

SOUTHWEST BASINS ROUNDTABLE

Michael Preston, Chair
c/o Dolores Water Conservancy District
P.O. Box 1150
Cortez, Colorado 81321
970-565-7562

EMAILED: July 16, 2012

Mr. Greg Johnson
Program Manager, Water Supply Management Section
Colorado Water Conservation Board
1580 Logan Street, Suite 600
Denver, Colorado 80203

SUBJECT: Red Mesa Reservoir and Ditch Company, Dam and Reservoir Spillway
Alternatives Analysis - \$19,400 from Basin Account

Dear Mr. Johnson:

The Southwest Basin Roundtable is pleased to recommend funding of \$19,400 from the Southwest Basin Account for the Red Mesa Reservoir and Ditch Company application for the Red Mesa Dam and Reservoir Spillway Alternatives Analysis.

The application was considered in detail and approved at the July 11, 2012 meeting of the Southwest Basin Roundtable. There was a quorum of Roundtable members present. The proposed project is part of a consumptive IPP in SWSI 2010. The project also addresses a sub-basin that has been heavily impacted by the La Plata River Interstate compact with New Mexico.

The completed Grant Application will be forwarded directly to you by the applicant. Please contact the applicant directly or me at 970-565-7562, mpreston@frontier.net, if you have questions or wish to discuss this application in more detail.

Sincerely,



Michael Preston
Southwest Basin Roundtable Chair



COLORADO WATER CONSERVATION BOARD



WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

Red Mesa Dam & Reservoir – Spillway Alternatives Analysis

Name of Water Activity/Project

Red Mesa Reservoir & Ditch Company

Name of Applicant

Southwest Basin

Amount from Statewide Account:

Amount from Basin Account(s):

Total WSRA Funds Requested:

\$19,400

\$19,400

Approving Basin Roundtable(s)

(If multiple basins specify amounts in parentheses.)

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Required Exhibits

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

Appendices – Reference Material

- 1. Program Information
- 2. Insurance Requirements
- 3. WSRA Standard Contract Information (Required for Projects Over \$100,000)
- 4. W-9 Form (Required for All Projects Prior to Contracting)

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 (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):	Red Mesa Reservoir & Ditch Company		
	Mailing address:	7882 County Road 100 Hesperus, CO 81326		
	Taxpayer ID#:	84-0494513		
	Primary Contact:	Jim Greer	Position/Title:	President
	Email:	drysiderancher@yahoo.com		
	Phone Numbers:	Cell: 970-749-6393	Office:	970-588-2220
	Alternate Contact:	Trent Taylor	Position/Title:	Vice President
	Email:	trentjtaylor02@yahoo.com		
	Phone Numbers:	Cell: 970-769-0950	Office:	970-588-3495

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 Red Mesa Reservoir & Ditch Company is a not-for-profit corporation established in 1923 under Colorado law, for the purposes of (1) appropriating or otherwise acquiring waters from the La Plata River and other nearby sources for storage in reservoirs and for distribution and use for domestic and irrigation purposes by shareholders; (2) acquiring ownership of facilities necessary to store and convey water and the land on which those facilities are located; (3) constructing, operating, and maintaining said facilities; and (4) levying and collecting assessments for the repair, operation, maintenance and superintendence of facilities.

The Articles of Incorporation filed with the Secretary of State in 1923 provide for five directors of the company, who are empowered to make by-laws which are proper and necessary for the management, conduct and control of company business. However, by-laws were never developed or filed by the company. The Articles of Incorporation are attached as Exhibit C.

The company owns the Red Mesa Reservoir, the dam for which was originally constructed in 1908 and reconstructed in about 1932, following its failure during a flood in 1929, and subsequently enlarged in 1946 to its current decreed storage capacity of 1172 acre-feet; a diversion structure on the La Plata River; and the inlet ditch to the reservoir. The reservoir is situated on Hay Gulch, a tributary to the La Plata River, and is currently the only significant water storage facility located within the La Plata River drainage. It is used to provide supplemental irrigation water to about 1140 acres of land within the Red Mesa system, with approximately fifty shareholders utilizing this water.

One share of stock in the company amounts to approximately one acre-foot of storage in the reservoir; thus, the 1137 shares of stock are spread among the fifty shareholders. The 2012 assessment was \$20 per share, of which approximately 20 % was designated for ongoing maintenance and repairs and 80% for operational expenses, including corrective action studies, and to build the cash reserves of the company in preparation for actual construction work. The 2012 assessment represents an increase of approximately 125% since 2008.

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

Not Applicable

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

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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.

As a private corporation, the Red Mesa Reservoir and Ditch Company is not subject to the provisions of TABOR, nor are TABOR issues relevant to this activity.

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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.

3. Is this project primarily a study or implementation of a water activity/project? (Please check only one)

☒ Study

☐ Implementation

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

New Storage Created (acre-feet)

New Annual Water Supplies Developed, Consumptive or Nonconsumptive (acre-feet)

Existing Storage Preserved or Enhanced (acre-feet)

Length of Stream Restored or Protected (linear feet)

Length of Pipe/Canal Built or Improved (linear feet)

Efficiency Savings (acre-feet/year OR dollars/year – **circle one**)

Area of Restored or Preserved Habitat (acres)

Other -- Explain:

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

Latitude: 37 deg 10' N

Longitude: 108 deg 8.5' 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.

The Colorado State Engineer (SEO) has identified the spillway at Red Mesa Dam as seriously deficient in flood routing capacity and has directed the owners to bring the spillway into compliance with the dam safety requirements for a high hazard dam, or face significant storage restrictions or a possible breach order. A time frame of approximately three years has been established to achieve compliance. The proposed water activity will assist in the selection of an appropriate, cost-effective methodology for complying with the SEO requirement.

In 2009, Red Mesa received WSRA basin grant funding from the SW Basins Roundtable for an Incremental Damage Analysis (IDA) and Emergency Action Plan (EAP), in the amount of \$29,000. Red Mesa provided matching funds of \$3000. While the IDA did not result in the hoped-for result of a decreased inflow design flood requirement, the study did include a new hydrologic analysis using the SEO's Extreme Precipitation Analysis Tool (EPAT) which was accepted for use by the SEO. The inflow design flood peak obtained via EPAT, while still large, is significantly smaller than that obtained by previous analyses and will serve as the basis for spillway design.

The next logical step in proceeding with spillway design, and the one proposed for funding herein, is to perform an initial evaluation of alternatives available for passing the inflow design flood through the reservoir without endangering the dam, in order to establish expected relative cost levels of the alternatives. At this point, it is clear that a "low-cost" alternative to achieving compliance with the SEO requirements is not available; therefore it is necessary to evaluate the relative cost-effectiveness of all of the alternatives. Alternatives under consideration include the following:

- Constructing a full breach of the dam to SEO requirements to eliminate reservoir storage and the hazard potential it presents (essentially the "do-nothing" alternative).
- Constructing a new, compliant spillway through the left abutment at the same overflow elevation as the current spillway, while utilizing material removed from the spillway channel excavation to raise the dam crest and provide more routing freeboard. This would be done as an optimization problem to achieve the best balance of spillway width and embankment crest raising.
- Hardening of the existing dam crest and downstream slope with roller-compacted concrete (RCC), to allow it to withstand the overtopping of the dam by the inflow design flood, combined with a much smaller SEO compliant spillway of approximately 100-year capacity.

