

Water Supply Reserve Fund– Grant and Loan Program
Water Activity Summary Sheet
September 21-22, 2016
Agenda Item 19(a)

Applicant & Fiscal Agent: Lower South Platte Water Conservancy District
Water Activity Name: HB16-1256 South Platte Storage Study
Water Activity Purpose: Study
County: All Counties w/in the South Platte Basin
Drainage Basin: South Platte
Water Source: South Platte River and all tributaries
Amount Requested/Source of Funds: \$211,168 Statewide Account
\$211,168 Total Grant Request

Matching Funds: As this study is legislatively mandated, and it is of statewide importance, the Metro and South Platte Basin Roundtables have requested that 100% of the funding come from the Statewide Account. CWCB Staff concur and recommend that the Basin Account matching requirement be waived in this case.

Staff Recommendation:

Staff recommends approval of up to \$211,168 from the Statewide Account to fund the project titled: HB16-1256 South Platte Storage Study.

Water Activity Summary: HB16-1256, signed into law by the Governor on June 9th, 2016, authorizes the Colorado Water Conservation Board (CWCB), in collaboration with the State Engineer (SEO), and the South Platte Basin and Metro Roundtables, to conduct a study to identify multi-purpose water storage possibilities along the South Platte River Basin. These water storage possibilities will include new reservoir sites, the enlargement/rehabilitation of existing sites, or alternative storage mechanisms (e.g., underground storage).

The primary objective of this study is to investigate multiple possible sites in the Lower South Platte Basin for constructing a new reservoir, enlarging an existing reservoir, or for implementing an alternative storage mechanism. Each of these identified sites will include the following analysis as per HB16-1256:

- 1) An estimate of the volume of water that could have been stored annually (only including measured flow in the South Platte River existing at the time of the study, this does not include any future or newly created transmountain diversions).
- 2) A preliminary estimate of the cost for obtaining the permits and acquiring the property or easements for either construction of a new reservoir, enlargement or rehabilitation of an existing reservoir, or implementing an alternative storage mechanism.
- 3) A cost-benefit analysis for constructing a reservoir or implementing an alternative storage mechanism including environmental, financial, and legal constraints.

In conducting these investigations, the Contractor will take into account existing absolute and conditional water rights and interstate agreements, e.g., the interstate compact with Nebraska, and the Platte River Cooperative Agreement with Nebraska and Wyoming for the endangered species recovery program on the Platte River.

Discussion: This grant is consistent with the next steps for implementation identified by the roundtables, the IBCC, and the CWCB, as well as in Colorado's Water Plan. The study fits the statutory language of HB16-1256 and will be a good starting point in identifying potential storage sites for further study and investigation.

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:

This activity has undergone review and evaluation and staff has determined that it satisfies the Evaluation Criteria. Please refer to WSRA Application for applicant's detailed response.

Funding Summary/Matching Funds: n/a

CWCB Project Manager: Andy Moore

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.

June 24, 2016

Mr. Craig Godbout
Colorado Water Conservation Board
1313 Sherman St, Suite 718
Denver, CO 80203

RE: WSRA Application Letter of Support – HB16-1256 South Platte River Storage Study

Dear Craig,

At its June meeting, the Metro Roundtable voted unanimously to support a request for Statewide WSRA funds to support a study of additional water storage in the South Platte Basin.

The Roundtable sees this project as meeting multiple criteria under our own WSRA Guidance and the priorities identified in the South Platte Basin Implementation Plan. One of the overarching priorities in the BIP was the need for additional storage in the South Platte Basin. Storage is key to all other alternatives for meeting our water supply gap and ensuring the wise use of our existing supplies.

The Roundtable believes that this project fully meets the threshold criteria for the WSRA program. It is consistent with 37-75-102 Colorado Revised Statutes; it is supported by both the Metro and South Platte Roundtables

If you, or the Board, have any questions for me, please do not hesitate to call.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Barbara Biggs', with a stylized flourish at the end.

Barbara Biggs
Chair, Metro Roundtable

August 30, 2016

Mr. Craig Godbout
Colorado Water Conservation Board
1313 Sherman St, Suite 718
Denver, CO 80203

RE: WSRA Application Letter of Support – HB16-1256 South Platte River Storage Study

Dear Craig,


At its June meeting, the South Platte Basin Roundtable voted unanimously to support a request for Statewide WSRA funds to support a study of additional water storage in the South Platte Basin.

