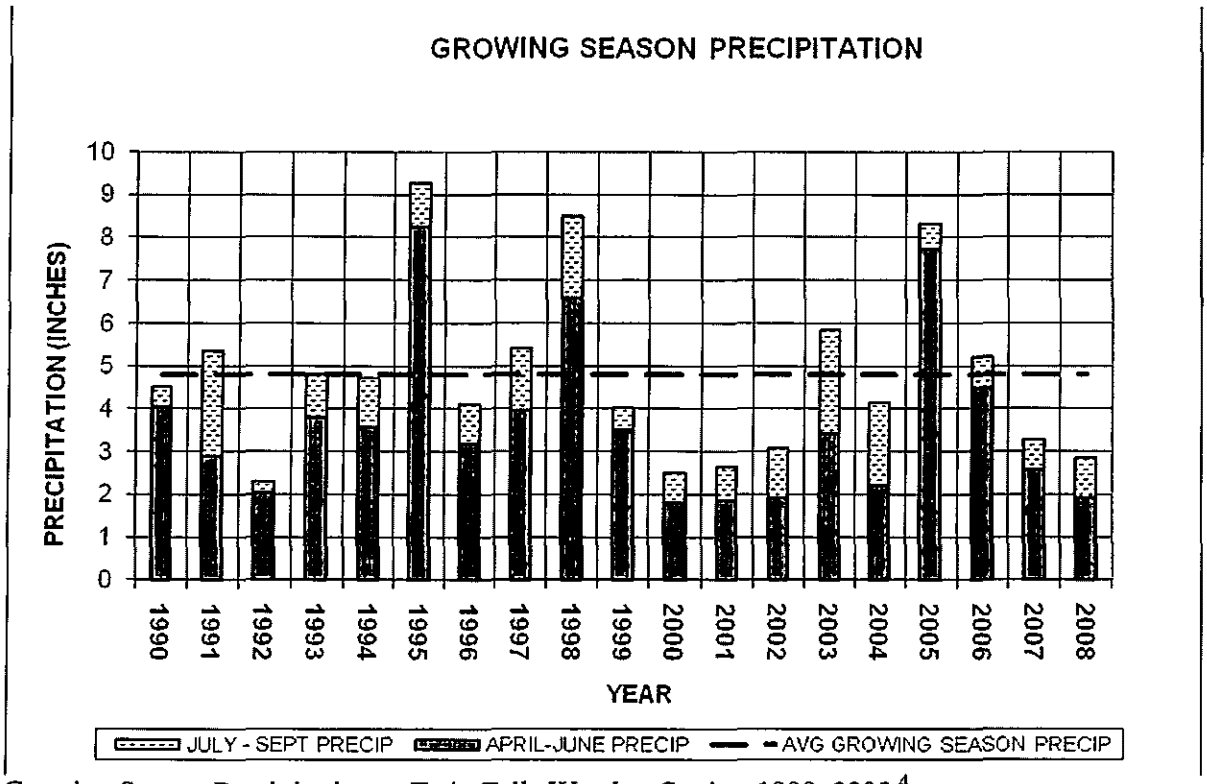
17. For the methods outlined herein, climate is represented by precipitation, ET, and growing degree days.

18. Precipitation. Water, in all phases, introduced to Idaho from the atmosphere is termed precipitation. During the growing season, precipitation has a substantial influence on crop water need both as a source of water to growing crops and as an influencing factor on ET. Ex. 3024 at 19. The figure below shows the precipitation recorded during the growing season at the National Weather Service's Twin Falls weather station. *Id.* at 12. Since 2000, the year 2006 received the nearest to average of growing season precipitation (April through September) relative to the 1990 through 2007 average, with 5.22 inches out of 4.79 inches for the average, or 109% of average. No other years were within +/- 10% of average.




Growing Season Precipitation at Twin Falls Weather Station 1990–2007.[3]

[3] Graph created from raw AgriMet precipitation data. Examples of the use of AgriMet precipitation data in the record may be found at: Ex. 3007 at 21; Ex. 8000, Vol. II at 6-2:6-4; Ex. 8000, Vol. IV at AU-2.



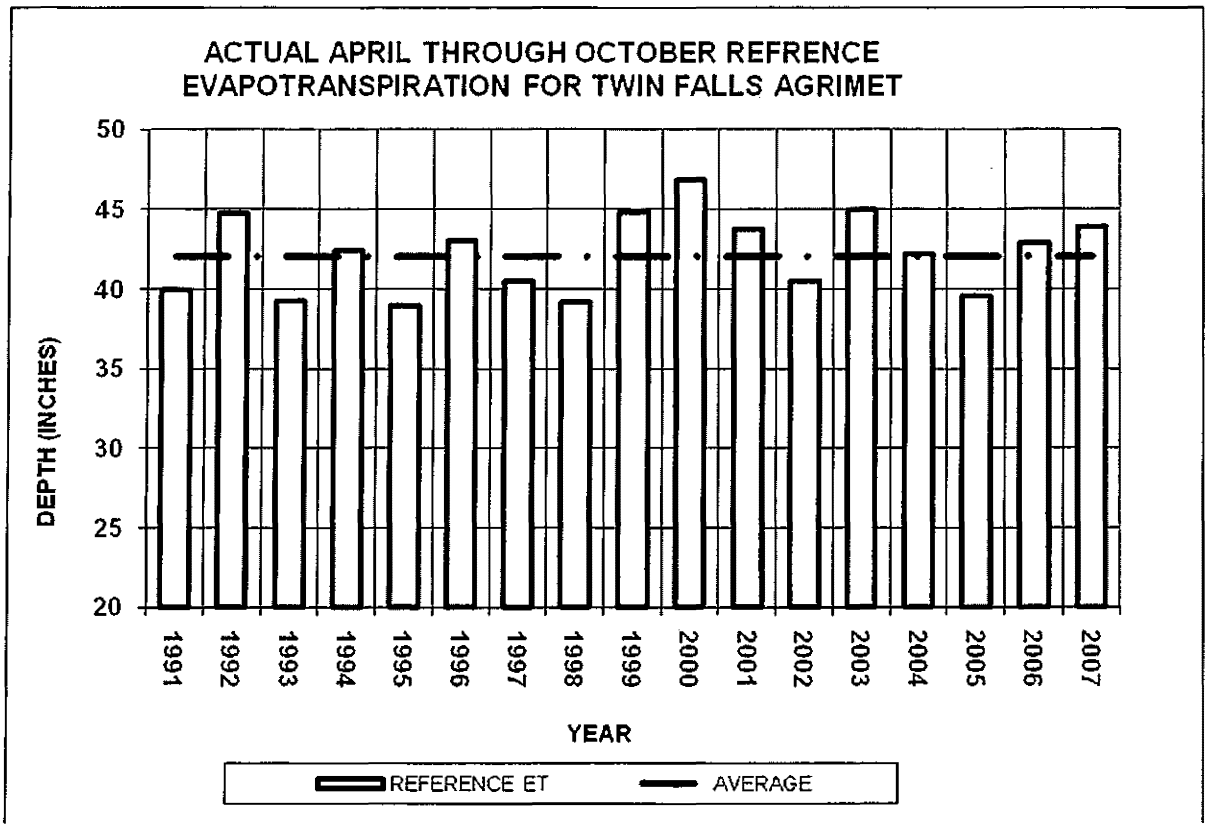
Growing Season Precipitation at Twin Falls Weather Station 1990–2008.[4]

19. Evapotranspiration. ET is a combined variable that describes the amount of water that evaporates from the ground from irrigation and transpires from vegetation. ET is an important factor for properly estimating RISD. In its water budget calculations, the SWC proposed the use of ET values from the USBR as part of their Pacific Northwest Cooperative Agricultural Network, i.e. AgriMet. Ex. 8000, Vol. II, Chap. 9; Ex. 8000, Vol. IV, Appdx. AU. The GWU proposed the use of ET values from Allen Richard G. and Clarence W. Robison 2007, Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho, i.e. ETIdaho. Ex. 3007A at 21; Ex. 3024 at 1-58.

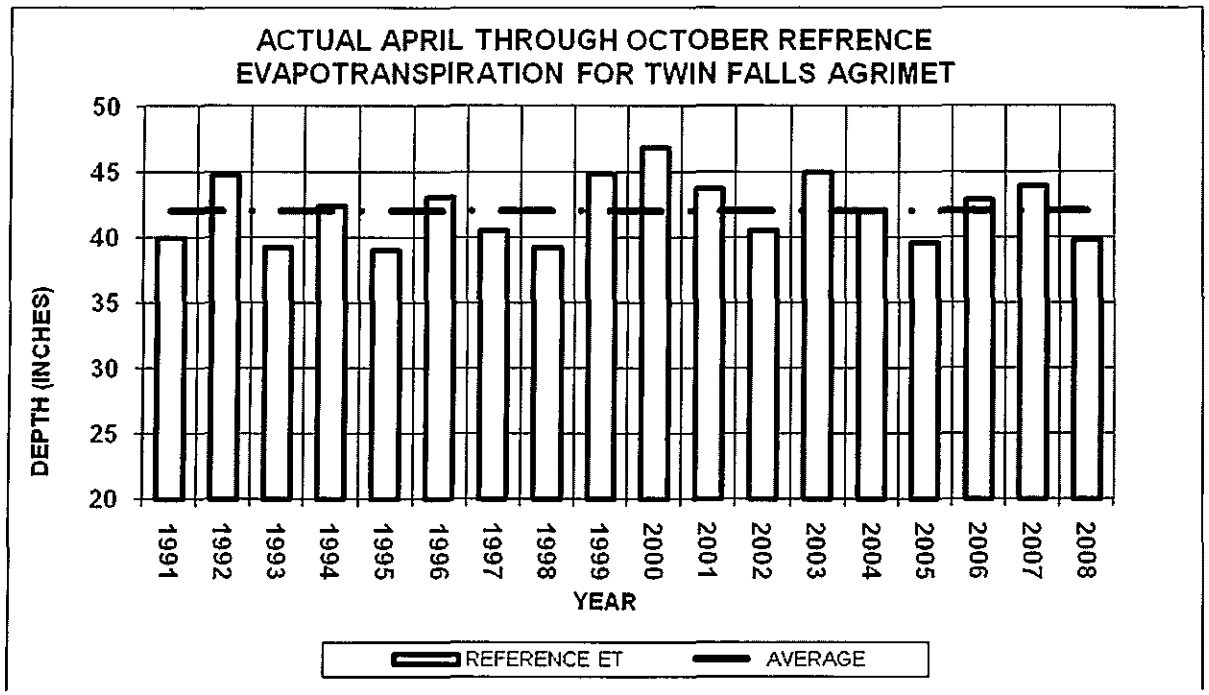
20. The use of reference ET calculated using ETIdaho for the Twin Falls (Kimberly) AgriMet site as an indicator of overall crop water need for a season is appropriate for purposes of comparison of historical average water need between seasons. Similar use of ETIdaho crop irrigation requirement data for AgriMet stations were employed in some of the expert reports submitted during hearing. *See* Ex. 3007 at 21. The ETIdaho method includes the contribution of effective precipitation in the reference ET calculation, and is a strong measure of the actual reference ET as opposed to the traditional potential ET, or the amount of ET the reference crop would use if water were not a limiting factor. ETIdaho is used here for the specific task of selecting appropriate BLY candidates. Total April through October reference ET for the period of record

[4] The record established at hearing was current through the year 2007. Since that time, Water District 01 has finalized its accounting for the 2008 irrigation season; thereby making the use of 2008 data appropriate. Water District 01 has not yet finalized its accounting for the 2009 irrigation season. For purposes of this order, the Director will specifically denote instances in which he uses 2008 data.

from the Twin Falls (Kimberly) AgriMet site is shown below. Since 2000, the years of 2000, 2001, 2003, 2006 and 2007 have been years of above average ET.




Actual Reference ET for Twin Falls (Kimberly) AgriMet using ETIdaho methodology 1991-2007.




Actual Reference ET for Twin Falls (Kimberly) AgriMet using ETIdaho methodology 1991-2008.

21. Growing Degree Days. Growing degree days provide a way to characterize the length and type of growing season. Growing degree days are an arithmetic accumulation of daily mean temperature above a certain base temperature. Ex. 3024 at 10; 117-21. These growth units are a simple method of relating plant growth and development to air temperatures. Different plant species have different base temperatures below which they do not grow. At temperatures above this base, the amount of plant growth is approximately proportional to the amount of heat or temperature accumulated. A higher annual growing degree day value indicates a higher potential rate of plant growth. The table below shows growing degree days accumulated for April through September for the Twin Falls (Kimberly) AgriMet site. Above average years since 2000 include: 2000, 2001, 2002, 2003, 2006, and 2007.

| Year | GDD: April-Sept | % of Average | Year | GDD: April-Sept | % of Average |
|---|---|---|---|---|---|
| 1991 | 2,095.4 | 86% | 2000 | 2,591.3 | 107% |
| 1992 | 2,610.7 | 107% | 2001 | 2,600.8 | 107% |
| 1993 | 2,004.7 | 82% | 2002 | 2,465.6 | 101% |
| 1994 | 2,516.8 | 103% | 2003 | 2,585.4 | 106% |
| 1995 | 2,257.8 | 93% | 2004 | 2,428.9 | 100% |
| 1996 | 2,418.6 | 99% | 2005 | 2,320.1 | 95% |
| 1997 | 2,478.4 | 102% | 2006 | 2,601.9 | 107% |
| 1998 | 2,422.2 | 100% | 2007 | 2,657.7 | 109% |
| 1999 | 2,294.9 | 94% | | | |

Average GDD: 2,432.4

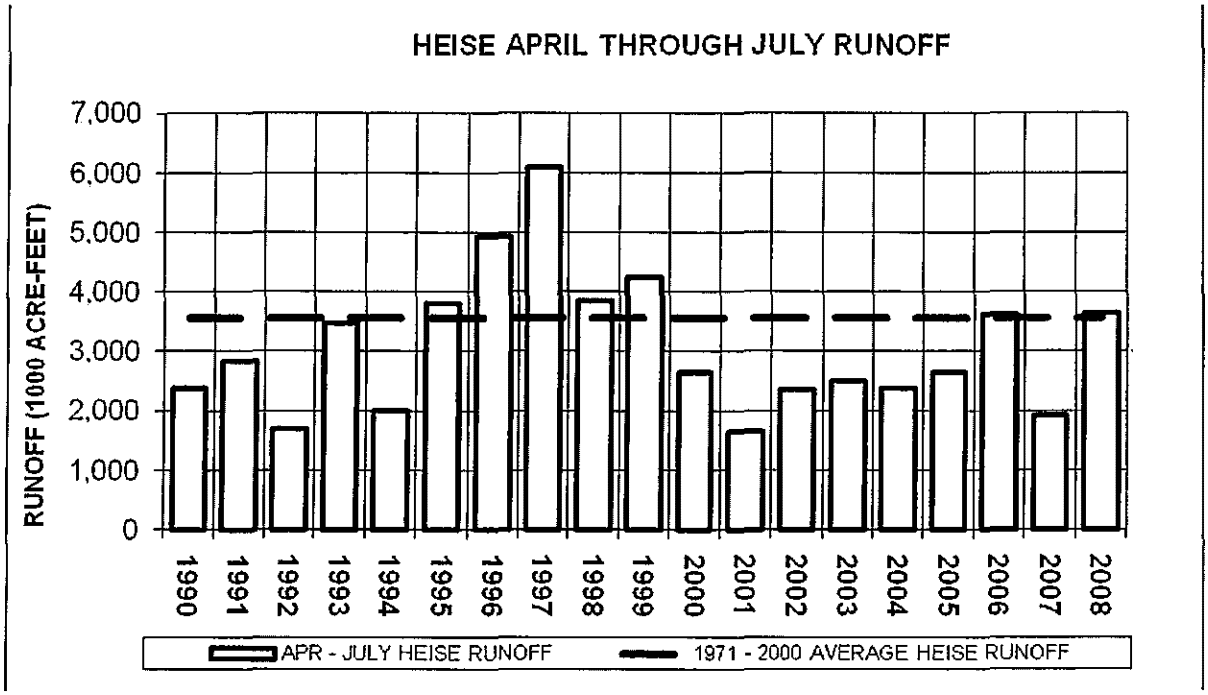
Growing Degree Days ("GDD") for Twin Falls (Kimberly) AgriMet Site 1991-2007, Ex. 3024 at 10.

| Year | GDD: April-Sept | % of Average | Year | GDD: April-Sept | % of Average |
|---|---|---|---|---|---|
| 1991 | 2,095.4 | 86% | 2000 | 2,591.3 | 107% |
| 1992 | 2,610.7 | 107% | 2001 | 2,600.8 | 107% |
| 1993 | 2,004.7 | 83% | 2002 | 2,465.6 | 101% |
| 1994 | 2,516.8 | 104% | 2003 | 2,585.4 | 106% |
| 1995 | 2,257.8 | 93% | 2004 | 2,428.9 | 100% |
| 1996 | 2,418.6 | 100% | 2005 | 2,320.1 | 95% |
| 1997 | 2,478.4 | 102% | 2006 | 2,601.9 | 107% |
| 1998 | 2,422.2 | 100% | 2007 | 2,657.7 | 109% |
| 1999 | 2,294.9 | 94% | 2008 | 2,382.9 | 98% |
| | | Average GDD: | | 2,429.7 | |

Growing Degree Days ("GDD") for Twin Falls (Kimberly) AgriMet Site 1991-2008.

**b. Available Water Supply**

22. The joint forecast ("Joint Forecast") issued by the United States Bureau of Reclamation ("USBR") and the United States Army Corp of Engineers ("USACE") for the period April 1 through July 31 "is generally as accurate a forecast as is possible using current data gathering and forecasting techniques." R. Vol. 8 at 1379, ¶ 98. The predictions made in this forecast are a good indicator of the total available irrigation water supply for a season. R. Vol. 37 at 7071. The April through July volume represents the amount available for diversion into storage reservoirs and also serves as an indicator of natural flow supplies. *Id.* at 7066. The figure below shows actual unregulated flow volumes at Heise for 2000-2007 and the Joint Forecast volume for 2008. Since the 2000 irrigation season, and recognizing that diversions for each individual member of the SWC are different, 2006 and 2008 are the only years in which water supply was not severely limited. The thirty-year average is indicated by the dashed line.




April through July Unregulated Flow Volume at Heise, 1990-2008. Ex. 8000, Vol. II at 6-37:6-38; R. Vol. 37 at 7018-28 (includes 2008 Joint Forecast projection for Heise).

**c. Irrigation Practices**

23. A BLY must be recent enough to represent current irrigation practices. R. Vol. 37 at 7099-7100. Conditions that should be consistent are the net area of the irrigated crops, farm application methods (flood/furrow or sprinkler irrigation), and the conveyance system from the river to the farm. The type of sprinkler systems should be similar between the BLY and the current year, whether side roll systems, hand lines, or center pivot.

24. Sprinkler systems are currently the predominant application system. *Id.* at 7101-02. In order to ensure that current irrigation practices are captured, selection of a BLY for the SWC should be limited to years subsequent to 1999. *Id.* at 7096; 7099-7100.

25. Estimates of irrigated acres from the hearing show a trend of decreasing irrigated acreage. R. Vol. 28, 5205-15; R. Vol. 37 at 7100. According to the Hearing Officer, beneficial use cannot occur on acres that have been hardened or are otherwise not irrigated. R. Vol. 37 at 7100.

**ii. Selection of the Initial Baseline Year**

26. In evaluating the factors listed above, 2006 satisfies the Hearing Officer's recommendations better than any other single year in the recent record (since 2000).

27. From the standpoint of total annual SWC diversion volumes, 2006 is an appropriate BLY. From 2000-2008, 2006 had total diversions of 97%. If BLY selection is limited to a single

year, 2006 is the best fit in the recent past. However, from the standpoint of annual diversion for individual entities, 2006 was a year of below average diversions for Milner, Minidoka Irrigation District ("MID"), and TFCC, at 82%, 98%, and 96%, respectively (*see* Finding of Fact 29). The selection of a single BLY for all entities is challenging, with all years representing average or near average diversions for some entities, but not others. By selecting a BLY that is comprised of the average of multiple years, a BLY can be selected that best represents the required conditions for each and all entities.

28. With the exception of diversions for Milner, MID, and TFCC, 2006 is an appropriate BLY selection for a single year. The Director finds, however, that it would also be appropriate to use the values of 2006 and 2008 (06/08) to arrive at an average BLY that more strongly fits selection criteria for all members of the SWC.[5] The 06/08 average has below average precipitation, near average ET, above average growing degree days, and were years in which diversions were not limited by availability of water supply. When compared to a period of record spanning from 1990-2008, the 06/08 diversions were above average; or average when considering a period of record from 2000-2008.[6]

29. Comparison of 2006 diversions to the 2000-2008 overall average, below, indicates that, for the SWC entities, with the exception of Milner, the 2006 diversions were within 4% of average. By comparing the average of 2006 and 2008 (06/08) diversions to the 2000-2008 overall average for the SWC entities, the 06/08 diversion are above the historic average, with the exception of Milner, keeping in mind that the average includes the drought years of 2000-2005.

