

FRAMEWORK

Background

The following findings of Fact were made and part of the basis for designation in the 2001 Order Designating the American Falls Ground Water Management Area:

7. The water supply available, including both natural flow and reservoir storage, for use under senior surface water rights that in part rely on reach gains is expected to be further diminished, should the drought continue, and inadequate to fully satisfy all senior surface water rights during the next irrigation season. This water supply is also expected to be reduced as a result of ground water withdrawals from the ESPA for irrigation and other consumptive purposes that are diverted in close proximity to the area of the American Falls reach without mitigating the effects of the associated ground water depletions.

8. Based upon the depletionary effects of ground water withdrawals on the reach gains and the inadequate water supply expected to be available for senior surface water rights, that portion of **the ESPA along the American Falls reach may be approaching the conditions of a critical ground water area.**

Order Designating the American Falls Ground Water Management Area - Page 2

A similar 2001 designation was made in the Thousand Springs area as well:

On August 3, 2001, the Director established the Thousand Springs Ground Water Management Area ("Thousand Springs GWMA") pursuant to Idaho Code § 42-233b. The Director designated the Thousand Springs GWMA due to concerns about the depletionary effects of ground water withdrawals under junior priority water rights and the availability of water supplies for senior priority water rights from connected surface and ground water sources during the severe drought conditions experienced across the Snake River Basin. The Director issued the order in response to his recognition that he has a responsibility, subject to the confines of existing knowledge and technology, to exercise his statutory authorities to administer water rights for the use of ground water in a manner that recognizes and protects senior priority surface water and ground water rights in accordance with the provisions of Idaho law. In establishing the Thousand Springs GWMA, the Director stated his **intent to curtail diversions under certain junior ground water rights that caused significant depletions to hydraulically connected surface water sources thereby causing injury to senior priority water rights.**

FINAL ORDER CREATING WATER DISTRICT NO. 130 - Page 1

Finally, in the *ORDER DESIGNATING THE EASTERN SNAKE PLAIN AQUIFER GROUND WATER MANAGEMENT AREA*, the following findings are instructive:

Need For ESPA Ground Water Management Area

8. The past ten years of litigation arising out of individual delivery calls under the Conjunctive Management Rules are symptoms of a larger underlying problem, i.e., **continuing declines in ESPA storage and spring discharges.** Delivery calls under the Conjunctive Management Rules result in sporadic curtailment orders and mitigation plans to address particular injuries in particular years. Delivery calls are not an efficient or effective means of addressing the underlying problem of chronic declines in ESPA storage and spring discharges, which have resulted from several factors and have developed over many years. ^{fn18} While the SWC and IGWA recently reached a stipulated settlement of their delivery call dispute that envisions reversing ground water declines, the settlement encompasses only part of the ESPA, and has not been fully implemented. Future conditions including climate change and water user practices are unknown, and the settlement does not preclude delivery calls by other senior water right holders.

9. Idaho Code § 42-233b identifies several potential tools available to the Director to more effectively **address the larger problem of declines in ESPA storage and spring discharges**, including approval of a "ground water management plan" and requiring ground water right holders **to report** "withdrawals of ground water and other necessary information." Idaho Code § 42-233b also authorizes the Director to require junior ground water right

holders not complying with an approved ground water management plan to cease or reduce diversions if the Director determines the ground water supply is insufficient to satisfy water rights within the ground water management area. A ground water management area designation under Idaho Code § 42-233b would support attainment of the ESPA storage and spring discharge objectives of the recent settlement, the State Water Plan, the ESPA CAMP, and various legislative enactments.

fn18 The City of Pocatello and others correctly point out in their comments that the Department took the position in previous litigation that a ground water management area is not necessary where a water district exists. Ltr. from Sarah Klahn, attorney for the City of Pocatello, to Gary Spackman, Dir. Idaho Dept. of Water Res. 7 (Sept. 2, 2016). However, as the above paragraph explains, an important management tool that a ground water management area provides is the opportunity to create a management plan to "manag[e] the effects of ground water withdrawals on the aquifer ... and on any other hydraulically connected sources of water." Idaho Code § 42-233b. In a conjunctive management delivery call, the primary focus is whether a junior is causing injury to the calling water right. See CM Rule 37.03.11.40.01. As learned through the recent Rangen delivery call, sometimes the solution to mitigate injury to the calling water right does not address underlying issues with the source of supply. In Rangen, IGWA mitigated the material injury by providing water from another spring source directly to Rangen. While this mitigated the injury to Rangen, it did not address the aquifer. A ground water management area and accompanying ground water management plan are the tools to address broader concerns with ground water aquifers such as the ESPA and allow for the focus to be broader than just mitigating injury to a calling water right.

