

MEMORANDUM

DATE: July 31, 2021

TO: Water Right 37-2493, 37-2576, 37-2649A, 37-2649B, 37-2681, 37-7644, 37-22777, 37-23090, 37-23091, 37-23092, and 37-23093 files

FROM: Angie Hansen, et. al. 

RE: Review Memo Temporary Change Applications TC-37-85, TC-37-86, and TC-37-87

Background – Shelley Keen

South Valley Ground Water District and Galena Ground Water District filed three temporary change applications and a Water Supply Bank rental application in connection with a mitigation proposal for the curtailment of ground water rights in the Bellevue Triangle in the Wood River Basin. This memo addresses the three temporary change applications. The rental application is addressed in a separate review memo.

Temporary changes applications may be filed and approved pursuant to Idaho Code § 42-222A “upon declaration of a drought emergency for an area designated by the director of the department of water resources and approved by the governor . . .” In April 2021 the director and governor signed a drought declaration for Blaine, Lincoln, and Gooding counties. See the Drought Declarations page of IDWR’s website for details of the declarations.

Publication of notice is not required. A temporary change application may be approved upon:

- Completion of the form.
- Payment of the \$50 filing fee.
- A determination that the proposed change can be administered.
- A determination that “there is no information that the change will injure another water right.”
- Obtaining and considering the recommendation of the watermaster.

The three temporary change applications were submitted with a payment of \$150.00 by Barker, Rosholt & Simpson LLP, as shown by receipt C110593. This satisfies the filing fee requirement for each temporary change application.

Summary – Angie Hansen

Three IDWR staff members (Tyler Smith, Shilynn Novak, and Dan Nelson) reviewed the three temporary change applications and prepared the subsequent sections of this memo summarizing their findings. I offer this section to summarize the details of the three temporary changes ultimately approved.

All three temporary change approvals authorize diversion of ground water from nine wells and injection of that ground water into various surface water conveyances, adjacent to the wells, which ultimately convey water into the Little Wood River. Water is then rediverted by specific Little Wood River water right holders downstream. The place of use for each temporary change specifies the land to receive this water. Also, each temporary change application identifies the Little Wood River user receiving the water by their Little Wood River water right number.

The following table summarizes the location, WMIS number, and name of the nine ground water well points of diversion:

Table 1

POD Location	WMIS ID	Well Name
T1S, R20E, S20, NWNENE	1001202	South Side of North Picabo Road
T1S, R20E, S20, NWNESW	1001596	Tic Toc Well
T1S, R20E, S20, SESWSE	1001558	Martin.Iden well
T1S, R20E, S30, NWSWNE	1001560	LeDuc well
T1S, R20E, S30, NENW	1001559	Meadow well
T1S, R19E, S02, SWNWSW	1001097	Gannet Pivot 2
T1S, R19E, S02, SENWSW	1001317	Gannet Pivot 1
T1S, R19E, S05, Lot 1 SENE	1001162	West of Price Lane and Baseline intersection
T1N, R19E, S28, SENW	1001212	Entrance Well

The following table summarizes the Little Wood River water right number, owner name, and temporary change that is providing water to that owner:

Table 2

Basin	Sequence	Suffix	Current Owner	Temporary Change Providing Ground Water to Place of Use
37	423		TABER, DONALD E	TC-37-85
37	49		RITTER, JAMES B; RITTER, LINDA	TC-37-86
37	326		ARKOOSH, CARRIE R; ARKOOSH, JOHN W	TC-37-87
37	560	A	CITY OF SHOSHONE	TC-37-87
37	560	B	CITY OF SHOSHONE	TC-37-87
37	606	C	CITY OF SHOSHONE	TC-37-87
37	606	D	REGALADO, ANA L; REGALADO, HUGO	TC-37-87
37	606	E	LINCOLN COUNTY CEMETERY MAINTENANCE DISTRICT	TC-37-87
37	10839		STATE OF IDAHO	TC-37-87
37	177	D	LARSON, JOHN A; LARSON, SHELLY	TC-37-87

