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May 31, 2011

Mr. Rich Rigby
Senior Advisor
Idaho Department of Water Resources
322 East Front Street
P.O. Box 83720
Boise, ID 83720-0098

Re: *Petition of Clear Springs Foods to Amend Rule 50, Conjunctive Management Rules*

Dear Mr. Rigby:

I have been authorized to submit these comments to the Idaho Department of Water Resources ("Department") on behalf of those persons in the Little Lost River Basin listed in the attachment to this letter who would be adversely affected by a decision of the Department to expand the currently-designated boundary of the Eastern Snake Plain Aquifer ("ESPA") area of common ground water supply to encompass their lands and water rights as proposed in the Clear Springs Foods Petition. For the reasons discussed below, my clients oppose the Petition and urge the Department not to proceed with the requested rulemaking process and rule amendment.

Background

The Conjunctive Management Rules ("CMRs") were adopted in 1994 in large part as a result of calls for priority administration of junior ground water rights made by spring water users with water rights in the Thousand Springs area of the Snake River and by certain surface water users with natural flow and storage rights above Milner Dam. Under the CMRs, ground water rights within what is designated an "area of common ground water supply" are subject to priority administration as against other ground water rights within the designated area and senior surface water rights whose source of water is affected by diversion and use of ground water. At the time of the CMR rulemaking, the most comprehensive source of information concerning the occurrence and movement of ground water in the ESPA was summarized in a report authored by S.P. Garabedian of the U.S. Geological Survey entitled *Hydrology and Digital Simulation of the*

Regional Aquifer System, Eastern Snake River Plain, Idaho, USGS Professional Paper 1408-F, 1992. Among other things, the Garabedian Report described a ground water model that simulated ground water flow in the EPSA.

The boundary delineating the ESPA for purposes of the USGS ground water model described in the Garabedian Report was used to describe an "area of common ground water supply" for the ESPA under Rule 50.01 of the CMRs because the USGS model was considered the best means of understanding ground water flows at the time. Subsequent modeling efforts have sought to refine and improve the data inputs and calibration and provide a tool for priority administration of ground water rights within the ESPA area of common ground water supply designated by Rule 50.01 of the CMRs.

The Petition filed by Clear Springs Foods, Inc., requests amendment of the ESPA area of common ground water supply designated in 1994 to incorporate additional land areas that now are included within the boundary of the ESPAM1.1 ground water model. IDWR has requested public comments concerning the Petition in contemplation of possibly initiating a rulemaking that would consider such an amendment.

The Little Lost River water users sponsoring these comments divert and use ground water and surface water rights within an area of the lower portion of the Little Lost River basin that would be incorporated into an amended area of common ground water supply if Rule 50.01 of the CMRs is amended to include areas now incorporated in the ESPAM1.1 modeling boundary as requested by the Petition. As such, if the Petition was granted, and the ESPA area of common ground water supply were extended to include their lands, their water rights would be subject to conjunctive administration under the CMRs, presumably so they could become potentially subject to curtailment to satisfy senior spring and surface water rights along the Snake River. My clients oppose the proposed rule amendment for the reasons stated below.

Comments

1. Neither ESPAM1.1 nor ESPAM2 are Demonstrated to be Reliable Tools for Administration of Ground Water Rights in the Little Lost River Basin.

It is our understanding that several iterations of the ESPA ground water model have been undertaken in an effort to improve its reliability and usefulness as a tool for understanding ground water flows and interrelationships between the ESPA and interconnected surface water sources. We also understand that the incorporation of additional ground water irrigated areas into the model boundaries was done to improve the ESPA model calibration. While it may have been useful to the modeling process to incorporate additional model cells and additional assumptions to improve the fit of simulated and observed conditions, ESPAM1.1 has not been demonstrated to reliably simulate the timing or location of the effects of ground water pumping or curtailment occurring within the ESPAM1.1 boundary extension. It, therefore, cannot be used as a tool to actually *administer* ground water rights in the Little Lost River vis a vis the Snake River.

Although the model simulations do predict effects of pumping or curtailment in terms of time and location, the model has not been subjected to any uncertainty analysis by which to evaluate the reliability of these predicted effects. Currently, all that is reliably certain is that effects of administration (i.e., curtailment of ground water pumping in the Little Lost River Basin) will take a very long time to manifest themselves, and will be distributed to an uncertain extent across numerous reaches of the Snake River. Since the model has not been demonstrated to reliably allocate or distribute these estimated effects to specific river reaches, it is not a sufficient tool for administering specific ground water rights in the Little Lost River Basin to deliver water to a specific calling senior in a specific river reach. Until an appropriate uncertainty analysis has been performed on the current model, it should not be used as a tool to administer ground water rights in the expanded model boundary respecting the Little Lost River.

