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 (Water Districts No. 120 and No. 130)	)	**SECOND SUPPLEMENTAL ORDER AMENDING REPLACEMENT WATER REQUIREMENTS**

On April 19, 2005, the Director of the Department of Water Resources ("Director" or "Department") issued his order *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.* These entities, or members, are collectively referred to herein as the "Surface Water Coalition" or "Coalition." The Order of April 19, 2005 (herein referred to as the "April 19 Order"), was amended on May 2, 2005 (herein referred to as the "May 2 Order").

The May 2 Order included a determination that surface water rights held by or for the benefit of members of the Surface Water Coalition were reasonably likely to incur material injury in 2005 because of the diversion and consumptive uses of ground water under junior priority water rights. In response, the Director ordered ground water districts representing certain holders of junior priority ground water rights to provide replacement water pursuant to a plan submitted to the Department no later than April 29, 2005, or curtailment based on the priorities of the rights would be required to the extent mitigation for out-of-priority depletions was not provided.

In determining that senior priority water rights were reasonably likely to incur material injury, the Director found that "[w]hether effects of ground water depletions result in material injury to the senior priority surface water rights held by the members of the Surface Water Coalition in a particular year depends in large part on the total water supply, under natural flow water rights and from reservoir storage, and in some instances supplemental ground water rights, otherwise available to each member of the Coalition in that year." *May 2 Order* at p. 19, Finding 88.

Findings in the May 2 Order set forth the following process in making the determination whether senior surface water rights held by or for the benefit of members of the Surface Water Coalition would be reasonably likely to incur material injury in 2005:

(1) Determine the minimum full water supply needed for irrigation (natural flow and reservoir storage releases) by the members of the Surface Water Coalition (the Director determined that 1995 was the most recent year that the members of the Surface Water Coalition received a minimum full water supply and based his determination of the minimum full water supply needed on the amounts diverted during the 1995 irrigation season);

(2) Compare the forecast as of April 1, 2005, for unregulated inflow from the Upper Snake River Basin for the time period of April 1, 2005, through July 31, 2005, with historic unregulated inflow from the Upper Snake River Basin for the period of April 1 through July 31;

(3) Select a year or years of similar unregulated inflow and assume that: (a) natural flow diversions in 2005 will be essentially the same as the natural flow diversions in the similar year(s); (b) water stored in the reservoirs after April 1 in the similar year(s) added to the volume actually stored as of April 1, 2005, adjusted for evaporation, will be the total reservoir storage available for release and use in 2005; and (c) the sum of the predicted natural flow diversions and the predicted reservoir storage, adjusted for evaporation, constitutes the "the predicted 2005 water supply"; and

(4) For each member of the Surface Water Coalition, subtract the predicted total water supply for 2005 from the minimum full water supply needed, and to the remainder[1] add the amount of carryover storage reasonably needed assuming a drought year in 2006, unless the remainder is negative and the value equals or exceeds the reasonably needed carryover storage.

Finding 96 of the May 2 Order stated in pertinent part:

[I]t is reasonable to conclude that as for the American Falls Reservoir District #2, the North Side Canal Company, and the Twin Falls Canal Company, the A&B, Burley, Milner, and Minidoka irrigation districts each had a full supply of water in 1995 considering both natural flow and storage releases.

In Finding 100 of the May 2 Order, the Director determined that:

The joint operating forecast prepared by the USBR [United States Bureau of Reclamation] and the USACE [United States Army Corps of Engineers] for unregulated inflow from the Upper Snake River Basin predicted for the Heise Gage for the period April 1 through July 31 . . . predicts an unregulated inflow of 2,340,000 acre-feet. . . . the predicted inflow is similar to the measured, unregulated inflows at the Heise Gage for two recent years in the present sequence of drought years, 2002 and 2004.

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[1] Negative remainder indicates water in excess of minimum needed without consideration of reasonable carryover storage needed. Positive remainder indicates shortage from minimum needed without consideration of reasonable carryover storage needed.

For each member of the Surface Water Coalition, the Director (1) averaged the 2002 and 2004 natural flow diversions; (2) estimated the 2005 storage allocation based on the average of the volume of water stored after April 1, 2002, and after April 1, 2004, added to the volume of water actually in storage on April 1, 2005, less estimated 2005 evaporation; and (3) summed the average natural flow diversions and estimated 2005 storage allocations. The sum of natural flow diversions averaged for 2002 and 2004 and the estimated 2005 storage allocations based on the actual storage as of April 1, 2005, and the storage after April 1 averaged for 2002 and 2004 was deemed the predicted 2005 water supply for each Surface Water Coalition Member.

For each Surface Water Coalition Member, the predicted 2005 water supply was subtracted from the water supply in 1995, which was deemed the minimum full water supply needed. If the difference was greater than zero, the difference was the "Predicted Shortage in 2005." The total predicted shortage for 2005 for the members of the Surface Water Coalition that were predicted to incur shortages was 27,700 acre-feet.