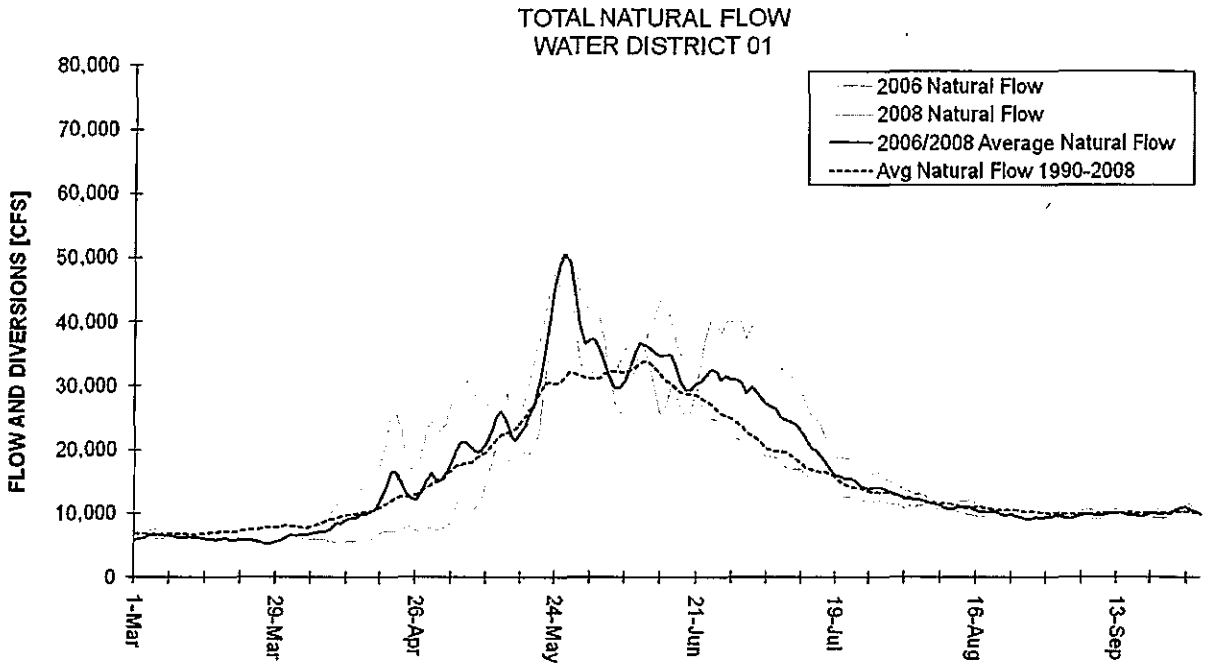
| | 2000-2008 Avg. Diversions | '06 Total Diversions | '06 % of Avg. | '06/'08 Avg. Total Diversions | '06/'08 % of Avg. |
|---|---|---|---|---|---|
| A&B | 57,615 | 57,492 | 100% | 58,492 | 102% |
| AFRD2 | 409,865 | 410,376 | 100% | 415,730 | 101% |
| BID | 245,295 | 247,849 | 101% | 250,977 | 102% |
| Milner | 50,786 | 41,671 | 82% | 46,332 | 91% |
| Minidoka | 358,018 | 352,269 | 98% | 362,884 | 101% |
| NSCC | 955,439 | 963,007 | 101% | 965,536 | 101% |
| TFCC | 1,031,987 | 995,822 | 96% | 1,045,382 | 101% |
| | | Average: | 97% | | 100% |

SWC Diversions for 2006; 2006/2008; and 2000 through 2008 Average. Ex. 8000, Vol. IV, Appdx. AS-1-8.

[5] In 2006, TFCC delivered ¾ of a miner's inch. Tr. p. 1601, lns. 1-15.

[6] Former Director Dreher found in the May 2005 Order that "since the year 2000 the Upper Snake River Basin has experienced the worst consecutive period of drought years on record." R. Vol. 8 at 1375, ¶ 78. The drought during this time period was determined by former Director Dreher to have a "probability of recurrence of something in excess of 500 years . . . ." Tr. p. 327, lns. 20-21.

30. Daily natural flow supply for Water District 01 in 2006 and 2008 are depicted below. When averaged together, the 2006 and 2008 natural flow is near the long term average (1990-2008). The long term average is shown as the blue dashed line.




Water District 01 Natural Flow, 2006 and 2008. Ex. 4604.

## D. Calculation of Reasonable In-Season Demand

31. RISD is the projected annual diversion volume for each SWC entity during the year of evaluation that is attributable to the beneficial use of growing crops within the service area of the entity. Given that climate and system operations for the year being evaluated will likely be different from the BLY, the BLY must be adjusted for those differences. As stated by the Hearing Officer, "The concept of a baseline is that it is adjustable as weather conditions or practices change, and that those adjustments will occur in an orderly, understood protocol." R. Vol. 37 at 7098.

### i. Assessment of Water Balance Studies Presented at Hearing

32. Water balance approaches to address the quantity of water needed by members of the SWC were presented in testimony, reports, and exhibits at the hearing. The methodology used for water balance studies provided by the SWC and the GWU experts is summarized in equation form, as set forth in Equation 1, below:

$$(1) \qquad Q = \left[ \left( \frac{ET_c \times F_c}{E_a} \right) - W_e \right] \times A_{ID} + S_{loss}$$

Where:

$Q$ = irrigation entity diversion requirement,
$ET_c$ = consumptive use of each crop,
$F_c$ = fraction of area of each crop in irrigation entity,
$E_a$ = field application efficiency,
$W_e$ = estimated effective rainfall during growing season,
$A_{ID}$ = irrigated area in irrigation entity, and
$S_{loss}$ = seepage loss from canals.

33. The variables described above were common to both the SWC and GWU water balance analyses, with the following exceptions. The GWU did not account for effective precipitation ($W_e$). Ex. 3007 at 17-19. Analysis by the GWU included a reduction in the diversion requirement for supplemental ground water used within SWC service areas. *Id.* at 17. Both of these exceptions will be considered for purposes of determining RISD shortfalls.[7]

34. Another component not shown or considered by the parties is the operation loss, or project return flows. SWC experts recognized the lack of data necessary to estimate this factor: "Operational losses and returns within the delivery system were not included in the irrigation diversion estimate since no consistent measured operational waste records are available." Ex. 8000, Vol. II at 9-7.

35. The areal extent of the SWC is large. Obtaining field measurements of canal seepage losses on the vast network of canals and laterals is not presently feasible given the time and resources necessary to complete such a task. The same would be true for determining the true value of farm or field application efficiency. Measuring farm runoff and deep percolation losses out of the crop root zone at a field level scale is also not practical given the time and resources necessary to complete such a task. Lacking measured data for canal seepage losses, farm runoff, and deep percolation, these parameters must be estimated.

36. The Director must exercise his best professional judgment in quantifying inputs to the water balance study. Differences in judgment affect the numerical results. As stated by the Hearing Officer:

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[7] As stated by former Director Dreher, "In making a determination of how much water is needed, I thought is was important to look at all three of those sources [surface water, storage water, and supplemental ground water]." Tr. p. 25, ln. 25; p. 26, lns. 1-2. All acres identified as receiving supplemental ground water within the boundaries of a single SWC entity will initially be evaluated by assigning an entity wide split of the ground water fraction to the surface water fraction as utilized in the development of the ESPA Model. *See* Ex. 8000, Vol. II, Bibliography at II, referencing *Final ESPA Model, IWRRI Technical Report 06-002 & Design Document DDW-017.* For each entity the ground water fraction to the surface water fraction is as follows: A&B 95:5; AFRD2 30:70; BID 30:70; Milner 50:50; Minidoka 30:70; NSCC 30:70; & TFCC 30:70.

> The irony in this case is that surface water and ground water expert testimony used much of the same information and in some respects the same approaches and came up with a difference of 869,000 acre-feet for an average diversion budget analysis of SWC districts for the period from 1990 through 2006. Sullivan Rebuttal Report, November 7, 2007, page 17. The total under the SWC analysis is 3,274,948 acre-feet as compared to the Pocatello analysis of . . . 2,405,861 [acre-feet]. The Director's minimum full supply amount of 3,105,000 falls between the two, though much closer to the SWC analysis.

R. Vol. 37 at 7096.

37. The Hearing Officer also found that the average annual surface irrigation requirements based on 1990 through 2006 for the North Side Canal Company ("NSCC") as calculated by experts for the SWC and GWU differed by 473,217 acre-feet. R. Vol. 37 at 7097. Annual average requirements based on the 1990 through 2006 period for TFCC vary by 310,000 acre-feet. *Id.* These discrepancies do not indicate errors in formulations or calculations, but do demonstrate the range of values in the total irrigation demand that are possible if contributing components to that total demand are calculated using different methods, or with different estimates of unknown parameters.

38. A further example of the range of possible values for seepage loss is shown by comparison of the SWC and GWU expert reports. In the SWC's Exhibit 8201, Pocatello's expert analysis of average annual canal seepage loss is presented as 338,984 acre-feet for NSCC. In the same exhibit, the SWC's expert analysis of average annual seepage loss for NSCC is reported as 586,136 acre-feet.

39. In a 1979 study published by the Idaho Water Resource Research Institute, R.G. Allen and C.E. Brockway determined that conveyance losses for the 1977 diversion volume of 794,930 acre-feet for NSCC was 286,012 acre-feet for 755 miles of canals. Ex. 3060 at 193. Brockway and B.A. Claiborne estimated conveyance losses to be 326,418 acre-feet for the same NSCC system, based on the 1974 diversion volume of 1,117,240 acre-feet. Ex. 3059 at 26.

40. The above seepage loss estimates were all calculated using the Worstell procedure, Ex. 3037 at 38, but range in magnitude by a factor of 1.8 for the two estimates with the highest, but similar, average diversion volumes. Clearly, the magnitudes of the conveyance losses are very sensitive to input parameters selected for use in that procedure.

**ii. Project Efficiency**

41. Given that the water balance method for estimating annual diversion requirements is subject to varying results based on the range of parameters used as input, an alternate approach is to assume that unknown parameters are practically constant from year-to-year across the entire project. Project efficiency is a term used to describe the ratio of total volumetric crop water need within a project's boundary and the total volume of water diverted by that project to meet crop needs. It is the same concept as system efficiency, which was presented at hearing. Ex. 3007 at 28-29. Implicit in this relationship are the components of seepage loss (conveyance loss), on-farm application losses (deep percolation, field runoff), and system operational losses (return flows). By utilizing

project efficiency and its input parameters of crop water need and total diversions, the influence of the unknown components can be captured and described without quantifying each of the components.

42. Project efficiency is calculated as set forth in Equation 2, below:

$$(2) \qquad E_p = \frac{CWN}{Q_D}$$

Where:

$E_p$ = project efficiency,
CWN = crop water need, and
$Q_D$ = irrigation entity diversion of water specifically put to beneficial use for the growing of crops within the irrigation entity.

43. Monthly irrigation entity diversions ($Q_D$) will be obtained from Water District 01's diversion records. Ex. 8000, Vol. II, at 8-4, 8-5. Raw monthly diversion values will then be adjusted to remove any water diversions that can be identified to not directly support the beneficial use of crop development within the irrigation entity. Examples of adjustments include the removal of diversions associated with in-season recharge and diversion of irrigation water on the behalf of another irrigation entity.

44. Project efficiencies will be computed for the entire irrigation season. Project efficiency varies from month-to-month during the season, and will typically be lower during the beginning and ending of the season. Project efficiencies will be calculated on a monthly basis for use in adjusting RISD during the year of evaluation. The tables below present average project efficiencies for each SWC member (2001-2007; 2001-2008), with project efficiencies during that time span greater or less than two standard deviations excluded from the calculation. By including only those values within two standard deviations, extreme values from the data set are removed.

| Month | A&B | AFRD2 | BID | Milner | Minidoka | NSCC | TFCC | AVG. |
|---|---|---|---|---|---|---|---|---|
| 4 | 0.93 | 0.19 | 0.27 | 1.12 | 0.17 | 0.14 | 0.19 | 0.43 |
| 5 | 0.42 | 0.27 | 0.30 | 0.62 | 0.26 | 0.28 | 0.32 | 0.35 |
| 6 | 0.63 | 0.42 | 0.47 | 0.61 | 0.49 | 0.44 | 0.52 | 0.51 |
| 7 | 0.80 | 0.44 | 0.56 | 0.66 | 0.65 | 0.50 | 0.56 | 0.60 |
| 8 | 0.69 | 0.38 | 0.43 | 0.55 | 0.48 | 0.38 | 0.41 | 0.47 |
| 9 | 0.52 | 0.26 | 0.32 | 0.49 | 0.35 | 0.30 | 0.24 | 0.35 |
| 10 | 0.15 | 0.46 | 0.11 | 0.44 | 0.11 | 0.24 | 0.12 | 0.23 |
| | 0.59 | 0.35 | 0.35 | 0.64 | 0.36 | 0.33 | 0.34 | 0.42 |

SWC Member Average Monthly Project Efficiencies from 2001-2007.

| Month | A&B | AFRD2 | BID | Milner | Minidoka | NSCC | TFCC | AVG. |
|---|---|---|---|---|---|---|---|---|
| 4 | 0.87 | 0.18 | 0.26 | 1.09 | 0.16 | 0.14 | 0.21 | 0.42 |
| 5 | 0.41 | 0.25 | 0.30 | 0.55 | 0.27 | 0.27 | 0.31 | 0.34 |
| 6 | 0.64 | 0.40 | 0.48 | 0.61 | 0.50 | 0.43 | 0.50 | 0.51 |
| 7 | 0.77 | 0.44 | 0.56 | 0.61 | 0.64 | 0.48 | 0.55 | 0.58 |
| 8 | 0.65 | 0.38 | 0.42 | 0.54 | 0.48 | 0.39 | 0.41 | 0.46 |
| 9 | 0.51 | 0.25 | 0.31 | 0.44 | 0.33 | 0.29 | 0.24 | 0.34 |
| 10 | 0.17 | 0.37 | 0.11 | 0.31 | 0.10 | 0.20 | 0.10 | 0.19 |
| Season Avg. | 0.57 | 0.32 | 0.35 | 0.59 | 0.35 | 0.31 | 0.33 | 0.41 |

SWC Member Average Monthly Project Efficiencies from 2001-2008.

### iii. Crop Water Need

45. Crop water need ("CWN") is the project wide volume of irrigation water required for crop growth, such that crop development is not limited by water availability, for all crops supplied with surface water by the surface water provider. Crop water need is the difference between the fully realizable consumptive use associated with crop development, or ET, and effective precipitation (We) and is synonymous with the terms irrigation water requirement and precipitation deficit. Ex. 3024. For the purposes of the methodology, CWN is calculated as set forth in Equation 3, below:

(3) $$CWN = \sum_{i=1}^{n} (ET_i - W_e) A_i$$

Where,

CWN = crop water need
$ET_i$ = consumptive use of specific crop type,
$W_e$ = estimated effective rainfall,
$A_i$ = total irrigated area of specific crop type,
i = index variable representing the different specific crop types grown within the irrigation entity, and
n = upper bound of summation equal to the total number of different specific crop types grown within the irrigation entity.

### iv. Evapotranspiration

46. ET has been estimated by experts for the parties using theoretically based equations that calculate ET for an individual crop, thus necessitating crop distribution maps for each year. Ex. 3007A at 21, Figure 3, Tables 6-12; Ex. 3024 at 1-58; Ex. 8000, Vol. II at Chapter 9; Ex. 8000, Vol. IV, Appdx. AU.

47. At hearing, values of ET were estimated by the SWC from AgriMet, Ex. 8000, Vol. IV, Appdx. AU-1, and by the GWU from ETIdaho, Ex. 3007A at 21; Ex. 3024 at 1-58. At this time, the Director finds that the use of AgriMet is more appropriate for determining ET than ETIdaho. At this time, AgriMet, is available to all parties in real-time without the need for

advanced programming. Accordingly, the methodology will rely on AgriMet derived ET values in the calculations of project efficiency, crop water need, and RISD. In the future, with the development of additional enhancements, ETIdaho may become a more appropriate analytical tool for determining ET.

48. The utilization of AgriMet derived crop specific ET values necessitates crop distribution profiles similar to those described and presented at hearing. R. Vol. 2 at 420-26; Ex. 3007 at 21 & Table 4; and Ex. 3026. The methodology will utilize crop distributions based on distributions from the United States Department of Agriculture's National Agricultural Statistics Service ("NASS"). Ex. 1005 at 1.[8] NASS reports annual acres of planted and harvested crops by county. NASS also categorizes harvested crops by irrigation practice, i.e. irrigated, non irrigated, non irrigated following summer fallow, etc. Crop distribution acreage will be obtained from NASS by averaging the "harvested" area for "irrigated" crops from 1990-2008. Years in which harvested values were not reported will not be included in the average. It is the Department's preference to rely on data from the current season if and when it becomes usable.

49. AgriMet crop water use (i.e. ET) and weather data are available from the Rupert and Twin Falls (Kimberly) stations for use with the closest SWC entity. Using AgriMet data from Rupert for A&B, Burley Irrigation District ("BID"), Milner, and MID provides a reasonable representation of the climate conditions for those entities and are consistent with common standards of practice. Using AgriMet data from Twin Falls (Kimberly) for American Falls Reservoir District No. 2 ("AFRD2"), NSCC, and TFCC provides a reasonable representation of the climate conditions for those entities and is consistent with common standards of practice. Ex. 8000, Vol. IV at AU-2, AU-8.

### v. Effective Precipitation

50. Effective precipitation ($W_e$), or the water in the soil horizon available for crop root uptake, will be estimated from total precipitation (W) utilizing the methodology presented in the USDA Technical Bulletin 1275. Ex. 8000, Vol. IV, Appdx. AU3, AU8. Total precipitation (W) is provided by the USBR as part of its Pacific Northwest Cooperative Agricultural Network, i.e. AgriMet. Ex. 8000, Vol. IV, Appdx. AU3. $W_e$ derived from AgriMet based precipitation values are independent of crop type.

51. AgriMet precipitation (W) values are easy to understand and regularly used by the farming, water supply, and water management communities. Accordingly, the methodology will rely on AgriMet derived W values in the calculations of crop water need and RISD.

52. As with ET data, AgriMet precipitation data are available from the Rupert and Twin Falls (Kimberly) stations for use with the closest SWC entity. Using AgriMet data from Rupert for A&B, BID, Milner, and MID provides a reasonable representation of the climate conditions for those entities and are consistent with common standards of practice. Using AgriMet data from Twin Falls (Kimberly) for AFRD2, NSCC, and TFCC provides a reasonable representation of the

[8] The ESPA Modeling Committee uses NASS data in the ESPA Model to distribute crop types within the model. *See* Ex. 8000, Vol. 2, Bibliography at II, referencing *Final ESPA Model, IWRRI Technical Report 06-002.*

climate conditions for those entities and is consistent with common standards of practice. Ex. 8000, Vol. IV at AU-2, AU-8.

### vi. Summary of Reasonable In-Season Demand Calculation

53. At the start of the irrigation season, RISD is equal to the baseline demand, or total season adjusted diversions for the baseline year(s). When calculated in-season, RISD is calculated by Equation 4, below.

$$(4) \qquad RISD_{milestonex_x} = \sum_{j=1}^{m}\left(\frac{CWN_j}{E_{p,j}}\right) + \sum_{j=m+1}^{7} BD_j$$

Where:

$RISD_{mileston_x}$ = reasonable in season demand at specified evaluation milestones during the irrigation season,
CWN = crop water need for month j,
$E_p$ = baseline project efficiency for month j,
BD = baseline demand for month j,
j = index variable, and
m = upper bound of summation, equal to the month calculation occurs, where April = 1, May =2, ... October = 7.

54. Water is sometimes diverted into canals and onto crops fields in support of crop development for reasons other than strictly meeting the consumptive requirement of the crop; such as canal wetting, salt leaching, soil wetting, and soil temperature control. April and October represent months during the irrigation season when the method of calculating RISD strictly as a function of CWN and PE is less reliable, because CWN is often not the driving factor in diversions during these bookend months. To account for uncertainty of RISD calculations during those time periods, April and October RISD adjustments have been developed.

55. April RISD Adjustment: In April, calculated RISD, as a function of CWN and PE, can grossly under estimate actual diversion needs. Therefore, for each individual surface water provider, if the calculation of $CWN/E_p$ for the month of April is less than the April average diversion volume over a record of representative years in the recent past, then RISD will be equal to the April average diversion volume. If the calculation of $CWN/E_p$ is greater than the April average, then RISD will equal the calculated $CWN/E_p$ volume.

