

**Water Supply Reserve Account – Grant and Loan Program**  
**Water Activity Summary Sheet**  
**September 24, 2013**  
**Agenda Item 18(g)**

**Applicant:** The Greenway Foundation

**Water Activity Name:** Grant-Frontier Park West Bank Floodplain Design and Construction Project

**Water Activity Purpose:** Non-consumptive / Needs Assessment

**County:** Denver

**River Basin:** Metro

**Water Source:** South Platte River

**Amount Requested:** \$400,000 (Statewide Account); \$100,000 (Metro Basin)

**Matching Funds:** \$7,120,000 (93%) (GOCO, Rocky Mountain Arsenal and Shattuck NRDS Funds, Urban Drainage and Flood Control District, CPW, et al)

<b>Staff Recommendation:</b>
Staff recommends approval of up to \$250,000 from the Statewide Account \$100,000 from the Metro Basin Account for the Grant-Frontier Park West Bank Floodplain Design and Construction Project.

**Water Activity Summary:**

Most of the riverine corridor in the project area includes a very narrow riparian zone, typically less than 50 feet wide along each bank. Herbaceous and woody species, listed on the Colorado noxious, invasive or exotic pest plant/weed list, are common within the riparian corridor. In addition to state and city recommendations and actions to remove these species from natural areas, this type of vegetation decreases ecosystem biodiversity and can block views of and access to the river. The goal of the project is to re-establish a riparian floodplain in the project reach to restore the interactions between the river and its riparian corridor by increasing the frequency of riparian inundation, resulting in of the restoration of hydrologic and ecologic functions. There is limited opportunity within this highly urbanized watershed to re-establish a riparian floodplain along the banks of the South Platte River. The existing land in the proposed project area is a gravel surface used as a parking area, owned by the City and County of Denver. Planned improvements are currently being designed within the river and along the eastern bank of the South Platte as part of the River Vision Program. This location is ideal for establishment of a riparian floodplain because the land is available (owned by the City) and construction cost efficiencies can be realized because a Contractor will be mobilized on-site to construct adjacent improvements.

Re-establishing a riparian floodplain will not only improve the river environment but also increase the benefits derived from recreational and educational improvements within Grant-Frontier Park and Pasquinel's Landing Park to the east. Implementing these improvements in conjunction with the proposed park improvements will provide both schedule and financial benefits. For instance, construction cost efficiencies can be realized by using the same contractor under a single contract. Combining the design, permitting and construction of the riparian floodplain, in-channel and Grant-Frontier/Pasquinel's Park improvements means the work can be accomplished within the next two years. In addition to benefits associated with a new riparian floodplain, aquatic and riparian corridor improvements in this reach of the river will increase the synergy created by the extensive in-channel habitat and recreation improvements that are currently being designed at Grant-Frontier Park, Pasquinel's Landing and

Overland Pond, resulting in a longer continuous reach of high quality native species habitat in a reach of the river that has suffered urban impacts for many generations.

Funding this project will result in final design drawings (ready for bidding) and construction of the riparian floodplain and non-native and invasive species removal. Specifically, WSRA funding will be used to develop bid documents (final design drawings and specifications), secure required permits for improvements targeting non-consumptive needs including non-native and invasive vegetation removal, providing additional river access, establishment of a riparian floodplain to promote native wildlife in this urban environment, and provide funding for construction of the proposed improvements.

#### *Threshold and Evaluation Criteria*

The application meets all four Threshold Criteria.

The application articulates how the project meets the Evaluation Criteria as summarized below:

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

Metro Basin Roundtable at their June 11, 2013 meeting. A portion of the River Vision Program planning and design funding was provided by the South Platte and Metro Basin Roundtables as a previous WSRA grant applications. Although no funding is requested of the South Platte Basin Roundtable for this grant application, implementation of this project will continue to promote collaboration between the Metro and South Platte Basin Roundtables through the stakeholder outreach process. In addition, this project will progress implementation of an identified project and process in the Metro Basin Needs Assessment Report (March 2011), addressing nonconsumptive needs, specifically targeting habitat restoration and recreation improvements.

The proposed improvements will integrate recreation and habitat enhancements that will benefit the Front Range community and one of the most densely-populated areas in the State of Colorado. This water activity will best leverage existing funding commitments, use of public and private resources and will result in constructed improvements by June of 2015. Because of the schedule opportunities and economy of scale, this project is an ideal candidate for implementing non-consumptive improvements in the South Platte River through Denver.

#### Tier 2: Facilitating Water Activity Implementation:

WSRA funds are necessary for successful completion of the project and further leveraging of local monies. A significant investment has been expended to date to develop this South Platte River Vision, as portrayed in the RINO, RISO and RVIP plans. Project stakeholders (The Greenway Foundation, the City and County of Denver and the Urban Drainage and Flood Control District) have already secured over \$15 million in construction funding, but the current scope does not include establishment of a riparian floodplain within this area or non-native and invasive vegetation removal along the west bank of the South Platte River. Improvements within this reach will amplify the benefit of recreation and habitat improvements that are included in the River Vision Program scope by expanding the reach of South Platte River with continuous in-channel habitat diversity.

Community support for this effort is strong. The former Mayor of Denver, now Governor Hickenlooper, officially endorsed this three-plus year planning and visioning effort. In addition, Denver City Council issued a proclamation in November 2010 applauding the RINO, RISO and RVIP documents. TGF has an excellent track record of delivering improvements to the South Platte River and tributaries for over 37 years.

