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Southern Region

09 Mar 2004

To: Karl J. Dreher, Director
State of Idaho Department of Water Resources
1301 North Orchard Street, P.O. Box 83720
Boise, Idaho 83720-0098

Re: Objection to the Order for Curtailment of ground water pumping and other consumptive uses in Water District #130 issued on 25 February 2004.

I am a groundwater right holder in the State of Idaho, the North Snake Groundwater District and Water District #130. I am also a member of the Middle Snake Regional Water Resource Commission representing Lincoln County. Since our pumpers association had not filed an objection as of Friday 05 March 2004 at 4:30 P.M. I am filing an objection as an individual.

I have the following objections and questions regarding the above order for curtailment:

1. #1 on page 1 of the Curtailment Order dated 25 February 2004
".....The ESPA is also defined as an area having a common ground water supply." This would mean that Water District #130 and Water District #120 are hydrologically connected. Therefore the eliminatioin of Water District #120 from the Curtailment Order dated 25 Febraury 2004 is in error. Or it could also mean that parts of Water District #130 must be eliminated from the Curtailment Order if parts of Water District #120 are correctly eliminated.

2. #6 on page 2
You include only the last four consecutive years of drought. There have been many years of drought since the diminishment of flow due to changes in surface water irrigation. These drought years have an effect as evidenced by #60 on page 15 of the Curtailment Order listing 1990-1996 as a decrease, 1997 and 1998 as a rebound and 1999 as a significant decrease in flow at the Rangen hatchery facilities. This data should have been used to form some estimate of the effects of drought on the decrease in spring flow instead of attributing the entire decrease to groundwater pumping and diminishment of incidental recharge.

The direct correlation of the effect of the repairs to the Northside Canal Company on the flow of the springs indicates that the incidental recharge from the canal systems created the increase of flow of the springs over the base flow measured by the USGS in the early 1900's. Since this increased flow occurred independent of drought years or above average natural recharge years, it appears that the incidental recharge from the irrigation systems is actually waste water and hence should be subject to waste water law.

3. #64 on page 16
What exactly has Rangen done to meet your definition of "....reasonable efforts..."? Failure to include what was done is a flaw in the Curtailment Order.

4. #69 on page 17
Why do you eliminate "....alternate means of diversion..." and "....alernate points of diversion..." based soley on your inability to think of alternate means and points of diversion? Failure to allow consideration of these possibilities is a flaw in the Curtailment Order.

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5. #73 on page 18
Does your model actually show that no time period, however long , will never have any impact on the Thousand Springs Reach? You have been assigning compensations to the amount of water needed for a transfer of rights depending whether the transfer is up or down gradient. Donna Cosgrove spoke to the Middle Snake Regional Water Resource Commission last year and showed that water withdrawl from any point in the ESPA effects all points within the ESPA both up and down gradient. The University of Idaho web site for the Idaho Falls branch of the the university also shows that the model you use shows that a withdrawl from any point in the ESPA effects all points within the ESPA both up and down gradient. The failure of the model to show impact regardless of the length of time involved is inconsistent with your other uses of the model and therefore is a flaw in the Curtailment Order.

6. #74 on page 18
I have been told that the 53000 acre feet is actually 26500 acre feet because the larger amount is for two years rather than one year. Who ran the simulation that you used for the Curtailment Order? Since this is an error might there be other errors in the simulation you used for the Curtailment Order? Have you found any other errors?

7. #75 on page 18
If the model cannot provide accurate simulations of the effects from curtailing individual ground water rights, how do you use the model for the transfer of water rights? Or do you use a different model for the transfer of water rights? If you use a different model for the transfer of water rights, why did you not use this different model for the simulation of the Curtailment Order? If the same model was used for the Curtailment Order that is used for the transfer of water rights your conclusion in #75 constitutes a flaw in the Curtailment Order.

8. #79 on page 19
Are you excluding Lincoln County from the Curtailment Order? If not failure to include Lincoln County is a flaw in the Curtailment Order.

