

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

July 18, 2012

**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 Hale Reservoir Renovation – Final Design & Permitting

Dear Greg:

Under separate cover you will receive a WSRA grant application for the Hale Reservoir Renovation – Final Design & Permitting. At the July 11, 2012, Arkansas Basin Roundtable meeting, the Roundtable agreed by consensus to approve this application for \$20,000 in Basin Funds and \$100,000 of Statewide Funds.

My expectation is that this grant request will be heard at the September, 2012 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 Elise Bergsten



### COLORADO WATER CONSERVATION BOARD

### WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM



### Hale Reservoir Renovation - Final Design & Permitting

#### Name of Water Activity/Project

Cross Creek Metropolitan District

#### Name of Applicant

Arkansas Basin RT

Amount from Statewide Account:

100,000

20,000

120,000

Amount from Basin Account(s):

**Total WSRA Funds Requested:** 

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)

### **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: <u>http://cwcb.state.co.us</u> 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: <u>http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Documents/WSRACriteriaGuidelines.pdf</u>

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.

#### 1. Applicant Name(s): Cross Creek Metropolitan District P.O. Box 1976 Colorado Springs, CO 80901 Mailing address: Taxpayer ID#: 73-1694343 Position/Title: **Primary Contact:** Elise Bergsten **District Manager** Email: elise@dmsc.us Phone Numbers: Cell: Office: 719-963-1809 719-963-1809 Position/Title: **Donald Smith** President Alternate Contact: donaldfsmith@gwestoffice.net Email:

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

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

719-337-5799

Cell:

Phone Numbers:

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.

719-337-5799

Office:

Public (Districts) – authorities, Title 32/special districts, (conservancy, conservation, and irrigation districts), and water activity enterprises.

х

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.

#### 3. Provide a brief description of your organization

Cross Creek Metropolitan District (CCMD) is a Title-32 Special District, formed in 2003, and located in the City of Fountain, Colorado. The services of the District include Parks and Recreation, Street Improvements, Sanitation, including storm sewers and flood and surface drainage, and Water. The District's water service authority includes installation, acquisition, operation and maintenance, repair and replacement of a non-potable water distribution system for the irrigation of the public parks and open space areas.

The District owns and maintains several pocket parks, but its main asset is a 60-acre Regional Park, the location of Hale Reservoir, a Low Hazard Classification Dam.

CCMD is managed by a five-member Board of Directors. It is a 10 mill District, and does not have the ability to incur debt. Since the original Service Plan, CCMD has entered into an Intergovernmental Agreement with a neighboring District; Mesa Ridge Metropolitan District (MRMD) in order to partner in completing necessary capital improvements to the park, including the renovation of Hale Reservoir.

- 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

#### 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 (Environr	mental or Recreational)
	Agricultural	
	Municipal/Industrial	
	Needs Assessment	
	Education	
x	_	This project equally benefits Non-Consumptive and Municipal needs.

- 2. If you feel this project addresses multiple purposes please explain.
- A renovated Hale Reservoir will serve Environmental, Recreational, and Municipal/Industrial purposes. It will be used for Stormwater Management and as a Non-Potable source of Irrigation Water, conserving Municipal potable supplies. The reservoir will be re-sized and much more aesthetic, incorporating a large, unsightly drainage channel which is currently adjacent to the lake. Environment restoration of surrounding wetlands will be included, which will provide wildlife habitat. If feasible, the lake may become a warm water fishery.
- 3. Is this project primarily a study or implementation of a water activity/project? (Please check only one)



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

138	New Storage Created (acre-feet)								
80	New Annual Water Supplies Developed, Consumptive or Nonconsumptive (acre-feet)								
18	Existing Storage Preserved or Enhanced (acre-feet)								
	Length of Stream Restored or Protected (linear feet)								
	Length of Pipe/Canal Built or Improved (linear feet)								
40,000-100,000	Efficiency Savings (dollars/year)								
2	Area of Restored or Preserved Habitat (acres)								
	Other Explain:								

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

Latitude:	38.71135

Longitude:	104.685373
Doligitado.	

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.