Because each of these alternatives is likely to present significant costs, Red Mesa would also like to include two reservoir enlargement scenarios for evaluation, to determine if the value of the additional storage would be sufficient to offset some of the cost of spillway and dam modification construction; both enlargement scenarios include spillway size optimization, as described above:

- Raising the normal storage level by 4 feet (approximately 250 AF of increased storage)
- Raising the normal storage level by 8 feet (approximately 550 AF of increased storage)

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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

The proposed activity is completely consistent with CRS 37-75-102. It in no way affects or impacts existing water rights in the area, other than to help ensure that the existing storage rights within the reservoir are maintained for the use of the applicant and the water is used for its decreed purposes.

No new water diversions or uses are included within the scope of this project. However, two of the alternatives to be evaluated by this project contain elements of reservoir enlargement, either of which would, if acted upon, result in additional storage capacity within the reservoir. The applicant currently holds conditional storage rights for Red Mesa Reservoir which would allow the storage of the additional waters within the enlarged reservoir. Either enlargement scenario would utilize only a portion of the applicant's conditional storage right of 2898 acre-feet. All waters stored within Red Mesa Reservoir are subject to administration under the La Plata River Compact between Colorado and New Mexico, and additional waters stored within the enlarged reservoir would be no different. Compact issues are involved only to the extent that maintaining or enhancing reservoir storage helps ensure Colorado's use of the water to which it is entitled under the La Plata River Compact.

- 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.

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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The proposed activity was presented for the consideration of the Southwest Basin Roundtable at its quarterly meeting held in Durango on July 11, 2012, and received the unanimous support of the roundtable. Please refer to the letter from the roundtable chair for more information.

- 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.

The proposed activity meets the provisions of CRS 37-75-104(2). The need for continued / improved water supply / storage within the La Plata River drainage, commonly referred to locally as “the dry side,” was identified by the SW Basin Water Supply and Needs Report prepared under the auspices of the Statewide Water Supply Initiative (SWSI). This conclusion was reinforced by the SWSI 2010 Report, where Water District 33 (the La Plata River Basin) was identified as having a clear and significant deficiency of agricultural water supply, often amounting to more than half of the annual irrigation water requirement for that basin. The La Plata basin is, in fact, identified by SWSI 2010 as one of the most seriously water-deficient basins in the state.

The Animas - La Plata Project, as originally conceived and developed by the U. S. Department of Interior, Bureau of Reclamation, would have resolved much of the water supply problem on the La Plata River drainage; however, the irrigation water supply component for the La Plata side was ultimately removed from the project as a condition of gaining approval. Thus, irrigation water supply and storage needs on the La Plata drainage were never addressed by that project, and irrigation water remains in short supply, frequently affected by flow delivery requirements of the La Plata River Compact with New Mexico.

The analysis activity currently proposed by this application will assist in the decision-making process for assuring continued usage of the decreed storage within the reservoir, thereby maintaining the existing water supply within the La Plata River drainage, without requiring the need for developing new water sources. A favorable outcome regarding the economics of reservoir enlargement as a component of spillway improvement activities could be expected to ultimately help relieve some of the water supply shortages which currently exist in the La Plata River drainage.

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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- 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)

Not applicable – applicant is not requesting funding for this activity from the Statewide Fund.

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).

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- 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.

Not applicable – applicant is not requesting funding for this activity from the Statewide Fund

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Part IV. – Required Supporting Material

1. **Water Rights, Availability, and Sustainability** – This information is needed to assess the viability of the water project or activity. Please provide a description of the water supply source to be utilized, or the water body to be affected by, the water activity. This should include a description of applicable water rights, and water rights issues, and the name/location of water bodies affected by the water activity.

The Red Mesa Reservoir & Ditch Company holds the following water rights associated with Red Mesa Reservoir:

- 1176 acre-feet of absolute storage right for Red Mesa Reservoir
- 2898 acre-feet of conditional storage right for Red Mesa Reservoir
- 120 cfs absolute diversion right from the La Plata River for reservoir storage

All of the rights were adjudicated in 1912, and have an appropriation date of 1905. The water rights are decreed for irrigation, domestic, municipal, industrial, recreation, fish & wildlife, flood control and other beneficial purposes.

The reservoir is filled via diversions from the La Plata River into the Company's Supply Ditch, and by natural flows within Hay Gulch above the reservoir, both of which are allowed by the storage decree. The service area is downstream of Red Mesa Reservoir, which is located near the mouth of Hay Gulch, and generally surrounds the small, unincorporated town of Red Mesa in southwest La Plata County. Water from the reservoir is distributed to shareholders via three ditches: the Joseph Freed Ditch, the Warren Vossburg Ditch and the Greer Revival Ditch, all of which serve irrigated lands to the south and east of the La Plata River. See Exhibit D for a map of the irrigated lands served by Red Mesa Reservoir and the three ditches.

Waters diverted to and stored within Red Mesa Reservoir are subject to administration under the La Plata River Compact with New Mexico. The Compact provides that (1) between December 1 and February 15, both states have unrestricted use of the river; (2) when the stateline gauge is 100 cfs or more, both states have unrestricted use of the river; and (3), when the first two conditions do not apply, Colorado shall deliver one half of the flow at the Hesperus gauge to New Mexico. These restrictions generally result in the Red Mesa water rights being in priority every year from about November 1 to April 1 (essentially the non-irrigation period) and during periods when flows at the stateline gauge are greater than 100 cfs.

With the imminent construction of the long-anticipated Long Hollow Reservoir on the lower end of the La Plata Basin, it is anticipated that the fill period for Red Mesa Reservoir would be extended further into the spring in future years, as water stored within Long Hollow could be released to meet compact requirements. This would provide a greater probability of filling Red Mesa Reservoir even in relatively dry years.

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

Several studies pertaining to correction of the spillway deficiencies and/or enlargement of the reservoir have been completed within the past 15 years. In 2011, URS Corp. completed a study funded by a WSRA SW Basin grant, entitled "Red Mesa Incremental Damage Analysis and

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Emergency Action Plan”, which was accepted by the SEO and will serve as the basis for spillway sizing and dam freeboard requirements.

Feasibility studies pertaining to both correction of the spillway inadequacy problem and enlargement of the dam and reservoir were completed by Harris Water Engineering (HWE) in 2001 and by Wright Water Engineers (WWE) in 2003. Both studies were funded by the CWCB. Along with the needed safety corrections to the dam, the HWE study investigated the feasibility of enlarging the reservoir to its full decreed capacity of 4070 acre-feet, while the WWE study examined the feasibility of two different enlargement scenarios, one to full decreed capacity, and another to a capacity of 3000 acre-feet. The HWE study identified operational issues in filling the reservoir as a key stumbling block to moving forward with enlargement. The WWE study, which incorporated a much larger inflow design flood approved by the SEO, estimated project costs of \$6.1 million and \$7.1 million for the two enlargement scenarios, both beyond the financial capability of the Company.

As the currently proposed activity consists only of an alternatives analysis, no permitting issues are associated with it. The need to address future permitting issues will depend largely on the outcome of the analysis and in what direction it points. As a minimum, any improvements or modifications made to the dam will require the review and approval of the Colorado State Engineer’s Office (SEO). Additionally, any enlargement scenario would be expected to require a wetlands permit under Section 404 of the *Clean Water Act* and a biological opinion for threatened and endangered species under the *Endangered Species Act*. While both of these hurdles were successfully cleared during previous studies, the permits were allowed to lapse in 2007 and are no longer in effect.

