RECEIVED
Jun 16, 2023
DEPARTMENT OF
WATER RESOURCES

Dylan Anderson (ISB# 9676)
Dylan Anderson Law PLLC
P.O. Box 35
Rexburg, Idaho 83440

Phone - (208) 684-7701
Email - dylan@dylanandersonlaw.com
Attorney for Bingham Groundwater District. (BGWD)

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

IN THE MATTER OF THE DISTRIBUTION OF WATER TO VARIOUS WATER RIGHTS HELD BY AND 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	Docket No. CM-DC-2010-001 **BINGHAM GROUNDWATER DISTRICT JOINDER IN IGWA'S AND BONNEVILLE-JEFFERSON'S POST-HEARING BRIEF, AND SUPPLEMENTAL BRIEF**

On June 6-9, the Department held a hearing to receive evidence and testimony regarding the fifth amended methodology order-and the as-applied order, issued on April 19, 2022. Bingham Ground water joins with IGWA in its post hearing brief, and offers a short supplemental brief regarding an issue that is intertwined with many of the arguments contained in IGWA's briefing, and with the methodology order that should be addressed by the department. The methodology order encourages and rewards higher diversions by the SWC.

The Methodology

Calculating Reasonable In-Season Demand involves complex averages of Crop Water Need (CWN), which involves Consumptive Use of a Specific Crop (ET_i) Precipitation (W_e), and irrigated area (A_i). However, when CWN is placed back into the formula to determine (RISD), all those calculations are essentially neutralized by a fluid and undefined project efficiency. When it is boiled down, Reasonable In-Season Demand (RISD) is just Diversion (Q_D); or average (Q_D) ran through a 14-year averaging process that's benefits are unexplained.

The simple equation in the methodology order outlined in paragraph 62 is as follows:

IDS=FS-RISD

Where:

IDS = demand shortfall for specified evaluation points throughout the season,

FS = forecasted supply adjusted for specified evaluation point during the season, and

RISD = reasonable in-season demand from above.

The methodology order goes on to show how each part of this equation is determined. Paragraph 33 of the Fifth methodology order shows the calculation for crop water need CWN, which is used to find the Reasonable in-season demand (RISD).

$$CWN = \sum_{i-1}^{n} (ET_i - W_e) A_i$$

Where,

CWN = crop water need

ET_i = consumptive use of specific crop type,

W_e = effective precipitation,

A_i = total irrigated area of specific crop type,

i = index variable representing the different specific crop types grown within the irrigation entity, and

n = upper bound of summation equal to the total number of different specific crop types grown within the irrigation entity.

The crop water need equation involves complex calculations that unfortunately are rendered moot because of the project efficiency algorithm and how it is used the methodology

calculations. The project efficiency algorithm is outlined in paragraphs 28-29 in the fifth methodology as follows:

$$\mathbf{E_p} = \frac{\boldsymbol{CWN}}{\boldsymbol{Q_D}}$$

Where:

E_p = project efficiency,

CWN = crop water need, and

Q_D = irrigation entity diversion of water specifically put to beneficial use for the growing of crops within the irrigation entity.

According to this, if CWN is high, then efficiency is proportionately high. If CWN is low, then efficiency is proportionately low. Because there is no standard efficiency, any efficiency is acceptable in the Reasonable In-Season Demand calculation. The testimony of the Surface Water Coalition's Expert Dr. Brockway highlighted this flaw as to acres and explained how acres do not matter in the methodology calculations. For the same reason that acres do not matter, CWN is nullified by an ever-expanding efficiency that assures any amount of diversion is reasonable and demanded. The only thing that calculating for CWN shows is how much of the overall diversion (Q_D)[1] is going to the crop water need, and how much is project efficiency; but these are arbitrary classifications because it is impossible, under this equation, to over-divert. Everything diverted is either crop water need, or project efficiency, and both are used to make up Reasonable In-Season Demand, ergo, everything diverted is Reasonable In-Season Demand.

The crop water need (CWN) and project efficiency (E_p) are used in determining the Reasonable In-Season Demand. The calculation for this is set out in paragraph 41 of the fifth methodology order as follows.

