

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)	Docket No. CM-DC-2010-001
THE BENEFIT OF A&B IRRIGATION DISTRICT,)	
AMERICAN FALLS RESERVOIR DISTRICT #2,)	FINAL ORDER
BURLEY IRRIGATION DISTRICT, MILNER)	REVISING APRIL 2010
IRRIGATION DISTRICT, MINIDOKA IRRIGATION)	FORECAST SUPPLY
DISTRICT, NORTH SIDE CANAL COMPANY,)	
AND TWIN FALLS CANAL COMPANY)	(METHODOLOGY STEP 7)
_____)	

FINDINGS OF FACT

Background

1. On June 23, 2010, the Director of the Idaho Department of Water Resources ("Director" or "Department") issued his *Second Amended 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").

2. In applying steps 3 and 4 of the Methodology Order, the Director predicted that the SWC would be materially injured during the 2010 irrigation season. The predicted injury was 56,600 acre-feet. *Final Order Regarding April 2010 Forecast Supply (Methodology Steps 3 & 4); Order on Reconsideration* ("April Forecast Supply Order"). At that time, the only predicted in-season injury was to the Twin Falls Canal Company ("TFCC").

3. The Department approved CM Rule 43 mitigation plans for the Idaho Ground Water Appropriators, Inc. ("IGWA") to mitigate for material injury to in-season demand and reasonable carryover. *Final Order Approving Mitigation Credits Regarding SWC Delivery Call*, CM-MP-2009-006 (July 19, 2010); *Order Approving Mitigation Plan*, CM-MP-2009-007 (June 3, 2010). IGWA secured in excess of 57,000 acre-feet of storage water to mitigate for 2010 in-season injury, as well as projected 2011 reasonable carryover shortfalls (Methodology Steps 9 and 10), if any. The Director instructed the watermaster for Water District 01 to not deliver storage water leased by IGWA under specific contracts for SWC mitigation to any entity other than the SWC, including the lessor, until further notice by the Director. The Director ordered dedication of IGWA's secured water to the SWC mitigation until he could determine the SWC's in-season injury. IGWA also established a 5,621 acre-feet mitigation credit, if needed, for the 2010 irrigation season.

4. On August 10, 2010, the Director issued his *Order Revising April Forecast Supply (Methodology Step 6)* ("August 2010 Order"), determining that the SWC would not be

materially injured during the 2010 irrigation season. However, because of uncertainty in predicting reach gains for TFCC, the Director issued the August 2010 Order as an interlocutory order, subject to review pursuant to IDAPA 37.01.01.711. *August 2010 Order* at 6-7.

5. In this order, the Director will re-examine the August 2010 Order and apply Methodology Step 7. Step 7 states as follows:

Shortly before the estimated 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; (2) issue a revised Forecast Supply; and (3) establish the Time of Need.

This information will be used to recalculate RISD and adjust the projected DS for each member of the SWC. . . . The Director will then issue revised RISD and DS values.

Methodology Order at 37.

Demand

April – August Climate

6. In April 2010, the Natural Resources Conservation Service (“NRCS”) determined that the 2009-2010 snow season would be the second driest snow season in the Upper Snake River Basin of the last 50 years. The April 2010 forecast prepared jointly by the United States Army Corp of Engineers and the United States Bureau of Reclamation predicted 1,940,000 acre-feet of natural flow at the Heise gage for the period April – July.

7. The months of April and May 2010 were unusually wet and cold. According to NRCS Snotel sites, the Upper Snake River Basin received 140% and 119% of average precipitation in April and May, respectively. The National Weather Service’s Twin Falls weather station reported 139% and 136% of average precipitation in April and May, respectively.

8. June and July 2010 precipitation were below normal. Twin Falls temperatures were near normal for April, were 4.2 degrees below normal for May, were near normal for June, and were 4.3 degrees above normal for July.¹ Because of the cool wet spring, the water supply improved dramatically. The actual Heise natural flow for April – July was 2,598,000 acre-feet, or 658,000 acre-feet greater than the April joint forecast.

