

**Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
Agenda Item 23a**

Applicant: Huerfano County Water Conservancy District

Water Activity Name: Red Wing Augmentation Facility – Huerfano Regional Augmentation Project

Water Activity Purpose: Structural Water Project

County: Huerfano

Drainage Basin: Arkansas

Water Source: Huerfano River

Amount Requested: \$250,000

Source of Funds: \$200,000 (Statewide Account)

\$50,000 (Arkansas Basin Account)

Matching Funds: \$330,000 cash (\$50,000 Huerfano County Water Conservancy District and \$280,000 CWCB Water Project Loan)

Staff Recommendation
Staff recommends approval of up to \$200,000 from the Statewide Account and up to \$50,000 from the Arkansas Basin Account to help fund the Red Wing Augmentation Facility – Huerfano Regional Augmentation Project.

Water Activity Summary:

The Red Wing Augmentation Facility is an important part of a permanent regional augmentation plan covering the Huerfano River Basin within Huerfano County. In addition to this grant, the regional plan was initially funded by a \$2.22M loan from the CWCB's Water Project Loan Fund as well as pledged tax revenue. The regional plan will provide augmentation water to entities now using water unlawfully because of the absence of working augmentation plans and will support future uses of water on this over-appropriated stream.

The Red Wing Augmentation Facility will enable upstream storage and release of historic consumptive use water from the Priority #7 water right, historically diverted through the William Craig Ditch. The District has acquired six-sevenths of the William Craig Ditch. It also acquired the Camp Ranch property, upon which the ditch was used for irrigation. This interest is anticipated to yield an average of approximately 150 acre feet (AF) per year of consumptive use water.

Located immediately offstream of the upper Huerfano River, the Red Wing Augmentation Facility will consists of (1) a diversion structure co-located with the existing Wilson Ditch, (2) a waste-way or augmentation station shortly below the headgate, (3) a splitter box dividing the water diverted between the District and the Wilson Ditch, (4) a pipeline from the splitter box to the Red Wing Augmentation Facility, (5) the lined pond itself, having a capacity of 25 AF, (6) outlet works into a second pipeline delivering releases back to (7) an augmentation station at the river, together with (8) appropriate measuring devices and telemetry. Water will be diverted from the river pursuant to an appropriate right of exchange.

For almost five years, by using temporarily leased water rights, the District has provided augmentation water to an increasing number of water users via individual annual leases of consumptive use water pursuant to approved Substitute Water Supply Plans (SWSP) and Rule 14 Plans. Since the limited statutory life of the plans is about to expire, the District must initiate a permanent augmentation plan.

The regional augmentation plan will provide consumptive use water to existing customers of the District (privately- and publically-owned residential supplies for over 300 homes, plus the Huerfano County Road & Bridge Department), to new water users in the basin, and to other out of priority water users that are not currently strictly administered. Water users will buy permanent augmentation certificates from the District for consumptive use water in amounts to cover their depletions, as well as annual administrative fees.

Discussion:

The Red Wing Augmentation Facility appears to provide multiple benefits. It is an integral part of a larger water activity – establishing a permanent regional augmentation plan for out-of-priority uses of water in the Huerfano River Basin. This activity meets multiple needs and issues by providing replacement water for domestic and residential water supplies, county road maintenance and replacement of pond evaporation. The Town of Gardner and its public school will not be able to continue to operate without the success of the Red Wing Augmentation Facility and the regional augmentation plan that this storage supports.

There are five entities which currently participate in the initial phase of this activity, by annual SWSPs or by Rule 14 Plans, and expect to be served by the permanent augmentation plan: Huerfano County Road & Bridge Department (water for dust control and road maintenance) and private and public water systems serving over 300 homes including: Malachite Spring, CO 61 Homeowners Association, Gardner Water & Sanitation District, and Paradise Acres HOA. Others have expressed interest, including energy companies in need of water for drilling, and residential properties that cannot be used until adequate replacement water supplies are developed (remaining lots within Paradise Acres and CO61). In addition, there are numerous out-of-priority existing water users that will be curtailed by the Division Engineer's Office if the regional augmentation plan is not successfully implemented. This was evidenced by a letter from Steve Witte, Division Engineer.

Additionally, the waters of the Huerfano Basin are subject to the terms of the Arkansas River Compact. Therefore, use of Huerfano River water must be in compliance with the Compact. This project helps ensure Compact compliance by eliminating out-of-priority depletions in violation of the Compact.

Due to these considerations, staff believes this project meets many of the Statewide Evaluation Criteria.

Issues/Additional Needs: None

Staff Recommendation:

Staff recommends approval of up to \$200,000 from the Statewide Account and up to \$50,000 from the Arkansas Basin Account to help fund the Red Wing Augmentation Facility – Huerfano Regional Augmentation Project.

All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and will help promote the development of a common technical platform.

In accordance with the revised WSRA Criteria and Guidelines, staff would like to highlight additional reporting and final deliverable requirements. The specific requirements are provided below.

Reporting: The applicant shall provide the CWCB a progress report every 6 months, beginning from the date of the executed contract. The progress report shall describe the completion or partial completion of the tasks identified in the scope of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

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.

Engineering: All engineering work (as defined in the Engineers Practice Act (§12-25-102(10) C.R.S.)) performed under this grant shall be performed by or under the responsible charge of professional engineer licensed by the State of Colorado to practice Engineering.



Arkansas Basin Roundtable
P.O. Box 1976
Colorado Springs, CO 80901

November 13, 2013

Mr. Craig Godbout
Colorado Water Conservation Board
Water Supply Planning Section
1580 Logan Street, Suite 200
Denver, Colorado 80203

Re: Red Wing Augmentation Facility, HCWCD

Dear Craig:

Under separate cover you will receive a WSRA grant application for the Red Wing Augmentation Facility, HCWCD. At the November 13, 2013, Arkansas Basin Roundtable meeting, the Roundtable agreed by consensus to approve this application for \$50,000 in Basin Funds and \$200,000 in Statewide Funds. This grant request meets our basin goals by addressing out-of-priority depletions in the Huerfano River basin and helps us meet our municipal water supply gap.