[1] Although technically there are some adjustments to the overall diversion that can be made as outlined in paragraph 30 of the methodology order, the testimony of Matt Anders is that Q_d is the diversion, and for the sake of this analysis, diversion is meant to be as adjusted in paragraph 30, for example if there was in-season recharge, or diversion shared with another entity.

$$RISD_{milestone\_x} = \sum_{j-1}^{n} \left(\frac{CWN_j}{E_{p-j}}\right) + \sum_{j-m+1}^{7} BD_j$$

Where:

$RISD_{milestone\_x}$ = reasonable in season demand at specified evaluation milestones during the irrigation season,

CWN = crop water need for month j,

E_p = baseline project efficiency for month j,

BD = baseline demand for month j,

j = index variable, and

m = upper bound of summation, equal to the month calculation occurs, where April = 1, May =2, … October = 7.

This equation represents crop water need (CWN) over baseline project efficiency for each month ($E_{p,j}$) to ultimately get the reasonable in-season demand (RISD). In April, this equation relies completely on the baseline year demand (BD), and slowly incorporate the in-season demand for the current year as that data becomes available. However, this equation is overly complex and misleading in what is actually being calculated.

Looking closer at CWN over E_p for month j $\left(\frac{CWN_j}{E_{p-j}}\right)$, The equation can be expanded out using the formula for baseline project efficiency ($E_p = \frac{CWN}{Q_D}$) and can be written as $\frac{CWN}{\frac{CWN}{Q_D}}$.To solve $\frac{CWN}{\frac{CWN}{Q_D}}$, simply flip and multiply as follows: $\frac{\cancel{CWN}}{1} \; x \; \frac{Q_D}{\cancel{CWN}}$ or $\frac{Q_D}{1}$ The crop water need is canceled out and we find that $\left(\frac{CWN_j}{E_{p-j}}\right) = Q_D$. When placed back into the original equation, we get: $RISD_{milestone\_x} = \sum_{j-1}^{n} (Q_D) + \sum_{j-m+1}^{7} BD_j$. In other words, Reasonable in-season demand is just an overly complex calculation that justifies whatever the diversion (Q_D) happens to be, just calculated on monthly intervals. Simplified even further, RISD=Q_D. Ultimately, the calculations for crop water need will only tell you how much of the diversion was used for crop water need, and whatever is left is project efficiency. If the crop water need goes up, project efficiency goes up (meaning if more of the diversion is going to crop need then less of the diversion is lost in

efficiency). If the crop water need goes down, the project efficiency goes down (meaning if less of the diversion is going to the crop demand, then more of the diversion is lost in efficiency calculations). This is illustrated in the fifth methodology order in the table in paragraph 32. Here we see that as the crop water needs are up in the middle of summer, the efficiency goes up.

Although this example illustrates that crop water need isn't actually accounting for anything, and is the equivalent of pretext calculations to justify whatever is diverted as "reasonable in-season demand" there are a few more complex layers to this equation. Unfortunately, when one dives into the details, the reasonable in-season demand only becomes more unreasonable.

The equations do a poor job of showing that the CWN_j used in the RISD calculation is slightly different from the CWN used in the E_p calculation because E_p is actually a fourteen-year rolling average of efficiency as outlined in paragraph 32 of the fifth methodology order.[2] The department does not explain why doing a fourteen-year rolling average of E_p is useful, or what the technical significance is, but that is what is done. In this case, there is an incentive for the SWC to increase diversions as much as possible because doing so would decrease efficiency. If efficiency is decreased for any year, the overall average efficiency is decreased, and RISD is increased making a shortfall more likely. In other words, increased diversions are rewarded with increased probability for injury.

If the department truly wants to account for actual acres and crop water need in a meaningful way, it must adopt a minimum efficiency standard. Without a minimum efficiency standard, all the calculations regarding crop water need are meaningless. Also, the number of acres irrigated become meaningless.

At the crux of many of the issues raised in IGWA's post hearing brief, is the lack of standard for any use, diversion, or efficiency. This is not to place blame on SWC because the inverse is also true. If they reduce diversions, the methodology order would actually punish them for doing so. Reduced diversion would produce a rise the average efficiency, thus lowering the calculated RISD. For example, SWC will divert at ¾ inch even if 5/8 is sufficient, because reducing to 5/8, although sufficient[3], would make calculated injury less likely.

[2] The exception to this is the April and October adjustment outlined in Paragraphs 42-46 of the Fifth Methodology Order.
[3] As argued in IGWA's brief.