#### **Brief Overview of Water Activity**

Hale Reservoir is a Low Hazard Classification Dam located in Fountain, Colorado. It is an embankment dam built around 1945 and it is in extremely poor condition. The original Hale Reservoir is decreed for 18 ac-feet of storage. The existing reservoir configuration is approximately 6 ac-ft in size with a dam height of 13.5 feet. The outlet works have been inoperable since 1985. The crest and downstream face of the dam are covered in heavy vegetation and are eroded. The dam has failed twice since CCMD took ownership of the property and there was a near-failure in 2011 as well.

Cross Creek Metropolitan District is seeking to renovate the reservoir in a way that meets multiple needs, including stormwater management, but also to serve non-consumptive aesthetic and recreational opportunities, including the environmental restoration of surrounding wetlands, providing wildlife habitat and birding opportunities.

The Hale Reservoir renovation is being designed so that it may be considered a non-potable well, serve as a supply for irrigation in the Cross Creek Regional Park, and perhaps serve surrounding landscape irrigation needs as well. This will free up funds in the District that are currently being spent on a potable source of supply, and will also free up that potable supply for future consumptive needs in El Paso County, serving municipal conservation goals. The Regional Park used 247,340 gallons of water in 2011.

In July, 2011, CCMD engaged the services of Applegate Group, Inc. in order to explore the possibility of enlarging Hale Reservoir and using it as a source of non-potable water. Applegate's work to date includes a Hazard Classification Report which has been submitted to the State. The District has paid a total of \$34,393 for preliminary design and planning, and is now prepared to engage Applegate Group for Final Design and Permitting of the renovation.

The renovated Hale Reservoir will have a capacity of 100 ac-ft with an 18 ft embankment dam. A new water right will be obtained by the District for the additional storage capacity in the enlarged reservoir. The reservoir is filled with natural groundwater and a groundwater seep located to the north of the reservoir.

The existing dam will be completely removed and a new embankment constructed. The proposed Hale Reservoir Dam will be constructed of zoned cohesive earth fill. At this point in the design process a 4:1 side slope on downstream and upstream face of the dam are proposed.

This grant application is for the funding of the Final Design and Permitting of Hale Reservoir. An updated survey will be needed, along with updated wetlands delineation. A full geotechnical investigation of the site will be made, and hydrology and geotechnical reports will be prepared. A design report will be prepared to SEO regulations. Construction drawings and specifications will be completed and submitted to the SEO. A Section 404 Permit will be obtained from the ACOE and a Section 206 Grant application will be submitted. The non-potable water system will be designed, and a well permit obtained.

#### Part III. – Threshold and Evaluation Criteria

- 1. This water activity meets the eligibility requirements outlined in Part 2 of the Criteria and Guidelines. This project provides design and permitting of a structural water project. The applicant, Cross Creek Metropolitan District, is an eligible entity.
  - a) The water activity is consistent with Section 37-75-102 Colorado Revised Statutes.<sup>1</sup> The project will not supersede, abrogate, or otherwise impair the State's current system of allocating water within Colorado nor does it in any manner repeal or amend the existing water rights adjudication system. The project does not affect the State Constitution's recognition of water rights as a private usufructuary property right nor is it intended to restrict the ability of the holder of a water right to use or to dispose of that water right in any manner permitted under Colorado law.
  - b) The water activity is was unanimously approved by the Arkansas Basin Roundtable on June 13<sup>th</sup>.
  - c) The water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes.<sup>2</sup> This project meets Conservation goals by freeing up potable water supply in an urban area in the Basin. It solves long-term stormwater management needs. It will restore wetlands and aquatic habitat.

<sup>&</sup>lt;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 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.

<sup>&</sup>lt;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 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.

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)

#### FUNDING SUMMARY:

Basin Funds:	\$ 20,000
Statewide Funds:	\$ 100,000
Cross Creek Metro District:	\$ 35,000
Mesa Ridge Metro District:	<u>\$ 15,000</u>
TOTAL	\$ 170,000

2. For Applications that include a request for funds from the **Statewide Account**, <u>describe how</u> 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.

