

Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
March 16-17, 2015
Agenda Item 14(c)

Applicant & Fiscal Agent: Colorado River Water Conservation District

Water Activity Name: Colorado River Development and Curtailment Risk Study

Water Activity Purpose: Multipurpose

County: throughout Colorado Basin

Drainage Basin: Colorado

Water Source: Colorado River and tributaries

Amount Requested/Source of Funds: \$8,000 Colorado Basin Account
\$8,000 Gunnison Basin Account
\$8,000 Southwest Basin Account
\$8,000 Yampa/White Basin Account
\$32,000 Total Basin Account request

Matching Funds: Applicant Match: \$20,000 = 38.5% of the total project cost of \$52,000
(refer to *Funding Summary/Matching Funds* section below)

Staff Recommendation:

Staff recommends approval of up to \$8,000 from the Colorado Basin Account; \$8,000 from the Gunnison Basin Account; \$8,000 from the Southwest Basin Account; and \$8,000 from the Yampa/White Basin Account to help fund the project titled: Colorado River Development and Curtailment Risk Study.

Water Activity Summary: WSRA funds, if approved, will be expended to fund the Colorado River Development and Curtailment Risk Study. 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 identified in Colorado's Water Plan. Participants will be asked to contribute to recommendations for further studies and the consultant will develop recommendations for modeling improvements for future studies.

Discussion: 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.

The study meets several goals identified in the Basin Implementation Plans of the contributing roundtables, associated with mitigating risk to existing and future uses in these basins. Additionally, Colorado's Water Plan identifies several key actions in Chapters 8 and 9 related to maximization of the use of Colorado's compact entitlement, while actively avoiding compact curtailment. This study will inform roundtable discussion and understanding of potential concepts to advance these actions.

Issues/Additional Needs: No issues or additional needs have been identified.

Threshold and Evaluation Criteria: The application meets all four Threshold Criteria.

Tier 1-3 Evaluation Criteria: n/a

Funding Summary/Matching Funds:

<u>Funding Source</u>	<u>Cash</u>	<u>In-kind</u>	<u>Total</u>
CRWCD	\$10,000	\$0	\$10,000
SWCD	\$10,000	\$0	\$10,000
Subtotal Matching Funds	\$20,000	\$0	\$20,000
WSRA Colorado Basin Account	\$8,000	n/a	\$8,000
WSRA Gunnison Basin Account	\$8,000	n/a	\$8,000
WSRA Southwest Basin Account	\$8,000	n/a	\$8,000
WSRA Yampa/White Basin Account	\$8,000	n/a	\$8,000
Total Project Costs	\$52,000		\$52,000

CWCB Project Manager: Brent Newman

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 will help promote the development of a common technical platform. In accordance with the revised WSRA Criteria and Guidelines, staff would like to highlight additional reporting and final deliverable requirements. The specific requirements are provided below.

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 scope 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.

Engineering: All engineering work (as defined in the Engineers Practice Act (§12-25-102(10) C.R.S.)) performed under this grant shall be performed by or under the responsible charge of professional engineer licensed by the State of Colorado to practice Engineering.

THE COLORADO BASIN ROUNDTABLE
C/O P.O. BOX 1120
GLENWOOD SPRINGS, COLORADO
81602

Feb. 10, 2016

Craig Godbout
Colorado Water Conservation Board
Water Supply Planning Section
1313 Sherman Street
 [\(303\) 866-3441, ext 3210](tel:3038663441) (office)
 [\(970\) 218-9407](tel:9702189407) (cell)
craig.godbout@state.co.us

Dear Craig:

The Colorado Basin Roundtable voted unanimously on Jan. 25, 2016 to support the WSRA Basin grant for \$8,000 that will go toward the Colorado River District's application to conduct a Colorado River Development and Curtailment Risk Study. The other three West Slope Roundtable have each voted to add \$8,000 each. That makes a pool of \$32,000 to match \$10,000 contributions each by the Colorado River District and the Southwestern Water Conservation District (\$52,000 total budget).

