

WATER SUPPLY RESERVE ACCOUNT
 APPLICATION FORM



Animas River Diversion Headgate Monitoring Study

Name of Water Activity/Project

Animas Consolidated Ditch Company

Name of Applicant

Southwest Basin
 Roundtable

Amount from Statewide Account:

\$0

Amount from Basin Account(s):

\$14,500

Total WSRA Funds Requested:

\$14,500

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)

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Instructions

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

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

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

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

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

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

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):	Animas Consolidated Ditch Company		
	Mailing address:	P.O. Box 3777 Durango, Colorado 81302		
	Taxpayer ID#:			
	Primary Contact:	Ed Zink	Position/Title:	Board Member
	Email:	Edzink@waterfallranch.com		
	Phone Numbers:	Cell: 970-749-4621	Office:	970-247-8758
	Alternate Contact:	Carrie Lile	Position/Title:	Engr. Consultant
	Email:	carrie@durangowater.com		
	Phone Numbers:	Cell:	Office:	970-259-5322

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 Animas Consolidated Ditch Company owns and operates the Animas Consolidated Ditch, which serves the west side of the Animas River Valley between Baker's Bridge and Durango. The ditch company was formed around 1900, and consolidated several ditches in the area into one. The ACDC has rights to nearly 93 cfs which provides irrigation and other water uses on roughly 1,600 acres. There are 300 members along the 12 mile ditch.

The ditch company is heading a collation of five ditch companies located within the Animas River Valley and divert from the Animas River, in the proposed study area of the ½ mile stretch. Collectively these ditches irrigate a total of 3,000 acres on both sides of the river.

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

The Ditch Company will retain a surveyor to gather data, and a water engineer to help identify the needed information.

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

☒ The Applicant will be able to contract with the CWCB using the Standard Contract

☐ The Applicant has reviewed the standard contract and has some questions/issues/concerns. Please be aware that any deviation from the standard contract could result in a significant delay between grant approval and the funds being available.

6. The Tax Payer Bill of Rights (TABOR) may limit the amount of grant money an entity can receive. Please describe any relevant TABOR issues that may affect the applicant.

Not applicable

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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:

Document cross sections of the river to provide a benchmark for future monitoring.

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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° 26' 39.2"

Longitude:

-107° 48' 14.5"

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 proposed project is to retain a surveyor to generate cross sectional data along the Animas River in relation to the 5 ditch companies' diversions. Please see Exhibit B for a location map. The surveyor will install a minimum of 6 sets of permanent control points along the river's riparian habitat. These control points will be used for future monitoring of the river to ensure accuracy between data collection sets. The surveyor will generate cross sectional data for each set of control points as well as cross sections between each set of control points. The cross sectional data will be compared to existing data collected in 1981 by Animas Valley Ditch and Water Company (owns and operates Reid Ditch) and other historic data that can be found to determine if any changes have occurred to the streambed and/or the entire river section.

Most (98%) of the water diverted from the Animas River for beneficial use in the Animas River Valley between Baker's Bridge and Durango occurs from diversion points within the ½ mile section of the river that is the proposed study area. This area needs to be monitored for channel depth and width changes due to the excessive large gravel extraction operations during the late 1900s that occurred in the 5 miles south of Bakers Bridge to Trimble Lane (including the study area). The high removal rate greatly exceeded the replenishment rate of gravel by the river, so there is significant channel erosion. These are known impacts but have not been quantified. This monitoring study will set the control points needed to quantify any changes in the river channel. To assist in quantifying past headcutting, the monitoring study will also include research into any and all available historic data which may have been prepared in the past relative to the gravel pit operations.

Should current and/or future surveys show that structural corrections are required in the river channel to maintain the capability of the irrigation ditches to divert from the Animas River, the surveys will provide the information needed to design the corrections.

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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 project will provide the ditch companies with the necessary data and information to first evaluate and if necessary protect their water rights from the potential channel degradation associated with gravel mining occurring downstream.

- 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.

The information requested is included in the letter from the roundtable chair.

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.

The information requested is included in the letter from the roundtable chair.

- 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)

The Animas Consolidated Ditch Company along with the Animas Valley Ditch and Water Company and other entities will provide a cash match of \$4,000. This is a 22% match to the grant funds.

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.**

N/A

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. WSR grant requests for projects that may qualify for loans through the CWCB loan program will receive preference in the Statewide Evaluation Criteria if the grant request is part of a CWCB loan/WSRA grant package. For these CWCB loan/WSRA grant packages, the applicant must have a CWCB loan/WSRA grant ratio of 1:1 or higher. Preference will be given to those with a higher loan/grant ratio.

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

- a. The water activity addresses multiple needs or issues, including consumptive and/or non-consumptive needs, or the needs and issues of multiple interests or multiple basins. This can be demonstrated by obtaining letters of support from other basin roundtables (in addition to an approval letter from the sponsoring basin).
- b. The number and types of entities represented in the application and the degree to which the activity will promote cooperation and collaboration among traditional consumptive water interests and/or non-consumptive interests, and if applicable, the degree to which the water activity is effective in addressing intrabasin or interbasin needs or issues.
- c. The water activity helps implement projects and processes identified as helping meet Colorado’s future water needs, and/or addresses the gap areas between available water supply and future need as identified in SWSI or a roundtable’s basin-wide water needs assessment.