37	177	H	BENCK JR, GERHARDT J; BURGESS-BENCK , LA VON M	TC-37-87
37	177	J	UHRIG, JOHN T; UHRIG, LENNIE L	TC-37-87
37	177	K	HALLER, ALEXIA; HALLER, ROD	TC-37-87
37	177	L	MC KEAN, SUSAN WOOD	TC-37-87
37	177	M	GLANBIA FOODS INC	TC-37-87
37	177	N	FLF SAWTOOTH LLC	TC-37-87
37	193	A	KUNTZ, CALVIN D; KUNTZ, JOYCE DARLENE	TC-37-87
37	485		KOOSH INC	TC-37-87
37	20847		GARZA, MELISSA; GARZA, ROMAN	TC-37-87
37	21168		LRM LLC	TC-37-87
37	21169		ONEIDA, MICHAEL PETE	TC-37-87
37	21173		HOSKOVEC, BARBARA; HOSKOVEC, STANLEY E	TC-37-87
37	21649		INFANGER, DEBRA A; INFANGER, JOHN N	TC-37-87
37	21650		SIMPSON, CARL D	TC-37-87
37	22832		BURNETT, CHRISTA L; BURNETT, SCOTT O	TC-37-87

The following table summarizes the rate requested and the rates, volumes, and acres approved for the three temporary changes and the waters supply bank (WSB) rental:

Table 3

	Rate Requested (cfs)	Rate Approved (cfs)	Volume Approved (afa)	Acres Approved/Dedicated to TC-37-85, TC-37-86, and TC-37-87
TC-37-85	0.5	0.5	126	36
TC-37-86	5.5	3.12	588	168
TC-37-87	17	15.89	3371	1141.5
WSB Rental	8	4.65	1000	301.9
Total	31	24.16	5085	1647.4

The Excel spreadsheet titled “Bs37TempChangeSum Table” provides detail regarding overlap analysis for the temporary change water rights and the approvals issued. This spreadsheet is stored in the N:\WRDocs\BASIN 37\Proposed Mitigation 2021 folder. It will be profiled as an attachment to this memo once the three temporary change approvals become final orders and subsequent processing of other Basin 37 temporary change requests (TC-37-88 and TC-37-89 for example) is complete.

TC-37-85 and TC-37-86 were approved as preliminary orders on July 8, 2021. IDWR received no petitions or exceptions of these two preliminary orders. Therefore, these temporary change approvals became final orders by operation of law on July 22, 2021.

TC-37-87 was approved as a preliminary order on July 12, 2021. On July 14, 2021, IDWR withdraw the initial preliminary order to correct an error in one of the conditions. The July 14, 2021 replaced the initial preliminary order and approved TC-37-87. IDWR received no petitions or exceptions to the July 14, 2021 order. Therefore, the approval of TC-37-87 became a final order on July 28, 2021.

TC-37-85 – Tyler Smith

Temporary change application TC-37-85 proposes temporary changes to water right 37-22777, and was submitted in the name of South Valley &/or Galena Ground Water Districts. It was signed by Pat McMahon, the North Division Director of Galena Groundwater District, and Kristy Molyneux, chair of the South Valley Groundwater District.

Aubrey Spring Ranch LLC is the current owner of 37-22777. A “Consent to Use Water Rights for Temporary Transfer Application by Groundwater Districts” was submitted with the temporary change application. This consent, signed by a representative of Aubrey Spring Ranch LLC, gives South Valley Groundwater District and the Galena Groundwater District the necessary authority to file temporary transfer applications for water right 37-22777 for use for the remainder of the 2021 irrigation season. According to the Idaho Secretary of State, Aubrey Spring Ranch LLC is administratively inactive/dissolved.

Temporary change application TC-37-85 proposes to divert groundwater to supply 36 acres for water right 37-423 from 36 acres in the NWSW Section 13 Twp 01S Rge 19E of water right 37-22777. The application states that these 36 acres to be moved from water right 37-22777 are fallow and not being irrigated this year.

According to Google Climate Engine data, this 36 acres (orange line) had a NDVI maximum between 0.53 and 0.73 between May 4, 2021 and June 13, 2021. A NDVI maximum above 0.60 indicates a presence of vegetative growth beyond the native vegetation, and therefore indicates irrigation has occurred on this 36 acres within the past month.

Right 37-22777 authorizes 3.18 cfs and 556.2 af of groundwater from three wells for the irrigation of 158.9 acres (0.02 cfs/acre & 3.5 af/acre). The irrigation season of use is from 4/15 to 10/31. Water right 37-22777 is conditioned as a supplemental groundwater right, meaning the right holder shall limit the diversion of ground water to times when surface water supply is not available. At the allowed rate/acre, 36 acres would allow for the transfer of up to 0.72 cfs (0.02 cfs x 36 acres), however only 0.50 cfs was applied for.

