

MEMORANDUM

Date: January 18, 2019
To: Transfer file #81940
From: Nathan Erickson, Watermaster Water District 143 *NE*
Re: Watermaster comments transfer #81940

Transfer #81940 filed by East Valley Cattle (EVC) proposes to change the commercial place of use on 20 water rights from the current foot print of the feed lot/dairy (approx. 640 acres) to the footprint of the entire farm owned by EVC (approx. 9,800 acres). The water rights associated with the transfer are within Water District 143 (WD 143). The water rights have limits of a total diversion rate of 4.61 cfs and total annual use of 1,782.8 af. The proposed change to the place of use will allow EVC to apply waste water from commercial use to anywhere on the farm.

Standard practice

The Southern part of Idaho has a large number of commercial uses which result in waste water lagoons. Per Transfer Processing Memo No. 24 users are allowed to mix the waste water with other irrigation water. If the waste water is used on land with active (per Transfer Processing Memo No. 24 active would be defined as "full existing") irrigation water rights there is no requirement for the commercial place of use to cover the same area. Typically the commercial waste water is high in concentrations of different minerals and is considered a nuisance rather than an additional source of irrigation water. For this reason it is mixed with other irrigation water to dilute and distribute throughout existing irrigated land. The proposal of this transfer would likely result in land being irrigated that does not have active irrigation water rights.

Critical Ground Water Area/Public Interest

The location of the proposed transfer is located within the Raft River Critical Ground Water Area (CGWA). The CGWA has over 5,600 acres of expansion water rights that have been curtailed fully as of 2019. EVC has 773.7 acres of curtailed expansion water rights on the farm associated with the transfer. Since 2017 I have worked with the owners of expansion acres to curtail the required acres and confirm owners are staying within the requirements of the curtailment. This has been difficult for many of the farmers to lose productive irrigated acres. The proposed transfer would potentially allow EVC to irrigate acres that would otherwise not be allowed. To the community it appears to be a loop hole in the Department's policy that undermines any efforts to conserve water in a CGWA. The water levels in the valley continue to go down each year. It is expected within the next couple of years the Raft River Ground Water District will propose a management plan which will include reductions in the volume used by each water right owner.

When EVC converted the water rights from irrigation to commercial, per the transfer memo the Department considers the fully consumptive amount of historic irrigation and allows that volume of water to be converted to commercial use. It is understandable why EVC sees the opportunity to utilize the commercial water to extinction. However this proposal could potentially change the view of commercial users as to how waste water

can be used. The Department does not regulate the water efficiency of a commercial use and it is possible that a commercial facility could over use water in an effort to dilute and render water more suitable for irrigation. Further it is important to note that if the commercial waste water is allowed to be used on land only covered by commercial use the Department would not regulate the number of acres that could be irrigated. If an owner were extremely liberal on their commercial use and conservative on their crop and irrigation use they could potentially irrigate more acres than were originally irrigated.

Possible comparable water rights

In WD 143 there are three farms that have a commercial place of use which includes land that is actively irrigated. Two of those farms have associated expansion water rights and have active plans for the curtailment of the expansion acres. Currently neither farm has plans with the Department to use the commercial waste water outside of active irrigated acres. The waste water is mixed with ground water and applied to land with active irrigation water rights.

The third farm has an approximately 75 acre field adjacent to a dairy that does not have irrigation water rights and is only allowed to be irrigated with waste water from the dairy. The owner has expressed interest in changing his system to transfer in irrigation water rights and to also allow waste water to be mixed with irrigation water throughout other parts of the farm. The owner has expressed that the current practice of irrigating the field with just waste water is too high in concentrations of phosphorus and other minerals and burns the field.

Measurement

Potentially there are two different scenarios where measurement would differ for use of the commercial water as a result of this transfer.

Scenario A would mix the waste water with the ground water irrigation and utilize the water on land with active irrigation water rights. Scenario A would technically not require measurement of the waste water since water would be used in combination with ground water on active irrigation acres.

