

RECOVERY PROGRAM
FY 2020-2021 SCOPE OF WORK for:
White River Management Plan

Recovery Program Project Number: FR-168

Reclamation Agreement number N/A
Reclamation Agreement term N/A

Note: Recovery Program FY20-21 scopes of work are drafted in May 2019. They often are revised before final Program approval and may subsequently be revised again in response to changing Program needs. Program participants also recognize the need and allow for some flexibility in scopes of work to accommodate new information (especially in nonnative fish management projects) and changing hydrological conditions.

Lead agency: U.S Fish and Wildlife Service

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Date Last Modified: 7/1/2019 4:31 PM

I. Title of Proposal: Develop a White River Management Plan.

II. Relationship to RIPRAP: Green River Action Plan: White River

- I. PROVIDE AND PROTECT INSTREAM FLOWS (HABITAT MANAGEMENT)**
- I.B.3. Develop and implement a White River Management Plan
- I.B.3.a. Conduct programmatic Section 7 and NEPA compliance on recovery actions and a level of future water demand.

III. Study Background/Rationale and Hypotheses:

The White River is an important component for the conservation of native fishes in the Upper Colorado River Basin and for the recovery of endangered Colorado pikeminnow and razorback sucker. The hydrology of the White River is relatively unchanged by large storage projects or depletions. Estimates of water use in the basin suggest that roughly 10% of the natural river flow is currently depleted by human uses, almost entirely within the state of Colorado (Anderson et al., 2018). Current consumptive uses of the river in Utah are minimal, likely less than 500 acre-feet annually (James Greer, Utah Division of Water Rights, personal communication, September 2018).

In 2001, Tyus and Saunders (2001) determined that indirect contributions (flow, sediment, and water quality) from the White River to endangered fish recovery in the Green River sub-basin were second only to those of the Yampa River. The authors recognized that the White River also provided direct contributions (endangered fish habitat) to recovery based on

abundant captures of adult Colorado pikeminnow, and the occasional capture of young-of-the-year Colorado pikeminnow and adult razorback sucker. Recently, researchers have documented spawning of Colorado pikeminnow and razorback sucker in the White River (Bestgen et al. 2012). These important new findings coupled with the relatively intact native fish populations have increased the recognized importance of the White River in recent years. In 1994, the U.S. Fish and Wildlife Service designated 151 river miles of the White River (from the Green River confluence upstream to Rio Blanco Lake) as critical habitat for the Colorado pikeminnow and a shorter reach for razorback sucker at river mile 18, the boundary of the Uintah and Ouray Indian Reservation (59 FR 13374).

The U.S. Fish and Wildlife Service has published draft flow recommendations for the endangered fishes of the White River that are currently undergoing technical review and revisions (Anderson et al., 2018). These recommendations consider information from base flow studies reviewed and approved by the Recovery Program in 2004 (Haines et al. 2004), and from spring peak flow studies drafted for the Recovery Program based on geomorphic analyses (Schmidt and Orchard 2002). They also consider substantial biological data gathered since those studies, along with simulated river flows by Wilson Water Group under different current and future development scenarios.

In a 2002 Recovery Program Project 114 Annual Report, entitled Tributary Basin Management Plans, there was a recommendation that a Programmatic Biological Opinion (PBO) be developed for the White River similar to PBO's developed for the 15-Mile Reach of the Colorado River, the Yampa River, and the Gunnison River. Meetings of a White River Planning Team¹ were initiated in 2016 to begin evaluating and modeling White River information as first steps toward developing a White River Management Plan and a corresponding PBO.

In June 2019, the Colorado Water Conservation Board (CWCB) released a request for proposals for the development of a White River Management Plan (WRMP) which will characterize current and some level of reasonably foreseeable future water use within the White River basin and its possible impacts to endangered fish, and help identify necessary Recovery Program activities in the White and Green River basins to provide ESA compliance for depletion impacts. That WRMP will include a biological assessment to provide the basis for the Service's development of a PBO.

