



Arkansas Basin Roundtable
Official Records Location
c/o Board of Water Works of Pueblo
Attention: Leslie Martinez
P.O. Box 400
Pueblo CO 81002-0400

January 16, 2013

Greg Johnson
Colorado Water Conservation Board
Water Supply Planning Section
1580 Logan Street, Suite 600
Denver, Colorado 80203

Re: Water Supply Reserve Account Grant Application for Fountain Creek Bank Restoration at the Frost Ranch

Dear Greg:

Under separate cover you will receive a WSRA grant application for the Fountain Creek Bank Restoration at the Frost Ranch. At the January 9, 2013, Arkansas Basin Roundtable meeting, the Roundtable agreed by consensus to approve this application for \$30,000 in Basin Funds and \$75,000 of Statewide Funds.

My expectation is that this grant request will be heard at the March, 2013 CWCB meeting since it includes Statewide Funds. Please do not hesitate to contact me if you have any questions.

Sincerely,

Gary Barber
Chair

c: Executive Committee, Ark Roundtable
Todd Doherty, CWCB staff
Graham Thompson

COLORADO WATER CONSERVATION BOARD

WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM



Fountain Creek Bank Restoration at the Frost Ranch

Name of Water Activity/Project

Fountain Creek Watershed Flood Control and Greenway District

Name of Applicant

Arkansas Basin Roundtable

Amount from Statewide Account:

\$75,000

Amount from Basin Account(s):

\$30,000

Total WSRA Funds Requested:

\$105,000

Approving Basin Roundtable(s)

(If multiple basins specify amounts in parentheses.)

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Required Exhibits

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

Appendices – Reference Material

- Program Information
- Insurance Requirements
- WSRA Standard Contract Information (Required for Projects Over \$100,000)
- 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):	Fountain Creek Watershed Flood Control and Greenway District		
	Mailing address:	PO Box 26373 Colorado Springs, CO 80936-6373		
	Taxpayer ID#:	27-0799089		
	Primary Contact:	Mr. Larry Small	Position/Title:	Executive Director
	Email:	Fountainckdist@aol.com ; lsmall42@comcast.net		
	Phone Numbers:	Cell: 719-447-5012	Office:	
	Alternate Contact:	Wayne Vanderschuere	Position/Title:	Colorado Springs Utilities
	Email:	wvanderschuere@csu.org		
	Phone Numbers:	Cell:	Office:	719-668-3811

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

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

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3. Provide a brief description of your organization

The Fountain Creek Watershed Greenway and Flood Control District was created under SB09-1441 in April of 2009 for the purpose of managing, administrating and funding capital improvement projects that will lead to the mitigation of flooding, improved water quality issues, erosion and sedimentation control and improved drainage. In addition, the district will fund the protection of open space as well as develop greenway amenities.

The newly formed district encompasses El Paso and Pueblo Counties. Land use authority is limited to the 100-year floodplain between El Paso and Pueblo counties south of the City of Fountain and north to the City of Pueblo.

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

N/A

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.

N/A

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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 also protects productive agricultural land on the Frost Ranch.

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)

400 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: 38°34'24.21"N

Longitude: 104°38'18.27"W

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.

Fountain Creek Bank Restoration at the Frost Ranch Overview of Proposed Water Activity

The proposed water project is to restore an eroding stream bank of Fountain Creek at the Frost Ranch in southern El Paso County. The project is located on Fountain Creek between Interstate 25 and Hanover Road about 1 ½ miles south of the Pikes Peak International Raceway and the Old Pueblo Road exit off of Interstate 25. The project bank is on the left bank (facing downstream) of the creek near the Frost headquarters.

The project bank lies along an eroding bendway where Fountain Creek has migrated into a bank with no riparian vegetation. The lack of vegetation along about 400 feet of the left bank (looking downstream) allows the soil to be readily removed during high flow events.

Over the years at this location, the landowner has experienced flood damage and bank erosion that has caused loss of property, damage to fences, loss of productivity, and loss of habitat and vegetation. Since 2010, the bank has migrated as much as 70 feet at one point.

