



United States Department of the Interior

BUREAU OF RECLAMATION
Upper Colorado Region
Provo Area Office
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Provo, UT 84606-7317

IN REPLY REFER TO:

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VIA OVERNIGHT MAIL

Kent L. Jones, P.E.
State Engineer
Division of Water Rights
1594 West North Temple, Suite 220
Salt Lake City, UT 84116-3154

RECEIVED
DEC 26 2013
WATER RIGHTS
SALT LAKE
GK

Subject: Weber River Water Right Operations for the Weber River, Weber Basin, and Provo River Projects

Dear Mr. Jones:

The Bureau of Reclamation appreciates the efforts your office has made to review and document the historic operations of the Weber River. This work is especially important for the Weber River, where various Federal Contracts and four Federal Projects interact to provide water for thousands of Utah's farmers, residents, and industrial users. In our past meetings, and in a November 12, 2013, letter from Assistant State Engineer Jared Manning, the Division of Water Rights has asked Reclamation to provide additional guidance on how Federal Projects should be operated within the Weber River system. Therefore, Reclamation takes this opportunity to comment on the October 29th public meeting regarding the 1938 Power Contract and to answer operational questions that have arisen regarding Federal Projects.

Power Interference Water

Reclamation has reviewed the document, "Historical Operations of the Weber River System in Relation to the 1938 Power Water Agreement, (Draft 10/17/2013)" that was provided during the October 29th public meeting. We feel this document provides a reasonably accurate description of how the December 20, 1938 Power Contract (Contract # Ilr-1082) influences Weber River water operations. However, to properly account for the modified diversions, it is important to remember that the 1938 Power Contract is an interference agreement that allows the junior Weber River Project (WRP) Water Right No. 35-8739 (A9568) and the junior Provo River Project (PRP) Water Right No. 35-8737 (A9569) to divert water ahead of senior hydropower water rights for the Weber Power Plant. All diversions made possible through the 1938 Power Contract should ultimately be accounted for under these PRP and WRP water rights. Because the 1938 Power Contract allows PRP to temporarily use Echo Reservoir until July 1st of each year, we recommend that the final accounting of Power Interference Water be made in July.

When the Power Interference Water is first captured, it should follow the water right priority outlined in our August 30, 2013 Letter (August Letter) to your office. A copy of the August Letter is enclosed for your reference and the section regarding power water priority is quoted below. After the power water has been captured in Echo Reservoir, it is no longer subject to priority call and should be available to exchange up to the Weber-Provo Canal (WPC) as long as the water users between the canal and Echo Reservoir are not impaired.

...to the extent possible, the water made available through this power contract should bear a 1903 priority date. Reclamation believes non-project water rights, that would not have received water when the power plants are operating, should not be entitled to water when the power plants are turned off through the interference contract. There are three important water right priority groups to consider when the 1938 Power contract is being exercised.

- ***Water Rights Prior to 1903** are senior to the power water rights and senior to Reclamation PRP and WRP water rights. These water rights should be given water ahead of Reclamation project rights whether or not the power contract is being exercised.*
- ***Intervening Water Rights** are junior to the power water (1903) rights but senior to Reclamation Project water rights (August 25, 1924). Intervening winter water rights downstream of the Weber Power Plant would have received water if the plant was operating and should continue to receive water. Intervening winter water rights upstream of the Weber Power Plant would not have received water if the power plant was operating and should be treated as junior to the power water quantified at Echo Dam, and stored in the Reservoir or diverted via the Weber-Provo Canal.*
- ***Water Rights Junior to 1924** are junior to both the power plant rights and Reclamation's PRP and WRP rights, and would only be entitled to water after Echo and Weber-Provo Canal water rights are fully satisfied.*

Power Interference Water is made available to Federal Projects because the power company is compensated for not exercising their water rights. This water is above and beyond what could have been captured under the 1924 priority water rights held for the PRP and WRP. Since the capture of Power Interference Water is only made possible through the 1938 Power Contract, the contract should govern the division of this water between the PRP and WRP. This division, generally an equal 50/50 split between the two projects and should be followed even in dry years when Echo and/or Deer Creek Reservoirs are not anticipated to fill. A more detailed description of the Power Interference Water division can be found in the August Letter.

Weber River Operations for Federal Projects

It is important to recognize that in addition to the Power Interference Water, Water Right Nos. 35-8737 (A9569) and 35-8739 (A9568) are entitled to divert surplus Weber River flows available under an August 25, 1924 priority date. While the allocation of the Power Interference Water between the PRP and WRP is governed by the 1938 Power Contract, the division Weber River flows between Water Right Nos. 35-8740 (A9580), 35-8739 (A9568), and 35-8737 (A9569) is less clear since all of these water rights share the same priority date. The August Letter provides a more detailed description of these surplus water rights and the following summary is taken from that letter.