37-22777 when combined with other Groundwater rights 37-2253A and 37-8571 is limited to 5.46 cfs. 37-22777, 37-2553A and 37-8571 combined authorize 258.9 acres and 2889.7 acre feet. 37-8571 authorizes 5.0 cfs and 1,983.5 af for wildlife, with no irrigation use. The

unstacking of these rights may be of concern due to the continued use of the other stacked ground water rights.

Right 37-22777 has overlapping surface water rights 37-252, 37-354, and 37-712 which are sourced from Loving Creek, and 37-2575 sourced from an Unnamed Drain tributary to Loving Creek. Loving Creek is tributary to Silver Creek which flows into the Little Wood River.

Rights 37-252, 37-712, 37-2553A, 37-2553B, 37-2575, 37-2686D, and 37-7598D are limited to 224 acres of irrigation in a single season.

37-423 authorizes 0.30 cfs with an acre limit of 295.0 acres. 37-423 has overlapping surface water rights 37-424 and 37-425 from the Little Wood River, 37-59B from the Big Wood River, as well as a ground water right 37-8401. Furthermore, it is within the Big Wood Canal Company service area. 37-423 when combined with 37-59B and 37-424 are limited to 295 acres. 37-423 when combined with 37-425 is limited to 327.2 acres. Accordingly, the possibility of enlargement due to more ground water being used at the new place of use is not of concern due to more surface water rights being available at the new place of use.

Additionally, according to Water District 37 Watermaster Kevin Lakey, the flow levels in the Big Wood River and the Little Wood River are diminished and likely not meeting the water demands required at the headgate for the place of use of either 37-22777 or 37-423. Therefore, he did not oppose approval of this application as the ground water would likely be applied at either water right place of use for the duration of the season since surface water is not currently deliverable.

TC-37-86 – Shilynn Novak

The Temorary Change proposes to use water from water rights 37-22777, 37-23090, 37-23091, 37-23092, and 37-23093 to supplement irrigation for 37-49.

37-22777	Aubrey Springs Ranch LLC	122.9 acres (after TC-37-85 deduction)	3.18 cfs
37-23090, 37-23091, 37-23092, and 37-23093	Blackburn Farming LLC	45.1 (before Dan's group's deduction)	7.16, 3.61, 8.89, 2.65 cfs
37-49		168 acres total transfered	5.50

Authority to File:

37-49

The transfer was signed by Kristy Molyneux, chair of the South Valley Groundwater District and Pat McMahon, North Division Director of Galena Groundwater District. Both have authority to file the transfer application.

37-22777

The consent of use submitted by Aubrey Spring Ranch LLC for 37-22777. The Secretary of State records show that Aubrey Spring Ranch LLC is administratively inactive/dissolved. After reviewing past Department docs and ownership changes, it appears that the last owner of the LLC was Stephen Barnard and the signatures do not match. This may bring a question of do they have authority to file. The consent form allows the transfer from the current POU to the new location.

37-23090, 37-23091, 23-2092, 37-2093

Cortlandt Blackburn is a member of Blackburn Farming LLC and has signed on behalf of Blackburn Farming LLC in Secretary of State records. Blackburn Farming has agreed on two separate consent forms to transfer the water from their POD to the new location and to divert water from their well for irrigation at the new location.

Water Right Validity:

37-22777

Using info from Climate Engine and Department Aerial Imagery, it appears that the POU has been irrigated likely using a combination of both surface and ground water irrigation water rights.

37-23090, 37-23091, 23-2092, 37-2093

See review of TC-37-87 below for details.

Water Right Notes

37-22777

This water right was licensed for a total of 3.18 cfs and 158.9 acres. TC-37-85 requested use of 36.0 irrigated acres from the 158.9 irrigated acres which left 122.9 irrigated acres to be moved. Water right 37-22777 has two surface water rights (37-252 and 37-2575) for the same POU for the portion north of the highway. The portion south of the highway has surface water right 37-354. So this water right can be supplemental to surface water.

According to the Field Exam completed 6/21/2012, the water from the well can be injected into Loving Creek and redelivered to the POU on the south side of the highway. "Typically, the ground water is pumped and delivered to the ponds continually and irrigation pumps are run as needed."