As a result of the bank erosion, the creek has become over widened from the stable Fountain Creek reference width of 160 feet to more than 200 feet. Near the lower end of the project, the bank has “scalped” out and is creating severe secondary currents (eddy) that will aggravate future erosion. Using an estimate of erosion based on bank erosion hazard index and near bank stress, it is estimated that routine (non-flood) erosion has increased from about 0.1 tons/foot/year to nearly 1 tons/foot/year. Along the 400-foot project reach that equates to an increase from 40 tons/year to 400 tons/year, a ten-fold increase. The over widening and increased sediment supply has caused downstream deposition which, if allowed to continue, will in-turn aggravate bank erosion.

With the exception of the project bank, this reach of Fountain Creek is an exemplary healthy reach. The creek in this vicinity is relatively stable, well-vegetated and neither aggrading or degrading. It is bordered by dense riparian and wetland buffer and associated high-value habitat. The vegetation buffer provides roughness that slows velocities and root mass that holds the stream banks together during floods. Restoring the project bank in this reach would prevent further impacts to the otherwise health reach at much lower cost than repairing it after further damage. In addition, this healthy reach was recently used as a reference reach to collect stable geomorphic and survey data to guide another channel restoration project on a site upstream. As such, considerable data for that study has already been collected for this site.

The project bank has a relatively low height compared to other severely eroding banks on Fountain Creek. That will allow the project to proceed with available Water Reserve Account funds to demonstrate effective habitat-sensitive restoration techniques at a reasonable cost by comparison. The concept for restoration will utilize the construction of a bankfull bench against the toe of the eroding bank. The bench width will restore the creek to a reference width and improve sediment transport capacity. The bench will be stabilized with appropriate toe protection and augmented with willow and other riparian plantings to increase habitat and provide sustainable flood velocity mitigation and soil protection.

The project bank is readily accessible and will be an excellent location to demonstrate techniques that can be used to systematically address larger erosion and sedimentation issues along Fountain Creek. Addressing these issues will begin to reduce the sediment supply that is contributing to irrigation, flooding, and stream stability problems downstream on Fountain Creek and the Arkansas River.

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Part III. – Threshold and Evaluation Criteria

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

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

Yes. The Fountain Creek Bank Restoration Project at the Frost Ranch is a non-consumptive use project that does not restrict the ability of any holder of the water rights to use or to dispose of that water right in any manner permitted under Colorado Law and is consistent with section 37-75-102 Colorado Revised Statutes.

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.

Pending

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.

Pending

- 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)

See Following Table

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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TOTAL BUDGET
Lump Sum Amount

1.	Frost Ranch Site Survey, base information, design and construction document preparation		
a.	Colorado Springs Utilities Southern Delivery System, Fountain Creek realignment study at Clear Spring Ranch	\$31,300	In-Kind
b.	Fountain Creek Watershed Flood Control and Greenway District	\$13,125	Cash
c.	Basin Funds	\$30,000	Cash
2.	Implementation		
a.	Fountain Creek Watershed Flood Control and Greenway District	\$32,175	Cash
b.	Statewide Account	\$75,000	Cash
c.	Frost Livestock Company	\$7,500	In-Kind
Total Project Budget		\$189,100	

Cash Match	24.0%
Official 3 rd Party In-Kind Percentage Match	20.5%
Basin Funds Percentage Match	15.9%
Statewide Account Percentage of total project budget	39.6%

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

Evaluation Criteria – the following criteria will be utilized to further evaluate the merits of the water activity proposed for funding from the Statewide Account. In evaluation of proposed water activities, preference will be given to projects that meet one or more criteria from each of the three “tiers” or categories. Each “tier” is grouped in level of importance. For instance, projects that meet Tier 1 criteria will outweigh projects that only meet Tier 3 criteria. 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.

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This project meets multiple objectives in the Tier 1 Evaluation Criteria.