56. October RISD Adjustment: In October, calculated RISD, as a function of CWN and PE, can either grossly under or over estimate actual diversion needs. For each individual surface water provider, if the calculation of $CWN/E_p$ for the month of October is greater than the October maximum diversion volume, or less than the October minimum diversion volume, over a record of representative years in the recent past, then RISD will be equal to the October average diversion volume, over the same period of representative years. If the calculation of $CWN/E_p$ is less than the October maximum diversion volume, or greater than the October minimum diversion volume, then RISD will equal the calculated $CWN/E_p$ volume.

## D. Adjustment of Forecast Supply

57. As stated by the Hearing Officer, "There must be adjustments as conditions develop if any baseline supply concept is to be used." R. Vol. 37 at 7093.

### i. April 1

58. Typically within the first week of April, the USBR and the USACE issue their Joint Forecast that predicts an unregulated inflow volume at the Heise Gage from April 1 to July 31 for the forthcoming year. Given current forecasting techniques, the earliest the Director can predict material injury to RISD "with reasonable certainty" is soon after the Joint Forecast is issued. R. Vol. 2 at 226. With data from 1990 through the previous water year, a regression equation will be developed for each SWC member by comparing the actual Heise natural flow to the natural flow diverted. *See e.g.* R. Vol. 8 at 1416-22. The regression equation will be used to predict the natural flow diverted for the upcoming irrigation season. *Id.* at 1380. The actual natural flow volume that will be used in the Director's Forecast Supply will be one standard error below the regression line, which underestimates the available supply. *Id.*; Tr. p. 65, lns. 6-25; p. 66, lns. 1-2.

59. The storage allocation for each member of the SWC will be estimated by the Department following the Joint Forecast. The reservoir fill and allocation will be predicted by using data from a similar year. The Forecast Supply is the sum of the estimated storage allocation and the predicted natural flow diversion. This volume will be used in the shortfall calculations until better data is available later in the irrigation season.

### ii. Early to Mid-July

60. In early to mid-July, the Forecast Supply will be adjusted. The reservoirs will typically have filled to their peak capacity for the season and the storage water will have been allocated. The Department's water rights accounting model will be used to compute the natural flow diverted by each member of the SWC as of the new forecast date. The natural flow diversion for the remainder of the irrigation season will be estimated based on a historical year with similar gains in the Blackfoot to Milner reach. Reach gains are graphed below, using 2004 as an example. In this case, 2003 has similar reach gains and is appropriately conservative. Therefore, the natural flow diverted in 2003 would be used to predict the natural flow diversions for the remainder of the 2004 season. The adjusted Forecast Supply is the sum of the actual natural flow diversions, the predicted natural flow diversions, and the storage allocation.

### iii. Time of Need

61. The July procedure will be repeated shortly before the Time of Need[9] with the updated water rights accounting data.

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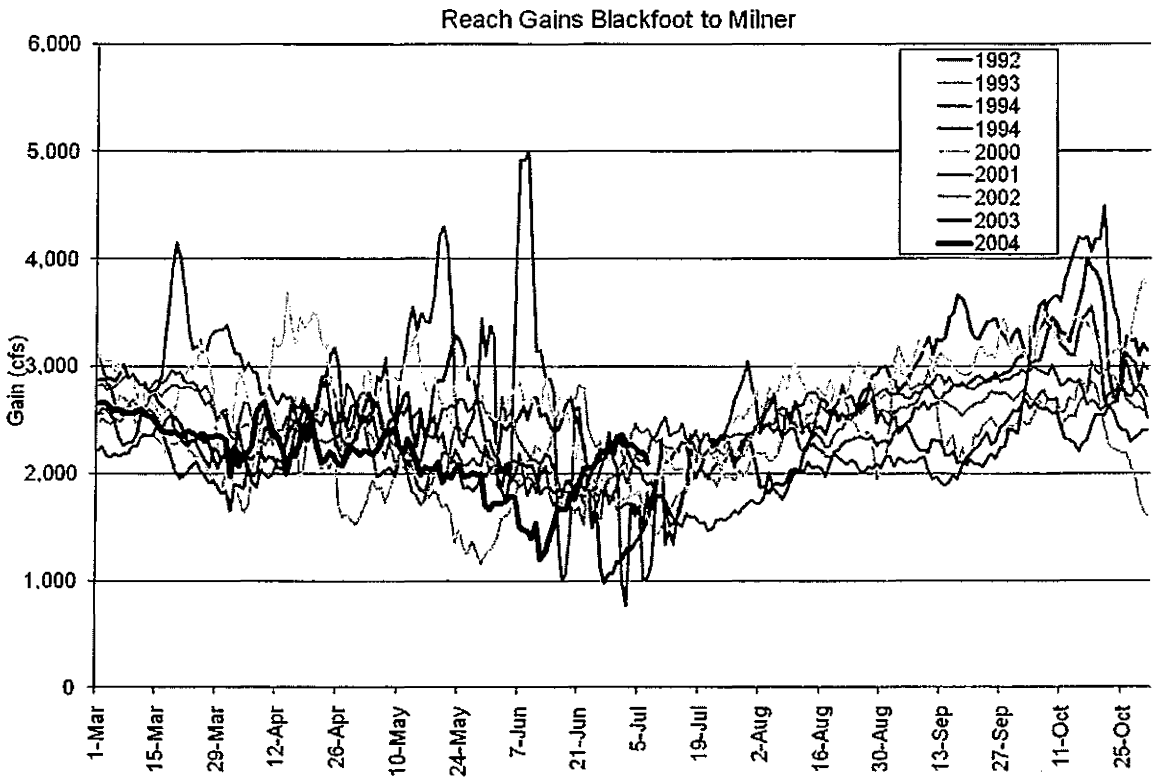
[9] The calendar day determined to be the Time of Need is established by predicting the day in which the remaining storage allocation will be equal to reasonable carryover, or the difference between the 06/08 average demand and the 02/04 supply.




Example reach gain analysis for 2004.

## E. Calculation of Demand Shortfall

62. Equation 5, below, is used to determine the amount of predicted demand shortfall during the irrigation season.

(5) $$DS = RISD - FS$$

Where:

DS = demand shortfall for specified evaluation points throughout the season,
RISD = Reasonable in-season demand from Equation 4, and
FS = forecasted supply for remainder of season after specified evaluation point during the season.

63. The amount calculated represents the volume that junior ground water users will be required to have available for delivery to members of the SWC found to be materially injured by the Director. The amounts will be calculated in April and in the middle of the season.

## III. Methodology For Determining Material Injury To Reasonable Carryover

64. CM Rule 42.01.g provides the following guidance for determining reasonable carryover: "In determining a reasonable amount of carry-over storage water, the Director shall consider average annual rate of fill of storage reservoirs and the average annual carry-over for prior comparable water conditions and the projected water supply for the system."

### A. Projected Water Supply

65. CM Rule 42.01.g provides that the Director "shall consider . . . the projected water supply for the system." Carryover shortfall will be determined following the completion of the irrigation season. Because it is not possible to adequately forecast the irrigation demand for the following irrigation season at the end of the current irrigation season, the Director must make a projection of need. R. Vol. 37 at 7109 ("Anticipating the next season of need is closer to faith than science."). The average of 2006/2008 BLY will be the projected demand.

66. Similar to projecting demand, the Director must also project supply. The Heise natural flows, for the years 2002 and 2004, were well below the long term average (1971-2000) but were not the lowest years on record. Ex 8000, Vol. II at 6-37:6-28; R. Vol. 8 at 1379-80. The average of the 2002 and 2004 supply will be the projected supply, representing a typical dry year. The 2002 and 2004 supply is computed as follows:

- 2002 supply = natural flow diverted + new fill
- 2004 supply = natural flow diverted + new fill
- Projected supply = average of 2002 supply and 2004 supply

Carryover from the previous years is not included in the 2002 and 2004 supply calculation because it was not new water supplied during the 2002 or 2004 irrigation year.

67. As described above, reasonable carryover based on projected water supply (2002/2004) and projected demand (2006 BLY; 2006/2008 BLY) are as follows:

| | Reasonable Carryover 2006 BLY (Acre-Feet) | Reasonable Carryover 2006/2008 BLY (Acre-Feet) |
|---|---|---|
| A&B | 16,000 | 17,000 |
| AFRD2 | 50,700 | 56,000 |
| BID | 0 | 0 |
| Milner | 100 | 4,800 |
| Minidoka | 0 | 0 |
| NSCC | 54,700 | 57,200 |
| TFCC | 0 | 29,700 |

Reasonable Carryover by Entity (2002/2004 supply; 2006 BLY; 2006/2008 BLY).

## B. Average Annual Rate of Fill

68. CM Rule 42.01.g states that the Director "shall consider the average annual rate of fill of storage reservoirs . . . ." The average annual reservoir fill serves as a means to evaluate reasonable carryover, calculated as the difference between the projected demand and the projected supply. For purposes of the table below, any water contributed to the rental pool from the previous year was added to the next year's fill volume so that it does not artificially lower the percent fill. R. Vol. 37 at 7108. Water that is supplied to the rental pool lowers carryover and could impact the following year's fill. The percent fill does not include water deducted for reservoir evaporation. The annual percent fill of storage volume by SWC entity is shown below:

| | A&B | AFRD2 | BID | Milner | MID | NSCC | TFCC |
|---|---|---|---|---|---|---|---|
| 1995 | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| 1996 | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| 1997 | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| 1998 | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| 1999 | 100% | 100% | 100% | 96% | 100% | 98% | 99% |
| 2000 | 100% | 99% | 99% | 98% | 100% | 97% | 97% |
| 2001 | 100% | 100% | 100% | 100% | 100% | 91% | 87% |
| 2002 | 41% | 100% | 100% | 90% | 92% | 84% | 88% |
| 2003 | 43% | 100% | 99% | 66% | 92% | 94% | 99% |
| 2004 | 34% | 82% | 98% | 48% | 95% | 82% | 63% |
| 2005 | 58% | 100% | 100% | 77% | 98% | 100% | 100% |
| 2006 | 98% | 100% | 99% | 98% | 100% | 99% | 99% |
| 2007 | 89% | 100% | 83% | 92% | 77% | 95% | 97% |
| Average | 82% | 99% | 98% | 90% | 96% | 95% | 95% |
| Std Dev | 27% | 5% | 5% | 16% | 7% | 6% | 10% |

Annual Percent Fill of Storage Volume by Entity (1995-2007).[10]

[10] *See e.g.* Ex. 4125. Exhibit 4125 accounts for water deducted for evaporation, but does not take into account water supplied to the rental pool.

| | A&B | AFRD2 | BID | Milner | Minidoka | NSCC | TFCC |
|---|---|---|---|---|---|---|---|
| 1995 | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| 1996 | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| 1997 | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| 1998 | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| 1999 | 100% | 100% | 100% | 96% | 100% | 98% | 99% |
| 2000 | 100% | 99% | 99% | 98% | 100% | 97% | 97% |
| 2001 | 100% | 100% | 100% | 100% | 100% | 91% | 87% |
| 2002 | 41% | 100% | 100% | 90% | 92% | 84% | 88% |
| 2003 | 43% | 100% | 99% | 66% | 92% | 94% | 99% |
| 2004 | 34% | 82% | 98% | 48% | 95% | 82% | 63% |
| 2005 | 58% | 100% | 100% | 77% | 98% | 100% | 100% |
| 2006 | 98% | 100% | 99% | 98% | 100% | 99% | 99% |
| 2007 | 89% | 100% | 83% | 92% | 77% | 95% | 97% |
| 2008 | 100% | 100% | 85% | 100% | 80% | 99% | 100% |
| Average | 83% | 99% | 97% | 90% | 95% | 96% | 95% |
| Std Dev | 26% | 5% | 6% | 16% | 8% | 6% | 10% |

Annual Percent Fill of Storage Volume by Entity (1995-2008).

## C. Average Annual Carryover

69. CM Rule 42.01.g states that the Director "shall consider the . . . average annual carry-over for prior comparable water conditions . . . ." This factor will be taken into consideration when determining reasonable carryover. Actual carryover volumes were adjusted from values reported in the storage reports so that they did not include water received for mitigation purposes or water rental by the canal company for use within the irrigation district. R. Vol. 37 at 7108. Actual carryover from 1995 through 2008 was sorted into categories ranging from very dry to wet. The categories are based on the Heise natural flow volumes from April through September.

| Heise April – Sept Natural Flow | Year | A&B | AFRD2 | BID | Milner | MID | NSCC | TFCC |
|---|---|---|---|---|---|---|---|---|
| Very Dry | 2001 | 9,902 | 4,217 | 37,430 | 26,854 | 55,132 | 42,421 | 26,917 |
| <3000 KAF | 2007 | 62,739 | 7,962 | 34,639 | 36,520 | 61,744 | 68,947 | (21,811) |
| | 2002 | 30,192 | 8,570 | 72,835 | 14,531 | 99,488 | 133,702 | 32,635 |
| | 2004 | (3,771) | 18,537 | 47,845 | 8,735 | 97,905 | 19,145 | 21,551 |
| | 2003 | 9,401 | 3,649 | 51,686 | 6,906 | 81,673 | 166,217 | (18,169) |
| | **Average** | **21,693** | **8,587** | **48,887** | **18,709** | **79,188** | **86,086** | **8,225** |
| Dry | 2000 | 66,915 | 20,787 | 107,425 | 43,173 | 160,183 | 205,510 | 52,536 |
| 3000 – 4000 KAF | 2005 | 36,665 | 99,097 | 90,190 | 37,593 | 150,623 | 365,001 | 64,452 |
| | **Average** | **51,790** | **59,942** | **98,808** | **40,383** | **155,403** | **285,256** | **58,494** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Average | 2006 | 89,311 | 107,682 | 102,873 | 58,755 | 182,612 | 365,672 | 51,187 |
| 4000-4500 KAF | 1995 | 82,567 | 167,451 | 134,340 | 75,451 | 237,300 | 441,729 | 58,675 |
| | **Average** | **85,939** | **137,566** | **118,607** | **67,103** | **209,956** | **403,701** | **54,931** |
| Wet | 1998 | 87,250 | 144,057 | 109,014 | 67,777 | 193,810 | 494,664 | 156,433 |
| >4500 KAF | 1999 | 78,312 | 121,793 | 168,545 | 67,147 | 205,716 | 454,338 | 191,501 |
| | 1996 | 85,209 | 145,019 | 127,123 | 70,250 | 228,786 | 472,790 | 111,459 |
| | 1997 | 89,811 | 114,324 | 87,073 | 65,307 | 202,475 | 464,715 | 136,926 |
| | **Average** | **85,145** | **131,299** | **122,939** | **67,620** | **207,697** | **471,627** | **149,080** |

Actual Carryover Volumes by Entity, Sorted by Heise Natural Flow (1995-2007).

| Heise April – Sept Natural Flow | Year | A&B | AFRD2 | BID | Milner | MID | NSCC | TFCC |
|---|---|---|---|---|---|---|---|---|
| Very Dry | 2001 | 9,902 | 4,217 | 37,430 | 26,854 | 55,132 | 42,421 | 26,917 |
| <3000 KAF | 2007 | 62,739 | 7,962 | 34,639 | 36,520 | 61,744 | 68,947 | (21,811) |
| | 2002 | 30,192 | 8,570 | 72,835 | 14,531 | 99,488 | 133,702 | 32,635 |
| | 2004 | (3,771) | 18,537 | 47,845 | 8,735 | 97,905 | 19,145 | 21,551 |
| | 2003 | 9,401 | 3,649 | 51,686 | 6,906 | 81,673 | 166,217 | (18,169) |
| | **Average** | **21,693** | **8,587** | **48,887** | **18,709** | **79,188** | **86,086** | **8,225** |
| Dry | 2000 | 66,915 | 20,787 | 107,425 | 43,173 | 160,183 | 205,510 | 52,536 |
| 3000 – 4000 KAF | 2005 | 36,665 | 99,097 | 90,190 | 37,593 | 150,623 | 365,001 | 64,452 |
| | **Average** | **51,790** | **59,942** | **98,808** | **40,383** | **155,403** | **285,256** | **58,494** |
| Average | 2006 | 89,311 | 107,682 | 102,873 | 58,755 | 182,612 | 365,672 | 51,187 |
| 4000 – 4500 KAF | 2008 | 92,193 | 102,753 | 130,762 | 63,342 | 182,531 | 413,408 | 65,648 |
| | 1995 | 82,567 | 167,451 | 134,340 | 75,451 | 237,300 | 441,729 | 58,675 |
| | **Average** | **88,024** | **125,962** | **122,659** | **65,849** | **200,814** | **406,936** | **58,504** |
| Wet | 1998 | 87,250 | 144,057 | 109,014 | 67,777 | 193,810 | 494,664 | 156,433 |
| >4500 KAF | 1999 | 78,312 | 121,793 | 168,545 | 67,147 | 205,716 | 454,338 | 191,501 |
| | 1996 | 85,209 | 145,019 | 127,123 | 70,250 | 228,786 | 472,790 | 111,459 |
| | 1997 | 89,811 | 114,324 | 87,073 | 65,307 | 202,475 | 464,715 | 136,926 |
| | **Average** | **85,145** | **131,299** | **122,939** | **67,620** | **207,697** | **471,627** | **149,080** |

Actual Carryover Volumes by Entity, Sorted by Heise Natural Flow (1995-2008).

70. In considering the principles articulated in CM Rule 42.01.g, the Director will project reasonable carryover shortfalls for members of the SWC. The following table represents the 2006 and the 2006/2008 BLY diversion volumes and total reservoir storage space by entity. By dividing the total reservoir space by the 2006 or 2006/2008 diversion volume, a metric is established that describes the total number of seasons the entity's reservoir space can supply water.

| | A&B | AFRD2 | BID | Milner | Minidoka | NSCC | TFCC |
|---|---|---|---|---|---|---|---|
| 06 BLY | 57,492 | 410,376 | 247,849 | 41,671 | 352,269 | 963,007 | 995,822 |
| 06/08 BLY | 58,492 | 415,730 | 250,977 | 46,332 | 362,884 | 965,536 | 1,045,382 |
| Total Reservoir Space | 137,626 | 393,550 | 226,487 | 90,591 | 366,554 | 859,898 | 245,930 |

Total Reservoir Space[11] in Comparison to Demand.

## D. Reasonable Carryover Shortfall

### i. A&B

71. A&B's reservoir space has the lowest average annual rate of fill with the highest variability in fill. *See* Finding of Fact 68. In very dry years, the potential exists that A&B's actual carryover will be less than the reasonable carryover. *See* Finding of Fact 69. A&B has an approximate two-year water supply provided by its total available storage space. *See* Finding of Fact 70. Because of its lower rate of fill, it is likely A&B will experience carryover shortfalls in consecutive dry years. Because of these factors, the estimated reasonable carryover for A&B (17,000 AF) is appropriate. *See* Finding of Fact 67.

### ii. AFRD2

72. AFRD2 has the highest and most consistent reservoir rate of fill of any member of the SWC. *See* Finding of Fact 68. Therefore, any unfilled space in the fall will most likely fill. AFRD2 has, however, an approximate one-year supply available in storage. *See* Finding of Fact 70. In a very dry year, AFRD2's historical carryover volume is often less than the amount needed for reasonable carryover. Because of these factors, the estimated reasonable carryover for AFRD2 (56,000 AF) is appropriate. *See* Finding of Fact 67.

### iii. BID & Minidoka

73. In an average demand year, BID and Minidoka will have enough water to meet demands given a low water supply. *See* Finding of Fact 67. *See also* R. Vol. 37 at 7105. Historically, even in very dry years, BID's and Minidoka's carryover have been well above the calculated reasonable carryover and it is unlikely that they will have reasonable carryover shortfalls in the future. *See* Finding of Fact 69. *See also* R. Vol. 37 at 7105. Because of these factors, the estimated reasonable carryover for BID and Minidoka is 0 AF. *See* Finding of Fact 67. *See also* R. Vol. 37 at 7105.

### iv. Milner

74. Similar to A&B, Milner's reservoir space had the second lowest average annual rate of fill of all entities with a high degree of variability in fill. *See* Finding of Fact 68. In very dry years, the potential exists that Milner's actual carryover will be less than the reasonable carryover.

[11] *See* R. Vol. 8 at 1373-74.

*See* Finding of Fact 69. Milner has an approximate two-year water supply available in storage. *See* Finding of Fact 70. Because of its rate of fill, it is likely Milner will experience carryover shortfalls in consecutive dry years. Because of these factors, the estimated reasonable carryover for Milner (4,800 AF) is appropriate. *See* Finding of Fact 67.