3. Statement of Work, Detailed Budget, and Project Schedule

Refer to Exhibit A, attached.

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

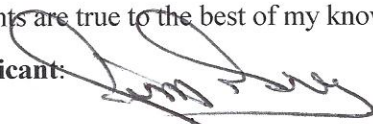
Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for 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:



President of Board

6-28-2012

Print Applicant's Name: Jim Greer, President, Red Mesa Reservoir & Ditch Co.

Project Title: Red Mesa Dam & Reservoir – Spillway Alternatives Analysis

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 - Red Mesa Dam & Reservoir – Spillway Alternatives Analysis

GRANT RECIPIENT – Red Mesa Reservoir & Ditch Company

FUNDING SOURCE – Southwest Basins Roundtable WSRA Basin Grant

INTRODUCTION AND BACKGROUND

The Colorado State Engineer has identified the spillway at Red Mesa Dam as seriously deficient in flood routing capacity and has directed the owners to bring the spillway into compliance with the dam safety requirements for a high hazard dam, or face significant storage restrictions or a possible breach order. A time frame of approximately three years has been established to achieve compliance.

The purpose of the proposed project is to develop a rational basis on which to determine the most cost-effective method for achieving compliance with the State Engineer's requirements. URS Corp., the Company's engineer, will evaluate several scenarios for achieving compliance, ranging from dam breaching and decommissioning to modifying the existing dam and spillway at the current reservoir storage level to allow it to pass the required spillway design flood. In addition, two scenarios for enlarging the dam and increasing normal reservoir storage capacity will be evaluated to determine the value of the increased storage in helping to offset spillway dam modification construction costs.

OBJECTIVES

The objectives of the proposed activity are as follows:

1. Develop conceptual designs for each evaluated alternative
2. Develop conceptual-level cost estimates for each alternative based on the conceptual designs and other anticipated costs, on which decisions concerning the best course of action can be based
3. Develop a recommended course of action

TASKS

Task 1 – Alternatives Development

Description of Task

Evaluate alternatives at a conceptual level to develop a cost effective solution to modify the existing spillway and dam without constructing a new dam.

Method/Procedure

The alternatives analysis will focus on the following strategies:

- Breaching the dam and draining the reservoir (essentially the “Do Nothing” Alternative)
- Spillway design based on optimizing the required spillway crest length at the existing spillway crest elevation, along with raising the dam crest to provide additional flood routing freeboard
- Providing flood overtopping protection consisting of roller-compacted concrete for the existing embankment, in concert with an enlarged spillway of appropriate size
- Two dam and reservoir enlargement alternatives coupled with spillway size optimization, as above, consisting of
 - Raising the normal storage level by 4 feet (approximately 250 acre-feet)
 - Raising the normal storage level by 8 feet (approximately 550 acre-feet)

URS will perform conceptual engineering analyses to enable the development of alternatives and concept figures.

Deliverable

Conceptual-level designs and figures for each of the evaluated alternatives, developed based on State Engineers Office (SEO) criteria and industry standards.

Task 2 – Cost Estimate

Description of Task

Develop conceptual cost estimates for each of the alternatives based on the conceptual design figures.

Method/Procedure

The cost estimates will be based on quantity takeoffs estimated from the figures developed in Task 1. Pricing will be based on URS’s database for material costs, previous dam construction projects in Colorado and New Mexico, prevailing wage rates, RS Means, and published unit rates from Colorado Department of Transportation. Contingencies will be applied, based on the conceptual level of design. The cost estimate for each alternative will be conceptual level and based on conceptual figures for the sole purpose of comparing alternatives.

Deliverable

Conceptual level cost estimates for each of the evaluated alternatives, for the purpose of comparing the alternatives.

Task 3 – Preparation of Technical Memorandum

Description of Task

A technical memorandum will be prepared which documents the activities and processes of the first two tasks and discusses recommendations for moving forward.

Method/Procedure

The technical memorandum will include design criteria, constraints, assumptions, quantities, cost estimates and potential construction risks and challenges for the alternatives.

Deliverable

Final technical memorandum, as described above, which will recommend a preferred alternative.

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.

BUDGET

Total Costs				
	Labor	Other Direct Costs	Matching Funds (If Applicable)	Total Project Costs
Task 1 – Alternatives Development	\$9117.00	\$252.44		\$9369.44
Task 2 – Cost Estimate	\$3764.00	\$104.22		\$3868.22
Task 3 – Preparation of Technical Memorandum	\$5899.00	\$263.34		\$6162.34
Total Costs:	\$18,780.00	\$620.00		\$19,400.00

Labor							
Project Personnel:	Consultant 2	Consultant 3	Project Engineer 4	Project Engineer 1	CADD Technician	Staff	Total Costs
Hourly Rate:	\$185.00	\$201.00	\$155.00	\$124.00	\$82.00	\$77.00	
Task 1 – Alternatives Development	9	2	6	31	24	4	\$9117.00
Task 2 – Cost Estimate	2	1	3	22			\$3764.00
Task 3 – Preparation of Technical Memorandum	5	1	5	31		2	\$5899.00
Total Hours:	16	4	14	84	24	6	
Cost:	\$2960.00	\$804.00	\$2170.00	\$10,416.00	\$1968.00	\$462.00	\$19,400.00

Other Direct Costs					
Item:	Communication	Reproduction / Shipping			Total
Task 1 – Alternatives Development	\$252.44				\$252.44
Task 2 – Cost Estimate	\$104.22				\$104.22
Task 3 – Preparation of Technical Memorandum	\$163.34	\$100.00			\$263.34
Total Cost:	\$520.00				\$620.00

SCHEDULE

Task	Start Date	Finish Date
1 - Alt. Dvlpmt.	NTP + 30 days	NTP + 75 days
2 - Cost Est.	NTP + 75 days	NTP + 95 days
3 - Tech. Memo.	NTP + 90 days	NTP + 120 days

NTP = Notice to Proceed

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.

Appendix 1

Reference Information

The following information is available via the internet. The reference information provides additional detail and background information.

- Water Supply Reserve Account main webpage:
 - <http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/main.aspx>
- Water Supply Reserve Account – Basin Fund Application Details:
 - <http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/BasinWaterSupplyReserveAccountGrants.aspx>
- Water Supply Reserve Account – Statewide Fund Application Details:
 - <http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/StatewideWaterSupplyReserveAccountGrants.aspx>
- Colorado Water Conservation Board main website:
 - <http://cwcb.state.co.us/>
- Interbasin Compact Committee and Basin Roundtables:
 - <http://cwcb.state.co.us/about-us/about-the-ibcc-brts/Pages/main.aspx/Templates/BasinHome.aspx>
- House Bill 05-1177 – (Also known as the Water for the 21st Century Act):
 - <http://cwcbweblink.state.co.us/DocView.aspx?id=105662&searchhandle=28318>
- House Bill 06-1400 – (Adopted the Interbasin Compact Committee Charter):
 - <http://cwcbweblink.state.co.us/DocView.aspx?id=21291&searchhandle=12911>
- Senate Bill 06-179 – (Created the Water Supply Reserve Account):
 - <http://cwcbweblink.state.co.us/DocView.aspx?id=21379&searchhandle=12911>
- Statewide Water Supply Initiative 2010:
 - <http://cwcb.state.co.us/water-management/water-supply-planning/Pages/SWSI2010.aspx>

Appendix 2

Insurance Requirements

NOTE: The following insurance requirements taken from the standard contract apply to WSRA projects that exceed \$25,000 in accordance with the policies of the State Controller's Office. Proof of insurance as stated below is necessary prior to the execution of a contract.