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

- a. The water activity addresses multiple needs, including consumptive and non-consumptive needs. This project addresses the following consumptive needs: preserves and enhances existing storage, creates additional storage, provides a non-potable source of irrigation water, and improves stormwater management. The project also addresses non-consumptive needs, providing wetlands restoration, improving wetlands and aquatic habitat, as well as providing an aesthetic amenity to the region.
- b. Project proponents include City of Fountain, Mesa Ridge Metropolitan District and Cross Creek Metropolitan District. The City of Fountain will benefit greatly from the completion of this project, and CCMD has met with them throughout the planning and design process to discuss water conservation benefits as well as technical aspects of the project.
- c. The water activity creates storage, ensures stormwater management, and implements conservation goals as identified in SWSI and the Arkansas Basin 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. Cross Creek Metropolitan District has been severely impacted by the stall in local development. CCMD's original Service Plan contemplated build-out around the Regional Park by 2015. Instead, there have been five years of mostly stalled building in the neighborhood. In addition, several builders left the area, builders that may have been expected to fund the capital construction of park amenities. For this reason, the renovation of Hale Reservoir was stalled for several years. It is anticipated that this phase of development will be followed by the actual construction of the re-designed Hale Reservoir. CCMD intends to apply for WSRA loan/grant funding to complete the project, along with other possible grant funding. Any District funds that can be preserved as matching funds for construction grants will be vital to the District at that point.
- 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. Matching funds from CCMD and its partner MRMD represent nearly 30% of the project cost.

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

f. The water activity helps meet environmental and recreational needs.

#### 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 original Hale Reservoir (WS 10 ID 3570) is decreed for 18 ac-ft of storage through Case No W1814 adjudicated in 1972. The existing reservoir configuration is approximately 6 ac-ft in size with a dam height of 13.5 feet.

Cross Creek Metro District is proposing to enlarge the existing reservoir for flood control and aesthetic purposes. The new design proposes a reservoir capacity of 100 ac—ft with an 18 ft embankment dam. A new water right will be obtained by the District for the additional storage capacity in the enlarged reservoir.

CCMD has purchased 19 shares of augmentation water, and has entered in a preliminary agreement with the City of Fountain. When complete, CCMD anticipates deeding the 19 shares to City of Fountain, and that Hale Reservoir will be covered by the City's blanket augmentation plan for wells.

The basin that contributes to Hale Reservoir is highly developed. The Master Drainage Plan for the area wes developed in 2002, is currently under revision, and will reflect an expanded Hale Reservoir. This work is being undertaken by Mesa Ridge Metropolitan District.

There are no natural or manmade channels that contribute regular inflows to the reservoir. The reservoir is filled with natural groundwater and a groundwater seep located to the north of the reservoir. The outflow flows into the Jimmy Camp Drainage Basin.

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

A Hazard Classification Report was submitted to the State of Colorado in May, 2012. The conclusion was that the contemplated renovation would not alter the designation of Hale as a Low Hazard Classification Dam.

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

Signature of Applicant:

Print Applicant's Name: Elise M. Bergsten

Project Title: Hale Reservoir Renovation – Final Design & Permitting

#### 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

### Exhibit A Statement of Work

### WATER ACTIVITY NAME - Hale Reservoir Renovation – Final Design & Permitting

#### **GRANT RECIPIENT – Cross Creek Metropolitan District (CCMD)**

#### **FUNDING SOURCE - Basin/Statewide Funds**

#### INTRODUCTION AND BACKGROUND

Hale Reservoir was originally constructed as a farm irrigation pond around 1945. It is a Low Hazard Classification Dam located within the City of Fountain, Colorado. The existing dam has failed several times in the last few years during storm events.

CCMD is seeking to renovate the reservoir in a way that meets multiple needs, including stormwater management, but also to serve non-consumptive aesthetic, environmental and recreation opportunities, including the environmental restoration of surrounding wetlands, providing wildlife and aquatic habitat.

Perhaps most importantly, CCMD intends to use Hale Reservoir as a source of supply for the nonpotable irrigation of turf in the Cross Creek Regional Park, freeing up potable supply for future consumptive needs in El Paso County and serving municipal conservation goals.

#### **OBJECTIVES**

The objective of this project is to produce final design and permitting of the renovation of the reservoir.

### TASKS

### Task 1 – Survey

### **Description of Task**

Survey of the bottom of the reservoir with bathometric techniques, survey the newly delineated wetlands and any newly constructed features in the park.

### Method/Procedure

Applegate Group will contract with Rockwell Consulting to update the existing survey of the area. The survey and control will meet mapping standards suitable for producing construction plans for a dam reconstruction project.