9. #1 on page 19
Do you have control over Jeff Martin? Do you have control over the ditch riders that are employed by the canal companies? Do you have control over Cindy Yenter who is employed by the North Snake Ground Water District? If so are you required to pay any of their wages for this control? This issue of control being included in the Curtailment Order does not seem to clarify anything and its inclusion may constitute a flaw in the Curtailment Order.

10. #4 on page 20
As a point of clarification do the Conjunctive Management Rules apply only to surface and groundwater rights with a common groundwater supply? Would surface water rights not connected to a groundwater supply be under the Conjunctive Management Rules?

11. #5-01 on page 20
Are the springs in the Thousand Springs Reach considered to be surface or ground water?

12. #6-04 on pages 20 and 21
Does a futile call only apply to material injury to the right holder making the call? Or does a futile call also require consideration of relative material damage to those who receive the curtailment order? For example if the right holder receiving the curtailment order suffers 37.5 times the material damage that the right holder making the call gains from the curtailment order would not the call be futile? Your office was sent copies of the Economic Implication of Curtailing Groundwater Pumping prepared by Wm. F. Hazen and Robert M. Ohlensehlen of the University of Idaho Extension Service. This study only considers curtailment of consumptive groundwater pumping for rights junior to 1967 and hence the comparative figures are less than the figures curtailment of groundwater rights junior to 13 July 1962 will generate. Failure to consider the economic impact of this study is a flaw in the Curtailment Order.

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13. #6-04 on pages 20 and 21
I may not understand what I am reading, but how can material damage or injury be used as a basis to sustain a call if the damage or injury is not immediately measurable, involves a remote hydrologic connection in a large resource and no direct immediate relief can be achieved?

14. #7-01a on page 21
Does the Curtailment Order accomplish the desired results in one year or is it accomplished over a period of up to the five years allowed?

15. #8-01b and #8-01h on pages 22 and 23
Has Rangen explored any alternate means of diversion or any alternate points of diversion? If so what have they done?

16. #17 on page 24
What time factor was used to rule that there would be no material increase in the flow of the Thousand Springs Reach if water rights junior to 13 July 1962 in Water District #120 were curtailed ? Would the same time factor exclude portions of Water District #130? If so the Curtailment Order is flawed.

17. #21 on page 25
Does this indicate that the model you used to run the simulation for the Curtailment Order is not reliable in determining the effects of groundwater diversion on the Thousand Springs Reach? If so the Curtailment Order is flawed.

18. #22 on page 25
Can the 53000 acre feet be applied anywhere in Water District #130 to mitigate the material damage to Rangen?

19. #5 on page 27
If you were to decide that any monthly report indicates that the 53000 acre feet of recharge water is not substantially on schedule would you immediately shut off all groundwater withdrawls junior to 13 July 1962? Or does #6 and #7 on pages 27 and 28 mean you would have to wait until 15 August 2004 to shut off the junior pumping rights?

20. One further complication is that Cindy Yenter's letter dated 26 February 2004 regarding the Curtailment Order states that 15 March 2004 is the deadline for filing objections. This is incorrect because the 15 March 2004 deadline refers to objections of groundwater pumpers in Water District #130 that are not members of either the North Snake Groundwater District or the Magic Valley Groundwater District. I called your Boise office and Tim Luke said that the deadline for filing objections is the close of business on 10 March 2004 and that objections can be filed at any of your offices.

21. Does aquaculture have equal footing with agriculture in the priorities of curtailment of water rights in Idaho? I ask this because I wonder if aquaculture was in existence when Idaho's water laws were developed? If there has been no enabling legislation or court cases that places aquaculture on equal footing with agriculture the call by Rangen is not valid and the Curtailment Order is not valid. This would also mean that calls by any other aquaculture firms would not be valid.

22. If incorrect figures have been used in the model simulation or incorrect conclusions have been reached the Curtailment Order is not valid. Since the irrigation season is only a few days away there is not time enough to issue a correct Curtailment Order thus the 2004 irrigation season should be allowed to progress unhindered.

I respectfully request a hearing before the Director of the Idaho Department of Water Resources to contest the Curtailment Order issued under that date of 25 February 2004.

