

Idaho MOA/Fish Accord Water Transactions Program Annual Report  
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## A. Introduction/Background Information

The MOA Idaho Water Transactions Program complements the Columbia Basin Water Transactions Program (CBWTP) and utilizes the transaction tracking and procedural aspects of CBWTP to enhance the effectiveness of implementation. The primary goal of the Idaho Water Transactions Program is to fund the acquisition of interests in water rights for use in restoring stream flow to ecologically significant reaches in the Lemhi and Pahsimeroi River basins (Figure 1).

As a result of legal water withdrawals during the peak irrigation season, stretches of the mainstem Lemhi and Pahsimeroi Rivers and their tributaries run low – and sometimes dry – in summer and early fall with significant consequences for imperiled salmon, steelhead, trout, and other aquatic species. The Upper Salmon Subbasin Plan and other habitat assessment plans cite inadequate stream flows as a key factor limiting the productivity of both anadromous and resident fish species. Often, the inadequate stream flows are the result of the competing consumptive water uses, primarily crop irrigation. Voluntary, market-based water transactions provide an effective, appropriate, and fair response to balance the competing consumptive uses of water with the need to address this key limiting factor. Restored stream flows benefit multiple species including Chinook salmon, steelhead, and bull trout.

Water transaction development under the Idaho MOA/Fish Accord Water Transaction Program utilizes the transaction tracking and procedural aspects of CBWTP to enhance the effectiveness of implementation. The program uses temporary and permanent acquisition of water rights and other incentive-based approaches to assist landowners who wish to voluntarily restore flows to key fish habitat.

Restoring flow for fish through water transactions includes acquiring temporary and permanent interests in water rights. These interests are secured through a variety of mechanisms including the conversion of agricultural practices (e.g. source switches), the conversion of agricultural lands to other land uses, or the acquisition of land or interests in land for riparian restoration. The Idaho Water Resource Board (IWRB) focuses its efforts in areas where restoring stream flow will benefit critical life history stages of anadromous and resident species in priority areas throughout the Lemhi and Pahsimeroi River basins.

Between 2008 and 2019, the IWRB, in cooperation with Idaho Office of Species Conservation, National Fish and Wildlife Foundation, BPA and a multitude of other program partners and cost share sources have completed a total of 45 water right transactions that have restored over 291 cubic feet per second of flow to key streams in the Lemhi and Pahsimeroi River Basins (Attachment A). These transactions have included a number of innovative methods, including short and long-term leases, source switches, permanent subordination agreements, and voluntary diversion reduction agreements. The terms of these deals have ranged from short-term to permanent.

