

Exhibit A
Statement of Work
Date: Feb. 10, 2016

WATER ACTIVITY NAME –Joint West Slope Roundtable Technical Study: The Colorado River Development and Curtailment Risk Study

GRANT RECIPIENT –Colorado River Water Conservation District

FUNDING SOURCE - \$8K from each WS roundtable - WSRA – \$10K each from CRWCD and SWCD

INTRODUCTION AND BACKGROUND

Provide a brief description of the project. (Please limit to **no more than 200 words**; this will be used to inform reviewers and the public about your proposal)

At the December 18th 2014 meeting of the four West Slope Basin Roundtables, attendees cited the need for more technical data and modeling so that the four roundtables could better understand and discuss issues surrounding future Colorado River development, the risk to existing water users and implementation of the framework principles included in the Colorado Water Plan. The proposed study is intended to begin the technical investigation process so that the roundtables will have a common technical platform.

The intent of this study is to supplement other studies and work that are underway or have been completed such as the water bank workgroup effort, the System Conservation Agreement pilot projects and the development of an Upper Basin contingency plan.

Given the complexities of the issues involved, this work will likely be the first step in a multi-year, multi-study process.

OBJECTIVES

List the objectives of the project

The study will address two major questions:

1. What is the likelihood that Lake Powell will drop below elevation 3525' under a range of selected water supply and water demand scenarios?
2. Evaluate how often and by how much water users of Colorado River water in Colorado would have to reduce demands/cut consumptive uses to maintain Lake Powell elevation levels above 3525'. Provide an indication and evaluation of the "risk" to existing uses at different levels of future demand levels.

The results will be shared with the sponsoring roundtables and other interested roundtables across the state via workshop/webinar in order to facilitate discussion of implications and lessons for implementation of the seven point framework. Participants will be asked to contribute to

recommendations for further studies and Hydros will develop recommendations for modeling improvements for future studies.

TASKS

Provide a detailed description of each task using the following format

TASK 1 – Kickoff Meetings and Workshop

Description of Task

Hold a technical workshop with representatives of the sponsoring and other interested Basin Roundtables on how CRSS operates and its limitations. Discuss and review assumptions and initial conditions for the baseline runs, including hydrology, demands, inclusion of contingency planning, etc. Discuss scenario development, expected outcomes from model analysis, and participate in meetings with individual roundtables, CWCB, CRWCD, SWCD and other interested parties as requested.

Method/Procedure

Organization of meetings will be managed by CRWCD (Eric Kuhn). Hydros Staff to provide background information, meeting content as dictated by agenda and timing.

Deliverable

Meeting notes, power point presentations as applicable.

TASK 2 – Baseline Condition Simulations

Description of Task

Based on preliminary conversations with participants, identify model assumptions for baseline runs. These runs will provide project participants with a foundational analysis of “current conditions” against which the impacts of various alternatives can be evaluated. Key assumptions for the baseline runs will include demand schedules, hydrologic periods of simulation, and assumptions regarding the availability and use of contingency planning actions (extended operations and currently implemented lower basin demand management). A set of 2-4 baseline simulations will be executed. Results of these simulations will be distributed to participants, with a workshop or webinar to discuss results.

Method/Procedure

Use CRSS to develop baseline simulations and perform analysis on results.

Deliverable

Spreadsheet analysis of outputs and memo / PowerPoint describing results. Meeting or webinar to discuss results. Model files to be archived for future comparisons.

TASK 3 –Identification and Analysis of Additional Scenarios

Description of Task

Based on results of Task 2 additional scenarios will be identified and analyzed. These scenarios may include modified demands, different hydrologic data, demand management schemes, modifications to extended operation rules for CRSP reservoirs, etc. The scenarios will be evaluated and compared to each other and to the original baseline runs. Analysis will include frequency and magnitude of required actions, and benefits to Colorado in terms of reduced risk and total consumptive use. Again, results will be presented to technical team, roundtables, CWCB, CRWCD, SWCD and other interested parties via workshop, webinar, or other meeting venues. We anticipate that multiple meetings may be necessary at this point to accommodate all participants.

The number of additional scenarios run under this task will depend on complexity of modeling runs and available budget. This task could involve multiple iterations of scenario development, analysis, and reporting.

Method/Procedure

Use CRSS or other models in conjunction to conduct the additional modeling requested by technical committee.

Deliverable

Modeling reports, power point presentations and model archive

REPORTING AND FINAL DELIVERABLE

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the statement of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

BUDGET

Provide a detailed budget by task including number of hours and rates for labor and unit costs for other direct costs (i.e. mileage, \$/unit of material for construction, etc.). A detailed and perfectly balanced budget that shows all costs is required for the State's contracting and purchase order processes. Sample budget tables are provided below. Please note that these budget tables are examples and will need to be adapted to fit each individual application. Tasks should correspond to the tasks described above.

Project Personnel:	Project Manager	Project Eng III	Project Eng II	Total Costs
Hourly Rate:	\$ 205	\$ 135	\$ 125	
Task 1 - (Kickoff Meetings/Scoping)	16	8	8	\$ 5,360
Task 2 – (Baseline Model Runs)	24	40	40	\$ 15,320
Task 3 – (Scenario Identification and Analysis)	40	80	80	\$ 29,000
Total Hours:	80	128	128	
Est Travel Costs				\$ 2,320
Cost:				\$ 52,000

SCHEDULE

Provide a project schedule including key milestones for each task and the completion dates or time period from the Notice to Proceed (NTP). This dating method allows flexibility in the event of potential delays from the procurement process. Sample schedules are provided below. Please note that these schedules are examples and will need to be adapted to fit each individual application.

Schedule

Task	Start Date	Finish Date
1	Upon NTP	NTP + 30 days
2	Upon NTP	NTP + 90 days
3	Following Completion of Baseline Runs and Meeting	NTP + 180 days (estimated July 2016)

NTP = Notice to Proceed

PAYMENT

Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.