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Thank you,

Neal Bowman

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University of Idaho Extension

ECONOMIC IMPLICATION OF CURTAILING GROUNDWATER PUMPING

Presented by
Wm F. Hazen, Gooding County Extension Educator
and
Robert M. Ohlensehlen, Twin Falls County Extension Educator

The water situation in South Central Idaho has reached a critical point. Producers are using water to which they have been given a water right, and water resources have been declining to a point where there is insufficient water to meet the current permitted rights for groundwater. Idaho water laws are based on the principle of "First in Time, First in Right." The law is designed to protect an individual water right, not to redistribute water or to maximize the resource.

The underlying problem is the inability of water managers to meet individual water rights from a system where groundwater is stored and used to meet water rights for both spring flow users and well users. On a canal or river system, it is quite simple to shut down users and transfer the water to more "senior" water right holders. The transfer of surface water from one user to another can usually be made in a few hours or days. With a groundwater system, the transfer from one user to another may take weeks, months or years. If the rate of recharge of the aquifer declines simultaneously with the transfer of water from junior to senior right holders, the transfer, in reality, may never actually be realized.

In the Magic Valley area, two groundwater districts have been formed to provide an oversight for the use of groundwater. The North Snake Groundwater District is made up of Gooding, Jerome and the southern part of Lincoln counties, while the Magic Valley Groundwater District is made up of Minidoka County and a portion of Cassia County. The groundwater districts are responsible to measure groundwater diversions, maintain records of water measurements and keep records of priority dates. These records provide a good resource base for establishing estimates of the effects of curtailing pumping. Together, the records of the two districts indicate that a total of approximately 75,000 acres of the irrigated land are irrigated with water from wells with priority dates after 1967. Since most of this land only has one source of water, curtailing the use of groundwater will make this land suitable only for dry grazing, which has very low value.

The current "calls for water" that have been made by water users have economic implications to all of the Magic Valley. The Idaho Department of Water Resources have asked the two groundwater districts located in Gooding, Jerome, Lincoln, Cassia and Minidoka counties to identify all the agriculture and commercial wells drilled after 1967. The 1967 date was selected based on predictions from the groundwater model and language included in the "call for water."

The Magic Valley Groundwater District (MVGD) estimated such a call for water would affect about 35,000 acres and the North Snake Groundwater District (NSGD) estimated 40,000 acres. In addition, the NSGD represents all of the affected dairy wells in the area. Records indicate that 67 percent of the permitted dairy water withdrawals have priority dates after 1967. Potentially, the result of making such a call would impact up to two thirds of the cows in Gooding, Jerome and southern Lincoln counties. The result of curtailing water pumping would be that the affected herds, which represent approximately 127,300 cows, would be left without water. The MVGD currently does not have records on dairy water use, but the call for water could also affect some Minidoka County dairies.

Land affected by the call would no longer be irrigated and would have little or no production, at least for a few years. The result of terminating well water to irrigate land in the region could result in a variety of different scenarios. Closing dairies would result in less demand for forages. A loss in crop production would result from acres idled by a lack of groundwater for irrigation, resulting in the loss of acres to produce forage and other crops. Unlike farm land that could lay idle for a few years, you can not idle a dairy cow's production and restart it at a later time.

If the decision is made that dairy production is too important to be sacrificed, one scenario could be to dry up cropland to meet the need for water. An important consideration for this scenario is that the total water diverted for dairy use is only about 5% of all groundwater used by NSGD members. NSGD members divert 417,000 acre feet of water, of which only 20,000 acre feet, or 4.79%, is used by dairies. If land is dried up and water is not taken from the dairies then dairies would have to find a replacement source for the feed grains and forages that previously were produced on the 40,000 acres that would be taken out of production.

Other scenarios might include curtailing both dairy users and crop users. Additional scenarios might see a shift in the types of crops being produced, either moving production to crops that have lower water requirements or by producing high-value crops and eliminating those with lower income potential.

A reasonable expectation of delivering the full permitted water flows to those entities making the water calls is an increase in their ability to produce. Estimates are that flows would improve by 20 percent, which would allow for a 20% increase in products produced and marketed by the aquaculture industry. The value of the increased processed product to be marketed by the aquaculture industry would be estimated at $20 million dollars. A large percentage of the aquaculture product is exported, which benefits the local economy by bringing in outside dollars.