- (1) Water Right No. 35-8740 (A9580).** *The WPC was built as a feature of the WRP. Operation of this canal is articulated in the December 16, 1926 Repayment Contract between the United States and WRWUA. According to the contract [and water right], this right can be diverted from May 1st to August 1st at a flow rate up to 210 cfs as long as the Provo River flows at Vivian Park are below 510 cfs. The conditions attached to this water right significantly limit when it can operate. However, when the proper conditions exist, the 1926 Contract gives this direct flow diversion priority ahead of Water Right Nos. 35-8737 (A9569) and 35-8739 (A9568).*
- (2) Water Right No. 35-8739 (A9568).** *Since Echo Reservoir is below the WPC, it should capture all Weber River water available under the August 25, 1924 priority date at the dam. As mentioned above, the Weber River Commissioner may elect to store water that would have been captured at Echo Reservoir in upstream reservoirs to allow greater system flexibility. If Echo Reservoir water is stored in other reservoirs, Reclamation asks that this storage be carefully tracked and the accounting made available to Reclamation and its project partners.*
- (3) Water Right No. 35-8737 (A9569).** *This water right allows PRP to divert up to 1000 cfs water available under an August 25, 1924 priority date through the WPC. The source of this water includes Beaver Creek in addition to the Weber River. It is important to note that this water right shares the same priority date as Water Right No. 35-8739 (A9568). However, the WRP was built ahead of the PRP and historically priority has been given filling Echo Reservoir whenever possible every year. Therefore, if necessary, Water Right No. 35-8737 should be restricted to help Echo Reservoir fill. Water Right No. 35-8737 has an annual 136,500 acre-foot limit based upon actual availability of water supply.*
- (4) Water Right No. 35-8756 (A12141).** *This Water Right has a September 12, 1936 priority date and can only be diverted after Water Right Nos. 35-8737 (A9569) and 35-8739 (A9568) are satisfied. If there is water available under this priority date, then the WPC*

can divert 1000 cfs (up to 37,200 acre-feet annually) to be stored in Utah Lake for future PRP water right exchanges.

The shared priority date of the PRP and WRP water rights plus the need to supply water to the later constructed Weber Basin Project (WBP) have raised several questions about Weber River operations for Reclamation projects. Some of these questions are articulated in a November 12, 2013, letter Reclamation received from Assistant State Engineer Jared Manning.

To better understand the operational needs of the Federal Projects, Reclamation has requested additional information from the project operators, namely the Provo River Water Users Association (PRWUA), the Weber River Water Users Association (WRWUA), and the Weber Basin Water Conservancy District (WBWCD). We have reviewed the information gathered, along with our planning documents, contracts, and water right files to provide input for the 2014 water year operations. The following are our responses to questions raised by Jared Manning and the Weber River Commissioner.

- (1) When should Deer Creek Water Right 35-8737 (A9569) start diverting, and how much should be diverted?** For 2014, the WPC should be operated as it has been historically (prior to 2013). During the winter period¹, before the WPC freezes, the diversion gates should be set to divert as much Weber River flow as possible while bypassing sufficient water in the Weber River to satisfy senior downstream rights. If operating under the 1938 Power Contract, winter water rights senior to 1903 between the canal and Echo Reservoir need to be satisfied. If not operating under the 1938 Power Contract, downstream winter water rights senior to August 25, 1924, need to be satisfied.

During the spring runoff period, the WPC can take a combination of surplus Weber River flows available to a 1924 priority water right² (1924 Weber River Flows) and Power Interference Water. If the Weber River Commissioner determines that the Echo Reservoir storage rights will not be fully satisfied, then he should reduce the 1924 Weber River Flows in the WPC appropriately. This reduction can be partial or complete, and can be adjusted throughout the runoff season as the available water supply and forecasts change. However, the reduction in the 1924 Weber River Flows at the WPC should not limit the ability of PRP to exchange or trade its Power Interference Water out of Echo Reservoir. The River Commissioner should coordinate with Reclamation and our effected project operators when making this decision.

We believe it would be beneficial for Reclamation, our Project Operators, the Division of Water Rights, and the Provo and Weber River Commissioners to meet at least annually before the spring runoff season to examine the available hydrologic data and review anticipated project operations. For 2014, Reclamation will hold project operation

¹ Defined as “approximately October 15 to April 15” in the 1938 Power Contract.