**v. NSCC**

75. NSCC has a near average annual rate of fill in comparison to all entities and an approximate one-year water supply available in storage. *See* Findings of Fact 68 and 70. In dry years, the potential exists that its reasonable carryover will be less than its actual carryover. *See* Finding of Fact 69. Because of these factors, the estimated reasonable carryover for NSCC (57,200 AF) is appropriate. *See* Finding of Fact 67.

**vi. TFCC**

76. TFCC has a near average annual rate of fill in comparison to all entities, but only a one-quarter of a year's water supply available in storage. *See* Findings of Fact 68 and 70. In dry years, the potential exists that its reasonable carryover will be less than its actual carryover. *See* Finding of Fact 69. In the 2006 irrigation season, supplies were average, but TFCC's demands were below average. *See* Findings of Fact 22 and 29. Therefore, if 2006 is used as the BLY, it will predict zero reasonable carryover for TFCC. *See* Finding of Fact 67. The 2006/2008 BLY average reasonably predicts TFCC's reasonable carryover needs.[12] Because of these factors, the estimated reasonable carryover for TFCC (29,700 AF) is appropriate. *See* Finding of Fact 67.

## CONCLUSIONS OF LAW

1. In his September 5, 2008 Final Order, the Director stated his intention to issue a separate, final order "detailing his approach for predicting material injury to reasonable in-season demand and reasonable carryover . . . ." R. Vol. 39 at 7386. On July 24, 2009, the Honorable John M. Melanson issued his *Order on Petition for Judicial Review*, in which he found that the Director's decision to bifurcate the proceedings conflicted with the Idaho Administrative Procedures Act; the court therefore remanded the issue to the Department.

2. Parties to the judicial review proceedings filed petitions for reconsideration with the court for a myriad of issues. Responding to the petition for reconsideration filed by IGWA regarding the issue of bifurcation, the Department stated that "sufficient information exists to issue an order determining material injury to reasonable carryover and reasonable in-season demand." *IDWR Response Brief on Rehearing* at 3 (November 6, 2009). At oral argument on rehearing, the Department requested that the court "hold in abeyance its decision on rehearing until the Director issues the new order and the time for filing a motion for reconsideration and a petition for judicial review of the order has expired." *Order Staying Decision on Petition for Rehearing Pending Issuance of Revised Final Order* at 2 (March 4, 2010). The court therefore ordered the Department to issue a final order determining material injury to reasonable in-season demand and reasonable

[12] Although not as severe, the 2006 BLY also underestimates Milner's reasonable carryover needs. Similarly to TFCC, 2006/2008 reasonably estimates Milner's reasonable carryover.

carryover by March 31, 2010. "Pursuant to I.A.R. 13(b)(14), the Court shall hold in abeyance any final decision on rehearing until such an order is issued . . . ." *Id.* at 3. On March 29, 2010, the court extended the deadline for the Director's order to April 7, 2010. *Order Granting Unopposed Motion for Extension of Time to File Order on Remand.*

3. The purpose of this order is to provide the methodology by which the Director will determine material injury to RISD and reasonable carryover to members of the SWC.

4. "The agency's experience, technical competence, and specialized knowledge may be utilized in the evaluation of the evidence." Idaho Code § 67-5251(5); IDAPA 37.01.01.600.

5. Idaho Code § 42-602 states that, "The director of the department of water resources shall have discretion and control of the distribution of water from all natural sources . . . . The director of the department of water resources shall distribute water . . . in accordance with the prior appropriation doctrine." According to the Hearing Officer, "It is clear that the Legislature did not intend to grant the Director broad powers to do whatever the Director might think right. However, it is clear also that the Legislature [in Idaho Code § 42-602] did not intend to sum up water law in a single sentence of the Director's authority." R. Vol. 37 at 7085. The Idaho Supreme Court has recently stated, "Given the nature of the decisions which must be made in determining how to respond to a delivery call, there must be some exercise of discretion by the Director." *American Falls Res. Dist. No. 2 v. Idaho Dept. Water Resources*, 143 Idaho 862, 875, 154 P.3d 433, 446 (2007). The CM Rules incorporate all principles of the prior appropriation doctrine as established by Idaho law. CM Rule 20.03.

6. "Priority of appropriation shall give the better right as between those using the water" of the State. Idaho Const. Art. XV, § 3. "As between appropriators, the first in time is first in right." Idaho Code § 42-106. "A prior appropriator is only entitled to the water to the extent that he has use for it when economically and reasonably used. It is the policy of the law of this state to require the highest and greatest possible duty from the waters of the state in the interest of agriculture and for useful and beneficial purposes." *Washington State Sugar v. Goodrich*, 27 Idaho 26, 44, 147 P. 1073, 1079 (1915).

7. It is the policy of this State to integrate the appropriation, use, and administration of ground water with the use of surface water in such a way as to optimize the beneficial use of water: "while the doctrine of 'first in time is first in right' is recognized, a reasonable exercise of this right shall not block the full economic development of underground water resources." Idaho Code § 42-226. *See also* Idaho Const. Art. XV, § 7; *Baker v. Ore-Ida Foods, Inc.*, 95 Idaho 575, 584, 513 P.2d 627, 636 (1973).

8. In *American Falls*, the Court stated as follows:

> The presumption under Idaho law is that the senior is entitled to his decreed water right, but there certainly may be some post-adjudication factors which are relevant to the determination of how much water is actually needed. The Rules may not be applied in such a way as to force the senior to demonstrate an entitlement to the water in the first place; that is presumed by the filing of a petition containing information about the decreed right. The Rules do give the Director the tools by

> which to determine "how the various ground and surface water sources are interconnected, and how, when, where and to what extent the diversion and use of water from one source impacts [others]." *A & B Irrigation Dist.,* 131 Idaho at 422, 958 P.2d at 579. Once the initial determination is made that material injury is occurring or will occur, the junior then bears the burden of proving that the call would be futile or to challenge, in some other constitutionally permissible way, the senior's call.

*American Falls* at 877-878, 154 P.3d at 448-449.

9. In the context of conjunctive administration, the Director's methodology for projecting material injury does not impose an obligation upon members of the SWC to reprove their water rights. To the extent water is available, members of the SWC are authorized to divert and store water in accordance with the terms of their licenses or decrees. Nothing established herein reduces that authorization. The question that the CM Rules require the Director to answer in this proceeding is, when water is not available to fill the water rights of the SWC, how much water is reasonably necessary for the SWC to accomplish the beneficial purpose of raising crops; because what is needed to irrigate crops may be less than the decreed or licensed quantities. *American Falls* at 880, 154 P.3d at 451; *Order on Petition for Judicial Review* at 24-25; R. Vol. 37 at 7098 ("Properly applied the minimum full supply approach is an attempt to measure, for purposes of determining if there should be curtailment, the amount of water senior surface water users need to raise crops of their choosing to maturity with the number of cuttings weather conditions will allow.").

10. Holders of senior-priority water rights may receive less than their licensed or decreed quantities and not suffer material injury within the meaning of the CM Rules. As a result, in-season demand should be viewed in light of reasonableness, optimum development of water resources in the public interest, and full economic development. Idaho Const. Art XV, § 7; Idaho Code § 42-226; CM Rule 20 and 42; *Schodde v. Twin Falls Land and Water Co.*, 224 U.S. 107 (1912); *American Falls* at 876-77, 154 P.3d at 447-48.

11. Here, the Director has established a methodology for determining material injury to members of the SWC. The methodology predicts material injury to RISD by taking the difference between RISD and the forecasted supply. At this time, with the recognition that the methodology is subject to adjustment and refinement, RISD will be equal to the historic demands associated with the BLY (2006/2008), and will be corrected during the season to account for variations in climate and water supply between the BLY and actual conditions.

12. The years 2000 through 2008 were used to select the initial BLY because it captured current irrigation practices in a dry climate. Based upon his evaluation of the record, members of the SWC were exercising more reasonable efficiencies during this time period than during the 1990s when supplies were more plentiful and the climate more forgiving. During periods of drought when junior ground water users are subject to curtailment, members of the SWC should exercise reasonable efficiencies in order to promote the optimum utilization of the State's water resources. Idaho Cost. Art. XV, § 7; Idaho Code § 42-226; CM Rules 20 and 42.

13. Recognizing that climate and surface water supplies (natural flow and storage) are inherently variable, the Director's predictions of material injury to RISD and reasonable carryover are based upon the best available information and the best available science, in conjunction with the Director's professional judgment as the manager of the State's water resources. Recognizing his ongoing duty to administer the State's water resources, the Director should use available data, and consider new analytical methods or modeling concepts, to evaluate the methodology. As the process of predicting and evaluating material injury moves forward, and more data is developed, the methodology will be subject to adjustment and refinement.

14. If the Director predicts that the SWC will be materially injured, the consequence of that prediction is an obligation that must be borne by junior ground water users. If mitigation water in the amount of the projected RISD shortfall cannot be optioned by junior ground water users to the satisfaction of the Director (*see Order on Petition for Judicial Review* at 19), the Director will curtail junior ground water users to make up any deficit. By requiring that junior ground water users have options for water in place during the season of need, the Director ensures that the SWC does not carry the risk of shortage to their supply. By not requiring junior ground water users to provide mitigation water until the time of need, the Director ensures that junior ground water users provide only the required amount of water.

15. Unless there is reasonable certainty that junior ground water users can secure the predicted volume of water and provide that water at the time of need, the purpose of allowing junior ground water users to continue to divert by providing water for mitigation is defeated. The risk of shortage is then impermissibly shouldered by the SWC. Members of the SWC should have certainty entering the irrigation season that mitigation water will be provided at the time of need, or curtailment of junior ground water rights will be ordered at the start of the irrigation season.

16. Because climate and the supply that the SWC appropriated (natural flow and storage) are inherently variable, the Director cannot and should not insulate the SWC against all shortages. The Director can, however, protect the SWC against reasonably predicted shortages to RISD.

17. Currently, the USBR and USACE's Joint Forecast is the best predictive tool at the Director's disposal for predicting material injury to RISD. Given current forecasting techniques, the earliest the Director can predict material injury to RISD with reasonable certainty is soon after the Joint Forecast is issued in early April. By using one standard error of estimate, the Director purposefully underestimates the water supply that is predicted in the Joint Forecast. The Director further guards against RISD shortage by using the 2006/2008 BLY, which has above average ET, below average in-season precipitation, and above average growing degree days. The 2006/2008 average represents years in which water supply did not limit diversions. The Director's prediction of material injury to RISD is purposefully conservative. While it may ultimately be determined after final accounting that less water was owed than was provided, this is an appropriate burden for junior appropriators to carry. Idaho Cost. Art. XV, § 3; Idaho Code § 42-106.

18. Just as members of the SWC should have certainty at the start of the irrigation season that junior ground water users will be curtailed, in whole or in part, unless they provide the required volume of mitigation water, in whole or in part, junior ground water users should also have certainty entering the irrigation season that the predicted injury determination will not be greater than it is ultimately determined at the Time of Need (defined in footnote 9, *supra*). If it is

determined at the time of need that the Director under-predicted the demand shortfall, the Director will not require that junior ground water users make up the difference, either through mitigation or curtailment. This determination is based upon the Director's discretion and his balancing of the principle of priority of right with the principles of optimum utilization and full economic development of the State's water resources. Idaho Const. Art. XV, § 3; Idaho Const. Art. XV, § 7; Idaho Code § 42-106; Idaho Code § 42-226. Because the methodology is based upon conservative assumptions and is subject to refinement, the possibility of under-predicting material injury is minimized and should lessen as time progresses. The methodology should provide both the SWC and junior ground water users certainty at the start of the irrigation season.

19. The Director will review, at the end of the season, the volume and efficiencies of application of surface water, the amount of mitigation water provided by junior ground water users, and may, in the exercise of his professional judgment, readjust the reasonable carryover shortfalls to reflect these considerations.

20. According to CM Rule 42.01.g, members of the SWC are entitled to maintain a reasonable amount of carryover storage water to minimize shortages in "future dry years." Guidance for determining reasonable carryover is also found in CM Rule 42.01.g: "In determining a reasonable amount of carry-over storage water, the Director shall consider the average annual rate of fill of storage reservoirs and the average annual carry-over for prior comparable water conditions and the projected water supply for the system."

21. While the right to reasonable carryover is provided by CM Rule 42.01.g, the Court in *American Falls* established that there are limitations upon that right:

> At oral argument, one of the irrigation district attorneys candidly admitted that their position was that they should be permitted to fill their entire storage water right, regardless of whether there was any indication that it was necessary to fulfill current or future needs and even though the irrigation districts routinely sell or lease the water for uses unrelated to the original rights. This is simply not the law of Idaho. While the prior appropriation doctrine certainly gives pre-eminent rights to those who put water to beneficial use first in time, this is not an absolute rule without exception. As previously discussed, the Idaho Constitution and statutes do not permit waste and require water to be put to beneficial use or be lost. Somewhere between the absolute right to use a decreed water right and an obligation not to waste it and to protect the public's interest in this valuable commodity, lies an area for the exercise of discretion by the Director. This is certainly not unfettered discretion, nor is it discretion to be exercised without any oversight. That oversight is provided by the courts, and upon a properly developed record, this Court can determine whether that exercise of discretion is being properly carried out.

*American Falls* at 880, 154 P.3d at 451.

22. While CM Rule 42.01.g contemplates reasonable carryover for future dry years, the Hearing Officer determined that "requiring curtailment to reach beyond the next irrigation season involves too many variables and too great a likelihood of irrigation water being lost to irrigation use to be acceptable within the standards implied in *AFRD#2*." R. Vol. 37 at 7109-10. Therefore, a

senior may only seek curtailment of juniors to provide reasonable carryover for a period of one year. *Id.* In his 2008 Final Order, former Director Tuthill accepted the recommendation of the Hearing Officer.

23. In its *Order on Petition for Judicial Review*, the court held that it was incorrect for the Director to categorically limit the right to carryover storage "for more than just the next season . . . ." *Order on Petition for Judicial Review* at 22. The court went on to say, however, that the Director, "in the exercise of his discretion, can significantly limit or even reject carry-over for multiple years based on the specific facts and circumstances of a particular delivery call. Ultimately, the end result may well be the same." *Id.*

24. As discussed in the Findings of Fact, reasonable carryover is determined by projecting the water supply for the system. This is accomplished by projecting the 2002/2004 supply and the 2006/2008 demand. Next, the Director examines the average annual rate of fill of the storage rights held by members of the SWC to determine each entities' relative probability of fill. Finally, the Director examines the average annual carryover for prior comparable water conditions by reviewing Heise natural flow.

25. If, in the fall, the Director finds that a reasonable carryover shortfall exists, the Director will use the ESPA Model to determine the transient impacts of curtailment (year-to-year). The ESPA Model will be used to determine the yearly impacts of curtailment of junior ground water users, if curtailed from April 1 through March 31.[13] It is this volume of water that junior ground water users must have optioned in the fall in order to start the subsequent irrigation season without an order of curtailment.

26. Recognizing that reservoirs space held by members of the SWC may fill, and in order to prevent the waste of water, junior ground water users are not required to provide the volume of reasonable carryover until after the Day of Allocation (defined in footnote 16, *infra*). Junior ground water users are required to provide reasonable carryover to the SWC until reservoir space held by the entities fills. If the reservoir space does not fill, the results of the transient analysis must be optioned by junior ground water users in the fall. In addition, the Director will determine shortfalls to the SWC's reasonable carryover for the next irrigation season and use the ESPA Model to determine the transient volume of water that must be optioned. This transient obligation is in addition to the subsequent year's transient obligation. *See* Attachment A.

27. By modeling the impacts of curtailments until the reservoir space held by members of the SWC fills, junior ground water users have an accruing mitigation obligation. In this way, the Director is able to account for reasonable carryover for "future dry years." CM Rule 42.01.g.

28. The Director recognizes that his analysis of the obligation for reasonable carryover differs from his analysis for RISD obligations. In predicting RISD shortages, the Director is able to premise his determination on the Joint Forecast. The Director requires junior ground water users to

[13] Version 1.1 of the ESPA Model runs on six-month time steps. Because an irrigation season is nine months long, simulating curtailment for a period of six months would under estimate the impacts of curtailment and unreasonably shift the risk of shortage to the SWC. Because version 1.1 of the ESPA Model cannot simulate curtailment for nine months, it is appropriate to simulate curtailment for one year, as opposed to six months. Because the methodology is subject to refinement, this determination may be revisited if the time steps are changed.

provide the entire RISD shortage because the Joint Forecast allows determination of material injury with reasonable certainty.

29. In the fall of the subsequent irrigation season, the Director cannot, with reasonable certainty, predict material injury to reasonable carryover. As found by the Hearing Officer, "Anticipating the next season of need is closer to faith than science." R. Vol. 37 at 7109. Because of the uncertainty associated with this prediction, and in the interest of balancing priority of right with optimum utilization and full economic development of the State's water resources, Idaho Const. Art. XV, § 3; Idaho Const. Art. XV, § 7; Idaho Code § 42-106; Idaho Code § 42-226, the Director will use the ESPA Model to simulate transient curtailment of the projected reasonable carryover shortage. By requiring that junior ground water users have options in place in the fall of the subsequent irrigation season in the amount of the first year of curtailment (accruing from season-to-season until reservoir space fills), the Director ensures that a certain volume of water will be carried over from one season to the next. This allows the SWC to plan for the coming irrigation season, and places the risk of reasonable shortage on junior ground water users. In light of the unpredictable nature of the determination of material injury to reasonable carryover, the use of the ESPA Model imposes a reasonable burden on junior ground water users.

## ORDER

Based upon and consistent with the Findings of Fact and Conclusions of Law, the Director hereby orders that, for purposes of determining material injury to reasonable in-season demand and reasonable carryover, the following steps will be taken:

1. Step 1: By April 1, members of the SWC will provide electronic shape files to the Department delineating the total irrigated acres within their water delivery boundary or confirm in writing that the existing electronic shape file from the previous year has not varied by more than 5%; provided that the total acreage count does not exceed the number of acres to be irrigated within the decreed place of use. If this information is not timely provided, the Department will determine the total irrigated acres based upon past year cropping patterns and current satellite and/or aerial imagery. The Department will publish electronic shape files for each member of the SWC for the current water year for review by the parties. In determining the total irrigated acreage, the Department will account for supplemental ground water use.

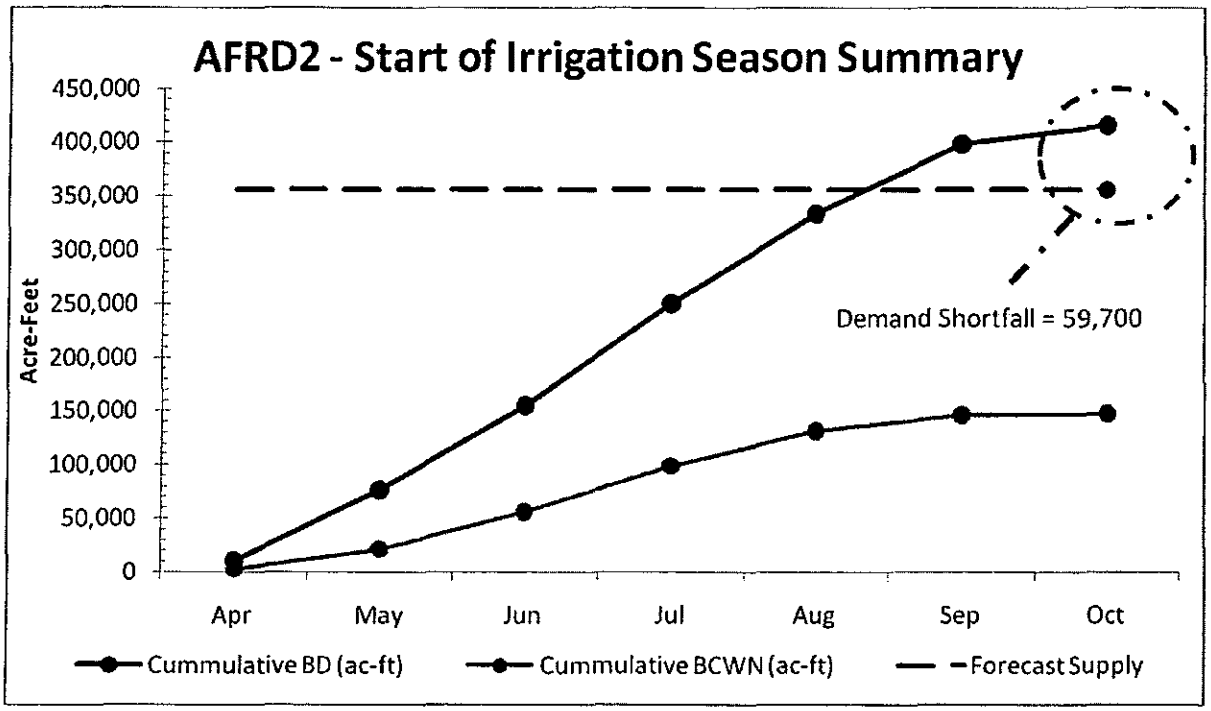
2. Beneficial use cannot occur on lands that are not described in the SWC's water rights. If, however, the acreage count is under reported by more than five percent of the irrigated acreage limit of the water right, then an assessment must be made of the impact of this reduction in use of the water right on any mitigation requirement.

