



COLORADO WATER CONSERVATION BOARD



WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

Water Development Feasibility of Colorado State Land Board Property Along the Lower South Platte River.

Name of Water Activity/Project

Ducks Unlimited, Inc.

Name of Applicant

South Platte

Amount from Statewide Account:

Amount from Basin Account(s):

\$33,663

Total WSRA Funds Requested:

\$33,663

Approving Basin Roundtable(s)

(If multiple basins specify amounts in parentheses.)

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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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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>

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:

Greg Johnson – WSRA Application
Colorado Water Conservation Board
1580 Logan Street, Suite 200
Denver, CO 80203
gregory.johnson@state.co.us

If you have questions or need additional assistance, please contact Greg Johnson at: 303-866-3441 x3249 or gregory.johnson@state.co.us.

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

1. Applicant Name(s):	Ducks Unlimited, Inc.		
Mailing address:	2926 E. Mulberry Street Fort Collins, CO 80524		
Taxpayer ID#:	13-5643799		
Primary Contact:	Greg Kernohan	Position/Title:	Manager, Conservation
Email:	gkernohan@ducks.org		
Phone Numbers:	Cell: 970-481-7793	Office:	970-221-9863
Alternate	Julia Firl	Position/Title:	Land Protection Specialist
Email:	jfirl@ducks.org		
Phone Numbers:	Cell: 970-217-6799	Office:	970-221-9861

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

Ducks Unlimited, Inc. is a member organization structured under section 501 (c)(3). The organization was created in 1937 for the conservation of North America's waterfowl and its habitat. Ducks Unlimited conserves, restores and manages wetlands and associated habitats for North America's waterfowl. These habitats also benefit other wildlife and people.

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.

NA

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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.

This project, like many others developed by DU in the same geographic area through this program, will lead to benefits for nonconsumptive needs and agricultural water needs. Our projects strive to encompass many water users to provide public access for hunting and wildlife viewing while generating river augmentation credits for use by municipal, industrial, and agricultural partners. While we focus on delivering value to the municipal and industrial partners, our projects have always provided direct benefit to agriculture.

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:

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

Latitude: 40.344

Longitude: -103.992

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 Colorado State Board of Land Commissioners (SLB) was established in 1876 to manage more than 3 million acres of land and 4 million acres of mineral rights that the federal government gave to Colorado to generate revenue for public education and some of the state's institutions. The SLB's activities generate significant revenue annually for its trust beneficiaries, primarily through agricultural leases and mineral development. In recent years, the SLB has expanded its efforts to increase revenue through commercial development and leasing lands for recreational activities. Much of the SLB's water assets have been sold in the distant past, but many of the land assets may be positioned on the landscape to provide high quality aquifer recharge for river augmentation.

We propose to identify the highest quality properties, perform detailed field investigations to narrow the number of properties to the best 2 or 3, develop partnerships and contracts with adjacent landowners and water providers as needed, and design the project to be ready for construction. The DU partnership with the SLB is a long-term agreement to develop these projects in a manner that generates revenue for the SLB and improves capital asset value through water development.

Ducks Unlimited, through the Wetland Recharge Location Model, funded in part by the CWCB, has identified several properties owned by the SLB that may provide high quality wetland recharge opportunities to augment the lower South Platte River from Denver to the Nebraska state line. Of the more than 3 million acres owned by the SLB, 18,280 acres are located within the priority area of the South Platte. Considering the value that retiming water and utilizing recharge to augment the river may play in the statewide water plan and the basin implementation plan, the amount of land controlled by the SLB warrants their inclusion in these efforts.

Within the last year, the SLB launched an ecosystem services program intent on developing several new revenue streams. River augmentation through wetland recharge is a new concept for the SLB as they focus on other more prominent opportunities such as wetland mitigation. Due to DU's history of developing projects for river augmentation, the SLB is investing in DU to identify and assist in developing their properties to access this new and potentially lucrative revenue stream. The SLB additionally wishes to improve stewardship on their properties and increase recreational hunting.

CWCB funds will be used as match for the SLB funds provided for the project. Funds will be leveraged 1:1 against DU and SLB funds. Our plan is to identify several properties (5-10) with high potential for recharge using the Wetland Recharge Location Model. We will then refine the list further based on factors such as water availability, partnerships with water providers, access to the river, complications associated with access or construction of infrastructure and permitting. The top 1-3 properties will then be field tested to confirm model assumptions by coring potential recharge sites, conducting pump tests on potential recharge wells, etc. As per our current agreement with the SLB, a single project will be selected, if appropriate, and moved into design for construction and contracting with partners for water and funding.

