

MEMORANDUM

Date: May 20, 2019
To: Transfer 83044
From: James Cefalo
Re: Review & Evaluation of Sufficiency of Information

This transfer proposes to create a 450-acre combined place of use for water rights 33-101A, 33-2138, 33-7040 and 33-7172. Water right 33-101A is a surface water right from South Creek that will be piped from the current point of diversion to the proposed place of use. There is only one other water right on South Creek (33-101B, 0.10 cfs), so the applicants have access to nearly the full flow of water on South Creek. Water rights 33-2138, 33-7040 and 33-7172 are ground water rights diverted from two wells at the north end of the proposed place of use.

Water right 33-101A is leased into the Water Supply Bank until the end of 2019. The applicant confirmed that the surface water will not be used at the proposed permissible place of use until the next irrigation season, therefore, the WSB lease period will be fulfilled. This transfer is being filed in combination with transfer 83038, which is splitting off and moving acres under the ground water rights to another property owned by the applicant.

Originally, the applicant proposed to leave only 324.3 acres of combined ground water rights 33-2138, 33-7040 and 33-7172 at the existing place of use. The remaining 125.7 acres would be covered by water right 33-101A. We were concerned that right 33-101A from South Creek was not as reliable of a source as the ground water rights. There is a danger that the ground water rights would be enlarged to irrigate the surface water acres.

The applicant provided some stream flow data for South Creek over the last five years. The applicant maintains a weir at the inflow to their pipeline intake on South Creek, but only collects periodic readings at that location. In addition, Scott Stosich conducted a field exam of the existing system on May 20, 2019. Based on his exam, we were able to estimate the volume of water diverted from ground water for irrigation at the existing system over the last ten years. Scott measured 1.56 cfs in South Creek. This is approximately the same flow rate measured at the intake weir. After reviewing the data with the applicant, they decided to leave an additional 22.5 acres of ground water rights at the existing place of use to shore up the water supply.

Based on our calculations, to achieve the same irrigation volumes that have been traditionally supplied by ground water rights at the existing place of use, South Creek would need to supply an average flow rate of 1.45 cfs to the system throughout the irrigation season. The flow rates reported by the applicant, and the measurement conducted by our field agent, confirms that the flow in South Creek generally exceeds 1.45 cfs throughout the irrigation season. A condition will be added to the rights, requiring at least 23% of the total irrigation water supply come from South Creek in any given year.

Authority to File:

The applicant is the current water right owner on IDWR record. The applicant is the owner of the proposed place of use and points of diversion. Butte County parcel data confirms that the applicant owns the property at the proposed place of use and points of diversion.

Water Right Validity:

The ground water rights, 33-2138, 33-7040 and 33-7172, included in this transfer were decreed in the SRBA in 2000. The surface water right 33-101A was decreed in the SRBA in 2002. Review of 2015, 2009 and 2006 aerial photography shows growing vegetation on the current place of use. Forfeiture does not appear to be an issue.

Injury to Other Water Rights:

Other water rights will not be injured by the proposed changes. There will be no changes to the points of diversion, as the surface water right being moved will be piped from the current point of diversion by a pipeline to be installed. The authorized quantity to be diverted will not change as a result of the transfer. Due to this being a proposed permissible place of use, and no other changes will occur, this application will not require public notice.

Enlargement of Use:

See the enlargement analysis above. The proposed change will not result in enlargement since neither the rate, volume or irrigated acres will increase as a result of the transfer. The transfer is simply creating a permissible place of use to cover the two pivots and wiper currently covered by the water rights included in this transfer.

Local Public interest:

No issues identified.

Beneficial Use/Conservation of Water Resources:

No issues identified.

Review of the application finds there is no clear inconsistency with criteria set forth in Section 42-222 Idaho Code preventing processing of this application.

Ground Water System

Water Rights 33-2138, 33-7040 and 33-7172

Combined Limits (prior to Transfer 82744) = 8.70 cfs, 1,606.5 af, 459 acres

Power Meter Serial # 28919177 (PacifiCorp)

Year	Total kWh	Mid-Season Demand (kW)	Estimated Hours of Operation	Estimated Days of Operation	Diversion Volume METRIC (CIR)	Calculated PCC (kWh/af)	Estimated Diversion Volume (af)	af/acre	Estimated Average Div. Rate (cfs)
2009	547440	295	1855.7	77.3			987.8	2.2	6.44
2010	614880	296	2077.3	86.6			1109.5	2.4	6.46
2011	506960	295	1718.5	71.6	894.0	567.1	914.8	2.0	6.44
2012	650481	294	2212.5	92.2			1173.7	2.6	6.42
2013	758960	292	2599.2	108.3	1364.8	556.1	1369.5	3.0	6.38
2014	684000	292	2342.5	97.6			1234.2	2.7	6.38
2015	644720	292	2207.9	92.0			1163.3	2.5	6.38
2016	644370	292	2206.7	91.9	1194.8	539.3	1162.7	2.5	6.38
2017	483200	291	1660.5	69.2			871.9	1.9	6.35
2018	451600	291	1551.9	64.7			814.9	1.8	6.35
AVG	598661	293	2043.3	85.1	1151.2	554.2	1080.2	2.4	6.40

Notes:

The calculated Power Consumption Coefficient (PCC) for 2011, 2013 and 2016 are within 5% of each other.