The exam also stated that "Surface water hasn't been comingled or used on the property for an undetermined length of time as it lead to problems with algal blooms in the ponds." This may mean that a larger amount of ground water was being used versus always using surface water even though it is a supplemental right. But it is water that has been historically used that specific way.

source	cfs	acres
Original use	3.18	158.9
After TC-37-85 deduction)	2.46	122.9

Combined Use Limits for 37-22777

There is a combined use limit of 5.46 cfs for 37-22777, 37-2553A, and 37-8571. The 5.46 cfs limit comes from the 40 Hp POD that discharges into a culvert so it can be distributed to a pump for irrigation and/or delivered to a pond system. 5.46 cfs is the max that can be produced by the well.

WR	cfs	Source	Use
37-22777	3.18	GW	Irrigation only
37-2553A	2	GW	Irrigation only
37-8571	5	GW	Wildlife

$3.18 + 2 = 5.18$ cfs but was rounded to 5.46 since that is what was measured

**Combined Use
Limit**

5.46

There may have to be measurement completed where the water is being injected into Loving Creek to ensure that only 3.18 cfs is being diverted for this temporary change.

37-23090, 37-23091, 37-23092, 37-23093

If this temporary change is used after TC-37-85 and before TC-37-87, it should have enough water to transfer from the original POU location to the new location.

source	cfs	acres
Original use	19.65	1291.6
TC-37-86 for 45.1 ac	.69	45.1

App may need to have 3.15 cfs. (3.18 cfs + .69 cfs)

37-49

This right is within the boundary which is provided surface water by the Milner Gooding Canal and the Big Wood Canal Company.

cfs	Source	Use
4.2	Little Wood	Irrigation only

The first condition of this right says "Right limited to 4.07 cfs when diverted from pump in Little Wood River. Condition R43 is listed.

TC-37-87 – Dan Nelson

Applicant name and signatures:

This application was filed by South Valley &/or Galena Ground Water Districts. The application was signed by Kristy Molyneux and I assume Pat McMahon. Mr. McMahon's signature is very difficult to read. Mr. McMahon is listed as the current chairman on their

website. Ms. Molyneux doesn't show up as one of the officers in any of the searches I could find, but I did find that she was a member of the District.

Water right numbers:

The water rights involved in this temporary change are 37-2493, 37-2576, 37-2649A, 37-2649B, 37-2681, 37-7644, 37-23090, 37-23091, 37-23092, and 37-23093.

Authority to change the proposed water rights:

The temporary change was filed by two water districts, but the owners of each water right and well location sent a letter agreeing to the water right change.

Source – The source for each of these rights is ground water.

Priority dates:

37-2493 (12/21/1948), 37-2576 (7/13/1955), 37-2649A (1/21/1961), 37-2649B (1/21/1961), 37-2681 (12/8/1961), 37-7644 (8/20/1977), 37-23090 (11/13/1959), 37-23091 (8/1/1960), 37-23092 (8/20/1964), and 37-23093 (4/1/1984).

Water use – The water use for each of these rights is irrigation.

Season of use:

37-2493 (4/15 to 10/31), 37-2576 (4/15 to 10/31), 37-2649A (4/1 to 11/1), 37-2649B (4/1 to 11/1), 37-2681 (4/15 to 10/31), 37-7644 (4/15 to 10/31), 37-23090 (4/1 to 11/1), 37-23091 (4/15 to 10/31), 37-23092 (4/1 to 11/1), and 37-23093 (4/15 to 10/31).

Total Rate and Volumes:

It has been determined that we are going to treat these rights as supplemental and that the ground water rights would be discontinued. The water will be coming from different sources and going to different locations. It has been determined that we will allow the watermaster to determine the locations of where the water will be delivered. We have created a spreadsheet that is attached to this memorandum that shows the acres that will be serviced from these rights. I have gone through an analysis below of each of the systems that will be retired. The following is the recommendations for the water use as if all of these rights were a supplemental right or irrigation would discontinue for the irrigated acres. The recommendations are separated out on the individual irrigation systems and the rights associated with them.

37-23090, 37-23091, 37-23092, and 37-23093 =	2.36 cfs and 543 af for 155 acres ¹
37-2493 =	2.00 cfs and 350 af for 100 acres

¹ Angie Hansen Note: Had to give 6.5 acres of the Blackburn rights to TC-37-86 due to overlap of water right 37-22777. Therefore, only 2.26 cfs 520.2 af for 148.5 acres from these rights provided to TC-37-87.