13. INSURANCE

Grantee and its Sub-grantees shall obtain and maintain insurance as specified in this section at all times during the term of this Grant: All policies evidencing the insurance coverage required hereunder shall be issued by insurance companies satisfactory to Grantee and the State.

A. Grantee

i. Public Entities

If Grantee is a "public entity" within the meaning of the Colorado Governmental Immunity Act, CRS §24-10-101, et seq., as amended (the "GIA"), then Grantee shall maintain at all times during the term of this Grant such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA. Grantee shall show proof of such insurance satisfactory to the State, if requested by the State. Grantee shall require each Grant with Sub-grantees that are public entities, providing Goods or Services hereunder, to include the insurance requirements necessary to meet Sub-grantee's liabilities under the GIA.

ii. Non-Public Entities

If Grantee is not a "public entity" within the meaning of the GIA, Grantee shall obtain and maintain during the term of this Grant insurance coverage and policies meeting the same requirements set forth in §13(B) with respect to sub-Grantees that are not "public entities".

B. Sub-Grantees

Grantee shall require each Grant with Sub-grantees, other than those that are public entities, providing Goods or Services in connection with this Grant, to include insurance requirements substantially similar to the following:

i. Worker's Compensation

Worker's Compensation Insurance as required by State statute, and Employer's Liability Insurance covering all of Grantee and Sub-grantee employees acting within the course and scope of their employment.

ii. General Liability

Commercial General Liability Insurance written on ISO occurrence form CG 00 01 10/93 or equivalent, covering premises operations, fire damage, independent Grantees, products and completed operations, blanket Grantual liability, personal injury, and advertising liability with minimum limits as follows: (a) \$1,000,000 each occurrence; (b) \$1,000,000 general aggregate; (c) \$1,000,000 products and completed operations aggregate; and (d) \$50,000 any one fire. If any aggregate limit is reduced below \$1,000,000 because of claims made or paid, Sub-grantee shall immediately obtain additional insurance to restore the full aggregate limit and furnish to Grantee a certificate or other document satisfactory to Grantee showing compliance with this provision.

iii. Automobile Liability

Automobile Liability Insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of \$1,000,000 each accident combined single limit.

iv. Additional Insured

Grantee and the State shall be named as additional insured on the Commercial General Liability and Automobile Liability Insurance policies (leases and construction Grants require additional insured coverage for completed operations on endorsements CG 2010 11/85, CG 2037, or equivalent).

v. Primacy of Coverage

Coverage required of Grantee and Sub-grantees shall be primary over any insurance or self-insurance program carried by Grantee or the State.

vi. Cancellation

The above insurance policies shall include provisions preventing cancellation or non-renewal without at least 45 days prior notice to the Grantee and the State by certified mail.

vii. Subrogation Waiver

All insurance policies in any way related to this Grant and secured and maintained by Grantee or its Sub-grantees as required herein shall include clauses stating that each carrier shall waive all rights of recovery, under subrogation or otherwise, against Grantee or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.

C. Certificates

Grantee and all Sub-grantees shall provide certificates showing insurance coverage required hereunder to the State within seven business days of the Effective Date of this Grant. No later than 15 days prior to the expiration date of any such coverage, Grantee and each Sub-grantee shall deliver to the State or Grantee certificates of insurance evidencing renewals thereof. In addition, upon request by the State at any other time during the term of this Grant or any sub-grant, Grantee and each Sub-grantee shall, within 10 days of such request, supply to the State evidence satisfactory to the State of compliance with the provisions of this §13.

Appendix 3

Water Supply Reserve Account Standard Contract Information

NOTE: The standard contract is required for WSRA projects that exceed \$100,000. (Projects under this amount will normally be funded through a purchase order process.) Applicants are encouraged to review the standard contract to understand the terms and conditions required by the State in the event a WSRA grant is awarded. Significant changes to the standard contract require approval of the State Controller's Office and often prolong the contracting process.

It should also be noted that grant funds to be used for the purchase of real property (e.g. water rights, land, conservation easements, etc.) will require additional review and approval. In such cases applicants should expect the grant contracting process to take approximately 3 to 6 months from the date of CWCB approval.

The standard contract is available here under the header "Additional Resources" on the right side:

<http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Pages/BasinWaterSupplyReserveAccountGrants.aspx>

Appendix 4

W-9 Form

NOTE: A completed W-9 form is required for all WSRA projects prior execution of a contract or purchase order. Please submit this form with the completed application.