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

The water activity helps meet identified environmental and recreational needs, as identified in the Metro Basin Needs Assessment Report and provides a high level of benefit to Colorado in relationship to the amount of funds requested. CWCB participated in the development of the RISO plan and design of recreation and habitat improvements (at Grant-Frontier and Overland Pond). This project will maximize benefits by providing more continuous habitat diversity within the South Platte River in Denver and build on the work CWCB has funded associated with this project over the last three years.

### **Discussion:**

Staff considers the Greenway Foundation's River Vision Implementation Plan (RVIP) a well planned and well executed multi-phase project along the South Platte corridor in Denver. The project is designed to make the best use of the available flows. It will improve channel/floodplain connections, riparian species diversity & abundance, and recreational experiences. The effort is well funded, and so far the Water Supply Reserve Account has contributed \$900,000 for planning and design work. Staff believes that the current funding recommendation will allow The Greenway Foundation to complete the necessary final design work. There will be funds remaining for construction, and there should be adequate time to acquire the additional funds needed to complete construction.

### **Issues/Additional Needs:**

- The applicant should provide staff with a detailed monitoring plan that describes geomorphic and biologic monitoring methodologies.
- The monitoring plan should conform to the CWCB Measurable Results Program's Standard Operating Procedures for Topographic Survey of Stream Channels.
- All proposed river channel work should conform to the CWCB Rules and Regulations for Regulatory Floodplains in Colorado

### **Staff Recommendation:**

Staff recommends approval of up to \$250,000 from the Statewide Account \$100,000 from the Metro Basin Account for the Grant-Frontier Park West Bank Floodplain Design and Construction Project.

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 and Final Deliverable:** 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. 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 21, 2013

Jacob Bornstein  
Colorado Water Conservation Board  
Water Supply Planning Section, WSRA Application  
1580 Logan Street, Suite 200  
Denver, CO 80203

Dear Jacob:

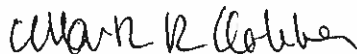
The Metro Roundtable has determined that supporting the Grant-Frontier Park West Bank Riparian Floodplain Design and Construction Project is an important element in addressing the state's non-consumptive needs. This project will result in final design drawings and specifications and construction of the proposed improvements for the Grant-Frontier Park West Bank Riparian Floodplain. This project will encompass the area of the South Platte River from West Evans Avenue (the southern border) downstream to West Jewell Avenue on the north; it is bounded by South Platte River Drive on the west and the South Platte River on the east. Project elements include removal of non-native and invasive riparian vegetation, establishment of riparian floodplain habitat and restoration of native vegetation. This location is ideal for establishment of a riparian floodplain because the land is available (owned by the City and County of Denver) and construction cost efficiencies can be realized because a Contractor will be mobilized on-site to construct adjacent improvements.

WSRA funds are necessary for successful completion of the project and further leveraging of committed construction funding.

At the June 12, 2013 Metro Roundtable meeting, a motion was made/seconded and adopted to provide \$100,000 of support from the Metro Roundtable WSRA funds to support the project. The motion also endorsed The Greenway Foundation's request for Statewide WSRA funds in the amount of \$400,000. There was a quorum present at the June meeting and the vote was unanimously in favor of the funding request.

Attached please find the application and supporting materials for this project. If you require additional information, please notify me accordingly.

Sincerely yours,



Mark Koleber  
Chair, Metro Roundtable



# COLORADO WATER CONSERVATION BOARD



## WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

Grant-Frontier Park West Bank Riparian Floodplain Design and Construction Project

### Name of Water Activity/Project

The Greenway Foundation

### Name of Applicant

Metro Basin Roundtable  
(\$100,000)

Amount from Statewide Account:

\$400,000

Amount from Basin Account(s):

\$100,000

Total WSRA Funds Requested:

\$500,000

### Approving Basin Roundtable(s)

*(If multiple basins specify amounts in parentheses.)*

## Application Content

Application Instructions	page 2
Part I – Description of the Applicant	page 3
Part II – Description of the Water Activity	page 5
Part III – Threshold and Evaluation Criteria	page 7
Part IV – Required Supporting Material	
Water Rights, Availability, and Sustainability	page 10
Related Studies	page 10
Signature Page	page 12

### 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 December 2011

---

### **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 (CWCBC). 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 CWCBC 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 CWCBC 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](mailto: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](mailto:gregory.johnson@state.co.us).

## Water Supply Reserve Account – Application Form

Revised December 2011

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

1.	Applicant Name(s):	The Greenway Foundation		
	Mailing address:	The Greenway Foundation 5299 DTC Boulevard, Suite 710 Greenwood Village, CO 80111		
	Taxpayer ID#:	51-019-3575		
	Primary Contact:	Jeff Shoemaker	Position/Title:	Executive Director
	Email:	wjs@greenwayfoundation.org		
	Phone Numbers:	Cell: (303) 818-8078	Office:	
	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.

## Water Supply Reserve Account – Application Form

Revised December 2011

---

3. Provide a brief description of your organization

The Greenway Foundation is the 501c3 non-profit organization that has, since 1974, been dedicated to the environmental and recreational reclamation of the South Platte River (and its tributaries) within the Denver Metro Area.