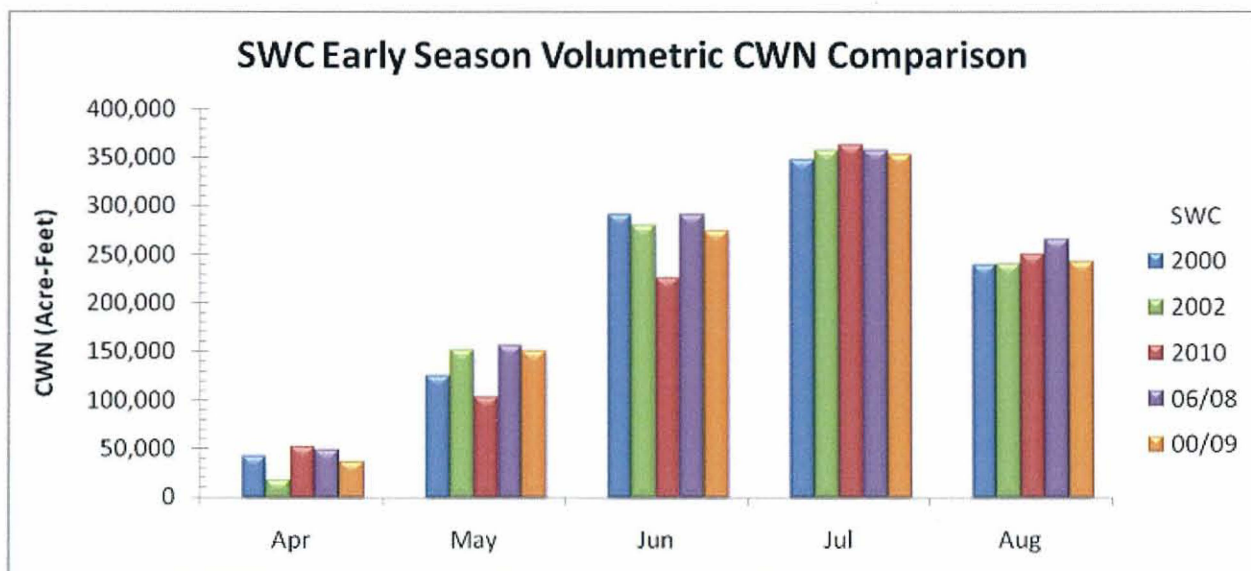
9. August 2010 was drier than normal and had near average temperatures. The National Weather Service’s Twin Falls weather station reported precipitation was 0.22 inches, which is 0.16 inches below normal.

¹ Precipitation and temperature data obtained from the NOAA National Weather Service Preliminary Monthly Climate Data for the Twin Falls 3SE weather station (Twin Falls Airport).

Crop Water Need

10. 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. CWN is the difference between the fully realized consumptive use associated with crop development, or evapotranspiration, and effective precipitation. CWN is used as input for calculating reasonable in-season demand (“RISD”) for those months of the irrigation season that are complete. It is combined with monthly baseline demands for the remaining months of the irrigation season to arrive at a season total RISD volume. Demand shortfall is then calculated as the difference between the adjusted forecast supply and the RISD. For specifics regarding determination of CWN, see *Methodology Order* at 16. Included with this order is a CD with background calculations.

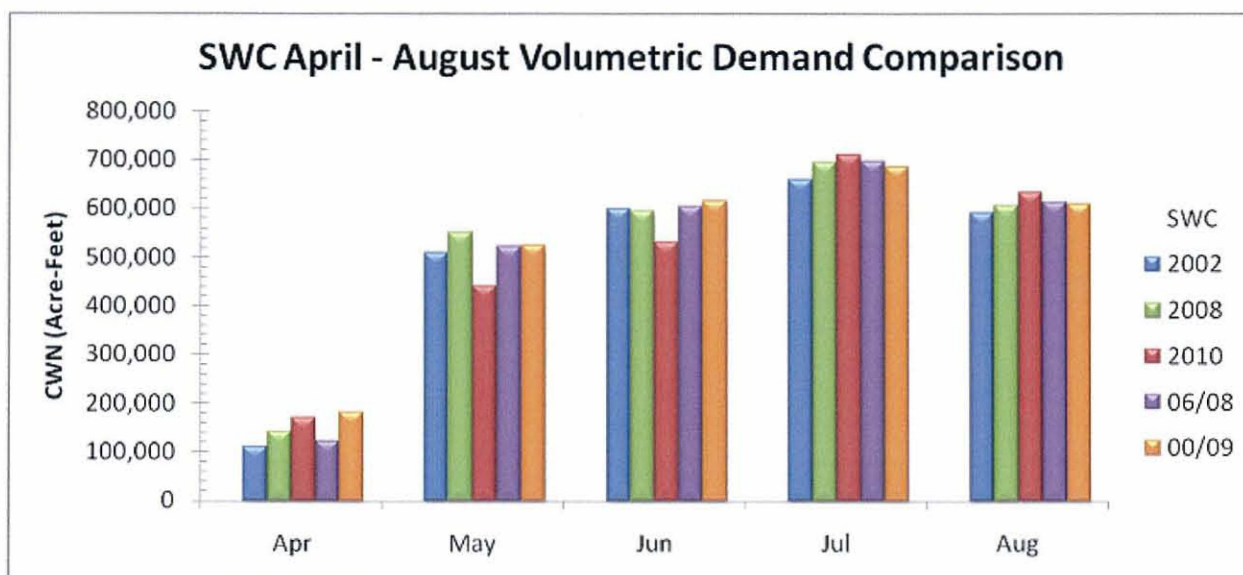
11. The SWC’s volumetric CWN for the current water year through the month of August 2010 is 994,934 acre-feet. This volume is 5.9% less than the ten year average CWN from 2000 – 2009 and 11.2% less than the baseline year CWN (2006/2008). Over the last ten years (2000 – 2009), the 2000 and 2002 water years have the most similar CWN accumulation to the current irrigation season. The following graph summarizes April through August monthly volumetric CWN values for 2000, 2002, 2010, the 2000 – 2009 average, and the baseline year (2006/2008).