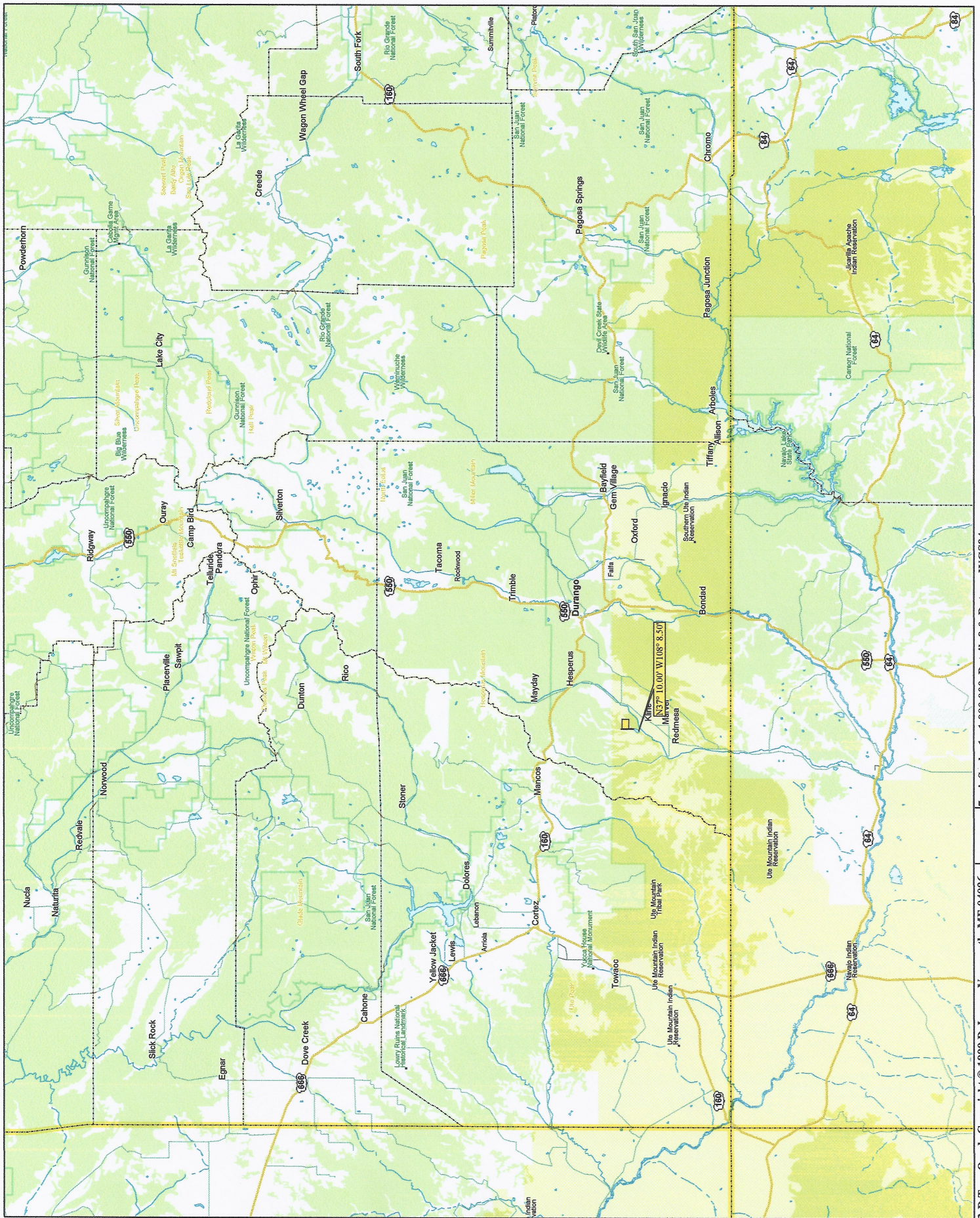


Exhibit B

ARTICLES OF INCORPORATION

OF

THE REDMESA WARD RESERVOIR & DITCH COMPANY.

KNOW ALL MEN BY THESE PRESENTS, That we, Leo S. Taylor, James M. Slade, William Devenport, E. K. Ball and L. J. Dean, all residents of the County of La Plata and State of Colorado, and citizens of the United States, being desirous of associating ourselves together for the purposes and objects hereinafter set forth, and not for pecuniary profit, under, by virtue of and pursuant to the laws and statutes of Colorado in such case made and provided, do hereby associate ourselves together, and we do hereby make, execute and acknowledge this, our certificate in writing in triplicate, of an intention so to become a body corporate, not for pecuniary profit, and we state and set forth:

ARTICLE I.

The corporate name of our said Company is "THE REDMESA WARD RESERVOIR & DITCH COMPANY".

ARTICLE II.

The particular business, purposes and objects for which our said Company is formed and organized are, to file on, appropriate or otherwise acquire four thousand acre feet, more or less, of the flood water of the La Plata River in said county and state, and other waters, for storage in reservoirs, for distribution and for the use of members of the Company and other persons entitled thereto, for domestic and irrigation purposes; to acquire by purchase or otherwise the title in the Company of the rights of way for headgates, ditches, flumes and of reservoirs for the carrying and conducting waters from the source of supply thereof to such reservoirs and the storage of such waters in such reservoirs, and the distribution of such waters to the members of the Company and other persons entitled thereto; to acquire by purchase or otherwise lands upon which to construct, maintain and operate the reservoirs of the Company for storage of waters therein for domestic and irrigation purposes; to construct, maintain and operate irrigation ditches, laterals, reservoirs and irrigation works, together with all necessary gates, dams, flumes, pipes and other appurtenances for the carrying, conveying storage and distribution of waters for irrigation and domestic purposes;

also to levy and collect pro rata and as may be provided by the by-laws of the Company, such assessments as may from time to time be necessary for the enlargement, repairs, maintenance, operation and superintendence of such irrigation works, ditches and reservoirs, and to provide for the sale of the memberships, membership certificates, rights and interests of the members of the Company and other persons entitled to receive water from said irrigation works, ditches and reservoirs for their default and neglect in payment of such assessments, all as may be provided by the by-laws of the Company.

ARTICLE III.

The headgate of the main feeder canal and ditch for taking and receiving flood waters from the La Plata River for storage in the main reservoir of the Company is on the right (west) bank of said river in the northeast quarter of the Northwest quarter ($NE\frac{1}{4}NW\frac{1}{4}$) of Section 26, Township 34, north of Range 12, West of the N.M.P.M., La Plata County, Colorado, whence the north quarter corner of said section bears N. $76^{\circ} 10'$ E. 1252 feet, more or less. From said headgate, said ditch extends in a general westerly direction on a line approximately as follows, to-wit:

Beginning at such headgate,

Thence	N. $84^{\circ} 00'$ W.	493 ft.	to Sta. 1,
"	N. $43^{\circ} 50'$ W.	616 ft.	to Sta. 2,
"	S. $76^{\circ} 25'$ W.	527 ft.	to Sta. 3,
"	S. $62^{\circ} 25'$ W.	883 ft.	to Sta. 4,
"	S. $51^{\circ} 45'$ W.	564 ft.	to Sta. 5,
"	S. $27^{\circ} 00'$ W.	210 ft.	to Sta. 6,
"	N. $08^{\circ} 15'$ W.	570 ft.	to Sta. 7,
"	S. $85^{\circ} 00'$ W.	92 ft.	to Sta. 8,
"	S. $76^{\circ} 36'$ W.	792 ft.	to Sta. 9,
"	N. $79^{\circ} 15'$ W.	204 ft.	to Sta. 10,
"	S. $60^{\circ} 40'$ W.	289 ft.	to Sta. 11,
"	S. $47^{\circ} 30'$ W.	910 ft.	to Sta. 12, where it connects

with the reservoir of the Company hereinafter described. The stream and source from which the principal supply of water is to be taken for storage purposes in such reservoir is from the La Plata River, and the foregoing mentioned feeder and ditch to such reservoir from said river traverses portions of the the $N\frac{1}{2}$ of the $NW\frac{1}{4}$ of Section 26, $SW\frac{1}{4}$ of the $SW\frac{1}{4}$ of Section 23, $N\frac{1}{2}$ of the $NE\frac{1}{4}$ and the $NE\frac{1}{4}$ of the $NW\frac{1}{4}$ of Section 27, all in the above mentioned township.

ARTICLE IV.

The location of the main reservoir of the Company is on, and the

lands which will be inundated by the waters stored in such reservoir, consist of the following, to-wit:

The east half of the northwest quarter of the northwest quarter ($E\frac{1}{2} NW\frac{1}{4} NW\frac{1}{4}$), the west half of the northeast quarter of the northwest quarter ($W\frac{1}{2} NE\frac{1}{4} NW\frac{1}{4}$) of Section 27, the South half of the southwest quarter ($S\frac{1}{2} SW\frac{1}{4}$), the northeast quarter of the southwest quarter ($NE\frac{1}{4} SW\frac{1}{4}$), the west half of the northwest quarter of the southeast quarter ($W\frac{1}{2} NW\frac{1}{4} SE\frac{1}{4}$), the west half of the southwest quarter of the northeast quarter ($W\frac{1}{2} SW\frac{1}{4} NE\frac{1}{4}$), and the east half of the southeast quarter ($E\frac{1}{2} SE\frac{1}{4}$) of Section 22, all in Township 34, north of Range 12, west of the N.M.P.M., La Plata County, Colorado.

ARTICLE V.

The use for which said water is intended to be applied is for the irrigation of land and domestic purposes.

ARTICLE VI.

The term of existence of this Company shall be twenty (20) years, unless sooner dissolved according to law.

ARTICLE VII.

The number of directors of this Company shall be five (5), and Leo S. Taylor, James M. Slade, William Devenport, E. K. Ball and L. J. Dean shall manage the affairs and business of this Company for the first year of its existence.

ARTICLE VIII.

The principal office of this Company shall be kept at Redmesa, La Plata County, Colorado, and a branch office may be opened and maintained at such other places in La Plata County, Colorado, as the Board of Directors may at any time determine, and the principal business of this Company shall be carried on in said La Plata County, Colorado.