This grant request finds its genesis in the December 2014 Four West Slope Basin Roundtable meeting at Ute Water in Grand Junction. There was a clear call to develop technical information to assist the four West Slope Basin Roundtables in their talks and negotiations regarding the West Slope's ability (and others' for that matter) to develop future water supplies.

This project advances priorities in our BIP as an understanding of river flows are central to ag sustainability, m&l development and environmental concerns.



Jim Pokrandt
Chair, Colorado Basin Roundtable

The Gunnison Basin Roundtable
501 Palmer Street
Delta, CO 81416

February 9, 2016

Mr. Craig Godbout
Water Supply Management Section
COLORADO WATER CONSERVATION BOARD
1313 Sherman St., Room 718
Denver, CO 80203

Re: WSRA Grant Request: Colorado River District – Colorado River Development and Curtailment Study

Dear Mr. Godbout:

This letter is presented to advise you that the grant application submitted by the CRWCD for \$8,000 from Basin Account funds from the Water Supply Reserve Account for the Colorado River Development and Curtailment Study was reviewed by the Gunnison Basin Roundtable and its Project Screening Committee and was approved by a unanimous vote of the Gunnison Basin Roundtable during our meeting on February 1, 2016.

This water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes. The requirements/language from the statute is provided in Part 3 of the Criteria and Guidelines.

This study will address the need for technical data so that the Four West Slope Roundtables – and all of Colorado - can better discuss issues surrounding future Colorado River development and the risk to current water users. The technical data gathered as a result of this study will be important to educating stakeholders on development and curtailment negotiations.

Sincerely,



Frank J. Kugel
Vice Chair

cc: Hugh Sanburg (e-mail)
Tom Alvey (e-mail)



COLORADO WATER CONSERVATION BOARD



WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

Today's Date:

Colorado River Development and Curtailment Risk Study

Name of Water Activity/Project

Colorado River Water Conservation District

Name of Applicant

Colorado - \$8,000
Gunnison - \$8,000
Southwest - \$8,000
Yampa/White - \$8,000

Amount from Statewide Account:

n/a

Amount from Basin Account(s):

\$32,000

Total WSRA Funds Requested:

\$32,000

Approving Basin Roundtable(s)

(If multiple basins specify amounts in parentheses.)

FEIN: 84-6000156 (contacting agent)

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Required Exhibits

- A. Statement of Work, Budget, and Schedule
- B. Project Map
- C. As Needed (i.e. letters of support, photos, maps, etc.)

Appendices – Reference Material

- 1. Program Information
- 2. Insurance Requirements
- 3. WSRA Standard Contract Information (Required for Projects Over \$100,000)
- 4. W-9 Form (Required for All Projects Prior to Contracting)

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Revised October 2013

Instructions

To receive funding from the Water Supply Reserve Account (WSRA), a proposed water activity must be approved by the local Basin Roundtable **AND** the Colorado Water Conservation Board (CWCB). The process for Basin Roundtable consideration and approval is outlined in materials in Appendix 1.

Once approved by the local Basin Roundtable, the applicant should submit this application **with a detailed statement of work including budget and schedule as Exhibit A** to CWCB staff by the application deadline.

WSRA applications are due with the roundtable letter of support 60 calendar days prior to the bi-monthly Board meeting at which it will be considered. Board meetings are held in January, March, May, July, September, and November. Meeting details, including scheduled dates, agendas, etc. are posted on the CWCB website at: <http://cwcb.state.co.us> Applications to the WSRA Basin Account are considered at every board meeting, while applications to the WSRA Statewide Account are only considered at the March and September board meetings.

When completing this application, the applicant should refer to the WSRA Criteria and Guidelines available at: <http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Documents/WSRACriteriaGuidelines.pdf>. In addition, the applicant should also refer to the [Supplemental Scoring Matrix](#) applied to Evaluation Criteria Tiers 1-3 for Statewide Account requests .