The University of Idaho, College of Agricultural and Life Sciences, Department of Ag Economics and Rural Sociology have recently updated the Magic Valley Agricultural Economy: Input/Output Model for Twin Falls, Jerome, Gooding and Lincoln counties. This model was specifically designed to track the economic changes within the four-county area as a result of changes in exports within the agricultural sector of the economy.

The existing model will not provide an analysis of Minidoka County and the portion of Cassia County that make up the MVGD; therefore, no attempt was made to factor in the losses to that area. There is every reason to expect similar types of impacts in job loss and reduced economic activity. At this time, the data for the priority dates for Minidoka County dairies has not been compiled, so the impact to the dairy industry in Minidoka County is unknown.

The call for water will create a change in the use of existing water resources, resulting in a loss of crop and dairy production, which will reduce exports. The negative impact on the local economy will be a result of the loss of production of agricultural products, loss of food processing, and loss of jobs. The general economy will also be affected as a result of the weakened agricultural economy due to loss of exports, loss of indirect jobs, reduced property values and reduced tax base. Exports of product are critical to a strong economy as exports are responsible for bringing outside money into a local economy. Exports are defined as those products leaving the region included in the model.

The purpose of the discussion that follows is to examine different scenarios that could occur and to estimate the economic impact to agriculture and the community. The evaluation will examine direct and indirect impacts, as well as the impact to employment, wages and income to proprietors.

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In order to complete the evaluation, the following assumptions have been made.

1) The acres necessary to meet the call for water will be dried up. Following this assumption, different scenarios will be evaluated with their impacts being compared.
2) When water is curtailed for dairy production, cheese production and resulting milk and cheese exports will drop because of the reduction of milk available.
3) The quantity of milk currently exported out of the four counties will be reduced. Milk previously exported will be retained by local processors to maintain cheese production levels at local plants.
4) Increased water available for aquaculture production will result in increased exports of product and an increase in employment related to the aquaculture industry.

The following situations will be used in the calculations for the various scenarios.

1) There are 40,000 acres of irrigated land in the NSGD that will be idled. The scenarios for reduction of crop acreages would likely include a reduction of 40,000 acres of forage and silage production. This scenario would be likely to occur simply because of the reduction of the dairy cow numbers in the region.
2) Should dairy numbers not be reduced and cropland becomes the sole source of water used to reach desired pumping reduction, low value crop acreages for the crops such as small grains and beans would likely be reduced rather than acres of high value crops such as potatoes and sugarbeets.
3) National Economic Census data corrected for local conditions suggest there is approximately $568 million dollars of processed milk products produced locally, with about $525 million of the total processed production being exported. The number of dairy cows located in the four counties is 237,500. A call for water curtailing use on all of the dairies with priority dates after 1967 could result in a reduction of 127,300 cows. Such a reduction represents a loss of 53.6% of the total milk available to local processors.
4) Assuming a uniform reduction in the amount of ultra-filtration milk (milk with a portion of the water removed), cheese and whey products from the loss of 127,300 cows, there would be a reduction of $281 million dollars worth of processed milk products. Ultra filtration milk would likely be retained locally to maintain an adequate level of milk to sustain cheese processing plants rather than being exported. The difference in value of the concentrated milk being used for cheese production rather than being exported would be approximately $10 million. The net result is a $271 million reduction in cheese exports.
5) With spring water flows at a higher level, the value of fish products to be exported could improve by at least $20 million.

The economic model evaluates one scenario at a time. The key in the evaluation is to identify the reduction in exports. An input-output model evaluates links backwards from the exported product. An evaluation of a link backwards means that a change in export will be evaluated backwards to all of the inputs required to reach the point of export for the product being analyzed. For example, an evaluation of a reduction in cheese exports will report the effects linked back to the loss of the demand for milk and linked back to the loss of demand for feed. Evaluating a change in export of cheese includes the employment impacts and economic activity impacts of the cheese, the cows and the feed.

Scenario 1

In the first scenario the assumption is made that: 1) all of the water of junior right holders with dairies in the NSGD is curtailed; 2) the 40,000 acres of cropland with junior rights are idled, and 3) the entire crop acreage idled is producing forage and silage.

