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Water Resources

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AUG 10 2015

DEPARTMENT OF
WATER RESOURCES

August 5, 2015

Mr. Gary Spackman, Director
Idaho Department of Water Resources
P.O. Box 83720
Boise, Idaho 83720-0098

Re: Water Right 37- 577BP Eccles Flying Hat Ranch
Project No. 275-13-2013

Dear Gary:

Water right 37-577BP, owned by Eccles Flying Hat Ranch resulted from the transfer of irrigation water rights from the Hiawatha Canal diverting from the Big Wood River north of Hailey to the Cove Canal, diverting just north of Bellevue for use on the Flying Hat Ranch. The Transfer filed with IDWR in 2000 was necessitated by the obstruction of the south end of the Hiawatha Canal by the Hailey airport construction resulting in the inability of the Flying Hat Ranch to continue receiving irrigation water through the Hiawatha Canal.

It was determined by IDWR that removal of the 7.0 cfs diversion of this right from the Hiawatha Canal would result in a decrease in the "carrying water (seepage) in the Hiawatha canal and a shortage of irrigation water from the canal to the other water users." As a result, IDWR required, as a condition of the transfer, that 20% of the water right discharge in the canal should remain in the canal to 'mitigate for seepage losses.' Therefore, 1.4 cfs of the 7.0 cfs allowed irrigation water under water right 37-577BP (condition #3) was to continue to be diverted into the Hiawatha canal and 5.6 cfs was to be diverted from the Big Wood River downstream at the Cove Canal diversion and thence to Flying Hat Ranch.

A seepage analysis was conducted by Allen Merritt of your office in 2001 and updated by Allen in 2008. The update showed a decrease in seepage in the canal as a result of lining of a portion of the canal by the Valley Club in connection with new golf course construction. This analysis, using the Worstall method as outlined in the IDWR Hubbel Report, showed that the seepage rate in the canal had reduced from 9.14 cfs in 2001 to 7.55 cfs in 2008 using the same analysis procedure.

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A review conducted in 2015 by Brockway Engineering of the IDWR water rights database shows that the authorized discharge under water rights owned by the Hiawatha Canal and specifically utilized for seepage mitigation is 8.539 cfs and that an additional 0.40 cfs of private water rights are dedicated to seepage mitigation (Brockway 2015 Hiawatha Canal Seepage Evaluation).

This analysis shows that the Hiawatha Canal Company owns water rights for seepage mitigation in excess of the water rights necessary to mitigate for the estimated seepage in the canal. Condition 3 of water rights 37- 577BP states that "A portion of Right 37-577BP, 1.40 cfs, shall continue to be diverted into the Hiawatha Canal until such time as the canal ceases operation or is otherwise no longer necessary for such mitigation. The right holder retains ownership of the 1.40 cfs portion of this right diverted into the Hiawatha Canal."

The Hiawatha Canal Company has successfully obtained ownership of water rights to "mitigate for seepage" from the canal. In 2012, the Company was partially decreed water right 37-577B for mitigation for seepage which was subsequently decreed. Similarly, in 2012 the Company was partially decreed water rights 37-22630, 37-22631, 37-22632 and 37-22633 which were 'limited to the conveyance losses associated with a delivery of water' by the Hiawatha Canal Water Users Association of Lateral or Laterals.

In addition to the water rights owned by the Hiawatha Canal which are specifically utilized for seepage mitigation, there are additional private water rights which have been required to continue to be diverted into the Hiawatha canal when water rights were transferred out of the canal.

Indian Creek is tributary to the Hiawatha canal upstream of the Indian Creek road and flows into the canal as high as 10 cfs have been observed or measured at the confluence. This discharge is not counted as mitigation for seepage by IDWR or the Watermaster. The available flow in the Hiawatha Canal for mitigation for seepage is, therefore, significantly in excess of the operational seepage in the Hiawatha Canal.

On March 26, 2015, We requested that the 1.4 cfs of irrigation water right 37-577BP, which is no longer necessary for Hiawatha Canal seepage mitigation, be returned back to the Flying Hat Ranch for delivery through the Cove Canal. Reading of condition three (3) of water right 37-577BP indicates that the intent of that condition was to assure no injury to existing water rights being conveyed in the Hiawatha Canal as long as the seepage water was needed.

It is significant that:

1. The ownership of all of the water right 37-577BP remains as Eccles Flying Hat Ranch LLC.
2. The 1.4 cfs required to remain diverted into the Hiawatha Canal has been diverted consistently since the approval of Transfer 68526 (Watermaster District 37).
3. A request by Hiawatha Canal for IDWR to conduct additional seepage evaluations on the Hiawatha canal was denied by IDWR (Allen Merritt, 1/9/2001).
4. The designated place of use of the 1.4 cfs of water right 37-577BP is the entire Flying Hat Ranch allowed acreage and not the Hiawatha Canal.
5. The Cove Canal is approximately 2.95 miles long and the estimated seepage loss (Worstell method) is 2.4 cfs. Seepage loss due to the additional 5.6 cfs is not currently mitigated.

On April 8, 2015, Allen Merritt, Regional Manager of IDWR in Twin Falls responded to the March 26, 2015 request and indicated that it was determined by Boise IDWR staff that there was insufficient evidence presented in the March 18 request to effect a change in water right 37-577BP. The letter also indicated an approved formal transfer under 42-222 would be required in order to return the 1.4 cfs of water right 37-577BP to the Cove Canal as indicated in Condition #3 of the water right. This was not the understanding which Flying Hat Ranch personnel, Mr. Spencer Eccles, Evan Robertson, attorney for Flying Hat Ranch, or I had when the negotiations were conducted. Condition 3 in water right 37-577BP is specific to the criteria for return of the water to its original use and should not require a lengthy, expensive water right transfer proceedings. It was the intent of the language agreed upon for water right 37-577BP, to facilitate the mitigation of any potential injury to Hiawatha Canal water users and to facilitate the return of the mitigating water to the original water right owner when warranted. The fact that the place of use and points of diversion for the mitigation component of the water right are on Flying Hat Ranch emphasizes the intent of the conditions.

I am therefore requesting that you not require a transfer to return the 1.4 cfs to the Cove Canal as part of water right 37-577BP.

Thank you for your prompt attention to this matter.

Sincerely

A handwritten signature in black ink, appearing to read "Charles E. Brockway". The signature is fluid and cursive, with the first name "Charles" being more prominent.

Charles E. Brockway, Ph.D., P.E.

Encls: Water Right 37-577BP
Brockway Engineering Report

cc: Kevin Lakey-Watermaster District 37
Evan Robertson
Marc Reinemann

Project No. 275-23-2013

Hiawatha Canal Seepage Evaluation

Prepared for:

Flying Hat Ranch, Eccles
Hailey, Idaho

March 20, 2015

For information concerning this report, contact
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Hiawatha Canal Seepage Evaluation

Prepared by: G. Erick Powell and Charles E. Brockway
Brockway Engineering, PLLC
Date: July 23, 2014, Revised March 20, 2015

A. Hiawatha Canal Overview

The Hiawatha Canal, a private ditch company, delivers individually held water rights through its system to the decreed place of use. The canal diverts water from the Big Wood River approximately 4 miles north of Hailey, Idaho near Zinc Spur. The canal serves about 44 users, which includes the area east of Highway 75 extending south through the City of Hailey (Figure 1). A total of 22.7 cfs of individual water rights with early priorities of 1883 or earlier have been delivered through this canal with an average discharge of 30 cfs and peak discharges over 40 cfs, according to records of Water District 37 (Appendix D). The Hiawatha Canal is 5.0 miles long with average width of 13.3 feet. The Hiawatha Canal historically provided irrigation water south of Hailey to the Flying Hat Ranch south of the Hailey Airport. The City of Hailey cemetery pump is currently the last diversion from the canal.

B. Water Right Transfer of 37-577BP

Water right no. 37-577BP, part of the Riley water right, is owned by Eccles Flying Hat Ranch, LLC and was originally delivered through the Hiawatha Canal to the Ranch property. It is unclear when, but sometime in the past, IDWR changed the Riley water right numbers in an attempt to eliminate confusion with multiple split suffixes. Water right no. 37-577BP was changed to 37-30001 and 37-30002. When the Hailey airport expanded, it prevented the Hiawatha Canal from delivering water to Flying Hat Ranch. Because of the new airport, a water right transfer was submitted to IDWR on May 24, 2000 to change the point of diversion of WR no. 37-30001, 37-30002, and 37-00917 from the Hiawatha Canal to the Cove Canal. The transfer was advertised in the Wood River Journal on October 10, 2000 and October 25, 2000. No protests were recorded

within the protest period. IDWR requested additional information regarding the canal from Dave Cropper, Hiawatha Canal Company, on November 21, 2000, which would allow IDWR to complete a seepage analysis and determine what portion of the above named rights would be required to remain in the canal as conveyance loss.