- a) By addressing erosion and sedimentation in Fountain Creek, the project will address multiple issues in the Arkansas River basin. The bank stabilization effort will reestablish the natural riparian vegetation and improve both terrestrial and aquatic habitat, while reducing sedimentation. The vegetation will provide cover for wildlife and shade the creek bank for improved fisheries. Sedimentation in the Arkansas Basin is a major concern to water users. Sedimentation raises the grade in the Arkansas River and clogs irrigation diversions that significantly impact water users' ability to divert water. The eroded creek bank in the project area is estimated to yield 1,000% more sediment when compared to stable banks in Fountain Creek. Reduced sediment load in Fountain Creek will also result in improved water quality.
- b) This project, while led by the Fountain Creek Watershed, Flood Control and Greenway District, is supported by the Lower Arkansas Conservancy District, Colorado Open Lands, Central Colorado Conservation Districts, El Paso County and the private land owner. This project is seen as a low-cost, high return project that all project supporters intend to promote as a key strategy and demonstration project for reducing sedimentation in Fountain Creek. This is a key goal of the *Fountain Creek Corridor Restoration Master Plan* that was completed in October, 2011 by the Fountain Creek Watershed, Flood Control and Greenway District. This project will serve as a model for habitat-sensitive restoration techniques throughout the state of Colorado. It will demonstrate the effectiveness of early identification of a problem and the implementation of cost effective measures to stabilize river banks before the problem becomes much larger and much more expensive to correct. (See Exhibit C – Letter From Colorado Open Lands)
- c) The proposed improvements that are a part of this project will address three of the four priorities identified in the Arkansas Basin Water Needs Assessment Report. The three priorities are:
 - Maintain agricultural viability in the lower basins.
 - Provide for adequate water quality to meet all needs.
 - Ensure adequate water for future needs including municipal and industrial (M & I), agricultural, recreational and environmental purposes.

Also, this project is located within the Fountain Creek Watershed, one of the three non-consumptive environmental and recreational water needs focus areas that was identified in the Arkansas Basin Water Needs Assessment Report.

This project meets multiple objectives in the Tier 2 Evaluation Criteria.

- d & e) WSRA funds are necessary for successful completion of the project and future leveraging of local monies. WSRA funds will complete the construction documents and construction of the Fountain Creek Bank Restoration at Frost Ranch. This leverages money and in-kind services provided by Colorado Springs Utilities, as a part of the Southern Delivery System, Fountain Creek Realignment Study at Clear Spring Ranch. This study includes an initial site survey and engineering study of the Frost Ranch as a reference reach for the Fountain Creek realignment at Clear Spring Ranch. Design of habitat-sensitive restoration techniques developed as a part of the Clear Spring Ranch project will be applied to the Frost Ranch project.

The Fountain Creek Bank Restoration at Frost Ranch will serve as a demonstration of habitat-sensitive restoration techniques that will be proposed throughout the Fountain Creek Watershed. The Fountain Creek Watershed, Flood Control and Greenway District will be initiating a series of sediment transport studies to identify priority sites along the main stem of Fountain Creek, similar to Frost Ranch, that can benefit from the demonstrated habitat-sensitive restoration techniques to reduce erosion.

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This project meets multiple objectives in the Tier 3 Evaluation Criteria.

- f, i & j) The water activity helps meet environmental and recreational needs as identified in the Arkansas Basin Needs Assessment Report and in relationship to the amount of funds requested, provides a high level of benefit to the State of Colorado. The water activity is also complementary to, and assists in, the implementation of other programs in the CWCB, including the Fish Passage at the Ray Nixon Power Plant diversion on Clear Spring Ranch upstream from the Frost Ranch.
- h) The water activity includes bank and channel improvements that assist in the recovery of the Arkansas Darter, a threatened and endangered wildlife species and the Flathead Chub, a Colorado state species of concern.

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1. 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 Fountain Creek within El Paso County. The water activity will progress design and construction of habitat-sensitive restoration techniques that will stabilize the creek bank, reducing erosion and sediment transport while improving water quality and protecting viable agricultural land.