The application, statement of work, budget, and schedule **must be submitted in electronic format** (Microsoft Word or text-enabled PDF are preferred) and can be emailed or mailed on a disk to:

Craig Godbout - WSRA Application
Colorado Water Conservation Board
1313 Sherman St., Room 721
Denver, CO 80203
Craig.godbout@state.co.us

If you have questions or need additional assistance, please contact Craig Godbout at: 303-866-3441 x3210 or craig.godbout@state.co.us.

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Part I. - Description of the Applicant (Project Sponsor or Owner);

1.	Applicant Name(s):	Colorado River Water Conservation District		
	Mailing address:	POB 1120 Glenwood Springs, CO 81602		
	FEIN #:	84-6000156 (contacting agent)		
	Primary Contact:	Eric Kuhn	Position/Title:	General Manager
	Email:	ekuhn@crwcd.org		
	Phone Numbers:	Cell: 970-379-7314	Office:	970-945-8522
	Alternate Contact:	Alesha Frederick	Position/Title:	Business Support Specialist
	Email:	afrederick@crwcd.org		
	Phone Numbers:	Cell: 662-574-6024	Office:	970-945-8522

2. Eligible entities for WSRA funds include the following. What type of entity is the Applicant?

- ☐ Public (Government) – municipalities, enterprises, counties, and State of Colorado agencies. Federal agencies are encouraged to work with local entities and the local entity should be the grant recipient. Federal agencies are eligible, but only if they can make a compelling case for why a local partner cannot be the grant recipient.
- ☒ Public (Districts) – authorities, Title 32/special districts, (conservancy, conservation, and irrigation districts), and water activity enterprises.
- ☐ Private Incorporated – mutual ditch companies, homeowners associations, corporations.
- ☐ Private individuals, partnerships, and sole proprietors are eligible for funding from the Basin Accounts but not for funding from the Statewide Account.
- ☐ Non-governmental organizations – broadly defined as any organization that is not part of the government.

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3. Provide a brief description of your organization

The Colorado River Water Conservation District (also known as the Colorado River District or the River District) was created by the Colorado General Assembly in 1937 to lead in the protection, conservation, use and development of the water resources of the Colorado River Basin for the welfare of the District, and to safeguard for Colorado all waters of the Colorado River to which the state is entitled. Fifteen counties in western Colorado comprise the District and each appoints a member to the Board of Directors. The District covers all the lands and waters of Grand, Summit, Eagle, Pitkin, Routt, Garfield, Moffat, Rio Blanco, Mesa, Delta, Gunnison and Ouray counties and parts of Montrose, Saguache and Hillsdale counties.

4. If the Contracting Entity is different then the Applicant (Project Sponsor or Owner) please describe the Contracting Entity here.

The applicant is the same as the contracting entity.

5. Successful applicants will have to execute a contract with the CWCB prior to beginning work on the portion of the project funded by the WSRA grant. In order to expedite the contracting process the CWCB has established a standard contract with provisions the applicant must adhere to. A link to this standard contract is included in Appendix 3. Please review this contract and check the appropriate box.

☒ The Applicant will be able to contract with the CWCB using the Standard Contract

☐ The Applicant has reviewed the standard contract and has some questions/issues/concerns. Please be aware that any deviation from the standard contract could result in a significant delay between grant approval and the funds being available.

6. The Tax Payer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect the applicant.

The Colorado River Water Conservation District does not anticipate any TABOR issues.