On December 1, 2000 a letter was sent to IDWR by Fritz Haemmerle requesting a re-noticing of the water right transfer to allow the Hiawatha Canal Company the opportunity to protest the transfer. In this letter, Mr. Haemmerle states that his clients were deprived of an opportunity to file protest because they were confused with the water right re-numbering of the Riley right (37-577BP) and therefore did not recognize the rights being transferred. Mr. Haemmerle further requested a thorough analysis by IDWR of the conveyance losses in the canal.

Allen Merritt, IDWR, reviewed the transfer and IDWR actions; he determined that IDWR adequately and correctly noticed the transfer and that the department would not consider re-noticing the transfer, as requested by Mr. Haemmerle. This determination was sent to Mr. Haemmerle on December 8, 2000. In this correspondence, Mr. Merritt again requested the canal data from Mr. Cropper to allow IDWR to conduct a thorough canal seepage analysis, as requested by Mr. Haemmerle.

Mr. Haemmerle replied to IDWR on December 27, 2000 and again requested that IDWR complete an analysis of conveyance losses on the canal. He cited canal seepage results from a previous transfer; the transfer resulted in 50% of the water right being transferred declared as conveyance loss and was to remain in the canal. Based on this previous transfer, Mr. Haemmerle requested that 50% of the Eccles water remain in the Hiawatha Canal as conveyance loss.

Mr. Merritt sent another letter to Mr. Haemmerle on January 9, 2001, that stated IDWR's intent to complete a seepage analysis of the Hiawatha Canal based on methodology outlined in the Hubble Report. The letter stated that IDWR would complete the analysis, "as soon as weather permits." Mr. Merritt stated in his letter that he would share the results of the analysis with the interested parties prior to finalizing the recommendation to the state office.

Allen Merritt sent a letter report on February 12, 2001, to all interested parties with the initial Hiawatha Canal conveyance loss estimates based on the Hubble Report and data collected by IDWR. In this report, Mr. Merritt used a spreadsheet analysis to determine the conveyance loss appurtenant to a water right holder based on the location of the diversion from the canal as well as the amount of water held in the canal by the water right holder. Mr. Merritt determined that the Hiawatha Canal lost 9.14 cfs. The 2001 Hubble Analysis spreadsheet can be found in Appendix A.

Based on the Hubble analysis, IDWR proposed that 20% of Mr. Eccles water right to be left in the Hiawatha Canal as conveyance loss or 1.4 cfs out of the 7.00 cfs (WR No. 37-577BP). IDWR held several meetings with interested parties to discuss the methodology and data used for the seepage analysis.

The renumbering of the old Riley water right from 37-577BP to 37-30001 and 37-30002 was retracted at some point, in the SRBA or in a transfer proceeding. It appears that the transfer filed on May 24, 2000 was never approved; a second transfer (transfer no. 68526) was filed on June 15, 2001, which included the movement of WR 37-577BP and 37-917 from the Hiawatha Canal to the Cove Canal and included the formation of a permissible place of use (PPU). The transfer filed in May, 2000, had the renumbered water rights (37-30001 and 37-30002) and the second transfer had the water right no. as 37-577BP.

IDWR approved the second transfer on May 6, 2002, with the condition that 1.4 cfs (20% of the analysis from IDWR) from WR No. 37-577BP be left in Hiawatha Canal. This condition was erroneously placed on every water right involved with transfer no. 68526. IDWR issued a revised approved transfer on June 3, 2002, with the condition to leave 1.4 cfs in the Hiawatha Canal only on WR No. 37-577BP.

The condition placed on water right 37-577BP (Appendix C) has the following language:

A portion of Right 37-577BP, 1.40 cfs, shall continue to be diverted into the Hiawatha Canal to mitigate the removal of Rights 37-481D, 37-482J, 37-483D, 37-577BP, 37-917, 37-11975, 37-11976, 37-11977 and

37-11978 diverted into Cove Canal and Kohler Ditch under Transfer 68526 until such time as the canal ceases operation or is otherwise no longer necessary for such mitigation. The right holder retains ownership of the 1.40 cfs portion of this right diverted into the Hiawatha Canal.

This condition clarifies that the ownership of this portion of the water right is to be retained by the right holder, in this case Eccles Flying Hat Ranch, LLC. The condition also instructs that the mitigation portion of water right no. 37-577BP should be diverted to the Hiawatha Canal until the mitigation is no longer necessary.

C. Hiawatha Canal SRBA Partial Decrees

The Hiawatha Canal filed three water right claims with the SRBA court in 1988. The basis for water right nos. 37-577B, 37-12097, and 37-12098 was based on a decree issued on 6/27/1925 that allowed for water from the Big Wood River to be diverted into the Hiawatha Canal to compensate for canal seepage. Upon review of the adjudication claims and water use, IDWR recommended that water right no. 37-577B be recommended and this water right was partially decreed in the SRBA on 6/29/2012. Amended adjudication claims for water right nos. 37-12097 and 37-12098 were recommended by IDWR to be disallowed on 1/3/2011 in an amended director's report. The Hiawatha Canal water users filed an objection to the disallowance of these claims.

Several meetings and status conferences were held between IDWR and the Hiawatha Canal. On May 2, 2012, Hiawatha Canal filed SF-5 with the SRBA court agreeing to the disallowance of water right claim nos. 37-12097 and 37-12098. The Hiawatha Canal agreed to the disallowance of these claims with the understanding that the canal company could object to all the disallowed rights claimed to be delivered through the Hiawatha Canal and that the canal could obtain the portion associated with each right that would be considered conveyance loss. The Hiawatha Canal filed four late claims with the SRBA court for disallowed water rights claimed to be delivered through the Hiawatha for 20% of the original diversion rate for seepage loss.

The four late claims were identified with water right nos. 37-22630, 37-22631, 37-22632, and 37-22633. These four late claims were reviewed by IDWR and recommended in the

Amended Director's Report. On 6/29/2012, partial decrees were filed for these late claims. Water right no. 37-22630 was partially decreed for 1.467 cfs, water right no. 37-22631 was partially decreed for 3.372 cfs, water right no. 37-22632 was partially decreed for 0.6 cfs, and water right no. 37-22633 was partially decreed for 0.36 cfs (Table 1).

In total, the Hiawatha Canal holds partial decrees for 8.539 cfs of mitigation water rights from the Big Wood River. Since these rights are non-consumptive, they should not be curtailed by priority date, but should continue to serve the purpose of conveying water through the Hiawatha Canal as long as the Hiawatha Canal is functioning and delivering the allotted water rights. A graph of the average and maximum water delivery to the Hiawatha Canal from 2000 to 2013 is shown in Figure 2.

D. Seepage Mitigation from Other Water Rights

Other private water right holders who had water delivered through the Hiawatha Canal have transferred their water out of the Hiawatha for one reason or another. A search of the IDWR database revealed at least seven rights that have mitigation as a nature of use, and the conditions indicate that the mitigation is for seepage in the Hiawatha Canal after the right had been moved. Table 2 contains a list of these other mitigation rights, the mitigation flow rate, and condition in the right. There are approximately 0.4 cfs of mitigation flow rate identified in Table 2.

Table 1: Hiawatha Canal Owned Water Rights for Seepage Mitigation

Water Right No.	Priority Date	Mitigation Flow Rate (cfs)	Condition
37-577B	3/24/1883	2.74	The watermaster shall deliver this right into the Hiawatha Canal where it shall not be rediverted.
37-22630	3/24/1883	1.467	This right is limited to conveyance loss associated with delivery of water by the Hiawatha Canal Water Users Association of Lateral or Laterals through its canal and lateral system.
37-22631	4/30/1889	3.372	
37-22632	8/1/1902	0.6	
37-22633	4/1/1940	0.36	
Total		8.539	

Table 2: Private water rights with a mitigation/conveyance loss component for the Hiawatha Canal.

