

I. Project Title: Protecting flows in the Price River

II. Bureau of Reclamation Agreement Number(s): N/A

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IV. Abstract:

The proposed project will reconstruct an off-river reservoir to allow for the strategic release of stored water to supplement flows to the Price River for endangered species fish habitat, as well as aid agriculture demands. Associated upgrades to the Carbon Canal will reduce the risk of flooding, and an innovative water agreement will allow the Carbon Canal Company to invest in future water infrastructure improvements that create additional “saved” water that will be used for environmental benefits. Conservation easements will ensure that benefits are realized in perpetuity.

V. Study Schedule: Ongoing

VI. Relationship to RIPRAP:

Green: I. C.3. Work with State of Utah and local water users to provide and enhance summer base flow conditions (either increase average daily flow thresholds or increase the frequency that those flows occur) in the lower Price River that are conducive to pikeminnow use. For example, consider securing an emergency pool of water to avoid periods of dewatering in the lower Price River.

VII. Accomplishment of FY 2018 Tasks and Deliverables, Discussion of Initial Findings:

Proposed Action

The Utah Division of Wildlife Resources (UDWR) has a near-term goal of guaranteeing delivery of water from Olsen Reservoir to the Price River, maintaining a base flow that prevents desiccation of that river. This includes working with two to three water users below Olsen Reservoir to ensure that released water would reach the Price River. One water user sold his property and water rights to The Nature Conservancy (TNC), who in turn is in the process of donating the water to the UDWR to hold as instream flow rights.

UDWR, in partnership with other interests including TNC is seeking funding to secure tailwater from the Carbon Canal Company (CCC) that would be delivered to the reservoir in early spring and late fall. Delivery of water in the spring and fall would fill much of the wetland and provide valuable nesting habitat for waterfowl and other marsh birds. This pool of water could be released periodically during dry periods (July-Aug) to maintain flows, improve water quality, and ultimately prevent Price River fish kills that have occurred in the past. The reservoir is also being investigated as a location for roundtail chub (*Gila robusta*) propagation.

Carbon Canal upgrades (replacement of a water overflow structure, installation of canal flow measurement) and a water agreement to use canal carrier water would allow for increased inflow to the reservoir. A pipeline and open channel would convey water from the canal to the reservoir while maintaining wetland habitats. Upgraded downstream diversion structures would allow for increased delivery of agriculture water. Conservation easements would enhance habitat in perpetuity.

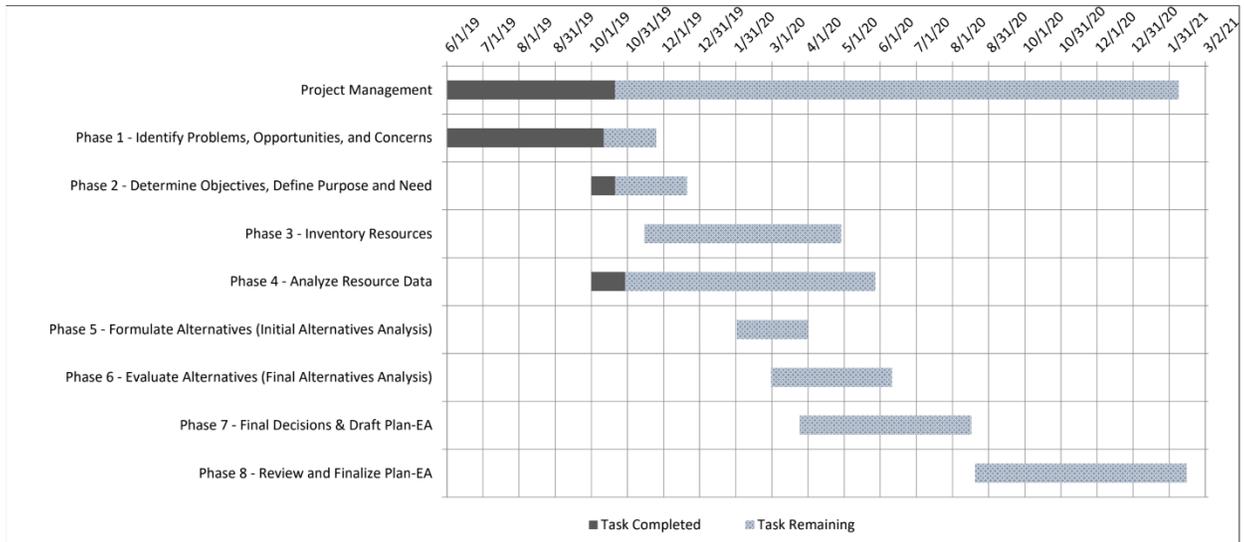
Concurrently, efforts are underway upstream to possibly develop a reservoir on the Garley Wash tributary to the Price River near Price, Utah, and make associated improvements to the existing irrigation system, including piping and pressurizing the currently open and unlined water delivery canals. An anticipated benefit of these improvements would be substantial water savings, a portion of which could be delivered under a long-term agreement to Olsen Reservoir (e.g., 600 acre-feet/year) for purposes of controlled release when needed to support in-stream Price River flows. TNC is working with legal counsel to determine suitability of water savings for environmental flows.

Accomplishments in FY2019

In August TNC and the Carbon Canal Company (CCC) signed a Water Infrastructure and Supply Agreement (the Agreement). The Agreement directs the CCC to manage their system in a way that delivers carrier water to Olsen Reservoir in exchange for funding for system efficiencies such as head gates and measuring devices to increase environmental flows. TNC will pay \$10/AF to CCC for water delivered to Olsen Reservoir.