Finding 119 of the May 2 Order established a reasonable amount of carryover storage at the end of 2005 for each member of the Surface Water Coalition "by averaging (1) the amounts of carryover storage required for Coalition members to have full supplies of water in 2006 if the divertible natural flow and storage accruals in 2006 are the same as in 2002 and (2) the amounts of carryover storage required for Coalition members to have full supplies of water in 2006 if the divertible natural flow and storage accruals in 2006 are the same as in 2004."

The "Predicted 2005 Material Injury" for each member of the Surface Water Coalition was determined by summing the "Predicted Shortage in 2005," if any, and the amount, if any, that the predicted carryover storage at the end of 2005 was less than the reasonable carryover storage determined in Finding 119 of the May 2 Order. The total "Predicted 2005 Material Injury" for all of the members of the Surface Water Coalition, computed by summing the predicted injury for each of the members, was 133,400 acre-feet, 101,000 acre-feet of which was determined to be caused by the diversion and consumptive use of ground water under junior priority rights in Water District No. 120 and No. 130 based on simulations using version 1.0 of the Department's ground water model for the ESPA.

Following issuance of the April 19 Order, the Idaho Ground Water Appropriators, Inc. ("IGWA") submitted its initial plan for providing replacement water on April 29, 2005. The Director ordered that IGWA submit additional information, and IGWA submitted the required additional information on May 23 and June 3, 2005. The collective information submitted by IGWA will be referred to hereafter as "IGWA's Replacement Water Plan." On June 13, 2005, IGWA filed *IGWA's Motion to Reduce Replacement Water Obligation.* On June 24, 2005, the Director issued his *Order Approving IGWA's Replacement Water Plan* (referred to hereafter as the "June 24 Approval Order").

IGWA's Replacement Water Plan, approved by the June 24 Approval Order, offered at least 27,700 acre-feet as replacement water for the Predicted Shortage in 2005.

The Director stated in the May 2 Order at page 47, paragraph 10:

The Director will monitor water supply requirements and the water supplies available throughout the irrigation season and may issue additional orders or instructions to the watermasters as conditions warrant.

Based upon the Director's consideration of changes in the water supplies available for the 2005 irrigation season following prolific low-elevation rains during May and June, the Director issued his *Supplemental Order Amending Replacement Water Requirements* on July 22, 2005 (herein referred to as the "July 22 Order"). On August 5, 2005, IGWA filed *IGWA's Petition for Reconsideration of the July 22, 2005 Supplemental Order Amending Replacement Water Requirements*. On November 21, 2005, Twin Falls Canal Company, a member of the Surface Water Coalition, filed *Request for End of the Year Accounting*.

Based upon the Director's consideration of IGWA's petition for reconsideration and preliminary diversion data following the 2005 irrigation season, the Director enters the following Findings of Fact, Conclusions of Law, and Order, which supercede the *Supplemental Order Amending Replacement Water Requirements* of July 22, 2005.

FINDINGS OF FACT

1. The May 2 Order required that holders of certain junior priority ground water rights within Water Districts No. 120 and No. 130 either curtail the diversion and use of ground water for 2005, provide replacement water to the members of the Surface Water Coalition on an annual basis in amounts and generally at times at least equal to the increase in reach gains in the Snake River between the Near Blackfoot Gage and the Minidoka Gage that would result from curtailment based on simulations using the Department's ground water model for the ESPA, or a combination of both.

2. Absent curtailment of junior ground water rights within Water Districts No. 120 and No. 130 by priority date, the minimum amount of replacement water required in 2005 by the May 2 Order was 27,700 acre-feet. Although IGWA, representing the ground water districts whose members include the holders of the affected junior priority ground water rights, secured more than 27,700 acre-feet of replacement water, only incremental increases in reach gains resulting from the lease and non-use of water rights held by FMC Idaho, LLC, the non-irrigation of leased lands, and mitigation actions implemented in Water District No. 130 were provided during the 2005 irrigation season. The Department is presently performing analyses to determine the amount of replacement water provided to individual members of the Surface Water Coalition through these actions.

3. Following issuance of the May 2 Order, precipitation in May and June of 2005 was unusually high. In May of 2005, widespread areas in the Upper Snake River Basin reportedly received near or above 150 percent of the long-term average precipitation for May; with several locations reportedly receiving near or above 200 percent of average, and one location, 46 miles west of Idaho Falls, reportedly receiving more than 275 percent of average. In June of 2005, widespread areas in the Upper Snake River Basin reportedly received well above 150 percent of the long-term average precipitation for June; with several locations reportedly receiving near or above 250 percent of average, and one location, Ashton, reportedly receiving just above 400 percent of average. *Natural Resources Conservation Service, U. S. Department*

of Agriculture (ftp://ftp.wcc.nrcs.usda.gov/data/climate/basin_reports/idaho/wy2005/baprid5.txt and ftp://ftp.wcc.nrcs.usda.gov/data/climate/basin_reports/idaho/wy2005/baprid6.txt).

