

**RECOVERY PROGRAM**  
**FY 2020-2021 SCOPE OF WORK:**  
*Coordinated Reservoir Operations and  
Public Involvement*

Recovery Program Project Number: C-14 and PIP 12C

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

Lead agencies:

Colorado Water Conservation Board  
U.S. Bureau of Reclamation, Eastern Colorado Area Office

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Date Last Modified: 7/15/2019 11:22:00 AM

Category:

- Ongoing project  
 Ongoing-revised project  
 Requested new project  
 Unsolicited proposal

Expected Funding Source:

- Annual funds  
 Capital funds  
 Other [explain]

- I. Title of Proposal: Coordinated Reservoir Operations and Public Involvement
- II. Relationship to RIPRAP:  
Colorado Mainstem Action Plan I.A.5.g.(2): Coordinated Reservoir Operations: If available, deliver additional peak flows, evaluate process and hydrology, and provide annual report.

### III. Study Background/Rationale and Hypotheses:

This project involves voluntary operational coordination of selected reservoirs and transmountain diversion projects in the Colorado River Basin upstream from the confluence of the Colorado and Gunnison Rivers. The goal is to enhance spring peak flows to improve endangered fish species habitat in the 15-Mile Reach of the Colorado River without diminishing reservoir yields or affecting the timing of reservoir filling.

Over the years, reservoirs and transmountain diversion projects that have participated in the operation have included the Colorado-Big Thompson Project, Granby Reservoir, Green Mountain Reservoir, the Fryingpan-Arkansas Project, the Homestake Project, the Moffat Tunnel Project, Ruedi Reservoir, Williams Fork Reservoir, Willow Creek Reservoir, Windy Gap Project and Wolford Mountain Reservoir. Participating water management agencies include Bureau of Reclamation, City of Aurora, Colorado River Conservation District, Colorado Spring Utilities, Denver Water Board, Northern Water Conservancy District, and Northern Water Municipal Subdistrict.

Coordinated Reservoir Operations (CROS) occur in years when runoff conditions allow participating reservoirs to contribute to significant peak flows in the 15-Mile Reach without affecting reservoir yields or aggravating flood concerns. The intent of CROS is to coordinate bypasses of inflow to enhance the natural peak flows on the Colorado for 10 days to two weeks. This typically occurs during the last week of May and the first week of June.

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

The Colorado Water Conservation Board (CWCB), in coordination with the U.S. Bureau of Reclamation and Upper Colorado River Endangered Fish Recovery Program, provides management support for coordinating Coordinated Reservoir Operations. CWCB coordination efforts includes coordinating weekly phone calls with participants, working with the Colorado Basin River Forecast Center, National Weather Service, and U.S. Bureau of Reclamation to assess hydrology conditions, and summarizing and reporting on CROS releases.

The goal is to enhance spring peak flows to improve endangered fish species habitat in the 15-Mile Reach of the Colorado River without diminishing reservoir yields or affecting the timing of reservoir filling. The objective is for CROS to occur in years when runoff conditions allow participating reservoirs to contribute without affecting its yield. The intent of CROS is to attempt to coordinate releases of inflow to enhance the natural peak flows on the Colorado for 10 days to two weeks. The end product is a summary of CROS releases.

### V. Study Area:

The Upper Colorado River basin in Colorado upstream from the confluence of the Colorado and Gunnison Rivers.

### VI. Study Methods/Approach:

See task descriptions below.

VII. Task Description and Schedule:

Tasks: The CROS team (consisting of CWCB, Bureau of Reclamation, U.S. Fish and Wildlife Service, various reservoir and water project operators identified above, and supporting entities such as the National Weather Service and Colorado Division of Water Resources) will perform the following activities and coordination tasks:

- a. March/April—The CROS team discusses and characterizes type of runoff year based upon the forecasts from the Colorado Basin River Forecast Center, National Weather Service, and U.S. Bureau of Reclamation, and other sources. Characterization of the runoff year determines the 15-Mile Reach flow recommendations. The CROS team also determines an approximate start date and duration time for the voluntary bypassing of inflows to enhance the peaks.
- b. Early April—Reservoir owners/operators prepare annual operating plans for normal operations and, if feasible, peak enhancement operations.
- c. May-June—The participating entities monitor runoff to predict more accurately the type of year and each participant’s likely ability to participate in bypasses. The U.S. Fish and Wildlife Service, Colorado Division of Water Resources Division 5, and participants determine when it is most appropriate to begin bypasses of inflow to enhance the peak in the 15-Mile Reach. Parties jointly agree when to initiate the voluntary bypass of inflows to enhance peaks as necessary and as they are able to. During the period of time that CROS occur, the public will be informed through news releases. The Colorado Division of Water Resources Division 5 conducts an accounting of releases and provides a record of all water bypassed to enhance the peak during the specified timeframe. The Recovery Program monitors the effects of peak flows on endangered fish and critical habitat.
- d. January—The CWCB prepares a report in coordination with operators, Colorado Division of Water Resources Division 5, and the Recovery Program.

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

Deliverables:

All deliverables are on an annual as described above.

FY 2020

<u>Recovery Program</u>	<u>CO State In-Kind</u>
\$5,000	\$12,000
<b>Total: \$17,000*</b>	

\*The Recovery Program funds this project only in years that coordination occurs. Costs will be billed on the actual amount spent during the coordination process as documented by the U.S. Bureau of Reclamation.

FY 2021

<u>Recovery Program</u>	<u>CO State In-Kind</u>
\$5,000	\$12,195
<b>Total: \$17,195*</b>	

\*The Recovery Program funds this project only in years that coordination occurs. Costs will be billed on the actual amount spent during the coordination process as documented by the U.S. Bureau of Reclamation. A 2% consumer price index increase was assumed from FY2020.

IX. Budget Summary:

Estimated costs for years in which CROS is implemented:

	<u>Recovery Program*</u>	<u>CO State In-Kind**</u>
2020:	\$5,000	\$12,000
2021:	\$5,000	\$12,195
2022:	\$5,000	\$12,439
2023:	\$5,000	\$12,688
2024:	\$5,000	\$12,942

\* This full expense would not be incurred in years of no CROS operations

\*\* A 2% consumer price index cost increase is assumed for each year after 2020.

X. Reviewers:

Jojo La and Michelle Garrison (Colorado Water Conservation Board), Victor Lee (Bureau of Reclamation), and Don Anderson (Recovery Program).

XI. Reference:

Recovery Implementation Program Section 7 Consultation, Sufficient Progress, and Historic Projects Agreement, October 15, 1993 (Revised March 8, 2000) and Recovery Implementation Program Recovery Action Plan (RIPRAP), May 4, 2019.

Final Programmatic Biological Opinion for Bureau of Reclamation's Operations and Depletions, Other Depletions, and Funding and Implementation of Recovery Program Actions in the Upper Colorado River above the Confluence with the Gunnison River December 1999.

Coordinated Reservoir Operations Implementation Plan, Upper Colorado River Endangered Fish Recovery Program, 10-page document approved by Program Management Committee on February 28, 2006.