3. Step 2: Starting at the beginning of April, the Department will calculate the cumulative CWN volume for all land irrigated with surface water within the boundaries of each member of the SWC.

- Volumetric values of CWN will be calculated using ET and precipitation values from the USBR's AgriMet program, irrigated areas provided by each entity, and crop distributions based on NASS data.

- Cumulative in-season CWN values will be calculated for each member of the SWC, approximately once a month.

4. Step 3: Typically within the first two weeks of April, the USBR and USACE issue their Joint Forecast that predicts an unregulated inflow volume at the Heise Gage for the period April 1 through July 31. Within fourteen (14) days after issuance of the Joint Forecast, the Director will predict and issue a Forecast Supply for the water year and will compare the forecast supply to the baseline demand ("BD") to determine if a demand shortfall ("DS") is anticipated for the upcoming irrigation season. A separate Forecast Supply and DS will be determined for each member of the SWC. See below for an example.[14]




AFRD2 Start of Irrigation Season Summary, Initial Demand Shortfall Prediction.

5. Step 4: If the April DS is greater than the reasonable carryover shortfall from the previous year, junior ground water users will be required to establish, to the satisfaction of the Director, their ability to secure and provide a volume of storage water equal to the difference of the April projected demand shortfall and reasonable carryover shortfall, for all injured members of the SWC. If junior ground water users cannot provide this information, by May 1, or within fourteen (14) days from issuance of the values set forth in Step 3, whichever is later in time, the Director will issue an order curtailing junior ground water users.[15]

[14] For the purposes of the illustrative example, AFRD2 was selected as the water user, a dry year was selected as the irrigation season, and 2006/2008 was selected as the BLY. Forecast supply was calculated utilizing historic natural flow and historic reservoir storage data.

[15] This presumes that any reasonable carryover obligation has been met, and that junior ground water users are not already under prior curtailment from deficiencies in meeting the previous year's obligation.

6. Step 5: Within fourteen (14) days following the publication of Water District 01's initial storage report, which typically occurs soon after the Day of Allocation,[16] the volume of water secured by junior ground water users to fulfill the reasonable carryover shortfall shall be made available to injured members of the SWC. The amount of reasonable carryover to be provided shall not exceed the empty storage space on the Day of Allocation for that entity. If water is owed in addition to the reasonable carryover shortfall volume, this water shall be provided to members of the SWC at the Time of Need.

7. Step 6: Approximately halfway through the irrigation season, but following the events described in Step 5, the Director will, for each member of the SWC: (1) evaluate the actual crop water needs up to that point in the irrigation season; (2) estimate the Time of Need date; and (3) issue a revised Forecast Supply.

8. This information will be used to recalculate RISD and adjust the projected DS for each member of the SWC. RISD will be calculated utilizing the project efficiency, projected demand, and the cumulative actual crop water need determined up to that point in the irrigation season. The Director will then issue RISD and revised DS values.

9. Step 7: Shortly before the Time of Need, but following the events described in Steps 5 and 6, the Director will, for each member of the SWC: (1) evaluate the actual crop water needs up to that point in the irrigation season; and (2) issue a revised Forecast Supply.

10. This information will be used to recalculate RISD and adjust the projected DS for each member of the SWC. RISD will be calculated utilizing the project efficiency, projected demand, and the cumulative actual crop water need determined up to that point in the irrigation season. The Director will then issue RISD and revised DS values.

11. Step 8: At the earliest forecasted Time of Need for any member of the SWC, junior ground water users are required to provide the lesser of the two volumes[17] from Step 4 (May 1 secured water) and Step 7 (RISD volume calculated at the Time of Need). If the calculations from Step 7 indicate that a volume of water necessary to meet in-season projected demand shortfalls is greater than the volume from Step 4, no additional water is required.

12. The Director will review, at the end of the season, the volume and efficiencies of application of surface water, the amount of mitigation water provided by junior ground water users, and may, in the exercise of his professional judgment, readjust the reasonable carryover shortfalls to reflect these considerations.

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[16] The Day of Allocation is the time in the irrigation season when the Water District 01 watermaster is able to issue allocations to storage space holders after the reservoir system has achieved its maximum physical fill, maximum water right accrual, and any excess spill past Milner Dam has ceased. Tr. p. 902, lns. 7-25; p. 903, lns. 1-10.

[17] This refers to the overall volume for the entire estimate. While the overall volume predicted at the start of the season represents with certainty the upper bound of water that junior ground water users will need to provide to members of the SWC, values predicted at the start of the season may adjust up or down at the time of mid-season re-evaluation.

13. Step 9: Following the end of the irrigation season (on or before November 30), the Department will determine the total actual volumetric demand and total actual *crop water need* for the entire irrigation season. This information will be used for the analysis of reasonable carryover shortfall, selection of future baseline years, and for the refinement and continuing improvement of the method for future use.

14. On or before November 30, the Department will publish estimates of actual carryover and reasonable carryover shortfall volumes for all members of SWC. These estimates will be based on but not limited to the consideration of the best available water diversion and storage data from Water District 01, return flow monitoring, comparative years, and RISD. These estimates will establish the obligation of junior ground water users in providing water to the SWC for reasonable carryover shortfall. Fourteen (14) days following the publication by the Department of reasonable carryover short fall obligations, junior ground water users will be required to establish, to the satisfaction of the Director, their ability to provide a volume of storage water equal to the reasonable carryover shortfall for all injured members of the SWC. If junior ground water users cannot provide this information, the Director will issue an order curtailing junior ground water rights.

15. Step 10: As an alternative to providing the full volume of reasonable carryover shortfall established in Step 9, junior ground water users can request that the Department model the transient impacts of the proposed curtailment based on the Department's water rights data base and the ESPA Model. The modeling effort will determine total annual reach gain accruals due to curtailment over the period of the model exercise. *See* R. Vol. 8 at 1386-87. In the year of injury, junior ground water users would then be obligated to provide the accrued volume of water associated with the first year of the model run. *See id.* at 1404, ¶ 5. In each subsequent year, junior ground water users would be required to provide the respective volume of water associated with reach gain accruals for that respective year, until such time as the reservoir storage space held by members of the SWC fills, or the entire volume of water from Step 9 less any previous accrual payments is provided. *See id.* at 1404, ¶ 6.

16. Included as an attachment to this order is an illustrative tabulated example, for each SWC entity, for three consecutive water years, illustrating the accounting that will be applied in determining reasonable carryover shortfalls, in-season demand shortfalls, water optioning, and water delivery requirements.

IT IS FURTHER ORDERED that this is a final order of the agency. Any party may file a petition for reconsideration of this final order within fourteen (14) days of the issuance of this order. The agency will dispose of the petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law pursuant to Idaho Code § 67-5246.

IT IS FURTHER ORDERED that pursuant to sections 67-5270 and 67-5272, Idaho Code, any party aggrieved by the final order or orders previously issued by the Director in this matter may appeal the final order and all previously issued orders in the matter to district court by filing a petition in the district court of the county in which a hearing was held, the final agency action was taken, the party seeking review of the order resides, or the real property or personal property that was the subject of the agency action is located. The appeal must be filed within twenty-eight (28)

days: (a) of the service date of the final order; (b) of an order denying petition for reconsideration; or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration, whichever is later. *See* Idaho Code § 67-5273. The filing of an appeal to district court does not in itself stay the effectiveness or enforcement of the order under appeal.

Dated this 7th day of April, 2010.

GARY SPACKMAN
Interim Director

## CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 8th day of April, 2010, the above and foregoing, was served by the method indicated below, and addressed to the following:

| | |
|---|---|
| Honorable John M. Melanson<br>Idaho Court of Appeals<br>P.O. Box 83720<br>Boise, ID 83720-0101 | ☒ U.S. Mail, postage prepaid<br>☐ Hand Delivery<br>☐ Overnight Mail<br>☐ Facsimile<br>☐ Email |
| John K. Simpson<br>BARKER ROSHOLT & SIMPSON, LLP<br>P.O. Box 2139<br>Boise, ID 83701<br>jks@idahowaters.com | ☒ U.S. Mail, postage prepaid<br>☐ Hand Delivery<br>☐ Overnight Mail<br>☐ Facsimile<br>☒ Email |
| Travis L. Thompson<br>Paul L. Arrington<br>BARKER ROSHOLT & SIMPSON, LLP<br>P.O. Box 485<br>Twin Falls, ID 83303<br>tlt@idahowaters.com<br>pla@idahowaters.com | ☒ U.S. Mail, postage prepaid<br>☐ Hand Delivery<br>☐ Overnight Mail<br>☐ Facsimile<br>☒ Email |
| C. Thomas Arkoosh<br>CAPITOL LAW GROUP, PLLC<br>P.O. Box 32<br>Gooding, ID 83339<br>tarkoosh@capitollawgroup.net | ☒ U.S. Mail, postage prepaid<br>☐ Hand Delivery<br>☐ Overnight Mail<br>☐ Facsimile<br>☒ Email |
| W. Kent Fletcher<br>FLETCHER LAW OFFICE<br>P.O. Box 248<br>Burley, ID 83318<br>wkf@pmt.org | ☒ U.S. Mail, postage prepaid<br>☐ Hand Delivery<br>☐ Overnight Mail<br>☐ Facsimile<br>☒ Email |
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| | |
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| Kathleen Carr<br>US Dept. Interior<br>960 Broadway Ste 400<br>Boise, ID 83706 | ☒ U.S. Mail, postage prepaid<br>☐ Hand Delivery<br>☐ Overnight Mail<br>☐ Facsimile<br>☐ Email |
| David W. Gehlert<br>Natural Resources Section<br>Environment and Natural Resources Division<br>U.S. Department of Justice<br>1961 Stout Street, 8th Floor<br>Denver, CO 80294<br>david.gehlert@usdoj.gov | ☒ U.S. Mail, postage prepaid<br>☐ Hand Delivery<br>☐ Overnight Mail<br>☐ Facsimile<br>☒ Email |
| Matt Howard<br>US Bureau of Reclamation<br>1150 N Curtis Road<br>Boise, ID 83706-1234<br>mhoward@pn.usbr.gov | ☒ U.S. Mail, postage prepaid<br>☐ Hand Delivery<br>☐ Overnight Mail<br>☐ Facsimile<br>☒ Email |
| Sarah A. Klahn<br>WHITE JANKOWSKI<br>511 16th St., Ste. 500<br>Denver, CO 80202<br>sarahk@white-jankowski.com | ☒ U.S. Mail, postage prepaid<br>☐ Hand Delivery<br>☐ Overnight Mail<br>☐ Facsimile<br>☒ Email |
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| Michael C. Creamer<br>Jeffrey C. Fereday<br>GIVENS PURSLEY LLP<br>P.O. Box 2720<br>Boise, ID 83701-2720<br>mcc@givenspursley.com<br>jcf@givenspursley.com | ☒ U.S. Mail, postage prepaid<br>☐ Hand Delivery<br>☐ Overnight Mail<br>☐ Facsimile<br>☒ Email |
| Lyle Swank<br>IDWR—Eastern Region<br>900 N. Skyline Drive<br>Idaho Falls, ID 83402-6105<br>lyle.swank@idwr.idaho.gov | ☐ U.S. Mail, postage prepaid<br>☐ Hand Delivery<br>☐ Overnight Mail<br>☐ Facsimile<br>☒ Email |

| | |
|---|---|
| Allen Merritt<br>Cindy Yenter<br>IDWR—Southern Region<br>1341 Fillmore St., Ste. 200<br>Twin Falls, ID 83301-3033<br>allen.merritt@idwr.idaho.gov<br>cindy.yenter@idwr.idaho.gov | ☐ U.S. Mail, postage prepaid<br>☐ Hand Delivery<br>☐ Overnight Mail<br>☐ Facsimile<br>☒ Email |

Deborah J. Gibson

Deborah Gibson
Administrative Assistant to the Director

# ATTACHMENT A

| Year | Step | Milestone | A&B | AFRD2 | BID | Milner | Minidoka | NSCC | TFCC | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| | 10 | Carryover Shortfall Volume Optioned | 3,000 | 18,700 | 0 | 0 | 0 | 0 | 15,600 | 37,300 |
| | | Volume of storage right that did not fill | 90,000 | 70,000 | 4,000 | 45,000 | 20,000 | 150,000 | 70,000 | 449,000 |
| | 3 | 4/1 Predicted In-Season Shortfall | 8,800 | 59,700 | 0 | 0 | 0 | 0 | 102,500 | 171,000 |
| | 4 | May 1 additional water to secure by IGWA | 5,800 | 41,000 | 0 | 0 | 0 | 0 | 86,900 | 133,700 |
| | 5 | Day of Allocation Water Owed | 3,000 | 18,700 | 0 | 0 | 0 | 0 | 15,600 | 37,300 |
| | 6 | July Predicted In-Season Shortfall | 14,400 | 125,300 | 0 | 0 | 0 | 0 | 103,600 | 243,300 |
| 1 | 8 | Time of Need water owed | 5,800 | 41,000 | 0 | 0 | 0 | 0 | 86,900 | 133,700 |
| | | **Total Water Delivered In- Season** | **8,800** | **59,700** | **0** | **0** | **0** | **0** | **102,500** | **171,000** |
| | 9 | Final In-Season Shortfall (assuming no water provided by IGWA) | 12,600 | 78,900 | 0 | 0 | 0 | 19,000 | 0 | 110,500 |
| | 9 | Carryover | 11,000 | 36,000 | 47,800 | 8,700 | 97,900 | 19,100 | 50,000 | 270,500 |
| | 9 | Reasonable Carryover | 17,000 | 56,000 | 0 | 4,800 | 0 | 57,200 | 29,700 | 164,700 |
| | 9 | Reasonable Carryover Shortfall | 6,000 | 20,000 | 0 | 0 | 0 | 38,100 | 0 | 64,100 |
| | 10 | Carryover Shortfall Volume Optioned | 3,200 | 14,400 | 0 | 0 | 0 | 12,100 | 6,700 | 36,400 |
| | | Volume of storage right that did not fill | 81,000 | 0 | 0 | 9,000 | 30,000 | 135,000 | 28,000 | |
| | 3 | 4/1 Predicted In-Season Shortfall | 0 | 0 | 0 | 0 | 0 | 0 | 28,200 | 28,200 |
| | 4 | May 1 additional water to secure by IGWA | 0 | 0 | 0 | 0 | 0 | 0 | 21,500 | 21,500 |
| | 5 | Day of Allocation Water Owed | 3,200 | 0 | 0 | 0 | 0 | 12,100 | 6,700 | 22,000 |
| | 6 | July Predicted In-Season Shortfall | 0 | 30,300 | 0 | 0 | 0 | 0 | 0 | 30,300 |
| 2 | 8 | Time of Need water owed | 0 | 30,300 | 0 | 0 | 0 | 0 | 0 | 30,300 |
| | | **Total Water Delivered In- Season** | **3,200** | **30,300** | **0** | **0** | **0** | **12,100** | **6,700** | **52,300** |
| | 9 | Final In-Season Shortfall (assuming no water provided by IGWA) | 0 | 5,900 | 0 | 0 | 0 | 0 | 0 | 5,900 |
| | 9 | Carryover | 33,400 | 28,000 | 72,800 | 14,500 | 99,500 | 145,800 | 39,300 | 433,300 |
| | 9 | Reasonable Carryover | 17,000 | 56,000 | 0 | 4,800 | 0 | 57,200 | 29,700 | 164,700 |
| | 9 | Reasonable Carryover Shortfall | 0 | 28,000 | 0 | 0 | 0 | 0 | 0 | 28,000 |
| | 10 | Carryover Shortfall Volume Optioned | 1,500 | 9,200 | 0 | 0 | 0 | 5,100 | 3,600 | 19,400 |
| | | Volume of storage right that did not fill | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 3 | 4/1 Predicted In-Season Shortfall | 0 | 8,100 | 0 | 0 | 0 | 0 | 66,800 | 74,900 |
| | 4 | May 1 additional water to secure by IGWA | 0 | 0 | 0 | 0 | 0 | 0 | 63,200 | 63,200 |
| | 5 | Day of Allocation Water Owed | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | July Predicted In-Season Shortfall | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 8 | Time of Need water owed | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | **Total Water Delivered In- Season** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| | 9 | Final In-Season Shortfall (assuming no water provided by IGWA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 9 | Carryover | 36,700 | 99,000 | 90,200 | 37,600 | 150,600 | 365,000 | 64,500 | 843,600 |
| | 9 | Reasonable Carryover | 17,000 | 56,000 | 0 | 4,800 | 0 | 57,200 | 29,700 | 164,700 |
| | 9 | Reasonable Carryover Shortfall | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Illustrative Analysis of Three Consecutive Years of Shortfall Accounting.[1]

[1] Illustrative analysis does not include the revised calculations at the Time of Need as represented by Step 7 in the Order.

**Example Transient Analysis of Carryover Shortfall Volumes**

| Year | A&B | AFRD2 | BID | Milner | Minidoka | NSCC | TFCC | Total |
|---|---|---|---|---|---|---|---|---|
| 0 | 8,000 | 50,000 | 0 | 0 | 0 | 0 | 42,000 | 100,000 |
| 1 | 6,000 | 20,000 | 0 | 0 | 0 | 38,100 | 0 | 64,100 |
| 2 | 0 | 28,000 | 0 | 0 | 0 | 0 | 0 | 28,000 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Reasonable Carryover Shortfalls (Acre-Feet).

| Year | Total Carryover Shortfall | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year7 |
|---|---|---|---|---|---|---|---|---|
| 0 | 100,000 | 37,300 | 16,000 | 8,600 | 5,900 | | | |
| 1 | 64,100 | | 20,400 | 8,600 | 4,500 | 3,100 | | |
| 2 | 28,000 | | | 9,200 | 3,800 | 2,100 | 1,500 | |
| 3 | 0 | | | | 0 | 0 | 0 | 0 |
| | Total | 37,300 | 36,400 | 26,400 | 0 | | | |

Reasonable Carryover Transient Analysis Results over Four Years (Acre-Feet).

| Year | A&B | AFRD2 | BID | Milner | Minidoka | NSCC | TFCC | Total |
|---|---|---|---|---|---|---|---|---|
| 1 | 3,000 | 18,700 | 0 | 0 | 0 | 0 | 15,600 | 37,300 |
| 2 | 3,200 | 14,400 | 0 | 0 | 0 | 12,100 | 6,700 | 36,400 |
| 3 | 1,500 | 9,200* | 0 | 0 | 0 | 5,100 | 3,600 | 19,400 |

Reasonable Carryover Obligation by Junior Ground Water Users for each SWC Member, Proportioned by the Percentage of Total Reasonable Carryover Shortfall from the Original Carryover Shortfall Year.

*AFRD2's space filled in year 2. Subsequently there are no carryover shortfall obligations in year 3 for carryover shortfalls that occurred in year 0 and year 1.

# ATTACHMENT B

**BEFORE THE DEPARTMENT OF WATER RESOURCES**

**OF THE STATE OF IDAHO**

| | | |
|---|---|---|
| IN THE MATTER OF DISTRIBUTION OF WATER TO VARIOUS WATER RIGHTS HELD BY OR FOR THE BENEFIT OF A&B IRRIGATION DISTRICT, AMERICAN FALLS RESERVOIR DISTRICT #2, BURLEY IRRIGATION DISTRICT, MILNER IRRIGATION DISTRICT, MINIDOKA IRRIGATION DISTRICT, NORTH SIDE CANAL COMPANY, AND TWIN FALLS CANAL COMPANY | ) | **NOTICE OF HEARING REGARDING 2008 DATA** |

On April 7, 2010, the Director of the Department of Water Resources ("Director" or "Department") issued his *Final Order Regarding Methodology for Determining Material Injury to Reasonable In-Season Demand and Reasonable Carryover* ("Methodology Order"). The City of Pocatello ("Pocatello"), the Idaho Ground Water Appropriators, Inc. ("IGWA"), and the Surface Water Coalition filed petitions for reconsideration regarding the Methodology Order. One issue raised by IGWA and Pocatello was the Director's use, in the Methodology Order, of information that is not contained in the record before the district court, namely 2008 data. On page 7, footnote 4, of the Methodology Order, the Director specifically directed the parties to the Director's use of 2008 data.

Idaho Code § 67-5251(4) states as follows:

Official notice may be taken of:

(a) any facts that could be judicially noticed in the courts of this state; and

(b) generally recognized technical or scientific facts within the agency's specialized knowledge. Parties shall be notified of the specific facts or material noticed and the source thereof, including any staff memoranda and data. Notice should be provided either before or during the hearing, and must be provided before the issuance of any order that is based in whole or in part on facts or material noticed. Parties must be afforded a timely and meaningful opportunity to contest and rebut the facts or material so noticed. When the presiding officer proposes to notice staff memoranda or reports, a responsible staff member shall be made available for cross-examination if any party so requests.