The Roundtable sees this project as meeting multiple criteria under our own WSRA Guidance and the priorities identified in the South Platte Basin Implementation Plan. One of the overarching priorities in the BIP was the need for additional storage in the South Platte Basin. Storage is key to all other alternatives for meeting our water supply gap and ensuring the wise use of our existing supplies.

The Roundtable believes that this project fully meets the threshold criteria for the WSRA program. It is consistent with 37-75-102 Colorado Revised Statutes; it is supported by both the Metro and South Platte Roundtables.

If you, or the Board, have any questions for me, please do not hesitate to call.

Sincerely,



Joe Frank
Chair, South Platte Basin Roundtable



COLORADO WATER CONSERVATION BOARD



WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

Today's Date:

HB16-1256 South Platte Storage Study

Name of Water Activity/Project

Lower South Platte Water Conservancy District

Name of Applicant

South Platte Basin
Roundtable
Metro Basin Roundtable

Amount from Statewide Account:

\$211,168

Amount from Basin Account(s):

Total WSRA Funds Requested:

\$211,168

Approving Basin Roundtable(s)

(If multiple basins specify amounts in parentheses.)

FEIN: 84-0562269

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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)

Water Supply Reserve Account – Application Form

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.

Water Supply Reserve Account – Application Form

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

1.	Applicant Name(s):	Lower South Platte Water Conservancy District		
	Mailing address:	100 Broadway Plaza Suite 12 Sterling, CO 80751		
	FEIN #:	84-0562269		
	Primary Contact:	Joe Frank	Position/Title:	General Manager
	Email:	jmfrank@lspwcd.org		
	Phone Numbers:	Cell: (970) 520-0628	Office:	(970) 522-1378 x221
	Alternate Contact:		Position/Title:	
	Email:			
	Phone Numbers:	Cell:	Office:	

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 Lower South Platte Water Conservancy District (LSPWCD) was formed in 1964 under the Water Conservancy District Act of 1937. The district encompasses approximately 406,000 acres in parts of Morgan, Washington, Logan, and Sedgwick counties. Over 30 ditch and reservoir systems lie within the boundaries of LSPWCD.

MISSION STATEMENT

To conserve, protect and enhance waters flowing in the South Platte River and its tributaries within the District boundaries; and to participate in water-related projects that will embody protection of water rights, thoughtful conservation, responsible growth, and beneficial water usage within the Lower South Platte Valley.

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

NA

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.

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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:

Evaluate potential storage sites

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

This study will identify possible water storage opportunities in the South Platte basin for

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:

Cost-benefit analysis of potential storage

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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.

The primary objective of this study is to investigate multiple possible sites in the Lower South Platte Basin for constructing a new reservoir, enlarging an existing reservoir, or for implementing an alternative storage mechanism. Each of these identified sites will include the following analysis as per HB16-1256:

- 1) An estimate of the volume of water that could have been stored annually (only including measured flow in the South Platte River existing at the time of the study, this does not include any future or newly created transmountain diversions).
- 2) A preliminary estimate of the cost for obtaining the permits and acquiring the property or easements for either construction of a new reservoir, enlargement or rehabilitation of an existing reservoir, or implementing an alternative storage mechanism.
- 3) A cost-benefit analysis for constructing a reservoir or implementing an alternative storage mechanism including environmental, financial, and legal constraints.

In conducting these investigations, the Contractor will take into account existing absolute and conditional water rights and interstate agreements, e.g., the interstate compact with Nebraska, and the Platte River Cooperative Agreement with Nebraska and Wyoming for the endangered species recovery program on the Platte River.

As per HB16-1256, WSRA funding will be used to conduct this study.

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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 project will not supersede, abrogate, or otherwise impair the current system of allocating water within Colorado.

- 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 BRT's 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 project was presented to and approved by the Metro and South Platte Basin Roundtables.

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 project assists in filling the gap between basin wide demands and consumptive and non-consumptive needs by identifying and evaluating potential storage sites for multiple uses.

- 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)

As this study is legislatively mandated, and it is of statewide importance, the Metro and South Platte Basin Roundtables have requested that 100% of the funding come from the Statewide Account. CWCB Staff concur and recommend that the Basin Account matching requirement be waived in this case.

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.

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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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).

HB16-1256 authorizes the CWCB, in collaboration with the SEO and the South Platte Basin and Metro Roundtables, to conduct a study to identify multi-purpose water storage possibilities along the South Platte River Basin. Subtask 4.5 outlines a cost benefit analysis for each site that will consider if the site reduces present and future needs to import water from one basin to another water basin through a transbasin diversion.