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

The water activity will build up the findings in the Fountain Creek Corridor Restoration Master Plan (October 2011) and the United States Army Corps of Engineers Fountain Creek Watershed Study (2009). Once constructed the water activity will assist and complement the objectives of the Southern Delivery system, Fountain Creek realignment at Clear Spring Ranch (2014) and the Fish Passage at Clear Spring Ranch (2014).

3. Statement of Work, Detailed Budget, and Project Schedule
(See Attached)

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.

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

Signature of Applicant:



Print Applicant's Name:

Larry Small, Executive Director, Fountain Creek Flood Control and Greenway District

Project Title: Fountain Creek Bank Restoration at the Frost Ranch

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

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EXHIBIT A STATEMENT OF WORK

I. Water Activity Name:

Fountain Creek Bank Restoration at the Frost Ranch

II. Grant Recipient:

Fountain Creek Watershed Flood Control and Greenway District

III. Funding Source:

Water Supply Reserve Account

IV. Introduction and Background:

V. Problem Identification:

The proposed water project is to restore an eroding stream bank of Fountain Creek at the Frost Ranch in southern El Paso County. The project bank lies along an eroding bendway where Fountain Creek has migrated into a bank with no riparian vegetation. The lack of vegetation along about 400 feet of the left bank (looking downstream) allows the soil to be readily removed during high flow events. Over the years at this location, the landowner has experienced flood damage and bank erosion that has caused loss of property, damage to fences, loss of productivity, and loss of habitat and vegetation. Since 2010, the bank has migrated as much as 70 feet at one point.

The Bank Assessment for Non-point source Consequences of Sediment (BANCS) model is a method to evaluate bank characteristics and flow distribution along river reaches to provide an estimation of bank erosion rates. Based on what we know about this reach of Fountain Creek, the eroded eastern bank adjacent to the Frost property likely yields between 0.4 and 1.0 tons of sediment per foot of streambank per year. However, most stable streambank features in this reach of Fountain Creek yield approximately 0.1 tons of sediment per foot of streambank per year. Therefore, the eroded east bank adjacent to the Frost property yields between 1000% more sediment when compared to stable banks in Fountain Creek.

VI. Objectives:

The objective of this project is to stabilize 400ft of Fountain Creek bank to eliminate erosion and reduce sedimentation while protecting viable agricultural land and improving terrestrial and aquatic habitat.

VII. Tasks:

A. Task 1 – Survey & Data Collection

Matrix will provide a detailed topographic survey at the location of this project for the purposes of preparing final design plans. The survey will encompass the longitudinal and lateral extents of the eroded bank. Additional data will be obtained from:

- Available base mapping
- Relevant hydrologic, hydraulic, geomorphic, and environmental reports
- One (1) site visit to evaluate existing conditions

B. Task 2 – Engineering Analysis

Matrix will conduct engineering analyses needed to support the design of the selected bank stabilization method. Engineering analyses are expected to include:

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- Design flow selection
- Hydraulic analysis
- Scour analysis
- Geomorphic evaluation
- Vegetation assessment

C. Task 3 – Preliminary (60%) Design

Matrix will prepare preliminary (60%) design plans for the design of the selected bank stabilization method. This task will consist of:

- Bank revetment design. Potential revetment could include rock toe protection, natural log crib wall, geo grid, or other applicable methods
- Preliminary (60%) design plans, which are expected to consist of:
 - One cover sheet
 - One notes sheet
 - One plan/profile sheet
 - One grading sheet
 - One revegetation sheet
 - One detail sheet
- Preliminary (60%) specifications
- Preliminary (60%) opinions of probable construction cost
- Preliminary (60%) design review meeting

The following deliverables for this task will be submitted electronically:

1. Preliminary (60%) design plans
2. Preliminary (60%) specifications
3. Preliminary (60%) opinion of probable construction cost

