

Memorandum

To: Water District 13-A File
From: Tim Luke
Date: June 25, 2010
Re: Worm Creek & Cub River Inventory; Water Right Administration Issues & Recommendations

This memo summarizes an inventory of diversions and water rights on Worm Creek, Cub River and Spring Creek (tributary to Worm Creek) within Water District 13-A (WD13-A). The inventory was made in response to IDWR's lack of knowledge about Worm Creek and certain ongoing concerns raised by several holders of water rights on Spring Creek. Department correspondence relative to those ongoing concerns is documented in the 2008, 2009, and 2010 WD13-A files. The WD13-A watermaster has not been involved in administration of the Worm Creek drainage since it was first added to WD13-A by an Order of the Department dated February 25, 1983. The WD13-A watermaster's jurisdiction has traditionally been limited to the main Cub River and certain tributary sources, including delivery of water to the Cub River-Worm Creek Canal (aka Preston Whitney Upper Fill Ditch). Delivery of water from Worm Creek above the Glendale Reservoir has historically been done by the Preston Whitney Irrigation Company (PWIC) since it owns or has interest in most of the water rights in that reach. The Department is not aware of any watermaster regulation or other organized delivery of water on Worm Creek or tributaries to Worm Creek below Glendale Reservoir, including Spring Creek.

Beginning in 2008, IDWR directed the WD13-A watermaster to begin regulating water rights on Spring Creek. In 2009, IDWR requested that WD13-A begin deputizing the PWIC manager or ditch rider who sets head gates and records diversions above Glendale Reservoir. A similar directive was issued to deputize ditch riders on Maple Creek, a Cub River tributary located south of Cub River near Franklin. In 2008 IDWR also issued an order requiring measuring devices for several larger diversions on Cub River. In May of 2009, IDWR also required installation of a measuring device and head gate on the Hull diversion from Spring Creek. Specific guidance was issued to the WD13-A watermaster concerning delivery of water rights on Spring Creek in 2009 and 2010. Some additional guidance was provided concerning the re-diversion of water from the Cub River Middle Ditch in 2010. Additionally, questions raised by IDWR in review of water rights in 2008 resulted in the filing of one or more water right transfers by PWIC that have subsequently been protested by several Spring Creek water rights holders (see specifically application for transfer for water right no. 13-2). In 2009, IDWR committed to conducting an inventory of water rights and diversions from Worm Creek, Cub River, Spring Creek, Maple Creek and Sugar Creek. An initial inventory was done in May, 2009 and some further visits were conducted in May, 2010. This memo summarizes the inventory of Worm Creek and Spring Creek, and includes diversions from Cub River owned or operated by PWIC and the Cub River Irrigation Company (CRIC).

Attached to the memo are inventory forms and photo graphs of diversions, measuring devices and re-diversions, and water rights lists of Worm Creek and Spring Creek.

Issues Found Pursuant to Inventory and Related Investigation

Water Right Transfer Issues

In addition to the transfer and measurement issues found over the past several years, IDWR identified several additional concerns that will likely require more water right transfers:

a) PWIC General Service Area and Water Rights Place of Use

PWIC representatives have discussed the need to potentially file a water right transfer on all of its water rights to correctly update its service area and irrigated places of use. This need was discussed at the May 3, 2010 pre-hearing conference for the protest of PWIC's transfer application of water right 13-2. IDWR concurs with this suggestion and finds it consistent with prior correspondence issued by IDWR to PWIC over the past two years. IDWR recognizes that the Cub River decree that includes PWIC's Cub River water rights lacks any place of use descriptions. The lack of place of use descriptions for the Cub River rights handicaps both IDWR and WD13-A in the administration of those water rights. PWIC should file transfers on its Cub River and Worm Creek rights (and other water source rights) as soon as possible so that the rights can be clarified and more easily administered by WD 13-A.