- 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.

Cooperating entities include the Colorado Water Conservation Board, State Engineer's Office, South Platte Basin Roundtable, Metro Basin Roundtable, and the Lower South Platte Water Conservancy District.

- 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.

Colorado's Water Plan identifies increased water storage as an important goal and sets forth an objective to attain an additional 400,000 acre-feet of water storage by 2050 in Colorado. This storage study will be an important first step in increasing water storage in the South Platte River Basin.

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).

HB 16-1256 specifically names the Water Supply Reserve Fund as the funding source for this study should it be approved by the CWCB Board.

- 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.

This study will identify multi-purpose water storage possibilities along the South Platte River Basin. Subtask 4.5 outlines a cost benefit analysis for each site that will include how the site will reduce reliance on the

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practice of buying agricultural water and drying up the agricultural land served by the water, provide the ability to use alternative agricultural transfer methods in conjunction with water storage, increase agricultural production, identify recreational benefits, improve instream flow, enhance wildlife habitats, etc (see exhibit A).

- 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.

Task 3 of the Study is to evaluate the amount of water delivered in excess of the South Platte River Compact, and to evaluate the amount of water that could have otherwise been stored through construction of a reservoir or other storage mechanism in the Lower South Platte River Basin.

Subtask 4.5 will provide a preliminary cost benefit analysis for each identified site from Greeley to the State line that will examine how the storage site can improve water compact compliance.

- h. The water activity assists in the recovery of threatened and endangered wildlife species or Colorado State species of concern.

Subtask 4.5 will provide a preliminary cost benefit analysis for each identified site from Greeley to the State line will include a cost benefit analysis that will examine how the storage site can enhance compliance with endangered species habitat regulations, enhance migratory bird habitats, and improve wildlife habitats.

- i. The water activity provides a high level of benefit to Colorado in relationship to the amount of funds requested.

The primary objective of this study is to identify and investigate multiple possible sites in the Lower South Platte Basin for constructing a new reservoir, enlarging an existing reservoir, or for implementing an alternative storage mechanism. The identification and analysis of these sites as per HB 16-1256 will have a high level of benefit to Colorado in relationship to the money authorized by the Bill for the study.

- j. The water activity is complementary 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.

Colorado's Water Plan identifies increased water storage as an important goal and sets forth an objective to attain an additional 400,000 acre-feet of water storage by 2050 in Colorado. This storage study will be an important first step in increasing water storage in the South Platte River Basin.

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.

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This study will include a water demands review for the South Platte Basin in Task 2 as follows:

Subtask 2.1: Review existing information and summarize the amount, type of use, geographic location, and temporal distribution (dry year demand vs full time demand) of water demands.

Subtask 2.2: Review existing information and summarize the water quality requirements associated with the identified demands.

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

Task 1 will be to review and evaluate previously developed and currently available studies related to the construction or enlargement of on-channel, off-channel, and underground water storage for the mainstem and tributaries of the South Platte River Basin. To the extent possible, this literature review should include a description of limits placed on different types and locations of storage by the South Platte River Compact, the Platte River Recovery Implementation Program, and other applicable laws and agreements.

Subtask 4.4 will be to review and assess permitting issues associated with each storage option.

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.

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: *Joe Frank*

Print Applicant's Name: *Joe Frank, General Manager
Lower South Platte Water Conservancy District*

Project Title: *HB16-1256 South Platte Storage Study*

Date: *8/24/2016*

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

HB16-1256

South Platte Storage Study

Scope of Work

Introduction and Background: HB16-1256, signed into law by the Governor on June 9th, 2016, authorizes the Colorado Water Conservation Board (CWCB), in collaboration with the State Engineer (SEO), and the South Platte Basin and Metro Roundtables, to conduct a study to identify multi-purpose water storage possibilities along the South Platte River Basin. These water storage possibilities will include new reservoir sites, the enlargement/rehabilitation of existing sites, or alternative storage mechanisms (e.g., underground storage).

Colorado's Water Plan identifies increased water storage as an important goal and sets forth an objective to attain an additional 400,000 acre-feet of water storage by 2050 in Colorado. This storage study will be an important first step in increasing water storage in the South Platte River Basin.