This suggests the calculated PCC are very reliable and that the estimated annual diversion volumes are reliable.

Big pivot irrigates approximately 302 acres. This represents 66% of the pre-2019 acres (300 ac/459 ac = 66%).

66% of the estimated average diversion rate for the entire system is 4.22 cfs (1,896 gpm).

On May 14, 2019, IDWR conducted a measurement of the gw system with only the big pivot in operation.

The examiner reported a diversion rate of 4.25 cfs (1,906.3 gpm). This confirms the estimated average diversion rate above.

Proposed System

346.8-acre portion of ground water rights 33-2138, 22-7040 and 22-7172 (combined rate limit = 6.57 cfs)

South Creek water right 33-101A (1.90 cfs, 125.7 acres)

Total combines system = 8.47 cfs, 450 acres)

Ground water acres represent 77% of the total acres.

** South Creek right would be the sole source for the remaining 23% of the total acres.

To prevent enlargement of the gw rights, 23% of the total volume of irrigation water must come from South Creek.

Estimated Operation Based on 10-year Average (from the table above)

Days of Operation	85.1	
Total Acres	450	
AF/Acre	2.4	
Total Volume Diverted for Irrigation (af)	1080	
Volume Supplied by GW (af)	832	77%
Volume Supplied by South Creek (af)	248	23%
Average Rate Required from South Creek (cfs)	1.47	(South Cr vol / 1.9835 / 85.1 days)

Estimated Operation Based on Maximum Use Year (2013) (from the table above)

Days of Operation	108.3	
Total Acres	450	
AF/Acre	3.0	
Total Volume Diverted for Irrigation (af)	1350	
Volume Supplied by GW (af)	1040	77%
Volume Supplied by South Creek (af)	311	23%
Average Rate Required from South Creek (cfs)	1.45	(South Cr vol / 1.9835 / 85.1 days)

PCC EXAM

EXAM DATE: 5 / 14 / 2019 EXAMINERS SIGNATURE: Ryan Tracy / Scott Stosich
 OWNER: Pancheri SITE TAG #: _____ RECORD #: _____
 EXAM COMPLETE: (Y) / N STANDARD CONFIDENCE: E (G) F P FOLLOW-UP: _____ / _____

KILOWATT HOUR METER

UTILITY: Pacificorp
 POLE #: 929381408
 SITE ID #: _____
 METER MFGR: GE
 METER S/N: 28 919 177
 DISK CONST (Kh): 1.2
 MULTIPLIER: 80

LEGAL:

kW-A: 172.8 GPM: 1906.3 PCC: 492.3 PSI: 71 %: _____
 DESCRIPTION COND#1: _____

This is for the well to the east.

PCC AF QAL

- Z ZERO PUMPAGE
- 1 SIMPLE, NO TRACKING
- 2 COMPLEX, NO TRACKING REQUIRED
- 3 TRACKING REQUIRED AND PROVIDED
- 4 TRACKING REQUIRED, BUT NOT PROVIDED
- 5 COMPLEX, EXAM INCOMPLETE
- 6 KNOWN DATA PROBLEM
- 7 PCC MEASURED @ Q-METER VERIF
- 8 LOW PCC WHERE Q-METER IS REQUIRED BUT NOT INSTALLED
- 9 CALCULATED OR ESTIMATED PCC
- N NO PCC
- Q OTHER, SEE EXAM NOTES

kW-B: _____ GPM: _____ PCC: _____ PSI: _____ %: _____

DESCRIPTION COND#2

kW-C: _____ GPM: _____ PCC: _____ PSI: _____ %: _____

DESCRIPTION COND#3

KILOWATTS OF ENERGY CONSUMED COND #1

N= 16 (No. of Disk Rev) | Time(sec): (32) + (32) + (32) / 3 = Avg 32 (T)

3.6 x 1.2 (Kh) x 80 (Mult) x 16 (N) / 32 (T) = 172.8 kW-A

PCC COND#1 = 172.8 (kW) x 5431 / 1906.3 GPM = 492.3 (kWh/ac.ft)