Scenario B would use the commercial waste water to irrigate acres not covered by active irrigation water rights. Scenario B would require the commercial waste water to be kept independent of other irrigation water. It is likely the commercial waste water would need to be measured and regulated in a way to confirm no other irrigation water is contributed to the system. It would be important that all commercial water used on the facility be measured and accounted for (see recommendations of water master memo dated November 13, 2018, RE: East Valley Cattle LLC, measurement of commercial and stockwater uses). There would also need to be measurement on the lines going to the acres to be irrigated by the commercial waste water to confirm the amount of water used for irrigation is consistent with the amount of water used on the dairy/feedlot.

Watermaster Recommendation

Due to the CGWA and concern with the impact this transfer would have on the public interest it is my recommendation that the transfer be conditioned that the commercial waste water would only be used on land with active irrigation water rights.

MEMORANDUM

Date: November 13, 2018

To: Rob Whitney, Tim Luke, Cherie Palmer

From: Nathan Erickson, Watermaster Water District 143 *NE*

Re: East Valley Cattle LLC, measurement of commercial and stockwater uses – Water District 143

In April of 2018, East Valley Cattle LLC (EVC) began discussions with the Idaho Department of Water Resources (IDWR) related to submitting Water Supply Bank (WSB) applications to lease water from the dairy/feedlot (dairy) facility located in Water District 143 (WD143). In April of 2017, transfer no. 80639 was approved to convert 212 irrigated acres to commercial and stockwater use. EVC believed the transfer was only partially accomplished by 2018. EVC proposed to lease any unused water into the WSB and subsequently rent the water back for other uses. Resulting from this proposal, IDWR articulated the importance of quantifying the amount of commercial and stockwater used, to ensure an enlargement in water use would not result from approval of a rental. The measurement order for WD143 was effective at the beginning of 2018, and there are no previous measurement records for the dairy. EVC's commercial and stockwater rights identify eight wells (see attached map), several of which are also used for irrigation. Transfer no. 80639 includes a condition of approval which states:

"Measuring device(s) shall be installed so irrigation diversions and stockwater and commercial diversions can be independently measured."

EVC specifically designated three of the eight wells that would be used to supply water to the dairy (WMIS nos. 1002799, 1002820, and 1002821). On April 24, 2018, the WD143 Watermaster (watermaster) met with a representative for EVC to review the system and collect meter readings from the three designated wells. Meter readings between January 5, 2018, and April 24, 2018, were used to estimate annual use for the dairy (see attached tables). Based on the estimated annual use EVC believed 50% of water right 43-13763 would be available for lease to the water bank. However due to enlargement concerns the Department allowed only 16 af to be leased to the WSB.

The watermaster continued to periodically read the meters presumed to be used for the dairy (see attached tables). Sometime between July 16, 2018, and September 26, 2018, the battery died on the flow meter for well no. 1002799 (big well). Therefore, the unknown gap in meter data will require an estimate to be used to determine the volume supplied in 2018, from the big well. On September 26, 2018, EVC was notified of the problem with the meter. EVC committed to replace the

battery and hard wire the meter. EVC also stated that the pump for the big well (1002799) was in need of repair sometime during the month of October. The watermaster requested EVC identify the source of water that would replace the big well while it was out of service. EVC responded that the remaining two identified wells (1002820 and 1002821) would be the only other source of water for the commercial and dairy use on the facility.

On October 30, 2018, the watermaster visited the dairy facility and determined the big well was out of service for repairs. The other two wells were checked (1002820 and 1002821) and both wells were showing 0 gpm of use. Water was apparently being used at the dairy, but was not coming from the two designated wells. As noted above, five of EVC's irrigation wells may be used for commercial and stockwater at the dairy, but EVC had maintained that these wells would not be used for the dairy. Two of the irrigation wells were pumping and may have been providing water to the dairy.

There continue to be concerns about the inability of the watermaster to obtain accurate data for the 2018 annual commercial and stockwater use. The gap in data due to the dead battery can be estimated based on the known use from the rest of the year. The main concern is specific to which other well(s) provided water to the dairy in an unquantifiable amount. It remains unknown which well(s) were used for the dairy while the designated wells were not being used. Volumes estimated will be based on incomplete flow meter data for 2018.