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Part II. - Description of the Water Activity/Project

1. What is the primary purpose of this grant application? (Please check only one)

☒ Nonconsumptive (Environmental or Recreational)

☒ Agricultural

☒ Municipal/Industrial

☒ Needs Assessment

☒ Education

☐ Other

Explain:

2. If you feel this project addresses multiple purposes please explain.

The Colorado River Development and Curtailment Risk Study will address the need for technical data so that the Four West Slope Roundtables – and all of Colorado -- can better discuss issues surrounding future Colorado River development and the risk to current water users. These issues affect agriculture, municipal and industrial, and environmental/recreational uses. This technical data will be important to educating stakeholders on development and curtailment negotiations.

3. Is this project primarily a study or implementation of a water activity/project? (Please check only one)

☒ Study

☐ Implementation

4. To catalog measurable results achieved with WSRA funds can you provide any of the following numbers?

New Storage Created (acre-feet)

New Annual Water Supplies Developed, Consumptive or Nonconsumptive (acre-feet)

Existing Storage Preserved or Enhanced (acre-feet)

Length of Stream Restored or Protected (linear feet)

Length of Pipe/Canal Built or Improved (linear feet)

Efficiency Savings (acre-feet/year OR dollars/year – **circle one**)

Area of Restored or Preserved Habitat (acres)

☒ Other -- Explain:

Technical data to support Roundtable negotiations.

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4. To help us map WSRA projects please include a map (Exhibit B) and provide the general coordinates below:

Latitude:

Longitude:

5. Please provide an overview/summary of the proposed water activity (no more than one page). Include a description of the overall water activity and specifically what the WSRA funding will be used for. A full **Statement of Work** with a detailed budget and schedule is required as **Exhibit A** of this application.

At the Dec. 18, 2014, meeting of the Four West Slope Basin Roundtables held at Ute Water in Grand Junction, various attendees cited the need for technical data so that the Four Roundtables could better discuss issues surrounding future Colorado River development and the risk to current water users.

The issues framing the need for technical data include the Yampa-White's call for a "development carve out" and the Gunnison's position that development of any sort, any place poses a risk to all current users. The Colorado and Southwest Basin Implementation plans have since identified development needs and risks. The risk factor is also critical to Principal No. 4 in the Conceptual Agreement about how to discuss a future transmountain diversion. It reads: "A collaborative program that protects against involuntary curtailment is needed for existing uses and some reasonable increment of future development in the Colorado River System, but it will not cover a new TMD." (*Chapt. 8, page 14, Colorado's Water Plan*).

Against this backdrop, the Colorado River District and the Southwest Water Conservation District propose that the Four Roundtables each join in a cross-basin Water Supply Reserve Account approval process to support a WSRA application for technical data development by the two Districts. The purpose of this first phase of technical data development is not meant to answer all of the questions surrounding Colorado River development but to get the Four Roundtables to a common platform to have fruitful discussions. It is meant to create a starting line.

Financing and Scope of Work

To conduct this study, the River District and Southwest District will contribute \$20,000. The Roundtables would request \$8,000 each, (\$32,000), for a grand total of \$52,000.

This will allow flexibility for the consultant, Hydros, to conduct additional modeling to address specific questions that will surface during the review of the initial modeling results, and to prepare a summary report. The Colorado River District will be the contracting entity.

The scope of work proposed below is designed to provide a simplified common technical platform to promote a better understanding of the issues and to promote additional discussions, including more detail on the proposed collaborative project (AKA "insurance" plan).

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Initial Goals Include:

- What is the likelihood of the elevation of Lake Powell going below 3,525' under selected water supply and water demand scenarios?
- Evaluate how often and by how much water users in the Upper Basin and specifically Colorado would have to reduce demand to maintain Lake Powell elevation above 3,525'. Provide an indication of the "risk" to existing Colorado River water users (West Slope and TMDs).

Study Tools and Limitations

The model platform for this phase will be CRSS – the Colorado River Simulation System. CRSS is a "big river" model. It operates the major Bureau of Reclamation reservoirs including Lake Powell as contemplated by the 2007 Interim Guidelines and the individual records-of-decision. CRSS models the demands on the Colorado River in and below Lake Mead in significant detail. It is the model used by the 7 states and Reclamation for the Colorado River Basin Report and subsequent modeling work supporting the Basin Report.