Through this process, we should be able to estimate the amount of new water that can be maximized through retiming; determine efficiency savings in dollars/year over reservoir construction; restore or create new habitat for wildlife; and potentially increase production value of the property for

agriculture.

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

The proposed application is consistent with the referenced statute as we are not seeking in any way to supersede, abrogate, or otherwise impair the current system of allocating water. We respect the General Assembly's affirmation of the state constitution's recognition of water rights as a private usufructuary property right, and our project 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.

- 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.

We will seek approval of the South Platte Basin Roundtable at their July 9th meeting. This application will be accompanied by a letter from the chairman outlining the specific requirements of this threshold.

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.

As in Part III 1. (b), the letter shall include a description of the requirements of this threshold.

- d) Matching Requirement: For requests from the **Statewide Fund**, the applicants is required to demonstrate a **20 percent** (or greater) match of the request from the Statewide Account. Statewide requests must also include a minimum match of **5 percent** of the total grant amount from Basin Funds. 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 application was submitted to the CWCBC. 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)

NA

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.**

NA

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

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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grouped in level of importance. For instance, projects that meet Tier 1 criteria will outweigh projects that only meet Tier 3 criteria. 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.

SLB properties could address multiple needs and issues as outlined in SWSI Phase I & II and the basin implementation plan. Although this application only represents DU and the SLB in cooperation with the CWCB, we expect that many partners will be incorporated into the project as specific properties are identified. DU works through a cooperative partnership of wildlife, open space and water interests and has been highly successful in the past. Almost all of our work centers on providing river augmentation through wetland recharge projects, which benefits many of the partners on the South Platte. Our projects have been selected specifically because they meet the objectives outlined in SWSI and the Platte River Recovery Implementation Program including agricultural, municipal, industrial, environmental, recreational, and public access to lands for recreation.

More recently we have been working towards innovative alternatives to agricultural transfer projects that would implement water cooperatives that use FLEX markets and interruptible supply to accomplish the goals of the basin. Our partnerships have raised over \$16 million since 2005 for water projects that benefit wildlife, and MIA. Due to the generous support of the CWCB via the roundtable process, along with South Platte Water Related Activities Program (SPWRAP), Lower South Platte River Group (SPLRG) and the Lower South Platte Water Conservancy District (LSPWCD), we are now growing DU's water program to include new partners like the SLB, Morgan County Quality Water District, Riverside Irrigation District, United Water and Sanitation District and others. All of these funds are being applied to wildlife related water issues in the South Platte and would be impossible to access if not for the incredible support and cooperation of our partners.

Developing projects with the SLB could lead to substantially improved access to SLB assets elsewhere in the state. Since obtaining our first grant from the CWCB in 2007, we have been approached by several other basins to discuss new partnerships and water projects. Millions of dollars have been spent to secure land and water for the purposes now identified for SWSI. In the past 10 years, DU and its partners have conserved over 27,000 acres. Contributing partners have included numerous private landowners, Parks and Wildlife, LSPWCD, North Colorado Water Conservancy District, DU, US Fish and Wildlife Service, Colorado Open Lands, City of Brush, City of Fort Morgan, City of Fort Collins, Lower Logan Well Users, Sedgwick County Well Users, SPWRAP, United Water and

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Sanitation, City of Aurora, and many more. This represents about 15 partners in total, all in agreement that we have diverse needs and goals that can be satisfied by cooperating without compromising our core values.

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).

We believe that this project is a perfect fit for the HB-1177 process. Through this project, we will introduce the single largest landowner in the state to the challenging water demands of the 21st century. We will begin to steward the SLB through a process that could have them play a very big role in addressing demands while also helping them meet their constitutional duties.

There is an urgency associated with this project from a number of perspectives. Water rights on the South Platte have been under threat from purchase and removal of consumptive water units (“buy and dry”). This effect, although not new, has escalated over the past several years resulting in reduced water allocations or whole scale dry-up. SWSI predicts this problem will be further exacerbated through 2050. The SLB currently controls substantial land assets in the state that could be partially tasked to address water needs. However, the SLB also has full authority to sell these assets. It would be beneficial for the SLB to determine which properties may have high value for water needs before properties are sold; DU can help expand their vision for management of water on a large scale for the benefit of multiple stakeholders.

- 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.

The core of DU projects is multiple beneficial use. To date, projects funded by the CWCB including South Platte River Ranch, DT Ranch, Drake Land Farms, and Haren have all provided benefits to municipal, industrial, and agricultural partners while providing improved habitat for migratory birds and hunting recreation for waterfowlers.

- 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.