ORDER DESIGNATING THE EASTERN SNAKE PLAIN AQUIFER GROUND WATER MANAGEMENT AREA

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Ground Water Management Plan

22. Idaho Code § 42-233b authorizes the Director to approve “a ground water management plan” for a designated ground water management area. A ground water management plan for the ESPA ground water management area would provide the framework for managing ground water in the areas within the ESP AM 2.1 model boundary to ensure a reasonably safe supply of ground water for irrigation of cultivated lands or other uses in the basin. The record confirms that such an approach is necessary if the objectives of arresting and reversing chronic declines in ESPA storage and spring discharges are to be realized.

25. With respect to the question of the substance or content of an ESPA ground water management plan, the starting point is the statutory requirement that a ground water management plan “shall provide for managing the effects of ground water withdrawals on the aquifer ... and on any other hydraulically connected sources of water.” Idaho Code § 42-233b. The recent Settlement Agreement between the SWC and IGWA must be commended because it adopts important consumptive use volume reductions and adaptive management measures to manage the effects of ground water withdrawals on the ESPA. However, the Settlement Agreement was written as an agreement between the SWC and IGWA and does not constitute a comprehensive ground water management plan. Because only IGWA and the SWC are signatories to the Settlement Agreement, it is unclear how many of the provisions would apply to those water users not part of IGWA who may desire protection of participating in the ground water management plan. Furthermore, the Settlement Agreement is primarily focused on irrigators. Irrigators are only one subset of water user on the ESPA. Involvement by other water users is necessary for the development of a comprehensive ESPA ground water management plan. As discussed in the comments provided by the Association of Idaho Cities, the City of Idaho Falls, and the City of Pocatello, municipalities may wish to find alternative ways to offset the effects of their ground water withdrawals on the aquifer. The Cities should be allowed the opportunity to participate in the development of the ground water management plan. Regardless of the process, the Settlement Agreement will be a key part of any future ground water management plan and it will be appropriate to incorporate all or part of the settlement into an ESPA ground water management plan.

ORDER DESIGNATING THE EASTERN SNAKE PLAIN AQUIFER GROUND WATER MANAGEMENT AREA,
Pgs. 19-20, 23-24

Framework Sections

Objectives: (highlighted portions of the above excerpts shape the scope and intent of the plan)

- “the starting point is the statutory requirement that a ground water management plan shall provide for managing the effects of ground water withdrawals on the aquifer...and on any other hydraulically connected sources of water.”
- To manage the aquifer as to reduce the risk, to the extent possible, of curtailment or reduction of ground water withdrawals over time by ensuring a reasonably safe supply of water for uses that rely upon the ESPA.
- To recognize and quantify the impacts and responsibility of legacy withdrawals on ESPA storage and spring discharges.
- To address the water supply for all water users of the ESPA and discharges
- To arrest declines and improve ESPA storage and spring discharges throughout reaches of the Snake River to protect existing water rights.
- To minimize the risk of additional administrative actions (Trust Water violations, potential cancellation, delivery call administration).
- Compliance with the Plan shall protect water users from administration pursuant to the Plan requirements.

Goal:

Restoring discharges and ground water levels to 2001 levels throughout the reaches of the Snake River, springs and within the ESPA, and initially addressing areas where water supply deficits have created conflicts are present, as the overarching goal of the ESPA Groundwater Management Plan, is legally defensible and consistent with the purpose behind the 2009 ESPA CAMP, Idaho statutes and prior agency decisions.

In 2001, the Director determined there was a technical and legal basis for creating the first GWMA on the ESPA, although limited geographically given the state of the ground water model. The drought period of 2001-2005 resulted in numerous delivery calls in 2005 throughout both the American Falls (Near Blackfoot – Milner) and Thousand Springs reaches (Milner – King Hill). The court found injury (insufficient supply to the senior spring and hydraulically connected surface rights) from ground water withdrawals.

Additionally, from 2007 to 2009 the State initiated an ESPA Comprehensive Management Plan process through which stakeholders throughout the area developed a “plan” for addressing declining water supplies reliant upon the ESPA for various beneficial uses including irrigation, municipal, hydropower, instream and other uses. Stabilization and restoration of ESPA storage and spring discharges were a focus of the process. The result was a goal of modifying the annual water budget by 600,000 ac-ft. While the goal of CAMP was generally met through recharge and weather modification (cloudseeding), ESPA water supply conditions continued to decline and have been subject to yearly variability.