More information on The Greenway Foundation can be found at <http://www.greenwayfoundation.org/home/index.html>

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

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 Greenway Foundation does not have TABOR limitation with regard to grant money received from the State of Colorado.



## Water Supply Reserve Account – Application Form

Revised December 2011

### 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 water activity addresses non-consumptive needs and meets the needs and interests of multiple basins. This proposed project will help sustain environmental and recreational needs and is of statewide significance. This project represents a portion of the River Vision Implementation Plan (RVIP) and is identified in the Metro Basin Needs Assessment Report (March 2011), addressing non-consumptive needs, specifically targeting habitat restoration and recreation improvements.

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:

## Water Supply Reserve Account – Application Form

Revised December 2011

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

Latitude: 39.680216

Longitude: -104.999417

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.

In 2008, The Greenway Foundation (TGF) and the City and County of Denver (Denver) initiated a planning and implementation effort to establish a vision for a healthy and prosperous South Platte River through Denver. In 2009 the River South Greenway Master Plan (RISO) was initiated. This \$450,000 jointly-funded effort (Colorado Water Conservation Board, Urban Drainage and Flood Control District, City and County of Denver, Denver Water, and The Greenway Foundation) focused on seven miles of South Platte River habitat and recreation improvements in Denver. In 2010, TGF, again in partnership with Denver, developed the South Platte River Vision Implementation Plan (RVIP) - a \$125,000 planning effort to prioritize the recommendations into a series of short, mid and long term recommendations as well as develop cost opinions for the five short term RVIP priority projects.

Three of the five RVIP priority projects are being designed and will be constructed by June 2015 as part of the South Platte River Vision Program. The River Vision Program is a \$15 million recreation and habitat improvement program along the South Platte River from approximately Evans Avenue to Alameda Avenue. This program is being funded by a public/private partnership with the City and County of Denver (\$5.4 million), Urban Drainage and Flood Control District (\$1.7 million), Great Outdoors Colorado (\$4.6 million), the Colorado Water Conservation Board (\$0.75 million), the Shattuck and Rocky Mountain Arsenal Natural Resource Damage Settlement Funds (\$2.7 million), the Environmental Protection Agency (\$0.19 million), Colorado Department of Wildlife (0.08 million), and other private donors (0.09 million).

One of the priority projects included in the River Vision Program encompasses the Grant-Frontier Park Reach, which is also identified in the Metro Basin Needs Assessment Report (March 2011), addressing non-consumptive needs, specifically targeting habitat restoration and recreation improvements. The proposed project is within the River Vision Program limits and encompasses the area of the South Platte River from West Evans Avenue (the southern border) downstream to West Jewell Avenue on the north; it is bounded by South Platte River Drive on the west and the South Platte River on the east.

Most of the riverine corridor in the project area includes a very narrow riparian zone, typically less than 50 feet wide along each bank. Herbaceous and woody species, listed on the Colorado noxious, invasive or exotic pest plant/weed list, are common within the riparian corridor. In addition to state and city recommendations and actions to remove these species from natural areas, this type of vegetation decreases ecosystem biodiversity and can block views of and access to the river. The goal of the project is to re-establish a riparian floodplain in the project reach to restore the interactions between the river and its riparian corridor by increasing the frequency of riparian inundation, resulting in the restoration of hydrologic and ecologic functions. There is limited opportunity within this highly urbanized watershed to re-establish a riparian floodplain along the banks of the South Platte River. The existing land in the proposed project area is a gravel surface used as a parking area, owned by the City and County of Denver. Planned improvements are currently being designed within the river and along the eastern bank of the South Platte as part of the River Vision Program. This location is ideal for establishment of a riparian floodplain because the land is available (owned by the City) and construction cost efficiencies can be realized because a Contractor will be mobilized on-site to construct adjacent improvements.

## Water Supply Reserve Account – Application Form

Revised December 2011

---

Re-establishing a riparian floodplain will not only improve the river environment but also increase the benefits derived from recreational and educational improvements within Grant-Frontier Park and Pasquinel's Landing Park to the east.

Implementing these improvements in conjunction with the proposed park improvements will provide both schedule and financial benefits. For instance, construction cost efficiencies can be realized by using the same contractor under a single contract. Combining the design, permitting and construction of the riparian floodplain, in-channel and Grant-Frontier/Pasquinel's Park improvements means the work can be accomplished within the next two years. In addition to benefits associated with a new riparian floodplain, aquatic and riparian corridor improvements in this reach of the river will increase the synergy created by the extensive in-channel habitat and recreation improvements that are currently being designed at Grant-Frontier Park, Pasquinel's Landing and Overland Pond, resulting in a longer continuous reach of high quality native species habitat in a reach of the river that has suffered urban impacts for many generations.

The riparian floodplain will be designed and constructed using compacted fill consisting of sands and gravels. A rock toe will be incorporated to prevent erosion of the bench during high flow conditions. Top soil will be placed on top of the compacted fill and planted with a diverse mix of native tree and shrub species. Species will be mixed randomly across the site and ideally a mix of dominant tree species, understory trees and shrubs, and herbaceous plants will be planted. Non-native and invasive species will be removed along the west bank from West Evans Avenue (the southern border) downstream to West Jewell Avenue on the north.