ARTICLE IX.

The Directors of this Company are hereby empowered and directed to make such prudential by-laws as are proper and necessary for the management, conduct and control of the affairs, business and property of the Company, and shall include therein a provision for the issuance to the members of this Company certificates showing and evidencing the respective rights, interests and privileges of such members in the waters and in the use of waters for irrigation and domestic purposes as may be appropriated, conveyed and carried by

the ditches of said Company from the La Plata River and other sources and as may be stored in the reservoirs of the Company. That such membership certificates as issued by this Company shall set forth therein and thereby the amount of water the several owners are entitled to use and enjoy for irrigation and domestic purposes as follows: one share for each acre foot of water as may be stored and distributed from the reservoirs of the Company. Also that said by-laws shall contain a provision that in the election of Directors of this Company cumulative voting shall be allowed to the members of this Company.

ARTICLE X.

Assessments may be levied and made against the interests in the Company owned by the members hereof, respectively, as shown by and according to the certificates of the Company issued to them as herein provided and under the by-laws of the Company, at any annual or special meeting of such members, as shall be necessary to defray the expenses of repairing, improving, maintaining and operating the irrigation system, ditches and reservoirs of the Company, and for the discharge of the debts and liabilities of the Company of every nature and description.

ARTICLE XI.

These Articles of Incorporation may be altered or amended by a vote of two-thirds of all membership certificates or shares of this Company issued and outstanding, at any regular meeting of the members, or at any special meeting of the members, whenever the call or notice for any such meeting shall contain the substance of such proposed alteration or amendments, and which such call or notice of such meeting shall be made and given in strict conformity with the by-laws of this Company.

IN WITNESS WHEREOF, We the incorporators hereof, have hereunto subscribed our names and affixed our seals as of this 23 day of July, A.D., 1923.

L. S. Taylor (SEAL)
James M. Adams (SEAL)
William D. Davenport (SEAL)
E. H. Ball (SEAL)
L. J. Dean (SEAL)

STATE OF COLORADO,)
COUNTY OF LA PLATA.)

ss.

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I, Michael Lester, a Notary Public in and for
said County in the State aforesaid, do hereby certify that Leo. S. Taylor, James
M. Slade, William Devenport, E.K. Ball and L.J. Dean, who are personally known to
me to be the persons whose names are subscribed to the annexed and foregoing
Certificate or Articles of Incorporation, appeared before me this day in person,
and each acknowledged that he signed, sealed and delivered said instrument of
writing as his free and voluntary act for the uses and purposes therein set
forth.

Given under my hand and notarial seal this 23 day of June A.D.,
1923.

My commission expires July 30 1925.

Michael Lester
Notary Public.



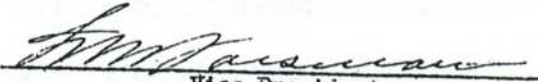
CERTIFICATE OF RENEWAL OF THE CERTIFICATE OF INCORPORATION.

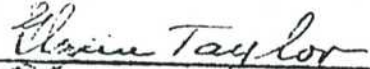
STATE OF COLORADO,)
COUNTY OF LA PLATA.) ss.

TO WHOM IT MAY CONCERN.

THIS IS TO CERTIFY That at a special meeting of the shareholders of The Redmesa Ward Reservoir & Ditch Company, held at Redmesa, County of La Plata, Colorado, on the 3rd day of September, 1943, duly called by the stockholders representing at least ten (10) per cent of the entire capital stock of the Company, the call being published once at least thirty days and not less than ten days prior to this date, in the Durango Herald-Democrat, a daily newspaper published at Durango, State of Colorado, and notice of said meeting having been mailed to each stockholder thirty (30) days prior to this date, there being represented at such meeting 22000 shares of the capital stock of said Company out of a total of 29425 shares outstanding.

That at said meeting a resolution was passed to have extended the corporate existence of this Company perpetually from and after the date of the expiration of the corporate life, the same being on August, 27, 1943, the resolution receiving a majority vote of all the outstanding stock of the Company. The Vice-President and Secretary were authorized to certify this resolution under the corporate seal of the company, to send such certificate to the Secretary of State of the State of Colorado, to file duplicate certificate under the seal of the Company in the office of the County Clerk and Recorder of the County of La Plata, State of Colorado, and in pursuance of such resolution, we do hereby certify the same under the seal of the Company.


Vice-President.

Attest: 
Secretary.

(Corporate Seal)

STATE OF COLORADO



OFFICE OF THE SECRETARY OF STATE

UNITED STATES OF AMERICA,
STATE OF COLORADO.

ss.

CERTIFICATE.

*I, Byron A. Anderson, Secretary of State
of the State of Colorado, do hereby certify that*

the annexed are full, true and complete copies of Articles of Incorporation and Certificate of Renewal of the Certificate of Incorporation of

THE REDMESA WARD RESERVOIR & DITCH COMPANY

as filed in this office and admitted to record.

... IN TESTIMONY WHEREOF *I have hereunto
set my hand and affixed the Great
Seal of the State of Colorado, at the
City of Denver, this --- Twentieth ---
day of --- July --- A. D. 1972*

Byron A. Anderson
SECRETARY OF STATE



United States of America,
State of Colorado,) SS.

CERTIFICATE

I **Carl S. Milliken**, Secretary of State
of the State of Colorado, do hereby certify that

JAMES M. SLADE

LEO S. TAYLOR

WILLIAM DEVENPORT

E. K. BALL

L. J. DEAN

Citizens of the United States, and residents of the State of Colorado, being desirous
of forming a corporation (not for pecuniary profit), under and by virtue of the provisions
of Chapter Nineteen (19) of the General Statutes of the State of Colorado,
entitled "An Act to Provide for the Formation of Corporations," Approved March 14, 1877, have made,
signed, acknowledged, and this TWENTY-SEVENTH day of AUGUST, 1923,
at the hour of 4:00 o'clock P.M. filed in my office the Certificate of Incorporation
of THE REDMESA WARD RESERVOIR & DITCH COMPANY

That in such Certificate is set forth the name of such Corporation, the particular
business and objects for which said Corporation is formed, the number of its Directors,
and the names of these Directors, who are to manage the affairs and concerns
of said Corporation for the first year of its existence, together with the location
of its principal office and place of business in this State.

Now, Therefore, pursuant to the provisions of Section 132 of said Chapter 19,
I hereby certify that the said

THE REDMESA WARD RESERVOIR & DITCH COMPANY

is a duly organized Corporation under the laws of the State of Colorado.

In Testimony Whereof, I have hereunto set my hand
and affixed the Great Seal of the State, at the City
of Denver, this TWENTY-SEVENTH day of AUGUST,
A.D. 1923




Carl S. Milliken

SECRETARY OF STATE.




Leslie A. Thompson

DEPUTY.