KILOWATTS OF ENERGY CONSUMED COND #2

N= _____ (No. of Disk Rev) | Time(sec): (_____) + (_____) + (_____) / 3 = Avg _____ (T)

3.6 x _____ (Kh) x _____ (Mult) x _____ (N) / _____ (T) = _____ kW-B

PCC COND#1 = _____ (kW) x 5431 / _____ GPM = _____ (kWh/ac.ft)

KILOWATTS OF ENERGY CONSUMED COND #3

N= _____ (No. of Disk Rev) | Time(sec): (_____) + (_____) + (_____) / 3 = Avg _____ (T)

3.6 x _____ (Kh) x _____ (Mult) x _____ (N) / _____ (T) = _____ kW-C

PCC COND#1 = _____ (kW) x 5431 / _____ GPM = _____ (kWh/ac.ft)

kWh: 6951

Pipe Diameter:

Upstream (x dia):

Demand: 3582

Pipe Thickness:

Downstream (x dia):

H.P. 200

Sensor Spacing:

Sonic location: E G F P

CHANGES TO SYSTEM Y / N
 SITE VISIT NOTES:

Application for Transfer 83038

Water Rights Prior to Transfer

Right No.	Rate (cfs)	Vol (af)	Acres
33-2138	2.63	460	131.5
33-7040	4.43	776	221.6
33-7172	0.67	118	33.7
Combined	7.33		386.8

Water Rights to be Transferred

Right No.	Rate (cfs)	Vol (af)	Acres
33-15080	0.27	47.6	13.6
33-15078	0.46	80.2	22.9
33-15079	0.07	12.2	3.5
Combined	0.76		40.0

Remaining Portion of Water Rights

Right No.	Rate (cfs)	Vol (af)	Acres
33-2138	2.36	412.4	117.9
33-7040	3.97	695.8	198.7
33-7172	0.60	105.8	30.2
Combined	6.57		346.8

Cefalo, James

From: Kristin Moore <kristin.rmea@gmail.com>
Sent: Thursday, May 02, 2019 8:15 AM
To: Cefalo, James; Holliday, Michael
Subject: Pancheri South Creek Transfer

James and Michael,

I spoke with Rod Pancheri last week after our meeting and presented the concerns to him as we discussed it. A new weir was installed around 2010, give or take a couple years. Rori Pancheri has been keeping measurements on their South Creek diversion for years. He doesn't keep them consistently, but we have some measurements for the last five years at least. Mostly the measurements were recorded in field notes or notebooks and are rather unorganized. Here are some of the measurements during the latter part of the season to show flows at the diversion. There may be more recorded measurements, but I do not have them yet.

2014-06-24	1.7 cfs
2014-11-24	1.11 cfs
2015-7-25	1.25 cfs
2015-9-15	1.75 cfs
2016-7-7	2.05 cfs
2016-9-15	2.17 cfs
2017-8-8	2.34 cfs
2018-7-20	2.43 cfs
2018-10-18	2.1 cfs
2019-4-1	2.2 cfs

The lowest flow measured during the irrigation season was in July 2015, showing 1.25 cfs. This would have allowed $\frac{1}{2}$ inch per acre, which is adequate for irrigation under the pivot sprinklers. Pancheri's operate other pivots under this rate per acre.

We recognize the concern with stacking the surface water and ground water rights together. It was suggested that all surface water be applied to the north pivot location for easier administration. However, after discussing with the Pancheri's, it is clear that putting the surface water on a single pivot would be inefficient if it were to be reduced due to do availability. Instead, we propose to put the 125 acres of surface water right under the end guns, mini pivot, and under the last section or two of one of the pivots, whichever would make the numbers work. This way, if there is a shortage, the water can be turned off at the end guns first, since it is the least efficient location. And then the mini pivot could be reduced or turned off to avoid exceeding the available surface water. The records show that there will be enough water to satisfy at least 83 acres of irrigation consistently at the decreed rate per acre. This is more than enough to keep both of the large pivots without end guns covered with adequate surface water and ground water.

Under an extreme drought situation, where surface water is very low, it would be possible for the surface water acres to be turned off with this configuration.

Does this sound reasonable for administration?

Kristin Moore
Senior Water Rights Analyst
482 Constitution Way, Ste 303, Idaho Falls, ID 83402

MEMORANDUM

Date: February 28, 2019
To: Transfer 83044
From: Scott Stosich
Re: Legal Notice Not Required

Pursuant to Section 42-222, Idaho Code, the Department has discretion to provide public notice as deemed appropriate. The water right changes proposed through this transfer application do not appear to change the effect on the original or hydraulically connected water source or affect other water rights. Therefore, staff review of the transfer application found no cause to require public notice. This application will continue processing without advertisement and be forwarded for approval consideration.