4. Along with some increase in snow accumulation and increased streamflows in the Upper Snake River Basin, the unusually high precipitation, coupled with cool temperatures in May and June, resulted in significant delay in irrigation demands for natural flow. Through about June 30, 2005, members of the Surface Water Coalition had limited needs to divert water for irrigation, and those limited needs were satisfied with the available natural flow and some small releases from reservoir storage in May and June.

5. The unusually high precipitation and cool temperatures in May and June, and the resulting delay in irrigation demands, also allowed runoff from the melting snow accumulation to be stored in Upper Snake River Basin Reservoirs that under normal conditions would have been diverted for irrigation, benefiting space holders in those reservoirs, including members of the Surface Water Coalition in relation to the storage space held.

6. On June 30, 2005, maximum storage in the Upper Snake River Basin Reservoirs had accrued. Preliminary accounting on July 2, 2005, showed Jackson, Walcott, American Falls, and the Palisades winter-water-savings accounts had filled to 100 percent. Henrys Lake had a total fill of 34,318 acre-feet (38.1 percent), Island Park had a fill of 124,215 acre-feet (92.0 percent), Grassy Lake had a fill of 10,279 acre-feet (67.6 percent), the Palisades 1939 water right had a fill of 427,000 acre-feet (45.4 percent), and Ririe had filled 2,641 acre-feet (3.3 percent). These reservoir fills included carryover storage from the 2004 irrigation season.

7. On July 6, 2005, the following preliminary storage accruals for the benefit of the members of the Surface Water Coalition and estimated reservoir evaporation were determined by Water District No. 01:

	2005 Max. Storage (acre-feet)	2005 Evap. (acre-feet)	Preliminary 2005 Net Storage (acre-feet)
Jackson Lake:	847,000	22,000	825,000
Palisades Winter Water Savings:	259,600	6,700	252,900
Other Palisades Reservoir:	427,000	11,100	415,900
Henrys Lake:	34,300	900	33,400
Island Park Reservoir:	134,500	3,500	131,000
Grassy Lake:	0[2]	0[2]	0[2]
Ririe Reservoir:	2,600	100	2,500
Amer. Falls Winter Water Sav.:	156,800	4,100	152,700
Other American Falls:	1,515,800	39,300	1,476,500
Lake Walcott:	95,200	2,500	92,700
Totals:	3,472,800	90,200	3,382,600

[2] Included in Island Park storage and evaporation.

8. The preliminary storage accruals in 2005 set forth in Finding 7 are the same as set forth in Finding 10 of the July 22 Order and supercede the amounts set forth in Finding 105 of the May 2 Order.

9. Using the Department's accounting program for storage, the preliminary maximum storage, less estimated evaporation for 2005, was allocated among all reservoir storage spaceholders in the Upper Snake River Basin, which resulted in the following preliminary storage allocations for the members of the Surface Water Coalition:

	Preliminary 2005 Storage Allocations (acre-feet)
A&B Irrigation District:	77,100
American Falls Res. Dist. #2:	383,400
Burley Irrigation District:	220,600
Milner Irrigation District:	65,800
Minidoka Irrigation District:	340,300
North Side Canal Company:	837,600
Twin Falls Canal Company:	239,600

10. The preliminary storage allocations in 2005 for the members of the Surface Water Coalition set forth in Finding 9 are the same as set forth in Finding 12 of the July 22 Order, except for Milner Irrigation District[3].

11. As of the end of the 2005 irrigation season (October 31, 2005), preliminary results from the Department's water rights accounting for surface water diversions from the Snake River show that members of the Surface Water Coalition diverted the following quantities of water during the 2005 irrigation season:[4]

[3] The preliminary 2005 storage allocation for Milner Irrigation District set forth in the July 22 Order was 66,200 acre-feet, which included 400 acre-feet projected to be delivered on behalf of the Palisades Water Users, Inc.

[4] Amounts are preliminary and subject to change after final year-end water rights accounting.

	Preliminary 2005 Natural Flow (acre-feet)	Preliminary 2005 Storage (acre-feet)	Preliminary Total 2005 Diversions (acre-feet)	Minimum Full Supply Needed (acre-feet)
A&B Irrigation District:	6,900	40,200	47,100	50,000
American Falls Res. Dist. #2:	110,300	287,300	397,600	405,600
Burley Irrigation District:	85,100	128,300[5]	213,400[5]	220,200[6]
Milner Irrigation District:	11,100	36,100	47,200	50,800
Minidoka Irrigation District:	127,700	192,400[7]	320,100[7]	314,300[8]
North Side Canal Company:	392,200	507,700	899,900	988,200
Twin Falls Canal Company:	722,500	189,300	911,800	1,075,900

12. Finding 11, setting forth the preliminary 2005 diversions of water, supercedes Finding 106 of the May 2 Order. The minimum full supply amounts needed, as set forth in Finding 11, are the amounts needed for full deliveries based on 1995 diversions and are equal to the amounts set forth in Finding 116 of the May 2 Order, except for the division of water between the Burley and Minidoka irrigation districts as noted.