My expectation is that this grant request will be heard at the March, 2014 CWCB meeting. Please do not hesitate to contact me if you have any questions.

Sincerely,

Gary Barber
Chair

c: Executive Committee, Ark Roundtable



COLORADO WATER CONSERVATION BOARD



WATER SUPPLY RESERVE ACCOUNT APPLICATION FORM

**Red Wing Augmentation Facility
Huerfano Regional Augmentation Project**

Name of Water Activity/Project

Huerfano County Water Conservancy District

Name of Applicant

**Arkansas Basin
Roundtable**

Amount from Statewide Account:

\$200,000

Amount from Basin Account(s):

\$50,000

Total WSRA Funds Requested:

\$250,000

Approving Basin Roundtable(s)

(If multiple basins specify amounts in parentheses.)

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Exhibits

- A. Statement of Work, Budget, Schedule, W-9
- B. Project Map
- C. Letter of support from Steve Witte, Division Engineer
- D. Figure: Camp Ranch Water Supplies
- E. Figure: Camp Ranch Augmentation Structures Plan View
- F. Figure: Camp Ranch Augmentation Structures Profile View
- G. Figure: HCWCD Exchange Reach
- H. Figure: Red Wing Augmentation Pond Plan View
- I. Figure: Red Wing Augmentation Pond Profile View
- J. Loan Approval Letter, Regional Augmentation Project, Contract Number C150364

Water Supply Reserve Account – Application Form

Revised December 2011

Instructions

To receive funding from the Water Supply Reserve Account (WSRA), a proposed water activity must be approved by the local Basin Roundtable **AND** the Colorado Water Conservation Board (CWCBC). The process for Basin Roundtable consideration and approval is outlined in materials in Appendix 1.

Once approved by the local Basin Roundtable, the applicant should submit this application **with a detailed statement of work including budget and schedule as Exhibit A** to CWCBC staff by the application deadline.

WSRA applications are due with the roundtable letter of support 60 calendar days prior to the bi-monthly Board meeting at which it will be considered. Board meetings are held in January, March, May, July, September, and November. Meeting details, including scheduled dates, agendas, etc. are posted on the CWCBC website at: <http://cwcb.state.co.us> Applications to the WSRA Basin Account are considered at every board meeting, while applications to the WSRA Statewide Account are only considered at the March and September board meetings.

When completing this application, the applicant should refer to the WSRA Criteria and Guidelines available at: <http://cwcb.state.co.us/LoansGrants/water-supply-reserve-account-grants/Documents/WSRACriteriaGuidelines.pdf>

The application, statement of work, budget, and schedule **must be submitted in electronic format** (Microsoft Word or text-enabled PDF are preferred) and can be emailed or mailed on a disk to:

Craig Godbout – WSRA Application
Colorado Water Conservation Board
1580 Logan Street, Suite 200
Denver, CO 80203
craig.godbout@state.co.us

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

1.

Applicant Name(s):	Huerfano County Water Conservancy District		
Mailing address:	Attn: Carol Dunn, Secretary to the Board P.O. Box 442 La Veta, CO 81055		
Taxpayer ID#:	84-0935026		
Primary Contact:	Michael (Sandy) White	Position/Title:	Board member
Email:	sandy@white-jankowski.com		
Phone Numbers:	Cell: 720-635-9403 seldom	Office:	719-742-6164 best
Alternate Contact:	Scott King	Position/Title:	Board member
Email:	slking@centurylink.net		
Phone Numbers:	Cell: 719-680-0784	Office:	719-742-3124

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 Huerfano County Water Conservancy District (HCWCD) was formed in 1971 by District Court decree pursuant to the Water Conservancy Act of 1963, C.R.S. § 37-45-101 et seq. The District's boundaries encompass all of Huerfano County; with minor exceptions (see Exhibit B).

Although Huerfano County constantly vies for the distinction of being the poorest county in the State, in 2012 its voters approved a 2.0 mil increase in the HCWCD levy. Voter support was remarkable since, as of July, 2013, only 49% of the county population comprised its civilian work force (54% statewide), 10.5% of the workforce was unemployed, 22.5% of the entire population was living below the poverty rate (12.5% statewide), and over half the households were on food stamps. This application covers the Huerfano River basin, one of two rivers in the county, the other being the Cucharas.

HCWCD is governed by a working board of directors comprised of active businessmen, ranchers, and retirees – an academic, a county commissioner, and a water lawyer:

- Kent Mace, chair
- Dawson Jordan, vice-chair
- Beaver Edmundson
- Scott King
- Sandy White

Since the District cannot afford a full-time staff, the board deals with most matters through assignment to committees or to individual members. It employs a part-time secretary/treasurer, Carol Dunn, and engages:

- Felt, Monson & Culichia, LLC (primarily Steve Monson), as its lawyers
- TZA Water Engineers, Inc. (primarily Tom Dea), as its engineers

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

5. Successful applicants will have to execute a contract with the CWCB prior to beginning work on the portion of the project funded by the WSRA grant. In order to expedite the contracting process the CWCB has established a standard contract with provisions the applicant must adhere to. A link to this standard contract is included in Appendix 3. Please review this contract and check the appropriate box.

<input checked="checked" type="checkbox"/>
<input type="checkbox"/>

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.

In November 2013, HCWCD presented local Ballot Issue 5C to the electorate, under which the District is “authorized to collect, retain and spend all revenues, funds and incomes from any and all sources during 2013 and in each fiscal year thereafter, that are in excess of the revenue, spending, or any other

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limitations imposed upon the district by Article X, Section 20 of the Colorado Constitution.” Ballot issue 5C expressly authorizes the District to obtain grants and retain all revenues regardless of the source of the funds.