*See also* IDAPA 37.01.01.602.

On April 21, 2010, the Director provided the parties with background technical information regarding the Methodology Order. This information contained 2008 data. The 2008 data used by the Director in the Methodology Order was used in order to update data already contained in the record before the district court. The 2008 data is the type of data described in Idaho Code § 67-5251(4).

Based upon the concerns raised by the parties, the Director shall conduct a limited hearing to provide the parties the opportunity to contest or rebut the 2008 data.

**ORDER**

Based upon and consistent with the foregoing, IT IS HEREBY ORDERED as follows:

The Director shall conduct a limited hearing to provide the parties the opportunity to contest or rebut the 2008 data. The hearing shall commence on May 24, 2010, starting at 9:00 a.m., at the Department's State Office.

Dated this 10th day of May, 2010.

GARY SPACKMAN
Interim Director

## CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 10th day of May, 2010, the above and foregoing, was served by the method indicated below, and addressed to the following:

| | |
|---|---|
| John K. Simpson<br>BARKER ROSHOLT & SIMPSON, LLP<br>P.O. Box 2139<br>Boise, ID 83701<br>jks@idahowaters.com | ☒ U.S. Mail, postage prepaid<br>☐ Hand Delivery<br>☐ Overnight Mail<br>☐ Facsimile<br>☒ Email |
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Victoria Wigle

Victoria Wigle
Administrative Assistant to the Director

# ATTACHMENT C

**BEFORE THE DEPARTMENT OF WATER RESOURCES**

**OF THE STATE OF IDAHO**

| | |
|---|---|
| IN THE MATTER OF DISTRIBUTION OF WATER TO VARIOUS WATER RIGHTS HELD BY OR FOR THE BENEFIT OF A&B IRRIGATION DISTRICT, AMERICAN FALLS RESERVOIR DISTRICT #2, BURLEY IRRIGATION DISTRICT, MILNER IRRIGATION DISTRICT, MINIDOKA IRRIGATION DISTRICT, NORTH SIDE CANAL COMPANY, AND TWIN FALLS CANAL COMPANY | Docket No. CM-DC-2010-001<br><br>**ORDER REGARDING APRIL 2010 FORECAST SUPPLY (Methodology Steps 3 & 4)** |

## FINDINGS OF FACT

1. On April 7, 2010, the Director of the Idaho Department of Water Resources ("Director" or "Department") issued his *Final Order Regarding Methodology for Determining Material Injury to Reasonable In-Season Demand and Reasonable Carryover* ("Methodology Order"). The Methodology Order established 10 steps for determining material injury to members of the Surface Water Coalition ("SWC"). This order will apply steps 3 and 4.

### A. Step 3

2. Step 3 states that, within fourteen days of the issuance of the joint forecast ("Joint Forecast") prepared by the United States Bureau of Reclamation and the United States Army Corps of Engineers, the Director shall "issue a Forecast Supply for the water year and will compare the forecast supply to the baseline demand ("BD") to determine if a demand shortfall ("DS") is anticipated for the upcoming irrigation season. A separate Forecast Supply and DS will be determined for each member of the SWC." *Id.* at 34.

3. On April 8, 2010, the Joint Forecast was announced,[1] predicting an unregulated inflow of 1,940,000 acre-feet.[2]

[1] The Methodology Order was issued on April 7, 2010. Petitions for reconsideration were filed with the Department on April 21, 2010. Issuance of this order was delayed to allow the Director time to review the petitions for reconsideration.

[2] Attached hereto are the regression analyses for each SWC entity used to predict natural flow supply.

4. Based upon the Joint Forecast, the Director predicts the following:

| | Predicted Natural Flow Supply | Predicted Storage Allocation | Total Supply | BLY 2006/2008 | Shortfall |
|---|---|---|---|---|---|
| A&B | 0 | 135,371 | 135,371 | 58,492 | 0 |
| AFRD2 | 1,256 | 387,102 | 388,358 | 415,730 | 27,400[3] |
| BID | 65,123 | 222,507 | 287,630 | 250,977 | 0 |
| Milner | 0 | 89,107 | 89,107 | 46,332 | 0 |
| Minidoka | 94,486 | 358,438 | 452,924 | 362,884 | 0 |
| NSCC | 233,145 | 843,169 | 1,076,314 | 965,536 | 0 |
| TFCC | 747,391 | 241,078 | 988,469 | 1,045,382 | 56,900 |
| | | | | Total | 84,300 |

**B. Step 4**

5. Step 4 states as follows:

> If the April DS is greater than the reasonable carryover shortfall from the previous year, junior ground water users will be required to establish, to the satisfaction of the Director, their ability to secure and provide a volume of storage water equal to the difference of the April projected demand shortfall and reasonable carryover shortfall, for all injured members of the SWC. If junior ground water users cannot provide this information, by May 1, or within fourteen (14) days from issuance of the values set forth in Step 3, whichever is later in time, the Director will issue an order curtailing junior ground water users.

*Id.* at 34.[4]

6. As shown in the table above, it is predicted, at this time, that AFRD2 and TFCC will suffer a combined DS in the amount of 84,300 acre-feet (27,400 + 56,900). No later than May 13, 2010 (fourteen days from issuance of this order), junior ground water users must establish, to the satisfaction of the Director, their ability to secure 84,300 acre-feet.

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[3] In its *Corrected Petition for Reconsideration of Final Order Regarding Methodology Dated April 7, 2010*, the Idaho Ground Water Appropriators, Inc. ("IGWA") raised concerns regarding natural flow diversions by AFRD2 and the interim director's initial determination of material injury. IGWA did not explain why the interim director's determination of shortfall for AFRD2 was incorrect. The interim director reviewed the method of determining the shortfall, AFRD2's water rights, and the accounting of water deliveries to AFRD2. The interim director did not find compelling information to change the initial prediction of shortfall for AFRD2.

[4] Steps 9 and 10 of the Methodology Order require the Director to predict reasonable carryover shortfalls to reservoir space held by member of the SWC in the fall before the subsequent irrigation season. *Methodology Order* at 36. Given when the Methodology Order was issued, junior ground water users were not under an obligation in the fall of 2009 to provide reasonable carryover shortfalls. At this time, it is forecasted that reservoir space held by members of the SWC will fill in 2010. In the fall of 2010, the Director will determine reasonable carryover shortfalls, if any, for members of the SWC. At that time, junior ground water users will be expected to comply with Steps 9 and 10, in whole or in part, or face curtailment, in whole or in part. *See id.* at 36.

7. If junior ground water users provide no water for purposes of mitigation, the Director will issue an order curtailing ground water rights junior to April 5, 1982, as simulated by the ESPA Model. Curtailment of ground water rights junior to April 5, 1982 will increase reach gains between the Near Blackfoot and Minidoka gages by a total amount of 84,361 acre-feet. Curtailing only those ground water rights located within the area of common ground water supply, IDAPA 37.03.11.050.01, will increase reach gains between the Near Blackfoot and Minidoka gages by 77,985 acre-feet. Curtailment of rights only within the area of common ground water supply will affect 73,782 acres. If junior ground water users secure a volume of water less than 84,300 acre-feet, the Director will redetermine the extent of curtailment, as simulated by the ESPA Model.

8. The 84,300 acre-feet of water required to mitigate material injury, shall be owed at the Time of Need, as established in Step 8 of the Methodology Order. At the Time of Need, the volume of water necessary to mitigate material injury to members of the SWC may be less but not greater than 84,300 acre-feet. *Id.* at 35.

## CONCLUSIONS OF LAW

1. Based upon the Joint Forecast, the Director predicts, at this time, a demand shortfall will occur to AFRD2 and TFCC's Reasonable In-Season Demand ("RISD"); thereby resulting in material injury. IDAPA, 37.03.11.042. At this time, the predicted material injury to AFRD2 is 27,400 acre-feet. At this time, the predicted material injury is to TFCC 59,900 acre-feet. At this time, no other members of the SWC are predicted to suffer material injury during the 2010 irrigation season. The total predicted material injury to RISD for members of the SWC in the 2010 irrigation season shall be no greater than 84,300 acre-feet.

2. No later than May 13, 2010 (fourteen days from issuance of this order), junior ground water users must establish, to the satisfaction of the Director, that they have secured 84,300 acre-feet.

3. The predicted volume of water required to mitigate material injury shall be owed at the Time of Need, as established in Step 8 of the Methodology Order. The volume of water necessary to mitigate material injury at the Time of Need may be less, but not greater than 84,300 acre-feet.

4. If junior ground water users provide no water for purposes of mitigation, the Director shall issue an order curtailing ground water rights junior to April 5, 1982, which will increase reach gains between the Near Blackfoot and Minidoka gages by 84,361 acre-feet. Curtailing only those ground water rights located within the area of common ground water supply, IDAPA 37.03.11.050.01, will increase reach gains between the Near Blackfoot and Minidoka gages by 77,985 acre-feet. Curtailment of rights only within the area of common ground water supply will affect 73,782 acres. If junior ground water users secure a volume of water less than 84,300 acre-feet, the Director will redetermine the extent of curtailment, as simulated by the ESPA Model.

## ORDER

Based upon and consistent with the foregoing, IT IS HEREBY ORDERED as follows:

The Director predicts, at this time, a demand shortfall of 27,400 acre-feet to AFRD2's reasonable in-season demand. The Director also predicts a demand shortfall, at this time, of 56,900 acre-feet to TFCC's reasonable in-season demand. At this time, no other members of the SWC are predicted to experience material injury during the 2010 irrigation season. The maximum, combined demand shortfall for members of the SWC during the 2010 irrigation season is 84,300 acre-feet.

No later than May 13, 2010 (fourteen days from issuance of this order), junior ground water users must establish, to the satisfaction of the Director, that they have secured 84,300 acre-feet of storage water to mitigate for the predicted material injury. If junior ground water users cannot establish, to the satisfaction of the Director, that they have secured the required volume of water, in whole or in part, the Director shall issue an order curtailing junior ground water users, in whole or in part, for the material injury caused to the injured members of the SWC.

IT IS FURTHER ORDERED that junior ground water users are not required to provide the secured volume of mitigation water until after the Director determines the SWC's Time of Need, as established in Step 8 of the Methodology Order. The volume of water required for mitigation at the Time of Need may be more or less for individual SWC members, but the combined volume will not be greater than 84,300 acre-feet.

IT IS FURTHER ORDERED that if junior ground water users provide no water for purposes of mitigation, the Director shall issue an order curtailing ground water rights junior to April 5, 1982. The curtailment shall affect 73,782 acres within the area of common ground water supply in Water District Nos. 34, 110, 120, 130, and 140, and will increase reach gains by 77,985 acre-feet. If junior ground water users secure a volume of water less than 84,300 acre-feet, the Director will redetermine the extent of curtailment, as simulated by the ESPA Model. Curtailment shall apply to consumptive ground water rights for agricultural, commercial, industrial, and municipal uses, excluding ground water rights used for *de minimis* domestic purposes where such domestic use is within the limits of the definition set forth in Idaho Code § 42-111 and ground water rights used for *de minimis* stock watering where such stock watering use is within the limits of the definitions set forth in Idaho Code § 42-1401A(12), pursuant to IDAPA 37.03.11.020.11.

IT IS FURTHER ORDERED that this is a final order of the agency. Any party may file a petition for reconsideration of this final order within fourteen (14) days of issuance of this order. The agency will dispose of the petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law pursuant to Idaho Code § 67-5246.

IT IS FURTHER ORDERED that any person aggrieved by this decision shall be entitled to a hearing before the Director to contest the action taken provided the person files with the Director, within fifteen (15) days after receipt of written notice of the order, or receipt of actual notice, a

written petition stating the grounds for contesting the action and requesting a hearing. Any hearing conducted shall be in accordance with the provisions of chapter 52, title 67, Idaho Code, and the Rules of Procedure of the Department, IDAPA 37.01.01. Judicial review of any final order of the Director issued following the hearing may be had pursuant to Idaho Code § 42-1701A(4).

Dated this 29th day of April, 2010.

GARY SPACKMAN
Interim Director

## CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 20th day of April, 2010, the above and foregoing, was served by the method indicated below, and addressed to the following:

| | |
|---|---|
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|---|---|
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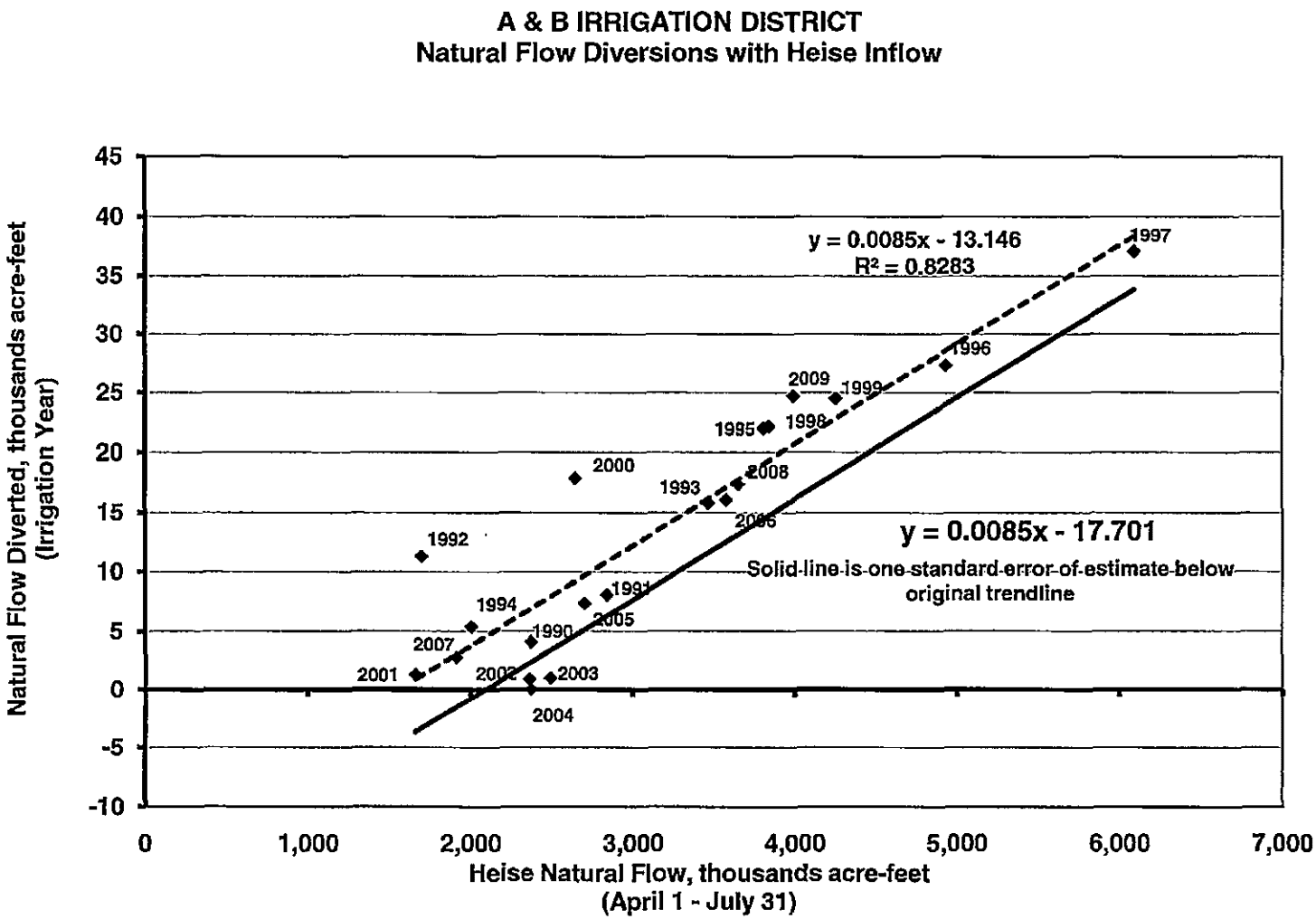
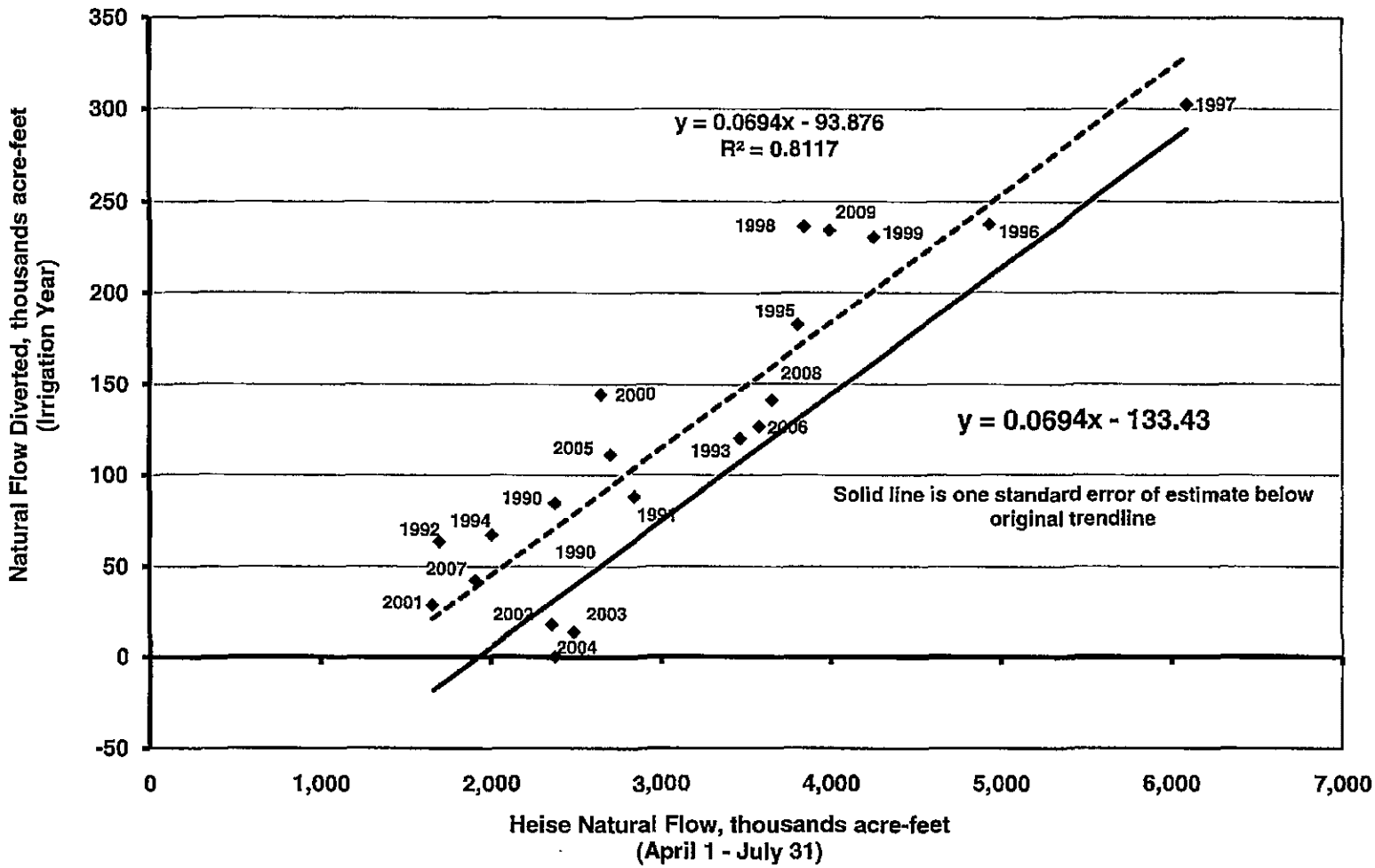
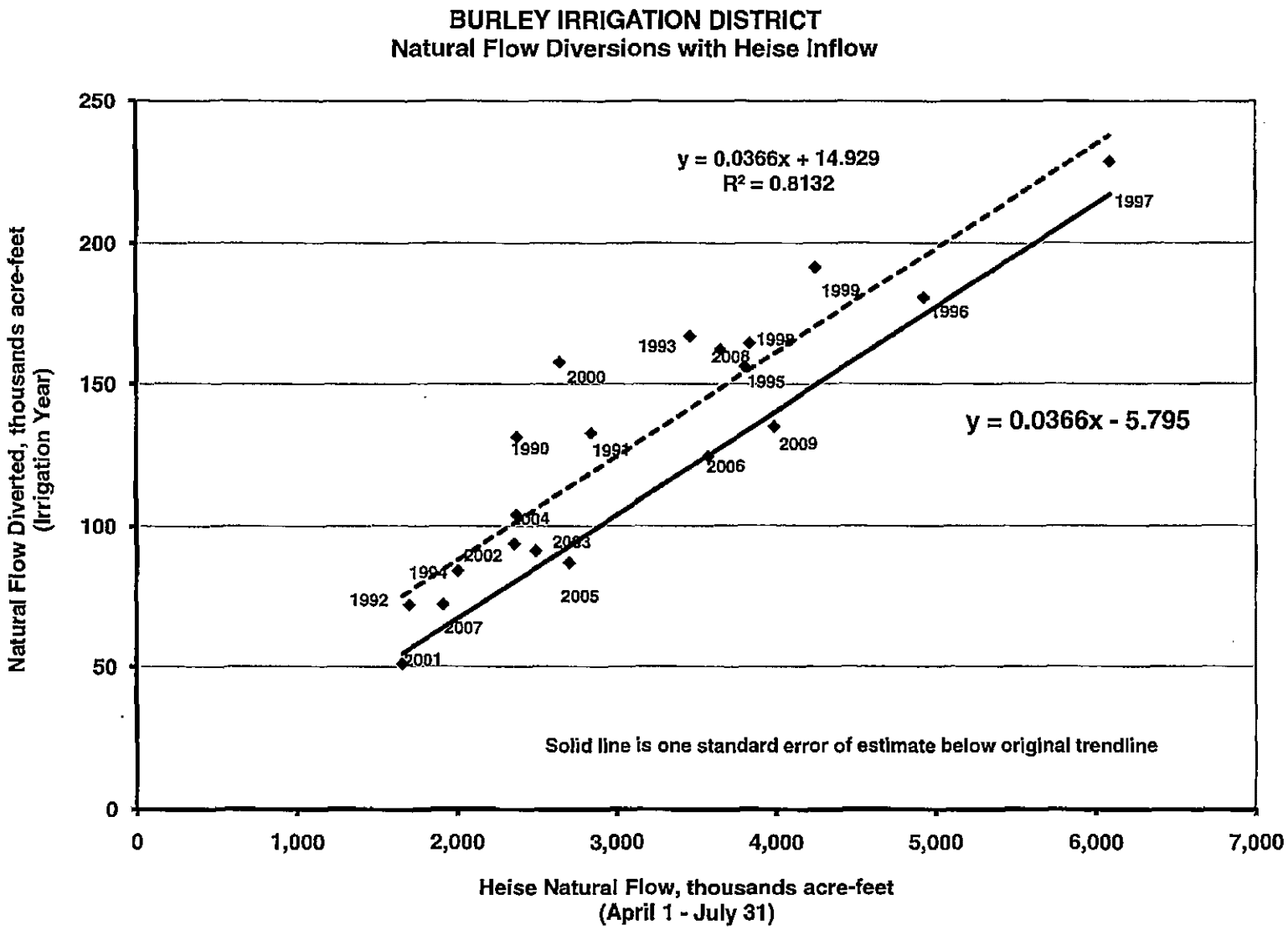
Victoria Wigle