Funding this project will result in final design drawings (ready for bidding) and construction of the riparian floodplain and non-native and invasive species removal. Specifically, WSRA funding will be used to develop bid documents (final design drawings and specifications), secure required permits for improvements targeting non-consumptive needs including non-native and invasive vegetation removal, providing additional river access, establishment of a riparian floodplain to promote native wildlife in this urban environment, and provide funding for construction of the proposed improvements.

## Water Supply Reserve Account – Application Form

Revised December 2011

---

### 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.<sup>1</sup>

This water activity meets the eligibility requirements outlined in Part 2 of the Water Supply Reserve Account Criteria and Guidelines. This water project (structural and non-structural) will be presented to the Metro Basin Roundtable (the basin in which the activity will occur) at their June 11, 2013 meeting.

The Greenway Foundation is a non-governmental organization, eligible for WSRA grants. The proposed recreation and habitat improvement design will address non-consumptive needs and will not restrict the ability of the holder of a water right to use or to dispose of that water right in any manner permitted by Colorado law and is consistent with CRS 37-75-102.

- 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.

At the June 12, 2013 Metro BRT meeting, a motion was made/seconded and adopted to provide \$100,000 of support from the Metro Basin WSRA funds to support the project. The motion also endorsed The Greenway Foundation's request for Statewide funds in the amount of \$400,000. There was a quorum present at the June meeting and the vote was unanimously in favor of the funding request. Attached to this application is a support letter from the Metro Basin Roundtable Chair.

---

<sup>1</sup> 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 unsatisfactory 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.

## Water Supply Reserve Account – Application Form

Revised December 2011

---

- c) The water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes.<sup>2</sup> 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.

The water activity meets the provisions of Section 37-75-104 (2) (c). This water activity will assist the State in addressing non-consumptive needs. The proposed improvements are described in the Metro Basin Needs Assessment Report (March 2011). Implementation of this project will realize substantial recreational and habitat improvements and best leverage the use of resources to maximize benefit to the ecosystem and State of Colorado.

- 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 CWCB. 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)

In all, over \$15 million have been secured for construction of habitat and recreation improvements as part of the River Vision Program. Available letters of commitment are included in Exhibit A. These letters of commitment were prepared for a Great Outdoors Colorado (GOCO) River Corridors Initiative Grant Proposal; \$4.6 million was awarded by GOCO on June 18, 2012 to the City and County of Denver to construct the proposed recreation and habitat improvements described in the South Platte River Vision Grant Proposal. In addition to the construction funding mentioned above, the City and County of Denver has committed \$5.4 million in maintenance, CIP and bond funding; Urban Drainage and Flood Control District has committed \$1.7 million to the River Vision Program; and over \$2.7 million in Natural Resource Damage Settlement funds have been committed to the River Vision Program. Approval of this grant request and implementation of in-channel multi-objective habitat and recreation improvements will result in more than 3,000% match of CWCB WSRA funds, when compared to the overall River Vision Program committed funding.

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.**

---

<sup>2</sup> 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 non-consumptive water supply needs assessment, conduct an analysis of available nonappropriated waters within the basin, and propose projects or methods, both structural and nonstructural, for meeting those needs and utilizing those nonappropriated 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.

## Water Supply Reserve Account – Application Form

Revised December 2011

**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. 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.
- 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.**

**This project meets multiple objectives in the Tier 1 Evaluation Criteria** – The project will be presented to the

## Water Supply Reserve Account – Application Form

Revised December 2011

---

Metro Basin Roundtable at their June 11, 2013 meeting. A portion of the River Vision Program planning and design funding was provided by the South Platte and Metro Basin Roundtables as a previous WSR grant applications. Although no funding is requested of the South Platte Basin Roundtable for this grant application, implementation of this project will continue to promote collaboration between the Metro and South Platte Basin Roundtables through the stakeholder outreach process. In addition, this project will progress implementation of an identified project and process in the Metro Basin Needs Assessment Report (March 2011), addressing non-consumptive needs, specifically targeting habitat restoration and recreation improvements.

The proposed improvements will integrate recreation and habitat enhancements that will benefit the Front Range community and one of the most densely-populated areas in the State of Colorado. This water activity will best leverage existing funding commitments, use of public and private resources and will result in constructed improvements by June of 2015. Because of the schedule opportunities and economy of scale, this project is an ideal candidate for implementing non-consumptive improvements in the South Platte River through Denver.

**This project meets multiple objectives in the Tier 2 Evaluation Criteria** – WSR funds are necessary for successful completion of the project and further leveraging of local monies. A significant investment has been expended to date to develop this South Platte River Vision, as portrayed in the RINO, RISO and RVIP plans. Project stakeholders (The Greenway Foundation, the City and County of Denver and the Urban Drainage and Flood Control District) have already secured over \$15 million in construction funding, but the current scope does not include establishment of a riparian floodplain within this area or non-native and invasive vegetation removal along the west bank of the South Platte River. Improvements within this reach will amplify the benefit of recreation and habitat improvements that are included in the River Vision Program scope by expanding the reach of South Platte River with continuous in-channel habitat diversity.

Funding is needed to further leverage efficiencies from the River Vision Program, hence the basis for this application. The amount of matching funds (secured construction funds) far exceeds the 20% requirement; in fact, the committed matching funding exceeds 3,000 % of the grant request.

