

UPPER COLORADO RIVER ENDANGERED FISH RECOVERY PROGRAM

FY 2024-25 SCOPE OF WORK

PROJECT: 71

Project Title

Colorado River Decision Support System (CRDSS)

Bureau of Reclamation Agreement Number:

NA

Reclamation Agreement Term

NA

Note: Recovery Program FY22-23 scopes of work are drafted in May 2021. 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:

Colorado Water Conservation Board

Principal Investigators:

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Category:

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

Expected Funding Source:

- Annual funds
- Capital funds
- Other *[in-kind]*

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 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 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.

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Colorado mainstem: I.A.3., I.A.4., I.B.3, I.C.2
Gunnison River: I.B., I.C.

Study Background/Rationale and Hypotheses:

The Colorado River Decision Support Systems (CRDSS) supports better decision making with respect to the utilization of Colorado River water resources. The CRDSS provides computer databases and tools to make informed and timely decisions regarding the use and operation of Colorado's water resources with the Upper Colorado River Basin being one component of CRDSS. The CRDSS operates in accordance with existing compacts and state laws governing the administration of water and water rights. The CRDSS allows planning for the optimal use and development of Colorado's water resources to occur.

In relation to the Recovery Program, the CRDSS is used to provide stream depletion accounting in accordance with the 15-Mile Reach and Yampa Programmatic Biological Opinions. CDSS is also 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 and to evaluate the impact of future water use on streamflow in designated critical habitat through the Stream Management Plan process.

Study Goals, Objectives, End Product(s):

The study goals and objectives of CRDSS are as follows:

- A. To support interstate compact analysis, including determination of water availability for further development and the optimization of Colorado's Compact apportionment.
- B. To support water resources management within Colorado, including the use of basinwide models, depletion accounting for the 15-Mile Reach and Yampa Programmatic Biological Opinions, the evaluation of existing and future instream flow appropriations, creation of Stream Management Plans, and provision of water use data as necessary for RIPRAP.

Study Area:

State of Colorado, Upper Colorado River Basin

Study Methods/Approach:

Work on CRDSS is conducted through in-kind contributions by Colorado Water Conservation Board (CWCB) and Colorado Division of Water Resources (DWR) staff as well as through CWCB grant programs to outside consultants. In FY 2024, the CWCB and DWR will have new FTE added to their programs specifically to augment Colorado River work and further develop the CRDSS. Anticipated staff that will develop the CRDSS include engineers, GIS specialists, and hydrographers. Grant applicants may receive funds from the Severance Tax Operational Fund that benefits the CRDSS program as well. See task descriptions below.

Task Description, Deliverables and Schedule:

1. Perform siting investigations and installation of infrastructure, pursuant to the Bipartisan

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Infrastructure Law (BIL) funding from the US Bureau of Reclamation. DWR Hydrography program incorporation of new stream gages.

2. Use of StateMod models to update Colorado River Simulation System (CRSS) demands with new UCRC depletion demand schedule.
3. Extend time horizon of West Slope StateMod models through current period.
4. Improvement of irrigated lands West Slope GIS layers with respect to structure association and acreage update
5. Updates of Statewide gridded evapotranspiration (ET) dataset
6. Rewrite of StateCU GUI in new software language
7. Convert all West Slope StateMod models from monthly to daily timestep
8. Develop GIS coverages of west slope agriculture for 2023 and 2024 snapshot years, as well as back in time between previous snapshot years ending in 0 and 5 (e.g. 2010, 2015).

Task	2024	2025	2026	2027	2028
1	X	X	X	X	X
2	X				
3	X	X			
4		X	X		
5		X	X		
6			X	X	
7			X	X	X
8				X	X

Budget Summary:

FY Year	CWCB Contribution
2024	\$123,857.52
2025	\$126,422.80
2026	\$128,842.51
2027	\$131,527.18
2028	\$134,435.70
Total	\$645,085.71

Reviewers:

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References:

- U.S. Fish & Wildlife Service, 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.
- U.S. Fish and Wildlife Service, Final Programmatic Biological Opinion on the *Management Plan for Endangered Fishes in the Yampa River Basin*, January 2005.

SUMMARY OF PROPOSED COSTS

Name of Servicing Agency:	Colorado Water Conservation Board (CWCB)
Project Name:	Colorado River Decision Support System (CRDSS)

	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5		TOTAL
	10/1/2023		10/1/2024		10/1/2025		10/1/2026		10/1/2027		
	Through		Through		Through		Through		Through		
Enter the BEGINNING dates for each year ----->	9/30/2024		9/30/2025		9/30/2026		9/30/2027		9/30/2028		
Enter the ENDING dates for each year ----->	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL					
DIRECT LABOR AND FRINGE BENEFIT COSTS:											
Direct Labor - Hourly	\$ 50,857.52	\$ 83,422.80	\$ 63,842.51	\$ 71,527.18	\$ 74,435.70	\$ 344,085.71					
Fringe Benefits - Hourly	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
Subtotal of Direct Labor & Fringe Benefits:	\$ 50,857.52	\$ 83,422.80	\$ 63,842.51	\$ 71,527.18	\$ 74,435.70	\$ 344,085.71					
OTHER DIRECT COSTS:											
Materials and Supplies	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
Travel Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
Contractors	\$ 73,000.00	\$ 43,000.00	\$ 65,000.00	\$ 60,000.00	\$ 60,000.00	\$ 301,000.00					
Subtotal of Other Direct Costs:	\$ 73,000.00	\$ 43,000.00	\$ 65,000.00	\$ 60,000.00	\$ 60,000.00	\$ 301,000.00					
INDIRECT/OVERHEAD COSTS:											
Subtotal of Labor and Other Direct Costs:	\$ 123,857.52	\$ 126,422.80	\$ 128,842.51	\$ 131,527.18	\$ 134,435.70	\$ 645,085.71					
Total dollars exempt from indirect/overhead base:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
<Enter Description of Indirect/OH Cost #1>	3.00%	\$ -	3.00%	\$ -	3.00%	\$ -	3.00%	\$ -	3.00%	\$ -	\$ -
Total dollars exempt from indirect/overhead base:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
<Enter Description of Indirect/OH Cost #2>	3.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	0.00%	\$ -	\$ -
Subtotal of Indirect/Overhead Costs:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -					
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL					
CWCB FUNDED GRAND TOTAL:	\$ 123,857.52	\$ 126,422.80	\$ 128,842.51	\$ 131,527.18	\$ 134,435.70	\$ 645,085.71					