Lacking any other information about the place of use for PWIC's Cub River rights, it is clear that PWIC's total irrigated area as described by the Worm Creek decree is limited to a total of 10,449 acres. It is not clear to IDWR if or how any of the Cub River rights might create a larger irrigated service area. IDWR notes however that Idaho Code Section 42-222 provides for the transfer of stored water for irrigation purposes over a larger service area as long as other rights are not injured. The code states in pertinent part:

The transfer of the right to the use of stored water for irrigation purposes shall not constitute an enlargement in use of the original right even though more acres may be irrigated, if no other water rights are injured thereby.

IDWR also notes that there is some place of use overlap among the several different canal companies in the area including PWIC, CRIC, Preston Whitney Reservoir Company and the Preston Riverdal and Mink Creek Company. IDWR should not immediately seek to regulate PWIC's total irrigated area to the 10,449 acres described in the Worm Creek decree until all of PWIC's rights are further clarified by the completion of the water right transfer process. IDWR should notify PWIC to file transfers as soon as possible.

b) PWIC right no. 13-271

This right is from Worm Creek and is PWIC's earliest priority right (5/7/1880) from either Worm Creek or Cub River. The point of diversion (POD) for this right is located immediately below the Glendale Reservoir and appears to be for the Eastside Ditch which is no longer used. As per PWIC President Lyle Porter, the Eastside Ditch was the original POD for PWIC before Glendale Reservoir was built. The ditch served lands below Lamont Reservoir and from the Fairview Lateral. The lands are now served by the Eastside Gravity Lateral Association which re-diverts water from the Lamont-Johnson Ditch above the Lamont Reservoir to a gravity pipeline. The Fairview Lateral is served by the Foster

Reservoir and outlet (recently converted from open ditch to pipeline). The correct PODs for this right appear to be the Glendale Reservoir and Outlet Canal, and the Lamont Johnson Ditch. A water right transfer should be filed to add the Lamont-Johnson Ditch as a POD and correctly show the Glendale Reservoir Outlet Canal as the point of diversion although the location is in the same quarter-quarter section as the old Eastside Ditch.

c) PWIC right no. 13-2103

This right was decreed to PWIC in the Worm Creek Drainage decree but the Department's computer records list the right as being owned by the Preston Whitney Reservoir Co. The right is not listed by PWIC in its own Company bylaws (see Section 3, Water Rights and List of Water Rights). The point of diversion given for this right is the same location for PWIC's right 13-271 (see above). The right authorizes the diversion of 25 cfs from Worm Creek for irrigation with a priority date of 3/14/1924. The right as shown in the Worm Creek decree includes a condition stating that the place of use is the "same as listed under 13-271." Note that PWIC also owns right 13-2104, which authorizes diversion of 25 cfs from the Cub River via the Cub River Worm Creek Canal with a 3/14/1924 priority date. The two rights are the same except for the source of water. The Department's records may need to be corrected to show PWIC as the correct owner of the right as per the Worm Creek Decree. PWIC may wish to consider adding the Lamont-Johnson Ditch as a point of diversion to this water right.

Neither right 13-2103 nor 13-2104 have conditions that limit the rate of diversion under the two rights. Licensing these rights under more modern IDWR policies would likely result in a total combined rate of diversion under the two rights being limited to no more than 25 cfs.

d) Cub River Irrigation Co. Water Rights Place of Use

The place of use given for Cub River Irrigation Co.'s (CRIC) water rights pursuant to descriptions provided by the company in several different water right transfers over the past 15 years does not include any land within Township 16S (T16S) and Range 40E (R40E) yet several of the Spring Creek water right holders and other CRIC shareholders irrigate land in this area. Several company officials have confirmed delivery of water within this area. CRIC should review its place of use boundaries and file any necessary water right transfers to correct or update its service area. IDWR correspondence to CRIC over the past two years advised CRIC to review its service area boundary and make any changes if necessary. Changes appear to be necessary. IDWR will formally notify CRIC to correct its water right place of use boundary through a water rights transfer or other appropriate legal means.