² As determined Weber River Water Commission.

meetings shortly after the February and April Colorado Basin River Forecast Center runoff forecasts are published.

- (2) How will Water Right No. 35-8756 (A12141) play into future operations of Reclamation's projects?** The purpose of this water right is to allow 1936 priority Weber River flows to be diverted through the WPC and delivered to Utah Lake after Deer Creek Reservoir is determined to be full³ (from all available water sources) by the Provo River Commissioner. The imported Weber River water in Utah Lake can be exchanged up to Deer Creek Reservoir the following year by mitigating downstream senior water rights for stored Provo River water. If Utah Lake does not reach the conversion line, this water right will be necessary to convert the system storage in Deer Creek Reservoir to Priority Storage. Currently, this water right is not consistently needed for system storage conversion, because Utah Lake water levels are benefiting from Strawberry Reservoir water being imported into the Utah Lake basin to meet fish flow requirements of the Central Utah Project (CUP). However, after all the facilities for the Bonneville Unit are constructed more of the Strawberry import water in Utah Lake will be exchanged out to meet the needs of the CUP.
- (3) Where should the water conveyed in the Weber-Provo Canal be measured?** For 2014, Reclamation recommends following the historic practice of measuring the WPC diversions at the Francis Gage. Measurement at Francis allows the Weber River Commissioner to account for the inflows from Beaver and Shingle Creeks and accretion flows to the WPC. Since the Francis Gage is near the Weber/Provo drainage divide, it represents all the Weber River water captured⁴ and simplifies the canal water rights management. However, we acknowledge that the 1938 Power Contract states that diversions would be measured at the Francis Gage when Power Interference Water is being diverted into the WPC on a real time basis, and at Oakley when Power Interference Water is being exchanged out of Echo Reservoir. The likely reason for this dual measurement system is due to the historic practice of using check structures in the WPC to keep the canal water levels artificially high for the benefit of Kamas Valley groundwater water rights. This practice increases canal seepage and makes it more difficult to deliver low winter flows across the WPC. Additionally, the canal seepage during the winter months has an opportunity to flow back to the Weber River to satisfy downstream storage rights.

If the Division of Water Rights (DWR) feels it is necessary to change where the WPC water is measured, Reclamation encourages that DWR follow the principle of the 1938

³ The Jordanelle/Deer Creek Operating Agreement allows the Central Utah Project (CUP) to temporarily store water in Deer Creek Reservoir. Conversely, the PRP can temporary store Deer Creek water in Jordanelle. The temporary PRP water in Jordanelle is exchanged for the temporary CUP water in Deer Creek until Deer Creek Reservoir is full of PRP water only.

⁴ There is a 1.5 cfs adjustment factor to account for the fact that Francis Gage is not exactly on the drainage divide.

Power Contract and use the Oakley Gage during the irrigation season (unless Beaver and Shingle Creeks are flowing into the canal), and the Francis Gage during the non-irrigation season. If the measurement point is changed, the participation of all the stakeholders and affected water right holders should be involved to determine proper measurement locations and monitoring practices.

Reclamation will continue to work with our project operators and DWR to address this and future questions relating to the operation of the WPC. This collaboration will be especially needed if the WPC operations change significantly in the future due to diversion dam improvements or enclosing the canal.

- (4) **How should power water be split in dry years when it appears that Echo Reservoir will not fill?** Power Interference Water should be accounted separately from the 1924 Weber River Flows captured under the PRP and WRP water rights. As mentioned above, since the Power Interference Water only exists because of the compensation made by the Federal Projects, it should be divided according to the provisions in the 1938 Power Contract. However, as outlined in our response to Item No. 2, above, preference should be given to the filling of Echo Reservoir when allocating the 1924 Weber River Flows.
- (5) **Delivery of Echo shareholder water to the Provo River has been coordinated between the two commissioners and at times has been delivered when it was not needed. The Division of Water Rights asks for more input from Reclamation on this issue in the future.** There are two interrelated issues surrounding the delivery of Echo Shares through the WPC. This first issue is how to divide the capacity of the WPC for deliveries of Power Interference Water, 1924 Priority PRP and WRP rights, and Echo Share water. Contracts allow the WRP to use 210 cfs capacity of the canal when needed. However, in practice the Provo and Weber River Commissioners have used the entire capacity of the canal to deliver this WRP water. The second issue is when to deliver the Echo Shares through the WPC. The ideal time to deliver Echo Share water would be when there were no 1924 Weber River Flows in the Weber River, after all the Power Interference Water has been exchanged out of Echo, and during a time the water was needed by the shareholder. Like with the first issue, operational practices and other constraints historically have not allowed for this ideal timing. Reclamation will work with the Weber and Provo River commissioners and our project operators to examine ways to improve the delivery of the Echo Share water while minimizing the impacts to the Federal Projects.
- (6) **Divertible Flow Studies sponsored by the Bureau indicate that minimum flows to the Ogden Bay Bird Refuge would be provided from water originating above Echo Dam. But our understanding is that any shortage of water to the bird refuge is currently provided from Willard Bay. Is there any Bureau water originating above Echo Dam that is or could be called by the bird refuge?** The minimum flow