37-2576, 37-2681, and 37-7644 =	10.42 ² cfs and 1824 af for 521 acres
37-2649A and 37-2649B =	2.44 cfs and 968 af for 372 acres ³
TOTALs =	15.99 cfs and 3,394 af for 1,148 acres ⁴

Please note that 1.23 cfs and 291 af of rights 37-2576, 37-2681, and 37-7644 is shared with the diversion rate and volume listed for 37-2649A and 37-2649B due to combined conditions on the water rights.

Please Note: A condition will be needed that states when 37-2576, 37-2649A, 37-2649B, 37-2681, and 37-7644 are combined they are limited to a total diversion rate of 2.44 cfs and total volume of 968 af.⁵

Points of diversion:

The points of diversion and points of injection were discussed above, see Table 1. The points of rediversion are the points of diversion listed on the each of the rights listed in Table 3 above. There will be a total of 1,176 acres retired.

Place of use:

The places of use of the water rights that will no longer be irrigated can be found for each system in the discussion section below.

The places of use where the water will be transferred to are the places of use shown in the table above. The total acres at the new place of use is 663.4 acres. Based on Department standards of 0.02 cfs and 3.5 af that would allow a total of 13.27 and 2,321.9 af. The amount of water being retired does not meet this criteria, but these rights are to be used to supplement the surface water rights at the new place of use. The watermaster is also going to need to address the stream losses, so that could further reduce the amount of water available to the new places of use.

Considerations for approval conditions

- Used only on land with irrigation rights from the Little Wood River
- Use surface water first
- Measure diversion, injection, and rediversion
- Subject to conveyance losses as determined by the watermaster
- Limited to XX acres in connection with the target SW rights

² Angie Hansen Note: 37-7644 has rate limit with 37-2649A & 37-2649B, if all available rate goes to 37-2649A & 37-2649B, leaves a total of 9.19 cfs for the 521 acres, which still enough rate to generate the 1824 af volume for the 521 acres under 37-7644.

³ Angie Hansen Note: If 37-7014 off, amounts for 37-2649A & B would be 7.44 cfs, 1302 af for 372 acres.

⁴ Angie Hansen Note: If 37-7014 off, amounts for 37-2649A & 37-2649B increase, but also had to decrease amounts from Blackburn rights (37-23090 et al) to give more to TC-37-86 due to 37-22777 overlap issues. New totals 20.89 cfs, 3996.2 af and 1141.5 acres.

⁵ Angie Hansen Note: 37-2576 and 37-2681 are diverted from a different well than the other three rights. The combined limit should be 37-2649A, 37-2649B, and 37-7644 are limited to 2.44 cfs and 968 af.

- A condition will be needed that states when 37-2576, 37-2649A, 37-2649B, 37-2681, and 37-7644 are combined they are limited to a total diversion rate of 2.44 cfs and total volume of 968 af⁶.

Discussion:

Water Rights 37-23090, 37-23091, 37-23092, and 37-23093:

Water rights 37-23090, 37-23091, 37-23092, 37-23093 are ground water rights limited to a combined diversion of 19.65 cfs and a total volume of 4520.6 af for 1291.6 acres of irrigation.

Water rights 37-23083, 37-23084, 37-23085, 37-23087, 37-23088, and 37-23089 are Big Wood River water rights limited to a combined total volume of 4520.6 af for 1291.6 acres of irrigation.

When Rights 37-23090, 37-23091, 37-23092, 37-23093, 37-23083, 37-23084, 37-23085, 37-23087, 37-23088, and 37-23089 are combined they are limited to 25.8 cfs, 1291.6 ac, and not more than 4520.6 af at 3.5 af per acre.

Using the Sentinel Imagery for June 29, 2021, shown below I found a total of 1148.5 acres being irrigated. There is a 21 acre field that is questionable, and 5 acres being irrigated on Bureau of Land Management (BLM) ground. I have shown it in the maps below. Using this information there is approximately 142.5 acres available for possible mitigation if you do not include the 26 questionable acres.

The temporary change package that I am working with, suggests that 155 acres are to be moved. I feel we would have to limit them to a minimum of 143 acres if not 117 acres. The temporary change package that Shilynn is working on they are asking for 41.5 acres. There clearly aren't enough acres to cover both proposed temporary changes.

At 155 acres they would be able to transfer 2.36 cfs ($[19.65 / 1291.6] \times 155 = 2.358$ cfs) and a volume of 543 af (155 acres $\times$ 3.5 af/ac = 542.5).