Return flows during summer months from river augmentation projects provide improved water flow throughout the river. Improved flows help satisfy all calls on the river and indirectly improve compliance with the Platte River compact.

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

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Some land owned by the SLB in the lower reaches of the South Platte River could assist in Colorado's contribution to the Platte River Recovery Implementation Program. The PRRIP states that habitat for piping plover, interior least tern, and whooping crane depends on increased water flows. Project tracts will provide water toward this effort. Additionally, restored, created, or enhanced wetlands derived from this project will benefit several species of concern. Project wetlands will benefit 52 bird species of national, regional, and local priority. Approximately 12 species breed in the area, 3 over winter, and all migrate through the project area. Several fish species of state concern will also benefit from improved flows through warm-water sloughs and the river channel, including brassy minnow and top minnow.

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

The water activity will introduce the largest state landowner to concepts of water development and conservation currently not well understood by the SLB. Through this partnership and successful development of river augmentation projects on SLB land, several thousand acres in other basins could be developed to address Colorado's water needs.

- 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.**

Most notably, SLB properties could lend heavily to alternative agricultural transfer methods. DU is working on several projects that could form small water cooperatives that would include municipal water providers, industrial water providers, and agricultural irrigation districts, along with landowners to develop larger local water plans. Several tools may be implemented in these cooperatives to meet collective needs including FLEX market, interruptible supply agreements, and exchange agreements. We are also working on scenarios where SLB land may be instrumental in addressing certain exchange choke points in the river, which could facilitate greater marketability of river augmentation credits throughout the river.

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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 focus of this project is to understand how SLB land can benefit the South Platte River through partnerships with water providers. It may be possible that some SLB water rights will be used to facilitate some of the project, or that the partnership may buy more water rights in order to own water assets as part of the project. The SLB is working with Wilson Water Group and Riverside Technology to develop a complete database of water assets owned by the SLB, which could illuminate some opportunities to better utilize SLB water rights, but that is not currently part of this project scope.

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

Simply put, DU has delivered several of these projects over the last several years in partnership with the CWCB. Our South Platte River Ranch project near Ovid has been operating for several years and is an exemplary demonstration of the cooperation between agricultural landowners, water districts, conservation organizations, the state, and recreational interests. Several other similar projects have been completed in recent years including Drake Land Farms, DT Ranch, Golden Eagle Ranch, and the Haren Wildlife and Recharge project. We can provide project summaries upon request. We now wish to expand DU's water program by introducing the SLB to the process. With the proper investigations, we will be prepared to construct the project.

Every project has delivered learning opportunities, which is the reason for performing some detailed analysis of several sites before moving forward with funding the design and construction. Surprisingly, DU has not suffered from lack of 404 permits. However, some projects tied to federal funds were cancelled by the landowner due to archeological permit issues. Additionally, site location of recharge wetlands where recharge characteristics were best, did not align well with access to water. In our ongoing Winterhaven project, we are trying to work out easement agreements with adjacent landowners. The project will be completed, but it may take a substantially different approach to provide water. On the other hand, the infrastructure on Drake Land Farms and DT Ranch is being considered by new water providers to maximize the capacity in those projects for municipal and industrial needs.

3. **Exhibit A**

Statement of Work:

Water Activity Name: Water Development Feasibility of Colorado State Land Board Property Along the Lower South Platte River.

Grant Recipient – Ducks Unlimited, Inc.

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Funding Sources – Colorado State Land Board (SLB), Ducks Unlimited, Inc. (DU), CWCB

Introduction and Background – DU and the SLB will investigate several SLB properties along the lower South Platte River from Denver to the Nebraska state line to determine feasibility of developing 1-3 properties for river augmentation through wetland recharge. The project will include use of other CWCB tools such as the Wetland Recharge Location Model to identify the best potential sites based on the characteristics of that model. The very best sites from the model will be investigated in the field to determine the best 5 – 10 sites for rigorous field investigation. The top 1-3 properties will then be field tested to confirm model assumptions by coring potential recharge sites, conducting pump tests on potential recharge wells, performing AWAS and StateMod Flow analysis as required, etc. As many as 3 projects will be selected, if appropriate, and moved into design for construction and contracting with partners for water and funding.

Objectives – The overall goal of the project will be met through performing the following tasks:

Task 1 – Develop partnership and contract with SLB

Task 2 – Identify Several Top Tier SLB Properties Using the Wetland Recharge Location Model

Task 3 – Perform Field Investigations of the top 5 to 10 sites

Task 4 – Perform Detailed Investigations for Recharge Suitability

Task 5 – Provide Final Report and Accompanying Work Product

Task 1 - Develop Partnership and Contract with State Land Board

Description of Task – Several months work were spent developing a partnership between DU and the SLB. Activities included several meetings between staff, development and presentation of a fictional demonstration project, development of a proposal between the parties, and development and execution of a contract.