requirements at the Ogden Bay Bird Refuge were established through an April 18, 1967 contract between Reclamation and Utah State Department of Fish and Game (Contract #14-06-400-4643). This contract states that the minimum flows will first be met by the natural flows into the Weber River below Slaterville Diversion Dam. If these flows are insufficient to meet the minimum targets then Weber River flows at Slaterville Diversion Dam would be left in the river. If the available Weber River flows at Slaterville Division Dam are insufficient to meet the minimum targets, then stored Weber Basin Project water will be released to meet the required flows. The contract does not specify which reservoir the stored water releases need to be made from, and Reclamation supports WBWCD having the flexibility to determine which reservoir to release water from to meet the minimum flows at the refuge.

- (7) **Deer Creek Water Right 35-8737 (A9569) is certificated for 136,500 acre-feet per year but has historically diverted less water. What annual diversion limits should this right have in the future as water demands on the Provo River side increase?** The PRP is unique from other Reclamation projects in that it can provide its water subscribers with “Extra Allotment Water” when the appropriate hydrologic conditions exist. Standard practice among Reclamation projects is to define a project yield based on hydrology, stream flow availability, reservoir capacity, and hold over storage. Reclamation then limits the annual project water deliveries to its projected yield. However, unlike other projects, the 1936 Repayment Contract between the PRWUA and the United States (Contract # Irl-874) states that the PRWUA

“...shall have the right to utilize the storage capacity of the Deer Creek Reservoir as herein defined together with total yield of storage water therefrom, estimated at 100,000 acre feet annually **together with the right to use any water above that required for storage purposes which may be available from or under said water appropriations and filings.**”

The repayment contract further specifies that Extra Allotment Water is “subject to the approval of such disposition by the Secretary”. When it is apparent that there is more water available to PRP water rights than is needed to fill Deer Creek Reservoir, the PRWUA petitions Reclamation to use of extra yield of the PRP rights. In the past Reclamation has consulted with PRWUA, WRWUA, WBWCD, and Central Utah Water Conservancy District (CUWCD) when considering Extra Allotment requests to ensure other Federal Projects would not be adversely impacted. In the future we will also consult with the Provo and Weber River Commissioners to better understand the potential impacts to river operations and ensure the extra allotment water is properly monitored and allocated.

We are not aware of a time when a request for Extra Allotment Water has been denied. Reclamation will continue to work with our project operators and the Division of Water

Rights to determine when it is appropriate to grant Extra Allotment Water and how it will affect other Federal Projects. Other factors that influence the granting of Extra Allotment include the total PRP storage in Deer Creek Reservoir, the amount of water individual users elect to hold over in Deer Creek Reservoir, and the amount of PRP water being held in Utah Lake for Power Interference Water exchanges.

- (8) Smith and Morehouse Reservoir has essentially the latest priority right on the Weber River. Questions have risen regarding storage in Smith and Morehouse Reservoir when some Bureau water rights have not been satisfied.** Reclamation will work with WBWCD to determine how Smith and Morehouse Reservoir can be used without harming the WBP and the prior water right holder in this reservoir. Since the filling of Smith and Morehouse is inevitable because of the reservoir's limited outlet releases, Reclamation will work with WBWCD and the Weber River commissioner to determine how the captured water in this reservoir should be accounted for and distributed.

Weber River Commissioner's Questions

How should PRP's Weber River, Duchesne River, and Provo River water rights be prioritized? Basically, this question asks whether the PRP water rights must be exercised in a specific order. While all PRP water rights are supplemental to each other for the purposes of providing water to the PRP Project purposes, there is no given hierarchy between the individual water rights. To the contrary, PRP was designed to use concurrently its water rights in the Duchesne, Provo, and Weber Rivers to fill Deer Creek Reservoir. This practice is formalized in the 1994 Deer Creek Reservoir/Jordanelle Reservoir Operating Agreement (Contract # 94-07-40-R1690) that states "PRWUA will store all waters available from the Provo River under the PRP Water Rights...and all waters available from the Weber River drainage and Duchesne River drainage under the PRP Water Rights until Deer Creek Reservoir initially fills."