Some lessons learned since State’s initiation of CAMP in 2009, include that a water budget goal failed to ensure that supply satisfied demand and as such conflict and administrative actions have not ceased. Further, a simple water budget change has failed to recognize the time delay impact of ground water pumping on surface water supplies, including hydraulically connected water rights.

Implementation:

Comparing 2001 data to 2021-2023 data identifies declines of approximately 10-80% depending upon the measuring point. Further, according to Mike McVay, since 2015 the ESPA storage has declined by approximately an additional 300,000 ac-ft. This decline has occurred despite the extensive IWRB managed recharge program and cloudseeding program partnership with Idaho Power Company (natural recharge) which together met the 2009 ESPA CAMP Goal of changing the ESPA water budget by 600,000 ac-ft. Additionally, there has been ESPA ground water consumptive use reductions pursuant to the 2015 settlement agreement.

Hence, the status quo which has focused on inputs and outputs to the ESPA water budget has been shown inadequate to recover, much less stabilize. Further, the water budget deficit fails to address “*Areas of Concern*,” that is, local areas of existing and growing water supply shortfalls which impact individual water users, local communities and Snake River basin through higher input costs (higher O&M, power rates, reduced deliveries or curtailments, etc.).

Timeframe:

25-year recovery period: 5 years to stop declines and then 20 years to recover and stabilize to 2001 levels.

Step 1 -*Stopping Declines*: Water budget change of approximately XXX,000 ac-ft (per IDWR documents : Weaver document; Sukow information; & McVay information and modeling).

- Areas of Concern: To go beyond the status quo, as described above, step 1 would identify and target areas of concern to address GW levels, spring/RG discharges where declines are impacting immediate deliveries.
- Water Budget actions should be taken to diminish the impacts from declines on water right holders and as such would require demonstration of benefit initially through modeling and eventually through improvements at identified measuring points.

Step 2 - *Rate of recovery to 2001 level*: average rate of recovery (using 3-5 year running averages. Where actions fail to meet or exceed the rate of recovery over the timeframe, adaptive management must change the actions taken.

Measuring points: (Examples)

Blackfoot – Neeley/Milner RGs (NBNRG)

Milner – Swan Falls RGs

Box Canyon gage

Alpheus Creek

Curren Tunnel

A&B wells

Sentinel Wells

Other points (Mud Lake, Egin Bench, etc.?)

Sub-Goal Benchmarks

a. Near Blackfoot to Neeley/Milner Reach Gain (NBNRG) 2001 Goal and Benchmarks.

- i. By April 1, 2049, the goal of this Plan is to reverse the trend of declining NBNRG and increase NBNRG to a level equal to the 2001 NBNRG levels identified in the attached table.
- ii. The following benchmarks shall be established:
 - A. Stabilization of the NBNRG at the 2023 volume (ac-ft) (“Baseline”) by no later than April 2029 (refer to table provided);
 - B. Increase in the NBNRG by April 2034 to a point where NBNRGs have increased from the Baseline by (%); (ac-ft); and,
 - C. Increase in NBNRG by April 2039 to a point where NBNRGs (May - September) have increased from the Baseline by (%); (ac-ft);
 - D. Increase in NBNRG by April 2044 to a point where NBNRGs (May - September) have increased from the Baseline by (%); (ac-ft);
 - E. Increase in NBNRG by April 2049 to a point where NBNRGs (May - September) have increased from the Baseline by (%); (ac-ft).
- iii. For the period beyond 2049, as long as NBNRG shall continue to meet or exceed the 2049 goal, no additional adjustments to the water budget shall be required based upon a five-year average. If the NBNRG declines during a five-year period, additional water budget actions shall be required. If any of the benchmarks is not achieved, adaptive measures will be identified and implemented per section AA below.

b. Similar to “a” above, sub-goal benchmarks will be established for “Milner to Swan Falls RGs”; spring(s); ground water level(s); others with specific consideration to areas of concern.

Potential Actions

- Near-term actions to address water supply shortfalls and *Step 1* stabilization through:
 1. Reduce Aquifer withdrawals through verified consumptive use reductions from 2023 GW withdrawals. If reductions are offset by conversions or recharge, such actions must consider proximity of such alternative actions to the expected reduction. Reductions or allocations shall give credence to ground water priorities.
 2. Prioritize IWRB recharge and new site development in locations to address immediate water supply shortfalls in areas where administrative or data driven actions are supported (NB-Neeley RGs, Curren Tunnel, Swan Falls minimums);
 3. Directed cloudseeding in basins experiencing deficits (Additional funding questions); and,
 4. Review 2009 ESPA CAMP management strategies (CAMP pg. 10) to identify additional actions. Review Table 2 “Plan Hydrologic Targets.” (CAMP pg. 11)
 5. Consideration shall be given to the priorities of ground water rights acquired from the state recognizing the timing and magnitude of ground water level declines, spring discharges, reach gains at the time of original appropriation.