In following tables, the effects on employment and economic activity for the first scenario are given.

EMPLOYMENT IMPACT OF CURTAILING DAIRY PRODUCTION AND FORAGES/SILAGE AND INCREASING FISH PRODUCTION

Product	$ Change in Exports	Direct Job Impacts	Indirect Job Impacts	Total Job Impacts
Milk and Cheese Processing	-$271,000,000	-354	-3124*	-3478
Dairy Production	$0	-723		-723
Forages and Silage	$0	-783		-783
Fish Products	$20,000,000	123	338	461
Net Effect	-$251,000,000			-4523

* Total Indirect job loss of 4,630 has been allocated as follows: 3,124 cheese and milk processing, 723 are assigned to direct jobs in dairy production and 783 are assigned to direct jobs in forage and silage production

In addition to changes in employment, the model evaluates the changes in dollars that flow through the economy.

ECONOMIC IMPACT FROM CURTAILING DAIRY PRODUCTION AND FORAGES/SILAGE AND INCREASING FISH PRODUCTION

Product	$ Change in Exports	Direct and Indirect Sales Impacts	Direct and Indirect Income Impact[1]
Milk and Cheese Processing	-$271,000,000	-$596,817,000[2]	-$124,676,000
Dairy Production		-$198,921,000	
Forages and Silage		-$27,565,000	
Fish Products	$20,000,000	$46,467,000	$8,167,000
Net Effect	-$251,000,000	-$776,836,000	-$116,509,000

[1] Direct and Indirect Income Impact represents the value of wages plus return to the proprietor

[2] Direct and Indirect Sales Impacts are $823,303,000 of which $198,921,000 is attributed to Dairy Production and $27,565,000 to Forages and Silage production.

In this case, exports are reduced and there is a reduction of money that comes into the economy from outside sources. The net result is detrimental to the local economy.

Scenario 2

The second scenario evaluates drying up 40,000 acres alone with all of the crop acreage reduction coming from small grain production. Since dairies use less than 5% of the total groundwater withdrawals in the NSGD, focusing on reducing the water used by dairies would not have a major impact on the water available for those making calls on water. The impact of removing the water used by dairies to the economy has been demonstrated to have an enormous impact compared to the benefit it would have on increasing water flows. The 40,000 acres would not account for the total amount of water reduction needed, but will serve as a number to use for demonstration purposes.

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EMPLOYMENT IMPACT OF CURTAILING SMALL GRAIN PRODUCTION AND INCREASED FISH PRODUCTION

PRODUCT	$ CHANGE IN EXPORTS	DIRECT JOB IMPACTS	INDIRECT JOB IMPACTS	TOTAL JOB IMPACTS
Small Grain	-$16,000,000	-262	-136	-398
Fish Products	$20,000,000	123	338	461
Net Effect	$4,000,000			63

In addition to changes in employment, the model evaluates the changes in dollars that flow through the economy.

ECONOMIC IMPACT FOR CURTAILING SMALL GRAIN PRODUCTION AND INCREASED FISH PRODUCTION

PRODUCT	$ CHANGE IN EXPORTS	DIRECT AND INDIRECT SALES IMPACTS	DIRECT AND INDIRECT INCOME IMPACT[1]
Small Grain	-$16,000,000	-$29,606,000	-$5,227,000
Fish Products	$20,000,000	$46,467,000	$8,167,000
Net Effect	$4,000,000	$16,861,000	$2,940,000

[1] Direct and Indirect Income Impact represents the value of labor plus return to the proprietor

In this case, there is an increase in exports resulting in an increase of money that comes into the economy from outside sources. The net result is a benefit to the local economy.

In the second scenario it is readily apparent while the 40,000 acres would not meet the total water required (does not include the 5% used by the dairy industry) the employment and the economic impact are dramatically different than in the first scenario. The second evaluation points out that there may be a means of meeting the need for water while minimizing the impact to the community. This does not, however, reduce the impact to those individuals who are directly affected.

