

Idaho MOA/Fish Accord Water Transactions Program Annual Report

Project No. 2008-608-00

Report covers work performed under BPA contract #76913 REL 15

Report was completed under BPA contract #76913 REL 023 (Project IDWRWT 21)

Report covers work performed from: October 2019– September 2020

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Report Created: July 2021

“This report was funded by the Bonneville Power Administration (BPA), U.S. Department of Energy, as part of BPA's program to protect, mitigate, and enhance fish and wildlife affected by the development and operation of hydroelectric facilities on the Columbia River and its tributaries. The views in this report are the author's and do not necessarily represent the views of BPA.”

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). 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.

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, bull trout, and other aquatic species. The 2004 Upper Salmon Subbasin Plan and 2019 Columbia River System Biological Opinion 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.

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 2020, 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 48 water right transactions that have restored 308 cubic feet per second of flow to key streams in the Lemhi and Pahsimeroi River Basins. 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

In FY20, the IWRB implemented a 20-year Source Switch agreement with a water user on Big Timber Creek, marking the completion of a third project on Big Timber Creek and increasing protected flow from 5.8 cfs to 7.2 cfs. The Big Timber re-connect project, which began in 2010 with 4.5 cfs, followed by an additional 1.4 cfs in 2011, secures critical late-season flow and cold water refugia for spawning Chinook salmon in the upper Lemhi River.

The IWRB completed a renewal of annual Minimum Flow Agreements on the Lemhi River at L-6, securing 15.4 cfs of protected flow in the lower reach of the Lemhi River through 2022. The renewal of annual Minimum Flow Agreements for 15.4 cfs, plus an additional 17 cfs that is permanently protected through Permanent Subordination Agreements, totals 32 cfs of protected flow in the Lemhi River below 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.

While the early season flows were near the 26 year average for 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, despite peak snow-water equivalent (SWE) above the 30 year median for the Lemhi Basin, full melt-out was two weeks earlier than the 30 year median. (Figure 3). The USGS L-5 gage is located 0.36 miles downstream of the L-6 diversion and the Lemhi Ridge SNOTEL site is near the middle of the basin in the headwaters of Agency Creek.