2. ***Assuming ESPAM1.1 was Shown to be Reliable with Respect to Simulated Effects of Ground Water Pumping or Curtailment in the Extended Little Lost River Boundary Area, the Simulated Effects are Too Small to Warrant Conjunctive Administration.***

Even assuming the model can be validated with respect to simulated effects of ground water withdrawals or curtailments in the Little Lost River Basin, the simulated effects are too small to warrant extension of the ESPA area of common ground water to coincide with the extended ESPAM1.1 model boundary. This is in large part because of the relatively small amount of ground water depletion that could be attributed to the extended area and its remoteness from the locations on the Snake River from which delivery calls by senior water right holders might be expected.

Total current ground water irrigated acres in the extended model boundary affecting the Little Lost River Basin is 10,272 acres. Approximately 8,496 acres within this area are served by mixed ground and surface water sources. These 18,768 acres irrigated with ground water conservatively account for approximately 29,000 acre-feet of consumptive use annually, or less than 1.5 percent of the estimated total annual consumptive use attributable to ground water withdrawals on the ESPA. If only half of all the effects from Little Lost River pumping would accrue to the Snake River between Blackfoot and Milner (as suggested by ESPAM1.1), the administration/curtailment of all such ground water diversions would produce only approximately 14,500 acre-feet per annum of benefit to this extended river reach at steady state (i.e., in approximately 150 years). ESPAM1.1 predicts that only about 7,500 acre-feet per annum could be expected to accrue to the same river reach in 14 years. (*See* May 17, 2011 Memorandum, Rocky Mountain Environmental Associates, Inc. included as Attachment A hereto) Annualized, this equates to only about 10 cubic feet per second of predicted additional flow distributed over a 120-mile stretch of the Snake River, which is in the range of only 0.2 and 0.5 percent of the mean annual flow of the Snake River.[1]

[1] USGS Streamflow Data, annual statistics, Snake River at Blackfoot and Neely gages (1998-2010).

With respect to predicted accruals to all reaches *below* Milner, ESPAM1.1 predicts only 3 percent of annual depletions attributable to ground water irrigation in the Little Lost would be realized by administration after 150 years. In other words, curtailment of all Little Lost ground water diversions would produce only approximately 870 acre-feet per annum distributed across the entire below-Milner reach of the Snake River at steady state conditions. This would equate to a little more than 1 cfs of increased reach gain. After curtailing all ground water diversions for irrigation in the Little Lost for 14 years, the accrual to the entire below-Milner reach would only be approximately 0.6 cfs or about 270 gallons per minute.

In other words, even assuming that ESPAM1.1's accuracy and reliability are acceptable with respect to the added model cells in the Little Lost, curtailment of ground water diversions serving close to 20,000 irrigated acres in the Little Lost community would produce both immeasurable and indiscernible benefits to any reach of the Snake River. As such, there is no conceivable delivery call that could be made out of any reach of the Snake River that could be shown by ESPAM1.1 to be satisfied at any time, let alone in a reasonable time, by extending conjunctive administration of ground water rights in the Little Lost River Basin as proposed. So long as the model cannot predict with reasonable certainty where the effects of ground water curtailment in the Little Lost will manifest themselves, or in what amounts, it does not provide an adequate basis to administer those ground water rights under the CMRs, and the administrative boundary of the ESPA area of common ground water supply should not be extended to correspond with ESPAM1.1.

3. ***Amendment of the Area of Common Ground Water Supply to Correspond with the ESPAM1.1 or ESPAM 2 Model Boundary Would be Arbitrary.***

Amending the boundary of the ESPA area of common ground water supply to correspond with the ESPAM1.1 model boundary also would be arbitrary inasmuch as the ESPAM1.1 model boundary fails to incorporate other tributaries that are known to contribute water to the ESPA. The decisions by IDWR and/or the modeling committee to include or exclude additional areas from the model boundaries apparently were based on improving the water budget calculations and model calibration—i.e., criteria other than priority administration of water rights. It is arbitrary to use these modeling criteria as the basis for water rights administration under the CMRs.

This is highlighted by the fact that other tributaries (Teton, Camas, Medicine Lodge, Birch Creek) were not included within the ESPAM1.1 boundary and so presumably would not be incorporated into an amended area of common ground water supply, even though they are known to contribute water to the ESPA and the ESPAM models are constructed to account for these inputs. Including some tributaries and not others that have similar hydrologic conditions in either the model or the designated area of common ground water supply is arbitrary.