On a positive side, meeting the more senior water rights could result in additional production. Many of the water rights that will be met by curtailment of junior water rights belong to producers who are involved in aquaculture. If junior water rights are curtailed, the senior water right holders could again produce to the full extent of their water rights. Increased production would offset some of the lost revenue due to the curtailment of junior rights. The change in production will occur only when the water actually becomes available. The positive impact, if it occurs, will probably take place sometime in the future, whereas the impact of curtailment will occur almost immediately.

It would be expected that improved spring flows would be used for increased production of fish products. If the spring flows improved 20%, the expected value of fish products could increase approximately $20 million, resulting in an additional 460 jobs.

The law that governs the allocation of water is not completely economically driven. Indeed, it must be demonstrated that water is being put to beneficial use. The law does not say that the benefits should be ranked except by priority date and hierarchy. The hierarchy for water use as defined by the Idaho State Constitution is as follows: domestic, agriculture and manufacturing, except mining can replace agriculture as the second high use. It appears that individuals involved in the discussion understand the hierarchy for water use and are doing everything they can to resolve the issue so everyone can remain in business. If the attempt at compromise is successful then both sides win; if the effort for compromise is unsuccessful

then the priority doctrine will be the basis for resolving the issue and the region is in for some difficult times.

The loss of jobs is a major concern, as is the enormous decline in the value of the idled land and the reduced value of associated improvements. There is no other way to pay for the cost of the improvements other than by using the land to produce product that will generate the necessary revenue to pay for the improvements. Without production, there is no other means to make the payments on the land or to pay the property taxes. Land owners and those from whom the land was purchased will be losers. Dry land value is only a fraction of what it is as irrigated farmland. Irrigated farmland that sells in excess of $2000 per acre could be worth as little as $100-$150 per acre.

An additional loss of value would be that of the buildings and improvements, this would impact both the landowner asset values and the assessed value for tax purposes. Dairy barns, corrals, feed processing facilities, and feed storages have little value if they can not be used to produce milk. The result is that the investment is drastically reduced if it is no longer used for its intended purpose.

The investment in irrigation equipment and farming equipment is only partially recoverable. The investment in wells and pumps is also lost. It is estimated that less than one fourth of the original value of land and equipment would remain. Equipment values could be less than one-half of the original cost and irrigation equipment may be one third of original value, and that assumes that a market for the equipment could be found.

County estimates for the tax on dry land is around $1.00 per acre, while the tax revenue on irrigated land is six to eight times that amount. Taxable value for buildings that are no longer used for their intended purposes could remain the same, but if they are abandoned, the owners can ask for special tax reductions, many of which have been granted in the past. The result would be that tax revenues will decrease. There may be some increased tax revenues as the senior water rights holders expand to utilize their full water resource capabilities.

Local school districts will lose income as property values decline and counties will lose the ability to supply needed services as their revenues decline. The value of neighboring land could also decline as the market reacts to dramatic events and uncertainty about the future. It could become more difficult for other local businesses to grow and expand.

There are some intangible conditions that are economically more difficult to measure should more water exit the aquifer via spring flows. An increased flow in the creeks and river has the potential to improve stream health. Billingsley Creek has been rated as one of the most impaired streams on the Snake River. Increasing flows could improve stream health and possibly improve recreational use of the stream, which in turn could increase money flowing into Hagerman.

Another positive aspect of increased flows into the Snake River is to meet downstream demands, most notably power generation. Maintaining a healthy flow into the river goes a long way toward meeting the minimum flow required at Swan Falls. With the springs being the largest tributary to the Middle Snake River, maintaining spring flows through recharge or curtailment of junior water users are the only tools the state has to meet the Swan Falls agreement. If the state has to come up with additional water to meet the Swan Falls agreement, curtailing junior water rights could include requiring water to bypass Milner Dam.

While Idaho water law is clear that the "First in Time, First in Right" principle applies to the management of Idaho's water resources, the system also allows for negotiated settlement of water disputes. The implications and ramifications of failing to reach a reasonable compromise for all sides in the current water allocation dispute points out the urgency for negotiators to reach a compromise that will pose the minimum impact on water users. The negotiations must consider scenarios that will avoid catastrophic consequences to the local economy. At the same time, the negotiations must strive to protect the water resource, comply with the priority doctrine and consider beneficial contributions of water to the economy.

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