Water Right No.	Owner	Mitigation Flow Rate (cfs)	Condition
37-577CM	Thomas-Stewart Family Trust	0.04	To mitigate for injury to other water users caused by the diversion and use of water under this right, the watermaster shall deliver 0.04 cfs of this right into the Hiawatha Canal where it shall remain undiverted.
37-12818D	Mariana S. Paen Trust	0.05	To mitigate for injury to other water users caused by the diversion and use of water under this right, the watermaster shall deliver 0.05 cfs of this right into the Hiawatha Canal where it shall remain undiverted.
37-20402	Walter Bruce Willis	0.06	The right holder shall retain ownership of Right 37-20402 and 0.06 cfs of that right shall be released by the watermaster of Water District 37 into the Hiawatha Canal and shall remain undiverted from the canal to prevent injury to canal users
37-20616	Henry Burdick	0.02	Diversion of ground water is limited to those times water is available for diversion under this right and priority from the Big Wood River and 0.02 cfs of surface water is actually diverted into the Hiawatha Canal for mitigation purposes.
37-21956	Robert Rohe	0.08	To prevent injury to other water users caused by approval of transfer 73969 the watermaster shall deliver a 0.08 cfs portion of this right for irrigation into the Hiawatha Canal where it shall remain undiverted and used for conveyance loss.
37-22323	Dry Lot, LLC	0.1	The watermaster shall deliver 0.10 cfs of these rights into the Hiawatha Canal for conveyance losses.
37-30000B	Michael Willard	0.05	A portion of Right No. 37-30000B, 0.05 cfs, is limited to use for conveyance losses in delivery of this right.

E. Revised Hiawatha Seepage Analysis

IDWR originally conducted the Hiawatha Canal seepage analysis as evaluation of the transfer involving water right no. 37-577BP, discussed above. Allen Merritt revised his seepage analysis in 2008 after the Valley Club, Inc. built the 'West Nine' golf course. The Valley Club incorporated water features into the existing Hiawatha Canal and lined the canal to prevent further seepage from the water features. The revised seepage analysis also removed the last section of the Hiawatha Canal, which used to serve the Flying Hat Ranch, but is no longer used following the transfer.

The same methodology used for the original seepage analysis was used for the revised seepage analysis. Mr. Merritt concluded that the total seepage from the Hiawatha Canal had decreased from 9.14 cfs in 2001 (Appendix A) to 7.55 cfs in 2008 (Appendix B).

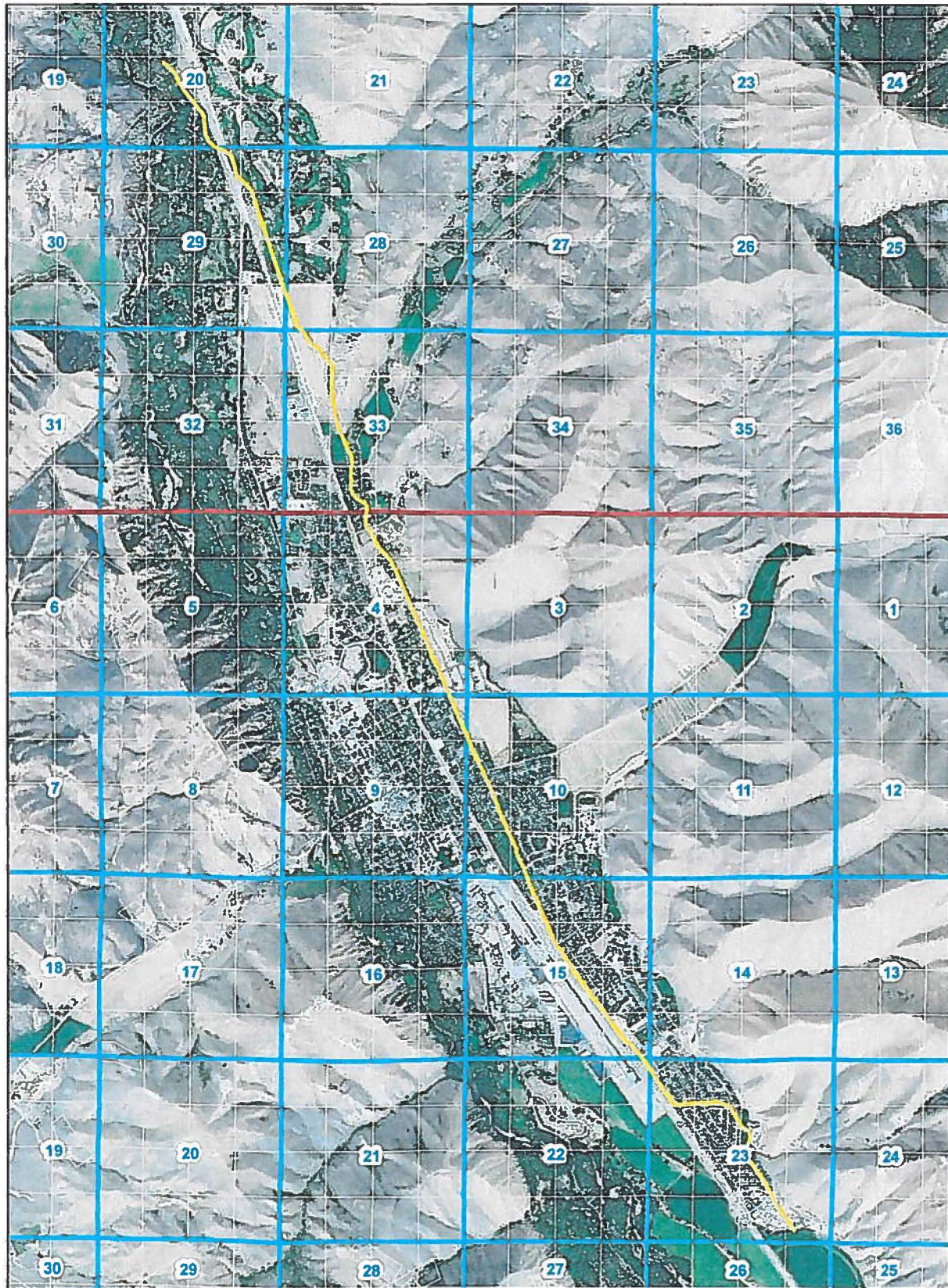
F. Mitigation for Hiawatha Seepage

IDWR has determined that the Hiawatha Canal conveyance loss has decreased from 9.14 cfs (2001) to 7.55 cfs (2008). The Hiawatha Canal has obtained 8.539 cfs of partially decreed water rights dedicated to seepage loss. Copies of these water rights from the IDWR are contained in Appendix C. The Hiawatha Canal has more mitigation water rights to cover the conveyance loss in the canal than actual seepage identified by IDWR. This does not include the additional mitigation components of private water rights outlined in Table 2 and does not include the 1.4 cfs from water right 37-577BP.

Our opinion regarding the mitigation of seepage in the Hiawatha Canal is that: according to IDWR, the Hiawatha Canal owns sufficient water rights to mitigate for canal seepage. Mitigation from private water rights should no longer be required. The private water rights are no longer "necessary for such mitigation" and should therefore revert back to the right holders.

G. Nature of Use for Water Right no. 37-577BP

Water right no. 37-577BP is partially decreed for 7.0 cfs with 5.6 cfs for irrigation and 1.4 cfs for mitigation. Considering that the Hiawatha Canal no longer requires mitigation for this right, it is proposed that the mitigation portion (1.4 cfs) of this irrigation right be changed to provide additional irrigation water in the Cove Canal.