Task Deliverables: Electronic version and hard copy of the survey

### Task 2 – Wetlands Delineation

#### **Description of Task**

Complete an updated wetlands delineation. The previous delineation was completed by Kiowa in November 2008 and did not reflect the current design for Hale Reservoir.

#### Method/Procedure

Applegate Group will contract with Kiowa Engineering to complete this task. Applegate will coordinate with Kiowa Engineering.

Task Deliverables: Electronic Wetlands Delineation Survey and Delineation Report

### Task 3 – Geotechnical Investigation

#### **Description of Task**

Complete a full geotechnical investigation of the site.

#### Method/Procedure

Applegate will contract with J. A. Cesare and Associates for this task. It will include soil sampling and testing according to the State Engineer's Office Standards for a low hazard dam. Monitoring wells will also be installed to identify the groundwater elevation in the area around the reservoir. Applegate will coordinate this work.

Task Deliverables: Report summarizing geotechnical investigation

#### Task 4 – Complete 30% Design

#### **Description of Task**

Preliminary plans have been completed by Applegate Group and are very close to a 30% design. Using the information collected in Tasks 1-3, we will bring the plans to 30% completion.

#### Method/Procedure

This task will include coordination with the State Engineers office on the Hazard Classification Report which has already been submitted.

Task Deliverables: 30% Construction Drawings

### Task 5 – Hydrology Report

#### Description of Task

A Hydrology Report will be prepared according to SEO regulations.

#### Method/Procedure

This report will outline the storm flows that will be used to design the spillway, outlet works and dam height. Applegate Group will communicate closely with the SEO during submittal and review. *Task Deliverables: Hydrology Report* 

### Task 6 – Geotechnical Report

#### **Description of Task**

A Geotechnical Report will be prepared according to SEO regulations.

### Method/Procedure

This report will contain the results from the Geotechnical investigation and the engineering assumptions used to design the foundation and embankment of the dam. Recommendations for construction methods and standards will also be included.

Task Deliverables: Geotechnical Report

### Task 7 – Complete 60% Design

### **Description of Task**

Based on the results contained in the Hazard Classification Report, the Hydrology Report and the Geotechnical Report Applegate Group will complete 60% design of the dam and reservoir.

### Method/Procedure

Construction plans and a draft design report will be submitted to the Cross Creek Board of Directors for their review. We will also go through a design review meeting with the State to present our findings and recommendations. The discussion may lead to suggestions or concerns expressed by the State that can be considered for final plans and specifications.

Task Deliverables: 60% Construction Drawings

### Task 8 – Meetings

#### **Description of Task**

We anticipate up to four meetings with the project participants throughout the design of the project.

### Method/Procedure

Applegate staff will travel to the site to meet with the city, neighboring developers and districts to discuss constructability and access issues. The 60% plans will be distributed to the entities involved for review and comment.

#### Task 9 – Design Report

#### **Description of Task**

Applegate will prepare the design report to SEO regulations.

#### Method/Procedure

The design report will include the following subsections;

Introduction

**Project Components** 

Site Requirements

Flood Hydrology and Results of Flood Routing

Spillway and Outlet Hydraulics

Foundation Designs

Seismic Hazard Assessment

Dam Analysis and Design

Structural Design

Dam Instrumentation

Mechanical and Electrical Design

Quality Assurance and Quality Control Plan

River Diversion during Construction

The Design Report will be submitted to the SEO after 100% completion of the design and accompanying documents.

Task Deliverables: Design Report

### Task 10 – Complete 90% Design

#### **Description of Task**

The construction plans and specifications will be completed to 90% and submitted for review to the board of directors by Applegate Group. *Task Deliverables: 90% Construction Plans and Design Report* 

### **Task 11 – Finalize Construction Drawings**

#### **Description of Task**

Construction drawings will be finalized and suitable for bidding the construction of the project. This task includes the fees for the CAD services to fully develop the plans from 30% to 100%. *Task Deliverables: Final Construction Plans* 

#### Task 12 – Construction Specifications

#### **Description of Task**

Technical specifications for all aspects of construction including site work, structures, electrical, mechanical, wetlands mitigation and erosion control during construction will be prepared and will be suitable for bidding the construction of the project.

Task Deliverables: Construction Specification Book

#### Task 13 – SEO Submittal and Coordination

#### **Description of Task**

Applegate will submit all of the required material to the State Engineer's Office.