12. The monthly CWN value for each of the SWC entities was divided by the average monthly efficiency value for each entity as identified in the table accompanying Finding of Fact 46 (page 16) of the *Methodology Order*. Monthly RISD values were summed to determine the already expired season-total RISD for 2010 climate data through August of the current year. The first summation term on the right side of the equal sign in equation 4 on page 18 of the *Methodology Order* computes the already expired season-total RISD. Based on the foregoing, the total RISD through August of the current year for all the SWC entities is 2,385,806 acre-feet.

SWC Diversions

13. The SWC's total irrigation diversion for the current water year through the month of August 2010 is 2,485,078 acre-feet. This volume of water is not used in determining RISD, but is presented herein as a comparison to the computed RISD values through August of the current year. This volume is 5.1% less than the ten-year average demand from 2000 – 2009 and 2.9% less than the baseline year demand (2006/2008). Over the last ten years (2000 – 2009), the 2002 and 2006 water years have the most similar diversions to the current irrigation season. The following graph summarizes monthly volumetric demands for 2002, 2006, 2010, the 2000 – 2009 average, and the baseline year.



Selection of an Analogous Year to Predict Remaining Natural Flow

14. The second summation term in the RISD equation on page 18 of the *Methodology Order* is the Baseline Demand ("BD"). The BD values are the sum of the 2006/2008 baseline year values for the months of September and October for each SWC entity.

Supply

15. The supply for each SWC entity is the sum of the actual natural flow supply, the predicted natural flow supply for the remainder of the irrigation season, the preliminary storage allocation, and adjustments to the natural flow supply and storage allocation.