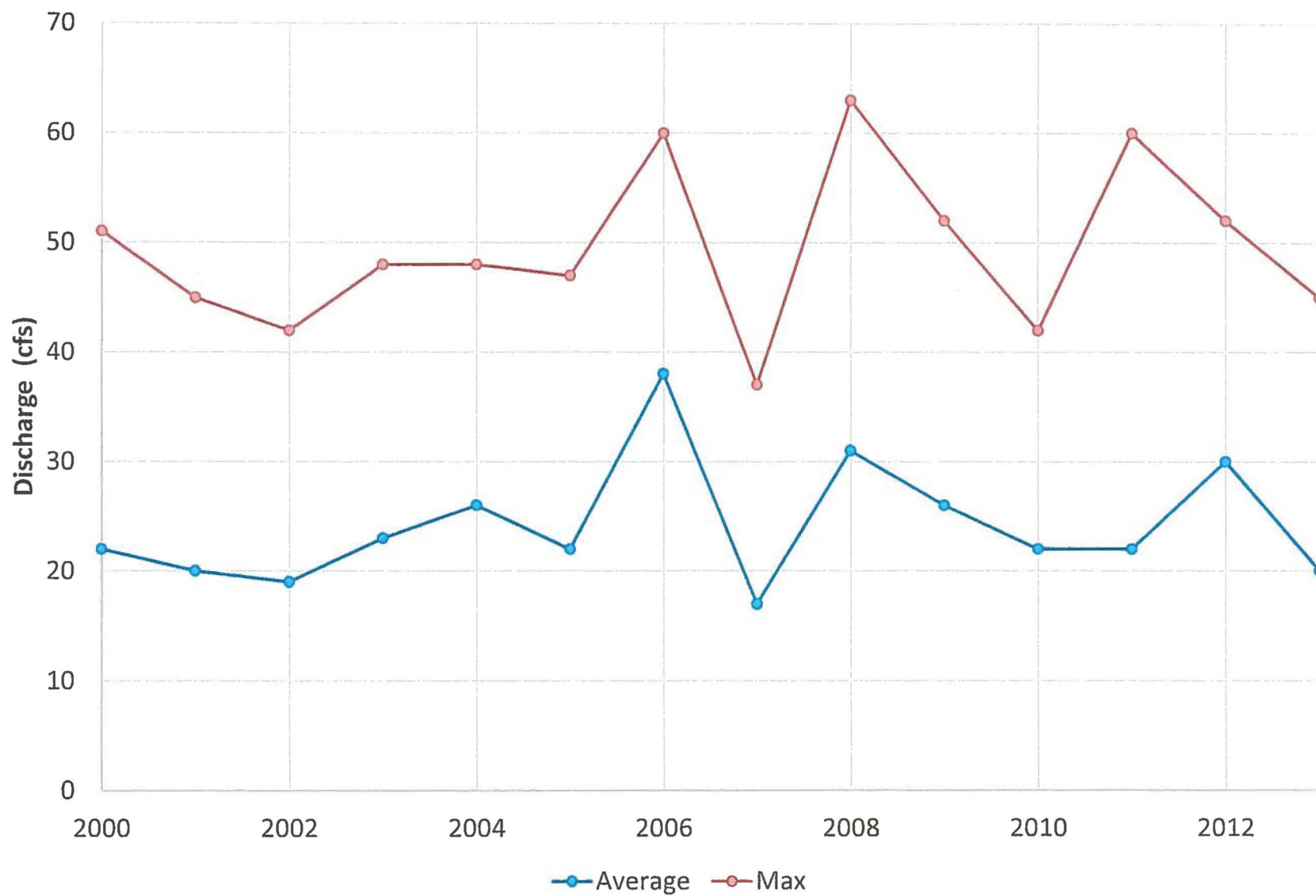
0 1,350 2,700 5,400 Feet

**FIGURE 1: HIAWATHA CANAL
FLYING HAT RANCH
NAIP 2013 AERIAL**

Legend
canals selection
Township/Range
Sections
QQ



Figure 2: Hiawatha Canal Diversions
Water District 37 data



Appendix A

IDWR Seepage Analysis of Hiawatha Canal 2001

CONVEYANCE LOSS - WORSTELL

NAME OF DITCH: Hiawatha Ditch BY: adm DATE: 02/05/01

REACH	LENGTH (FT)	AVE WIDTH (FT)	SEEPAGE (FT/DAY)	WORSTELL LOSS (CFS)	DELIVERY (CFS)	DELIVERY LEFT (CFS)	LOSS FACTOR	DELIVERY LOSS (CFS)	FLOW (CFS)	DELIVERY LOSS MINUS HIAWATHA RIGHTS FOR LOSS
Decree	900	24.0	10.00	2.73	0.00	29.72	0.0918	0.00	38.89	0.00
1	1910	18.0	3.00	1.30	2.88	29.72	0.0438	0.39	36.16	0.21
2	450	18.0	3.00	0.31	0.04	26.84	0.0114	0.01	31.97	0.00
3	480	18.0	3.00	0.33	0.02	26.80	0.0122	0.00	31.63	0.00
4	430	18.0	3.00	0.29	0.02	26.78	0.0110	0.00	31.28	0.00
5	1770	15.0	2.25	0.75	2.02	26.76	0.0282	0.40	30.97	0.22
6	730	15.0	1.50	0.21	1.45	24.74	0.0084	0.30	28.19	0.16
7	490	15.0	1.50	0.14	0.05	23.29	0.0060	0.01	26.53	0.01
8	1820	15.0	1.50	0.52	0.00	23.24	0.0223	0.00	26.35	0.00
9	1470	15.0	1.50	0.42	0.62	23.24	0.0180	0.16	25.83	0.08
10	4500	14.0	1.28	1.02	0.24	22.62	0.0450	0.07	24.79	0.04
11	680	12.0	1.00	0.10	2.17	22.38	0.0046	0.66	23.54	0.36
12	970	12.0	1.00	0.15	0.04	20.21	0.0073	0.01	21.26	0.01
13	350	12.0	1.00	0.05	0.13	20.17	0.0026	0.04	21.08	0.02
14	440	12.0	1.00	0.07	0.66	20.04	0.0033	0.21	20.89	0.11
15	1860	12.0	1.00	0.28	1.44	19.37	0.0146	0.48	20.16	0.26
16	530	12.0	1.00	0.08	0.82	17.93	0.0045	0.27	18.44	0.15
17	490	12.0	1.00	0.07	0.68	17.11	0.0043	0.23	17.54	0.13
18	460	12.0	1.00	0.07	4.00	16.43	0.0042	1.37	16.78	0.74
19	820	10.0	1.00	0.10	0.82	12.43	0.0083	0.29	12.71	0.16
20	650	7.0	0.66	0.04	1.55	11.61	0.0033	0.55	11.78	0.30
21	1260	4.0	0.66	0.04	0.20	10.06	0.0042	0.07	10.20	0.04
22	2900	4.0	0.66	0.10	2.86	9.86	0.0098	1.06	9.95	0.57
23	1	4.0	0.66	0.00	7.00	7.00	0.0000	2.58	7.00	1.40
TOTALS	26361			9.17	29.72		0.2774	9.17		4.97

REACH = SECTION OF CHANNEL

LENGTH = LENGTH OF REACH, THE CHANNEL CAN BE DIVIDED INTO EQUAL LENGTH REACHES
OR ACTUAL LENGTHS BETWEEN DELIVERY POINTS

AVE WIDTH = AVERAGE TOP WIDTH OF WATER SURFACE IN REACH

SEEPAGE = SOIL SEEPAGE RATE OF REACH

WORSTELL LOSS = CONVEYANCE LOSS IN REACH BASED ON WORSTELL METHOD

DELIVERY = TOTAL DELIVERIES IN REACH

DELIVERY LEFT = SUM(DELIVERIES OF CURRENT AND REMAINING REACHES)

LOSS FACTOR = WORSTELL LOSS/DELIVERY LEFT

DELIVERY LOSS = SUM(LOSS FACTORS OF CURRENT AND PREVIOUS REACHES) X DELIVERY;
REPRESENTS THE LOSSES ASSIGNED TO THE DELIVERIES IN THE REACH;
IF MULTIPLE RIGHTS WITHIN REACH, DELIVERY LOSSES SHOULD BE
PRORATED BASED ON SIZE OF DELIVERY FOR EACH RIGHT WITHIN REACH

FLOW = TOTAL FLOW AT BEGINNING OF EACH REACH

Appendix B

IDWR Seepage Analysis of Hiawatha Canal 2008

CONVEYANCE LOSS - WORSTELL

NAME OF DITCH: Hiawatha Ditch with liner BY: adm DATE: 04/18/08
After moving Cutter to Dry Lot