13. The preliminary total 2005 diversions set forth in Finding 11 are less than the minimum full supply needed by each member of the Surface Water Coalition as set forth in Finding 116 of the May 2 Order and Finding 11 above, with the noted adjustments to the full supply amounts between Burley and Minidoka irrigation districts, except for the Minidoka Irrigation District.

14. The fact that members of the Surface Water Coalition generally diverted less water in 2005 than the minimum full supply determined to be needed indicates that either not as much water was generally needed by members of the Coalition in 2005, given the unusually high precipitation and cooler than normal temperatures in May and June, or members of the Coalition sought to conserve available storage water out of concern that supplies might not be adequate given the above normal temperatures and below normal precipitation in the forecast released on July 21, 2005, by the National Weather Service Climate Prediction Center for the months of August, September, and October. Generally, water not diverted during the irrigation season would be stored or remain in storage if previously diverted to storage, either of which would increase the storage available to reservoir storage spaceholders in the Upper Snake River Basin, including members of the Surface Water Coalition.

15. Shortages in 2005 to rights held by or for the benefit of members of the Surface Water Coalition resulting from depletions to the Snake River caused by the diversion and use of ground water under junior priority water rights, if any, can not be based solely on the quantities

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[5] Assumed to be 40 percent of total Minidoka Project diversions.

[6] 41.2 percent of total Minidoka Project diversions for the 1995 irrigation year from Water District 01 report.

[7] Assumed to be 60 percent of total Minidoka Project diversions.

[8] 58.8 percent of total Minidoka Project diversions for the 1995 irrigation year from Water District 01 report.

of water diverted but must also take into account the amounts of carryover storage for the various members of the Coalition.

16. Based on the preliminary storage allocations set forth in Finding 9 and the preliminary amounts of storage water diverted set forth in Finding 11, the following are the preliminary amounts of carryover storage at the end of the 2005 irrigation season:[4]

	Prelim. 2005 Storage Alloc. (acre-feet)	Prelim. 2005 Storage Used (acre-feet)	Prelim. 2005 Carryover Storage (acre-feet)
A&B Irrigation District:	77,100	40,200	36,900
American Falls Res. Dist. #2:	383,400	287,300	96,100
Burley Irrigation District:	220,600	128,300[5]	92,300
Milner Irrigation District:	65,800	36,100	29,700
Minidoka Irrigation District:	340,300	192,400[7]	147,900
North Side Canal Company:	837,600	507,700	329,900
Twin Falls Canal Company:	239,600	189,300	50,300

17. The preliminary 2005 shortages in surface water supplies, if any, for members of the Surface Water Coalition are determined by subtracting the sum of the total 2005 diversions (set forth in Finding 11 above) and the preliminary carryover storage (set forth in Finding 16 above) from the sum of the minimum full water supply needed (set forth in Finding 11 above) and the reasonable carryover storage (set forth in Finding 119 of the May 2 Order). The preliminary 2005 shortages in surface water supplies, if any, for members of the Coalition are as follows:

	Minimum Full Supply Needed (acre-feet)	Reasonable Carryover (acre-feet)	Preliminary Total 2005 Diversions (acre-feet)	Preliminary 2005 Carryover (acre-feet)
A&B Irrigation District:	50,000	8,500	47,100	36,900
American Falls Res. Dist. #2:	405,600	51,200	397,600	96,100
Burley Irrigation District:	220,200[6]	0	213,400[5]	92,300
Milner Irrigation District:	50,800	7,200	47,200	29,700
Minidoka Irrigation District:	314,300[8]	0	320,100[7]	147,900
North Side Canal Company:	988,200	83,300	899,900	329,900
Twin Falls Canal Company:	1,075,900	38,400	911,800	50,300

	Minimum Full Supply Needed + Reas. Carryover (acre-feet)	Preliminary Total 2005 Diversions + Carryover (acre-feet)	Preliminary 2005 Shortages and Material Injury (- *is surplus*, no shortage) (acre-feet)
A&B Irrigation District:	58,500	84,000	*- 25,500*
American Falls Res. Dist. #2:	456,800	493,700	*- 36,900*
Burley Irrigation District:	220,200	305,700	*- 85,500*
Milner Irrigation District:	58,000	76,900	*- 18,900*
Minidoka Irrigation District:	314,300	468,000	*-153,700*
North Side Canal Company:	1,071,500	1,229,800	*-158,300*
Twin Falls Canal Company:	1,114,300	962,100	152,200

18. Finding 17 supercedes Finding 120 of the May 2 Order. The preliminary total shortage and material injury of 152,200 acre-feet is 14 percent greater than the total material injury of 133,400 acre-feet predicted to be likely in the May 2 Order. Given the climate variability anticipated in the May 2 Order and the assumptions that are necessary to predict reasonably likely material injury in advance of the major portion of an irrigation season, a deviation of 14 percent is reasonable.

