

# UPPER COLORADO RIVER ENDANGERED FISH RECOVERY PROGRAM

FY 2022 ANNUAL REPORT

PROJECT: 71

## **Project Title**

Colorado River Decision Support System (CRDSS)

## **Bureau of Reclamation Agreement Number:**

N/A

## **Project/Grant Period:**

Start date: 1/1/1993

End date: Ongoing

Reporting period end date: 9/30/2022

Is this the final report? Yes \_\_\_\_\_ No X

## **Principal Investigator:**

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## **Abstract:**

The CRDSS supports better decision making with respect to the utilization of Colorado River water resources. It provides computer databases and tools to make informed and timely decisions regarding the use and operation of Colorado's water resources in the Upper Colorado River Basin. The CRDSS operates in accordance with existing compacts and state laws governing the administration of water and water rights, and will allow planning for the optimal use and development of Colorado's water resources to occur.

In relation to the Recovery Program, CRDSS is being used to evaluate the physical and legal water availability at different locations along a stream and to determine the amount of water available for instream flow appropriations. It can also provide information to help determine the impacts of endangered fish flows on Colorado's ability to develop its full compact apportionment.

The development of CDSS was initiated in 1993. A funded maintenance program has been established to provide ongoing maintenance and data updates. Some of the funding and tasks for the study directly benefited the Recovery Program, as mentioned below.

## **Study Schedule:**

1993-Ongoing

## **Relationship to RIPRAP:**

- Assess legal and physical availability of water and compact considerations associated with the protection of instream flow water rights for endangered fish and their critical habitat in the Little

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Snake River, the Yampa River above and below the Little Snake River, the White River, the Colorado River (mainstem), and the Gunnison River.

- Provide hydrology support to develop and evaluate flow augmentation alternatives for the Yampa and Little Snake Rivers.
- Estimate current and projected future depletions in the Colorado River mainstem above the 15-Mile Reach and Yampa Rivers in Colorado for their respective Programmatic Biological Opinions (PBOs).

RIPRAP Activity Numbers:

Yampa and Little Snake Rivers: I.B.3, I.B.4., I.C.3., I.D.2.

White River: I.A.1., I.B.3, I.C., I.D., I.E.1.

Colorado mainstem: I.A.3., I.A.4., I.B.3

Gunnison River: I.B., I.C.

### **Accomplishment of FY 2022 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:**

- CWCB prepared 15-Mile Reach and Yampa PBO depletion accounting reports for the 2016-2020 period pursuant to the respective PBOs.
- StateCU and StateMod models on the west slope of Colorado are having their period of record extended through 2020. Work began on this in FY 2021 and is ongoing.
- HydroBase was updated with diversion records in FY 2022 which will be used in upcoming depletion accounting.
- An update to Colorado's Water Plan was published which relies on CRDSS StateMod and StateCU models of the west slope for basinwide and stateside planning.
- CRDSS datasets in all West Slope subbasins were utilized to verify the Bureau of Reclamation's Colorado River Simulation System (CRSS) RiverWare model projection of future depletions in Colorado.
- Colorado used the CRDSS datasets to verify the UCRC Agricultural CU Study Phase III work. A new methodology was selected based on this work to verify agricultural depletions in the Upper Basin for interstate purposes.
- The StateMod model of the White River Basin continued to be used to develop climate change analysis and depletion modeling for the White River Management Plan (WRMP) modeling and planning process.

### **Additional noteworthy observations:**

N/A

### **Recommendations:**

- CWCB will continue providing funding and staff for use and maintenance of the CRDSS.

### **Project Status:**

On track and ongoing.

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### **FY 2022 Budget Status**

Funds Provided: \$120,260.00 State of Colorado funding + in-kind services

Funds Expended: \$120,260.00

Difference: \$0

Percent of the FY 2022 work completed, and projected costs to complete: 100% and 0%

Recovery Program funds spent for publication charges: \$0

### **Status of Data Submission**

CRDSS models and data can be viewed online at [colorado.gov/cdss](http://colorado.gov/cdss).

### **Signed:**

Brian Macpherson, PE

Principal Investigator

11/30/2022