Funding under NRCS's Watershed Protection and Flood Prevention Act (*PL-566*) was secured to complete an Environmental Assessment of the Olsen Reservoir project and watershed plan. Jones and DeMille Engineering was the contractor selected to develop

the EA. We anticipate that the EA will be finalized by March 2021, following the schedule below:



Milestones accomplished:

- Stakeholder meetings (public and agency) were held in the summer. Post public and stakeholder input meeting held where we reviewed a draft purpose and need statement, the comments received, and the project scope
- Geotechnical drilling permitted and completed
- Geotechnical test hole permitting started with BLM
- Preliminary sedimentation modeling, hydrologic model of watershed and dam routing
- Met with LDS Farm on the pipeline route, coordination
- Economics scoping meeting held with sub-consultant AECOM
- Water balance analysis kickoff meeting held with sub-consultant Keller-Bliesner Engineering

VIII. Additional noteworthy observations:

Endangered and Imperiled Fish Use. In January 2017, the USGS Utah Cooperative Fish and Wildlife Research Unit and the Department of Watershed Science and Ecology Center at Utah State University published the results of a multi-year study, “Tributary habitat use of endangered and imperiled fishes in the Price River, Utah” (Budy et al. 2017). This effort was funded under U.S. Bureau of Reclamation Grant Number R11AC40021. Overall project goals were to (1) investigate and document tributary (Price River) habitat use by Colorado pikeminnow, (2) explore movement patterns and habitat use of the “three species” within the Price River, while obtaining ancillary information on population abundance and distribution, and (3) characterize and quantify fish habitat within the Price River to guide restoration planning. Among the report findings were the detection of “several magnitudes more native fish use and movement than anticipated”, and “more than twice the number of pikeminnow utilizing the Price

River relative to the San Rafael River.” Dr. Budy and her associates have subsequently developed a draft *Restoration and Monitoring Plan* for the lower Price River, identifying priority areas for restoration activities, and identifying activities that may best accomplish restoration goals.

Price Watershed Enhancement Proposal. The Price Municipal Corporation submitted an application for funds from the NRCS Watershed Protection and Flood Prevention Program (PL-566), and was awarded \$670,200 for planning and preliminary design of the “Price River Watershed Restoration and Enhancement Project.” The funds will be utilized over a 24-month period, beginning in January, 2019. Activities proposed by the Corporation revolve around plans to construct a new reservoir at Garley Wash, replace open irrigation canals with pressurized pipelines, and upgrade to more efficient irrigation systems. Among the potential benefits are removal of diversion structures in the Price River that inhibit fish passage, removal of invasive plant species from the riparian corridor, and provision of higher and more consistent base flows in the late summer months that could significantly benefit native fishes, including Colorado pikeminnow. While the Program Director's Office and the FWS Utah Ecological Services Office takes no position regarding the Corporation's proposed reservoir, we do wish to be in a position to assist in developing plans to control any non-native fish that may be introduced into that reservoir, and also assist with the development of strategies that could significantly enhance late summer base flows in the lower Price River, should this reservoir project move forward.

IX. Recommendations:

The Recovery Program supports the efforts by UDWR, TNC, the Walton Family Foundation, Utah Water Users, the Price River Enhancement Committee, NRCS, USGS, USU, USFWS, and others to improve and maintain summer base flow conditions that support Colorado pikeminnow seasonal use of the lower Price River, and to remove three fish barriers. We recommend that the Program continue to maintain contact with those organizations and those efforts; see the Program project included in the 2018-19 Program Work Plan tasking the Program Hydrologist with keeping apprised of Price River discussions and, as appropriate, engaging the Program’s technical committees.

X. Project Status:

- Based on discussions with the Carbon Canal Company and initial engineering assessment, project proponents have selected the option to install a 15” pipe above terminal pond for the Carbon Canal; this pipe will run approximately 6,000 feet to an ephemeral wash that flows into Olsen Reservoir. With this pipe in place, there will be an ability to route excess carrier water from the canal to Olsen Reservoir.
- In August TNC and the Carbon Canal Company (CCC) signed a Water Infrastructure and Supply Agreement (the Agreement). The Agreement directs the CCC to manage their system in a way that delivers carrier water to Olsen Reservoir in exchange for funding for system efficiencies such as head gates and measuring devices to increase environmental flows. TNC will pay \$10/AF to CCC for water delivered to Olsen Reservoir. CCC

estimates they can deliver approximately 1,000 to 2,500 AF annually to Olsen Reservoir.

- Significant progress has been made establishing a roundtail chub propagation pond in Emery County. 58 roundtail chub from the upper San Rafael River are now in the pond. The intention is to use progeny from this source to populate Olsen Reservoir and in the future use the water releases from the reservoir to introduce roundtail to the Price River. Roundtail Chub have not been found in the Price River since the late 1970's.
- TNC is in the process of negotiating a second water transaction to acquire 500-900AF of water that could also be used to meet baseflow targets.

XI. FY 2018 Budget Status

- A. UCREFRP Funds Provided: \$0
- B. UCREFRP Funds Expended: \$0
- C. Difference: --

XII. Status of Data Submission (Where applicable): N/A.

XIII. Signed:

<u>Dan Keller</u>	<u>12/19/2019</u>
Principal Investigator	Date
<u>Don Anderson</u>	<u>12/19/2019</u>
	Date