In conclusion, Clear Springs Food's Petition to amend the boundary of the ESPA area of common ground water supply should not be granted. The model boundaries were revised based on model construction and calibration criteria, which bear no relationship to water right

administration criteria, including futile call. The ESPA ground water model needs to be fully validated, which would include an uncertainty analysis demonstrating that the model predictions are reliable as to the effects of pumping in all areas, before the model boundary can serve as the area of common ground water supply boundary. The model also would need to show that administration of ground water rights in the Little Lost River Basin actually would produce reach gains in specific reaches of the Snake River that are substantial as opposed to theoretical, immeasurable, and indiscernible. Otherwise, it is arbitrary and capricious to include ground water users in the Little Lost within an expanded area of common ground water supply or seek to administer their water rights in an attempt to deliver water to prior spring or surface water rights at the Snake River.

Thank you in advance for your careful consideration of these comments.

Sincerely,

Michael C. Creamer

Enclosures

cc: Little Lost River Water Users listed in Attachment B

MCC:ch
11272-1_1168347_3.DOC

Attachment A

TO MAY 31, 2011 COMMENTS OF LITTLE LOST RIVER WATER USERS TO PETITION OF CLEAR SPRINGS FOODS TO AMEND RULE 50, CONJUNCTIVE MANAGEMENT RULES

Rocky Mountain ENVIRONMENTAL ASSOCIATES, INC.

MEMORANDUM

To: Michael C. Creamer
Givens Pursley LLP

Fr: Bryce A. Contor
Rocky Mountain Environmental Associates

Date: 17 May 2011

Re: Hydrologic effect of groundwater curtailment in the Little Lost River

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This memo reports on my assessment of the hydrologic effect that curtailment of groundwater pumping for irrigation in the Little Lost River would have upon springs tributary to the Snake River and reaches of the Snake River that are connected to the Eastern Snake Plain Aquifer. I used IDWR's Eastern Snake Plain Aquifer Model Version 1.1 (ESPAM1.1) for this analysis and its inherent uncertainty applies to my results.

1. Magnitude of groundwater pumping impact.

   Using the irrigated lands data set Irr_Lands_2006_CLU from IDWR, I selected all Little Lost groundwater-irrigated lands lying inside the model boundary of ESPAM1.1 but outside the current Area of Common Groundwater Supply of the Conjunctive Management Rules. These data indicate 10,272 acres irrigated solely by groundwater and 8,496 acres that have both groundwater rights and surface-water rights (mixed-source acres).

   Estimating net depletion of 2 acre feet per acre per year on groundwater-only acres and 1 foot per year on mixed-source acres (with the balance assumed to be supplied by surface-water rights), the consumptive use from groundwater irrigation is approximately 29,000 acre feet per year. This is less than 1.5% of total groundwater consumptive use on the Eastern Snake River Plain Aquifer.

2. Calculation of effects on springs and the Snake River.

   IDWR's groundwater rights transfer spreadsheet is based on ESPAM1.1. Using this

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spreadsheet, I applied a hypothetical 1,000 acre feet per year curtailment in model row 30, column 130, at the approximate centroid of Little Lost River irrigated lands. In the past I have verified that at large distances from the springs and river, using a centroid is adequate for analysis of a contiguous irrigated area. Using a hypothetical 1,000 acre feet allows easy calculation and visualization of percentages. Because of the underlying mathematics of the tool and model, the results are fully scalable and apply equally to pumping, recharge or curtailment. For instance, if the result from 1,000 acre feet of curtailment is 50 cfs, the result from 2,000 acre feet will be 100 cfs.

3. Results.

Figure 1 shows that (within the limitations of the model) approximately half the benefit of curtailment in the Little Lost is predicted to eventually reach the Snake River between Blackfoot and Milner,[1] with only three percent predicted to accrue to reaches below Milner. Figure 2 shows the model's representation of the timing of effects. About 14 years are required for half the benefit to arrive, and over 30 years for 90%. Though not apparent in the graph, even after 150 years not all the benefit is shown to have reached the springs and river.