Even though this 1994 Operating Agreement requires the full diversion of PRP water rights it also states that PRWUA and the CUWCD "will use [their] best efforts to minimize adverse impacts of the WRP and WBP water rights." Reclamation sees the future project operations meetings contemplated in Question #1 as a venue to consider and minimize the adverse impacts between the Federal Projects.

Should the Weber-Provo Canal capture the diurnal flows in the Weber River? The WPC diversion dam should bypass sufficient water to satisfy senior downstream water rights above Echo Reservoir. Since it is likely this downstream water demand is constant, the WPC is legally entitled to capture the flows above this demand according to the 1938 Power Contract and project water rights. Prior to increasing the historic winter WPC diversions, consideration of the impact to the WRP and WBP should be addressed among Reclamation and its project operators.

Should there be a special process to quickly resolve disputes between water users?

Reclamation agrees that water right disputes need to be resolved as quickly as possible to minimize the damage to affected parties. Reclamation believes the key to quick dispute resolution is to promote transparency in the water operations of the Weber River. Providing public access to real-time accurate stream flow data and daily water rights accounting will allow water users to know when and how much water is available under their water rights. If a water user disagrees with the allocation of water, he or she will have real time data to support his or her position. Conversely, the River Commissioner should have fewer disputes to resolve because water users will be able to educate themselves. Reclamation encourages water users on both the Provo and Weber River systems to take advantage of Federal and State program funding (i.e., WaterSMART Program) to install additional water measuring devices and associated infrastructure and make the data available over the Internet.

Reclamation does not believe it is necessary to create a water ombudsman or other separate dispute resolution process. Instead, River Commissions should be provided the information and tools they need to make correct water allocation decisions. If there are disputes that the River Commissioner cannot resolve, the affected parties should be able to appeal to the Regional Engineer, State Engineer, and ultimately the Utah Courts. The water users should understand that as each level of appeal is invoked, the process will be slower and more thorough. If the dispute is between a Federal Project and a third party, then Reclamation and our Project Operator should represent the interests of the Federal Project. If the dispute is between two Project Operators, Reclamation will meet with the disagreeing parties and help arbitrate the dispute.

Future Efforts

As seen above, many of the Weber River Operations issues will need to be resolved through careful collaboration between Reclamation, its Project Operators, and the DWR. While the initial positions of the involved parties may seem at odds with each other, Reclamation has been encouraged by the common values expressed in our various meetings. The managers and staff from PRWUA, WRWUA, WBWCD, and CUWCD all emphasized the importance of:

- Storing as much water as possible during the winter and spring runoff period.
- Storing the water as high in the hydrologic system as possible.
- Measuring stream flows and diversions to fully understand the river.
- Verifying that river measurement is accurate and correctly reported.
- Accounting for diversions on a frequent (daily if possible) basis.
- Making the water measurements and water rights accounting available on a real-time basis.
- Informing the Weber River Commissioner on the operations of the Federal Projects.
- Empowering the Weber River Commissioner to make daily operational calls.
- Providing a quick process to resolve disputes between water users.

Focusing on these common values, Reclamation hopes to establish regular meetings with PRWUA, WRWUA, and WBWCD to look for opportunities to improve future water operations between the Federal Projects that depend on the Weber River. These meetings would be similar to the operations meeting required by the Deer Creek Reservoir/Jordanelle Reservoir Operating Agreement, and would provide an opportunity to consider the operations of the entire Weber River Basin. Reclamation plans to invite the river commissioners and the DWR to these meetings to get the State's perspective.

Reclamation recognizes the ongoing efforts of Henrie Engineering in partnership with WRWUA, Davis and Weber Counties Canal Company, WBWCD, and the Weber River Water Rights Committee to develop a Weber River Water Management Plan. Reclamation fully supports, and has provided significant input for this management plan. This plan documents the water rights, contracts, and historic practices that affect the water operations of the Weber River, and provides ideas for improvements to these operations for the future. Our hope is that this plan will be a valuable tool in future Weber River operations meetings and to the Weber and Provo River Commissioners.

Reclamation appreciates the opportunity to provide these comments, and we look forward to working with DWR to ensure our projects are operated properly. Please contact Mr. Justin Record at 801-379-1072, if you have any questions or concerns regarding the information in this letter.

Sincerely,

A handwritten signature in black ink, appearing to read "Wayne G. Pullan", written over a printed name and title.

Wayne G. Pullan
Acting Area Manager