

PAROWAN VALLEY PUMPERS ASSOCIATION

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Teresa Wilhelmsen, State Engineer
Utah Division of Water Rights
P.O. Box 146300
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Re: Response to Draft Groundwater Management Plan for Parowan Valley

We commend you and the Division of Water Rights on your thoroughness and responsiveness during the four-year period during which a groundwater management plan for Parowan Valley has been in process.

You have acted within your statutorily defined duty as prescribed in Section 73-5-15 of the Utah Code to preserve the resource and protect the legal rights of all groundwater right holders in the Parowan Valley. You have made several trips to Iron County to meet with groundwater right holders and other interested parties. You have responded to issues raised through further analysis and patient explanations. You have sought to facilitate a resolution of the concerns of Parowan City relative to metering of individual customers on its secondary water system. While this is not directly a groundwater issue, you have supported legislation that would resolve this issue when a groundwater management plan is in place for Parowan Valley. You have sought to facilitate aquifer recharge where a political subdivision of the State is not the recharging party. Thank you for your personal and professional interest in these matters.

Groundwater management plans must be guided by three objectives under the statute:

- 1) Limit groundwater withdrawals to safe yield.
- 2) Protect the physical integrity of the aquifer; and
- 3) Protect water quality.

The Parowan Valley Groundwater Management Plan when adopted will probably be the most thoroughly analyzed, modeled, and documented of any groundwater management plan in Utah. Two extensive USGS studies were published in 2017, just immediately before this process commenced, that focused intensively on groundwater conditions in the Parowan Valley. The first, "Water Resources of Parowan Valley, Iron County, Utah" focused on valley specific data involving surface and groundwater. The second is titled "Groundwater Model of the Great Basin Carbonate and Alluvial Aquifer System Version 3.0: Incorporating Revisions

in Southwestern Utah and East Central Nevada.” While the second study on its face does not appear to be Parowan Valley specific, its methodology was to evaluate Parowan Valley specific hydrological data to validate a computer model and then extrapolate Parowan Valley results to other nearby basins. Serendipitously or with foresight, this computer model of Parowan Valley hydrology evaluated the exact parameters proposed by you in your draft groundwater management plan document; specifically, a safe yield of 22,000 acre-feet per year. The modeling conclusion was that such a safe yield would lead to the following result: “The simulated annual rate of water removed from storage fluctuates around zero, with water added to storage during periods of above-average recharge and removed from storage during periods of below average recharge.” This describes aquifer stabilization. From a purely regulatory perspective, you are likely on safe ground.

We noted that the draft plan you circulated in Cedar City Valley was identical to the plan you ultimately adopted in every material aspect. While you could proceed in the same way in Parowan Valley, there are some fundamental differences between Parowan Valley and Cedar City Valley that we hope you will carefully consider before adopting that course of action.

The first fundamental difference between the two valleys is the paper water rights vs the utilized water rights. In Cedar City Valley utilized water rights are less than half of paper water rights. In Parowan Valley, the overwhelming preponderance of water rights are being utilized. The draft plan 2035 and subsequent cuts will inflict real economic dislocation on actual water users vs a mix of paper water rights and actual water users.

The second fundamental difference is that Parowan Valley is still fundamentally an agricultural community. As such, the economic impact of the cuts on the community will be much more severe than in Cedar City Valley with its much more diversified economy.

The third fundamental difference is that a water conservancy district already exists in Cedar City Valley. This district will likely facilitate provision of water to domestic water users with recent priority water rights whose water rights are cut in that valley. There are many domestic water users in Parowan Valley with recent priority water rights. The specter of a groundwater management plan has accelerated discussions and analysis of a water conservation district in Parowan Valley, but the formation of any such district is a multi-year process.

While these differences between Cedar City Valley and Parowan Valley may fall in part outside your purely regulatory responsibilities and framework, we hope you will find sufficient cause to moderate your draft plan.

The implementation of a groundwater management plan in Parowan Valley consistent with the draft plan will be financially and personally painful to all members of the board of directors of the Parowan Valley Pumpers Association and most of its members and will lead to substantial economic disruption in our valley. Because there will be winners and losers, we have concluded that a voluntary groundwater management plan is not feasible here for the same reasons that it has not been feasible in other groundwater basins. The impact on Parowan City, a member of our association, is dire and we understand that they will likely respond to the proposed draft plan separately. Other members may choose to do likewise.

Attached below is a table reflecting an extended implementation schedule. While this table has not been adopted by resolution, it reflects the concerns of our directors and members in attendance at a recent meeting where the draft plan was discussed. The notes reflect specific comments expressed at that meeting.

Table 1 – Groundwater Management Plan Regulation Schedule

Phase	Implementation Date	Priority Dates (YYYY-MM-DD)	Acre-Feet Reduction in Estimated Depletion	Remaining Depletion in Acre-Feet
Data Collection & Project Implementation	2023-2043	No regulation.		32,943
Phase 1	January 1, 2043	1955-01-01	2,653	30,290
Phase 2	January 1, 2060	1954-01-01	1,248	29,042
Phase 3	January 1, 2080	1953-01-01	1769	27,273
Phase 4	January 1, 2100	1951-12-05	5239	22,000

Supporting notes to the above schedule:

- First WR issued was in 1856 and that date to present is 166 years. The Ground Water Management Plan would be best implemented over a 77-year period as outlined above.
- Data Collection / Project Implementation reasoning identifies the following points:
 - Continued water depth testing by the UGS on well locations throughout Parowan Valley.
 - Dr. Ryan Smith, Study on “The Role of Temporally Vary Specific Storage on Confined Aquifer Dynamics”.
 - Continued implementation of the Parowan Valley Pumpers Association’s three goals of:
 - 1) Maximizing water use efficiency.
 - 2) Increasing the supply of water through watershed improvement projects.
 - 3) Increasing recharge by utilizing WR # 75-2105.
- We seek understanding with DWR that a safe yield determination can be met with ground water levels having a variable water level of +/-20’.
- The above outlined plan considers the economic impacts of current and future water right owners, state, county and city employees, financial institutions, and agriculturists to make sound financial decisions that will have impacts on a 20-year (generational) interval.
- Allows water users in the area to use political, financial, and environmental options to purchase/idle water rights throughout the plan length.
- Producers feel that the regulation of underground water rights is considered a “take” of real property rights and compensation is warranted.

Your highest consideration is appreciated in this very difficult task,



The Parowan Valley Pumpers Association