D. Task 4 – Final (100%) Design

Matrix will prepare final (100%) design plans for the design of the selected bank stabilization method. It is assumed that comments received from the preliminary (60%) design submittal will not result in any major changes to the design. This task will consist of:

- Final (100%) design plans, which are expected to consist of:
 - One cover sheet
 - One notes sheet
 - One plan/profile sheet
 - One grading sheet
 - One revegetation sheet
 - One detail sheet
- Final (100%) specifications
- Final (100%) opinion of probable construction cost

The following deliverables for this task will be submitted electronically:

1. Final (100%) design plans
2. Final (100%) technical specifications

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3. Final (100%) opinions of probable construction cost

Matrix will not prepare a stormwater management plan (SWMP) as a part of this scope of services. The contractor shall be responsible for preparing the SWMP and obtaining the National Pollution Discharge Elimination System (NPDES) permit through the Colorado Department of Public Health (CDPHE). It is assumed that less than 1 acre of land will be disturbed during construction activities.

E. Task 5 – Permit Support

Matrix will provide permit support by coordinating with the El Paso County Regional Floodplain Administrator and the United States Army Corps of Engineers (USACE). We have assumed the following for this project:

- The proposed revetment design will not cause a rise in the regulatory Federal Emergency Management Agency (FEMA) 100-yr floodplain and, as a result, a conditional letter of map revision (CLOMR) and letter of map revision (LOMR) will likely not be required. Alternately, Matrix will submit a no-rise letter to El Paso County.
- A USACE Nationwide permit will likely be utilized instead of a USACE 404 permit.

F. Task 6 – Construction Bidding

Matrix will assist with the procurement and identification of a competent bidder. Services provided in this task include:

- Attending the pre-bid meeting
- Answering bidders questions
- Reviewing bids & making a recommendation

G. Task 7 – Construction Management

Minor modifications to the final design are often encountered, and required, during construction. As a result, it is recommended that all changes be verified and approved by the design engineer prior to construction. Matrix will provide on-site engineering to assist with the construction of the selected bank stabilization method. Specific tasks include:

- Attending one (1) pre-construction meeting
- Part-time construction observation, reporting, and field engineering
- Providing survey support at four (4) different times throughout the construction phase to verify that the construction is being completed according to the final (100%) design plans
- Responding to requests for information (RFI)
- Reviewing submittals
- Providing record (as-built) drawings

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,

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summaries of meetings and engineering reports/designs.

BUDGET

Provide a detailed budget by task including number of hours and rates for labor and unit costs for other direct costs (i.e. mileage, \$/unit of material for construction, etc.). A detailed and perfectly balanced budget that shows all costs is required for the State's contracting and purchase order processes. Sample budget tables are provided below.

Please note that these budget tables are examples and will need to be adapted to fit each individual application. Tasks should correspond to the tasks described above.

Budget

The budget table shown below is based on the scope of work described in this proposal.

Engineering	Lump Sum Cash Amount	In-Kind
1. Survey & Data Collection	\$3,830	\$12,300
2. Engineering Analysis	\$5,100	\$9,900
3. Preliminary (60%) Design	\$7,580	\$9,100
4. Final (100%) Design	\$7,380	
5. Permit Support	\$1,920	
6. Construction Bidding	\$1,560	
7. Construction Management	\$9,900	
Project Management	\$5,160	
Direct expenses (est.)	\$695	
Subtotal	\$43,125	\$31,300
Construction	Subtotal	\$107,175
	\$150,300	\$7,500
Total Cash Budget		\$189,100

VIII. Schedule

The schedule shown below assumes that the notice-to-proceed (NTP) is received by August 1st, 2013.

Task	Start (all dates are in 2013)	Finish (all dates are in 2013)
Survey & Data Collection	August 5 th	August 9 th
Engineering Analysis	August 12 th	August 23 rd
Preliminary (60%) Design	August 26 th	September 6 th
Preliminary (60%) Design Review	September 9 th	September 13 th
Final (100%) Design & Permit Support	September 16 th	September 27 th
Construction Bidding	September 30 th	October 25 th
Construction & Construction Management	October 28 th	November 22 nd

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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.