#### Method/Procedure

This will include a meeting at the SEO office to present the material prior to submittal to discuss any questions or clarifications required in the final submittal. *Task Deliverables: Draft Submittal meeting and Full SEO Submittal* 

### Task 14 - Revisions

#### **Description of Task**

If revisions to the draft SEO submittal are required this task will cover any additional work that is required to complete the final submittal.

#### Task 15 – Section 404 Permitting

#### **Description of Task**

This project will require an Individual Section 404 Permit from the Army Corp of Engineers due to the size of the disturbance within wetlands.

#### Method/Procedure

This task will include a meeting with the local Army Corp office, preparation and submittal of the permit application. It is unlikely that the Army Corps review will require any substantial changes to the Hale Reservoir construction plans as currently envisioned. If for some reason this assumption is wrong, then additional our-of-scope work may be required to meet both dam safety regulations as well as NEPA. *Task Deliverables: Section 404 Permit Application* 

#### Task 16 – Section 206 Grant Coordination Description of Task

The Board is interested in applying for a Section 206 grant from the Army Corp of Engineers. This grant program is available to public entities to partially fund the design and implementation of mitigation measures. The Army Corp will contribute 65% towards the design and construction costs. This task includes coordination with the Army Corp and submittal of the grant application. It does not include the 35% match that will be required for design and construction of the mitigation.

Task Deliverables: Section 206 Grant Application

#### Task 17 – Non-Potable System Design

#### **Description of Task**

Part of this project is a non-potable water system that will be used to irrigate the park. This system will utilize the existing irrigation infrastructure and the existing potable water supply tap. These existing items will be integrated with Hale Reservoir.

#### **Method/Procedure**

Applegate will contract with JDS Hydro who will complete the design. *Task Deliverables: Design drawings and report for the non-potable system* 

#### Task 18 – Well Permit Description of Task

This reservoir will be classified as a well in terms of Colorado water law. Groundwater will be exposed by the expansion of the reservoir. Therefore the reservoir must be permitted as a well with the SEO. *Task Deliverables: Completed Well Permit Application* 

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

Signature of Applicant:

Applicant's Name: Cross Creek Metropolitan District

#### Project Title: HALE RESERVOIR RENOVATION – FINAL DESIGN & PERMITTING

### BUDGET - HALE RESERVOIR FINAL DESIGN AND PERMITTING

DATE: 6/1/12

Task #	Task Description	Total Hours	Labor Tota	L	Sul	ocontracts	Reimbursables	Tot	al Task Fee
1	Survey	4	\$ 55	5	\$	5,445		\$	6,000
2	Wetlands Delineation	4	\$ 57	1	\$	10,329		\$	10,900
3	Geotechnical Investigation	4	\$ 55	0	\$	9,350		\$	9,900
4	30% Design	36	\$ 4,90	0			\$ 200	\$	5,100
4.1	Hazard Classification Report Submittal	8	\$ 1,10	0				\$	1,100
5	Hydrology Report	40	\$ 4,10	0			\$ 600	\$	4,700
6	Geotechnical Report	24	\$ 2,40	0			\$ 600	\$	3,000
7	60% Design	96	\$ 12,90	0			\$ 300	\$	13,200
8	Meetings	40	\$ 5,60	0			\$ 1,400	\$	7,000
9	Design Report	64	\$ 7,40	0			\$ 1,500	\$	8,900
9.1	Spillway and outlet hydraulics	12	\$ 1,40	0				\$	1,400
9.2	Foundation design	12	\$ 1,40	0				\$	1,400
9.3	Seismic Hazard Assessment	12	\$ 1,40	0				\$	1,400
9.4	Dam Analysis and Design	12	\$ 1,40	0				\$	1,400
9.5	Structural Design	6	\$ 70	0				\$	700
9.6	Dam Instrumentation	4	\$ 50	0				\$	500
9.7	QA/QC Paln	12	\$ 1,40	0				\$	1,400
9.8	Cofferdam	16	\$ 2,00	0				\$	2,000
10	90% Design	56	\$ 6,90	0			\$ 300	\$	7,200
11	Finalize Construction Drawings	36	\$ 4,40	0	\$	11,000	\$ 600	\$	16,000
12	Construction Speciifications	58	\$ 6,30	0			\$ 600	\$	6,900
13	SEO Submittal and Coordination	42	\$ 5,90	0			\$ 200	\$	6,100
14	Revisions	32	\$ 3,90	0				\$	3,900
15	404 Permitting	80	\$ 9,70	0			\$ 600	\$	10,300
16	Section 206 Grant Coordination	56	\$ 6,50	0			\$ 600	\$	7,100
17	Non-Potable System Design	21	\$ 3,00	0	\$	22,000		\$	25,000
18	Well Permit	28	\$ 5,00	0			\$ 500	\$	5,500
1-18	Grant Administration	27	\$ 2,00	0				\$	2,000
	Totals:	842	\$ 103,87	6	\$	58,124	\$ 8,000	\$	170,000