The conclusions of law contained in paragraphs 5 and 6 regarding beneficial use, least wasteful use, and optimal development of water resources in the public interest are not only unsupported by the findings of fact, but are actually frustrated by the methodology order and findings of fact. The department should look at reasonable efficiency standards that would allow the Reasonable In-Season Demand to actually account for irrigated acres, and crop water need. The methodology order would have objective standards that actual reflect a Reasonable In-Season Demand, not just default to whatever is diverted. Not only that, the methodology order should incentivize reasonable diversion reductions, not punish SWC if they ever reduced.

Due Process

Bingham Ground Water District joins with IGWA and Bonneville-Jefferson Ground Water District in their briefing regarding Due Process, and adds as follows. Groundwater users are frustrated by the process of this methodology order change. The changes bring wide sweeping implications, and the explanation only refers to data and court decisions that are decades old. Why was this such an emergency? Why was this rushed into an order without a hearing when IGWA asked for a hearing on potential changes to the methodology order last fall? Groundwater pumpers are even more frustrated that when they asked for more answers, there were shut down through limitations on the scope of Discovery, and limitations on the scope of the hearing. In preparing its final decision, groundwater users request that the Department explain why the change was made so hastily and without a hearing. Please explain the policy reasons, outside the technical information which department employees were not allowed to testify about, but did testify exist. Groundwater users want to understand the policy decisions and reasons that let do increasing acres curtailed for a given injury by roughly 10 times.

DATED this 16 day of June, 2023.

Dylan Anderson Law, PLLC

___/s/_____
Dylan Anderson,
Attorney for Bingham Groundwater District

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 16 day of May, 2023, a true and correct copy of the foregoing document was served via email to the following:

Idaho Dept. of Water Resources
file@idwr.idaho.gov

Kathleen Marion Carr
US Dept. Interior
960 Broadway Ste 400
Boise, ID 83706
kathleenmarion.carr@sol.doi.gov

John K. Simpson
MARTEN LAW LLP
P.O. Box 2139 Boise, ID 83701-2139
jsimpson@martenlaw.com

David W. Gehlert
Natural Resources Section Environment and Natural Resources Division U.S. Department of Justice
999 18th St., South Terrace, Suite 370 Denver, CO 80202
david.gehlert@usdoj.gov

Travis L. Thompson
MARTEN LAW LLP P.O. Box 63
Twin Falls, ID 83303-0063
tthompson@martenlaw.com
jnielsen@martenlaw.com

Matt Howard
US Bureau of Reclamation
1150 N Curtis Road
Boise, ID 83706-1234
mhoward@usbr.gov

W. Kent Fletcher
FLETCHER LAW OFFICE
P.O. Box 248
Burley, ID 83318
wkf@pmt.org

Thomas J. Budge
Elisheva M. Patterson
RACINE OLSON
P.O. Box 1391
Pocatello, ID 83204-1391
tj@racineolson.com
elisheva@racineolson.com

Candice McHugh
Chris Bromley
MCHUGH BROMLEY, PLLC
380 South 4th Street, Suite 103
Boise, ID 83702
cbromley@mchughbromley.com
cmchugh@mchughbromley.com

Robert L. Harris
HOLDEN, KIDWELL, HAHN & CRAPO, PLLC
P.O. Box 50130
Idaho Falls, ID 83405
rharris@holdenlegal.com

Robert E. Williams
WILLIAMS, MESERVY, & LOTHSPEICH, LLP
P.O. Box 168
Jerome, ID 83338
rewilliams@wmlattys.com

Skyler C. Johns
Nathan M. Olsen
Steven L. Taggart
OLSEN TAGGART PLLC
P.O. Box 3005
Idaho Falls, ID 83403
sjohns@olsentaggart.com
nolsen@olsentaggart.com
staggart@olsentaggart.com

Randall D. Fife
City Attorney
City of Idaho Falls
P.O. Box 50220
Idaho Falls, ID 83405
rfife@idahofallsidaho.gov

Corey Skinner
IDWR—Southern Region
1341 Fillmore St., Ste. 200
Twin Falls, ID 83301-3033
corey.skinner@idwr.idaho.gov

Tony Olenichak IDWR—Eastern Region
900 N. Skyline Drive, Ste. A
Idaho Falls, ID 83402
Tony.Olenichak@idwr.idaho.gov

William A. Parsons
PARSONS SMITH & STONE
P.O. Box 910
Burley, ID 83318
wparsons@pmt.org

Dylan Anderson Law, PLLC

By: /s/
Dylan Anderson