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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)

<input type="checkbox"/>	Nonconsumptive (Environmental or Recreational)
<input type="checkbox"/>	Agricultural
<input type="checkbox"/>	Municipal/Industrial
<input type="checkbox"/>	Needs Assessment
<input type="checkbox"/>	Education
<input checked="" type="checkbox"/>	Other

Explain:

2. If you feel this project addresses multiple purposes please explain.

In addition to providing augmentation water to public users and unincorporated private water systems, which now operate unlawfully by making out-of-priority diversions (having no or inadequate augmentation plans), the project will also provide consumptive use and replacement water for domestic, residential and other beneficial consumptive uses, including agricultural irrigation and energy development. The augmentation provided under this plan will also replace depletions attributable to evaporation for various lakes, reservoirs, and ponds (including project ponds).

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

<input type="checkbox"/>	Study	<input checked="" type="checkbox"/>	Implementation
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4. To catalog measurable results achieved with WSRA funds can you provide any of the following numbers?

<input type="text" value="25"/>	New Storage Created (acre-feet)
<input type="text"/>	New Annual Water Supplies Developed, Consumptive or Nonconsumptive (acre-feet)
<input type="text" value="N/A"/>	Existing Storage Preserved or Enhanced (acre-feet)
<input type="text" value="33"/>	Length of Stream Restored or Protected (linear feet) [length of exchange reaches]
<input type="text" value="3,000"/>	Length of Pipe/Canal Built or Improved (linear feet)
<input type="text" value="N/A"/>	Efficiency Savings (acre-feet/year OR dollars/year – circle one)
<input type="text" value="3"/>	Area of Restored or Preserved Habitat (acres)
<input type="text"/>	Other -- Explain: <input type="text"/>

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

Latitude:

37.7836° N

Longitude:

105.1658° 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.

This project, the Red Wing Augmentation Facility, is an important part of a permanent regional augmentation plan covering the Huerfano River Basin within Huerfano County (Exhibit B). In addition to this grant, the regional plan is initially funded by a \$2.22M loan from the CWCB's Water Project Loan Fund as well as pledged tax revenue (Exhibit T). The plan will (1) provide augmentation water to entities now using water unlawfully because of the absence of working augmentation plans and (2) support future uses of water on this over-appropriated stream. Both of these objectives will support and develop the tax base within Huerfano County.

The Red Wing Augmentation Facility (RWAf) will enable upstream storage and release of historic consumptive use water from the Priority #7 water right, historically diverted through the William Craig Ditch. HCWCD is in the process of acquiring six-sevenths of the William Craig Ditch and the Camp Ranch upon which it was used for irrigation. This interest is anticipated to yield an average of approximately 150 a.f. per year of consumptive use water. (Exhibit D).

Located immediately offstream of the upper Huerfano River, RWAf consists of (1) A diversion structure co-located with the existing Wilson Ditch, (2) a waste-way or augmentation station shortly below the headgate, (3) a splitter box dividing the water diverted between HCWCD and the Wilson Ditch, (4) a pipeline from the the splitter box to the Red Wing Augmentation Facility, (5) the lined pond itself, having a capacity of 25 a.f., (6) outlet works into a second pipeline delivering releases back to (7) an augmentation station at the river, together with (8) appropriate measuring devices and telemetry. (Exhibit H and I) Water will be diverted from the river pursuant to an appropriate right of exchange. The District's analysis shows that there is not a dry-up point in the river restricting exchange potential in the exchange reach between the William Craig Ditch and the Wilson Ditch headgates. (Exhibit G) Indeed, during the irrigation season, the exchange potential in this reach averaged approximately 43 percent of river flow at the Manzanares Crossing Near Red Wing gage. As a result, the Red Wing Augmentation Facility will be able to be filled by exchange with the historical consumptive use credits and delayed flows from the senior Priority #7.

For almost five years, by using temporarily leased water rights, the HCWCD has provided augmentation water to an increasing number of water users via individual annual leases of consumptive use water pursuant to approved SWSPs and Rule 14 Plans. Since the limited statutory life of the plans is about to expire, the District must initiate a permanent augmentation plan.

The regional augmentation plan will provide consumptive use water to existing customers of the District (privately- and publically-owned residential supplies for over 300 homes, plus the County road department), to new water users in the basin, and to other out of priority water users that are not currently strictly administered. Water users will buy permanent augmentation certificates from the District for consumptive use water in amounts to cover their depletions, as well as annual administrative fees.

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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

This water activity of which RWAF is a part will be conducted wholly pursuant to Colorado's water law – under the terms of water court decrees and the direct supervision of the State and Division Engineers, thereby precluding injury to other water users whether under decree or contract. HCWCD's operations will include the change of existing water rights (quantification of historical consumptive use, alternate uses including augmentation, alternate points of diversion, conversion from direct flow to storage, groundwater recharge facilities, *etc.*) and the creation of new water rights for appropriative rights of exchange to store historical consumptive use and facilitate the regional plan for augmentation. All operations will eventually be pursuant to water court decree. Prior to issuance of that decree, operations will be conducted pursuant to a Substitute Water Supply Plan and a Rule 14 Plan (Arkansas Compact) both of which will be approved by the State and Division Engineers.

- 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.

In process.

¹ 37-75-102. Water rights - protections. (1) It is the policy of the General Assembly that the current system of allocating water within Colorado shall not be superseded, abrogated, or otherwise impaired by this article. Nothing in this article shall be interpreted to repeal or in any manner amend the existing water rights adjudication system. The General Assembly affirms the state constitution's recognition of water rights as a private usufructuary property right, and this article is not intended to restrict the ability of the holder of a water right to use or to dispose of that water right in any manner permitted under Colorado law. (2) The General Assembly affirms the protections for contractual and property rights recognized by the contract and takings protections under the state constitution and related statutes. This article shall not be implemented in any way that would diminish, impair, or cause injury to any property or contractual right created by intergovernmental agreements, contracts, stipulations among parties to water cases, terms and conditions in water decrees, or any other similar document related to the allocation or use of water. This article shall not be construed to supersede, abrogate, or cause injury to vested water rights or decreed conditional water rights. The General Assembly affirms that this article does not impair, limit, or otherwise affect the rights of persons or entities to enter into agreements, contracts, or memoranda of understanding with other persons or entities relating to the appropriation, movement, or use of water under other provisions of law.