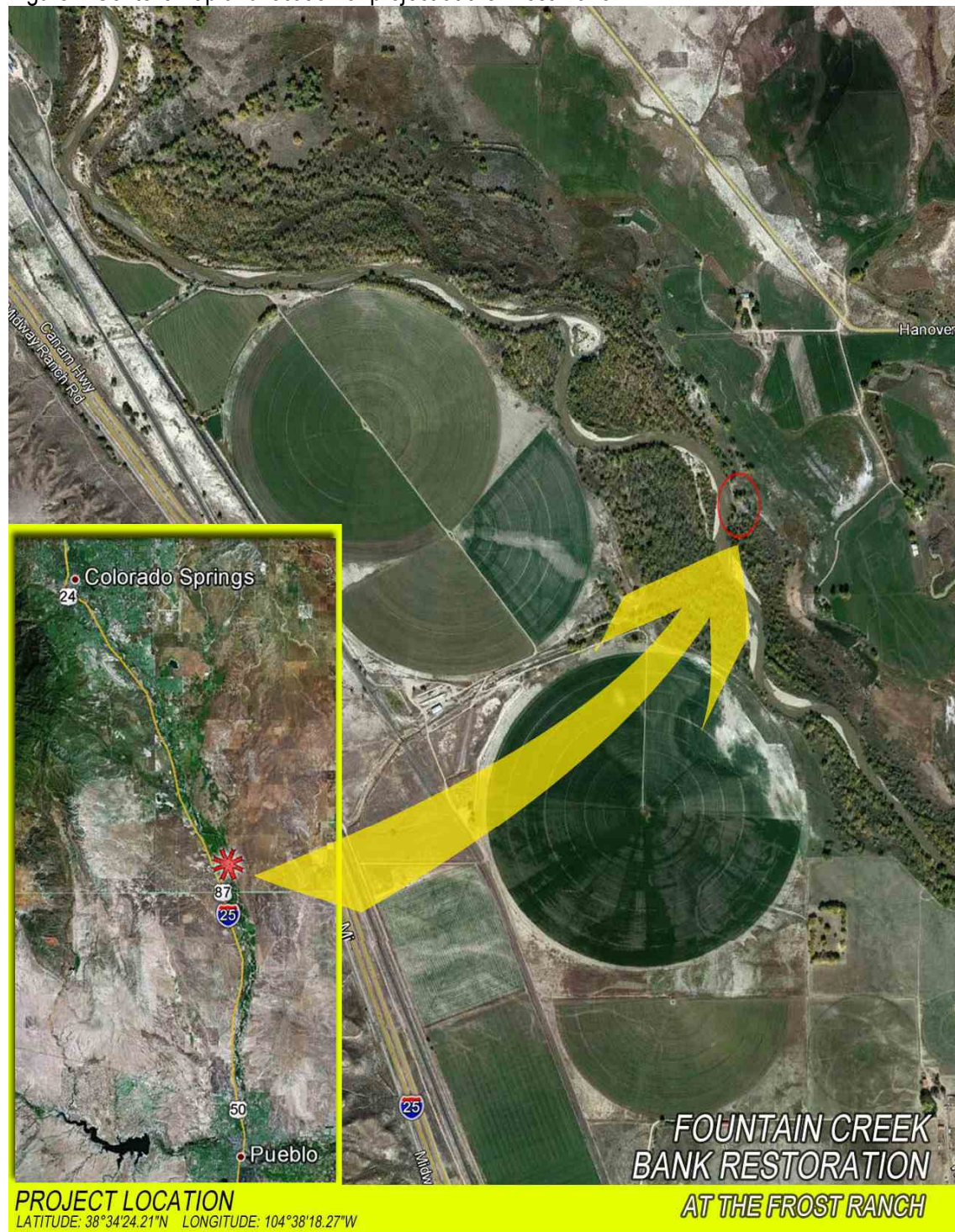
EXHIBIT B

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PROJECT MAP

Figure1: Context map and location of project at the Frost Ranch



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Figure 2: Lateral bank migration