Victoria Wigle
Administrative Assistant to the Director

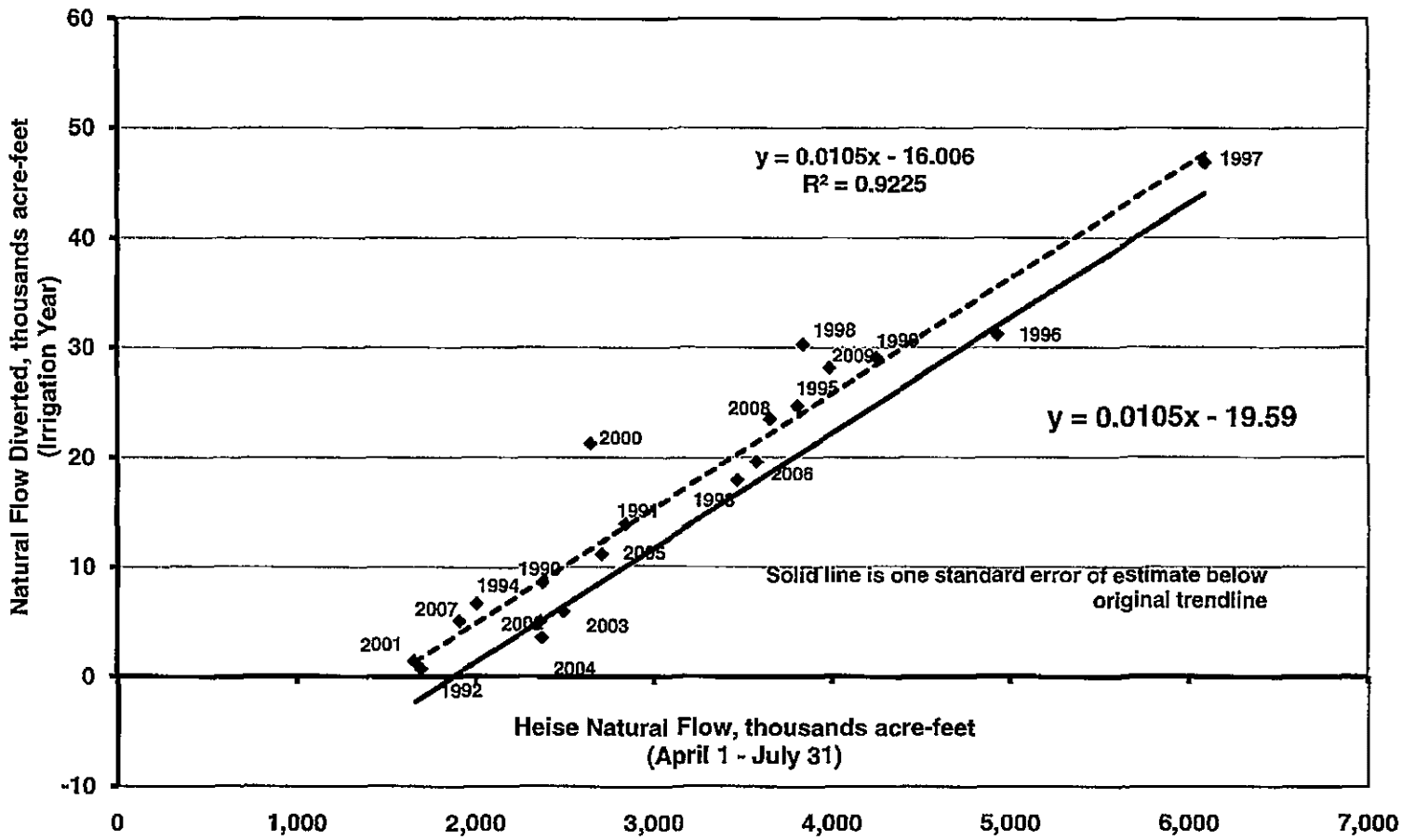

A & B IRRIGATION DISTRICT
Natural Flow Diversions with Heise Inflow
y = 0.0085x - 13.146
R² = 0.8283
y = 0.0085x - 17.701
Solid line is one standard error of estimate below original trendline
Natural Flow Diverted, thousands acre-feet (Irrigation Year)
Heise Natural Flow, thousands acre-feet (April 1 - July 31)
45
40
35
30
25
20
15
10
5
0
-5
-10
0
1,000
2,000
3,000
4,000
5,000
6,000
7,000
1997
1996
2009
1999
1995
1998
2000
2008
1993
2006
1992
1991
1994
2005
1990
2007
2001
2002
2003
2004

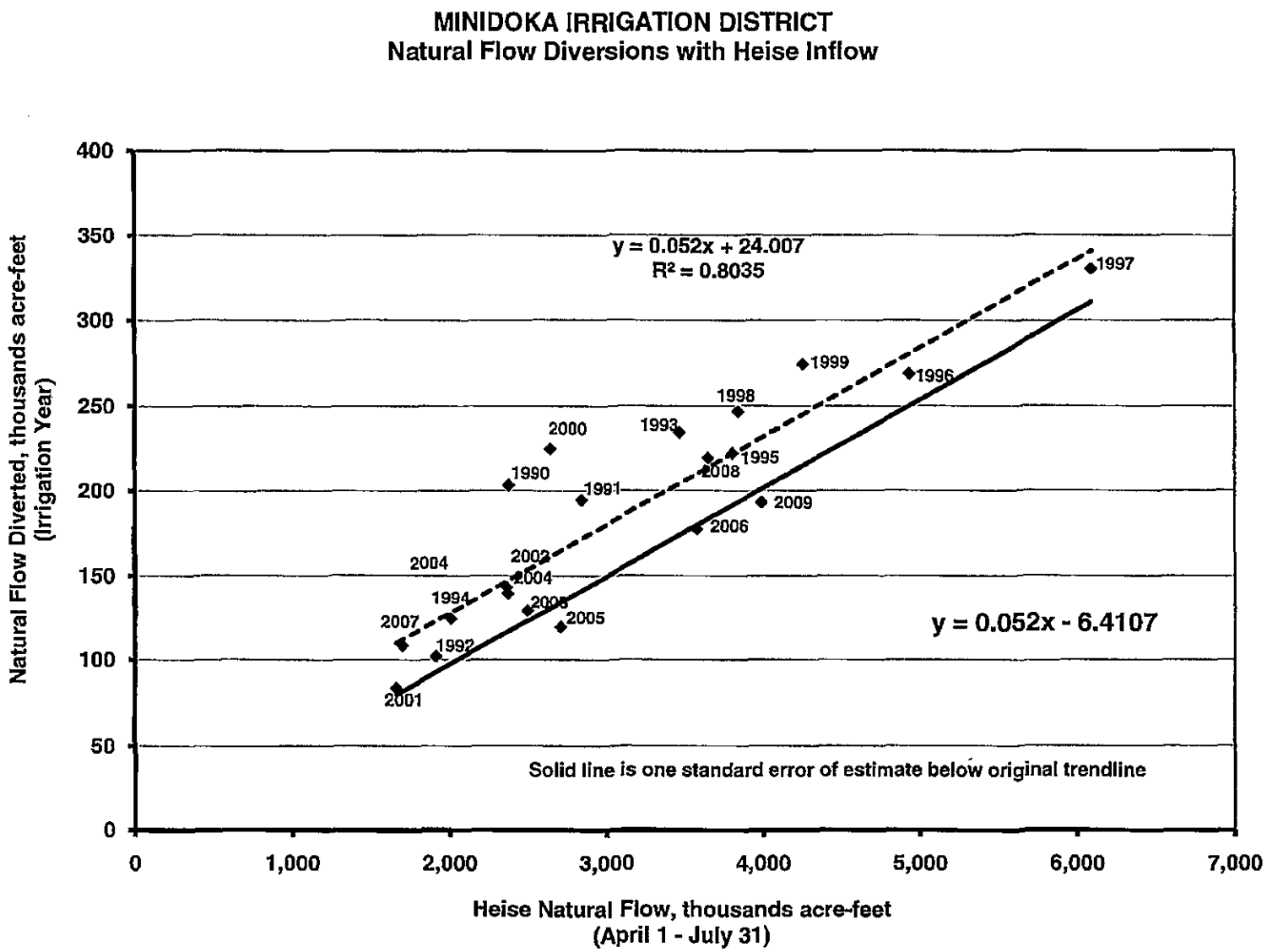
## AMERICAN FALLS RESERVOIR DISTRICT #2
## Natural Flow Diversions with Heise Inflow




BURLEY IRRIGATION DISTRICT
Natural Flow Diversions with Heise Inflow
y = 0.0366x + 14.929
R² = 0.8132
y = 0.0366x - 5.795
Solid line is one standard error of estimate below original trendline
Natural Flow Diverted, thousands acre-feet
(Irrigation Year)
Heise Natural Flow, thousands acre-feet
(April 1 - July 31)
0
50
100
150
200
250
0
1,000
2,000
3,000
4,000
5,000
6,000
7,000
1992
1994
2002
2007
2001
2004
2003
2005
1990
1991
2000
1993
2008
1998
1995
1999
2006
2009
1996
1997

**MILNER IRRIGATION DISTRICT**
**Natural Flow Diversions with Heise Inflow**




MINIDOKA IRRIGATION DISTRICT
Natural Flow Diversions with Heise Inflow
y = 0.052x + 24.007
R² = 0.8035
y = 0.052x - 6.4107
Solid line is one standard error of estimate below original trendline
Natural Flow Diverted, thousands acre-feet
(Irrigation Year)
Heise Natural Flow, thousands acre-feet
(April 1 - July 31)
0
50
100
150
200
250
300
350
400
0
1,000
2,000
3,000
4,000
5,000
6,000
7,000
1997
1999
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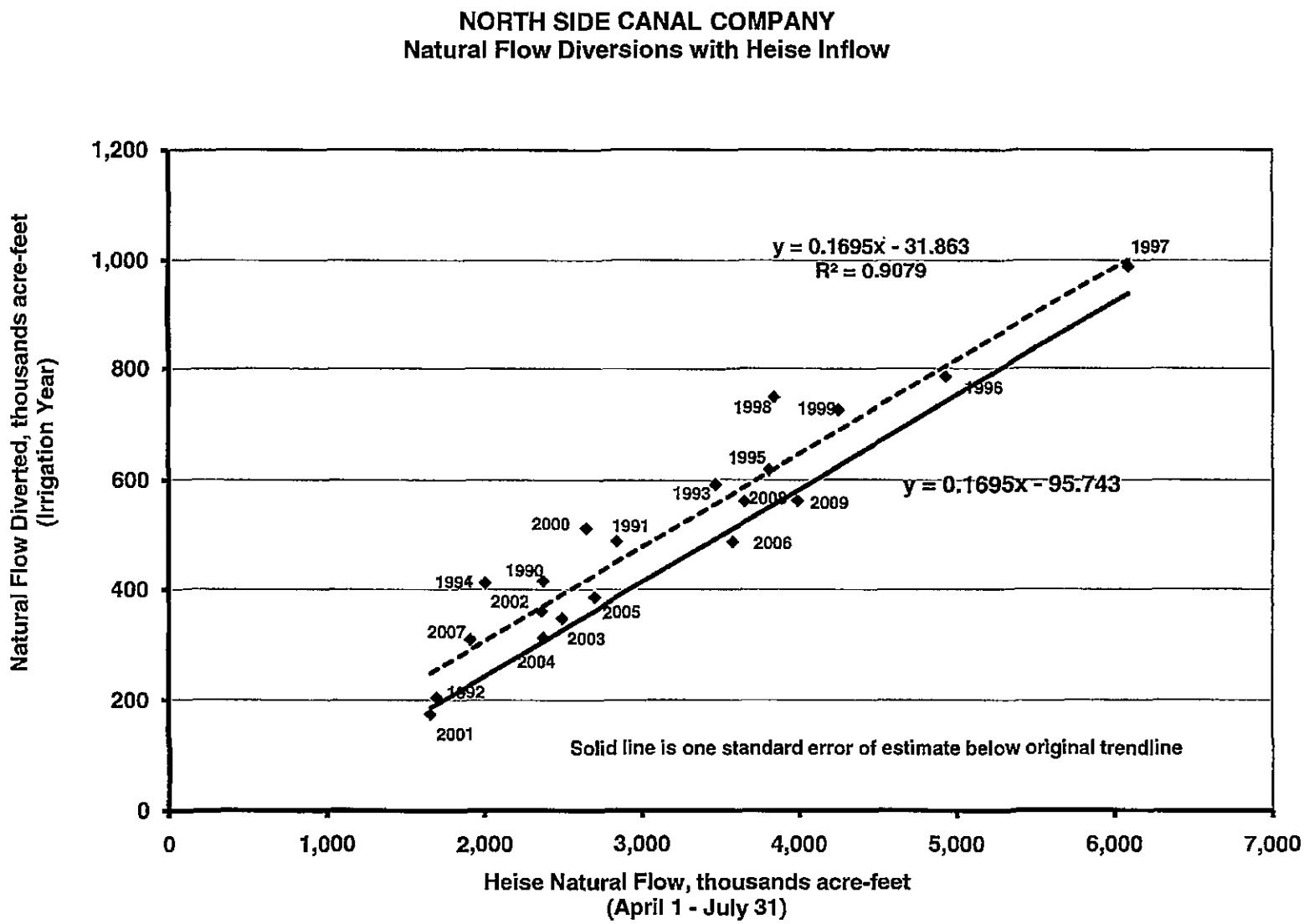
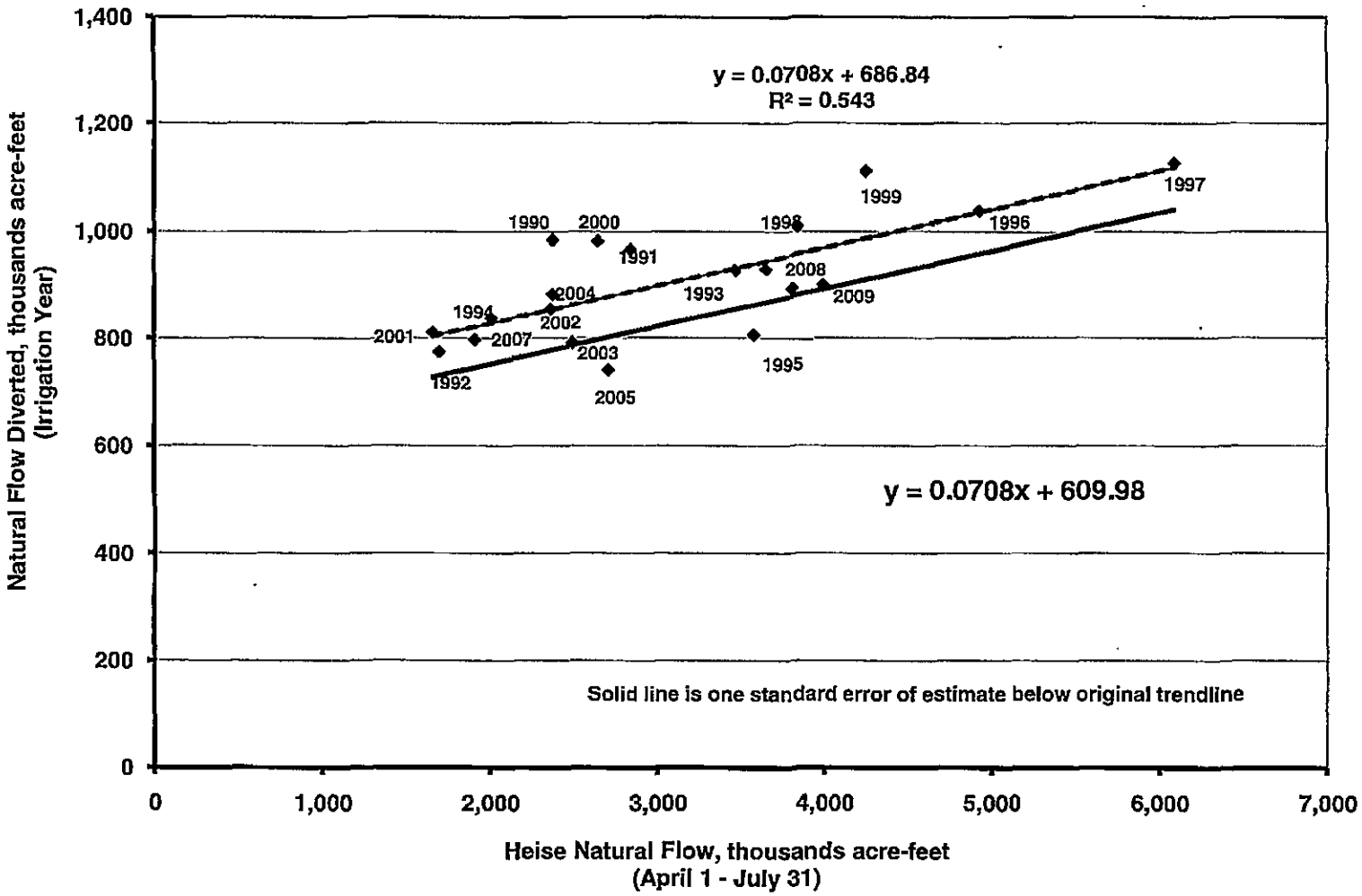

NORTH SIDE CANAL COMPANY
Natural Flow Diversions with Heise Inflow
Natural Flow Diverted, thousands acre-feet
(Irrigation Year)
1,200
1,000
800
600
400
200
0
0
1,000
2,000
3,000
4,000
5,000
6,000
7,000
Heise Natural Flow, thousands acre-feet
(April 1 - July 31)
y = 0.1695x - 31.863
R² = 0.9079
y = 0.1695x - 95.743
1997
1996
1998
1999
1995
1993
2008
2009
2000
1991
2006
1990
1994
2002
2005
2007
2003
2004
1992
2001
Solid line is one standard error of estimate below original trendline

## TWIN FALLS CANAL COMPANY
### Natural Flow Diversions with Heise Inflow



# ATTACHMENT D

**BEFORE THE DEPARTMENT OF WATER RESOURCES**

**OF THE STATE OF IDAHO**

| | | |
|---|---|---|
| IN THE MATTER OF THE IDAHO GROUND WATER APPROPRIATORS, INC.'S MITIGATION PLAN FOR CONVERSIONS, DRY-UPS, AND RECHARGE | ) | Docket No: CM-MP-2009-006 |
| | ) | **ORDER APPROVING MITIGATION CREDITS REGARDING SWC DELIVERY CALL** |

## FINDINGS OF FACT

1. On October 6, 2009, the Idaho Ground Water Appropriators, Inc. ("IGWA") filed with the Director of the Department of Water Resources ("Director" or "Department") a *Mitigation Plan for Conversions, Dry-Ups and Recharge* ("Plan") in accordance with the Conjunctive Management Rules ("CM Rules"). IDAPA 37.03.11.043. The Plan was filed broadly, "on behalf of [IGWA's] Ground Water District Members and other water user members for and on behalf of their respective members and those ground water users who are non-member participants in their mitigation activities . . . ." *Plan* at 1.