Lower South Platte Water Conservancy District is the WSRA grant applicant and fiscal agent for this study. The study will be performed by a Contractor selected through a competitive process directed by a committee including representatives from the South Platte and Metro Roundtables, CWCB, and SEO. HB16-1256 authorizes the CWCB to expend up to \$211,168 from the Water Supply Reserve Fund to conduct the storage study.

Study Objectives:

The primary objective of this study is to investigate multiple possible sites in the Lower South Platte Basin for constructing a new reservoir, enlarging an existing reservoir, or for implementing an alternative storage mechanism. Each of these identified sites will include the following analysis as per HB16-1256:

- 1) An estimate of the volume of water that could have been stored annually (only including measured flow in the South Platte River existing at the time of the study, this does not include any future or newly created transmountain diversions).
- 2) A preliminary estimate of the cost for obtaining the permits and acquiring the property or easements for either construction of a new reservoir, enlargement or rehabilitation of an existing reservoir, or implementing an alternative storage mechanism.
- 3) A cost-benefit analysis for constructing a reservoir or implementing an alternative storage mechanism including environmental, financial, and legal constraints.

In conducting these investigations, the Contractor will take into account existing absolute and conditional water rights and interstate agreements, e.g., the interstate compact with Nebraska, and the Platte River Cooperative Agreement with Nebraska and Wyoming for the endangered species recovery program on the Platte River.

WORK TASKS: The work tasks associated with the study are outlined below.

Task 1: Literature Review of Storage Options

Review and evaluate previously developed and currently available studies related to the construction or enlargement of on-channel, off-channel, and underground water storage for the mainstem and tributaries of the South Platte River Basin. To the extent possible, this literature review should include a description of limits placed on different types and locations of storage by the South Platte River Compact, the Platte River Recovery Implementation Program, and other applicable laws and agreements.

Based on this literature review, identify and summarize water storage possibilities in the basin. This literature review and summary will cover the entire South Platte River Basin.

Task 2: Water Demands

Subtask 2.1: Review existing information and summarize the amount, type of use, geographic location, and temporal distribution (dry year demand vs full time demand) of water demands. To the extent possible information regarding water demands from the Statewide Water Supply Initiative (SWSI) should be used.

Subtask 2.2: Review existing information and summarize the water quality requirements associated with the identified demands. It is anticipated that total dissolved solids may be used as a general indicator of water quality requirements.

Task 3: Historical Flow Analysis

As per the legislation, the main objectives of this task are twofold:

- 1) To evaluate the amount of water delivered in each of the previous twenty years to Nebraska in excess of the amount required by the South Platte River Compact.
- 2) To evaluate the amount of water that could have otherwise been stored through construction of a reservoir or other storage mechanism in the Lower South Platte River Basin.

The South Platte Roundtable has completed a daily assessment of historical water availability at all important locations along the South Platte River. This point flow assessment was completed for a 14-year period extending from the 2000 water year through the 2013 water year. This prior assessment quantified the amount of water delivered to Nebraska in each year of the study period that was in excess of the amount required to be delivered by the South Platte River Compact. The prior evaluation also estimated on a regional basis the amount of legally available water that could have otherwise been stored through construction

of new reservoirs, enlargement or rehabilitation of existing reservoirs, or other storage mechanisms in the Lower South Platte River Basin.

This work task will extend the South Platte Roundtable water availability assessment to a 20-year period extending from 1996 through 2015. The task will utilize the same point flow techniques used in the South Platte water availability study, and will quantify daily native South Platte River water availability for the 1996 through 1999, 2014, and 2015 water years. The analysis will be based upon data available from Colorado's Decision Support Systems (CDSS) and from HydroBase.

This estimate should include only flows that could have been stored in a practical manner. For example, the magnitude and severity of the flows in the September 2013 flood event washed out many diversion structures on the river, making it impossible to divert into storage vessels in those areas.

Task 4: Storage Site Analysis

Evaluate possible sites in the Lower South Platte Basin, from Greeley to Julesburg, for constructing a new reservoir, enlarging an existing reservoir, or for implementing an alternative storage mechanism, including aquifer recharge. For each site identified, perform the following subtasks:

Subtask 4.1: Map and describe the size and extent of potential facilities, and indicate whether lands are publicly or privately owned.

Subtask 4.2: Estimate the volume of legally available native South Platte water that could have been stored at each site for each year of the study period.

Subtask 4.3 Evaluate at a qualitative level, the location, type and magnitude of water demands that may be reasonably supplied by each storage site. Describe the operation of the reservoir and related facilities in supplying these demands.

