From: Ken Tuttle <kentuttle24@gmail.com>
Date: Jan 9, 2025
Subject: Public Comment Regarding Pahvant GWMP
To: <waterrights@utah.gov>

Mrs. Wilhelmsen,

First, I would like to thank The Utah Division of Water Rights (DWRi) personnel for the initial 11/13/2024 meeting. I did attend the meeting, it was informative, held in good taste and was professionally done.

CONCERNS and UNDERSTANDINGS:

A. As we all know the Pahvant Basin has been managed for decades via the "Six Districts". The restrictions of no water right movement across district lines has been used to manage water right matters. This policy has anchored water right decisions by the DWRi.
B. This policy is written, mapped, maintained by DWRi, and supported by the water users in the basin. DWRi has policed the matter and included the management of change application approval conditions accordingly.
C. Water was not allowed to move outside of the district. Also, water was not allowed to be moved into a district from another district. I agree with this management policy and feal it should continue as we face this matter of over appropriation of the water resource in the Pahvant Valley.
D. This should then require that the district's total water depletions annually should be compared to the safe yields of each district to determine which water rights have the greater priority.

Now the DWRi is proposing and or mandating a priority cut equal to balancing the annual depletion equal to the "Safe Yield" of the aquifer. In areas of the basin the water level has declined by 80 to 120 feet prior to and since the mid-1980s. Over the past 43 years, the water table may have averaged a 2.093 ft of annual decline in areas (using a 90-foot decline over 43 years). The decline does vary in each district; however, the trend is such that the water table has been in a decline trend since about the 1950s on average.

The wet period of the Mid 1980s were exceptional water years and may only happen once in a lifetime but no one knows. Evidence shows that it has happened once in our lifetime. If that trend is repeating, nature would take care of the water table decline matter without any future imposed restrictions.

The other possibility is likelier, historical records may indicate that the Mid 1980s wet years have not repeated since records have been kept. As the safe yield is over pumped the trend is likely here to stay for a very long time, it appears that we need to slow down on the annual accumulated water depletions from the aquifer source to level out the water table decline so when the good precipitation years happen, the water table may begin to level off or rebound.

2. DWRi has explained how a ground water management plan could correct the matter. DWRi is proposing that the pumping be restricted such that the depletion of that pumping equals the aquifer safe yield estimate.

Trying to understand the proposed safe yield numbers leaves me a little confused. When one tries to figure it out using the water right data available, specifically, the safe yield numbers vary from 65,000 AF to 70,000 AF annually.

My understanding of this safe yield number is that it is proposed by DWRi that this amount of physical water exists requiring in our underground aquifers each year, on average, and can be depleted each year.

As a fifth-generation farmer, when we pumped any water, we did not anticipate that we were pumping any water which was not used by the plant and or environment directly. We did not anticipate pumping any water which would return to the aquifer. Thus, it would reason to me that DWRi is proposing a new diversion goal/regulation of 65,000 to 70,000 acre-feet of pumped diversions annually.

A. Using the public data of "All Underground Rights" listed, the total of all depletions for all underground rights basin wide is 77,282.12 Acre-Feet (AF) annually. Using the District depletion data, adding each District's depletion data today, the total is 90,892.12 AF of depletion annually. We need to know which number is correct.
B. I realize that the regional information was discussed in the recent meeting, and it was explained that the regional office would be taking a "deep dive" into updating the water right data as a first priority this winter (2025).
C. The data is critical to give direction and confidence to the water users as they contemplate the future proposed priority cut as it has been discussed. To the point that it seems impossible to have water users meet to help mold the policy decisions and to help DWRi create a fact filled new Pahvant Groundwater Management Plan until the data update is finished. I recommend the data be updated as the first priority and that the public be given the official information specific to each water right, the accumulated depletion data basin wide, and district specific ASAP.
D. As is, the data that is now available for each district has its own accumulated depletion numbers. We realize how important these numbers are to each water right owner. At a future day, DWRi will draw a line which indicates which water rights can be used, and which water rights cannot be used. If the currently estimated depletion is 90,000 AF annually then it is proposed that 20,000 or 25,000 AF of water right depletion, will not be allowed. The priority cut for each district could be calculated based on the allotted safe yield for each district.
E. If the priority cut is implemented based on basin wide priority, the cut may not be balanced to the safe yield inputs from each district. The following may give understanding to the matter.