e) Water Rights 13-299 & 13-300 owned by Dennis Webster

IDWR's inventory found that rights 13-299 and 13-300 owned by Dennis Webster are diverted from Worm Creek just below where Mink Creek is injected to Worm Creek. The POD authorized by the rights is the Lamont Johnson Ditch. Several re-diversion head gates are located on the Lamont Johnson Ditch where Webster can take his water but he no longer uses these re-diversions and instead takes the water from a diversion point further upstream on Worm Creek through an open ditch that drops to a gravity pipeline and sprinkler system. The ditch diversion now used by Webster also includes water rights 13-267 in the name of Robert Smith, and 13-305A under the name of Clarence Owen. A water right transfer should

be filed on the two Webster rights to correct the POD. IDWR plans to send Mr. Webster a formal notice regarding this concern.

IDWR also learned that Webster, a PWIC shareholder, may at times divert Mink Creek water that is injected to Worm Creek for the benefit of the Preston Riverdale and Mink Creek Company under water right 13-7747, whose place of use is within PWIC's Worm Creek decree place of use. The place of use for 13-7747 appears to include lands that are served by the North, East and Fairview pipe laterals. Members of the Preston Riverdale and Mink Creek Co are also PWIC shareholders. PWIC's manager Conan Foster explained that Webster diverts Preston Riverdale water in exchange for Webster's PWIC shares at times when Webster's Worm Creek rights are not deliverable. While this may constitute some sort of long standing arrangement between the parties, there is no recognized or formal exchange on record with IDWR. IDWR recommends that an exchange application be filed with IDWR and that the exchange practice be discontinued until the application is approved.

f) PWIC Places of Use above Glendale Reservoir

IDWR has also found that there are a number of PWIC shareholders who re-divert and apply water from the Lamont Johnson Ditch to land located along the ditch between the ditch heading and the Lamont and Johnson Reservoirs. Right number 13-302 (4/1/1896 priority) decreed to Vern Nelson authorizes use of the Lamont Johnson Ditch to irrigate 21 acres south of Glendale Reservoir. Portions of the 21 acres appear to be currently owned by Terry Smith, Mark Owen, Larry Hansen, Murray Nichols and others. PWIC records show that Smith, Owen, Hansen and Nichols are PWIC shareholders receiving water via the Lamont Johnson Ditch above the Lamont and Johnson Reservoirs. Several other shareholders are also identified in PWIC delivery records as receiving water from the Lamont Johnson Ditch above the reservoirs. Users who may be using portions of right 13-302 need to file ownership changes and/or water right transfers to correctly show the current place of use and splits of water right 13-302.

Certain small irrigated tracts along the Lamont Johnson Ditch, some of which are owned by the PWIC shareholders referenced above, appear to be irrigated but have no appurtenant water rights. PWIC has indicated that some of these lands are included in the PWIC service area although not all of these areas were included within the place of use of the PWIC Worm Creek decree water rights. Further contact with the above referenced owners by IDWR and initiation of any water right transfers of 13-302 may clarify the issues further. IDWR may issue Notices of Violation to users who do not comply with filing transfers and/or water right ownership changes.

Again, PWIC must file water right transfer applications for all of its water rights to properly show the irrigated lands within its service area.