Vendors	(	Cost	
Applegate Group		\$	109,876
Rockwell Consulting		\$	5,445
Kiowa Engineering		\$	10,329
JA Cesare and Associates		\$	9,350
Line Design		\$	11,000
JDS Hydro		\$	22,000

#### Schedule

#### Date: 5/29/2012 Job #: P12-131 Project: Hale Reservoir Design and Permitting

Task Description	Budget	AG Budget	Start	Finish	Duration	Dates									
	(\$)	(\$)	Date	Date	(mo)	Oct-2012	Nov-2012	Dec-2012	Jan-2013	Feb-2013	Mar-2013	Apr-2013	May-2013	Jun-2013	Jul-2013
Survey	\$6,000	\$460	10/1/2012	11/1/2012	1.0										
Wetlands Delineation	\$10,900	\$460	10/1/2012	11/1/2012	1.0										
Geotechnical Investigation	\$9,900	\$460	10/1/2012	11/1/2012	1.0										
Complete 30% Design	\$5,100	\$4,250	11/1/2012	1/1/2013	2.0										
Hazard Classification Report Submittal	\$1,100	\$920	10/1/2012	10/15/2012	0.5										
Hydrology Report	\$4,700	\$3,880	12/1/2012	1/1/2013	1.0										
Geotechnical Report	\$3,000	\$2,520	11/1/2012	1/1/2013	2.0										
Complete 60% Design	\$11,300	\$9,420	12/1/2012	2/1/2013	2.0										
Meetings	\$7,000	\$5,850	11/1/2012	3/1/2013	3.9										
Design Report	\$8,900	\$7,460	1/1/2013	3/1/2013	2.0										
Spillway and outlet hydraulics	\$1,400	\$1,140	1/1/2013	3/1/2013	2.0										
Foundation design	\$1,400	\$1,140	1/1/2013	3/1/2013	2.0										
Seismic Hazard Assessment	\$1,400	\$1,140	1/1/2013	3/1/2013	2.0										
Dam Analysis and Deisgn	\$1,400	\$1,140	1/1/2013	3/1/2013	2.0										
Structural Design	\$700	\$570	1/1/2013	3/1/2013	2.0										
Dam Insturmentation	\$500	\$400	1/1/2013	3/1/2013	2.0										
QA/QC Plan	\$1,400	\$1,140	1/1/2013	3/1/2013	2.0										
Cofferdam	\$2,000	\$1,600	1/1/2013	3/1/2013	2.0										
Complete 90% Design	\$7,200	\$6,000	2/1/2013	4/1/2013	2.0										
Finalize Construction Drawings	\$16,000	\$4,160	2/1/2013	4/1/2013	2.0										
Construction Specifications	\$6,900	\$5,720	2/1/2013	4/1/2013	2.0										
SEO Submittal and Coordination	\$6,100	\$5,080	4/1/2013	6/1/2013	2.0										
Revisions	\$3,900	\$3,200	6/1/2013	7/1/2013	1.0										
404 Permitting	\$10,300	\$8,600	11/1/2012	6/1/2013	6.9										
Section 206 Grant Coordination	\$7,100	\$5,960	11/1/2012	6/1/2013	6.9										
Non-Potable System Design	\$25,000	\$2,465	1/1/2013	4/1/2013	3.0										
Well Permit	\$5,500	\$4,540	12/1/2012	2/1/2013	2.0										
	<b>\$</b> 0									1					
	<b>\$</b> 0														
	\$0														
							1		1						