IV. Study Goals, Objectives, End Product:

- A. Study Goal: Develop a management plan that: 1) identifies historic and a most likely future depletion scenario; 2) uses (and refines) the Recovery Program's draft endangered fish flow recommendations and current hydrology to identify the effects of past and future water development on endangered fish habitat; and 3) identifies recovery actions needed to offset depletion effects. A federal-state-local cooperative or other agreement to implement the resultant management plan will constitute the

¹ Membership on the White River Planning Team includes Upper Colorado River basin water users, the U.S. Fish and Wildlife Service, CWCB, State of Utah Division of Water Rights, the Rio Blanco Water Conservancy District, the Ute Indian Tribe, and The Nature Conservancy.

federal action (likely via USFWS participation) that serves as the basis for a Section 7 consultation and development of a White River PBO.

B. Study Objectives:

- a. Work with local water users to develop a range of future water demand scenarios such as; CWCB, Yampa/White River Roundtable including the Rio Blanco Water Conservancy, District, Ute Indian Tribe, Bureau of Land Management, Colorado River Water Conservation District, Uintah Water Conservancy District, Price Water Pumping Inc., Red Leaf Resources, Inc., Deseret Generation & Transmission Co-Operative, ENFIT, R.N. Industries, Target Trucking, Inc., State of Utah Board of Water Resources, Paraho Development Corporation, Frederick H. Larson.
- b. Select a modeling approach (e.g. StateMod or historic USGS daily data) to evaluate effects of future water demands on White River hydrology and the draft endangered fish flow recommendations. Work with a technical consultant to conduct scenario analysis.
- c. Develop flow recommendations for inclusion in the Water Management Plan considering existing hydrology/geomorphology, future depletions, earlier draft flow recommendations, and current biological/geomorphological data
- d. Work with the USFWS – Ecological Services (representatives from the Utah Field Office and the Western Colorado Area Office) to identify recovery actions needed to offset depletion effects to the endangered fish resulting from historical and future water demand.
- e. Concurrently finalize a White River Management Plan that includes: a future depletion scenario; endangered fish flow recommendations; recovery actions to be implemented by the Recovery Program; and a draft cooperative agreement with input by the public and interested / affected parties.
- f. Adopt a final White River Management Plan and complete NEPA compliance on the Plan and cooperative agreement.
- g. Initiate the White River Management Plan via signing of a cooperative agreement (or a Memorandum of Agreement / Understanding). Possible signatories: USFWS, state water management agencies, and CRWCD.
- h. Public outreach to water users will occur throughout the development of this Management Plan.

End Products: A final White River Management Plan with flow recommendations and NEPA compliance, implemented via a signed cooperative or other agreement.

V. Study Area:

The White River is a major tributary to the Green River, second only to the Yampa River in annual discharge under current conditions of development. It is more than 200 miles long and drains nearly 5,120 square miles in western Colorado and eastern Utah, merging with the Green River in northeastern Utah approximately 98 river miles downstream from the Yampa River confluence, and two miles downstream from the Duchesne River confluence.

Most White River runoff derives from high elevation snow accumulation and melt. Under current conditions, average runoff in the White River is about 508,000 acre-feet annually, based on measurements at the U.S. Geological Survey (USGS) gages near Watson, Utah (#09306500) and near the Colorado State Line (#09306395) from 1975 to 2015. Median flows vary from around 350 cubic feet per second (cfs) in late summer to well over 3,000 cfs during the peak of spring snowmelt runoff. The White River, over the period identified above, contributed on average about 13% of the total annual flow in the lower Green River as measured at the USGS gage at Green River, Utah (#09315000).

The hydrology of the White River is affected by various water diversions and uses within the river basin, and by one substantial mainstem impoundment, Taylor Draw Dam, near Rangely, Colorado at River Mile 103. However, compared to most other major rivers in the upper Colorado River system, the hydrology of the White River remains relatively unaltered. Agricultural water use is the single largest consumptive use in the basin. Recent estimates indicate approximately 26,000 to 28,000 irrigated acres in the basin in Colorado, with a corresponding average consumptive annual irrigation water requirement between 32,634 and 45,740 acre-feet (CWCB 2015; AMEC and Hydros, 2015). Almost all of this irrigation is provided by surface water; groundwater pumping in the basin is relatively minor.