Administration of Worm Creek and Tributaries

As noted earlier in this memo and Department correspondence over the past several years, Worm Creek was added to WD13-A in 1983 but there has been no formal administration of Worm Creek water rights by the district since that time. A review of the Worm Creek water rights list attached to this memo shows that the number of privately owned senior priority rights is fairly limited. There are only 14 individual privately owned rights with priorities from 1871 to 1909. Those 14 rights have a total combined diversion rate of only 12.7 cfs. Five of those rights have priorities that are 1880 or senior and total only 2.3 cfs. In contrast, PWIC has an 1880 priority right for irrigation with a diversion rate of up to 50 cfs, although the right does have a volume limit of 2000 AF that may affect the total number of days the right can be diverted. The Preston Whitney Reservoir Company has a 1910 priority right authorizing diversion of 10 cfs for irrigation purposes. It is likely that little water is available on the creek during much of the irrigation season to fill rights junior to PWIC's 1880 right. The several most junior priority rights located towards the end of the creek and west of Franklin are likely filled, if at all, as a result of return flows or waste water from upstream canal companies. IDWR could not locate several Worm Creek water right diversions when making its inventory in 2009. IDWR is not aware of any water delivery complaints or issues from water users on Worm Creek below Glendale Reservoir.

Although the number of individual privately held rights and diversions on Worm Creek is rather limited, the canal company water rights and diversion systems are significant and more complex. IDWR should and will continue steps to extend administration of water rights to Worm Creek and tributaries by Water District 13-A (WD13A). Those steps include:

- a) Continue annual appointment of a watermaster assistant or deputy watermaster for Worm Creek at and above the Glendale Reservoir that may include the PWIC manager or PWIC ditch riders.
- b) Continue requirement of WD13-A to include PWIC measured diversions from and flow of Worm Creek in annual WD13A reports. Reported data should include data that PWIC is already gathering such as daily diversions for the Lamont Johnson Ditch, the Webster Diversion (Diversion 1), Mink Creek injection, Worm Creek flow, the Glendale Reservoir Outlet Canal and spill from the Glendale Reservoir Outlet Canal to Worm Creek. Additional data should include monthly diversion data to users or lateral associations on the Lamont Johnson Ditch, the Glendale Reservoir Outlet Canal, the Foster Reservoir outlet (Fairview Lateral), the outlets of the Lamont and Johnson Reservoirs, discharge from the Lamont Johnson pipeline to the Cub River Middle Ditch/Foster pipeline, and weekly or other regular storage levels recordings for the Glendale, Foster, Lamont and Johnson Reservoirs. IDWR will send correspondence to the watermaster and PWIC concerning annual reporting requirements.
- c) IDWR will send notice to current right holders on Worm Creek and tributaries advising that their rights are included in WD13-A and that they may be subject to assessments from the water district. IDWR will issue an order requiring installation of measuring devices and head gates for Worm Creek and tributary source diversions that currently do not have adequate devices and controlling structures. The order will seek compliance for the 2011 irrigation season and be sent by October 1, 2010.

- d) IDWR will direct the watermaster to begin monitoring diversions from Worm Creek below Glendale Reservoir starting in 2011.
- e) Require WD13-A to develop resolutions at subsequent annual meetings for assessment of water rights on Worm Creek and tributaries.

Measurement of Worm Creek

PWIC measures and records Worm Creek flows just upstream of where Cub River water from the PWIC Upper Fill Ditch is injected to Worm Creek. Measurement at this point is important to know the total flow of Worm Creek, including water from Mink Creek that is measured and injected to Worm Creek about one mile upstream. The Worm Creek measurement is based on use of an installed staff gage on a concrete culvert structure and a rating table that was prepared a number of years ago by representatives from the US Bureau of Reclamation. Although PWIC has referred to the structure as a weir, it is actually a rated structure or section and not a standard measuring device. PWIC could not immediately verify the date of the rating and indicated that there have been no recent updates or calibrations of the rating. IDWR plans to make at least one calibration measurement this summer to check the accuracy of the table and/or any gage shifts. There are likely gage shifts at this rated section due to vegetative growth in the stream channel and along the stream bank. Although a rated section is an acceptable method of measurement, PWIC should make several calibration measurements each year and make any rating table adjustments as necessary. IDWR has recommended standards for rated sections that can be provided to PWIC.