REACH	LENGTH (FT)	AVE WIDTH (FT)	SEEPAGE (FT/DAY)	WORSTELL LOSS (CFS)	DELIVERY (CFS)	DELIVERY LEFT (CFS)	LOSS FACTOR	DELIVERY LOSS (CFS)	FLOW (CFS)	DELIVERY LOSS MINUS HIAWATHA RIGHTS FOR LOSS
Decree	900	24.0	10.00	2.73	0.00	22.72	0.1201	0.00	30.27	0.00
1	1910	18.0	3.00	1.30	6.52	22.72	0.0574	1.16	27.54	0.30
2	450	18.0	3.00	0.31	0.04	16.20	0.0190	0.01	19.72	0.00
3	480	18.0	3.00	0.33	0.02	16.16	0.0203	0.00	19.37	0.00
4	430	18.0	3.00	0.29	0.02	16.14	0.0182	0.00	19.02	0.00
5	1770	15.0	0.00	0.00	2.02	16.12	0.0000	0.47	18.71	0.12
6	730	15.0	0.00	0.00	1.45	14.10	0.0000	0.34	16.69	0.09
7	490	15.0	0.00	0.00	0.05	12.65	0.0000	0.01	15.24	0.00
8	1820	15.0	0.00	0.00	0.00	12.60	0.0000	0.00	15.19	0.00
9	1470	15.0	1.50	0.42	0.62	12.60	0.0332	0.17	15.19	0.04
10	4500	14.0	1.28	1.02	0.24	11.98	0.0850	0.08	14.15	0.02
11	680	12.0	1.00	0.10	2.17	11.74	0.0088	0.79	12.90	0.20
12	970	12.0	1.00	0.15	0.04	9.57	0.0154	0.02	10.62	0.00
13	350	12.0	1.00	0.05	0.13	9.53	0.0056	0.05	10.44	0.01
14	440	12.0	1.00	0.07	0.66	9.40	0.0071	0.26	10.25	0.07
15	1860	12.0	1.00	0.28	1.44	8.73	0.0323	0.61	9.52	0.16
16	530	12.0	1.00	0.08	0.82	7.29	0.0110	0.36	7.80	0.09
17	490	12.0	1.00	0.07	0.68	6.47	0.0115	0.30	6.90	0.08
18	460	12.0	1.00	0.07	0.36	5.79	0.0120	0.16	6.14	0.04
19	820	10.0	1.00	0.10	0.82	5.43	0.0191	0.39	5.71	0.10
20	650	7.0	0.66	0.04	1.55	4.61	0.0082	0.75	4.78	0.19
21	1260	4.0	0.66	0.04	0.20	3.06	0.0137	0.10	3.20	0.03
22	2900	4.0	0.66	0.10	2.86	2.86	0.0338	1.52	2.95	0.39
TOTALS	26360			7.55	22.72		0.4115	7.55		1.95

4.79

REACH = SECTION OF CHANNEL

LENGTH = LENGTH OF REACH, THE CHANNEL CAN BE DIVIDED INTO EQUAL LENGTH REACHES
OR ACTUAL LENGTHS BETWEEN DELIVERY POINTS

AVE WIDTH = AVERAGE TOP WIDTH OF WATER SURFACE IN REACH

SEEPAGE = SOIL SEEPAGE RATE OF REACH

WORSTELL LOSS = CONVEYANCE LOSS IN REACH BASED ON WORSTELL METHOD

DELIVERY = TOTAL DELIVERIES IN REACH

DELIVERY LEFT = SUM(DELIVERIES OF CURRENT AND REMAINING REACHES)

LOSS FACTOR = WORSTELL LOSS/DELIVERY LEFT

DELIVERY LOSS = SUM(LOSS FACTORS OF CURRENT AND PREVIOUS REACHES) X DELIVERY;
REPRESENTS THE LOSSES ASSIGNED TO THE DELIVERIES IN THE REACH;
IF MULTIPLE RIGHTS WITHIN REACH, DELIVERY LOSSES SHOULD BE
PRORATED BASED ON SIZE OF DELIVERY FOR EACH RIGHT WITHIN REACH

FLOW = TOTAL FLOW AT BEGINNING OF EACH REACH

Appendix C
Water Right 37-577BP

Close

IDAHO DEPARTMENT OF WATER RESOURCES
Water Right Report

8/6/2015

WATER RIGHT NO. 37-577BP

<u>Owner Type</u>	<u>Name and Address</u>
Current Owner	ECCLES FLYING HAT RANCH LLC PO BOX 3028 SALT LAKE CITY, UT 84110 (801) 246-5329
Original Owner	SPENCER F ECCLES PO BOX 3028 SALT LAKE CITY, UT 84110 (801)246-5331

Priority Date: 03/24/1883

Basis: Decreed

Status: Active

Water Supply Bank Status: Active

<u>Source</u>	<u>Tributary</u>
BIG WOOD RIVER	MALAD RIVER

<u>Beneficial Use</u>	<u>From</u>	<u>To</u>	<u>Diversion Rate</u>	<u>Volume</u>
IRRIGATION	04/15	10/31	5.6 CFS	
MITIGATION	04/15	10/31	1.4 CFS	
Total Diversion			7 CFS	

Location of Point(s) of Diversion:

BIG WOOD RIVER|SESWNE|Sec. 16|Township 02N|Range 18E|BLAINE County
 BIG WOOD RIVER|SENESE|Sec. 22|Township 02N|Range 18E|BLAINE County
 BIG WOOD RIVER|SWNW|Sec. 20|Township 03N|Range 18E|BLAINE County

IRRIGATION Use:

Acre Limit: 523

Place(s) of use:

Place of Use Legal Description: IRRIGATION BLAINE County

<u>Township</u>	<u>Range</u>	<u>Section</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>
02N	18E	15		SESW	0.3									
				SWSE	4.5									
		22		NENE	9		NWNE	31		SWNE	2.8		SENE	36
				NENW	0.6									
				NESE	32									
		23		SWNW	21									
				NESW	14		NWSW	40		SWSW	40		SESW	38
				SWSE	11		SESE	8						
		25		NWNW	26		SWNW	40		SENE	5.9			
				NESW	26		NWSW	25		SWSW	3.4		SESW	15
		26		NENE	38		NWNE	35		SWNE	40		SENE	32
				NENW	40		NWNW	29		SENE	32			

Place of Use Legal Description: MITIGATION BLAINE County

<u>Township</u>	<u>Range</u>	<u>Section</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>	<u>Lot</u>	<u>Tract</u>	<u>Acres</u>
02N	18E	15		SWSW			SESW							
		22		NENE			NWNE			SWNE			SENE	
				NENW										
				NESE										
		23		SWNW										
				NESW			NWSW			SWSW			SESW	
				SWSE			SESE							
		25		NWNW			SWNW							
				NESW			NWSW			SWSW			SESW	
		26		NENE			NWNE			SWNE			SENE	

		NENW		NWNW		SENW			
--	--	------	--	------	--	------	--	--	--

Total Acres: 675.5

Conditions of Approval:

1. X35 Rights 37-483D and 37-577BP when combined shall not exceed the irrigation of 523 acres.
2. X35 Rights 37-481D, 37-482J, 37-483D, 37-577BP, 37-917, 37-11975, 37-11976, 37-11977, 37-11978, 37-2713, and 37-7356 when combined shall not exceed a total diversion rate of 26.74 cfs, a total annual maximum diversion volume of 4172 af at the field headgate, and the irrigation of 596 acres.
A portion of Right 37-577BP, 1.40 cfs, shall continue to be diverted into the Hiawatha Canal to mitigate the removal of Rights 37-481D, 37-482J, 37-483D, 37-577BP, 37-917, 37-11975, 37-11976, 37-11977 and 37-11978 diverted into Cove Canal and Kohler Ditch under Transfer 68526 until such time as the canal ceases operation or is otherwise no longer necessary for such mitigation. The right holder retains ownership of the 1.40 cfs portion of this right diverted into the Hiawatha Canal.
3. Rights 37-481D, 37-482J, 37-483D, 37-577BP, 37-917, 37-2713, 37-7356, 37-11975, 37-11976, 37-11977, and 37-11978 are limited to the irrigation of a specific 596 acres within the 675.5 acre place of use in a single irrigation season. The specific 596 acres to be irrigated by the right holder shall be identified prior to use by submittal of a land list and a representative electronic shape file or by submittal of a land list and a map sufficiently detailed to allow creation of an electronic shape file to be associated with this right and are shown in the electronic shape file associated with this right in the geographic information system component of the water rights database maintained by the Department. Before changing the 596 acres to be irrigated within the 675.5 acre place of use, the right holder shall submit a new land list and representative electronic shape file or map to the Department prior to the irrigation season in which the change will occur.
4. 206 This right when combined with all other rights shall provide no more than 3.5 afa per acre when applied by sprinkler system and 7.0 afa per acre when applied by surface application at the field headgate for irrigation of the lands above.
5. R59 Rights 37-481D, 37-482J, 37-483D, 37-577BP, 37-917, 37-11975, 37-11976, 37-11977, 37-11978, 37-2713, and 37-7356 when applied by sprinkler system shall not exceed a maximum diversion rate of 11.92 cfs and 2086.0 af at the field headgate, and when applied by surface application shall not exceed a maximum diversion rate of 23.84 cfs and 41720.0 af at the field headgate. Any portion of these rights in excess of the maximum applied rates of diversion and volumes at the field headgate shall be limited to use for conveyance losses and shall not be diverted from the river unless required for the delivery of the applied rate of water to the field headgate.
6. Use of water under this right will be regulated by a watermaster with responsibility for the distribution of water among appropriators within a water district. At the time of this approval, this water right is within State Water District No. 37.
7. R05