The use of any type of averaging must be reconciled with annual obligations and allocations and should not exceed a three year period, and should be on a “trailing” basis (basing allocations and/or actions on the prior three year water supplies).

ESPA/Water District Administration

- i.* All water rights within the ESPA GWMA boundary will be brought into GWDs/Water Districts.
- ii.* The State shall prioritize modeling and data collection, and policy changes to support expanding the boundary of the GWMA and uses covered (domestics) which impact water budget allocations and benchmark obligations.
- iii.* Water Districts 100, 110, 120, 130 and 140 assessing their water users to fully fund staff to perform the following:
 - A. Measurement/Meter Reading: Water Districts 100, 110, 120, 130 & 140 shall implement meter reading on a bi-weekly basis commencing in 2025. All ground water pumps shall have an IDWR approved, and properly operating measurement device installed as required by IDWR. If it is determined that a measuring device was not properly operating during an irrigation season, a cropping pattern methodology approved by IDWR will be utilized to determine ground water usage until such measuring device is installed.
 - B. Compliance and Enforcement: By _____ of each year the GWDs will submit: 1) a projected upcoming season allocation/delivery plan; and 2) a compliance report for the prior year to the Water District for confirmation and compliance with the annual mitigation plan. All compliance reports shall be submitted for review by February 1 of

each year following Water District review. IDWR will verify each District's annual diversion volume and other diversions reduction data (recharge, CREP, conversions, end-gun removals, etc.) to confirm the accuracy of the data. If an annual report indicates that a GWD is out of compliance, a corresponding reduction shall be required the following year(s) as required by the Director in order to remain in compliance with the Plan.

- C. Compliance with the Plan shall constitute safe harbor from administration of the Plan. However, compliance with the Plan shall not preclude administration under the Conjunctive Management Rules as recognized by statute.

IWRB Programs (Managed Recharge & Cloudseeding)

Managed Recharge: Support State sponsored and funded managed recharge program of up to 250,000 ac-ft annual-average across the ESPA (unless total amount amended as provided by various processes/approvals of IWRB, IPC, water users), following State action to the State Water Plan, legislative changes and voluntary agreements with other water users necessary to effectuate an increase to the sponsored managed recharge program. The State managed recharge program will focus new development on recharge sites and water delivery priorities which initially address the areas of concern.

State Cloudseeding Program in partnership with IPC: Support the continued Program consistent with the State Water Plan, ESPA CAMP, existing agreements with IPC and other necessary agreements to ensure the benefits of cloudseeding are realized by those stakeholders who participate in the funding and operation of the program. Stakeholders recognize the added water resulting from the program to natural recharge, potential incidental recharge and water available to managed recharge under a program agreed to by the IWRB and IPC.

Adaptive Water Management Measures.

If any of the sub-goal benchmarks or GWMA goal, once established, are not met, the Steering Committee shall submit a plan that includes additional recharge, diversion reductions, consumptive use reductions, or other measures, together with data and modeling support, or request that the IDWR identify actions to rectify said failure within 60 days following the failure to achieve the benchmark or goal. Failure to comply with the Plan or Director approved amendments shall result in administration by the Director consistent with statute.

Plan Compliance

Continued compliance with the Plan or Director ordered modifications shall result in protection from administration under the Plan. This protection shall not extend to administrative actions pursuant to the Conjunctive Management Rules (delivery calls/priority administration).

Framework Summary

Goals/Objectives:

“the starting point is the statutory requirement that a ground water management plan shall provide for managing the effects of ground water withdrawals on the aquifer...and on any other hydraulically connected sources of water.” *Director’s GWMA Order*.