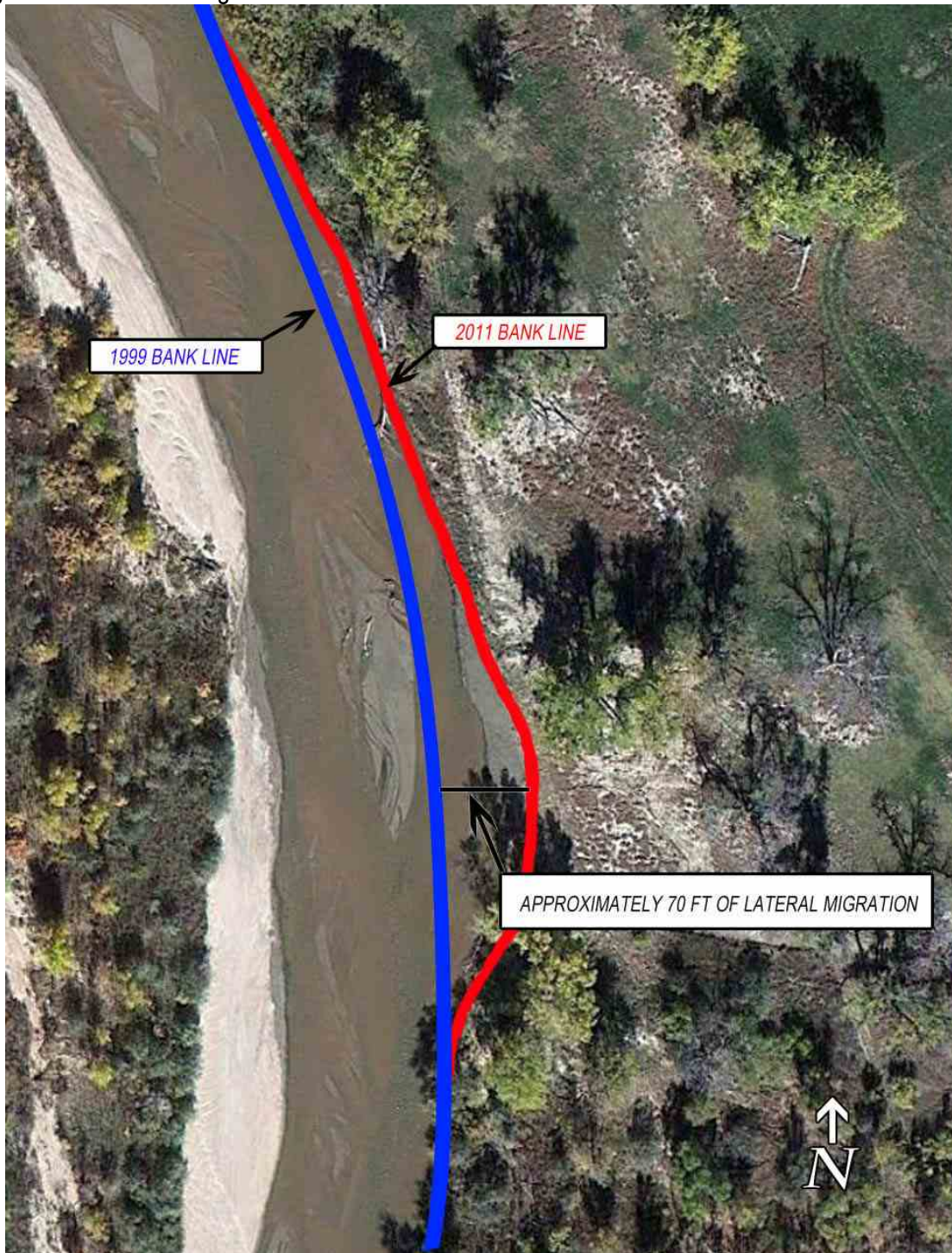


EXHIBIT C
AS NEEDED (PHOTOS,ETC.)