Tier 2: Facilitating Water Activity Implementation

- d. Funding from this Account will reduce the uncertainty that the water activity will be implemented. For this criterion the applicant should discuss how receiving funding from the Account will make a significant difference in the implementation of the water activity (i.e., how will receiving funding enable the water activity to move forward or the inability obtaining funding elsewhere).
- e. The amount of matching funds provided by the applicant via direct contributions, demonstrable in-kind contributions, and/or other sources demonstrates a significant & appropriate commitment to the project.

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

- f. The water activity helps sustain agriculture & open space, or meets environmental or recreational needs.
- g. The water activity assists in the administration of compact-entitled waters or addresses problems related to compact entitled waters and compact compliance and the degree to which the activity promotes maximum utilization of state waters.
- h. The water activity assists in the recovery of threatened and endangered wildlife species or Colorado State species of concern.
- i. The water activity provides a high level of benefit to Colorado in relationship to the amount of funds requested.
- j. The water activity is complimentary to or assists in the implementation of other CWCB programs.

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Continued: Explanation of how the water activity/project meets all applicable Evaluation Criteria.

Please attach additional pages as necessary.

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 project will assist in maintaining existing senior irrigation water rights in the Animas River Valley.

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

The Animas Valley Ditch and Water Company (owners and operators of Reid Ditch) conducted a survey of the river channel in 1981. This data will be used to compare historic conditions with current conditions and quantify any changes in the river. Other studies and US Army Corps of Engineers permits will be investigated to collect all available data for the proposed project site area.

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

The statement of work will form the basis for the contract between the Applicant and the State of Colorado. In short, the Applicant is agreeing to undertake the work for the compensation outlined in the statement of work and budget, and in return, the State of Colorado is receiving the deliverables/products specified. **Please note that costs incurred prior to execution of a contract or purchase order are not subject to reimbursement.** All WSRA funds are disbursed on a reimbursement basis after review invoices and appropriate backup material.

Please provide a detailed statement of work using the template in Exhibit A. Additional sections or modifications may be included as necessary. Please define all acronyms and include page numbers.

REPORTING AND FINAL DELIVERABLE

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

Final Deliverable: At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

PAYMENT

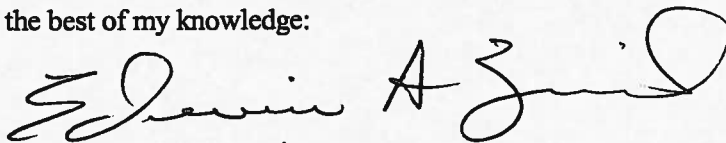
Payment will be made based on actual expenditures and invoicing by the applicant. Invoices from any other entity (i.e. subcontractors) cannot be processed by the State. The request for payment must include a description of the work accomplished by major task, and estimate of the percent completion for individual tasks and the entire water activity in relation to the percentage of budget spent, identification of any major issues and proposed or implemented corrective actions. The last 5 percent of the entire water activity budget will be withheld until final project/water activity documentation is completed. All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and help promote the development of a common technical platform.

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

Signature of Applicant:



Print Applicant's Name:

Edwin A Zink

Project Title:

Arroyo River Diversion Headgate Monitoring
Study

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

CONCEPTS FOR BASIN EVALUATION AND PRIORITIZATION

The following will be used to evaluate a project submitted to the Southwestern Colorado Basin Roundtable:

Required:

A. Projects must be submitted on an application form used by the State IBCC and CWCB.

All applicable sections must be completed.

B. Projects must address the values encompassed by the SW Basin Bylaws, especially the following goals and objectives:

- ☐ **Seek the involvement of all interested parties and stakeholders.**
- ☐ **Propose methods or projects, both structural and non-structural, for meeting any future needs as well as utilizing any unappropriated waters.**
- ☐ **Promote the protection, conservation, and use of water in the Southwestern Colorado Roundtable area.**
- ☐ **Promote the socio-economic sustainability of the Southwestern Colorado Roundtable area.**
- ☐ **Promote the protection and conservation of the natural environment, including the protection of open space.**

C. Provide the financial details of the plan, including cost sharing and other possible funding sources. Give a financial overview and rough timeline for completion of the project.

To assist the Southwest Roundtable in determining whether and to what extent a proposed project meets the values set forth in the Bylaws, the following questions should be addressed separately as can reasonably be answered by the applicant.

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

Note: this does not mean that a single purpose project would be rejected, but for major funding requests, addressing multiple use needs would be an advantage.

This project will provide benefits to the ditch company as well as the four other ditch companies along this section of the Animas River. By setting control points, future monitoring will be conducted that can in turn relate to previous data collections. By monitoring the control points along the river, the extent of erosion of the river channel by future runoff/flood events can be quantified.