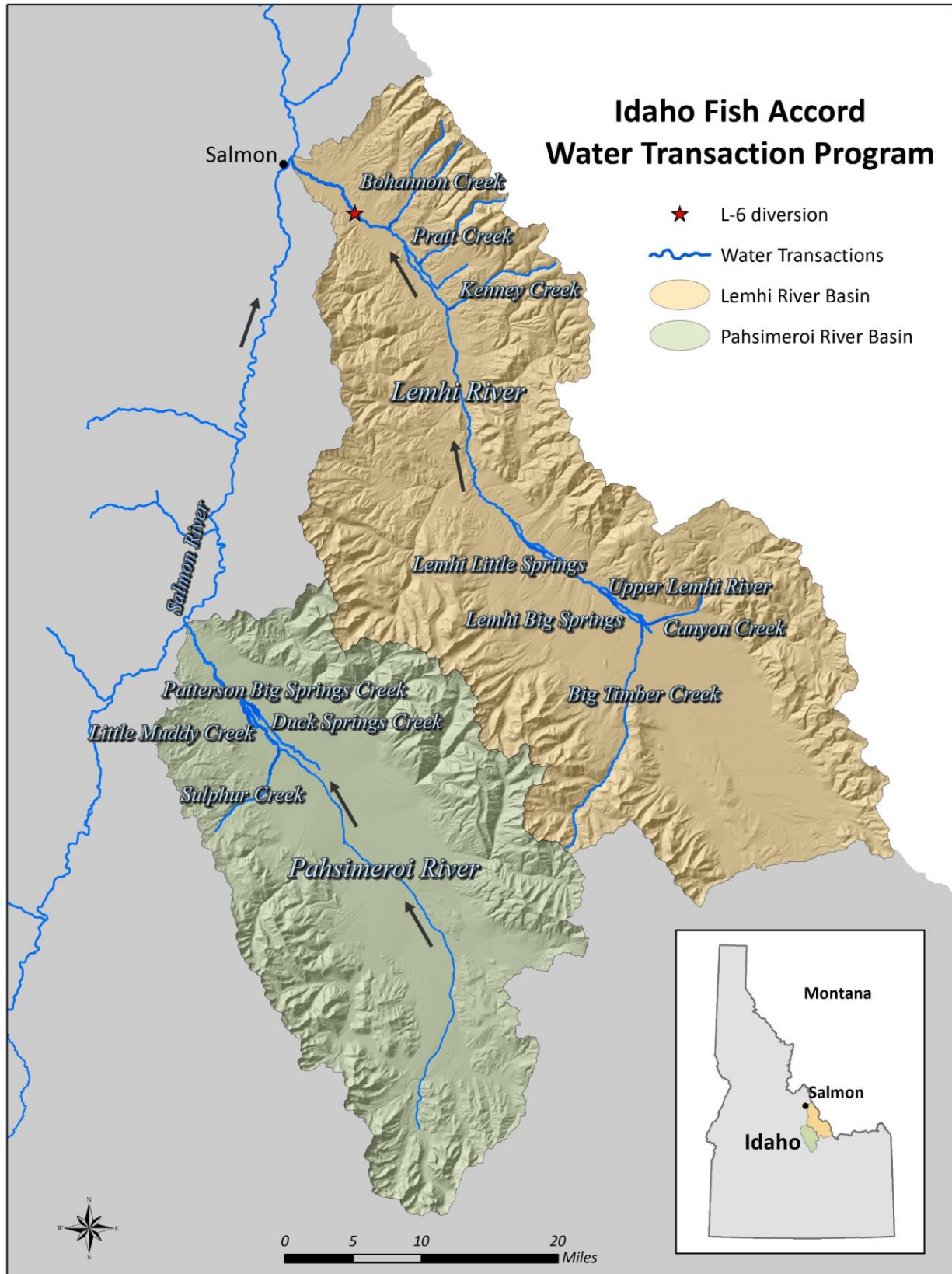


Figure 1. Project Area

## B. Completed Work

The IWRB completed two Permanent Subordination Agreements on the Lemhi River at L-6, securing an additional 1.2 cfs of permanently protected water in the lower reach of the Lemhi River. A total of 17 cfs is now permanently protected on the Lemhi River at the L-6 diversion. These flows are necessary to meet the IWRB's Lemhi River Minimum Stream Flow (MSF) water right, which provides that 35 cfs is maintained 80 percent of the time between March 15 and June 30, and 25 cfs is maintained 100 percent of the time between March 15 and November 15 to facilitate the migration of Chinook salmon and steelhead in the Lemhi River below the L-6 diversion.

In addition to Lemhi River Permanent Subordination transactions, the Board completed the 2019 Lower Lemhi Annual transaction to provide an additional 15.4 cfs to meet the 25-35 cfs MSF at L-6. While the early season flows were higher than average on the Lemhi River at the L-5 gage, the hydrograph dropped rather precipitously in late-June and the IWRB began to call for transacted water by mid-July in order to meet the MSF at L-6 (Figure 2). Notably, the maximum discharge (cfs) measured at the L-5 gage in 2019 was the eighth lowest since 1993 (Figure 3). The L-5 gage is located 0.36 miles downstream of the L-6 diversion.