19. Of the members of the Surface Water Coalition, only the Twin Falls Canal Company had shortages and material injury in 2005; preliminarily, 152,200 acre-feet. There are two primary reasons for this outcome. First, only about 22 percent of the minimum full supply determined for the Twin Falls Canal Company (1,075,900 acre-feet) is derived from storage when Twin Falls receives a full storage water allocation. Thus, the benefit derived by the Twin Falls Canal Company from the unanticipated and enhanced storage allocations following the unprecedented precipitation in May and June of 2005 was significantly less than for other members of the Surface Water Coalition who receive a greater portion of their overall water supply from storage. Secondly, the reach gains to the Snake River, upon which the Twin Falls Canal Company depends to supply water to its natural flow water rights, between the Near Blackfoot Gage and the Neeley Gage declined dramatically beginning in about the second week of July, recovering in August to levels similar to those observed in August of prior years, 1995 for example, based on preliminary diversions of natural flow by Twin Falls. This caused the Twin Falls Canal Company to use considerably more storage in July of 2005, as compared to

storage used in July of 1995, although the total average supply diverted in July of 2005 was about 92 percent of the total average supply diverted in July of 1995. Average storage diversions in August and September of 2005 were 67 percent and 56 percent, respectively, as compared to average storage diversions in 1995, presumably to conserve carryover storage.

20. The accounting for surface water diversions from the Snake River described in Findings 11, 16, and 17 is preliminary. Gage shift adjustments and other adjustments must be made prior to the final accounting, but cannot be made until gage shift data is provided by the USGS. The final accounting for surface water diversions from the Snake River will be completed in mid-February or early March of 2006. In the event the final accounting for surface water diversions shows that the preliminary declines in natural flow diverted by the Twin Falls Canal Company are too large, less storage will have been diverted by Twin Falls, which will result in an increase in carryover storage and a corresponding decrease in the shortage and material injury set forth in Finding 17.

21. In addition to the adjustments made for the final accounting for surface water diversions from the Snake River described in Finding 20, the Department is continuing to evaluate the water supplies available to members of the Surface Water Coalition in 2005 and may determine that adjustments to the amounts of minimum full supply needed, as set forth in Finding 11 and Finding 116 of the May 2 Order, are warranted to account for differences in climatic variations between 2005 and 1995, the year for which diversion amounts were used to determine the amounts of minimum full supply needed, based on evapotranspiration and effective precipitation in 2005 as compared to evapotranspiration and effective precipitation in 1995. These adjustments may or may not affect the final determination of shortages and material injury resulting from depletions to the Snake River caused by the diversion and use of ground water under junior priority water rights, which determination will be made following the final accounting for surface water diversions.

Simulated Curtailment of Junior Priority Ground Water Rights

22. Nearly all ground water rights authorizing the diversion and use of ground water from the ESPA are junior in priority to the surface water rights held by or for the benefit of the Surface Water Coalition. Based on simulations using version 1.1 of the Department's ground water model for the ESPA, using the average annual consumptive use for irrigation beginning in 1980 through 2001, curtailing all ground water diversions in Water District No. 120 would, over time, increase reach gains in the Snake River between the Near Blackfoot Gage and the Minidoka Gage by a total amount of 422,500 acre-feet, which equals 65 percent of the total average annual ground water depletions in Water District No. 120, for each year of curtailment. Curtailing all ground water rights in Water District No. 130 would, over time, increase reach gains in the Snake River between the Near Blackfoot Gage and the Minidoka Gage by a total amount of 198,800 acre-feet, which equals 35 percent of the total average annual ground water depletions in Water District No. 130, for each year of curtailment. Curtailing all ground water diversions in Water Districts No. 120 and No. 130 for one year would, over time, increase reach gains in the Snake River between the Near Blackfoot Gage and the Minidoka Gage by a total amount of 621,300 acre-feet, which is more than four times the material injury preliminarily

determined to have occurred in 2005 to the water rights held by or for the benefit of the Surface Water Coalition members.