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- c) The water activity meets the provisions of Section 37-75-104(2), Colorado Revised Statutes.² The Basin Roundtable Chairs shall include in their approval letters for particular WSRA grant applications a description of how the water activity will assist in meeting the water supply needs identified in the basin roundtable's consumptive and/or non-consumptive needs assessments.

In process.

- d) Matching Requirement: For requests from the **Statewide Fund**, the applicants is required to demonstrate a **20 percent** (or greater) match of the request from the Statewide Account. Statewide requests must also include a minimum match of **5 percent** of the total grant amount from Basin Funds. Sources of matching funds include but are not limited to Basin Funds, in-kind services, funding from other sources, and/or direct cash match. Past expenditures directly related to the project may be considered as matching funds if the expenditures occurred within 9 months of the date the application was submitted to the CWCBC. Please describe the source(s) of matching funds. (NOTE: These matching funds should also be reflected in your Detailed Budget in **Exhibit A** of this application)

FUNDING SUMMARY

WSRA Basin Funds	\$ 50,000
WSRA Statewide Funds	\$ 200,000
HCWCD	\$ 50,000
CWCB Loan	<u>\$ 280,000 *</u>
	\$ 580,000

*A CWCB loan request was approved on September 25, 2013 for the larger Huerfano County Regional Augmentation Project, in the amount of \$2,222,000. The scope of the loan includes this portion of the project, but also includes the purchase of Camp Ranch, water rights, and other costs necessary to complete the entire Augmentation Project

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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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 project, the Red Wing Augmentation Facility, is an integral part of a larger water activity – establishing a permanent regional augmentation plan for out-of-priority uses of water in the Huerfano River Basin.

This activity meets multiple needs and issues; providing replacement water for domestic and residential water supplies, county road maintenance and replacement of pond evaporation. The Town of Gardner and its public school will not be able to continue to operate without the success of the Red Wing Augmentation Facility and the regional augmentation plan that this storage supports. Energy development entities are expected to obtain augmentation water from this activity, as are owners of junior irrigation rights who are in need of supplemental water. As such the existing tax base will be supported and enhanced to the much needed benefit of Huerfano County.

- 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.

There are five entities which currently participate in the initial phase of this activity, by annual SWSPs or by Rule 14 Plans, and expect to be served by the permanent augmentation plan: Huerfano County Road & Bridge Department (water for dust control and road maintenance) and private and public water systems serving over 300 homes including: Malachite Spring, CO 61 Homeowners Association, Gardner Water & Sanitation District, and Paradise Acres HOA. Others have expressed interest, including energy companies in need of water for drilling, residential properties that cannot be used until adequate replacement water supplies are developed (remaining lots within Paradise Acres and CO61). In addition there are numerous out-of-priority existing water users that will be curtailed by the Division Engineer’s Office if the regional augmentation plan is not successfully implemented. See Exhibit C letter from Steve Witte, Division Engineer.

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- 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.

Although SWSI-2010 identified M&I requirements from the two incorporated municipalities in Huerfano County (Walsenburg and La Veta), it did not address needs associated with residential and other M&I development outside of incorporated municipalities. In the Huerfano basin there are no incorporated municipalities, only unincorporated communities – those described above as well as, for example, Apache City, Badito, Farisita, Malachite, Red Wing, and Sharpsdale. Some existed before statehood while others, which have developed centralized domestic water systems (ie. Town of Gardner), may operate without augmentation plans or plans which are broken, as described by the supporting letter from the Division Engineer. The District believes that other water users (including subdivisions, commercial, industrial, energy, agricultural and recreational water users) exist and will find it necessary to participate in this augmentation plan. Additional non-irrigation water users will be identified over the next few years and we believe that the demands could be up to 25 acre-feet or more of replacement water per year during that time. In addition, numerous junior irrigation water rights are called out on the Huerfano River every year, and the demand for supplemental irrigation water is expected to exceed the supply that can be provided from the use of the historical consumptive use credits from the Camp Ranch Water Rights.

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).

Huerfano County is one of the poorest counties in the state. Even with an approved mill levy increase, the District will be stretched to fund the Regional Augmentation Project, of which this project plays a vital role. The District has already incurred over \$65,000 in legal fees, since finding a permanent regional augmentation solution has been a complicated process.

Funding for the Red Wing Augmentation Facility will reduce the uncertainty about whether compliance with Colorado water law through regional augmentation can be accomplished in the Huerfano Basin. Failure to complete this project would result in dire consequences to Huerfano County and all parties involved.

- e. The amount of matching funds provided by HCWCD demonstrates a significant and appropriate commitment to the project. For five years, based on annual SWSPs and Rule 14 Plans, the District has provided (leased) regional augmentation water for over 300 households on central water systems. That has been accomplished at a cost to the District of approximately \$188,000. In addition, legal fees recently spent in order to move the project forward represent a commitment well beyond the \$50,000 committed to this phase of the entire project.

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

- f. The water activity will help sustain agriculture and meet environmental/recreational needs. In addition to providing augmentation water to unincorporated private water systems which now frequently operate unlawfully for lack of augmentation plans, the project will similarly provide consumptive use water for other beneficial consumptive uses, including agricultural irrigation and energy development. We have already received unsolicited inquiries from two agricultural irrigators, one in the Red Wing area and one neighbor of the Camp Ranch, about the availability of replacement water for irrigation consumption.
- 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.

