

**RECOVERY PROGRAM**  
**FY 2016-2017 SCOPE OF WORK for:**  
White River Management Plan

Recovery Program Project Number: FR-168

Reclamation Agreement number \_\_\_\_

Reclamation Agreement term \_\_\_\_

Note: Recovery Program FY16-17 scopes of work are drafted in May 2015. 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.

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**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. The State of Colorado's prediction of a current 10% depletion is based on the StateMod percentage from predicted diversions versus predicted natural flows from 1975 to 2006 on the White River near Colorado/Utah Stateline (Alvarado, R. 2013). In Utah there are currently 69,082 acft of water rights from the White River and its tributaries with a potential depletion of 53,628 acft, which is approximately 3% of average annual flows at Watson Utah gage (Adkins, G. 2012). 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 was 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 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)

A base flow recommendation for endangered fish in the White River was approved by the Recovery Program in 2004 (Irving et al. 2004). Although not approved as final, a channel maintenance flow recommendation (i.e., spring peak flows) was also drafted for the Recovery Program based on geomorphic analyses (Schmidt and Orchard 2002). Those preliminary, seasonal flow recommendations combined with new biological information will be considered in developing the Recovery Program's year-round flow recommendation for endangered fish in the White River as part of development of the Management Plan for the White River.

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. This scope of work (SOW) describes the steps needed to develop a management plan, which will recognize historical and some level of future water development in the White River drainage and recovery actions (e.g. implementation of flow recommendations for the endangered fish, etc.) needed to offset depletion effects. The resultant management plan will then serve as the basis for a White River 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; 3) develops flow recommendations for the White River and 4) identifies recovery actions needed to offset depletion effects. A federal-state cooperative or other agreement to implement the resultant management plan will constitute the 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, ENEFIT, 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 the second largest tributary to the Green River. It is approximately 160 miles long, draining approximately 5,120 square miles in western Colorado and eastern Utah. Median flows at the Watson gage vary from 385 cfs in late summer to well over 3,800 cfs during the spring snowmelt runoff. Most runoff is attributable to snowmelt from higher elevation areas. Average annual streamflow in the White River is 498,166 acre-feet (acft), based on operation of a USGS gage at Watson, Utah from 1924 - 2010 (missing 1980 – 1985). Taylor Draw Dam (RM 104), a barrier to upstream fish movement, is a run-of-the-river project and passes large spring peaks, so that the river retains relatively unaltered runoff characteristics.

## **VI. Study Methods/Approach:**

A White River Work Group comprised of Water Users (Ute Indian Tribe, Recovery Program, water user representative, Colorado Water Conservation Board, Utah Water Resources); environmental groups (The Nature Conservancy, Western Resource advocates), the USFWS, and the Program Director's Office, will be formed to assist with the development of this Management Plan. The Program Director's will oversee the development of the Management Plan, which will require 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:**

<b>Schedule</b>	<b>Draft changes Task</b>	<b>Responsibility</b>
Summer 2013	Obtain Recovery Program approval for Scope of Work	PDO
Fall 2013	Public meetings with stakeholders - meet with the White River Roundtable/ Utah water users/Tribe to communicate proposed approach, i.e., contents of this Recovery Program approved SOW; seek initial input	PDO
	Hire consultant; conduct 1st workshop on StateMod and initial work plan	Work Group - CWCB leads
Fall thru Winter 2013 / 2015	Develop future water demand scenarios	CWCB and Utah Division Water Rights lead activity with the Work Group
	Develop White River flow recommendations to strengthen biological and hydrologic links, including methods for evaluating and revising flow recommendations in the future	PDO, USFWS, and Utah Division of Wildlife
	Select tools and alternatives for scenario analysis with draft flow recommendations	Consultant / Work Group
	Conduct scenario analysis	Consultant
Spring / Summer 2015	Review scenario analysis with future water demands and flow recommendations	Work Group
	Draft Management Plan including a suite of recovery actions needed to offset depletion effects	Consultant / PDO
	Complete review of flow recommendations under Recovery Program procedures	PDO
Winter2016	Public meetings with stakeholders - meet with the White River Roundtable / Utah/Tribe to communicate content of the final Management Plan	PDO and work group
Summer2016	Concurrently finalize Management Plan and flow recommendations	Recovery Program
Fall thru Winter 2016 / 2017	Evaluate and recommend methods for legal flow protection and the time frame for legal protection	CWCB and Utah Division Water Rights will lead activity with Work Group
Winter 2017 / 2018	Develop cooperative agreement and initiate NEPA / ESA compliance, USFWS drafts PBO concurrently	PDO / Consultant / USFWS
Spring 2019	New Contract? Complete NEPA, USFWS completes PBO, sign Cooperative Agreement	PDO / Consultant / USFWS

**VIII. Summary of SOW budget:**

Task 1 During Summer/Fall 2015 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.

FY2015 All Tasks      Total      PDO and in kind service with partners

FY2016 and 2017 All Tasks      Total      \$ 250,000 plus in kind service with partners

**IX. Reviewers:** James Greer, Utah Water Resources; Ted Kowalski, Andy Moore, Ray Alvarado, Michelle Garrison, CWCB; Dan Luecke, Environmental Representative, Recovery Implementation Committee; Tom Pitts, Water Users Representative; Robert Wiginton, John Sanderson, The Nature Conservancy; Tom Chart, Jana Mohrman, Recovery Program

**X. References:**

Adkins, G., 2012. Table emailed of Utah's depletions on the White River

Alvarado, R. Table emailed of Colorado's depletions on the White River

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

CWCB. 2010. State of Colorado 2050 Municipal & Industrial Water Use Projections (M&I), which was folded into the final report for all sectors: CWCB (January 2011) Colorado's Water Supply Future, Statewide Water Supply Initiative 2010 (SWSI II).

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.

Martinez, P.J. et al. 1986. White River Taylor Draw Project pre-and postimpoundment fish community investigations. Colorado Division of Wildlife, Fort Collins. 121 pp.

Schmidt, J.C. and K.L. Orchard. 2002. Geomorphic analysis in support of a channel maintenance flow recommendation for the White River near Watson, Utah. *in* T. Modde (editor). Flow recommendations for the White River, Utah-Colorado. Draft report to Upper Colorado River Endangered Fish Recovery Program, Denver.

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.

Yampa/White Basin Roundtable. 2010. Agricultural Water Needs Study (Ag Needs), which keys off a mid-term, mid-production energy development scenario for the White River sub-basin from an earlier study (Energy I).

Yampa/White Basin Roundtable. 2011. Energy Development Water Needs Assessment Phase II (Energy II)