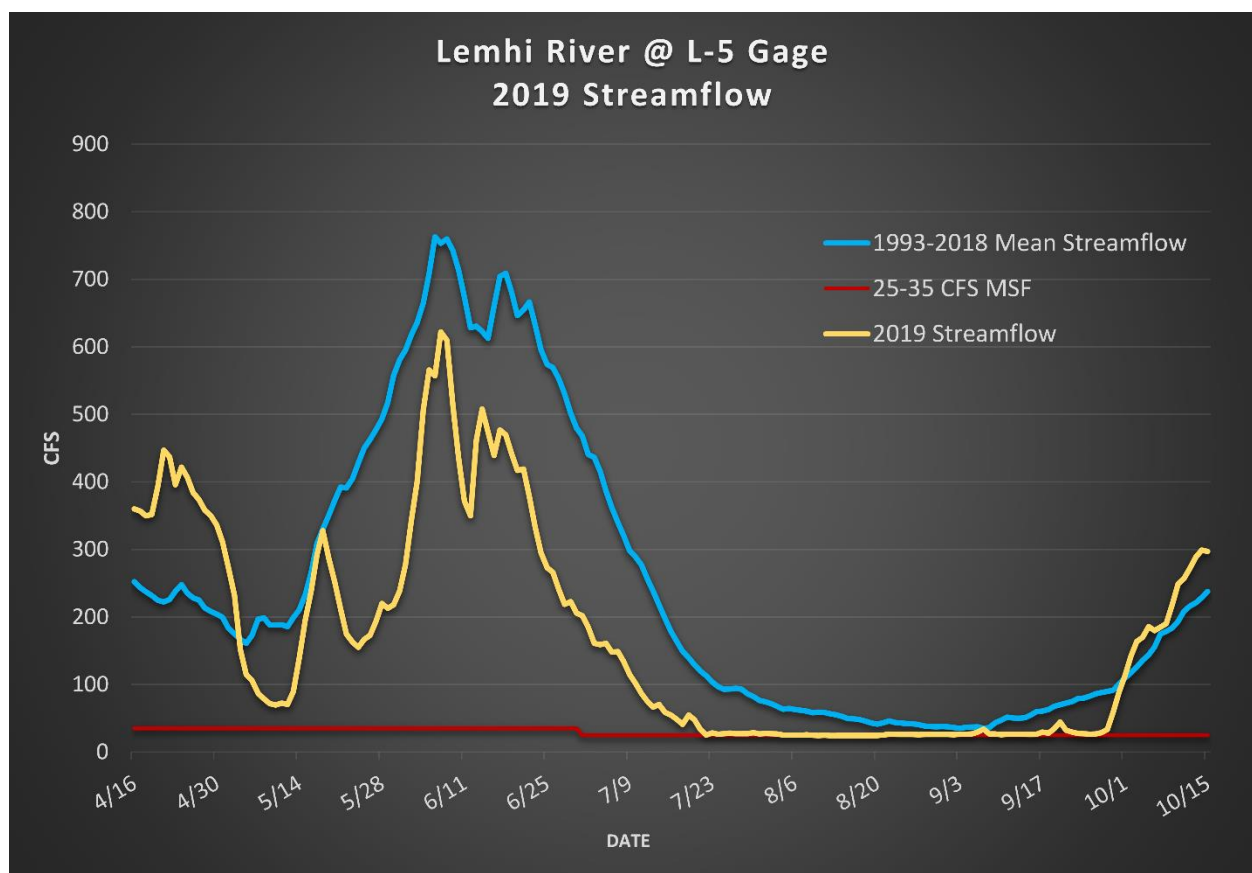


Figure 2. 2019 Lemhi River streamflow at the L-5 gage compared to the 1993-2018 mean streamflow at the same location.