The waters of the Huerfano Basin are subject to the terms of the Arkansas River Compact, C.R.S. § 37-69-101 et seq., and the resulting rules promulgated by the State Engineer. As a result, use of Huerfano River water must be in compliance with the Compact. This project helps ensure Compact compliance by eliminating out-of-priority depletions in violation of the Compact.

- h. The water activity provides a high level of benefit to Colorado in relationship to the amount of funds requested. The funds expended here from the statewide account, \$200,000, will secure the rural residential domestic supply for at least 310 homes. That amounts to less than \$650 per home in one of the poorest counties of the state. The monthly Social Services budget for Huerfano County is approximately \$187,000; annually, \$2,200,000. If over 300 rural homes are without domestic water and must be abandoned, the cost to the County and the State will be significant.
- i. The water activity is complimentary to or assists in the implementation of other CWCB programs, namely, the Water Project Loan Program, based on which the HCWCD has been approved for a \$2,220,000 loan for this project, as demonstrated by Exhibit T, resulting in a loan to grant ratio of approximately 8.9:1 based on the total grant sought by this application (\$250,000) and over 11:1 based solely on the amount requested from the WSRA's Statewide Account (\$200,000). Also, a Feasibility Study Small Grant Fund under CWCB Policy Number 17 was received by the HCWCD in the amount of \$5,000.

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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.

- a. Water Supply Source. As illustrated by Exhibit B, activity includes groundwater and surface water sources that are within Huerfano County, within the Huerfano River drainage basin, and within the HCWCD boundaries as established by its organic Decree, and excludes sources wholly within United States Forest Service lands. The service area encompasses approximately 430,500 acres. The elevation ranges from approximately 10,500 feet to roughly 5,350 feet above sea level at the point where the Huerfano River flows out of the county.

- b. Applicable Water Rights.

To provide a source of consumptive use credits for the regional augmentation plan, HCWCD contracted to purchase the Camp Ranch and associated water rights. This agreement is expected to close early in 2014. HCWCD is currently performing due diligence to evaluate the Camp Ranch land and associated water rights. The Camp Ranch consists of roughly 1,000 deeded acres located on the Huerfano River about four miles upstream of the Interstate-25 crossing. The property boundaries, the irrigation ditches which serve it, and the location of the Mapes Well No. 1 (Registration No 14474), are shown in Exhibit D.

There are three Camp Ranch water rights: an undivided six-sevenths interest in the William Craig Ditch priority, an undivided one-third interest in the Jose Maria Ditch priority, and the entire Mapes Well No. 1 priority. At this time, HCWCD does not intend to use the more junior water rights adjudicated to the Jose Maria Ditch³ and to the Mapes No. 1 Well⁴ as part of the regional augmentation plan. Instead, the District will rely solely on the William Craig Ditch priority #7 to provide consumptive use credits but may use the Mapes No. 1 well *structure* as an augmented structure for continued irrigation supported with augmentation water from Priority # 7.

³ The Jose Maria Ditch water right was decreed for 0.24 cfs for irrigation of 12 acres with Priority No. 51 in the original (Reed) adjudication. It has an appropriation date of May 1, 1873 and an adjudication date of June 12, 1889.

⁴ Mapes Well No. 1 was permitted by the Division of Water Resources and assigned Registration No. 14474. In Water Court Case No. W-2931, Mapes Well No. 1 was decreed for 1.0 cfs for irrigation on 120 acres with priority date of June 22, 1950.

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The William Craig Ditch is decreed for 2.4 cfs for irrigation of 120 acres with priority No. 7 in the original (Reed) adjudication on the Huerfano River. It has an appropriation date of May 1, 1864 and an adjudication date of June 12, 1889. The water right has been diverted and applied to about 110 acres, of which approximately 95 acres are located on the Camp Ranch. Historical diversions under Priority #7 averaged about 365 acre-feet per year. It is relatively senior; during years of low runoff, diversions have averaged about 260 acre-feet per year.

- c. Water Right Issues. In any water right transaction or adjudication there are myriad issues. Described below are those which are of greatest interest to HCWCD and probably to the reviewers of this grant application:
- i. Historic Consumptive Use. An analysis by HCWCD's consulting engineers (TZA) estimated the historical consumptive use attributable to the Camp Ranch water rights and amenable to use as consumptive use credits in the regional augmentation plan. This analysis was conducted in the standard manner used for water court transfers. The crop irrigation requirement was determined and compared to the ditch water supply upon the historically irrigated acreage, to determine how much of the ditch diversions were consumed as well as the amount and timing of return flows to the Huerfano River. The transferrable historical consumptive use attributable to Priority #7 on the Camp Ranch was calculated to be approximately 150 acre-feet per year, generally being 1.6 acre feet of consumptive use per irrigated acre. Additional work will be needed to develop firm transferable consumptive use numbers, and to obtain approval to transfer consumptive use credits in water court, but we are confident that the amount of available consumptive use water will be adequate to meet HCWCD's augmentation requirements.
 - ii. Replication of Return Flows and delivery of consumptive use credits. As part of this regional augmentation plan project, HCWCD will need to make timed releases of water to the Huerfano River in appropriate locations. Those releases are of two types, being: replacement of historical return flows associated with the William Craig water right and replacement/augmentation of depletions caused by those holding augmentation certificates issued by the District. Historical return flows from irrigation on the Camp Ranch that accrued to the river outside of the irrigation season averaged about 15 acre-feet per year. The amount, timing, and location of augmentation water releases will be established by the nature and location of certificate holders, something which may change over time. HCWCD facilities to handle those two types of releases to the river are described below.
 - iii. Camp Ranch Augmentation Station. An augmentation station (turnout and measuring flume) will be constructed to enable measure releases from the William Craig Ditch directly back to the Huerfano River.