23. Based on the Department's water rights data base and version 1.1 of the ground water model for the ESPA, curtailing all ground water diversions, which at steady-state conditions reduce reach gains in the Snake River between the Near Blackfoot Gage and the Minidoka Gage by more than 10 percent of the amount of depletion to the ESPA resulting from those ground water diversions (10 percent is the uncertainty in model simulations, see Finding 30 of May 2 Order), within the modeled area for one year under water rights having priority dates of July 23, 1977, and later will increase reach gains in the Snake River between the Near Blackfoot Gage and the Minidoka Gage by a total amount of 152,500 acre-feet, over time.

24. Based on the Department's water rights data base and version 1.1 of the ground water model for the ESPA, curtailing the subset of ground water diversions for one year under water rights described in Finding 23 within the area defined as the area of common ground water supply for the ESPA in Rule 50 of the Conjunctive Management Rules (IDAPA 37.03.11.050.01) would increase reach gains in the Snake River between the Near Blackfoot Gage and the Minidoka Gage by a total amount of 142,100 acre-feet, over time.

25. Based on the Department's water rights data base and version 1.1 of the ground water model for the ESPA, curtailing the subset of ground water diversions for one year under water rights described in Finding 23 within Water Districts No. 120 and No. 130, which are wholly within the area of common ground water supply for the ESPA defined in Rule 50 of the Conjunctive Management Rules (IDAPA 37.03.11.050.01) would result in the curtailment of irrigation of 65,400 equivalent[9] acres and 26,300 equivalent acres, respectively, and would increase reach gains in the Snake River between the Near Blackfoot Gage and the Minidoka Gage by 89,200 acre-feet and 24,700 acre-feet, respectively, over time. The number of acres on which irrigation would be curtailed in Water Districts No. 120 and No. 130 total 91,700 equivalent acres, and the total amount of the simulated increase in reach gains over time between the Near Blackfoot Gage and the Minidoka Gage from curtailment in Water Districts No. 120 and No. 130 is 113,900 acre-feet.

26. Based on the Department's water rights data base and version 1.1 of the ground water model for the ESPA, curtailing the subset of ground water diversions for one year under water rights described in Finding 23 within the North Snake, Magic Valley, Aberdeen-American Falls, Bingham, and Bonneville-Jefferson ground water districts, using the most recent boundaries of the districts provided to the Department, within the area of common ground water supply for the ESPA defined in Rule 50 of the Conjunctive Management Rules (IDAPA 37.03.11.050.01) would result in the curtailment of irrigation on the following equivalent

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[9] For the ESPA ground water model, an algorithm is used to simulate the effects of supplemental ground water irrigation where surface water is deliverable for some portion of the irrigation of those lands. For each model cell, acreages simulated to be irrigated with both surface water and supplemental ground water are replaced with acreages simulated to be irrigated using all ground water such that the simulated consumptive use on the replacement acreage equals the consumptive use on the acreage with supplemental ground water irrigation. The equivalent acreage consists of the sum of acreages irrigated solely with ground water and the replacement acreages for acreages irrigated with both surface water and ground water.

acreages and increase reach gains in the Snake River between the Near Blackfoot Gage and the Minidoka Gage over time by the following amounts:

	Acres Curtailed	Total Accruals (acre-feet)	1st 6-month Accruals (acre-feet)	2nd 6-month Accruals (acre-feet)	3rd 6-month Accruals (acre-feet)
North Snake District:	5,340	3,030	0	0	20
Magic Valley District:	19,390	20,410	40	280	570
Aberdeen-Amer. Falls District:	37,930	58,230	16,360	15,850	6,660
Bingham District:	13,620	16,860	3,860	4,360	1,980
Bonneville-Jefferson District:	9,700	8,100	250	1,010	1,030
Totals:	85,980	106,630	20,510	21,500	10,260

	4th 6-month Accruals (acre-feet)	5th 6-month Accruals (acre-feet)	6th 6-month Accruals (acre-feet)	7th 6-month Accruals (acre-feet)	8th 6-month Accruals (acre-feet)
North Snake District:	40	60	70	80	90
Magic Valley District:	740	810	830	810	790
Aberdeen-Amer. Falls District:	3,820	2,540	1,860	1,430	1,140
Bingham District:	1,210	850	640	500	410
Bonneville-Jefferson District:	860	690	570	460	380
Totals:	6,670	4,950	3,970	3,280	2,810

27. The total reach gain accruals set forth in Finding 26 are the total accruals that are simulated to occur over a time period of about 20 years or more from the curtailment of the diversion and use of ground water under the water rights and for the irrigation of the lands described in Finding 26 for a single year. The 6-month accruals set forth in Finding 26 are the simulated incremental additions to the reach gains for the first 4 years following curtailment for a single year. By the end of the fourth year, approximately 70 percent of the total reach gain accruals will have occurred. Additional reach gains would continue to accrue until the effects of the single year of curtailment have been fully realized.

