

**COLORADO RIVER RECOVERY PROGRAM  
FY-2010/11 PROPOSED SCOPE OF WORK for:  
Colorado Decision Support System (CDSS)**

**Project # : 71**

**Lead Agency:** Colorado Water Conservation Board  
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**Category**

Ongoing project  
 Ongoing-revised project  
 Requested new start

**Expected Funding Source**

Annual funds  
 Capital funds  
 Other (cash)

**I. Title of Proposal:**

Colorado River Decision Support System (CRDSS)

**II. Relationship to Recovery Program:**

Assess legal and physical availability of water and compact considerations for protection of instream flow water rights for 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. Provide a depletion accounting report for the 15-Mile Reach of the upper Colorado River every 5 years, as described in the 15-Mile Reach PBO.

RIPRAP Activity Numbers:

Yampa and Little Snake Rivers: I.A.1.d., I.B.3., I.C.3., I.D.2.

White River: I.C., I.D.

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

Gunnison River: I.B.

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

The CDSS is intended to support better decision making with respect to the utilization of Colorado River water resources. The CDSS 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 CDSS. The CDSS operates in accordance with existing compacts and state laws governing the administration of water and water rights. The CDSS allows planning for the optimal use and development of Colorado's water resources to occur.

In relation to the Recovery Program, CDSS 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 and to evaluate the impact of future water use on streamflow in designated critical habitat.

CDSS is also used to provide stream depletion accounting in accordance with the 15-Mile Reach PBO.

### **IV. Study Goals, Objectives, End Product:**

The study goals and objectives of CDSS 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 basin-wide models, the evaluation of existing and future instream flow appropriations, and provision of water use data as necessary for RIPRAP.

### **V. Study Area:** State of Colorado, Upper Colorado River Basin

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

The CWCB has limited CDSS maintenance funds available; these funds have been allocated to updates and improvements that will benefit the Recovery Program. However, the CWCB approved funding for the Colorado Water Availability Study (CRWAS) Phase 1. This study will look at water availability under "current" conditions under different hydrologies. Money allocated for CRWAS Phase 1 is \$881,000. Phase 2 of the study will look at using the "new" hydrology under estimated future water use, determined from the Interbasin Compact Committee (IBCC) efforts.

**VII. Task Description and Schedule:**

The CRWAS will be look at modeling refinements in basin, in terms of river operations and potentially recalibration in some areas. The major effort will be the implementation of different hydrologies in the CDSS surface water models. Detailed task description in section VIII below.

**VIII. FY-2010 Work:**

The work performed in FY-2010 will focus on updates of irrigated acreage data for all basins in the CDSS (Yampa, White, Colorado, Gunnison, San Juan/Dolores & Rio Grande) and refining some river operations for major water users. The main tasks for Phase 1 will be generating new natural flows from existing paleo-hydrology work and the creation of new hydrology taking into account climate change. The work began in FY-2009 and estimated to be completed in FY-2010.

**FY-2011 Work:**

FY-2011 Work will focus on incorporating the various hydrologies generated in Phase 1 of CRWAS and implement them with new estimated future water use.

The final FY-2011 budget has yet to be determined by the Colorado Legislature.

**IX. Budget Summary:**

CWCB Cash Contribution

**FY2010: \$881,000**

**FY-2011: Approximately \$1,000,000.**

The actual amount will be determined by the Colorado Legislature in 2010.

**X. Reviewer(s):** Not applicable.

**XI. References:** Not applicable.