Method or Procedure – DU and SLB met on several occasions to discuss the potential to develop wetland recharge sites on SLB property. River augmentation was a new concept for the SLB. Despite having a couple recharge sites with Riverside Irrigation and with Central Colorado Water Conservancy District, the staff had not investigated the development techniques or business structure of river augmentation. DU also walked through our procedure for identifying potential sites and performed a desktop review for a single site owned by the SLB and provided that information as a demonstration of our procedures.

Deliverable – Executed Contract with SLB

Timing – November 2012 – September 2013

Cost - \$4,009 (Match)

Task 2 - Identify Several Top Tier SLB Properties Using the Wetland Recharge Location Model

Description of Task – This model was developed by DU under contract with the CWCB to identify potential recharge sites on a landscape level scale. We will use the model to identify the top 20% of sites in the model and which ones are owned by the SLB.

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Procedure/Method - The model is currently being completed by our contractor, Brown and Caldwell, and is in such condition to require some GIS analysis skill to deliver specific property information. However, the model is mostly completed and will be submitted to the CWCB in September 2013. It is in such working condition that we can reliably identify quarter-section parcels we wish to further investigate.

- 1) We will have Brown Caldwell manage the model to identify the top 20% of sites in the model and then identify only SLB properties. The model already incorporates published SLB property boundaries so we should be able to identify the properties easily.
- 2) We will then use the weighted criteria to work through the properties from highest to lowest score to find the top 5 – 10 sites for further investigation.

Deliverable – Semi-annual report including map of top 5 - 10 property locations and accompanying report of the property characteristics as described by the model with weighted score for each property.

Schedule – August 2013

Cost - \$1,606 (Match)

Task 3 - Perform Investigations of the top 5 to 10 sites

Description of Task – Several criteria considered in the model need to be verified in the field. We will visit each site and determine as best we can the physical limitations and any obvious legal constraints that may hinder development of each property.

Procedure/Method – DU staff, SLB staff, and our contractor will travel to all selected sites and determine limiting characteristics such as topography, water availability, partnerships with water providers, access to the river, complications associated with access for construction of infrastructure and permitting. Some of these issues will be completed with the assistance of landowner boundary maps and discussions with known water providers in the area. It is expected that topography and location relative to the river will eliminate several sites.

- 1) Property Site Visit to confirm physical characteristic of each property.
- 2) Review of landowner maps to determine distance to river, water providers, other physical impediments and potential partners.
- 3) Review of potential access issues and other easements required to develop project.
- 4) Identify major permitting restrictions.

Deliverable – Semi- annual report discussing elimination of sites from the study due to preliminary investigations

Schedule – 180 days from Notice to Proceed (NTP)

Cost - \$16,943

Task 4 - Perform Detailed Investigations for Recharge Suitability on remaining 1-3 sites

Description – Several different tasks will be pursued simultaneously during this task to determine the suitability of the best sites. We will perform detailed field tests of the remaining sites including soil coring

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of potential recharge facilities (wetlands), and test recharge well capacity (if needed). We will also be working on commitments from water providers as needed and developing easements from adjacent landowners as required.

Procedure/Method

- 1) Drill soil cores for potential recharge sites
- 2) Perform recharge well pump tests
 - a. This will likely be performed from the closest local well.
- 3) Develop commitments with Water Providers
 - a. MOU or Contracts
- 4) Develop access and pipeline easements as needed.

Deliverable – Provide information on all sites as part of the semi-annual report

Schedule – 275 days from NTP

Cost – \$37,825

Task 5 - Develop Final Report

Description – The final report will be an add-on from the semi-annual reports required by the CWCB. It will include the final agreements or commitments from water providers, identify all easements or potential easements required for the project and a conceptual design of the project.

Procedure/Method – Develop a written report for the CWCB and roundtable. Turn over all work products and materials to the CWCB.

Deliverable – Final report as required by the CWCB.

Schedule – 365 days from NTP

Cost - \$7,322

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.

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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 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.

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

Signature of Applicant:

Print Applicant's Name: Greg Kernohan

Project Title: Water Development Feasibility of Colorado State Land Board Property Along the Lower South Platte River.

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

Greg Johnson – WSRA Application
Colorado Water Conservation Board
1580 Logan Street, Suite 200
Denver, CO 80203
gregory.johnson@state.co.us

Water Supply Reserve Account – Application Form
Revised December 2011