Community support for this effort is strong. The former Mayor of Denver, now Governor Hickenlooper, officially endorsed this three-plus year planning and visioning effort. In addition, Denver City Council issued a proclamation in November 2010 applauding the RINO, RISO and RVIP documents. TGF has an excellent track record of delivering improvements to the South Platte River and tributaries for over 37 years.

**This project meets multiple objectives in the Tier 3 Evaluation Criteria** – the water activity helps meet identified environmental and recreational needs, as identified in the Metro Basin Needs Assessment Report and provides a high level of benefit to Colorado in relationship to the amount of funds requested. CWCB participated in the development of the RISO plan and design of recreation and habitat improvements (at Grant-Frontier and Overland Pond). This project will maximize benefits by providing more continuous habitat diversity within the South Platte River in Denver and build on the work CWCB has funded associated with this project over the last three years.

## Water Supply Reserve Account – Application Form

Revised December 2011

---

### 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 activity will consist of structural and non-structural improvements in the South Platte River in Denver. This water activity will progress design of recreation and habitat improvement concepts presented in the community-based, multi-stakeholder vision documents - the RISO Master Plan and South Platte RVIP. The riparian floodplain project encompasses the area of the South Platte River from West Evans Avenue (the southern border) downstream to West Jewell Avenue on the north; it is bounded by South Platte River Drive on the west and the South Platte River on the east.

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

The water activity will build upon the findings in the South Platte River Vision Implementation Plan (March 2011), the River South Greenway Master Plan (January 2010) and the River North Greenway Master Plan (April 2009), and the South Platte River Recreation and Habitat Improvement Preliminary Design.

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 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.

**Water Supply Reserve Account – Application Form**

Revised December 2011

---

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

Signature of Applicant:



Print Applicant's Name: Jeff Shoemaker

**Project Title:** Grant-Frontier Park West Bank Riparian Floodplain Design and Construction Project

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

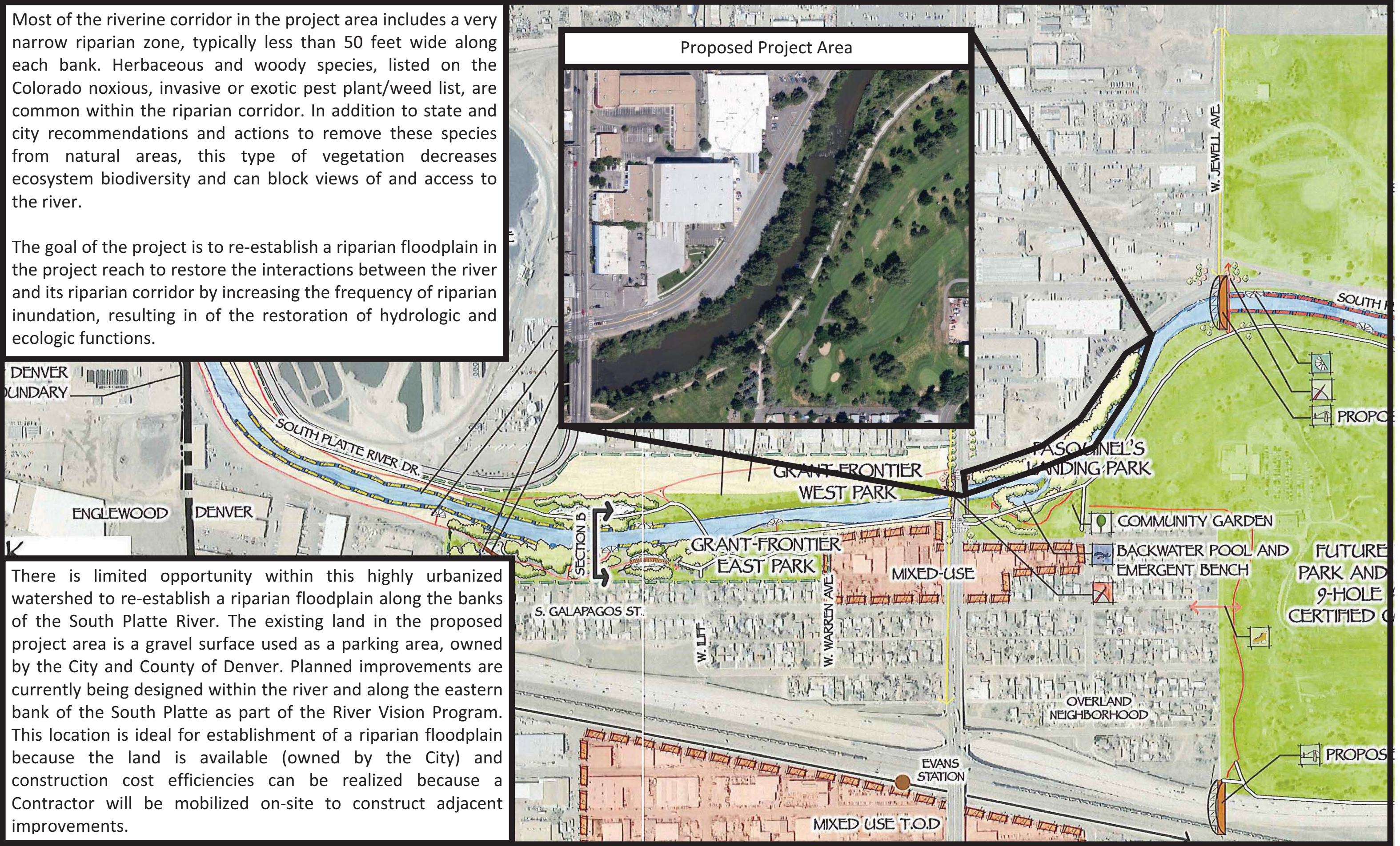
Greg Johnson – WSRA Application  
Colorado Water Conservation Board  
1580 Logan Street, Suite 200  
Denver, CO 80203  
[gregory.johnson@state.co.us](mailto:gregory.johnson@state.co.us)