28. If curtailment of the diversion and use of ground water under these same rights occurred within the North Snake, Magic Valley, Aberdeen-American Falls, Bingham, and Bonneville-Jefferson ground water districts during each and every year of a four-year period, the following 6-month accruals to the reach gains are simulated to occur using the Department's ground water model:

	Acres Curtailed	Total Accruals (acre-feet)	1st 6-month Accruals (acre-feet)	2nd 6-month Accruals (acre-feet)	3rd 6-month Accruals (acre-feet)
North Snake District:	5,340	12,120	0	0	20
Magic Valley District:	19,390	81,640	40	280	600
Aberdeen-Amer. Falls District:	37,930	232,920	16,360	15,850	23,020
Bingham District:	13,620	67,440	3,860	4,360	5,840
Bonneville-Jefferson District:	9,700	32,400	250	1,010	1,290
Totals:	85,980	426,520	20,510	21,500	30,770

	4th 6-month Accruals (acre-feet)	5th 6-month Accruals (acre-feet)	6th 6-month Accruals (acre-feet)	7th 6-month Accruals (acre-feet)	8th 6-month Accruals (acre-feet)
North Snake District:	50	80	120	160	210
Magic Valley District:	1,020	1,410	1,840	2,220	2,630
Aberdeen-Amer. Falls District:	19,670	25,560	21,530	26,990	22,670
Bingham District:	5,570	6,690	6,220	7,200	6,630
Bonneville-Jefferson District:	1,870	1,980	2,430	2,440	2,810
Totals:	28,180	35,720	32,140	39,010	34,950

29. The total increase in reach gains in the Snake River between the Near Blackfoot Gage and the Minidoka Gage from curtailment for a single year within ground water districts is less than the total increase in reach gains from curtailment within Water Districts No. 120 and No. 130 by 7,270 acre-feet because not all ground water rights having priority dates of July 23, 1977, and later that are within Water Districts No. 120 and No. 130 are also within ground water districts. Nearly all such rights are located east of American Falls Reservoir in an area adjacent to the Aberdeen-American Falls Ground Water District. The amount 7,270 acre-feet is 12.5 percent of the 58,230 acre-feet increase in reach gains that would occur over time from curtailment for a single year in the Aberdeen-American Falls Ground Water District.

30. Findings 22 through 29 supercede Findings 123 through 130 of the May 2 Order.

CONCLUSIONS OF LAW

1. Conclusions of Law set forth in the May 2 Order, as applicable, are incorporated into this Supplemental Order.

2. Based on changed water supply conditions and preliminary water rights accounting through October 31, 2005, only the Twin Falls Canal Company preliminarily

incurred material injury during the 2005 irrigation season. The preliminary material injury to the Twin Falls Canal Company during the 2005 irrigation season was 152,200 acre-feet.

3. Because of the unusually high precipitation and cool temperatures in May and June of 2005, the Director should continue to evaluate the water supplies available to members of the Surface Water Coalition in 2005 and determine whether adjustments to the amounts of minimum full supply needed and shortages incurred by members of the Surface Water Coalition are warranted to account for differences in climatic variations between 2005 and 1995, the year for which diversion amounts were used to determine the amounts of minimum full supply needed, based on evapotranspiration and effective precipitation in 2005 as compared to evapotranspiration and effective precipitation in 1995. These adjustments, if any, should be combined with final adjustments from the accounting for surface water diversions from the Snake River anticipated to be completed in mid-February or early March of 2006 and may affect the final determination of material injury resulting from depletions to the Snake River caused by the diversion and use of ground water under junior priority water rights. The final determination of shortages and material injury will be made once the final accounting for surface water diversions from the Snake River has been completed.

4. Although IGWA secured at least 27,700 acre-feet of replacement water in 2005, which was the minimum amount required by the May 2 Order, only incremental increases in reach gains resulting from the lease and non-use of water rights held by FMC Idaho, LLC, the non-irrigation of leased lands, and mitigation actions implemented in Water District No. 130 were provided during the 2005 irrigation season.

5. The Department should complete the determination of the amount of replacement water provided by IGWA to individual members of the Surface Water Coalition during and subsequent to the 2005 irrigation season from incremental increases in reach gains resulting from the lease and non-use of water rights held by FMC Idaho, LLC, the non-irrigation of leased lands, and mitigation actions implemented in Water District No. 130.

6. Because IGWA is providing replacement water in lieu of curtailment of ground water rights later in priority than July 23, 1977, the Director should continue to require that IGWA provide replacement water in amounts and generally at times at least equal to the increases in reach gains between the Near Blackfoot Gage and the Minidoka Gage that would have resulted from curtailment of such rights based on simulations using the Department's ground water model for the ESPA.

7. IGWA should be required to provide the Twin Falls Canal Company with the remainder of the 27,700 acre-feet of minimum replacement water that was required in 2005 that was not provided from incremental increases in reach gains plus an additional 18,340 acre-feet of replacement water in 2006,[10] subject to the final determination of 2005 material injury, such that the remainder of the replacement water that was due in 2005 is provided at the beginning of the irrigation season in 2006 (March 15) in addition to the water supplies otherwise available to the Twin Falls Canal Company.

