
Upper Salmon Basin Watershed

NEWS ABOUT RESTORING FISH HABITAT IN CENTRAL IDAHO

Winter 2016



Pipe installation on the Carmen Creek Flow Enhancement Project, April 2015

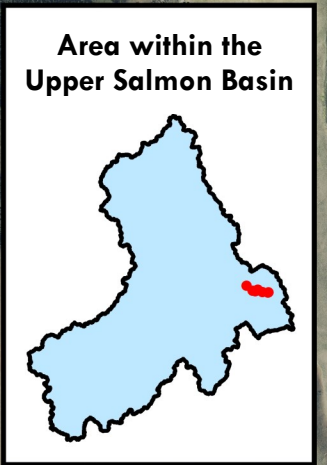
CARMEN CREEK FLOW ENHANCEMENT PROJECT

In August 1805 William Clark and his party camped at Tower Creek north of Carmen Creek. On Wednesday, August 21, Clark's journal entry describes "Sammon Creek" [present Carmen Creek], "...Passed a large Creek which fall in on the right Side 6 miles below the forks a road passed up this Creek & to the Missouri." Sergeant Gass in the party adds, "In this branch we shot a salmon about 6 pounds weight." Survey information has been sporadic, but according to documentation from the Lewis and Clark expedition, Carmen Creek historically supported Chinook salmon. Currently, Carmen Creek supports spawning and rearing habitat for steelhead but only juvenile Chinook salmon are found in the creek.

The Watershed Program and its partners are working to improve fish habitat on Carmen Creek. The most recent project, completed in spring 2015, increased streamflow by 1.2 cubic feet per second (cfs) during times of regulation, improved fish migration and riparian function, and provided on-farm irrigation efficiencies to two landowners. To increase streamflow in a section of Carmen Creek that was frequently dewatered due to irrigation, two irrigators transferred their point of diversion from the Carmen Creek 3 diversion downstream to the McNutt Ditch. This allowed their irrigation water to travel the length of Carmen Creek before being withdrawn. To improve water conveyance and distribution efficiency, a flood irrigation system was converted to pivot sprinkler and K-Line pod system, which facilitated additional water savings.

With continued efforts and projects such as this, we hope to improve conditions to provide favorable rearing habitat for Chinook salmon and steelhead, spawning opportunities for steelhead, and out-migration for smolts while maintaining the integrity of local agricultural producers.

Hawley Creek Habitat Improvement Projects



Eighteenmile Creek Culvert to Bridge - 2015



LHaC-01 Diversion



Private Road Culvert to Bridge - 2013



BLM Culvert to Bridge - 2013



Eighteenmile Intercept Removal - 2015



County Road Culvert to Bridge - 2014



LHaC-02 Diversion



Upper Hawley Water Transfer - 2015



- Completed Projects
- Future Projects
- Stream Channel
- LHaC-01 Ditch
- LHaC-02 Ditch/Pipeline
- LHaC-03 Ditch
- State Highway

0 1 2 Miles



HAWLEY CREEK HABITAT IMPROVEMENT PROJECTS

The Hawley Creek watershed, located near the headwaters of the Lemhi River near the town of Leadore, is the largest tributary to Eighteenmile Creek. Hawley Creek is often dewatered due to irrigation withdrawals and runs dry in the lower reaches making it inaccessible to anadromous fish. Historically, the watershed was a major anadromous fish producer, home to Snake River spring/summer Chinook salmon, Snake River Basin steelhead, and fluvial Columbia River bull trout. All of these species are listed as Threatened under the Endangered Species Act. For many years, Hawley Creek has been disconnected from the Lemhi River. Diversion structures, culverts, dewatering, and entrainment have prevented anadromous fish from accessing Hawley Creek, as well as limited the fluvial migration of bull trout to the main stem river.



The unscreened diversion on Upper Hawley Creek prior to removal, July 2002

The Upper Salmon Basin Watershed Program and its partners have been working on a plan for Hawley Creek since the early 2000's. The goal is to reconnect Hawley Creek with the Lemhi River to provide access to rearing and spawning habitats. The Watershed Program and its partners have completed six projects as part of this plan and have several more in the works (*see map on pages 2 and 5 for completed and planned projects*).