- | | | |
|-----|-----|--|
| 8. | R43 | The right holder shall maintain a measuring device and lockable controlling works of a type approved by the Department in a manner that will provide the watermaster suitable control of the diversion(s). |
| 9. | 004 | This right does not grant any right-of-way or easement across the land of another. |
| 10. | T07 | The right holder shall accomplish the change authorized by this transfer within one year of the date of this approval. |
| 11. | T08 | Failure of the right holder to comply with the conditions of this transfer is cause for the Director to rescind approval of the transfer. |
| 12. | T19 | Pursuant to Section 42-1412(6), Idaho Code, this water right is subject to such general provisions necessary for the definition of the rights or for the efficient administration of water rights as may be determined by the Snake River Basin Adjudication court at a point in time no later than the entry of the final unified decree. |

Dates:

Licensed Date:

Decreed Date: 08/30/2011

Enlargement Use Priority Date:

Enlargement Statute Priority Date:

Water Supply Bank Enrollment Date Accepted:

Water Supply Bank Enrollment Date Removed:

Application Received Date:

Protest Deadline Date:

Number of Protests: 0

Other Information:

State or Federal: S

Owner Name Connector:

Water District Number: 37

Generic Max Rate per Acre:

Generic Max Volume per Acre:

Combined Acres Limit: 596

Combined Volume Limit: 4172

Combined Rate Limit: 26.74

Civil Case Number:

Old Case Number:

Decree Plaintiff:

Decree Defendant:

Swan Falls Trust or Nontrust:

Swan Falls Dismissed:

DLE Act Number:

Cary Act Number:

Mitigation Plan: False

Water Supply Bank:

Lessor Name(s):

Lease Status: Active

Lease Amount: Part

Rental Availability: Part

Date Received: 6/15/2011

Lease Begin Date: 6/15/2011

Expiration Date: 12/31/2016

Close

Appendix D

Water District 37 Historic Delivery to Hiawatha Canal

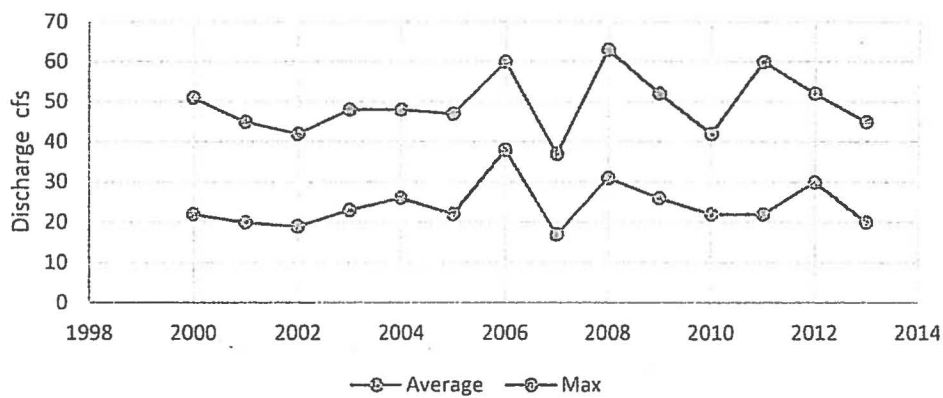
Water Rights Diverted through Hiawatha Canal

Big Wood River Water District 37 Data Compiled by Brockway Engineering, PLLC

Year	Average	Max
2000	22	51
2001	20	45
2002	19	42
2003	23	48
2004	26	48
2005	22	47
2006	38	60
2007	17	37
2008	31	63
2009	26	52
2010	22	42
2011	22	60
2012	30	52
2013	20	45

Avg. 24.1 Max 49.4

Hiawatha Canal Diversions
Water District 37 data



Date	April	May	June	July	August	September	Date
1				37	35	15	12
2				36	34	11	28
3				43	31	14	28
4				47	29	19	24
5		5		42	24	24	24
6		5		45	22	21	24
7		4		45	20	19	23
8		5		45	17	17	22
9		6		40	15	16	20
10		5		34	13	15	20
11		4		27	12	15	19
12		4		37	15	14	17
13		3		37	18	13	16
14		2		35	18	10	14
15		2		43	17	9	12
16		6		39	17	8	10
17		17		29	16	8	10
18		22		25	17	8	11
19		27		34	20	8	10
20		3		30	17	8	10
21		40		32	17	8	12
22		49		35	15	8	24
23		51		34	18	7	24
24		43		32	17	8	24
25		45		29	17	7	23
26		45		39	17	7	23
27		40		37	19	7	22
28		41		35	17	7	21
29		41		34	17	6	20
30		42		32	17	6	20
31		39			16	6	

Total	0	626	1089	594	349	567
Mean	0	23	36	20	11	19
Acre-Ft	0	1239	2156	1176	691	1123

2000 Yearly CFS	3225
Yearly Acre-ft	6386
Total no of Days	149
Yearly Mean	22
Max	51

Date	April	May	June	July	August	September	Date
1			25	38	29	17	7
2			24	35	26	16	7
3			23	33	24	16	7
4			22	28	23	16	7
5			23	25	23	15	7
6			23	21	23	15	7
7			23	19	22	15	7
8			23	25	22	15	7
9			25	33	26	15	7
10			25	35	30	10	8
11			26	35	28	5	7
12			26	34	24	4	8
13			26	32	22	7	9
14			26	31	21	9	9
15			22	32	21	9	9
16			18	32	19	9	9
17			16	32	20	8	10
18			14	32	19	8	10
19			14	30	17	7	10
20			13	30	17	7	10
21			23	30	15	7	10
22			25	30	15	7	9
23			32	30	13	7	9
24			35	28	12	7	9
25			39	26	11	7	9
26			43	25	9	7	9
27		27	40	28	28	7	10
28		27	45	33	27	7	10
29		26	43	31	26	7	10
30		25	38	30	27	7	10
31			36		23	7	
Total		105	836	903	662	300	257
Mean		26	27	30	22	10	9
Acre-Ft		208	1655	1788	1311	594	509

2001 Yearly CFS 3063
 Yearly Acre-ft 6065
 Total no of Days 157
 Yearly Mean 20
 Max 45

Date	April	May	June	July	August	September	Date
1			17	33	16	22	12
2			18	28	19	21	12
3			19	22	34	20	11
4			20	19	34	19	10
5			19	15	32	17	11
6			18	16	29	17	12
7			18	16	30	16	13
8			16	17	28	16	13
9			15	14	26	16	13
10			13	10	25	16	13
11			11	7	23	17	13
12			10	15	25	15	13
13			12	25	25	15	12
14			16	28	25	15	12
15			21	33	30	15	12
16			21	38	30	17	13
17			22	41	31	17	14
18			26	30	30	16	15
19			32	32	30	16	16
20			31	24	30	14	16
21			29	23	29	13	16
22			22	25	22	12	17
23			18	23	21	12	16
24			15	23	19	12	17
25			13	23	18	12	17
26			12	23	17	12	19
27			13	21	14	12	21
28			18	19	13	13	24
29		13	28	19	12	13	24
30		16	42	19	17	12	24
31			40		19	12	
Total		29	625	681	753	472	451
Mean		15	20	23	25	15	15
Acre-Ft		57	1238	1348	1491	935	893