At 143 acres they would be able to transfer 2.18 cfs ($[19.65 / 1291.6] \times 143 = 2.1755$ cfs) and a volume of 501 af (143 acres $\times$ 3.5 af/ac = 500.5).

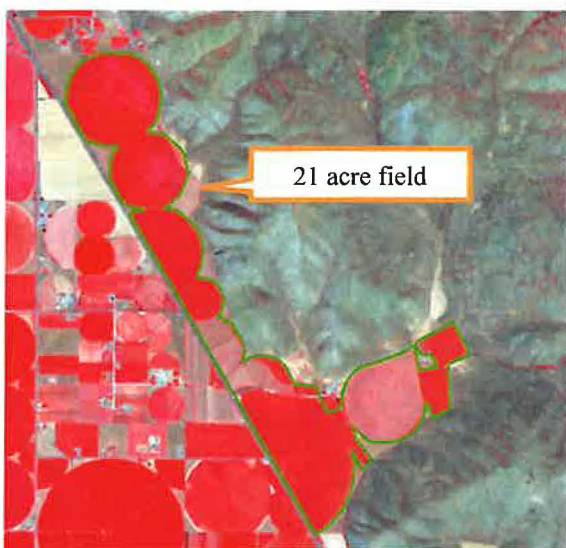
At 117 acres they would be able to transfer 1.78 cfs ($[19.65 / 1291.6] \times 117 = 1.78$ cfs) and a volume of 410 af (117 acres $\times$ 3.5 af/ac = 409.5).

Depending on the acreage amount used, a condition will be needed to insure that the acres being retired will not be irrigated from the Big Wood River water rights. Water Management Information System (WMIS) records show annual volumes range from 501 af in 2018 to 1156.5 af in 2016.

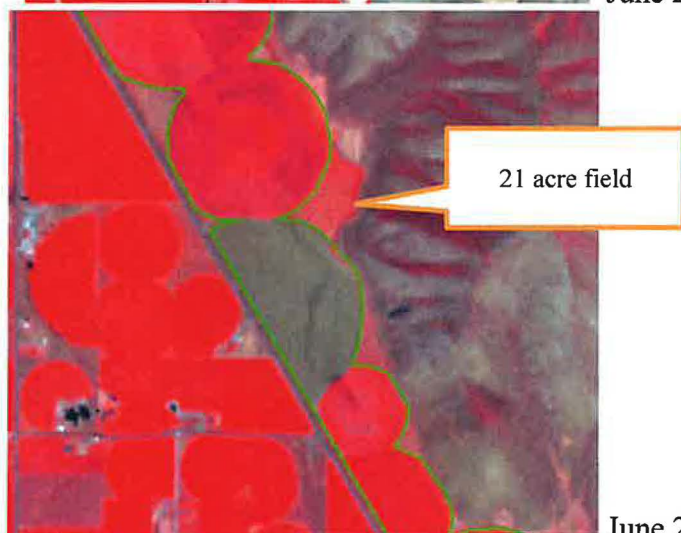
⁶ Angie Hansen Note: 37-2576 and 37-2681 are diverted from a different well than the other three rights. The combined limit should be 37-2649A, 37-2649B, and 37-7644 are limited to 2.44 cfs and 968 af.

I recommend that we allow this temporary transfer to move forward with a limit of 117 acres from the 4 water rights at a diversion rate of 1.78 cfs and 410 AF for water rights 37-23090, 37-23091, 37-23092, and 37-23093⁷.

If we assume that this water is supplemental, then I would recommend that we limit the water that can be transferred to the volumes found in the WMIS database of 90.53 af or the amount suggested above for the 155 acres of 2.36 cfs and 543 af⁸.



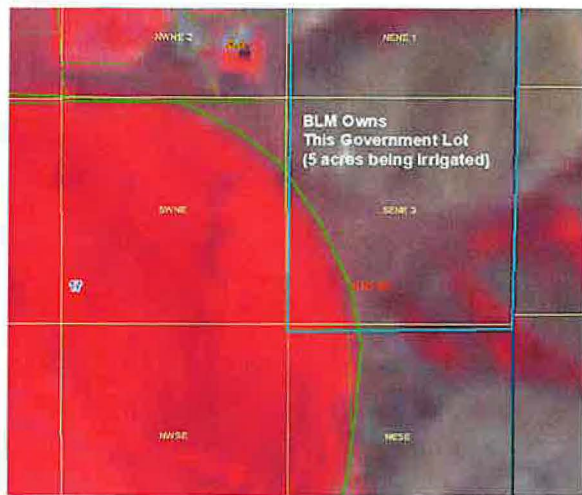
June 29, 2021, Sentinel Imagery



June 2, 2021, Sentinel Imagery

⁷ Angie Hansen Note: See approvals for quantities actually approved.