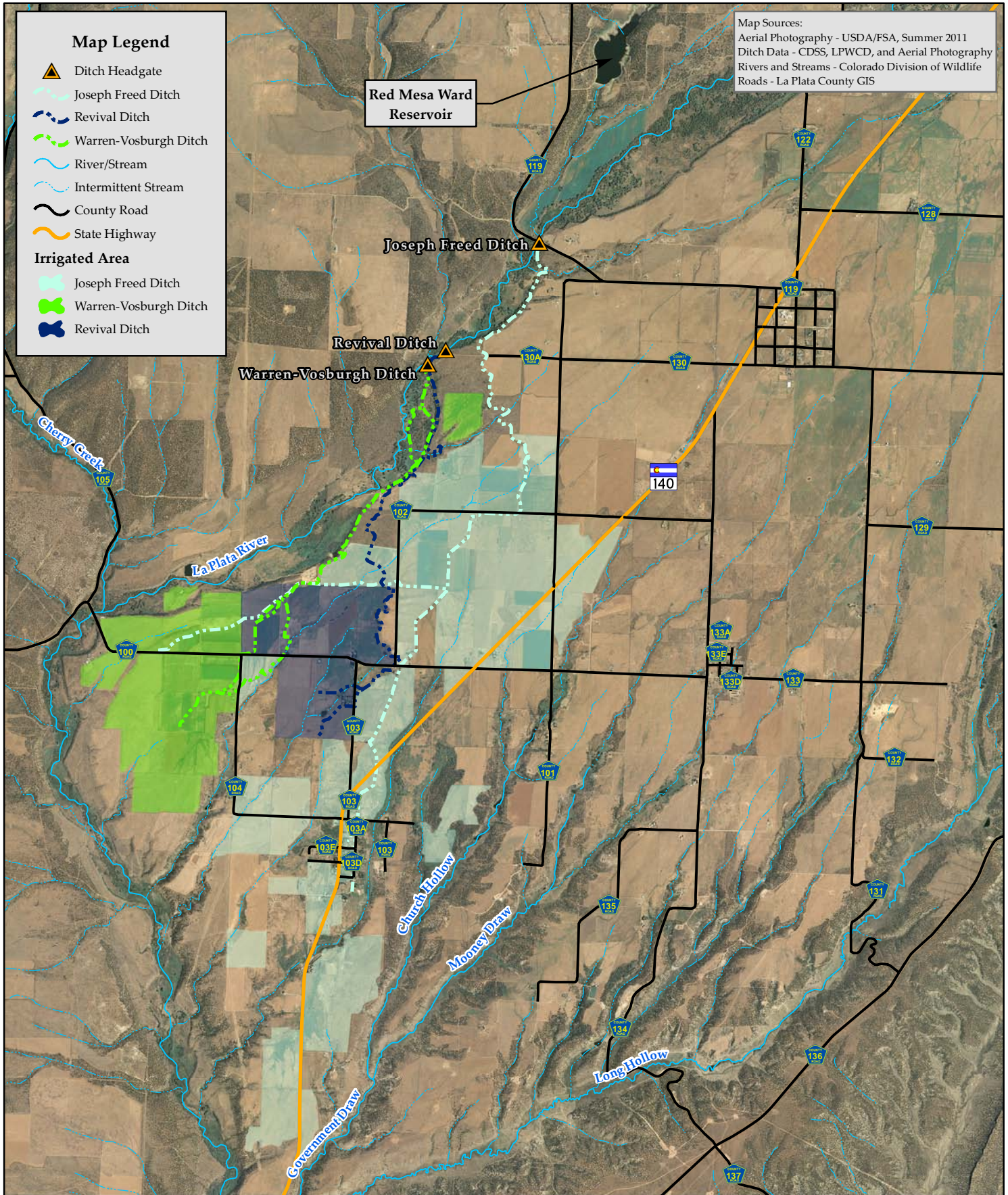
Map Legend

-  Ditch Headgate
-  Joseph Freed Ditch
-  Revival Ditch
-  Warren-Vosburgh Ditch
-  River/Stream
-  Intermittent Stream
-  County Road
-  State Highway

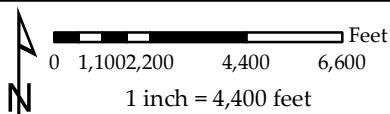
Irrigated Area

-  Joseph Freed Ditch
-  Warren-Vosburgh Ditch
-  Revival Ditch

Map Sources:
Aerial Photography - USDA/FSA, Summer 2011
Ditch Data - CDSS, LPWCD, and Aerial Photography
Rivers and Streams - Colorado Division of Wildlife
Roads - La Plata County GIS



555 RiverGate Lane, Suite B4-82
Durango, CO 81301
(970) 385-2340ph 385-2341fx
www.BikisWater.com



Designed by: MJK
Checked by: EAB
Date: 6/5/2012
Scale: 1:52,800

LPWCD Ditch Map

DRAFT
Figure
1

SW Basin RT Criteria for Project Evaluation & Prioritization

to support the

Grant Request

for

Red Mesa Dam & Reservoir

Spillway Alternatives Analysis

Red Mesa Reservoir & Ditch Company

The Red Mesa Reservoir & Ditch Company (Red Mesa) is requesting funding assistance from the SW Basin Roundtable for the purpose of performing a Spillway Alternatives Analysis, which will be used to identify the most cost-effective means for complying with the requirement imposed by the Colorado State Engineer's Office (SEO) to construct an adequate spillway for the dam. Red Mesa is requesting SW Basin grant funds in the amount of \$19,400 to complete the Alternatives Analysis.

Discussion of SW Basin Evaluation Criteria:

1. What benefit(s) does the project provide? Are there multiple purposes?

Due to its current serious hydrologic inadequacy, the reservoir faces certain future regulatory action by the SEO, which could range from significant restriction of reservoir storage to an outright breach order for the dam if a satisfactory spillway is not constructed. Either action would result in a serious loss of needed water supply to the agricultural lands on the lower La Plata River basin, and significant economic hardship to those irrigators and to other associated economic activities. The design and construction of a compliant spillway would significantly reduce the risk of a dam failure due to flood overtopping, and help preserve the value of the dam and reservoir for future use. The proposed project is the next logical step in moving forward toward the goal of meeting the hydrologic requirements of the SEO.

The purpose of the proposed project is to help identify, from among several possible scenarios, which method of achieving compliance with the SEO's spillway requirements would likely be the most cost-effective. This proposed project does not contain any hard construction elements, but the results of the project would be expected to ultimately lead to construction activities to achieve compliance. As any construction activities at the site are likely to be quite expensive, the project is designed to identify what methodology for achieving compliance is the most effective, and that is its primary benefit.

Modifications to the existing dam will clearly be required to achieve compliance with the spillway requirements. Just what those modifications will consist of is, at this time, undetermined, and will need to be identified by the proposed project. Several scenarios are possible, including removal of the dam, combinations of raising the dam crest to increase flood storage and routing capacity along with enlarging the actual spillway channel to significantly increase its flow capacity, and hardening of the dam surfaces. Since enlargement of the spillway

channel would require considerable excavation of soil and rock materials, those materials would need to be disposed of, and placement within an enlarged dam section would likely result in an overall lowered cost of construction. Hardening of the dam surfaces would allow the dam to overtop during certain extreme flood events, thereby reducing the size of the spillway required.

An additional component of the proposed study is to evaluate the cost-effectiveness of including additional reservoir storage as a component of spillway improvements, to take advantage of potential excess fill materials generated by the spillway channel excavation. Two enlargement scenarios will be evaluated, with increases to storage capacity of approximately 250 and 550 acre-feet, representing reservoir enlargements of approximately 21% and 47% of current capacity, respectively. This would be accomplished by raising the dam and the normal storage levels within the reservoir by 4 and 8 feet, respectively. Red Mesa holds decreed conditional water rights which would allow this additional reservoir storage.