Most of the riverine corridor in the project area includes a very narrow riparian zone, typically less than 50 feet wide along each bank. Herbaceous and woody species, listed on the Colorado noxious, invasive or exotic pest plant/weed list, are common within the riparian corridor. In addition to state and city recommendations and actions to remove these species from natural areas, this type of vegetation decreases ecosystem biodiversity and can block views of and access to the river.

The goal of the project is to re-establish a riparian floodplain in the project reach to restore the interactions between the river and its riparian corridor by increasing the frequency of riparian inundation, resulting in of the restoration of hydrologic and ecologic functions.

There is limited opportunity within this highly urbanized watershed to re-establish a riparian floodplain along the banks of the South Platte River. The existing land in the proposed project area is a gravel surface used as a parking area, owned by the City and County of Denver. Planned improvements are currently being designed within the river and along the eastern bank of the South Platte as part of the River Vision Program. This location is ideal for establishment of a riparian floodplain because the land is available (owned by the City) and construction cost efficiencies can be realized because a Contractor will be mobilized on-site to construct adjacent improvements.





**Attachment 1 - Scope of Work, Professional Services Fee Estimate, Opinion of Probable Construction  
Cost and Proposed Schedule**

## **Scope of Work**

### **Introduction and Background**

The scope of work includes professional engineering and landscape architectural services required to finalize the design of the Grant-Frontier Park West Bank Riparian Floodplain project. The design effort will focus on preparing draft and final design drawings and specifications for bidding and securing required permits for construction of the improvements.

The goal of the project is to re-establish a riparian floodplain in the project reach to restore the interactions between the river and its riparian corridor by increasing the frequency of riparian inundation, resulting in of the restoration of hydrologic and ecologic functions. There is limited opportunity within this highly urbanized watershed to re-establish a riparian floodplain along the banks of the South Platte River. The existing land in the proposed project area is a gravel surface used as a parking area, owned by the City and County of Denver. Planned improvements are currently being designed within the river and along the eastern bank of the South Platte as part of the River Vision Program. This location is ideal for establishment of a riparian floodplain because the land is available (owned by the City) and construction cost efficiencies can be realized because a Contractor will be mobilized on-site to construct adjacent improvements.

A concept plan figure is provided with this Water Supply Reserve Account Grant Application showing the location of the proposed improvements. Summarized below is the proposed Scope of Work.

### **Task 1 – Project Management and Meetings**

Upon Notice to Proceed, The Greenway Foundation and it's consultants (hereafter referred to as the Team) will conduct/participate in a project kick-off meeting with stakeholders. The kick-off meeting will address the following:

- Project and scope overview
- Schedule
- Communications procedures
- Review of information currently available
- Requests for Additional Information
- Goals and expectations

The kick-off meeting will include a visit to the project site by The Team and interested stakeholders to assess and confirm site conditions and further identify project issues.

A detailed project schedule will be developed and updated on an as needed basis to reflect any substantive changes in the plan.

Funding for construction of other River Vision Program components has been committed through grants and stakeholder matching funds. Because of the significant contributions from numerous stakeholders, coordination and progress meetings are required for a variety of agencies; all attempts will be made to minimize the number of meetings and maximize agency participation. The Team will conduct up to 4 meetings/workshops with the River Vision Coordination Committee (RVCC), Urban Drainage and Flood Control District (UDFCD), Metro Wastewater Reclamation District and/or the City and County of Denver (CCD) throughout the duration of the project to review progress, discuss key issues, exchange ideas, and make decisions. The scope of these meetings will generally include a discussion of work completed, budget and schedule status, potential problem areas and solutions, and technical matters. The

Team will prepare agenda and minutes for each meeting and distribute to the UDFCD's and CCD's Project Manager electronically. Key decisions will be prepared by the Team and tracked in a decision log.

The Team will maintain a project eRoom to facilitate scheduling, project documents, and related coordination. Members will be added to the e-Room at the stakeholders' request. The Team will hold biweekly internal conference calls to update project progress, schedule, and specific design issues. Summaries from these meetings will be posted to the eRoom.

The Team will provide monthly progress reports which will accompany invoices and include task status and planned activities.

#### **Assumptions**

- Up to 4 meetings with RVCC/CCD/UDFCD

#### **Deliverables**

- Kick-off meeting summary
- Monthly progress reports (16 assumed)

#### **Task 2 – Data Acquisition and Field Investigations**

The Team will obtain updated information regarding the project and project site, as available. The Team will coordinate with City and County of Denver (CCD) staff and Urban Drainage and Flood Control District (UDFCD) to obtain the most recent hydraulic modeling as well as review invasive species eradication techniques as per CCD and UDFCD. All information and pertinent data will be incorporated into the project on an as-needed basis.