2002 Yearly CFS 3011
 Yearly Acre-ft 5962
 Total no of Days 155
 Yearly Mean 19
 Max 42

Date	April	May	June	July	August	September	Date
1				25	28	29	16
2				27	23	29	16
3				31	18	30	16
4				27	16	30	16
5				21	10	30	16
6				21	14	29	17
7				24	11	21	17
8				29	24	21	15
9				31	38	21	11
10				31	35	21	12
11				27	33	21	12
12				24	31	21	11
13				24	31	21	11
14				22	30	20	12
15				22	34	18	13
16				16	33	16	13
17				20	33	17	14
18				29	33	16	16
19			18	27	33	16	19
20			22	27	33	14	24
21			24	14	32	16	28
22			28	17	32	15	30
23			39	18	31	17	18
24			48	22	31	16	18
25			41	25	31	16	18
26			39	18	31	16	13
27			29	21	31	16	9
28			33	27	30	16	9
29			32	27	29	16	9
30			31	27	29	16	9
31			28		29	17	
Total			412	721	877	618	458
Mean			32	24	29	20	15
Acre-Ft			816	1428	1736	1224	907

2003 Yearly CFS 3086
 Yearly Acre-ft 6110
 Total no of Days 135
 Yearly Mean 23
 Max 48

Date	April	May	June	July	August	September	Date
1			34	38	41	21	12
2			38	40	39	20	11
3			44	34	36	30	10
4			46	34	36	29	10
5			28	38	34	28	10
6			15	36	34	28	9
7			17	32	18	27	15
8			16	27	17	27	14
9			25	27	25	27	13
10			23	35	22	26	12
11			35	31	21	25	12
12			31	29	28	28	11
13			31	28	28	27	17
14			38	30	27	27	9
15			36	36	28	29	8
16			37	36	27	15	9
17			35	34	27	15	8
18			38	33	25	17	8
19			34	32	28	16	8
20			33	33	25	15	15
21			39	30	24	14	14
22			39	38	26	14	13
23			38	45	26	14	11
24			38	44	25	15	12
25			42	44	23	15	12
26	4		34	45	27	14	11
27	21		34	48	28	14	10
28	37		39	47	25	14	13
29	36		41	46	27	14	13
30	34		39	43	25	13	
31	34		38		29	13	
Total		166	1055	1093	850	631	330
Mean		28	34	36	28	20	11
Acre-Ft		329	2089	2164	1683	1249	653

2004 Yearly CFS 4125
 Yearly Acre-ft 8168
 Total no of Days 158
 Yearly Mean 26
 Max 48

Date	April	May	June	July	August	September	Date
1				21	27	25	10
2				19	27	34	10
3				21	24	33	11
4				18	21	28	10
5				17	27	25	10
6				17	25	20	10
7				15	24	20	10
8				12	30	21	9
9				19	34	20	10
10				17	34	21	11
11				25	35	20	15
12				24	36	20	15
13			6	24	41	20	15
14			7	27	41	20	15
15			8	33	38	20	15
16			22	38	36	20	15
17			47	41	34	20	15
18			29	33	32	20	15
19			30	27	30	19	15
20			7	26	27	18	16
21			4	35	27	17	20
22			17	43	26	15	20
23			20	43	26	12	19
24			19	36	25	12	23
25			16	34	25	12	25
26			15	33	25	14	24
27			21	30	25	13	25
28			22	30	25	12	24
29			24	28	25	7	24
30			23	25	27	6	24
31			22		10	10	25
Total			359	811	889	574	505
Mean			19	27	30	19	16
Acre-Ft			711	1606	1760	1137	1000

2005 Yearly CFS 3138
 Yearly Acre-ft 6213
 Total no of Days 142
 Yearly Mean 22
 Max 47

Date	April	May	June	July	August	September	Date	
1				37	30	39	55	1
2				37	28	36	56	2
3				40	26	35	55	3
4				43	25	34	53	4
5				45	24	32	55	5
6				46	24	31	28	6
7				47	41	32	28	7
8				53	35	30	31	8
9				43	33	28	34	9
10				39	41	28	36	10
11				38	41	41	36	11
12			38	37	43	43	32	12
13			41	35	39	42	31	13
14			42	34	37	37	30	14
15			43	41	35	36	30	15
16			45	39	35	36	35	16
17			47	35	36	35	32	17
18			48	33	57	35	32	18
19			50	30	56	27	31	19
20			51	29	56	32	31	20
21			53	27	54	32	17	21
22			55	37	51	30	16	22
23			56	35	51	32	16	23
24			58	34	53	36	16	24
25			59	34	54	40	15	25
26			60	40	54	45	14	26
27			55	39	50	49	14	27
28			51	37	45	47	14	28
29			47	37	43	48	13	29
30			41	33	41	50	13	30
31			38		39	53	14	31
Total			978	1134	1277	1151	913	
Mean			49	38	43	37	29	
Acre-Ft			1936	2245	2528	2279	1808	

2006 Yearly CFS 5456
 Yearly Acre-ft 10797
 Total no of Days 143
 Yearly Mean 38
 Max 60

Date	April	May	June	July	August	September	Date
1			27	22	17	11	0
2			27	22	17	10	0
3			27	22	16	10	0
4			26	23	16	15	20
5			25	23	16	15	0
6			25	23	16	15	17
7			24	21	16	14	18
8			25	21	16	14	8
9			31	21	15	14	9
10			33	21	15 4e		8
11			34	23	15 4e		11
12	6		36	16	15 4e		11
13	6		37	16	5 4e		6
14	6		37	16	5 4e		6
15	6		25	16	7 4e		6
16	5		27	16	7 4e		6
17	5		33	16	5 4e		6
18	5		32	21	5 4e		4
19	5		32	21	5 4e		4
20	4		33	21	5 4e		16
21	3		33	21	11 4e		11
22	3		31	20	11 4e		11
23	16		31	20	17 4e		12
24	24		27	19	17 4e		14
25	24		27	19	18 4e		15
26	24		27	18	18	9	17
27	22		27	18	12	9	17
28	23		28	18	12 4e		17
29	26		28	17	11 4e		17
30	28		28	17	11 4e		17
31	29		22		11 4e		18
Total		270	905	588	383	136	322
Mean		14	29	20	13	12	10
Acre-Ft		535	1792	1164	758	269	638

2007 Yearly CFS 2604
 Yearly Acre-ft 5156
 Total no of Days 154
 Yearly Mean 17
 Max 37

Date	April	May	June	July	August	September	Date
1				37	56	28	16
2				38	59	27	18
3				37	54	27	16
4				37	54	27	16
5				37	56	27	15
6			24	37	55	27	15
7			31	37	53	27	14
8			41	37	53	27	14
9			42	37	51	27	13
10			36	37	54	27	13
11			35	37	39	25	12
12			35	37	44	24	12
13			33	37	43	25	6
14			31	37	43	25	7
15			33	37	29	25	9
16			35	59	31	25	7
17			32	58	33	24	4
18			37	60	33	25	5
19			61	60	32	29	5
20			39	61	32	27	7
21			41	63	32	28	11
22			41	61	33	28	9
23			41	60	34	17	4
24			35	57	34	16	9
25			38	55	33	20	8
26			38	54	33	27	4
27			39	53	32	14	2
28			38	54	32	12	2
29			36	53	33	12	2
30			38	53	33	13	8
31			38		33	13	
Total			968	1417	1266	725	283
Mean			37	47	46	23	9
Acre-Ft			1917	2806	2507	1436	560

2008 Yearly CFS 4659
 Yearly Acre-ft 9225
 Total no of Days 148
 Yearly Mean 31
 Max 63

Date	April	May	June	July	August	September	Date
1			20	36	42	23	25
2			15	38	51	22	22
3			13	52	50	22	19
4			17	48	51	23	18
5			17	41	51	22	18
6			18	38	51	22	17
7			17	36	49	22	20
8			18	35	48	23	21
9			24	24	43	23	21
10			24	26	42	22	20
11			24	25	1	21	12
12			25	33	41	20	12
13			18	33	42	21	12
14			18	31	34	21	11
15			22	27	42	21	10
16	0		22	27	39	20	8
17	0		23	27	39	18	8
18	8		37	25	39	17	13
19	15		45	24	38	16	15
20	25		46	28	37	15	14
21	26		35	27	41	21	10
22	25		33	24	40	21	11
23	22		33	23	29	20	11
24	0		43	23	27	24	13
25	31		43	43	27	23	13
26	16		43	37	27	22	12
27	15		45	33	27	20	12
28	15		44	37	25	18	30
29	15		40	35	25	18	30
30	9		37	30	24	16	18
31			35		24	20	
Total		222	894	966	1186	637	476
Mean		15	29	32	40	21	16
Acre-Ft		440	1770	1913	2348	1261	942