3. As the water priority right cut becomes more certain and more defined on the updated district priority lists and in the GWMP it will be particularly important to make this public

and to balance the district safe yield estimates to the district estimates of the accumulated annual pumping/depletion.

Today, if we total up the estimated DWRi district accumulated depletions this is how they read:

Meadow	17,701.46
Kanosh	16,673.96
Flowell	25,901.53
Pahvant	4,610.84
Greenwood	16,957.54
McCornick	9,047.03
TOTAL	90,892.39 AF

The total of 90,892.39 AF of annual depletion is possible if all water rights were used at 100% as per the public data today using the district depletion totals. We can hope this number is not correct. But if it is, the overall water right priority cut in the future could be (90,892.39 AF minus the 65,000 safe yield number = 25,892.39 AF of depletion to be cut).

A diversion and depletion balance equal to each district aquifer safe yield should be a main goal of the GWMP. This policy can only be implemented if each district's safe yield (SY) is estimated by updating the DWRi Pahvant Water models to show each of the districts' safe yield estimates. We recommend these estimates are completed ASAP.

If the water model is not updated, the area drainage percent of each district could be estimated by measuring the total acres of mountainous drainage total then by extending the district lines through to the eastern boundary, calculate the percent of the safe yield drainage acres which are in each district. The following is estimated as described.

District Drainage Acres:

McCornick	60,468.80
Greenwood	123,618.00
Pahvant	46,983.20
Flowell	113,061.10
Kanosh	110,003.30
Meadow	52,340.70
TOTAL	506,475 .10

The estimated acres for each district were estimated using the acreage calculator in the DWRi mapping programs, extending each basin boundary to the east or northeast etc. then measured.

The district estimates of percent of drainage for each district were then calculated and the totals are as follows:

McCornick	60,468.80	acres or	11.939	percent	or 7,760.44 AF of	65,000 SY
Greenwood	123,618.00	acres or	24.407	percent	or 15,864.88 AF of	65,000 SY
Pahvant	46,983.20	acres or	09.276	percent	or 6,029.730 AF of	65,000 SY
Flowell	113,061.10	acres or	22.323	percent	or 14,510.04 AF of	65,000 SY
Kanosh	110,003.30	acres or	21.719	percent	or 14,117.60 AF of	65,000 SY
Meadow	52,340.70	acres or	10.334	percent	or 6,717.30 AF of	65,000 SY
TOTALS	506,475.10	ACRES		OR	65,000 AF of the	SAFE YEILD

Based on the numbers above, the safe yield for each district can be estimated. Realizing the numbers can be updated at any time.

The numbers above do not represent the annual diversions of each district, the basin wide depletion factors must be used to estimate that number. The next paragraphs estimate the basin depletion using two methods.

The possible district diversion estimate is 151,881.46 AF according to the DWRi data. Using the data numbers an accumulative depletion number can be calculated, (90,882.39 AF divided by the 151,881.46 = 0.5983 depletion basin wide. This indicates a 59.83% depletion.

Using the 'Hill Report (HR) method of determining depletion, using the Fillmore HR data, the required annual irrigation amount in inches, scientifically derived, is 28.57 inches of net irrigation/depletion. Using the area duty of 48 inches the calculation would show (28.57 divided by the 48 inches = a depletion of .53270 percent or 53.207% depletion.

This 53.207% percent is close to the depletion figure 59.838% calculated above. These numbers appear to give credibility to the DWRi data lists and column totals as they are close to equal to the Dr. Hill depletion method. Dr. Hill is an important and well-respected water expert state wide.

My concerns above are based on 40 years of farming and 25 years of water right consulting state wide and hope this information will be considered as the Pahvant GWMP is formulated over time.

Please let me know when any additional meetings are scheduled.

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