- To avoid, to the extent possible, curtailment or reduction of ground water withdrawals by ensuring a reasonably safe supply of water for uses that rely upon the ESPA.
- To recognize the impacts and responsibility of legacy withdrawals on ESPA storage and spring discharges.
- To address the water supply for all water users of the ESPA and discharges.
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Goal:

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Timeframe: 25-year recovery period: 5 years to stop declines and then 20 years to recover and stabilize at 2001 levels

Step 1 - *Stopping Declines/Stabilization*

Step 2 - *Rate of recovery to 2001 level: average rate of recovery (using 3-5 year running averages)*

Measuring points: W/Benchmarks (Check-ins)

Blackfoot – Neeley/Milner RGs (NBNRG)

Milner – Swan Falls RGs

Box Canyon gage

Alpheus Creek

Curren Tunnel

A&B wells (other wells?)

Potential Actions:

Near-term actions to address water supply shortfalls and *Step 1* stabilization.

1. Reduce Aquifer withdrawals through verified consumptive use reductions from 2023 GW withdrawals.
2. Prioritize IWRB recharge and new site development in locations to address immediate water supply shortfalls in areas where administrative or data driven actions are supported.
3. Directed cloudseeding in basins experiencing deficits.
4. Review 2009 ESPA CAMP management strategies (CAMP pg. 10) to identify additional actions.

Other Actions/considerations

ESPA/Water District Administration:

- i.* All water rights within the ESPA GWMA boundary will be brought into GWDs/Water Districts.
- ii.* The State shall prioritize modeling and data collection, and policy changes to support expanding the boundary of the GWMA and uses covered (domestics) which impact water budget allocations and benchmark obligations.

Water Districts 100, 110, 120, 130 and 140 assessing their water users to fund performing measuring, monitoring and enforcement.

Compliance with the Plan shall constitute protection from administration of the Plan. However, compliance with the Plan shall not preclude administration under the Conjunctive Management Rules as recognized by statute.

IWRB Programs (Managed Recharge & Cloudseeding)

Adaptive Water Management Measures

Plan Compliance

Continued compliance with the Plan or Director ordered modifications shall result in protection from administration under the Plan. This protection shall not extend to administrative actions pursuant to the Conjunctive Management Rules (individual delivery calls / priority administration).

Eastern Snake Plain Aquifer
Groundwater Management Area
Historical Hydrologic Monitoring Data

Reach Gains (Acre-feet)	1993-2004		2004-2022		2010-2015		1993		2001		2005		2022	
	Blackfoot- Neeley	Milner- Swan Falls	Blackfoot- Neeley ¹	Milner- Swan Falls	Blackfoot- Neeley	Milner- Swan Falls	Blackfoot- Neeley	Milner- Swan Falls	Blackfoot- Neeley	Milner- Swan Falls	Blackfoot- Neeley	Milner- Swan Falls	Blackfoot- Neeley*	Milner- Swan Falls
Annual Discharge	1,728,925	4,514,091	1,484,081	4,132,911	1,436,287	4,105,832	1,822,241	---	1,803,617	---	1,500,778	3,951,490	1,382,092	3,956,885
May-Sept.	705,562	1,683,800	603,874	1,558,879	579,818	1,530,200	760,948	---	740,412	---	612,590	1,513,776	588,410	1,478,474
Nov.-Feb.	586,012	1,616,184	498,770	1,481,616	495,755	1,483,935	572,545	---	601,311	---	499,910	1,404,922	481,895	1,452,762
March	146,242	414,752	127,687	369,369	121,523	368,800	151,897	---	157,784	---	128,552	353,562	110,298	347,155
December	144,939	415,559	126,314	382,713	129,457	382,713	151,711	---	148,532	---	126,605	376,558	125,956	375,887
Springflow Annual Discharge (CFS)														
Box Canyon	335.1		316.3		321.4		326.7		335.2		311.1		305.2	
Blue Lakes ²	164.6		145.6		138.1		160.9		169.3		164.3		145.9	
Curren Tunnel	11.9		4.7		3.5		14.3		10.2		2.9		1.9	
A & B Irrigation District Wells (depth to water, ft bgs) March/April														
08S 25E 16DAC1	176.63		187.63		---		173.03		170.33		179.74		213.83	
08S 23E 27BDC1	197.06		---		---		198.36		194.35		201.04		---	
09S 22E 16CDB1	262.58		281.27		---		261.37		259.88		272.50		293.05	
09S 22E 33ADA1	245.86		---		---		244.53		244.74		251.42		---	
10S 21E 26AAA2 ³	273.93		287.00		288.39		272.18		273.30		284.76		285.82	

¹Nov.-Dec. 2022 Blackfoot-Neeley reach gains pulled from SWC Dashboard (months were missing from Water District 1 calculations).

²Blue Lakes Spring (gage 13091000) data combines USGS and IDWR dataset (IDWR began monitoring in 2008).

³Well is immediately south of A&B Boundary.