2009 Yearly CFS 4381
 Yearly Acre-ft 8674
 Total no of Days 168
 Yearly Mean 26
 Max 52

Date	April	May	June	July	August	September	Date
1			15	35	19	25	20
2			14	35	19	24	20
3			30	38	19	24	20
4			31	22	19	24	18
5			31	33	27	24	18
6			31	33	27	24	18
7			30	33	27	23	19
8			30	28	26	23	17
9			30	27	26	23	20
10			35	27	26	26	13
11			36	25	26	26	12
12			36	25	26	25	11
13			36	24	25	24	11
14			36	24	24	24	11
15			37	28	23	22	9
16			42	27	23	20	9
17			42	25	23	20	9
18			41	24	3	19	9
19			41	23	22	19	9
20			12	24	21	19	9
21			11	23	21	19	9
22			10	23	7	19	9
23	7	9	9	23	24	19	9
24	5	7	7	24	24	19	9
25	3	6	6	23	24	20	9
26	6	34	24	28	20	20	9
27	14	36	24	28	20	20	8
28	12	36	24	27	20	20	8
29	17	36	24	27	20	20	8
30	8	36	24	26	20	20	7
31		36		26	20	20	
Total		72	893	796	713	674	
Mean		9	29	27	24	22	
Acre-Ft		143	1768	1576	1412	1335	

2010 Yearly CFS 3515
 Yearly Acre-ft 6960
 Total no of Days 161
 Yearly Mean 22
 Max 42

Date	April	May	June	July	August	September	Date
1			2	19	30	25	22
2			2	30	27	25	25
3			3	30	26	25	25
4			3	30	27	25	25
5			21	30	26	23	25
6			17	33	26	23	25
7			17	33	24	21	25
8			17	33	24	21	31
9			12	33	24	21	31
10			10	34	23	21	30
11			15	33	22	21	30
12			16	31	19	20	29
13			11	31	25	17	30
14			20	32	23	16	20
15			19	28	23	15	19
16			15	36	23	16	19
17			12	34	23	21	20
18			11	33	22	16	19
19			10	32	21	16	21
20			11	32	21	16	21
21			21	37	20	16	21
22			23	37	20	16	17
23	3		23	35	20	15	17
24	3		23	23	19	16	17
25	3		22	60	19	14	17
26	3		23	58	19	20	16
27	2		21	30	19	21	20
28	2		19	28	25	21	20
29	2		17	26	25	21	20
30	2		16	32	25	21	19
31			20		25	20	
Total		20	472	993	715	605	676
Mean		3	15	33	24	20	23
Acre-Ft		40	935	1966	1416	1198	1338

2011 Yearly CFS 3481
 Yearly Acre-ft 6892
 Total no of Days 161
 Yearly Mean 22
 Max 60

Date	April	May	June	July	August	September	Date
1			26	37	39	33	18
2			25	39	39	32	18
3			25	41	39	32	18
4			28	38	39	31	18
5			27	38	39	31	18
6			31	34	39	31	18
7			36	31	39	33	18
8			37	30	39	33	18
9			47	28	38	34	18
10			51	28	38	34	18
11	3		49	26	33	34	18
12	3		49	26	32	32	18
13	3		49	26	32	33	18
14	3		50	25	32	32	18
15	3		50	27	32	32	18
16	3		51	27	33	31	18
17	3		52	30	33	31	18
18	18		45	37	33	31	18
19	17		45	34	34	31	18
20	24		44	33	33	31	18
21	27		42	32	33	31	18
22	31		45	38	33	31	18
23	30		38	38	32	31	18
24	21		39	38	32	31	18
25	36		38	41	31	30	18
26	47		37	43	31	30	18
27	3		36	40	31	30	18
28	36		34	39	33	30	18
29	34		33	38	33	29	18
30	27		33	39	31	27	18
31			34		33	18	
Total	372	1226	1021	1068	960	540	
Mean	19	40	34	34	31	18	
Acre-Ft	737	2427	2022	2115	1901	1069	

2012 Yearly CFS 5187
 Yearly Acre-ft 10270
 Total no of Days 173
 Yearly Mean 30
 Max 52

Date	April	May	June	July	August	September	Date
1		31	27	38	7	3	1
2	2	30	27	38	10	3	2
3	2	30	28	39	5	3	3
4	2	29	30	39	3		4
5	2	30	28	37	3		5
6	2	30	27	36	3		6
7	2	29	27	36	3		7
8	2	30	23	29	3		8
9	2	32	35	29	3		9
10	2	30	31	28	3		10
11	2	34	45	28	3		11
12	2	27	45	27	3		12
13	2	37	42	27	3		13
14	2	23	44	25	3		14
15	23	18	43	24	3		15
16	3	27	41	24	3		16
17	3	29	41	26	3		17
18	3	27	41	23	3		18
19	3	27	41	23	3		19
20	3	30	42	21	3		20
21	3	30	40	21	3		21
22	12	29	39	21	3		22
23	11	28	40	14	3		23
24	12	27	40	14	3		24
25	12	27	40	15	3	5	25
26	12	27	39	15	3	5	26
27	20	27	39	17	3	5	27
28	32	26	39	19	3	5	28
29	28	27	39	15	3	5	29
30	31	26	38	15	3	5	30
31		26	38		3		31
TOTAL	237	880	1138	763	106	39	
MEAN	8	28	37	25	3	4	
ACRE FT	469	1742	2253	1511	210	77	

2013	YEARLY C F S	3163
	YEARLY ACRE FEET	6263
	TOTAL NO OF DAYS	161
	YEARLY MEAN	20
	MAX	45

Appendix E

History of Water Right 37-577BP and Hiawatha Canal Water Rights

History

5/24/2000 WR Transfer of 37-30001, 37-30002, and 37-917 from Hiawatha to Cove
10/10/2000 Transfer advertised in Wood River Journal
10/25/2000 Transfer advertised in Wood River Journal
11/21/2000 IDWR requested Data from Hiawatha Canal Company to evaluate seepage
12/1/2000 F. Hammerle requested the transfer be re-noticed in the Wood River Journal
12/8/2000 A. Merritt, IDWR, responded to F. Hammerle, IDWR would not re-notice the transfer
12/27/2000 F. Hammerle requested IDWR perform conveyance losses on the canal
1/9/2001 A. Merritt letter indicating seepage analysis based on the Hubble Report
2/12/2001 IDWR released initial conveyance loss estimates: Total loss in Hiawatha is 9.17 cfs
IDWR proposed conveyance loss of 20% (1.4 cfs of 7.00 cfs)
2/27/2001 Summary letter from BE to E. Robertson outlining other options.

These two rights (37-30001 and 37-30002) were combined to 37-577BP, unsure when that happened (SRBA, perhaps)?

6/15/2001 Filed Transfer 68526 to change POD and POU
5/6/2002 Approved Transfer 68526
6/3/2002 Error with Hiawatha condition on all rights, should have been only on 37-577bp
6/3/2002 Revised Approved Transfer No. 68526 with condition to leave 1.4 cfs in the Hiawatha Canal only on 37-577bp

Unknown Valley Club Lined a portion of the Hiawatha Canal

4/18/2008 Revised Spreadsheet from A. Merritt on seepage after lining of Hiawatha Canal and other changes
Total loss in Hiawatha is 7.55 cfs

1/15/2002 SRBA claim of 1.4 cfs from Indian Creek for conveyance loss
11/15/2007 SF-1 objection form filed on disallowed water right
7/6/2011 Objection form SF-1 was withdrawn
8/30/2011 Final order for disallowance

37-577B

10/26/1988 Hiawatha Canal Water Users claimed 37-577B for Irrigation (to mitigate for seepage - decree 6/27/1925)
6/29/2012 Partial Decree Filed

37-12097 and 37-12098 vs. 37-22630, 37-22631, 37-22632, 37-22633

10/26/1988 Hiawatha Canal water users claimed 37-12097 & 37-12098 for Irrigation (to mitigate for seepage)

1/3/2011 IDWR filed Amended Directors Report recommending that they be disallowed

1/27/2011 Hiawatha Canal water users filed an objection

5/2/2012 SF-5 forms were filed, recommending claims 37-12097 and 37-12098 as claim numbers 37-22630, 37-22631, 37-22632, 37-22633

The combined new claims were cited as "the conveyance losses associated with a right that was disallowed stayed in the ditch"

6/29/2012 Partial Decrees filed