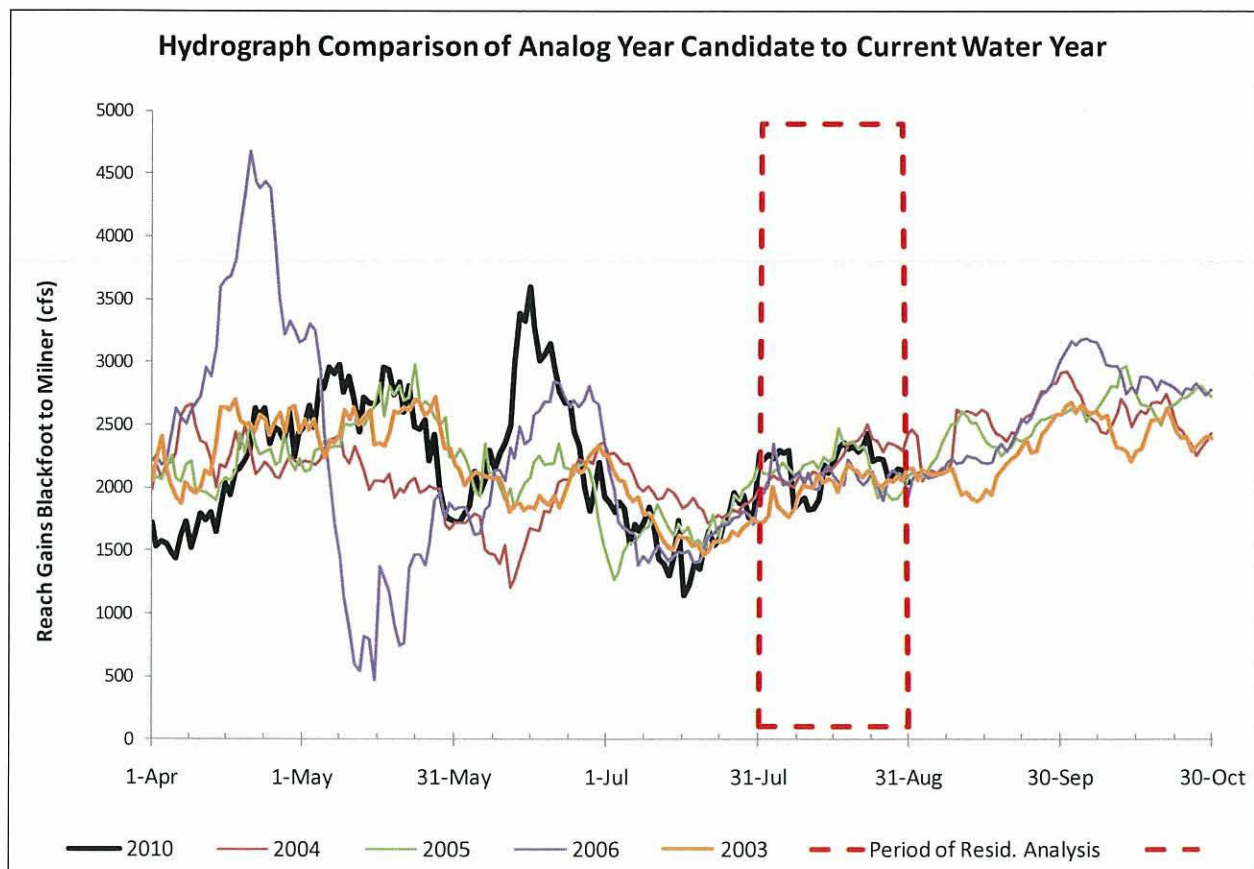
16. Natural flow supply for the remainder of the irrigation season was predicted by choosing an analogous year. The Department used a residual analysis² carried out at a daily time step to compare the reach gains from August 1 to August 31 for the current water year to

² The daily residual, or more accurately the daily relative residual (R), is expressed as a percentage and defined as the difference between the current water year reach gain (CY) and the historical reach gain (HY) divided by the current water year reach gain. $R = (CY - HY)/CY$.

historical reach gains for the same time period for the 1991 – 2009 water years. From the residual analysis, four candidate water years were selected: 2003, 2004, 2005, and 2006. These years represent the four years with the smallest average daily residual over the analysis period as summarized in the following table:

Summary of Residual Analysis of Candidate Years				
Period of Analysis	2003	2004	2005	2006
11/1-8/31	-6.7%	-5.7%	-6.4%	-8.2%
8/1-8/31	7.0%	-2.5%	-0.3%	3.7%

17. The hydrograph shown below compares the current water year to the four candidate years with the most similar reach gains as determined by the residual analysis. The natural flow diversions for each of the candidate years were examined and 2003 was selected as the analog year to predict natural flow diversions for the remainder of the irrigation season. The 2003 irrigation season was selected because it represented the best fit when considering the SWC as a whole. The 2003 irrigation season was also selected because it represents a conservative estimate of natural flow diversions for the remainder of the season.



Adjustments to Total Supply

18. Adjustments were made to both the natural flow and storage water supplies, as shown on the following page. Adjustments to natural flow include 6,725 acre-feet of natural

flow wheeled to South West Irrigation District through Burley Irrigation District and Milner Irrigation District. Preliminary adjustments to the storage water supply that were used in this analysis were published by Water District 01 in its Weekly Water Report dated July 20, 2010. The only adjustments made to the stored water supply in the table below were for the Minidoka Credit. Adjustments for wheeled storage water were not included in the storage adjustment because the water is not available for use by the SWC. Adjustments for wheeled storage water that were published in the Weekly Report were not included as an adjustment because wheeled water does not actually increase the amount of water available for use by the SWC. Water supplied to the rental pool was not included in the adjustments. An adjustment for water supplied to the rental pool would artificially increase the shortfall obligation.