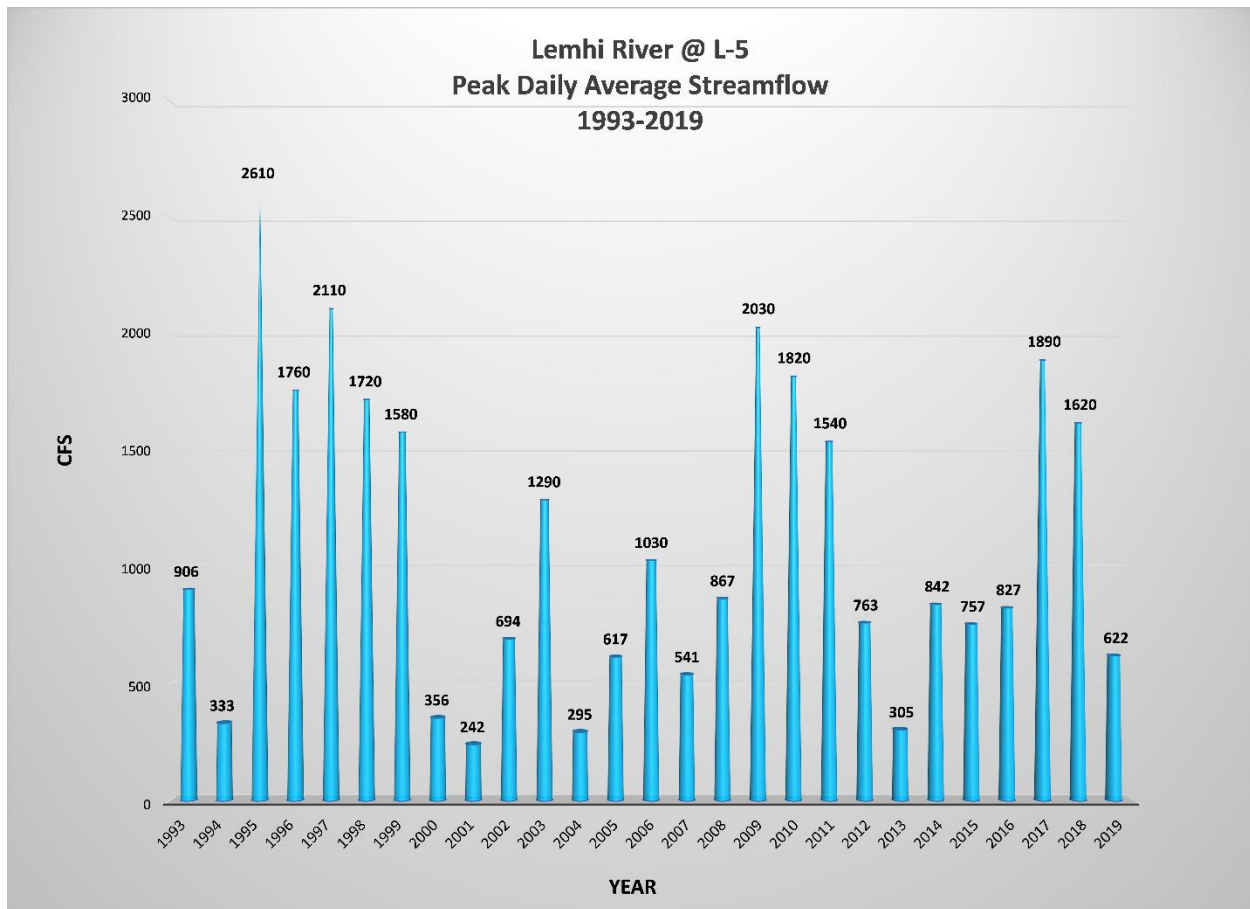


Figure 3. Peak discharge measurements on the Lemhi River at the L-5 gage 1993 – 2019.