As part of this task, the Team will perform additional site investigations, including obtaining additional field survey, as required for final design. Surveying and mapping will be conducted in a manner that conforms to applicable UDFCD and CCD requirements.

#### **Assumptions**

- The Team will identify right-of-way and easement information from the Denver County Assessor's Office and information provided by project stakeholders (e.g. CCD and UDFCD).

#### **Deliverables**

- The Team will provide updated project mapping developed in this task.
- Detailed tree survey (tagging and surveying) will be conducted

#### **Tasks 3 and 4 – Final Design Development (75- and 100-percent design documents)**

Because final design of other River Vision Program elements are currently underway, a streamlined design effort is proposed for this project so that the design is complete and the project is ready for construction in the second quarter of 2014. The proposed approach is to develop 75% design documents (Task 3), based on the preliminary design already completed as part of the South Platte River Recreation and Habitat Improvements Preliminary Design. The Team will then prepare 100% design documents based on stakeholder comments from the 75% deliverable. Technical specifications and cost opinions will also be developed for each final design milestone. The design will incorporate final hydraulic modeling results (see Task 5) and additional site investigations (see Task 2), as required for final design. The design review process will be in accordance with UDFCD and CCD requirements and will include internal QA/QC of design drawings, project specifications, and cost opinions at 75-percent and 100-percent completion milestones.

### **Task 5 – Floodplain Analysis and Hydraulic Modeling**

The Team will develop and provide the necessary hydraulic data for the Floodplain Development Permit and CLOMR associated with this scope of work. The Team will update the HEC-RAS hydraulic model based on updated information collected in Task 2 and associated design refinements. This model shall use the update base mapping data to finalize cross-sections at specific locations within the project area that will be used to quantify low and flood flow characteristics through the project area.

The Team will utilize the current conditions hydraulic model to assess the impacts of improvements on regulatory (100-year) and low (bankfull) flows. This “proposed conditions” model will be updated regularly as the design progresses. The Team will prepare and submit the CLOMR for the proposed project, if required by UDFCD.

#### **Assumptions**

- Regulatory model will be provided by UDFCD

#### **Deliverables**

- Draft and Final CLOMR

### **Task 6 – Permitting**

The Team will assist UDFCD and CCD in obtaining necessary regulatory approval for implementation of the proposed improvements. This task will include providing the necessary exhibits and documentation to support the permitting process.

As part of this task, the Team will develop and provide necessary material required to secure permits associated with the improvements described in this scope of work. Anticipated permits include the 404 permit, floodplain development permit, Denver Project Controls Office review and approvals, and other Right-of Way permits. Material to be provided by the Team could include site plans, development plans, project descriptions, erosion and sedimentation control plans (i.e., Stormwater Management Plan), and hydraulic and sediment transport analysis data. Based on discussions with UDFCD, the Team assumes that UDFCD will prepare the Section 404 permit application. Preparation of the 404 permit application is not included in this task (to be completed under a separate contract), but the Team will provide technical information associated with this scope of work required to complete the 404 permit application.

### **Task 7 – Engineering Services During Construction**

Construction is anticipated to be performed as part of the River Vision Program using the City’s CMGG Contractor. The construction cost opinion (\$395,722.80) for the proposed improvements is provided following the professional services budget summary (\$104,277.20) resulting in a total project cost of \$500,000, which is equal to the WSRA Grant request. The Team will provide limited engineering services during construction, including submittal reviews and response to request for information (RFIs). The Team assumes that up to 30 submittals and RFIs (combined total) will be reviewed, assuming 4 hours per submittal review/RFI response.

Professional Services Fee Estimate - Grant-Frontier Park West Bank Riparian Floodplain Design and Construction Project

Labor															
	Senior Project Manager	Technical Director	Project Manager	Engineer/ Scientist 6	Engineer/ Scientist 3	Designer/ Drafter	Cost Estimator	Principal Landscape Architect	Landscape Architect 6	Landscape Architect 3	Landscape Architect 1	Admin/ Word Processing		Total Hours	Total Labor
	\$225.00	\$200.00	\$155.00	\$145.00	\$100.00	\$90.00	\$175.00	\$140.00	\$110.00	\$85.00	\$70.00	\$85.00			Cost
Task 1 - Project Management and Meetings	8		8					8						24	\$4,160.00
Task 2 - Data Acquisition and Field Investigations			4			8		16						28	\$3,580.00
Task 3 - 75% Design Development (60% P&S, OPCC)	16	8	16			40	16		16	32	32	24		200	\$22,840.00
Task 4 - 100% Design Development (100% P&S, OPCC)	16	8	16			20	8		16	16	16	24		140	\$17,160.00
Task 5 - Floodplain Analysis and Hydraulic Modeling			16	60	100									176	\$21,180.00
Task 6 - Permitting	8		12		8	12		12	8					60	\$8,100.00
Task 7 - Engineering Services During Construction	16		80					24						120	\$19,360.00
Total Hours	64	16	152	60	108	80	24	60	40	48	48	48		748	
Cost	\$14,400.00	\$3,200.00	\$23,560.00	\$8,700.00	\$10,800.00	\$7,200.00	\$4,200.00	\$8,400.00	\$4,400.00	\$4,080.00	\$3,360.00	\$4,080.00			\$96,380.00