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- iv. Camp Ranch Recharge Facility. A recharge facility will be constructed to deliver some of the Priority #7 entitlement to recharge the alluvium and generate accretions to the Huerfano River so as to replicate historical return flows outside the irrigation season and to provide replacement water for use in the augmentation plan. Conceptual schematic drawings for the Camp Ranch Recharge Facility are shown in Exhibits E and F.
- v. Mapes Well. Another approach which is under investigation may be to use the Mapes Well No. 1 as a retiming augmentation well. Located near the river, the well can be equipped so that it can pump through a pipeline that will discharge to the Huerfano River at times when the recharge facility is not able to provide the necessary accretions to the Huerfano River. Those well depletions as lagged to the stream will then later be replaced by use of the consumptive use credits from the Camp Ranch Water Rights. This process uses the Mapes Well as an augmented structure to retime and allocate the stream accretions from the recharge facility to correspond with the timing of the augmentation plan depletions to the river. Conceptual schematic drawings for the Mapes Augmentation Well are shown in Exhibits E and F.
- vi. Red Wing Augmentation Pond. The project includes construction of an off-channel lined reservoir of approximately 25 acre-feet capacity near Red Wing for storage of transferable consumptive use credits and delayed return flow obligations from the historically irrigated Camp Ranch property. HCWCD's water court application will seek a decree which, *inter alia*, confirms an appropriative right of exchange, allowing the historical consumptive use entitlement and delayed return flows from Priority #7 to be diverted by exchange at the Wilson Ditch headgate for storage in the Red Wing Augmentation Pond. Water placed in storage will be later released to replace the augmentation plan depletions and delayed/non-irrigation season return flows. A map of the exchange reach (Camp Ranch to Red Wing) is shown in Exhibit G, and the layout and operation of the Red Wing facilities are illustrated in Exhibits H and I.
- vii. Exchange operations. There are several exchanges contemplated. The primary exchange will be between the Camp Ranch augmentation station and the Wilson Ditch headgate, which feeds the Red Wing Augmentation Pond. Other exchange reaches will be from the Camp Ranch Augmentation Station to the location of certificate holder depletions. A preliminary analysis of exchange potential between Camp Ranch and the Wilson Ditch headgate was performed for the eight years there are gage records at both the Manzanares Crossing Near Redwing gage (USGS Gauge No. 7111000), and the Badito gage (USGS Gauge No. 7112500), those being 1948, 1949, and 2006 through 2011. These eight years include two drought years, two flood years and four average flow years. The analysis of exchange potential shows that there is sufficient exchange potential from the William Craig

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Ditch to the Red Wing Facility as there is not a dry-up point in the river restricting exchange potential in the exchange reach. Indeed, during the irrigation season, the exchange potential in this reach averaged approximately 46 percent of river flow at the Manzanares Crossing Near Red Wing gage. As a result, the Red Wing Augmentation Pond will be able to be filled by exchange with the historical consumptive use credits and delayed flows from the senior Camp Ranch Water Rights.

- d. Water Supply Demands. This is a topic about which HCWCD has a great deal of recent experience, having operated approved Substitute Water Supply Plans and Regional Rule 14 Replacement Plans from 2009-2013, providing augmentation water to five separate entities who were in danger of having their water use curtailed due to unlawful out of priority usage. A copy of the most recent approved SWSP and Rule 14 Plan are available if needed. The current entities have demands of approximately 10 acre-feet of 100% consumptively used water and are as follows: Huerfano County Road & Bridge, Malachite Spring, CO 61 Water Association, Gardner Water & Sanitation District, and Paradise Acres HOA. The CO 61 Assn, Gardner WSD, and Paradise Acres HOA utilize groundwater withdrawals for their water supply; the County and Malachite Spring make surface diversion. These demands will continue for the foreseeable future and are likely to increase over time. In addition, the District believes that other water users (including subdivisions, commercial, industrial, agricultural or recreational water users) exist that will find it necessary to participate in this augmentation plan, especially under pending strict water rights administration by the State. Annual non-agricultural demands are expected to reach at least 25 acre-feet of wholly consumptive augmentation water. In addition, junior irrigation water rights are called out on the Huerfano River every year, and the demand for supplemental irrigation water (whether by direct use of credits or use of credits as augmentation) is expected to exceed the supply that can be provided from the use of the historical consumptive use credits from the Camp Ranch Water Rights.
2. Please provide a brief narrative of any related studies or permitting issues.
 - a. Related Studies. HCWCD is familiar with the following studies which bear on this project:
 - i. The multi-volume *Water Resources of Huerfano County*, prepared for the Huerfano County Water Conservancy District by Zorich-Erker Engineering, August, 1978, updated January, 1998.
 - ii. Huerfano County Water Conservancy District, *Goals and Strategic Plan*, adopted May 13, 2013.
 - iii. HCWCD's approved annual Substitute Water Supply Plans, 2009-2013.
 - iv. HCWCD's approved annual Rule 14 Plans, 2009-2013.
 - b. Permitting Issues. HCWCD believes that no Environmental Assessment (EA) or Environmental Impact Statement (EIS) will be required. We will obtain a 1041 Permit from Huerfano County. Wetland mapping will be completed and the Army Corps of Engineers will be contacted concerning 404 permitting. HCWCD anticipates that the work will either not require a formal 404 permit or will fall within the existing nationwide permits.