However, above Lake Powell, the model aggregates demands in the four Upper Division states (and the Upper Basin portion of Arizona) into a small number of nodes. For example, in the Yampa River there is only one demand node. Above Glenwood Springs all of the transmountain diversions are consolidated into one node. However, even with these simplifications, CRSS does a reasonable job of simulating Upper Basin depletions upstream of Lake Powell for the purposes of this study.

Assumptions

For the initial analysis, the study will consider three different hydrologic options: 1906-2012 disaggregated natural flows (DNF); 1988-2012 (DNF); and, climate change (same base as the Colorado River Basin Study).

The study will consider three different demand levels: 2015 (current trends from the Colorado River Basin Study), 2015 plus the amount of additional depletions contemplated by the sub-basin programmatic biological opinions (PBO) or equivalents where no formal PBO exists, and the expansive growth scenario (from the Colorado River Basin Study).

Colorado's current demands/depletions will be set at 2015 levels pursuant to the Basin Study schedule A "current trends" or updated information, if available.

The demands/depletions in the other three Upper Division states will be "normalized" to Colorado's level of depletions based on each state's apportionment under the 1948 Upper Colorado River Basin Compact Article III apportionments. For example, if Colorado's depletions are 2,500 KAF, Utah's depletions would be $2,500 \times .23/.5175$ or 1,111 KAF. NOTE, under this assumption, Colorado is not relying on, or benefitting from, unused apportionment from another Upper Division state. Colorado's share of any shortage

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apportionment will be assumed to be 51.75%. The study may also consider a non-“normalized” run, using demand levels from the Colorado River Basin or updated Upper Colorado River Commission depletions modules if they are available.

Lakes Powell and Mead will be operated pursuant to the 2007 Interim Guidelines through the study period. The study period will be 2015-2040 (25 years), with a possible later iteration to 2060 to mirror the Colorado River Basin Study. Demands for Lake Mead water will be set by the 2007 Interim Guidelines tiers.

Where possible, we will assume that extended operations of the upstream CRSP reservoirs (Aspinall, Navajo and Flaming Gorge) is operational. We may want to consider model runs with and without extended operations. This includes making small adjustments to monthly releases at Powell to maintain an elevation of 3,525' MSL.

Study Management and Rules of Engagement

- The study will be managed jointly by the River District and the Southwestern District with assistance of technical representatives from the four West Slope roundtables. The effort needs to be open and transparent.
- It is anticipated that the study will generate additional questions and the need for further study. Further studies likely will require the development of new modeling tools or the integration of different model platforms such as CDSS and CRSS.

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Part III. – Threshold and Evaluation Criteria

1. Describe how the water activity meets these **Threshold Criteria**. (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines.)

- a) The water activity is consistent with Section 37-75-102 Colorado Revised Statutes.¹

This activity is consistent with the CRS.

- b) The water activity underwent an evaluation and approval process and was approved by the Basin Roundtable (BRT) and the application includes a description of the results of the BRTs evaluation and approval of the activity. At a minimum, the description must include the level of agreement reached by the roundtable, including any minority opinion(s) if there was not general agreement for the activity. The description must also include reasons why general agreement was not reached (if it was not), including who opposed the activity and why they opposed it. Note- If this information is included in the letter from the roundtable chair simply reference that letter.

This information is pending Roundtable consideration, approval and the writing of approval letters.

