

- I. Project Title: Protecting flows in the Price River
- II. Bureau of Reclamation Agreement Number(s): N/A
- III. Contact(s): Dan Keller
Utah Division of Wildlife Resources Native Aquatics Biologist
319 N. Carbonville Rd., Price, UT 84501
435-636-9238
danielkeller@utah.gov
- Don Anderson
U.S. Fish and Wildlife Service Region 6
Upper Colorado River Recovery Program Hydrologist
303-236-9883
Donald.Anderson@fws.gov
- IV. Abstract:
Convene with interested parties to discuss flow protection and habitat improvement opportunities in the lower Price River.
- 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 2017 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 is interested in selling his property and water rights to The Nature Conservancy (TNC), who in turn would donate the water to the UDWR.

UDWR, in partnership with other interests including TNC is seeking funding to secure tail water from the Carbon Canal Company (CCC) that would be delivered to the

reservoir in early spring and late fall. This reservoir storage would restore spring wetland habitat and be released during very low water periods to prevent fish kills. 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.

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 FY2017

Olsen Reservoir Restoration Planning: In April 2017, UDWR in association with TNC released a Scope of Work for the preliminary design phase of a project to enhance Olsen Reservoir to support conservation of native fish in the Price River system. The project would secure excess irrigation water by agreement and store it in Olsen Reservoir for release during dry periods when the Price River would otherwise become inhospitable for fish. Under this scope, engineering services would be secured to evaluate the feasibility, design, and cost associated with rehabilitating the aging earthen dam at Olsen Reservoir as well as the water-related infrastructure required to deliver, store, and release water at Olsen Reservoir to meet the ecological objectives of the restoration project. Phase 1 of this project is to implement this Scope of Work, which is essentially a feasibility study and preliminary design. Final design including construction documents would be acquired during Phase 2, separate from this Scope of Work. The State of Utah awarded the contract for this Phase 1 work to Jones and DeMille; work is anticipated to begin by mid-November 2017.

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 Regional Conservation Partnership Program (RCPP) to assist with the "Price Watershed Enhancement Project" in Utah. The Recovery Program Director's Office provided a letter of qualified support for that application. 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 took 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.

Mailing List for meeting invitations:

[Donald Anderson@fws.gov](mailto:Donald.Anderson@fws.gov), Paul Burnett <pburnett@tu.org>, Jordan Nielson <jnielson@tu.org>, Eric McCulley, <eric.mcculley@riverrestoration.org>, Sue Bellagamba <sbellagamba@tnc.org>, Wally MacFarlane <wally.macfarlane@gmail.com> Christopher McGinty <mcginty.chris@gmail.com>, Jack Schmidt <jack.schmidt@usu.edu>, John Ruple <john.ruple@law.utah.edu>, Dave Dean <djdean@usgs.gov>, Dave Speas <dspeas@usbr.gov>, Mark McKinstry <mmckinstry@usbr.gov>, "MacKinnon, Peter" <Peter.MacKinnon@biomark.com>, Daniel Eddington <danieleddington@utah.gov>, Justin Hart <justinhart@utah.gov>, "Reese, Jared R" <jreese@blm.gov>, Makeda H edatrujillo@utah.gov, Paul Badame <pbadame@utah.gov>, Peter Wilcock <wilcock@usu.edu>, Mark Fuller <mark_h_fuller@fws.gov>, Daniel Keller danielkeller@utah.gov, Erik Woodhouse erikwoodhouse@utah.gov Gary Thied gary.thiede@usu.edu Jerrad Goodell jgoodell@blm.gov Joan DeGiorgio jdegiorgio@tnc.org, Krissy Wilson krissywilson@utah.gov Mike Fiorelli mfiorelli@utah.gov Phaedra Budy phaedra.budy@usu.edu ryan Maloney bryanmaloney23@gmail.com Brian Laub brian.laub@aggiemail.usu.edu Phil Tuttle philiptuttle@utah.gov Cassie Mellon cmellon@blm.gov Cynthia Tait ctait@fs.fed.us George Weekley george_weekley@fws.gov Justin Jimenez jjimenez@blm.gov Mills mikem@cuwcd.com Paul Abate paul_abate@fws.gov Chris Keleher christopherkeleher@utah.gov Mark Grover mgrover@blm.gov Beth Reinhart mreinharte@usbr.gov Marc Stilson marcstilson@utah.gov Jason Carey jason.carey@riverrestoration.org Matt Breen mattbreen@utah.gov Trina Hedrick trinahedrick@utah.gov

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 remove three

fish barriers. The Program will continue maintaining 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 we have selected the option to install an 18-24" pipe at the 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 we will have the ability to route excess tail end water from the canal to Olsen Reservoir.
- CCC is interested in pursuing an agreement to capture tail water and deliver it to Olsen Reservoir. A water appraisal has been completed to place a value on the water. The appraisal was \$10-12 per acre/foot. Other costs to be paid to the CCC as part of the agreement that is being negotiated include: new automated headgates in key locations, measuring devices, and costs for marinating the tail end pond.
- Current estimates from CCC indicate approximately 1,000 to 2,500 AF annually of surplus or nondelivered water could be delivered to Olsen Reservoir.
- Initial estimates indicate that to be able to release 5 cfs for 60 days in late summer (~600 AF) we will need to store roughly twice that amount in Olsen to account for seepage, evaporation and evapotranspiration losses. This estimate will be verified with Phase 1 engineering that will begin November 2017. Phase 1 will also verify how much storage we can gain in Olsen Reservoir by making modifications to the existing dam.
- We've made significant progress establishing a roundtail chub propagation pond in Emery County. We now have 58 roundtail chub from the upper San Rafael River in the pond. It is our intention 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 have not been found in the Price River since the late 1970's.
- TNC is in the process of negotiating an option agreement to purchase the land and water rights below Olsen Reservoir. This would make TNC owner of 38 CCC shares and the storage rights associated with Olsen Reservoir.

XI. FY 2017 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:

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| <u>Dan Keller</u> | <u>11/08/2016</u> |
| Principal Investigator | Date |
| <u>Don Anderson</u> | <u>11/17/2016</u> |
| | Date |