Watermaster recommendations for required measurement

- EVC should provide IDWR and the watermaster with all known sources of water, including a complete schematic of the water delivery system, for commercial and stockwater use on the dairy.
- Any connections to the dairy facility should be measured separately from irrigation or have a valve that can be shut and locked by the watermaster.
- To further help EVC show with confidence the amount of water used on the facility it is recommended the meters be read weekly with the records being provided to WD143 at the end of each year.
- This information will be important to provide documentation for future transfers and WSB applications.

East Valley Cattle Commercial/Stockwater Use Estimates and Flow Meter Readings

All well meter readings and analysis provided by Nathan Erickson, IDWR and WD143 Watermaster

West Well - 1002821

Date	Totalizer	units	Difference (AF)	2018 cumulative use (AF)	# of days	AF/day	1 year estimate
1/5/2018	219,950	kG	5.7	5.7	110	0.051	18.8
4/24/2018	221,792	kG					
5/8/2018	222,118	kG	1.0	6.7	14	0.071	26.1
			10.9	17.5	69	0.158	57.6
7/16/2018	225,666	kG	0.3	17.8	72	0.004	1.6
9/26/2018	225,766	kG					
10/30/2018	227,489	kG	5.3	23.1	34	0.156	56.8
			2.1	25.2	17	0.123	45.1
11/16/2018	228,173	kG	0.6	25.9	31	0.021	7.6
12/17/2018	228,383	kG					
1/17/2019	228,490	kG	0.3		31	0.011	3.9

Big Well - 1002799

Date	Totalizer	units	Difference (af)	2018 cumulative use (AF)	# of days	AF/day	1 year estimate
7/11/2017	2,968	AF	463.4		179	2.589	944.9
1/5/2018	3,431	AF					
4/24/2018	3,791	AF	360.46	360.5	110	3.277	1,196.1
5/8/2018	3,838	AF	46.61	407.1	14	3.329	1,215.2
7/16/2018	4,079	AF	241.37	648.4	69	3.498	1,276.8
9/26/2018	Dead Battery-----						
10/30/2018	Pump for well was being worked on, it is believed well was not used during the month of October.						
11/16/2018	4,259	AF	179	828	55*	3.261	1,190.2
			79.05	906.8	31	2.550	930.7
12/17/2018	4,338	AF	100.26		31	3.234	1,180.5
1/17/2019	4,438	AF					

East Well - 1002820

Date	Totalizer	units	Difference (af)		# of days	AF/day	1 year estimate
1/5/2018	wrong totalizer read						
4/24/2018	136,654	kG	5.6		14	0.403	147.1
5/8/2018	138,493	kG					
7/16/2018	146,575	kG	24.8		69	0.359	131.2
9/26/2018	148,521	kG	6.0		72	0.083	30.3
10/30/2018	151,563	kG	9.3		34	0.275	100.2
11/16/2018	151,627	kG	0.2		17	0.011	4.2
12/17/2018	154,190	kG	7.9		31	0.254	92.6
1/17/2019	156,273	kG	6.4		31	0.206	75.3

Well #13 Irrigation Well (measures all flow from well) - 1002796

Date	Totalizer	units	Difference (af)		# of days	AF/day	1 year estimate
3/6/2018	111,540	galx1000	401.3		238	1.686	615.5
10/30/2018	242,312	galx1000					
11/16/2018	247,971	galx1000	17.4		17	1.021	372.8
12/17/2018	247,971	galx1000	0.0		31	0.000	0.0
1/17/2019	257,244	galx1000	28.5		31	0.918	335.1

Well #13 Stockwater/commercial use (flow meter located in shed with the Big well) - 1003320

Date	Totalizer	units	Difference (af)		# of days	AF/day	1 year estimate
12/17/2018	2,161	galx1000	0		31	0.000	0.0
1/17/2019	2,161	galx1001					

Irrigation Well (by east well) - 1002798

Date	Totalizer	units	Difference (af)		# of days	AF/day	1 year estimate
3/6/2018	0	galx1000	318.4		238	1.338	488.4
10/30/2018	103,765	galx1000					
11/16/2018	111,438	galx1000	23.5		17	1.385	505.6
12/17/2018	111,818	galx1000	1.2		31	0.038	13.7
1/17/2019	111,818	galx1000	0.0		31	0.000	0.0