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

Signature of Applicant:

Michael D. (Sandy) White, board member:

Print Applicant's Name:

Huerfano County Water Conservancy District

Project Title: Red Wing Augmentation Facility, Huerfano Regional Augmentation Project

Date: 11/1/13

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

Craig Godbout – WSRA Application
Colorado Water Conservation Board
1580 Logan Street, Suite 200
Denver, CO 80203
craig.godbout@state.co.us

Exhibit A
Statement of Work

WATER ACTIVITY NAME - **Red Wing Augmentation Facility
Huerfano Regional Augmentation Plan**

GRANT RECIPIENT – **Huerfano County Water Conservancy District (HCWCD)**

FUNDING SOURCE - **WSRA**

INTRODUCTION AND BACKGROUND

Provide a brief description of the project. (Please limit to **no more than 200 words**; this will be used to inform reviewers and the public about your proposal)

An integral element of the Huerfano River Regional Augmentation Plan (which will supply replacement water to out-of-priority water users in the Huerfano River Basin), the Red Wing Augmentation Facility (RWAf) provides upstream storage and release of historic consumptive use water from Huerfano River Priority #7. A 6/7ths interest in that water right, currently diverting through the William Craig Ditch, is being acquired by the HCWCD and is anticipated to yield approximately 150 annual acre feet of historical consumptive use. Located beside the upper Huerfano River, RWAf consists of (1) A diversion structure co-located with the existing Wilson Ditch headgate, (2) a waste-way shortly below the headgate, (3) a splitter box dividing the water diverted between HCWCD and the Wilson Ditch, (4) a pipeline from the splitter box to the Red Wing Augmentation Facility (Pond), (5) the lined pond itself, ~25 a.f. capacity, (6) outlet works from the pond into a second pipeline delivering releases back to (7) an augmentation station at the Huerfano River, together with (8) appropriate measuring devices and telemetry. Water will be diverted from the river pursuant to an appropriate right of exchange of the historical consumptive use water from Priority #7 under the William Craig Ditch.

OBJECTIVES

List the objectives of the project

The project objectives are: (1) to divert the Priority #7 wholly consumable water by operation of the exchange, (2) store that water in the lined Red Wing Augmentation Facility, and (3) release the water from storage back to the river, together with other augmentation releases, in those amounts necessary to augment out-of-priority diversions by HCWCD's augmentation certificate holders within the HCWCD boundaries of the Huerfano River Basin of Huerfano County.

TASKS

Provide a detailed description of each task using the following format

TASK 1 – Site Survey and Preliminary Design

Description of Task

A site survey will be performed by a licensed Surveyor to establish elevations of all pertinent locations. After the survey is reviewed, a preliminary design will be completed. The preliminary design will include the location and basic construction design of the RWAf.

Method/Procedure

The site survey will be utilized to determine the optimal location for the Pond and preliminary design locations for key components of the RWAf. Key components include the diversion structure at the Huerfano River, the location and routing of the inflow pipeline from the diversion structure to the Pond, the actual Pond location and size, and the outflow structure and pipeline for releases from the Pond to the Huerfano River. Appropriate measurement structures will also be included in this design. This task will result in the ability for diversions, inflows to the Pond, and outflows back to the river to all be by gravity flow, eliminating the need to provide pumping equipment. The site survey will also provide information to assist with the cut and fill calculations at the Pond and the distance and depth of pipeline placement to help determine the costs of construction and preparation of bidding documents. The surveyor will also be utilized to stake the determined locations of the Pond and pipelines, and at the end of the project, to delineate the easements.

Preliminary Design may also include locations to perform test hole drilling and geologic investigation of the site. This will enable the determination of potential ground water issues and subsurface soil conditions.

Deliverable

The deliverables from Task 1 will be a Site Survey and a preliminary design for the RWAf.

TASK 2 – Test Hole Drilling and Geologic Investigations

Description of Task

Test holes will be drilled, piezometers will be installed, and test pits will be constructed to determine the nature of the subsurface materials and presence or absence of ground water. Piezometers will be installed to determine the depth to water and to monitor fluctuations of the water table, if it exists at the location. Test pits will also be dug with a backhoe or other equipment for additional geologic information and to obtain samples for sieve analysis.

Method/Procedure

A drilling contractor will be utilized to drill and install piezometers at desired locations. The test holes will also enable testing of the subsurface materials to determine the suitability of excavated material for construction of embankments and/or use as riprap for the Pond. A backhoe or excavator will be utilized to dig observation trenches.

Deliverable

Sieve analysis for onsite materials will be documented, and groundwater level mapping will be completed following completion of field activities in Task 2. Geologic information and hydrogeologic information will be utilized in developing the final design for the RWAF.

TASK 3 – Final Design – Project Specifications

Method/Procedure

Results from Task 1 and Task 2 will be reviewed, and a Final Design will be prepared by the Engineer. Plans and Specifications for the entire project including pipelines will be completed and Bidding Documents will be prepared. The project will be advertised and a Prebid conference and Bid date will be scheduled. A contractor will be selected and scheduling finalized.

Deliverable

Bid documents and final design (plans and specifications) for the RWAF.

TASK 4 – Pond Excavation, Embankment and Outlet Structure Construction

Description of Task

The successful contractor will meet with the Engineer and Owner to review all technical, easement, property, locations and safety issues. A schedule will be prepared and construction will commence.

Method/Procedure

Excavation and embankment construction will be accomplished simultaneously. The objective is that all excavated materials will be utilized in the embankment as much as possible in a balanced cut/fill approach. Design compaction of excavated and filled materials may be required. Any larger rock or cobbles (>6" diameter) will be stockpiled for later use as riprap on the slope of the embankment. When excavation and grading are finished, a designed fabric and geotextile liner will be installed by a qualified contractor on the bottom and side slopes of the embankment. A layer of crushed gravel/soil will be installed above and below the liner per specifications. Larger rocks (riprap) will be installed over the cover for stabilization of all slopes to control wind and water erosion. Any materials not utilized in the embankment will be spread in an acceptable manner as designated by the Engineer.

The Inlet and Outlet Structure construction will be coordinated with the embankment construction. The outlet will obviously be at the lowest point in the lined Pond and will contain piping and valves with a designed flow meter vault for maintenance and operation of valves. The Pond will also contain a staff gage for measuring water levels in the Pond. There will be a staged area capacity survey performed of the Pond that will be calibrated to the staff gage in order to determine the volume of water in storage at various levels of the Pond.

Deliverable

The deliverable from Task 4 will be an operational pond – capable of storing and releasing approximately 25 acre-feet of water at peak capacity, together with the staged area capacity survey.