Subtask 4.4: Review and assess permitting issues associated with each storage option. It is anticipated that a reconnaissance level fatal-flaw type permitting review would be completed, and permitting issues associated with each storage option would be compared in tabular or matrix format.

Subtask 4.5: Provide a preliminary cost estimate, including the estimated costs of obtaining the necessary permits and acquiring property.

Perform a cost-benefit analysis for each site, including consideration of potential environmental, financial, and legal constraints, and water quality issues, as well as potential benefits, including the following:

- a) Addressing Colorado's predicted future water supply gaps
- b) Providing storage water rights that allow for aquifer recharge

- c) Reducing present and future needs to import water from one basin to another water basin through a transbasin diversion
- d) Reducing reliance on the practice of buying agricultural water and drying up the agricultural land served by the water
- e) Providing the ability to use alternative agricultural transfer methods in conjunction with water storage
- f) Enhancing exchange potential
- g) Recreational benefits
- h) Flood control
- i) Improving instream flow
- j) Improving water compact compliance
- k) Enhancing compliance with endangered species habitat regulations
- l) Enhancing migratory bird habitats
- m) Improving wildlife habitats
- n) Increased municipal, industrial, environmental, and agricultural water supply
- o) Increased agricultural production
- p) Any other benefit

Task 5: Final Report

Provide a draft report on the study to the Roundtable and State representatives by November 30, 2017. The report should include at a minimum a summary of the analyses, the results, a relative ranking of potential sites, and recommendations for next steps. After review, incorporate any comments and submit the final report to CWCB by December 28, 2017.

Task 6: Project Administration

Lower South Platte Water Conservancy District will provide project administration, including project coordination and invoicing.

Schedule

As per the statute, the study must be completed by October 31, 2017. The final report is due to the Senate and House Ag Committees by December 31, 2017. A schedule table by task is attached.

Costs

The attached cost table summarizes costs by task.

HB16-1256 South Platte Storage Study

Budget

Item	Description	WSRF Funding	Total Costs
Task 1	Literature Review of Storage Options	\$20,000	\$20,000
Task 2	Water Demands	\$10,000	\$10,000
Task 3	Historical Flow Analysis	\$20,000	\$20,000
Task 4	Storage Site Analysis	\$130,000	\$130,000
Task 5	Final Report/Project Management	\$20,000	\$20,000
Task 6	Project Administration	\$11,168	\$11,168
Total Costs		\$211,168	\$211,168

Schedule

Task	Start Date	End Date
1	NTP	January 31, 2017
2	NTP	March 31, 2017
3	NTP	March 31, 2017
4	NTP	October 31, 2017
5	NTP	December 31, 2017
6	NTP	December 31, 2017

HB16-1256 South Platte Storage Study Estimated Cost of Services														
Work Tasks	Principal Rate \$175/hr		Project Manager Rate \$150/hr		Project Engineer Rate \$100/hr		Engineer Rate \$75/hr		Engineer Rate \$70/hr		Office Admin Rate \$35/hr		Subcontracts and Expenses	Total Cost Estimate
	Hours	Total	Hours	Total	Hours	Total	Hours	Total	Hours	Total	Hours	Total		
Task 1 – Literature Review of Storage Options	4	\$ 700	18	\$ 2,700	160	\$ 16,000	8	\$ 600		\$ -		\$ -		\$ 20,000
Task 2 – Water Demands	4	\$ 700	8	\$ 1,200	78	\$ 7,800	4	\$ 300		\$ -		\$ -		\$ 10,000
Task 3 – Historical Flow Analysis	4	\$ 700	18	\$ 2,700	160	\$ 16,000	8	\$ 600		\$ -		\$ -		\$ 20,000
Task 4 – Storage Site Analysis	40	\$ 7,000	316	\$ 47,400	720	\$ 72,000	48	\$ 3,600		\$ -		\$ -		\$ 130,000
Task 5 – Final Report	8	\$ 1,400	34	\$ 5,100	120	\$ 12,000	20	\$ 1,500		\$ -		\$ -		\$ 20,000
Task 6 – Project Administration		\$ -		\$ -		\$ -		\$ -	104	\$ 7,280	104	\$ 3,640	\$ 248	\$ 11,168
Subtotal	60	\$ 10,500	394	\$ 59,100	1,238	\$ 123,800	88	\$ 6,600	104	\$ 7,280	104	\$ 3,640	\$ 248	\$ 211,168