Program staff monitored 30 active Accord transactions pursuant to the Columbia Basin Water Transactions Program Accounting Framework (Figure 4). Stream gaging stations on Big Timber Creek, Kenney Creek, Bohannon Creek, Lemhi Little Springs Creek, Pratt Creek, Pahsimeroi River at P-9, Patterson Big Springs Creek, and Canyon Creek were maintained for the 2019 irrigation season and contributed to the monitoring and compliance of transactions on those streams. The 30 active Accord transactions contribute 119 cfs over 47 stream miles in the Lemhi and Pahsimeroi River basins (Attachment B).

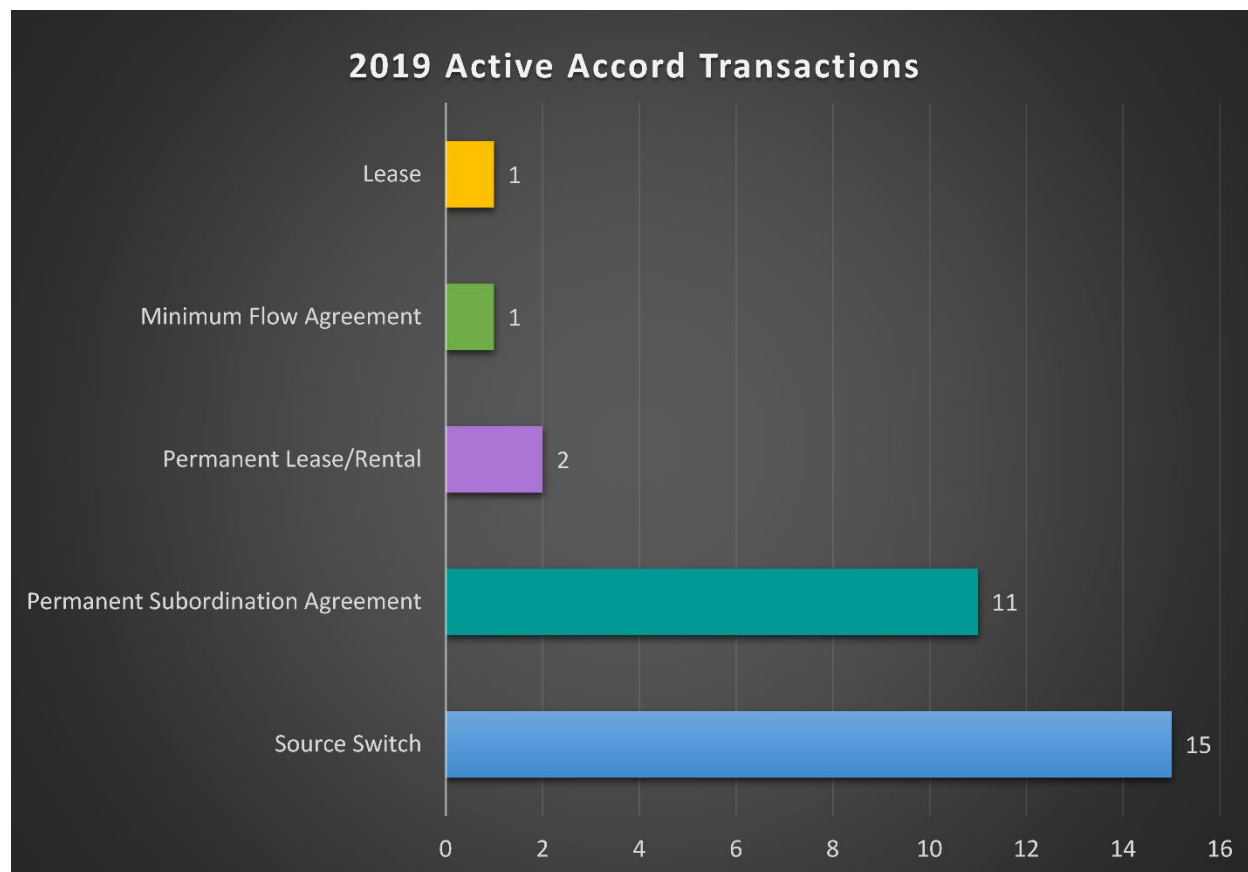


Figure 4. Active Water Transactions by type 2019.

