RECOVERY PROGRAM Recovery Program Project Number: 173
FY 2018-2019 SCOPE OF WORK for:

Evaluate the potential of reestablishing humpback chub in Dinosaur National Monument.

Reclamation Agreement number: ____
Reclamation Agreement term: ____

Lead agency:
Submitted by: Shane Capron, WAPA, capron@wapa.gov, 720-799-3441
Melissa Trammell, NPS, melissa_trammell@nps.gov,

Date Last Modified: 5/24/2017 3:02:00 PM

Category:
__ Ongoing project
__ Ongoing-revised project
_X_ Requested new project
__ Unsolicited proposal

Expected Funding Source:
__ Annual funds
__ Capital funds
_X_ Other, no funds needed

I. Title of Proposal: Evaluate the potential for reestablishing humpback chub in Dinosaur National Monument.

II. Relationship to RIPRAP: Yampa, IV.A.1 (Augment or restore populations as needed, and as guided by the Genetics Mgmt. Plan)

III. Study Background/Rationale and Hypotheses:

The previous recovery plans for humpback chub, and the current draft of the species status assessment (SSA; Valdez et al. draft April 19, 2017) identify a self-sustaining population in Dinosaur National Monument (Whirlpool Canyon/Island Park in the Green River, and Yampa Canyon in the Yampa River). This area has also been determined to be critical habitat for humpback chub. However, the population may have been extirpated in the Green River for a while, and recently extirpated in the Yampa River. Recent population estimates in Yampa Canyon ranged from 320 in 2001 to 224 adults in 2003 (Finney 2006). Since 2003, no population estimates have been possible because too few humpback chub have been captured. In 2007 about 400 juveniles were taken from Yampa Canyon to hatchery facilities to evaluate the survival of young humpback chub during transport and in a hatchery setting, and potentially for the purpose of establishing a refuge population (Upper Colorado River Endangered Fish Recovery Program 2007). It was determined after the fish were large enough to identify that there were no humpback chub in the sample, confirming that the number of humpback chub is low and roundtail chub and hybrids are common. There are numerous hypotheses for the decline in this population and concerns about the habitat quality to support a large population of humpback chub. These issues will need to be explored in the discussion paper.

The humpback chub has not been translocated in the upper basin, but has been introduced from hatchery stocks once. In December of 1981, a total of 7,600 juvenile humpback chub were

hatched and raised at the Willow Beach National Fish Hatchery and released in Cataract Canyon at 1½ years of age (Valdez 1990). These fish had been hatched from eggs taken from ripe fish in Black Rocks in May 1980 (Arcadio Gonzales-Valdes, University of Mexico at Monterey, Personal Communication to Dr. Rich Valdez, October, 1980). Each released fish was marked with a coded wire nose tag, but fish caught in subsequent investigations have not been examined with a metal detector, and the survival, fate, and eventual influence of these fish on the population size and genetics of the Cataract Canyon population is unknown.

Translocations have been extremely successful in Grand Canyon to the point that numerous conservation measures require continued and expanded translocations, and even mainstem translocations in order to mitigate predation by rainbow trout. Successful translocations have been made above Chute Falls in the Little Colorado River, Havasu Creek, and Shinumo Creek. These projects have been led by the NPS and USFWS, funded in part by GCDAMP funds and appropriated dollars.

IV. Study Goals, Objectives, End Product(s):

The objective of this study is to evaluate the potential for taking the successful management action used in Grand Canyon and applying that to humpback chub populations in the upper basin. A similar management action could be applied to the Yampa Canyon humpback chub population/locale of a former population. The Grand Canyon population has shown its ability to recover and grow fairly rapidly, however the upper basin populations have been mostly stable or in the case of the Yampa Canyon fish, to be extirpated. If this population could be recovered via translocation efforts and be re-established as a natural self-sustaining population it would provide additional confidence in their recovery. The product of this work is a discussion paper that evaluates the utility of translocations to Yampa Canyon, and potentially other appropriate locations within the upper basin.

This discussion paper will include at least the following:

1. A history of humpback chub collections in Dinosaur National Monument (DNM: Whirlpool, Lodore, and Split Mountain canyons of the Green River, as well as the Yampa River),
2. An evaluation of habitat suitability for the humpback chub in DNM,
3. Alternative means of translocating fish, including, but not limited to:
    a. live translocation of young fish from upper basin populations,
    b. live translocation of young fish from Grand Canyon, and
    c. release of hatchery reared fish.
4. Recommendations for reintroducing humpback chub into DNM to restart a population.

V. Study Area:
Dinosaur National Monument, Yampa Canyon

VI. Study Methods/Approach:

This will be a group effort to draft this discussion paper led by Shane Capron, Melissa Trammell, and Tom Czapla, with help from Harry Crockett, Paul Badame and Tildon Jones.

VII. Task Description and Schedule:

The discussion paper will be completed in 2017 and provided to the BC for discussion.

VIII. Deliverables, Due Dates, and Budget by Fiscal Year:

See above, no funds are needed for this work which is comprised only of an academic assessment of the utility of translocations.

IX. Budget Summary:
None identified.

X. Reviewers:

Rich Valdez, Brian Healy

XI. References:

Valdez, R.A. 1990. The endangered fish of Cataract Canyon. Final report prepared for Bureau of Reclamation. Salt Lake City. Utah. Contract 6-CS-40-03980. Fisheries Biology and Rafting. BIO/WEST Report 134-3.94 pp. + appendices. Logan, UT.

Finney, S. 2006. Adult and juvenile humpback chub monitoring for the Yampa River Population, 2003–2004. Final report to the Upper Colorado River Fish Recovery Program, Project number 133. U. S. Fish and Wildlife Service, Vernal, UT.