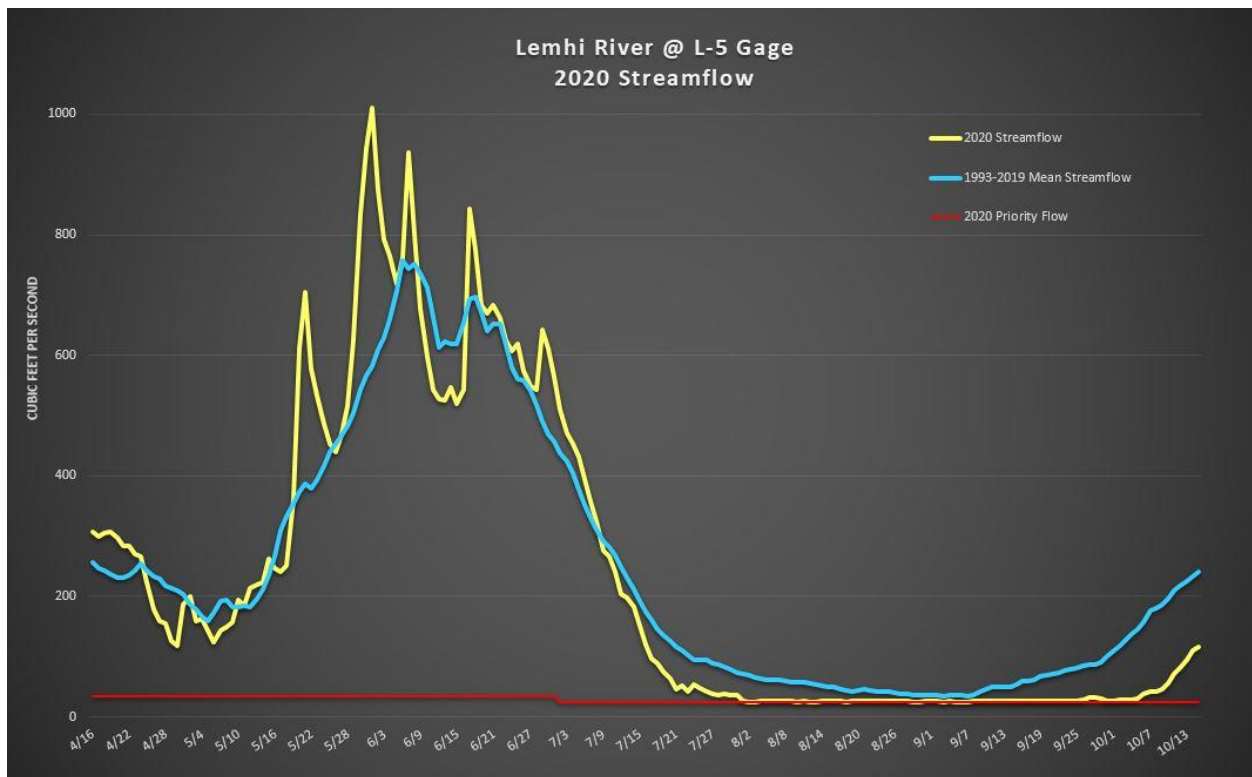


Figure 2. 2020 Lemhi River streamflow at the L-5 gage compared to the 1993–2019 mean streamflow at the same location.

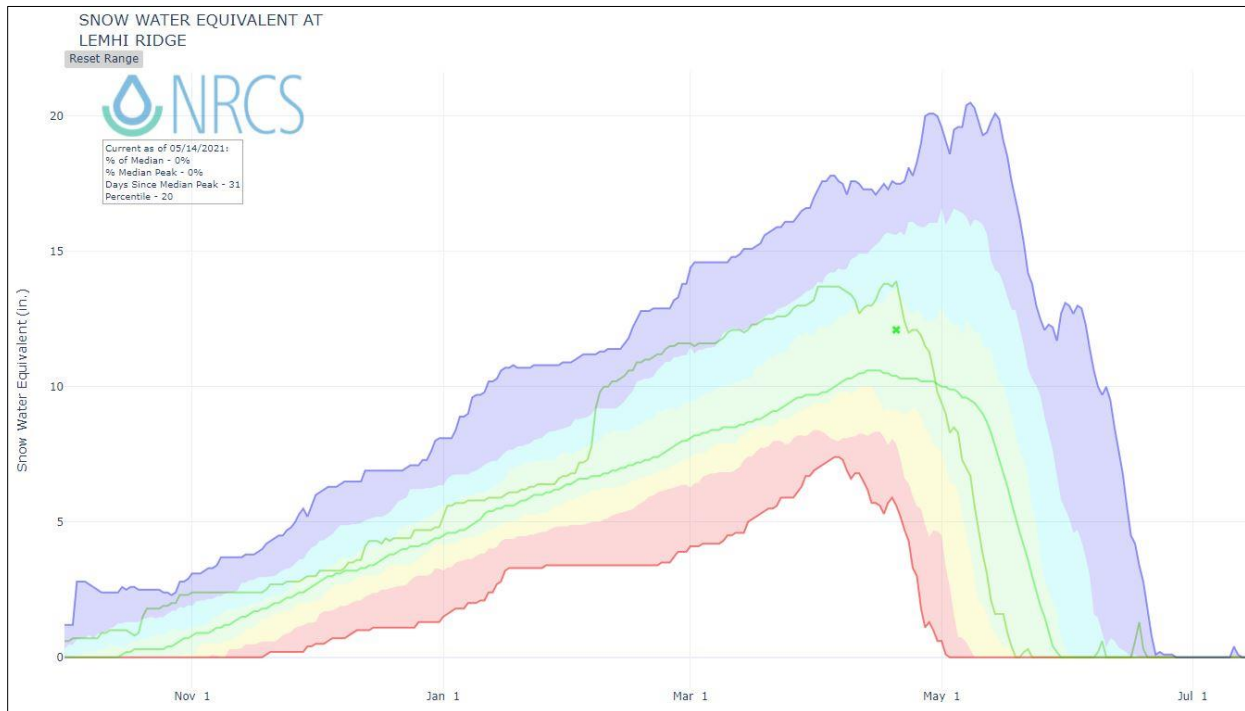


Figure 3. 2020 Lemhi River snow-water equivalent (SWE) at 8100’ on Lemhi Ridge compared to the 30 year median SWE at the same location.