The benefit that the proposed project provides, then, is to provide a rational basis for the determination of what path makes the most economic sense for Red Mesa to move forward in meeting the requirements of the SEO.

2. Outline the steps needed for completion of the project. What permit issues must be overcome? How will funds acquired in this process be used to accomplish the final goal?

Steps required for the completion of the proposed project are essentially the engineering tasks described in Appendix A of the grant application form, as developed within a proposal to the applicant by its consultant, URS Corp., and include:

- Alternatives development, considering those alternatives described above. This step will consist of conceptual engineering analyses to enable the development of alternatives and concept figures.
- Development of conceptual-level cost estimates for each of the evaluated alternatives.
- Preparation of a technical memorandum which describes the processes of the first two tasks, discusses potential risks and problems to be encountered, and recommends a course of action.

An approximate timeline for the completion of these steps, as well as other activities incidental to them, is included within Appendix A.

The currently proposed Alternatives Analysis project is one step along the path of the ultimate goal of achieving compliance with the SEO's hydrologic requirements. The SW Basins Roundtable previously participated in the initial step along that path by providing Basin Grant funds for the recently completed Incremental Damage Analysis (IDA) and Emergency Action Plan (EAP) project. The currently proposed project does not involve any construction activities at this time, and no permitting issues are therefore involved with this part of the overall project, other than to include significant anticipated costs of permitting activities for the various alternatives in the cost estimates prepared. Ultimately, however, in future components of the project, construction activities will be required, and permitting issues will come into play. Those will vary with the course of action selected. As a minimum, any improvements or modifications made to the dam will require the review and approval of the Colorado State Engineer's Office

(SEO). Additionally, any enlargement scenario would be expected to require a wetlands permit under Section 404 of the *Clean Water Act* and a biological opinion for threatened and endangered species under the *Endangered Species Act*. Those issues will be addressed as they are identified as being relevant to the selected course of action.

The funds acquired by the requested grant will be utilized in their entirety to complete the proposed Alternatives Analysis.

3. For prioritization of different proposals and assessment of the merits of the plan, can this project be physically built with this funding? Are further studies needed before actual construction is commenced (if the project anticipates construction)? Will these studies or additional steps delay the completion of the project substantially?

The proposed project which is the subject of the funding request consists of analyses only, and does not include construction of any hard facilities. The proposed analysis project can be completed for the requested level of funding.

The eventual construction of hard facilities at the dam site will undoubtedly require additional funding, which will be the subject of future grant and/or loan requests. At this point, the project needs to progress on a logical step-wise basis, in order to determine the most cost-effective course on which to proceed. Future sources of funding for actual construction are anticipated to include WSRA Basin and Statewide Grants, CWCB loans, and possibly additional funding from the Southwest Water Conservation District and other sources.

4. How does the proposal envision and anticipate support from its beneficiaries or from other sources in addition to the funding requested here? Would a loan reasonably address the needs of the applicant or, with a grant, should a recommendation be added to assess the future project status for ability to repay a portion of the grant?

The currently proposed project represents only a small piece of the overall project which Red Mesa must undertake in order to resolve their spillway inadequacy issue at the dam. Red Mesa previously contributed \$3000 of matching funds to help fund the first step of the project, the IDA/EAP component, with the remaining \$29,000 funded by a grant provided by the SW Basins Roundtable. The current Alternatives Analysis project is requesting full funding from the Basin account. A loan for this amount is not felt to be justified by the relatively low level of funding requested. Future funding requests will certainly need to consider all potential avenues for funding, including both loans and grants.

5. What is the ability of the sponsor to pay for the project? What actions have been taken to secure local funding? Are there supporting factors which overcome the sponsor's inability to pay? (These could be related to basin water needs and compact considerations).

The sponsor is poorly capitalized to pay for the project, with very low cash reserves. Other local funding sources have not been actively sought, as it is felt that the WSRA is the most applicable funding source. Applicant's Red Mesa Reservoir is currently the only significant water storage

facility on the La Plata River basin; partial or complete loss of its capacity due to a reservoir restriction or a breach order would have very significant impacts on the basin, the area, and the ability of current water users to appropriate decreed waters administered under the La Plata River Compact.

6. What alternative sources of water or alternative management ideas have you considered? Are there water rights conflicts involving the source of water for the project? If so, please explain.

The proposed project does not involve the development of additional water sources; the project would seek to protect the applicant's existing adjudicated water rights within the La Plata River drainage. Alternative sources of agricultural water are not generally available on the La Plata River drainage. In the event that reservoir storage in Red Mesa Reservoir is no longer available, due to reservoir restriction or dam removal, the alternative management practice would be to convert currently productive irrigated lands to primarily dry land agriculture, which, in this setting, would be unlikely to be viable.

7. How has public input been solicited and is there local support for the project? Have the beneficiaries solicited funding, letters or other documentation to demonstrate support?

Local support has long existed for protection of existing water resources on the La Plata River basin, and is well-documented. Removal of the La Plata River water supply component from the Federal Animas – La Plata Project has left the La Plata basin exposed to continuing water shortage issues, which would only be exacerbated by the loss of existing storage facilities within the basin.

8. Is there opposition to the project? If there is opposition, how have those concerns been addressed?

There is no known opposition to the project. At its meeting on February 8, 2012, the Red Mesa Board of Directors decided to pursue funding for the proposed project from the Southwest Basin Roundtable.

9. How does the project affect the protection and conservation of the natural environment, including the protection of open space?

The outcome of the proposed project is expected to lead eventually to the construction of improved dam and spillway facilities that will ensure the continued existence of the reservoir, possibly in an enlarged state, as opposed to the imminent imposed draining of the reservoir if no action is taken. This will help ensure that the existing character of the area will be maintained and that it will remain as a viable agricultural production area. Open space values will be preserved by helping ensure the continued agricultural viability of the project lands.

- 10.** What is the impact of the proposed action on other non-decreed values of the stream or river?
Non-decreed values may include things such as non-decreed water rights or uses, recreational uses and soil/land conservation practices.

The proposed action, which consists of a study only, will not produce any impact on other non-decreed values of the river. One component of the proposed study does include the evaluation of reservoir enlargement as a possible option during dam improvement activities. Reservoir enlargement, with its associated greater withdrawal of water from the natural regime, could be expected to potentially have some impact on non-decreed values of the river, although recreational uses of the La Plata River system are generally quite limited under the natural flow regime, and the requirements of native fish species are protected by current in-stream flow requirements on the La Plata. At any rate, any enlargement of the reservoir would be preceded by the required environmental permitting processes, ensuring that additional withdrawals from the river would not have a negative impact on native species.

- 11.** How does the project relate to **local** land use plans? If conflicts exist, how will these be addressed?

There are no known conflicts with local land use plans. Current land usage would not be altered.

- 12.** Identify any intrabasin conflicts and how they will be addressed.

There are no known intrabasin conflicts.

- 13.** Identify any interbasin impacts and how any conflicts would be addressed.

There are no identified interbasin impacts.

- 14.** How does the project support agricultural development or protect the existing agricultural economy?

The proposed project is another step along the path toward preventing regulatory action which would limit or prevent the storage of water in Red Mesa Reservoir, an action which would make irrigation water unavailable to existing irrigators at certain times of the year and could seriously impact the existing agricultural economy of the lower La Plata River basin. Loss of the storage in the reservoir would result in serious financial impacts to all irrigators within the project area, and the loss of a large portion of the agricultural viability of the lower La Plata River basin.