⁸ Angie Hansen Note: See approvals for quantities actually approved.



June 2, 2021, Sentinel Imagery

Water Right 37-2493:

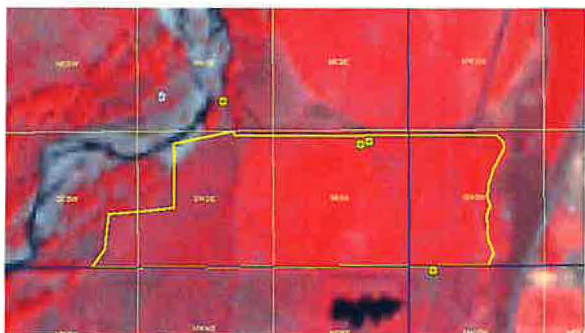
A significant portion of water right 37-2493 appears to have been irrigated on June 2, 2021. This property has overlapping water rights 37-11821, 37-11822, 37-11823, and is within the borders of Upper Wood River Water Users Association Inc.

Water rights 37-2493, 37-11821, 37-11822, and 37-11823 are limited to 100 acres of irrigation. There are no further conditions limiting diversion rate or volume when these rights are combined.

A temporary transfer was filed on water rights 37-11821 and 37-11822 in April of 2021, and that temporary transfer was denied based on possible expansion of use and would injure other rights. The reasoning behind this decision was that Upper Wood River Water Users Association Inc. water rights 37-892 and 37-891A are appurtenant to this property, and that the owner's were trying to only transfer 2 of the 4 other surface water rights listed above that are also appurtenant to the property. It was determined at that time this would cause an expansion of the rights and injury.

WMIS data also shows that the maximum amount of water diverted from these wells was 90.53 af in 2018.

A review of the Sentinel imagery suggests that this property is still being irrigated. The image below is dated June 2, 2021. The earlier temporary transfer dealt only with the surface water rights, and we are dealing strictly with the ground water right, so the earlier denial shouldn't hamper this approval.

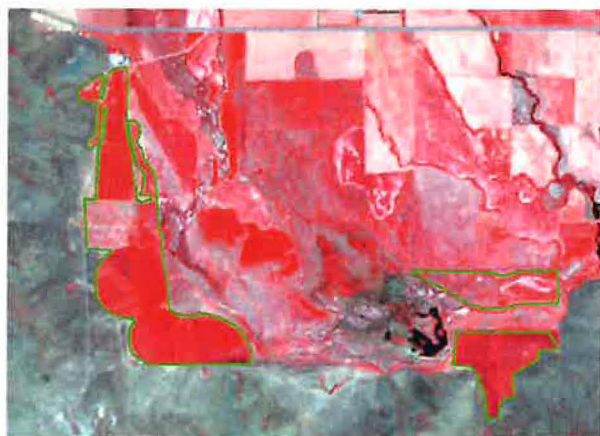


If we assume the ground water rights are supplemental, then we should limit them to the 90.5 af found in the WMIS database, or the full allocation of 2.00 cfs and 350 af for 100 acres.

Water Rights 37-2576, 37-2681, and 37-7644:

Water rights 37-2576, 34-2681, and 37-118 are all for the same acres, and 37-7644 covers only a portion of those acres. When all of these rights are combined, they are limited to a total of 521.1 acres. Water right 37-118 is a water right from the Buhler Drain and is limited to 296.1 acres in the 521.1 acres place of use. Water right 37-118 also supplies mitigation for water right 37-22909, which is not part of the acres discussed here.

When I review the acres currently being irrigated, I found a total of 477.1 acres. See the map below for the acres irrigated as of June 29, 2021. The surface water right 37-118 only authorizes the irrigation of 296.1 acres, so a minimum of 181 acres of this ground could only be legally irrigated with ground water. This would leave only an additional 44 acres of ground water irrigation that isn't currently being used.