2. In accordance with CM Rule 43 and Idaho Code § 42-222, IGWA's Plan was published. The Plan was not protested. On May 14, 2010, the Director approved the Plan. *Order Approving Mitigation Plan.* In the Order Approving Mitigation Plan, the Director stated: "In the future, if mitigation credit is sought by IGWA, the Director shall determine the appropriate credit, if any, to provide."

3. On May 12, 2010, the Department received *IGWA's Request for Mitigation Credit* ("Credit Request"). The Credit Request was filed in order to provide IGWA with mitigation credit for material injury that was predicted by the Director to occur to certain members of the SWC during the 2010 irrigation season. The Credit Request seeks approximately 15,306 acre-feet of mitigation credit for conversions, CREP, and recharge activities. According to the Request, these activities "enhance the water supply in the ESPA and to the Snake River . . . ." *Request* at 2.

4. Using the ESPA Model, the Director is able to simulate the benefits that will accrue to the Near Blackfoot and Minidoka gage during the 2010 irrigation season, in acre-feet, for certain mitigation activities:[1]

| W.D. 130 Conversions | CREP | 2007 & 2009 Recharge | Total |
|---|---|---|---|
| 220 | 5,390 | 97 | 5,707 |

5. Because water should be provided during the time in which it can be put to beneficial use, which for the SWC is the irrigation season (April through October), the Director calculates transient mitigation credit for these activities. Attached hereto as Attachment A are the ESPA Model runs.

## CONCLUSIONS OF LAW

1. Idaho Code § 42-602 states that, "The director of the department of water resources shall have discretion and control of the distribution of water from all natural sources . . . . The director of the department of water resources shall distribute water . . . in accordance with the prior appropriation doctrine." The Idaho Supreme Court has recently stated, "Given the nature of the decisions which must be made in determining how to respond to a delivery call, there must be some exercise of discretion by the Director." *American Falls Res. Dist. No. 2 v. Idaho Dept. Water Resources*, 143 Idaho 862, 875, 154 P.3d 433, 446 (2007). The CM Rules incorporate all principles of the prior appropriation doctrine as established by Idaho law. CM Rule 20.03.

2. CM Rule 43.03 states as follows:

> **03. Factors to Be Considered.** Factors that may be considered by the Director in determining whether a proposed mitigation plan will prevent injury to senior rights include, but are not limited to, the following: (10-7-94)
>
> **a.** Whether delivery, storage and use of water pursuant to the mitigation plan is in compliance with Idaho law. (10-7-94)
>
> **b.** Whether the mitigation plan will provide replacement water, at the time and place required by the senior-priority water right, sufficient to offset the depletive effect of ground water withdrawal on the water available in the surface or ground water source at such time and place as necessary to satisfy the rights of diversion from the surface or ground water source. Consideration will be given to the history and seasonal availability of water for diversion so as not to require replacement water at times when the surface right historically has not received a full supply, such as during annual low-flow periods and extended drought periods. (10-7-94)
>
> **c.** Whether the mitigation plan provides replacement water supplies or

[1] While IGWA has sought credit for certain activities undertaken by Southwest Irrigation District ("SWID"), IGWA has not stated that its Plan applies to SWID. Therefore, the Department will only review IGWA activities.

other appropriate compensation to the senior-priority water right when needed during a time of shortage even if the effect of pumping is spread over many years and will continue for years after pumping is curtailed. A mitigation plan may allow for multi-season accounting of ground water withdrawals and provide for replacement water to take advantage of variability in seasonal water supply. The mitigation plan must include contingency provisions to assure protection of the senior-priority right in the event the mitigation water source becomes unavailable. (10-7-94)

**d.** Whether the mitigation plan proposes artificial recharge of an area of common ground water supply as a means of protecting ground water pumping levels, compensating senior-priority water rights, or providing aquifer storage for exchange or other purposes related to the mitigation plan. (10-7-94)

**e.** Where a mitigation plan is based upon computer simulations and calculations, whether such plan uses generally accepted and appropriate engineering and hydrogeologic formulae for calculating the depletive effect of the ground water withdrawal. (10-7-94)

**f.** Whether the mitigation plan uses generally accepted and appropriate values for aquifer characteristics such as transmissivity, specific yield, and other relevant factors. (10-7-94)

**g.** Whether the mitigation plan reasonably calculates the consumptive use component of ground water diversion and use. (10-7-94)

**h.** The reliability of the source of replacement water over the term in which it is proposed to be used under the mitigation plan. (10-7-94)

**i.** Whether the mitigation plan proposes enlargement of the rate of diversion, seasonal quantity or time of diversion under any water right being proposed for use in the mitigation plan. (10-7-94)

**j.** Whether the mitigation plan is consistent with the conservation of water resources, the public interest or injures other water rights, or would result in the diversion and use of ground water at a rate beyond the reasonably anticipated average rate of future natural recharge. (10-7-94)

**k.** Whether the mitigation plan provides for monitoring and adjustment as necessary to protect senior-priority water rights from material injury. (10-7-94)

**l.** Whether the plan provides for mitigation of the effects of pumping of existing wells and the effects of pumping of any new wells which may be proposed to take water from the areas of common ground water supply. (10-7-94)

**m.** Whether the mitigation plan provides for future participation on an equitable basis by ground water pumpers who divert water under junior-priority rights but who do not initially participate in such mitigation plan. (10-7-94)

**n.** A mitigation plan may propose division of the area of common ground water supply into zones or segments for the purpose of consideration of local impacts, timing of depletions, and replacement supplies. (10-7-94)

**o.** Whether the petitioners and respondents have entered into an agreement on an acceptable mitigation plan even though such plan may not otherwise be fully in compliance with these provisions. (10-7-94)

3. The Credit Request requires the Director to utilize the ESPA Model to simulate the benefits that will accrue to the Near Blackfoot and Minidoka gage. CM Rule 43.03.e and .f. The ESPA Model represents the best available science for determining the effects of ground water diversions and surface water users on the ESPA and hydraulically-connected reaches of the Snake River and its tributaries. There is currently no other technical basis as reliable as the simulations from the ESPA Model that can be used to determine the effects of ground water diversions and surface water uses on the ESPA and hydraulically-connected reaches of the Snake River and its tributaries. The degree of uncertainty associated with application of the ESPA Model is 10 percent.

4. In order to ensure that mitigation credit is provided during the time of need, which for the SWC is the irrigation season (April through October), the Director calculates transient mitigation credit for the above-identified mitigation activities. Based upon ESPA Model simulations, the Director determines that, for the 2010 irrigation season, the benefit of these activities will increase gains in the Near Blackfoot and Minidoka gage by 5,707 acre-feet.

## ORDER

Based upon the foregoing, IT IS HEREBY ORDERED as follows:

IGWA's *Request for Mitigation Credit* is GRANTED for the 2010 irrigation season, in response to the SWC delivery call. The mitigation credit for the 2010 irrigation season is 5,707 acre-feet.

IT IS FURTHER ORDERED that this is a final order of the agency. Any party may file a petition for reconsideration of this final order within fourteen (14) days of the issuance of this order. The agency will dispose of the petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law pursuant to Idaho Code § 67-5246.

IT IS FURTHER ORDERED that, unless the parties specifically instruct the Director that a hearing is not necessary, a hearing shall occur on June 1, 2010. Judicial review of any final order of the Director issued following the hearing may be had pursuant to Idaho Code § 42-1701A(4).

IT IS FURTHER ORDERED that pursuant to sections 67-5270 and 67-5272, Idaho Code, any party aggrieved by the final order or orders previously issued by the Director in this matter may appeal the final order and all previously issued orders in the matter to district court by filing a petition in the district court of the county in which a hearing was held, the final agency action was taken, the party seeking review of the order resides, or the real property or personal property that was the subject of the agency action is located. The appeal must be filed within twenty-eight (28) days: (a) of the service date of the final order; (b) of an order denying petition for reconsideration; or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration, whichever is later. *See* Idaho Code § 67-5273. The filing of an

appeal to district court does not in itself stay the effectiveness or enforcement of the order under appeal.

Dated this 17th day of May, 2010.

GARY SPACKMAN
Interim Director

## CERTIFICATE OF SERVICE

I hereby certify that I served a true and correct copy of the following described document on the persons listed below by mailing in the United States mail, first class, with the correct postage affixed thereto on the 17th day of May, 2010.

| | |
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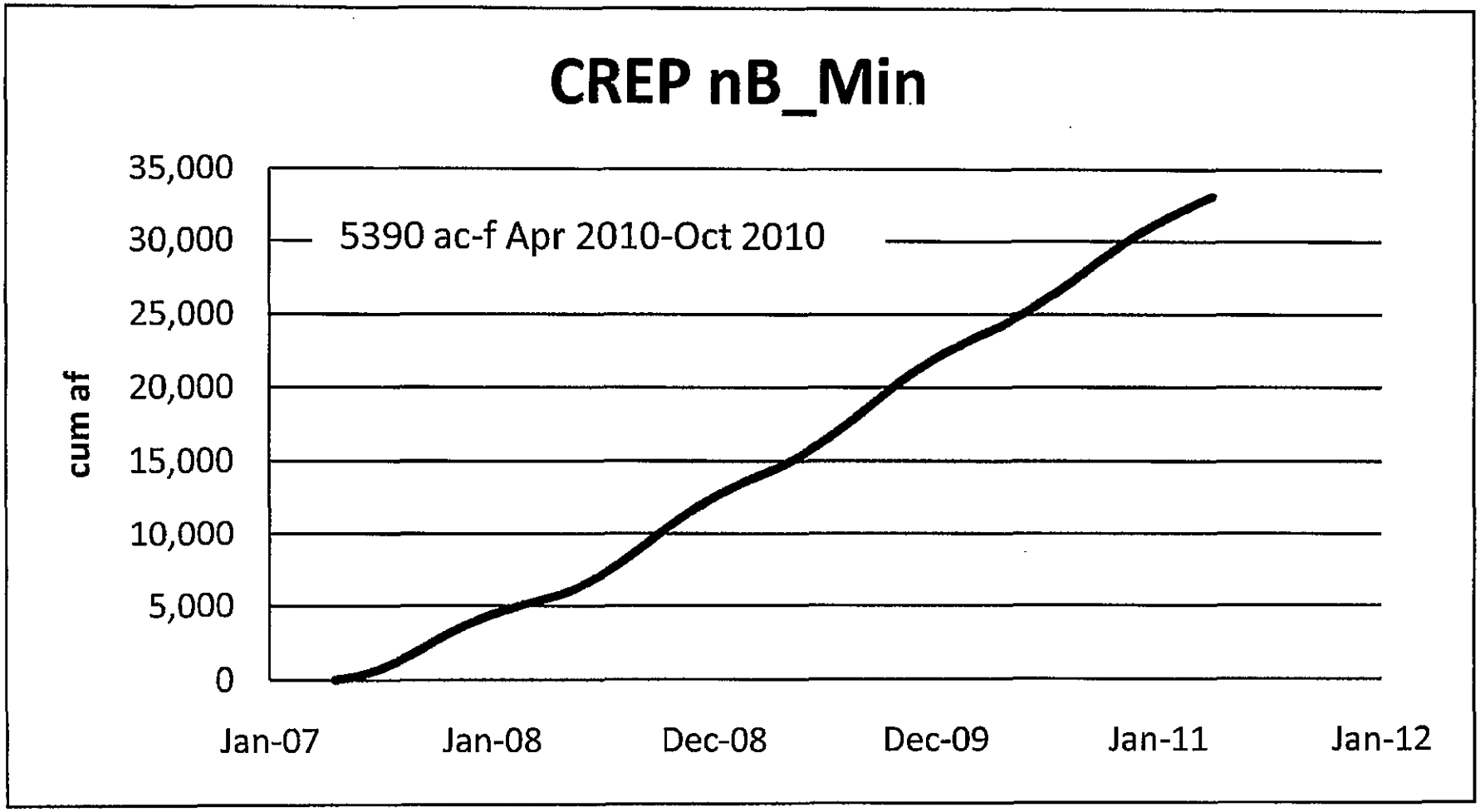
Deborah J. Gibson

Deborah Gibson
Administrative Assistant, IDWR

# ATTACHMENT A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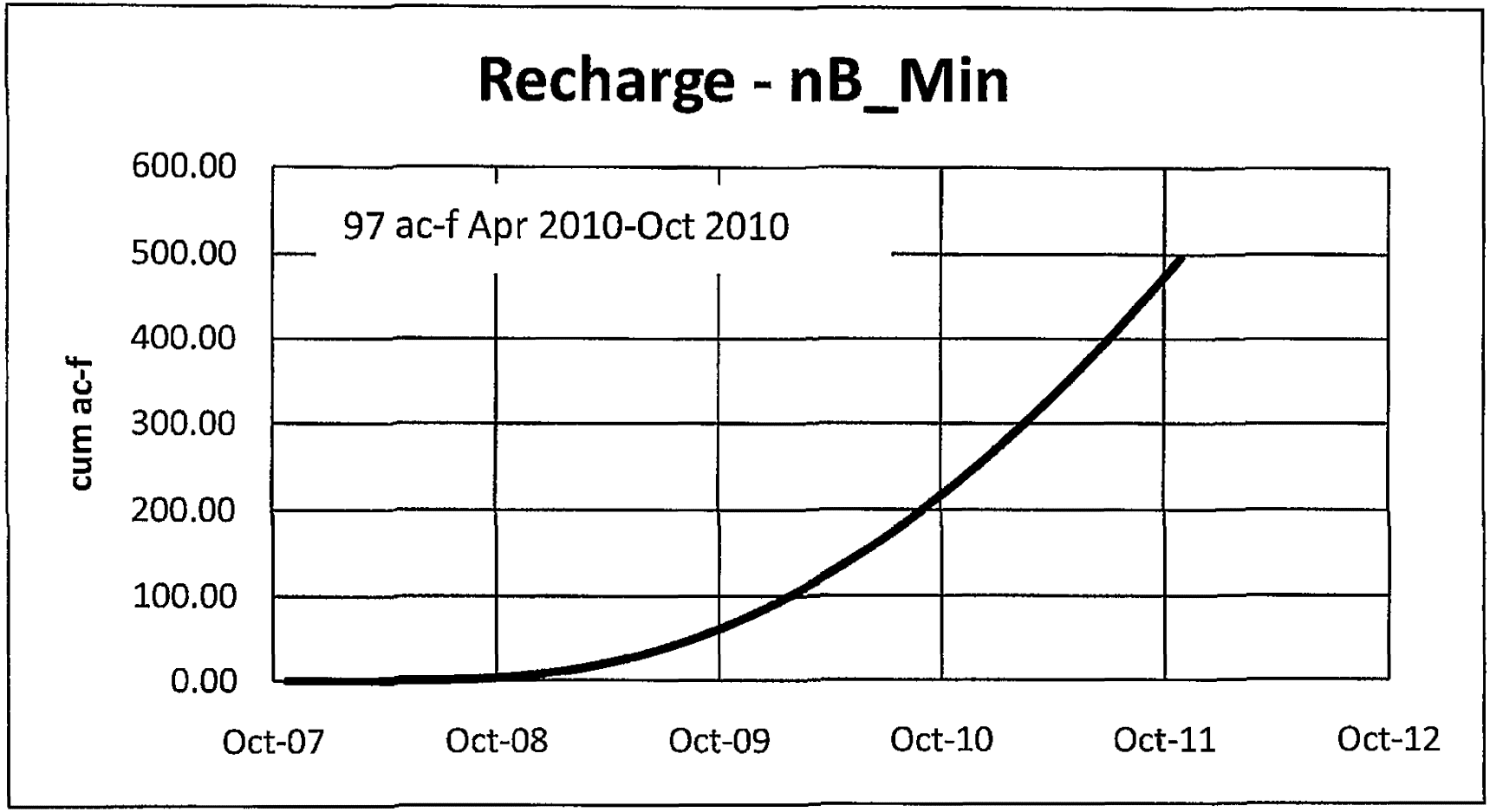
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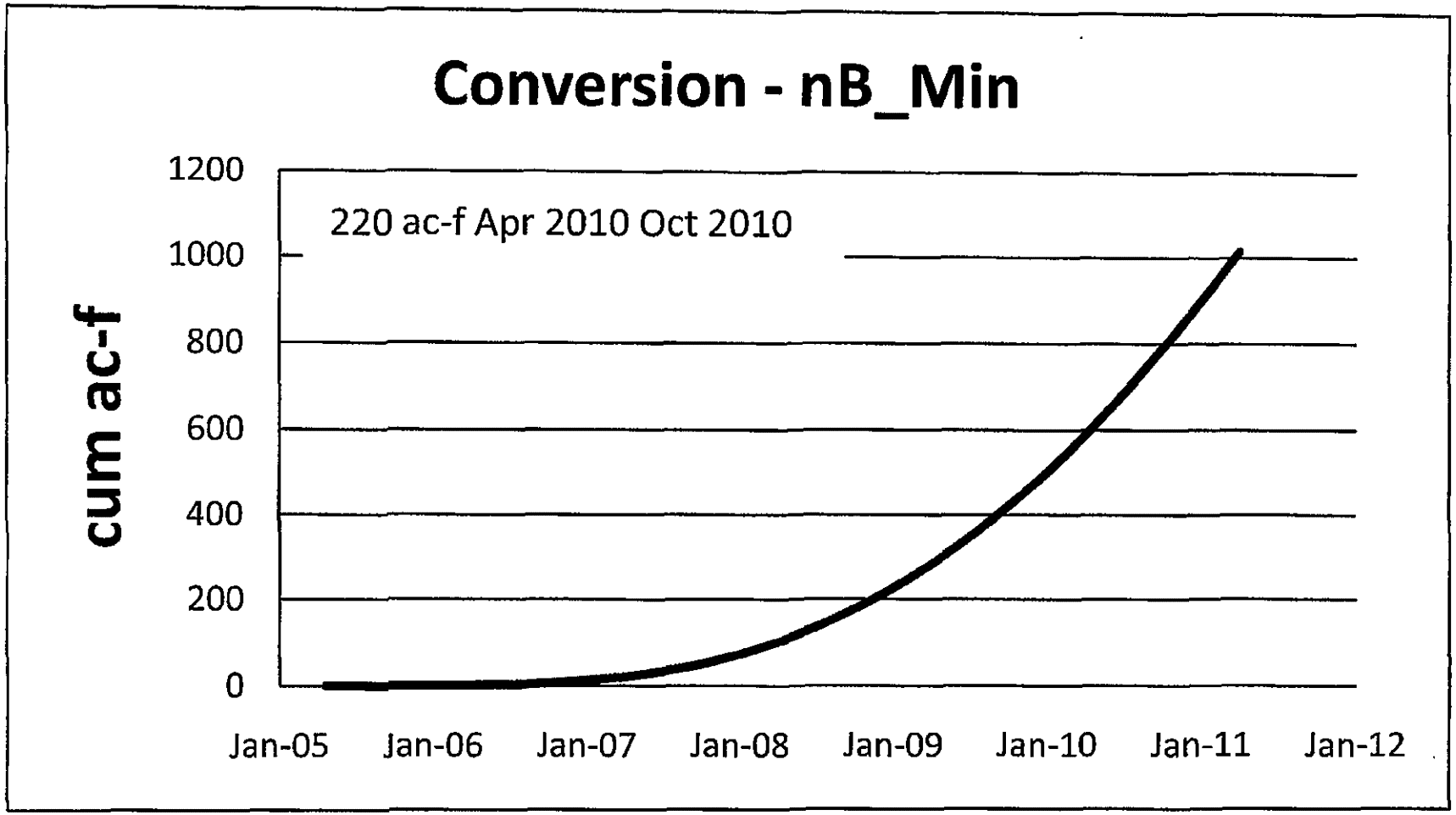
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