¹ 37-75-102. Water rights - protections. (1) It is the policy of the General Assembly that the current system of allocating water within Colorado shall not be superseded, abrogated, or otherwise impaired by this article. Nothing in this article shall be interpreted to repeal or in any manner amend the existing water rights adjudication system. The General Assembly affirms the state constitution's recognition of water rights as a private usufructuary property right, and this article is not intended to restrict the ability of the holder of a water right to use or to dispose of that water right in any manner permitted under Colorado law. (2) The General Assembly affirms the protections for contractual and property rights recognized by the contract and takings protections under the state constitution and related statutes. This article shall not be implemented in any way that would diminish, impair, or cause injury to any property or contractual right created by intergovernmental agreements, contracts, stipulations among parties to water cases, terms and conditions in water decrees, or any other similar document related to the allocation or use of water. This article shall not be construed to supersede, abrogate, or cause injury to vested water rights or decreed conditional water rights. The General Assembly affirms that this article does not impair, limit, or otherwise affect the rights of persons or entities to enter into agreements, contracts, or memoranda of understanding with other persons or entities relating to the appropriation, movement, or use of water under other provisions of law.

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- c) The water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes.² The Basin Roundtable Chairs shall include in their approval letters for particular WSRA grant applications a description of how the water activity will assist in meeting the water supply needs identified in the basin roundtable's consumptive and/or non-consumptive needs assessments.

This information is pending Roundtable consideration, approval and the writing of approval letters.

- d) Matching Requirement: For requests from the **Statewide Fund**, the applicants will be required to demonstrate a **25 percent** (or greater) match of the total grant request from the other sources, including by not limited to Basin Funds. A minimum match of 5% of the total grant amount shall be from Basin funds. A minimum match of 5% of the total grant amount must come from the applicant or 3rd party sources. Sources of matching funds include but are not limited to Basin Funds, in-kind services, funding from other sources, and/or direct cash match. Past expenditures directly related to the project may be considered as matching funds if the expenditures occurred within 9 months of the date the contract or purchase order between the applicant and the State of Colorado is executed. Please describe the source(s) of matching funds. (NOTE: These matching funds should also be reflected in your Detailed Budget in **Exhibit A** of this application)

The total budget is \$52,000. The Colorado River District is contributing \$10,000. The Southwest Colorado Conservation District is contributing \$10,000. It is anticipated that each of the four West Slope Basin Roundtables (Colorado, Gunnison, Southwest and Yampa/White) will contribute \$8,000 each from their respective WSRA Basin Funds.

² 37-75-104 (2)(c). Using data and information from the Statewide Water Supply Initiative and other appropriate sources and in cooperation with the on-going Statewide Water Supply Initiative, develop a basin-wide consumptive and nonconsumptive water supply needs assessment, conduct an analysis of available unappropriated waters within the basin, and propose projects or methods, both structural and nonstructural, for meeting those needs and utilizing those unappropriated waters where appropriate. Basin Roundtables shall actively seek the input and advice of affected local governments, water providers, and other interested stakeholders and persons in establishing its needs assessment, and shall propose projects or methods for meeting those needs. Recommendations from this assessment shall be forwarded to the Interbasin Compact Committee and other basin roundtables for analysis and consideration after the General Assembly has approved the Interbasin Compact Charter.

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2. For Applications that include a request for funds from the **Statewide Account**, describe how the water activity/project meets all applicable **Evaluation Criteria**. (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines and repeated below.) Projects will be assessed on how well they meet the Evaluation Criteria. **Please attach additional pages as necessary.**

Evaluation Criteria – the following criteria will be utilized to further evaluate the merits of the water activity proposed for funding from the Statewide Account. In evaluation of proposed water activities, preference will be given to projects that meet one or more criteria from each of the three “tiers” or categories. Each “tier” is grouped in level of importance. For instance, projects that meet Tier 1 criteria will outweigh projects that only meet Tier 3 criteria. The applicant should also refer to the Supplemental Scoring Matrix applied to Evaluation Criteria Tiers 1-3 for Statewide Account requests. WSRA grant requests for projects that may qualify for loans through the CWCB loan program will receive preference in the Statewide Evaluation Criteria if the grant request is part of a CWCB loan/WSRA grant package. For these CWCB loan/WSRA grant packages, the applicant must have a CWCB loan/WSRA grant ratio of 1:1 or higher. Preference will be given to those with a higher loan/grant ratio.