Rights 37-2649A and 37-2649B share a well and a combined diversion rate with water right 37-7014. We would need to remove a portion of the diversion rate from the combined diversion rate limit of 7.44 cfs that is shown in the conditions, since water right 37-7014 is not part of this temporary transfer package⁹. Water right 37-7014 has 4 wells, but we can't tell how much each

⁹ Angie Hansen Note: An alternative to this would be if 37-7014 is not diverted in 2021, the entire 7.44 cfts of rights 37-2649A (4.24 cfs) and 37-2649B (3.2 cfs) could be used in the temporary change application(s).

well supplies the 5.00 cfs authorized by that right. Therefore, we must remove the 5.00 cfs from the 7.44 cfs combined rate limit authorized by 37-7014. That would leave a maximum diversion rate of 2.44 cfs. Due to the shared wells, we can't really tell how much water has been used by these rights in the WMIS database.

I would recommend that we limit these rights to 44 acres at 0.02 cfs per acre and 3.5 af per acre or 0.88 cfs and 154 af. If we assume that surface water acres are supplemented by ground water and that they will discontinue irrigating with ground water, The diversion rate would be limited to 2.44 cfs due the limits required by the overlapping water rights mentioned above, and 968 af ($2.44 \text{ cfs} \times 214 \text{ days of irrigation season} \times 1.9835 = 967.9 \text{ af}$)¹⁰.

If they stop using ground water to irrigate their property, they would only be able to irrigate 296.1 acre authorized by surface water right 37-118. We would also need a combined limitation that when water rights 37-2649A, 37-2649B, and 37-7644 are combined, they will be limited to 2.44 cfs and 968 af. Therefore, we now need to determine how much rate and volume we call allot to each water right in this set. Water right 37-7644 has a condition that limits this right to 0.02 cfs per acre, and 488.3 af when combined with all other rights on 139.5 acres, or 3.5 af per acre. It also has a condition that limits the irrigation to 521.1 acres when combined with water rights 37-2576 and 37-2681. Water right 37-2576 authorizes 4.69 cfs and 840 af for 240 acres in the 521.1 place of use, and water right 37-2681 authorizes 4.50 cfs and 693 af for 231 acres in the 521.1 acre s place of use. When rights 37-2576 and 37-2681 are added together they provide 9.19 cfs and 1533 af for 471 acres of the 521.1 acre permissible place of use. The combined water rights can have 10.42 cfs and 1,824 af for the 521.1 acres at 0.02 cfs and 3.5 af per acre. Water right 37-7644 can provide the differenet for these rates and volumes, so it can provide 1.23 cfs and 291 af to bring the total rates and volumes up to the maximum amounts allowed.

Water rights 37-2576, 37-2681, and 37-7644 should be limited to the 10.42 cfs and 1824 af for the 521.1 acres.

Water Rights 37-2649A and 37-2649B:

The water rights for these two water rights list a 397 acre permissible place of use, but the shape file on record and the file shown in the maps supplied by the applicant only show 372 acres. Ther are conditions that limit the acres irrigated to 372, so the total acres that can be irrigated each year is 372 acres. The entire place of use has been irrigated, and there are no overlapping water rights. Therefore, we can only consider what will be done from this point forward.

These ground water rights share a well and a combined diversion rate with water right 37-7014 and 37-7644. We would need to remove a portion of the diversion rate from the combined diversion rate limit of 7.44 cfs that is shown in the conditions, since water right 37-7014 is not part of this temporary transfer package. Water right 37-7014 has 4 wells, but we can't tell how

¹⁰ Angie Hansen Note: With full 7.44 cfs dedicated to 37-2649A & 37-2649B (37-7014 off so 5 cfs available to other two WRs), can produce full volume on face of 37-2649A & 37-2649B so no combined volume limit needed.

If we assume that they will discontinue irrigating with ground water, The diversion rate would be limited to 2.44 cfs due the limits required by the overlapping water rights mentioned above, and 968 af ($2.44 \text{ cfs} \times 214 \text{ days of irrigation season} \times 1.9835 = 967.9 \text{ af}$). We would also need a combined limitation that when water rights 37-2649A, 37-2649B, and 37-7644 are combined, they will be limited to 2.44 cfs and 968 af. We can recommend the total amount for these rights, but the when these rights are combined with the total volumes, we need to understand that 37-7644 has already accounted for 1.23 cfs and 291 af, so the overall total needs to reflect this information.