Program staff monitored 31 active Accord transactions pursuant to the Columbia Basin Water Transactions Program Accounting Framework (FRAF). 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 2020 irrigation season and contributed to the monitoring and compliance of transactions on those streams. The 31 *active* Accord transactions contribute over 120 cfs over 47 stream miles in the Lemhi and Pahsimeroi River basins (Attachment A & Attachment B).

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 2020, 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
1	2008	Whitefish Ditch 2007	145-07	Source Switch	19	7.54
2	2008	Pahsimeroi P-9 Dowton	168-08	Source Switch	20	15.99
3	2008	Pahsimeroi P-9 Elzinga	169-08	Source Switch	20	9.87
4	2008	Pahsimeroi P-9 Charlton	166-08	Source Switch	20	0.75
5	2008	Pahsimeroi P-9 Bowles	167-08	Source Switch	20	3.14
6	2009	Lemhi Permanent - Fisher		Permanent Subordination Agreement	Permanent	5
7	2009	Lemhi Permanent - B Thomas	247-09	Permanent Subordination Agreement	Permanent	1.81
8	2009	Lemhi Permanent - K Thomas	248-09	Permanent Subordination Agreement	Permanent	0.33
9	2009	Lemhi Permanent - Wolters	241-09	Permanent Subordination Agreement	Permanent	2.25
10	2009	Lemhi Permanent - Bird	251-09	Permanent Subordination Agreement	Permanent	0.73
11	2009	Lemhi Permanent - Cheney	252-09	Permanent Subordination Agreement	Permanent	2.52
12	2009	Lemhi Permanent - Demick	258-09	Permanent Subordination Agreement	Permanent	1.33
13	2010	Big Timber Reconnect - Tyler	285-10	Source Switch	20	4.5
14	2010	Lemhi Permanent - M Olson	261-09	Permanent Subordination Agreement	Permanent	0.96
15	2011	Big Timber/Canyon-Beyeler	333-11	Source Switch	20	5.4
16	2011	Lemhi and Little Springs-Kauer	326-11	Source Switch	20	4.06
17	2011	Little Springs -Snyder	332-11	Source Switch	20	5.69
18	2011	TNC Donation - Lemhi River	309-11	Permanent Lease/Rental	Permanent	0.31
19	2012	Sulphur Creek Donation	349-12	Permanent Lease/Rental	Permanent	1.07
20	2012	Patterson Big Springs Creek 2012	339-11	Source Switch	20	6
21	2013	Lemhi - Big Springs	370-13	Source Switch	20	4.54
22	2013	Kenney Creek Source Switch	369-13	Source Switch	20	0.14
23	2013	Lower Lemhi Permanent - JP	389-13	Permanent Subordination Agreement	Permanent	0.6
24	2017	Pratt Creek 2017-2036	455-16	Source Switch	20	0.41

25	2018	Bohannon Creek - DJ	429e-17	Source Switch	20	5.58
26	2018	Bohannon Creek - BS	429g-17	Source Switch	20	3
27	2019	Pahsimeroi River -BG	456b-19	Lease	5	4.7
28	2019	Lemhi River -KT	479-18	Permanent Subordination Agreement	Permanent	1.14
29	2019	Lemhi River -MO	487-19	Permanent Subordination Agreement	Permanent	0.16
30	2020	Big Timber-LLP	285b-17	Source Switch	20	1.3
31	2020	Lemhi Annual 2020-2022	72p-19	Minimum Flow Agreement	3	15.4

*Source: Water Transaction Summary – Active and Inactive Transactions

Attachment B*

STREAM NAME	TRANS_TYPE	FLOW (CFS)	Miles	TERMS
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	7.2	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
	TOTAL	120.58	46.7	

*Source: Active Water Transactions 2020