



Conant Creek Canal Project

December 13th 2022
Henry's Fork Watershed Council

Farms and Fish Program

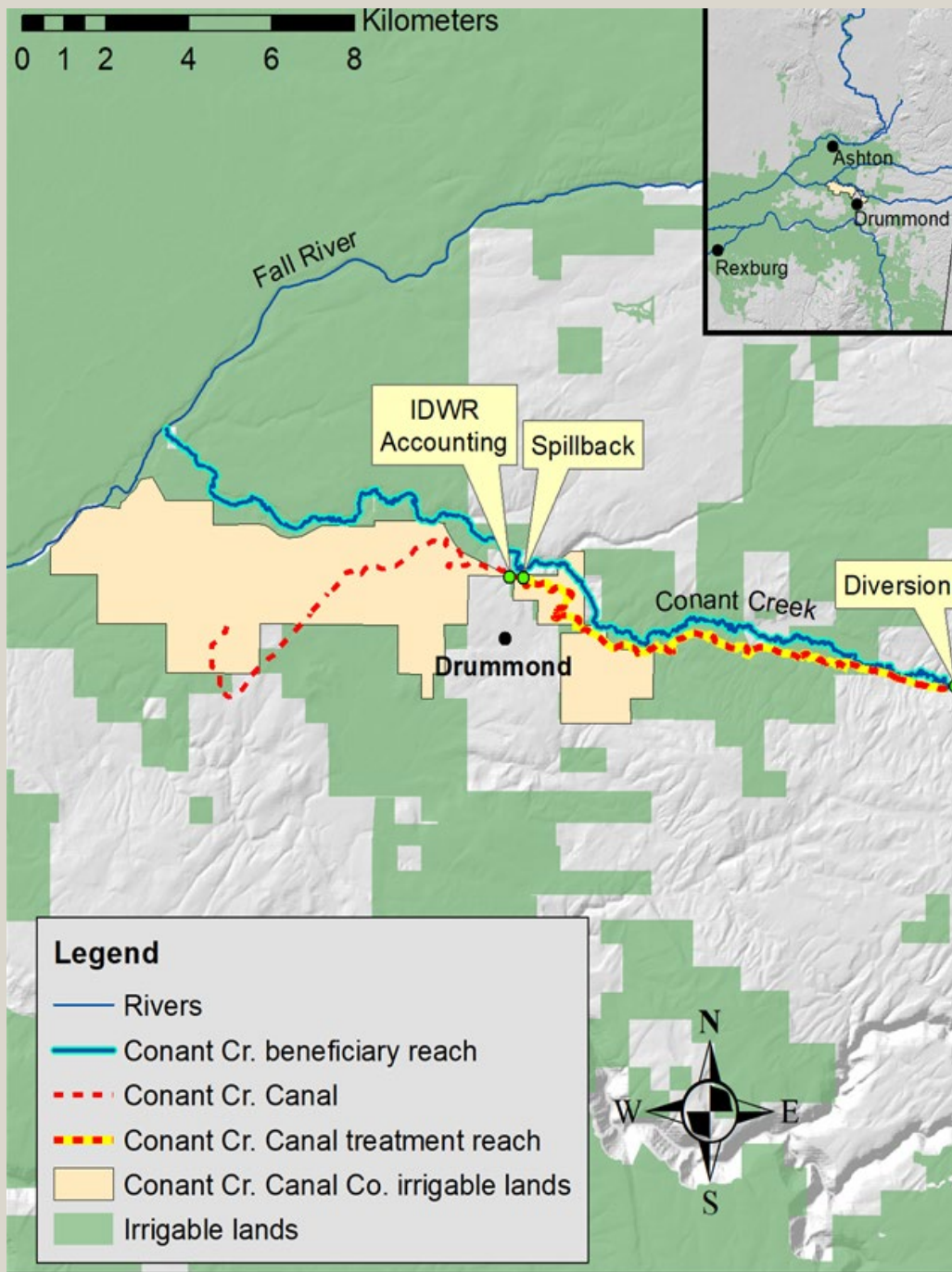
The Farms and Fish Program consists of regional organizations working with local irrigators and agricultural producers who voluntarily implement new management practices with the intent to maintain quality fisheries in the Henry's Fork Watershed.

- **Island Park Reservoir is crucial to maintaining quality fisheries in the Henry's Fork.**
- **Its mandate does not include fisheries.**
- **Prior Appropriation Doctrine.**
- **Regional economic contribution of agriculture is greater than that of fisheries.**

Conant Creek

- Critical habitat for an array of cold-water fish species.
- Supports a robust population of Yellowstone Cutthroat Trout.
- Since the 1970's, native populations of Yellowstone Cutthroat Trout have declined due to harvest, habitat degradation, and competition and introgression from non-native species.