Figure 1: Looking downstream at the east cut bank. No riparian vegetation available to protect the floodplain.



Figure 2: Looking downstream (south) at the southern limit of the project. No riparian vegetation available to protect the floodplain.



Figure 3: Looking north at the eastern cut bank at the northern limit of the project. No riparian vegetation available to protect the floodplain.

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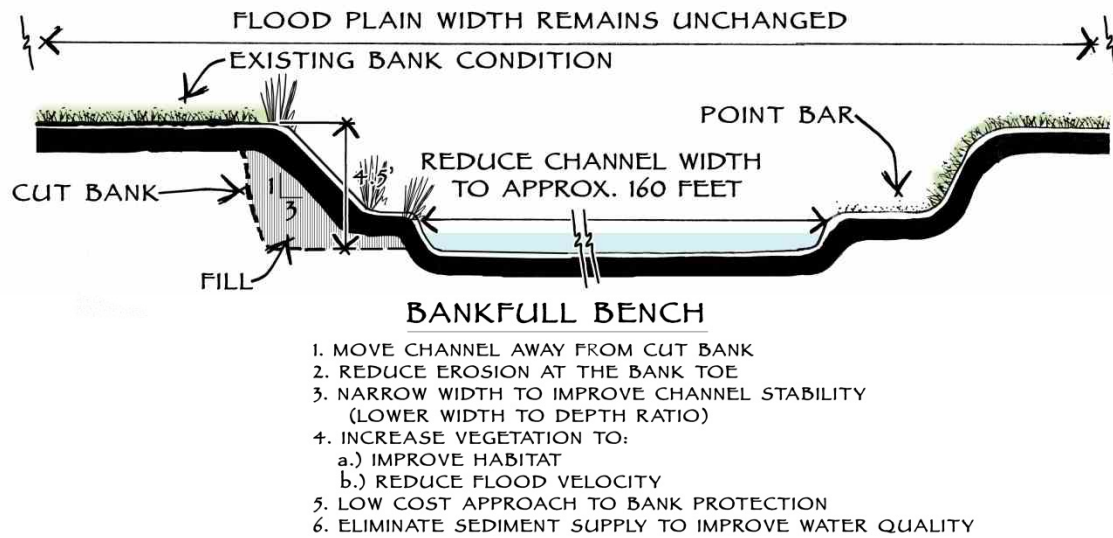
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Figure 4: Looking upstream (north) with project area on right. Creek is too wide and will be reduced to 160ft width.



Figure 5: Fountain Creek Section



PROPOSED FOUNTAIN CREEK BANK RESTORATION AT FROST RANCH

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OUR LAND. OUR WATER. OUR FUTURE.

Mr. Jay Frost
Frost Livestock Co.
18350 Hanover Road
Pueblo, CO 81008

January 29, 2013

Dear Jay,

On January 3rd, 2013, Colorado Open Lands was notified of your intent to work with the Fountain Creek Watershed Flood Control and Greenway District ("District") to implement bank stabilization on approximately 400 linear feet of the east bank of Fountain Creek.

I have reviewed the basic project concept and it appears that the activities contemplated under this project are consistent with the purpose and terms of the conservation easement held by Colorado Open Lands and recorded at reception #207074279 in the records of El Paso County. Please accept this letter as approval of the proposed project under Section 5. I. of the conservation easement.

As a member of the Districts' Citizens Advisory Group, I am pleased to see the District partnering with private landowners to mitigate impacts of flooding along Fountain Creek, and I'm even more pleased to see the Frost Livestock Co. participating in the Districts' programs to improve bank stability and riparian habitat along Fountain Creek. I'm hopeful that demonstration projects like this will increase the engagement between the District and landowners along Fountain Creek.

Good luck with the application to the Arkansas Basin Roundtable and please let me know if the plans change substantially from what I've reviewed.

All my best,

Dieter Erdmann
Director of Conservation Operations

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