VI. Study Methods/Approach:

A White River Planning Team has been formed, comprised of a water user’s representative, the Ute Indian Tribe, Rio Blanco Water Conservancy District, the Colorado Water Conservation Board, Utah Water Resources, The Nature Conservancy, and the Program Director’s Office, to assist with the development of this Management Plan. The Program Director’s Office along with Planning Team and the interests they represent will oversee the development of the Management Plan, which requires contracting technical expertise to assist with the following: a) model proposed future water development scenarios to understand effects on White River hydrology and the Recovery Program’s draft endangered fish flow recommendations; b) assist with scheduling, facilitating, summarizing Work Group and public outreach meetings; c) drafting and revising (as needed) a Management Plan; and d) assist with NEPA compliance.

VII. Task Description and Schedule:

Draft Schedule	Task	Responsibility
Oct 2019	Hire consultant	CWCB in consultation with PDO and Planning Team
Oct 2019	Agree on current and future water demand scenario to be incorporated into White River Management Plan	PDO working with White River Planning Team and other basin interests
Nov 2019	Finalize provisional flow recommendations	PDO and Recovery Program committees
Nov 2019 – Feb 2020	Evaluate impacts of water demand scenario on provisional recommended flows and endangered species	Consultant working with White River Planning Team

Dec 2019 – Apr 2020	Identify, evaluate, and recommend management actions to offset depletion impacts	Consultant working with White River Planning Team
Apr 2020	Distribute draft Management Plan including a suite of recovery actions needed to offset depletion impacts	Consultant
Apr – Jun 2020	Conduct meetings with public, Yampa/White/Green Basin Roundtable, Utah, Ute Tribe, etc. to communicate content of the draft Management Plan; document results of public input.	Consultant
Jul – Oct 2020	Based on public input, revise draft Plan for review by CWCB, PDO, Planning Team, and WRWG; following review, finalize plan.	Consultant
Aug – Nov 2020	Develop a draft cooperative agreement (CA) framework. Initiate NEPA compliance. USFWS drafts PBO.	Consultant
Apr 2021	Complete compilation of information required for NEPA compliance.	Consultant
Jul 2021	Complete PBO	U.S. Fish and Wildlife Service

VIII. Summary of SOW budget:

Tasks: During Fall 2019 a consultant will be contracted to; a) model proposed future water development scenarios using the Recovery Program’s draft endangered fish flow recommendations as a measure of depletion effects; b) assist with scheduling, facilitation, summarizing Work Group and public outreach meetings; c) drafting and revising (as needed) a Management Plan; and d) assist with NEPA compliance.

FY 2020 All Tasks Total \$ 85,000 from CWCB (not a Program expenditure) plus in-kind services from partners

FY 2021 All Tasks Total \$ 115,000 from CWCB (not a Program expenditure) plus in-kind service from partners

IX. Reviewers: Tom Chart, USFWS; Jojo La, CWCB.

X. References:

AMEC and Hydros Consulting. 2015. Yampa/White/Green Basin Implementation Plan. Prepared for Yampa/White/Green Basin Roundtable.

Anderson, D.M., T.W. Econopouly, J. Mohrman, T. Jones, M.J. Breen, and T.E. Chart. 2018. Draft review of fish studies and flow recommendations for endangered fishes of the White River, Colorado and Utah. 10 September 2018 Draft.

Bestgen K., Webber A., Jones T., 2012. Annual Report #22f Interagency standardized monitoring program (ISMP) assessment of endangered fish reproduction in relation to Flaming Gorge operations in the middle Green and lower Yampa Rivers: assessment of Colorado pikeminnow and razorback sucker larvae

Colorado Water Conservation Board (CWCB). 2015. Historical Crop Consumptive Use Analysis, White River Basin. Final Report.

Haines B., Irving, D., and T. Modde. 2004. Base flow recommendations for endangered fishes in the White River, Colorado and Utah, 1995-1996. *in* T. Modde (editor). Flow recommendations for the White River, Utah-Colorado. Draft report to Upper Colorado River Endangered Fish Recovery Program, Denver.

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Tyus, H.M. and J.F. Saunders. 2001. An evaluation of the role of tributary streams for recovery of endangered fishes in the Upper Colorado River Basin, with recommendations for future recovery actions. Final Report to Upper Colorado River Endangered Fish Recovery Program; Project No. 101. Univ. of Colorado, Boulder.