Other Direct Costs				
Task	Copies No.	Mileage Miles		Total
	\$ 0.25	\$ 0.565		
Task 1 - Project Management and Meetings	250	160		\$ 152.90
Task 2 - Data Acquisition and Field Investigations	250	80		\$ 107.70
Task 3 - 75% Design Development (60% P&S, OPCC)	1000			\$ 250.00
Task 4 - 100% Design Development (100% P&S, OPCC)	1000			\$ 250.00
Task 5 - Floodplain Analysis and Hydraulic Modeling	500			\$ 125.00
Task 6 - Permitting	100			\$ 25.00
Task 7 - Engineering Services During Construction	500	640		\$ 486.60
Total Units	3600	880		
Costs	\$900.00	\$497.20		\$1,397.20

Subcontractors					
Task	Survey/ Easements	Utility Locates	Geotechnical Investigation		Total
Task 1 - Project Management and Meetings	\$ -	\$ -	\$ -		\$ -
Task 2 - Data Acquisition and Field Investigations	\$ 5,000.00	\$ 1,500.00	\$ -		\$ 6,500.00
Task 3 - 75% Design Development (60% P&S, OPCC)	\$ -	\$ -	\$ -		\$ -
Task 4 - 100% Design Development (100% P&S, OPCC)	\$ -	\$ -	\$ -		\$ -
Task 5 - Floodplain Analysis and Hydraulic Modeling	\$ -	\$ -	\$ -		\$ -
Task 6 - Permitting	\$ -	\$ -	\$ -		\$ -
Task 7 - Engineering Services During Construction	\$ -	\$ -	\$ -		\$ -
Costs	\$ 5,000.00	\$ 1,500.00	\$ -		\$ 6,500.00

Total Costs					
Task	Labor	Subcontract	Other Direct Costs		Total
Task 1 - Project Management and Meetings	\$ 4,160.00	\$ -	\$ 152.90		\$ 4,312.90
Task 2 - Data Acquisition and Field Investigations	\$ 3,580.00	\$ 6,500.00	\$ 107.70		\$ 10,187.70
Task 3 - 75% Design Development (60% P&S, OPCC)	\$ 22,840.00	\$ -	\$ 250.00		\$ 23,090.00
Task 4 - 100% Design Development (100% P&S, OPCC)	\$ 17,160.00	\$ -	\$ 250.00		\$ 17,410.00
Task 5 - Floodplain Analysis and Hydraulic Modeling	\$ 21,180.00	\$ -	\$ 125.00		\$ 21,305.00
Task 6 - Permitting	\$ 8,100.00	\$ -	\$ 25.00		\$ 8,125.00
Task 7 - Engineering Services During Construction	\$ 19,360.00	\$ -	\$ 486.60		\$ 19,846.60
	\$ 96,380.00	\$ 6,500.00	\$ 1,397.20		\$ 104,277.20



Opinion of Probable Construction Cost - Grant-Frontier Park West Bank Riparian Floodplain

No. 1	Item	Unit	Estimated Quantity	Unit Price	Total Estimated Price
1	Mobilization/ Demobilization	LS	1	\$ 15,000	\$ 15,000
3	Clearing and Grubbing (Trees and Invasive Species)	Acres	3	\$ 10,000	\$ 30,000
5	Debris Removal/Demo and haul off-site (non structural)	CY	1000	\$ 35	\$ 35,000
6	Water Control	LS	1	\$ 15,000	\$ 15,000
7	Erosion and Sediment Control	LS	1	\$ 5,000	\$ 5,000
8	Low Flow Floodplain Bench (channel contouring and rock toe)	CY	2000	\$ 20	\$ 40,000
9	Bank Grading/Stabilization	CY	2000	\$ 3	\$ 6,640
10	Riparian/Wetland Vegetation	Acres	1.50	\$ 25,000	\$ 37,500
11	Soil Prep/Native Seeding	Acres	1.00	\$ 18,000	\$ 18,000
12	Tree Planting	EA	30	\$ 400	\$ 12,000
13	Shrub Planting-Willow Stakes (3' O.C.)-Long Stake	Acres	1.00	\$ 20,000	\$ 20,000

SUBTOTAL OPINION OF DIRECT COSTS				\$	234,100.00
Markups					
Gen Liab Ins (% total cost)	1.00%			\$	3,993.00
GC Bonds (% total cost)	1.50%			\$	5,989.50
Builder's Risk Ins (% total cost)	0.20%			\$	798.60
General Conditions	10.0%			\$	39,930.00
Contractor Total OH&P	10.0%			\$	39,930.00
Contingency	17.9%			\$	70,981.70
TOTAL CONSTRUCTION COST OPINION				\$	395,722.80

**Proposed Schedule - Grant-Frontier Park West Bank Riparian Floodplain Design and Construction Project**

Task	Date															
	Dec-13	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15
Task 1 - Project Management and Meetings <sup>1</sup>																
Task 2 - Additional Data Acquisition and Field Investigations																
Task 3 - 75% Design																
Task 4 - 90% Design																
Task 5 - Floodplain Analysis and Hydraulic Modeling																
Task 6 - Permitting																
Task 7 - Engineering Services During Construction <sup>2</sup>																

1. Assumed notice to proceed December 1, 2013

2. Construction duration assumed to last up to 6 months.