Conant Creek Canal Company

- The Conant Creek Canal consists of three primary reaches: 1) the point of diversion from Conant Creek. 2) the spillback to the Creek. 3) the end of the canal and terminal pond.
- The headgate is used only for coarse delivery of water and is adjusted a couple times per irrigation season.
- Precise delivery to the water users is controlled by adjustment of a gate at the spillback point.
- Water spilled back to the creek is not counted as part of the canal company's water use.

Conant Creek Canal Company



- Farmers in the Conant Creek Canal Company service area rely on healthy soils and dependable water sources to grow high-quality, high-value crops that help contribute to a robust Ag economy in the County.
- Irrigation infrastructure supports 3,200 acres of irrigated farmland.
- Crops grown in the service area are seed potatoes, cereal grains, and alfalfa hay.
- The Ashton area is one of the nation's largest potato seed-producing management areas.

Henry's Fork Basin Study (2015)

- **U.S. Bureau of Reclamation completed the Henry's Fork Basin Study as a planning document.**
- **Intended to be a template for future actions to ensure reliability and sustainability of water resources in the basin.**
- **These options include small off-stream storage reservoirs, modest enlargement of existing reservoirs, managed aquifer recharge, market-based administrative exchanges in time and place of water use, canal linings and piping, and automated irrigation delivery infrastructure.**
- **The most viable options in the Basin Study are relatively small in scale and designed to be implemented and managed in conjunction with other efforts at the local level.**

Collaboration and Support



Courtesy Capital Press

- **Pipeline and canal lining systems already constructed in the North Fremont irrigated region have helped to reduce the need for deliveries from upstream storage.**
- **Positively impacts streamflows in the river system by reducing instream withdrawals and more water is available later in the irrigation season.**
- **Mitigates for current water supply shortages in the region due to earlier season run-off.**

Canal Measurements

On 20 August 2019 we measured discharge in the canal system at four points:

- Diversion
- Immediately upstream of the spill structure,
- Immediately downstream of the spill structure
- Immediately upstream of the terminal pond.

We measured discharge with an Acoustic Doppler Current Profiler (ADCP), using the standard method of two passes across the canal in each direction.



Canal Measurements

Date time	Location	Discharge (cfs)	ADCP error (coefficient of variation)
2020-08-20 14:30	Point of diversion	27	18.5%
2020-08-20 12:45	Upstream of spill	13	2.0%
2020-08-20 11:45	Downstream of spill	9	9.2%
2020-08-20 10:45	Terminal pond	9	51.0%

Canal Infrastructure



Anticipated benefits

- **Estimated to eliminate 2,850 ac-ft/year in canal seepage and increase flows in Conant Creek by 13 CFS (~ 39% increase during irrigation season)**
- **Saving 1,987 ac-ft/year of storage water in Island Park Reservoir (cooler water, better water quality, improved winter flows, etc.)**
- **Improving aquatic habitat, connectivity, and ecological resiliency for cold-water species in both Conant Creek, Fall River, and the Henry's Fork River, especially during the most thermally stressful summer months.**
- **Increase in farmers' participation in NRCS conservation programs like the Environmental Quality Incentives Program (EQIP).**

Project Progress

Phase 1 – Line 5.7 Miles of canal with Liner to reduce seepage and increase conveyance to 99%.



Project Progress

Phase 2 - Establish automation equipment at diversion headgates and spillback locations.



Project Progress

Phase 3 - Flow Meters for on-farm component.



Monitoring

- Installed a sonde, temperature, and pressure logger in the project area.
- ADCP (acoustic doppler current profiler) to take stream flow measurements.



Cost & Fundraising

- We propose a three-year project budget of \$2,172,443.6, of which \$1,122,902 (51.7%) is federal funding already secured through the WaterSMART program.
- Funding from the Idaho Soil and Water Conservation Commission Water Quality Program for Agriculture will pay for engineering plans and design of the diversion structures (\$35,000).
- Requested (\$499,145) from the IWRB Aging Infrastructure Grant which represents 23% of the total project.
- The remaining non-federal match will come from three entities in the form of cash or In-kind, Henry's Fork Foundation, Conant Creek Canal Company, and Fremont-Madison Irrigation District.

Thank You



Daniel Wilcox 

208-520-2137 

Daniel@henrysfork.org 

www.henrysfork.org 