The active transactions and monitoring align with the project objectives and NOAA Fisheries Ecological Concern Category Limiting Factor 9.2 Decreased Water Quantity by increasing flow through defined reaches and improving the total volume of water restored to those reaches. Project data was shared through the CBWTP and project partners to help evaluate whether increased stream flow is improving available habitat and improving the egg to smolt survival ratio.

### C. Lessons Learned & Adaptive Management

The priority in the Lemhi River basin is to secure a minimum of 25 cfs of permanent water at the L-6 diversion, and as of 2019, approximately 17 cfs is secured in perpetuity. Because these agreements are

limited to location (Lemhi River diversions L-6, L-7, and L-8A) and priority (1800's), the number of water users that can participate is quite small (approximately 7-10 total). Negotiations with these water users are ongoing and some creative approaches are being considered.

Flow restoration in the Pahsimeroi River Basin continues to be a challenge because the only minimum stream flow water right on the lower Pahsimeroi River is always met, and therefore additional water cannot be leased and then rented to meet the Pahsimeroi River Minimum Stream Flow water right. That limits the ability of the IWRB to call for rented water through dewatered stream reaches. Instead, projects must be developed where there is no risk of junior water users diverting transacted flows out of the ecological reach. Staff continue to work with the Idaho Water Supply Bank Coordinator and IWRB members to investigate some novel ideas to open up restoration opportunities in the Pahsimeroi River Basin.



**Attachment A\***

No.	Year	Name	CBWTP No.	TYPE	Duration	CFS	CFS total YR
1	2008	Whitefish Ditch 2007	145-07	Source Switch	19	7.54	
2	2008	Lower Lemhi 2008	72e-08	Minimum Flow Agreement	1	31.46	
3	2008	Pahsimeroi P-9 Dowton	168-08	Source Switch	20	15.99	
4	2008	Pahsimeroi P-9 Elzinga	169-08	Source Switch	20	9.87	
5	2008	Pahsimeroi P-9 Charlton	166-08	Source Switch	20	0.75	
6	2008	Pahsimeroi P-9 Bowles	167-08	Source Switch	20	3.14	68.75
7	2009	Lemhi Permanent - Fisher		Permanent Subordination Agreement	Permanent	5	
8	2009	Lemhi Permanent - B Thomas	247-09	Permanent Subordination Agreement	Permanent	1.81	
9	2009	Lemhi Permanent - K Thomas	248-09	Permanent Subordination Agreement	Permanent	0.33	
10	2009	Lemhi Permanent - Wolters	241-09	Permanent Subordination Agreement	Permanent	2.25	
11	2009	Lemhi Permanent - Bird	251-09	Permanent Subordination Agreement	Permanent	0.73	
12	2009	Lemhi Permanent - Cheney	252-09	Permanent Subordination Agreement	Permanent	2.52	
13	2009	Lemhi Permanent - Demick	258-09	Permanent Subordination Agreement	Permanent	1.33	
14	2009	Lower Lemhi 2009	72f-09	Minimum Flow Agreement	1	17.46	31.43
15	2010	Big Timber Reconnect - Tyler	285-10	Source Switch	20	4.5	
16	2010	Lower Lemhi 2010	286-10	Minimum Flow Agreement	1	17.47	
17	2010	Lower Lemhi - Thomas	72g-10	Minimum Flow Agreement	12	1.14	
18	2010	Lemhi Permanent - M Olson	261-09	Permanent Subordination Agreement	Permanent	0.96	24.07
19	2011	Big Timber/Canyon-Beyeler	333-11	Source Switch	20	5.4	
20	2011	Lower Lemhi 2011	72h-11	Minimum Flow Agreement	1	16.21	
21	2011	Lemhi and Little Springs-Kauer	326-11	Source Switch	20	4.06	
22	2011	Little Springs -Snyder	332-11	Source Switch	20	5.69	
23	2011	TNC Donation - Lemhi River	309-11	Permanent Lease/Rental	Permanent	0.31	31.67
24	2012	Lower Lemhi 2012	72i-12	Minimum Flow Agreement	1	16.21	
25	2012	Sulphur Creek Donation	349-12	Permanent Lease/Rental	Permanent	1.07	