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[10] Total of 46,040 acre-feet equals the first and second six month accruals set forth in Finding 26 plus an additional 12.5 percent of the first and second six month accruals for the Aberdeen-American Falls Ground Water District as described in Finding 29.

8. Additional replacement water or curtailment should be required in 2006 to equal the third and fourth six-month reach gain accruals of simulated curtailment for the preliminary material injury in 2005,[11] unless the reservoir storage space held by the members of the Surface Water Coalition under contract with the USBR fills, and in addition to curtailment or replacement water required to mitigate for material injury determined to be reasonably likely in 2006, if any.

ORDER

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

1. Requirements set forth in the May 2 Order, as applicable, are incorporated into this Supplemental Order.

2. The amount of replacement water required to mitigate the preliminary material injury in 2005 caused by the diversion and use of ground water under water rights having priority dates later than July 23, 1977, shall be provided by the North Snake, Magic Valley, Aberdeen-American Falls, Bingham, and Bonneville-Jefferson ground water districts as follows:

North Snake Ground Water District	3,030
Magic Valley Ground Water District	20,410
Aberdeen-American Falls Ground Water District	65,500
Bingham Ground Water District	16,860
Bonneville-Jefferson Ground Water District	8,100

These amounts equal the increase in reach gains in the Snake River between the Near Blackfoot Gage and the Minidoka Gage that would occur over time based on the ground water model simulations described in Finding 26, except for the Aberdeen-American Falls Ground Water District. The required amount of replacement water for the Aberdeen-American Falls Ground Water District is 12.5 percent more than described in Finding 26 to provide replacement water as mitigation for ground water rights that are within Water Districts No. 120 and No. 130 but that are not within any of the ground water districts. Nearly all such rights are located east of American Falls Reservoir in an area adjacent to the Aberdeen-American Falls Ground Water District. *See* Finding 29.

3. The required replacement water can be provided over time on an annual basis in amounts and generally at times at least equal to the increase in reach gains in the Snake River between the Near Black Foot Gage and Minidoka Gage that would result from curtailment of the affected ground water rights based on simulations using the Department's ground water model for the ESPA. The simulated increase in reach gains in the Snake River from curtailment of affected ground water rights for irrigation in 2005 for the first four years is set forth in Finding 26, not including the additional reach gains from the simulated curtailment of ground water

[11] An additional 18,240 acre-feet for preliminary 2005 material injury to the Twin Falls Canal Company (sum of 10,260 acre-feet, plus 6,670 acre-feet, plus 12.5 percent of the sum of 6,660 acre-feet and 3,820 acre-feet). *See* Findings 26 and 29.

rights that are within Water Districts No. 120 and No. 130 but that are not within any of the ground water districts.

4. Because IGWA, on behalf of the ground water districts representing holders of the affected junior-priority ground water rights, only provided replacement water in 2005 through incremental increases in reach gains resulting from the lease and non-use of water rights held by FMC Idaho, LLC, the non-irrigation of leased lands, and mitigation actions implemented in Water District No. 130, IGWA shall provide the Twin Falls Canal Company with the remainder of the 27,700 acre-feet of minimum replacement water that was required in 2005, that was not provided from incremental increases in reach gains, plus an additional 18,340 acre-feet of replacement water at the beginning of the irrigation season in 2006 (March 15), subject to the final determination of 2005 material injury. The remainder of such replacement water that was due in 2005 for 2005 material injury shall be in addition to the water supplies otherwise available to the Twin Falls Canal Company in 2006, 18,240 acre-feet of replacement water or curtailment for the third and fourth six-month reach gain accruals of simulated curtailment for the preliminary material injury in 2005 (unless the reservoir storage space held by the members of the Surface Water Coalition under contract with the USBR fills), and curtailment or replacement water required to mitigate for material injury determined to be reasonably likely in 2006, if any.

5. Failure by IGWA to provide the Twin Falls Canal Company with the remainder of the 27,700 acre-feet of minimum replacement water required in 2005, that was not provided from incremental increases in reach gains, plus an additional 18,340 acre-feet of replacement water in 2006, subject to the final determination of 2005 material injury, such that the remainder of the replacement water due for 2005 material injury is provided at the beginning of the 2006 irrigation season (March 15) in addition to the water supplies otherwise available to the Twin Falls Canal Company in 2006 shall result in the immediate curtailment of ground water rights in Water Districts No. 120 and No. 130, preliminarily having priority dates of July 23, 1977, and later.

DATED this 27th day of December, 2005.

KARL J. DREHER
Director

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 27th day of December, 2005, the above and foregoing, was served by the method indicated below, and addressed to the following:

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