Tier 1: Promoting Collaboration/Cooperation and Meeting Water Management Goals and Identified Water Needs

- a. The water activity addresses multiple needs or issues, including consumptive and/or non-consumptive needs, or the needs and issues of multiple interests or multiple basins. This can be demonstrated by obtaining letters of support from other basin roundtables (in addition to an approval letter from the sponsoring basin).
- b. The number and types of entities represented in the application and the degree to which the activity will promote cooperation and collaboration among traditional consumptive water interests and/or non-consumptive interests, and if applicable, the degree to which the water activity is effective in addressing intrabasin or interbasin needs or issues.
- c. The water activity helps implement projects and processes identified as helping meet Colorado’s future water needs, and/or addresses the gap areas between available water supply and future need as identified in SWSI or a roundtable’s basin-wide water needs assessment.

Tier 2: Facilitating Water Activity Implementation

- d. Funding from this Account will reduce the uncertainty that the water activity will be implemented. For this criterion the applicant should discuss how receiving funding from the Account will make a significant difference in the implementation of the water activity (i.e., how will receiving funding enable the water activity to move forward or the inability obtaining funding elsewhere).
- e. The amount of matching funds provided by the applicant via direct contributions, demonstrable in-kind contributions, and/or other sources demonstrates a significant & appropriate commitment to the project.

Tier 3: The Water Activity Addresses Other Issues of Statewide Value and Maximizes Benefits

- f. The water activity helps sustain agriculture & open space, or meets environmental or recreational needs.
- g. The water activity assists in the administration of compact-entitled waters or addresses problems related to compact entitled waters and compact compliance and the degree to which the activity promotes maximum utilization of state waters.
- h. The water activity assists in the recovery of threatened and endangered wildlife species or Colorado State species of concern.

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- i. The water activity provides a high level of benefit to Colorado in relationship to the amount of funds requested.
- j. The water activity is complimentary to or assists in the implementation of other CWCB programs.

Continued: Explanation of how the water activity/project meets all applicable **Evaluation Criteria**.

Please attach additional pages as necessary.

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Part IV. – Required Supporting Material

1. **Water Rights, Availability, and Sustainability** – This information is needed to assess the viability of the water project or activity. Please provide a description of the water supply source to be utilized, or the water body to be affected by, the water activity. This should include a description of applicable water rights, and water rights issues, and the name/location of water bodies affected by the water activity.

The water bod to be affected by this water activity is the Colorado River system which includes the mainstem and its tributaries in western Colorado.

2. Please provide a brief narrative of any related studies or permitting issues.

3. Statement of Work, Detailed Budget, and Project Schedule

The statement of work will form the basis for the contract between the Applicant and the State of Colorado. In short, the Applicant is agreeing to undertake the work for the compensation outlined in the statement of work and budget, and in return, the State of Colorado is receiving the deliverables/products specified. **Please note that costs incurred prior to execution of a contract or purchase order are not subject to reimbursement.** All WSRA funds are disbursed on a reimbursement basis after review invoices and appropriate backup material.

Provided in Exhibit A.

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Please provide a detailed statement of work using the template in Exhibit A. Additional sections or modifications may be included as necessary. Please define all acronyms and include page numbers.

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.

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 10 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.

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The above statements are true to the best of my knowledge:

Signature of Applicant:



Print Applicant's Name: Eric Kuhn, General Manager, Colorado River District

Project Title: Colorado River Development and Curtailment Risk Study

Date: March 1, 2016

Return an electronic version (hardcopy may also be submitted) of this application to:

Craig Godbout – WSRA Application
Colorado Water Conservation Board
1313 Sherman St., Room 721
Denver, CO 80203
303-866-3441, ext. 3210 (office)
303-547-8061 (cell)
craig.godbout@state.co.us

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.