26	2012	Patterson Big Springs Creek 2012	339-11	Source Switch	20	6	23.28
27	2013	Lower Lemhi 2013	72j-13	Minimum Flow Agreement	1	16.21	
28	2013	Lemhi - Big Springs	370-13	Source Switch	20	4.54	
29	2013	Kenney Creek Source Switch	369-13	Source Switch	20	0.14	
30	2013	Lower Lemhi Permanent - JP	389-13	Permanent Subordination Agreement	Permanent	0.6	21.49
31	2014	Lower Lemhi River 2014-2015	72k-14	Minimum Flow Agreement	2	15.56	
32	2014	Bohannon Creek 2014	429-14	Minimum Flow Agreement	1	2	17.56
33	2015	Bohannon Creek 2015	429b-15	Minimum Flow Agreement	1	2	2
34	2016	Lower Lemhi Annual 2016-2017	72l-16	Minimum Flow Agreement	3	15.56	
35	2016	Pahsimeroi_Little Mud Creek	456-16	Lease	3	5.35	
36	2016	Bohannon Creek	429c-16	Minimum Flow Agreement	1	2	22.91
37	2017	Bohannon 2017	429d-17	Minimum Flow Agreement	1	2	
38	2017	Pratt Creek 2017-2036	455-16	Source Switch	20	0.41	2.41
39	2018	Bohannon Creek - DJ	429e-17	Source Switch	20	5.58	
40	2018	Bohannon Creek - BS	429g-17	Source Switch	20	3	
41	2018	Lower Lemhi Annual 2018	72m-17	Minimum Flow Agreement	1	15.56	24.14
42	2019	Lemhi River -Annual 2019	72n-19	Minimum Flow Agreement	1	15.56	
43	2019	Pahsimeroi River -BG	456b-19	Lease	5	4.7	
44	2019	Lemhi River -KT	479-18	Permanent Subordination Agreement	Permanent	1.14	
45	2019	Lemhi River -MO	487-19	Permanent Subordination Agreement	Permanent	0.16	21.56

**TOTAL 2008-  
2019      291.27**

\*Source: Water Transaction Summary – Active and Inactive Transactions

**Attachment B\***

<b>STREAM NAME</b>	<b>TRANS_TYPE</b>	<b>FLOW (CFS)</b>	<b>Miles</b>	<b>TERMS</b>
Bohannon Creek	source switch	8.58	1.2	20
Kenney Creek	source switch	0.14	0.8	20
Canyon Creek	source switch	4	1.9	20
Big Timber Creek	source switch	5.8	2.0	20
Pratt Creek	source switch	0.41	0.4	20
Lemhi River	subordination agreements	35	7.9	100, annual
Little Muddy Creek	source switch, lease	3.15	3.9	20, 5
Lemhi Little Springs	source switch	9.75	2.6	20
Patterson Big Springs Creek	source switch	7.1	4.1	20
Pahsimeroi River	source switch, lease	25.3	13.7	20, 5
Sulphur Creek	acquisition	1.07	2.3	100
Lemhi Big Springs	source switch	4.54	2.9	20
Upper Lemhi River	source switch	7.54	1.8	20
Duck Springs Creek	source switch, lease	6.9	1.1	20, 5
	<b>TOTAL</b>	<b>119.28</b>	<b>46.7</b>	

\*Source: Active Water Transactions 2019