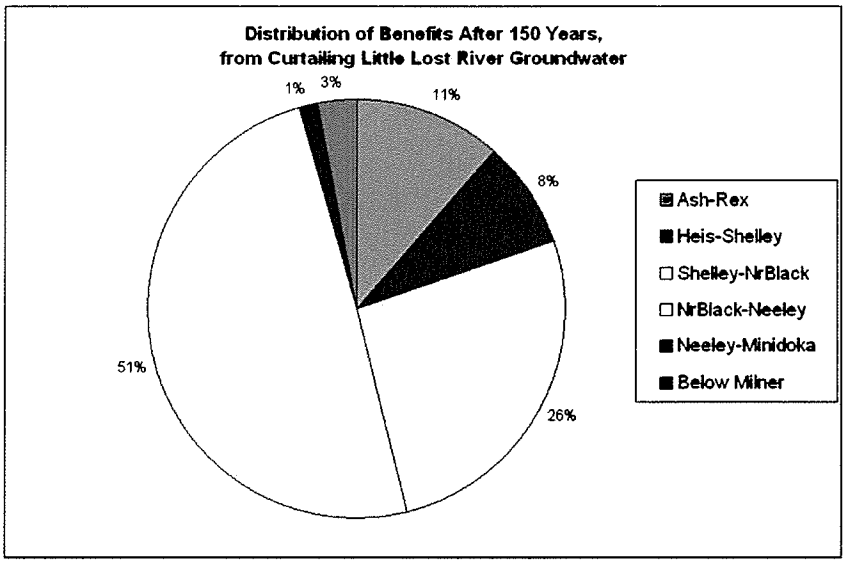

Figure 1. Approximate spatial distribution of effects of pumping or curtailment in the Little Lost.

[1] The model represents the river as perched between Minidoka and Milner, so above-Minidoka results are actually above-Milner results.

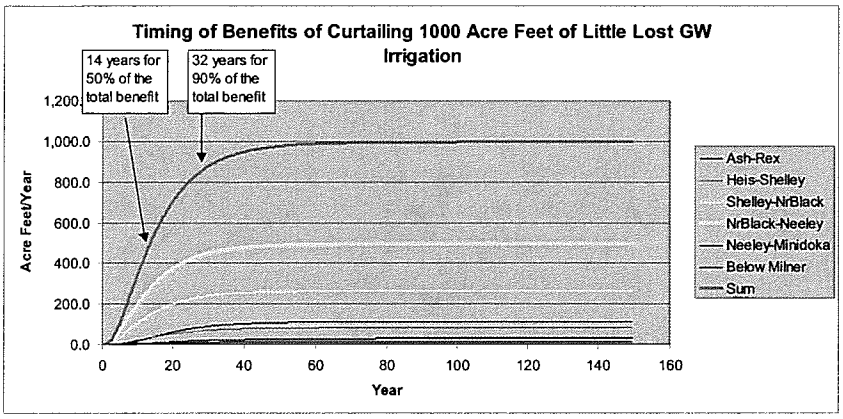

Figure 2. Approximate timing of effect of pumping or curtailment in the Little Lost.

Combining the acreage and consumptive use analysis with the modeling analysis, I estimate that if the Little Lost groundwater pumping were curtailed to benefit below-Milner water rights, after 14 years the benefit would be approximately 435 acre feet per year (29,000 x 0.03 x 0.50), or about 0.6 cubic feet per second (cfs) spread across the entire reach. Even after 150 years of curtailment the benefit would barely amount to 1.2 cfs.

After 14 years the estimated benefit between Blackfoot and Milner is about 7,500 acre feet per year (29,000 x 0.52 x 0.50) or about 10 cfs.

I caution that these results are subject to the uncertainties inherent in the model, which have not been fully evaluated. In general, uncertainty increases as one attempts to describe exactly where effects will propagate, and as one attempts to predict when they will arrive. These uncertainties increase with distance, and obviously the Little Lost is on the far margin of the model domain, opposite the springs and river.

Sincerely,

Bryce A. Contor

Bryce A. Contor
Hydrologist

Attachment B

TO MAY 31, 2011 COMMENTS OF LITTLE LOST RIVER WATER USERS TO PETITION OF CLEAR SPRINGS FOODS TO AMEND RULE 50, CONJUNCTIVE MANAGEMENT RULES

1. Brian Harrell
2. Wade Williams
3. WT Williams, Inc.
4. Owen Romrell
5. Aaron Romrell
6. Scott Allen
7. Brent Allen
8. Norm Allen
9. Allen Farms
10. David R. Callister
11. Don O. Callister
12. Callister Dairy
13. Matt LaGomarsino
14. Jeff Hawley
15. Nickerson Farms
16. Dennis Weeks
17. Isham Farms
18. Pancheri, Inc.
19. Dean Mays
20. Mays Land & Livestock
21. David Andreason