Measurement of Water Injected to Worm Creek from PWIC Upper Fill Ditch from Cub River

IDWR recommends that PWIC and Preston Whitney Reservoir Co consider installation of a measuring device or rated section for measurement of water on the Fill Ditch before it injects to Worm Creek. IDWR is not certain at this time that the measuring device is critical for water distribution purposes on Worm Creek as long as PWIC can make improvements to the measurement of Worm Creek at the rated section above the Fill Ditch injection. However, IDWR believes that better measurement of the Fill Ditch injection can improve overall measurement and distribution within the PWIC and Preston Whitney Reservoir Co systems particularly since some of the re-diversions on the fill ditch above the injection point to Worm Creek (five in total) are not measured, and because there are likely some ditch losses between the ditch heading and injection point.

Other Water Measurement and Water Right Issues

Other observed water measurement and water right issues include:

- a) Weir for measurement of Birch Spring to PW Fill Ditch has poor approach velocity conditions, lacks a good weir pool above the weir, and includes significant channel growth and rocks in the weir pool area that all contribute to inaccurate measurement at the weir.
- b) No measuring devices were found for Spring Creek diversions except for the Hull diversion and the bypass water below the Golightly headgate. The flume for the Hull diversion was installed in a poor location on the ditch and should be moved. The Hull diversion still requires a head gate to be installed before water can be diverted in 2010.

- c) The PWIC and Preston Whitney Reservoir Co. reservoir outlet pipes and other lateral re-diversion pipelines lack any access for IDWR or others to make measurements of the pipes with portable meters for purposes of calibrating the PWIC installed flow meters.
- d) The ponds located on the Golightly property from Spring Creek are not authorized by any water rights.
- e) The Wheatley irrigation pumps located at Gamble Pond and northwest of Gamble Pond should be properly located as points of diversion and/or points of re-diversion on Wheatley's irrigation rights. These pump locations are not described by any of Wheatley's rights.
- g) Whitney Nashville Water Works Co: IDWR inspected the spring collection facility and measuring device for measurement of the spring diversions by Whitney Nashville Water Works Co. (see inventory form and photos attached). The company has two spring sources but currently is limited to the diversion of just one source due to water quality issues. The installed meter that measures the spring diversion is an acceptable device and tracks both flow and volume. IDWR observed a diversion flow rate of 41 gallons per minute (gpm) at the time of inspection. The company maintains flow meter records which can and should be reported to the WD13-A watermaster annually and made part of the watermaster's annual report. The average rate of diversion from the spring source during September of 2009, a peak use month, was 86 gpm or 0.19 cfs, well within the maximum authorized rate of 1.25 cfs. The combined volume use during August and September (only months provided to IDWR) was 21.2 AF, which is about 21% of the authorized 101 AF annual volume limit. Given the expected lower use in most other months, the company is likely within its annual water right volume limit. Since the spring source is tributary to Spring Creek, the right is subject to priority regulation and can be regulated although curtailment of 40 to 90 gpm potentially may not benefit any senior downstream right holders and therefore could be futile.



Legend

- ① IDWR GPS Points (2009/10)
-  Preston Whitney Res Co
-  Cub River Irr Co
-  Preston Whitney Irr Co
-  Preston Rivdale & Mink Ck Co
-  Basin Boundary (State Line)



**Water District 13- A Area
Cub River and Worm Creek**



Water District 13- A Area **Cub River and Worm Creek**

Legend

- ⊙ IDWR GPS Points (2009/10)
- ▭ Preston Whitney Res Co
- ▭ Cub River Irr Co
- ▨ Preston Whitney Irr Co
- ▭ Preston Rivrdale & Mink Ck Co
- ▭ Basin Boundary (State Line)



**Water District 13- A Area
Cub River and Worm Creek**

Legend

- ① IDWR GPS Points (2009/10)
- Preston Whitney Res Co
- Cub River Irr Co
- Preston Whitney Irr Co
- Preston Rivrdale & Mink Ck Co
- Basin Boundary (State Line)