The **Upper Hawley Creek Water Transfer Project**, was completed in spring 2015. Before this project, an unscreened diversion (*top photo*) diverted 15.7 cubic feet per second (cfs) of water from Hawley Creek into an open ditch which conveyed irrigation water through lands managed by the Bureau of Land Management (BLM) to the place-of-use on private land. The goal of this project was to restore fish access to upper Hawley Creek by increasing water instream and removing the diversion, which was a fish passage barrier.



The new diversion and fish screen, Nov. 2014

The project replaced the unscreened diversion with a new fish-friendly diversion approximately 300 feet upstream. The Idaho Department of Fish and Game installed a fish screen at the new diversion (*bottom photo*). The removal of this barrier provides an additional 1.4 miles of fish passage upstream.

Continued on next page

To increase water efficiency, the project installed a new irrigation pipeline in the existing ditch channel and provided the landowner with four new pivots. This conversion not only increased water-use efficiency for the landowner, but left an additional 5.3 cfs of water in Hawley Creek.

Two more projects completed in 2015 continue to improve fish access to Hawley Creek. The **Eighteenmile Creek Culvert to Bridge Replacement Project** removed two undersized, corrugated metal culverts that conveyed Eighteenmile Creek underneath the Old Railroad Grade Road (*right photo*). The culverts were a passage barrier to anadromous and resident fish species. Replacing the culverts with a bridge provides an additional 1.2 miles of fish passage upstream.



The new Eighteenmile Creek Bridge, Aug. 2015

The second project, the **Eighteenmile Intercept Removal Project**, removed a five-foot metal culvert that was used as a headgate to divert Eighteenmile Creek and was a complete fish passage barrier when in use during the irrigation season (*photos below*). The project moved the point of diversion downstream and installed a pump and inline pod sprinkler system. Removal of the fish passage barrier provides an additional one mile of fish passage upstream and keeps 1.65 cfs instream.



The Eighteenmile Intercept prior to and after removal, Aug. 2015



**Upper Salmon Basin
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Homegrown, Common-sense Conservation

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NEWS ABOUT
RESTORING FISH
HABITAT IN
CENTRAL IDAHO

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To:

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WATERSHED CALENDAR

- **USBWP Office Closed:** January 1 and 18, February 15
- **USBWP Advisory Committee:** January 7, 1 p.m.

HAPPY NEW YEAR!

Coordinator's Comments *By Daniel Bertram*



Irrigation season has ended, the ground is covered with snow and ice is flowing in our rivers. All of these things are a reminder to me that summer is long gone and fall has also slipped past our grasp.

At the Upper Salmon Basin Watershed Program, restoration projects have wrapped up and the results are already evident. In Carmen Creek, two producers have a new irrigation system which has allowed for the perennial reconnection of Carmen Creek. Hawley Creek has an additional 5.3 cubic feet per second of water and the producer now has a gravity system as opposed to pumping costs.

Two fish barrier projects have been completed which benefitted juvenile fish and allowed increased access into places previously inaccessible. With the completion of these projects, our office is now focusing attention on grant applications, reporting, and planning additional projects. We will be meeting with landowners and

coming up with ideas for future projects and begin planning the 2016 field season.

With the help of our partners, we just completed an exercise to document the improvements that have occurred within the Upper Salmon Basin over the past three years. In the spring, we will reconvene and capture the anticipated outcomes we plan to achieve in the next three years.

During 2016, our office looks forward to completing five additional irrigation projects, one stream restoration project and one barrier removal project. In addition to these projects, we will collect field data for the projects we plan to accomplish in 2017.

If you have an idea for a project, a problem on your land, or a desire to improve habitat please don't hesitate to approach one of the many partners we have working in the Upper Salmon Basin. Let's continue to work together, proving that by being proactive we can sustain a way of life that benefits all.