## Project: Hale Reservoir Design and Permitting

Task Description	Budget	AG Budget	Start	Finish	Duration		
	(\$)	(\$)	Date	Date	(mo)	Aug-2013	Sep-2013
Survey	\$6,000	\$460	10/1/2012	11/1/2012	1.0		
Wetlands Delineation	\$10,900	\$460	10/1/2012	11/1/2012	1.0		
Geotechnical Investigation	\$9,900	\$460	10/1/2012	11/1/2012	1.0		
Complete 30% Design	\$5,100	\$4,250	11/1/2012	1/1/2013	2.0		
Hazard Classification Report Submittal	\$1,100	\$920	10/1/2012	10/15/2012	0.5		
Hydrology Report	\$4,700	\$3,880	12/1/2012	1/1/2013	1.0		
Geotechnical Report	\$3,000	\$2,520	11/1/2012	1/1/2013	2.0		
Complete 60% Design	\$11,300	\$9,420	12/1/2012	2/1/2013	2.0		
Meetings	\$7,000	\$5,850	11/1/2012	3/1/2013	3.9		
Design Report	\$8,900	\$7,460	1/1/2013	3/1/2013	2.0		
Spillway and outlet hydraulics	\$1,400	\$1,140	1/1/2013	3/1/2013	2.0		
Foundation design	\$1,400	\$1,140	1/1/2013	3/1/2013	2.0		
Seismic Hazard Assessment	\$1,400	\$1,140	1/1/2013	3/1/2013	2.0		
Dam Analysis and Deisgn	\$1,400	\$1,140	1/1/2013	3/1/2013	2.0		
Structural Design	\$700	\$570	1/1/2013	3/1/2013	2.0		
Dam Insturmentation	\$500	\$400	1/1/2013	3/1/2013	2.0		
QA/QC Plan	\$1,400	\$1,140	1/1/2013	3/1/2013	2.0		
Cofferdam	\$2,000	\$1,600	1/1/2013	3/1/2013	2.0		
Complete 90% Design	\$7,200	\$6,000	2/1/2013	4/1/2013	2.0		
Finalize Construction Drawings	\$16,000	\$4,160	2/1/2013	4/1/2013	2.0		
Construction Specifications	\$6,900	\$5,720	2/1/2013	4/1/2013	2.0		
SEO Submittal and Coordination	\$6,100	\$5,080	4/1/2013	6/1/2013	2.0		
Revisions	\$3,900	\$3,200	6/1/2013	7/1/2013	1.0		
404 Permitting	\$10,300	\$8,600	11/1/2012	6/1/2013	6.9		
Section 206 Grant Coordination	\$7,100	\$5,960	11/1/2012	6/1/2013	6.9		
Non-Potable System Design	\$25,000	\$2,465	1/1/2013	4/1/2013	3.0		
Well Permit	\$5,500	\$4,540	12/1/2012	2/1/2013	2.0		
	<b>\$</b> 0						
	<b>\$</b> 0						
	<b>\$</b> 0						

#### MESA RIDGE METRO DISTRICT 111 SOUTH TEJON STREET SUITE 222 COLORADO SPRINGS, CO 80903 719-593-2600

June 18, 2012

Colorado Water Conservation Board 1580 Logan Street, Suite 200 Denver, CO 80209

To Whom It May Concern:

Mesa ridge Metropolitan District (MRMD) is participating with Cross Creek Metropolitan District (CCMD) to develop Cross Creek Regional Park. Hale Reservoir is, literally, the center of the park. A re-constructed Hale Reservoir has the potential to be the central amenity of the park.

As participant to CCMD, MRMD will contribute to the maintenance of the park. The significant cost-savings that will be realized in switching from a potable to non-potable source or irrigation water for the park makes this project crucial to the long-term sustainability of the park.

Most importantly, the use of Hale Reservoir for stormwater management, and the recent dam failures make this project extremely urgent. Because of the downturn in the economy, this project does not have the funds it was projected to have at this point in time. Funding assistance will be crucial to completing this project in a timely manner, before a more catastrophic failure occurs.

Mesa Ridge Metropolitan District heartily supports the renovation of Hale Reservoir, and joins with Cross Creek Metropolitan District and residents of the region in asking for your support in funding the Final Design and Permitting of the renovation of Hale Reservoir.

Sincerely,

Kent A. Petre Secretary Mesa Ridge Metropolitan District

KP/kq