19. The total supply for each of the entities is set forth in the table below.

Revised Shortfall Prediction

20. Based on the above, and as summarized in the table below, no member of the SWC will experience material injury to in-season demand during the 2010 irrigation season.

	Natural Flow Diverted through 8/31	Predicted Natural Flow 9/1 to 10/31	Natural Flow Adjustment	Preliminary Storage Allocation	Preliminary Storage Adjustments	Total Supply	RISD	Shortfall
A&B	9,374	-	-	135,382	-	144,756	48,503	-
AFRD2	76,422	-	-	387,132	1,000	464,554	400,986	-
BID	86,233	1,274	(3,714)	222,794	5,130	311,717	205,897	-
Milner	14,067	-	(3,011)	87,992	-	99,048	45,373	-
MID	140,695	1,803	-	360,576	8,370	511,444	300,735	-
NSCC	354,037	26,085	-	845,875	(7,750)	1,218,247	971,298	-
TFCC	621,250	195,311	-	241,919	(6,750)	1,051,730	997,837	-
						3,801,496	2,970,629	
							Total	0

CONCLUSIONS OF LAW

1. The Director concludes that, for the 2010 irrigation season, no member of the SWC will be materially injured. CM Rule 42.

2. The Director is aware that the issue of which standard of proof to apply in the context of conjunctive administration (preponderance or clear and convincing) is on review. When the Director made his original prediction of material injury (56,600 acre-feet), it was based on the best available information. *See April Forecast Supply Order*. As required by the Methodology Order, the Director updated the April Forecast Supply Order to evaluate the SWC's actual crop water need to determine RISD shortfalls, if any. In updating the April Forecast Supply Order, the Director used 2003 as the analog year to examine reach gains for

purposes of calculating RISD. 2003 was also selected because it represents the best fit when considering the SWC as a whole and provides a conservative estimate of natural flow diversions for the remainder of the 2010 irrigation season. The Director concludes that, even under the heightened standard of review, the SWC will not experience material injury this irrigation season. See *Luttrell v. Clearwater County Sheriff's Office*, 140 Idaho 581, 584, 97 P.3d 448, 451 (2004) ("Clear and convincing evidence means a degree of proof greater than a mere preponderance.").

3. IGWA has 57,000 acre-feet of secured storage water to mitigate for 2010 in-season injury, as well as projected 2011 reasonable carryover shortfalls (Methodology Steps 9 and 10), if any. IGWA also has a 5,621 acre-feet mitigation credit that may be applied to 2010 in-season shortfalls. Because the Director has not found material injury during the 2010 irrigation season, IGWA may not transfer its 5,621 acre-feet credit to future material injury determinations, including any perspective determination of 2011 reasonable carryover shortfalls (Methodology Steps 9 and 10).

4. Because there will be no 2010 in-season shortfalls, the Director notifies the watermaster for Water District 01 to release IGWA's 57,000 acre-feet of secured water.

5. On or before November 30, the Director will project IGWA's reasonable carryover shortfall, if any, for 2011. *Methodology Order* at 37-38 (Steps 9 and 10). If the Director projects a reasonable carryover shortfall, IGWA shall have fourteen days to establish its ability to secure "a volume of storage water or to conduct other approved mitigation activities that will provide water to the injured members of the SWC equal to the reasonable carryover shortfall for all injured members of the SWC." *Id.* at 38.

6. If the Director projects a 2011 reasonable carryover shortfall and determines that the shortfall exceeds 57,000 acre-feet, IGWA will be required to prove to the Director that it has secured additional mitigation. If IGWA no longer holds all or part of the 57,000 acre-feet, and a projected carryover shortfall is found in excess of its remaining secured water, IGWA will be required to prove to the Director that it has secured additional mitigation.

7. The Director should rescind the August 10, 2010 interlocutory order. IDAPA 37.01.01.711.

ORDER

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

The Director predicts that, for the 2010 irrigation season, no member of the SWC will be materially injured.

IT IS FURTHER ORDERED that the watermaster for Water District 01 shall release IGWA's 57,000 acre-feet of secured storage water.

IT IS FURTHER ORDERED that IGWA's 2010 in-season mitigation credit (5,621 acre-feet) may not be applied to future determinations of material injury.

IT IS FURTHER ORDERED that the Director rescinds the August 10, 2010 interlocutory order.

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 service 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 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 September, 2010.


GARY SPACKMAN
Interim Director

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 17th day of September, 2010, the above and foregoing, was served by the method indicated below, and addressed to the following:

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