TASK 5 – Diversion Structure at the Huerfano River and Inlet and Outlet Piping

Description of Task

The diversion structure at this site is currently utilized by the Wilson Ditch. The structure will be modified to enable diversion of either the Wilson Ditch decreed water, HCWCD augmentation water, or both. A pipeline will be installed from the diversion structure to the Pond. A separate pipeline will be installed to deliver releases from the Pond outlet structure to the Huerfano River.

Method/Procedure

The diversion structure will be modified to enable diversion of either the Wilson Ditch decreed water and/or HCWCD augmentation water. Construction of devices and flumes at the Wilson Ditch will enable water to be channeled through a measuring flume to the Ditch, and HCWCD water will be channeled to a measuring flume or flow meter and then into the inlet piping for storage in the Pond. There is an existing gabion diversion dam across the river. This task will involve some mitigation and repair of the gabion dam, clearing out vegetation and some grading of the area. Permanent structures will be designed and constructed to facilitate the inflows and measurement of water at or near this location. Inlet piping from the diversion structure will be buried near the existing ditch. It will generally follow the ditch route to the end point of the existing ditch, but will be designed to follow the optimum grade to the Pond without impacting the flow of the existing ditch.

The outlet piping will be installed and connected to the outlet structure at the Pond and will carry releases to the Huerfano River. There will be a designed structure in the outlet piping containing a flow meter vault and control valves with a channel to direct the outflow to the Huerfano River.

Deliverable

The deliverable from Task 5 will be operational inlets and outlets to the Pond – capable of measuring and recording diversions into the Pond and releases from the Pond to the Huerfano River.

TASK 6 – Final Cleanup and Restoration

Description of Task

A project of this magnitude utilizing heavy construction equipment will create disturbance to surface areas, roads and open spaces near the project site. Adequate effort will be required to mitigate these situations.

Method/Procedure

The contractor will be required to remove any trash or debris on a daily or weekly basis. Any disturbance of surface areas on an ongoing basis will be graded, compacted, and watered on an as-needed basis to avoid wind erosion and dust issues. Final repair of roadways, disturbed surfaces and pipeline easements will be graded. Roadways may need to be graveled. Areas disturbed around the Pond and other areas will require planting of native grass.

Deliverable

The deliverable from Task 6 will be a revegetated site with access roads and easements to be left in equal or better conditions than at the inception of construction.

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.

Reporting: HCWCD 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, HCWCD 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

Red Wing Augmentation Facility Total Costs			
Task	Labor	Direct Costs	Total Project Costs
1 - Site Survey and Preliminary Design	\$ 3,000	\$ 2,500	\$ 5,500
2 - Test Holes and Geologic Investigation	\$ 15,000	\$ 8,000	\$ 23,000
3 - Final Design	\$ 10,000	\$ 6,000	\$ 16,000
4 - Pond Construction	\$ 180,000	\$ 240,000	\$ 420,000
5 - Diversion Structure and Outlet Piping	\$ 25,000	\$ 75,000	\$ 100,000
6 - Site Cleanup and Restoration	\$ 10,000	\$ 5,500	\$ 15,500
Total Costs	\$ 243,000	\$ 337,000	\$ 580,000
*WSRA Grant Funds			\$250,000.00
** Match			\$330,000.00
Project Personnel Costs	Hourly	Hours	Totals
Principal Engineer	\$ 190	70	\$ 13,300
Senior Engineer	\$ 147	365	\$ 53,655
Project Engineer	\$ 132	40	\$ 5,280
Engineer/Hydrogeologist	\$ 122	50	\$ 6,100
Asst. Engineer/Graphics Designer	\$ 101	380	\$ 38,380
Clerical	\$ 52	80	\$ 4,160
			\$ 120,875

Below please find a project schedule including key milestones for each task and the completion dates or time period from the Notice to Proceed (NTP). This dating method allows flexibility in the event of potential delays from the procurement process.

SCHEDULE

Tasks	Start Date		Finish Date
1	Upon NTP		NTP + 30 days
2	Upon completion of task 1		NTP + 45 days
3	NTP + 45 days		NTP + 90 days
4	NTP + 120 days		12/31/16
5	NTP + 120 days		12/31/16
6	NTP + 120 days		12/31/16
7	NTP + 120 days		12/31/16

NTP = Notice to Proceed

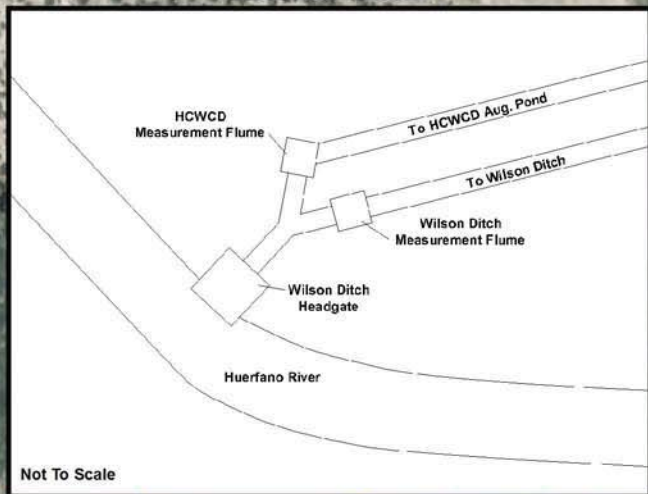


Section 1
Township 27 S
Range 71 W

Conceptual Design Schematic Plan View

Figure 6

Huerfano River
Diversion Detail



0 150 300 600 Feet

Wilson Ditch Headgate

General Location
Red Wing Augmentation Pond

RL Smith Ditch No. 1
Headgate

Huerfano River

HCWCD
Red Wing Augmentation Pond
General Location Map



July 2013

Aerial Photo: 6/17/2005