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?

No special use permits will be necessary to conduct the work for this project. The applicant will work with property owners along the section of interest to obtain access and allow work by the surveyor. The funds acquired will be used to retain and pay a surveyor and retain an engineering consultant.

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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?

No additional funding is needed to complete this monitoring study.

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 project is less than \$20,000 so a grant meets the applicant's needs for additional funding. A loan for the monitoring study would not be feasible.

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 Animas Consolidated Ditch Company and its partners will provide a cash match of \$4,000.

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.

Not applicable. No water rights conflicts are associated with this study.

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?

The Animas Consolidated Ditch Company has received support from the Animas Valley Ditch and Water Company. This project will be discussed with the memberships of both companies at their respective annual meetings in the spring of 2013.

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

No opposition.

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

The project will develop cross sections of the Animas River in order to monitor the river channel condition. The cross sections will be re-surveyed in the future to determine if any changes to the river channel have occurred.

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.

Not applicable. This is simply a monitoring study. No impact on the natural environment is expected.

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

The project will help monitor possible channel erosion of the Animas River. This data can be used to evaluate headgate locations along the river, land practices along the river, and identify other local factors that could be manipulating the river channel. It is a priority of La Plata County land use plan to maintain agriculture. Protecting these irrigation ditches supports the land use plan objective.

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

Not applicable.

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

Not applicable.

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

This project will monitor the river channel's movement throughout time. By understanding the river movement, the ditch company can adjust their practices to coincide with the river. Currently, the headgate sits two feet below the river bed. By monitoring the river channel, the ditch company can anticipate streambed changes so that diversion for irrigation can avoid interruption.

Scope of Work

WATER ACTIVITY NAME – Animas River Diversion Headgate Monitoring Study

GRANT RECIPIENT – Animas Consolidated Ditch Company

FUNDING SOURCE – Basin Account Water Supply Reserve Account

INTRODUCTION AND BACKGROUND

The Animas Consolidated Ditch Company owns and operates the Animas Consolidated Ditch, which serves the west side of the Animas River Valley between Baker's Bride and Durango. The ditch company has been in operations for over 100 years and has a diversion water right of 86 cfs which provides irrigation and other water uses to roughly 1,600 acres. The other ditch companies provide water for about 1,400 irrigated acres.

Most (98%) of the water diverted from the Animas River for beneficial use in the Animas Valley occurs between Baker's Bridge and Durango and occurs within the ½ mile section of the river that is the proposed study area. This area needs to be monitored for headcutting impacts due to the excessive large gravel extraction operations during the late 1900s that occurred in the 5 miles south of Bakers Bridge to Trimble Lane. The high removal rate greatly exceeded the replenishment rate of gravel by the river, so there are significant headcutting in the thalweg. These are known impacts but have yet to be quantified. This monitoring study will set the control points needed to quantify any changes in the river channel.

OBJECTIVES

The project objectives are to install control points along a specific river stream section, delineate river cross sections, collect and analyze data. The data collection shall be made available for future studies to evaluate potential changes in the Animas River.

TASKS

Provide a detailed description of each task using the following format.

TASK 1 – Site Assessment

Description of Task

Prior to the site assessment, research studies and permits for any historic elevation data. The site visit attendees are a surveyor, engineering consultant(s), members of the Animas Consolidated Ditch Company and members of the Animas River Valley Ditch and Water Company (owns and operates the Reid Ditch). The group will first determine the area of interest for the study. Next the group will establish the permanent survey control points locations along the east and west banks of the Animas River for the purpose of initial channel mapping and the continued monitoring of the river channel. Discussions with surveyor on access, feasibility to the site and other constraints will determine the location of the remaining cross sections.

Method/Procedure

Common engineering and surveying principles and practices will be employed to determine the locations of the control points and cross sections. The control points will be established on the Colorado State Plane Grid system South Zone 503, NAD 1983, NAVD 1988.

Deliverable

The major deliverables will be a site layout of cross section locations with latitude and longitude values for each control points' location.

TASK 2 – Surveying

Description of Task

The second task will be for the surveyor to start developing the cross sections for the river. The surveyor will survey field data collection of the existing Animas River channel topography and the preparation of channel cross sections above and below the headgates for the Animas Consolidated Ditch Company and the Reid Ditch.

Method/Procedure

The surveyor will use common principles and practices to conduct the work.

Deliverable

The major deliverables will be a generated map with the cross section locations, plan and profiles views of each cross section, and provide latitude and longitude values for each section.

TASK 3 – Research historic data

Description of Task

The third task will be for the engineer to conduct a research study to find, locate and collect all applicable existing data for the proposed project area. Having a historic record will generate a Animas River Valley wide understanding of the current and past conditions of the river.

Method/Procedure

The engineer will use common principles and practices to conduct the work.

Deliverable

The major deliverables will be a collection of data that is compiled in precise and concise manner to be reference in the future.

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 scope of work including a description of any major issues that have occurred and any corrective action taken to address these issues.

Final Deliverable

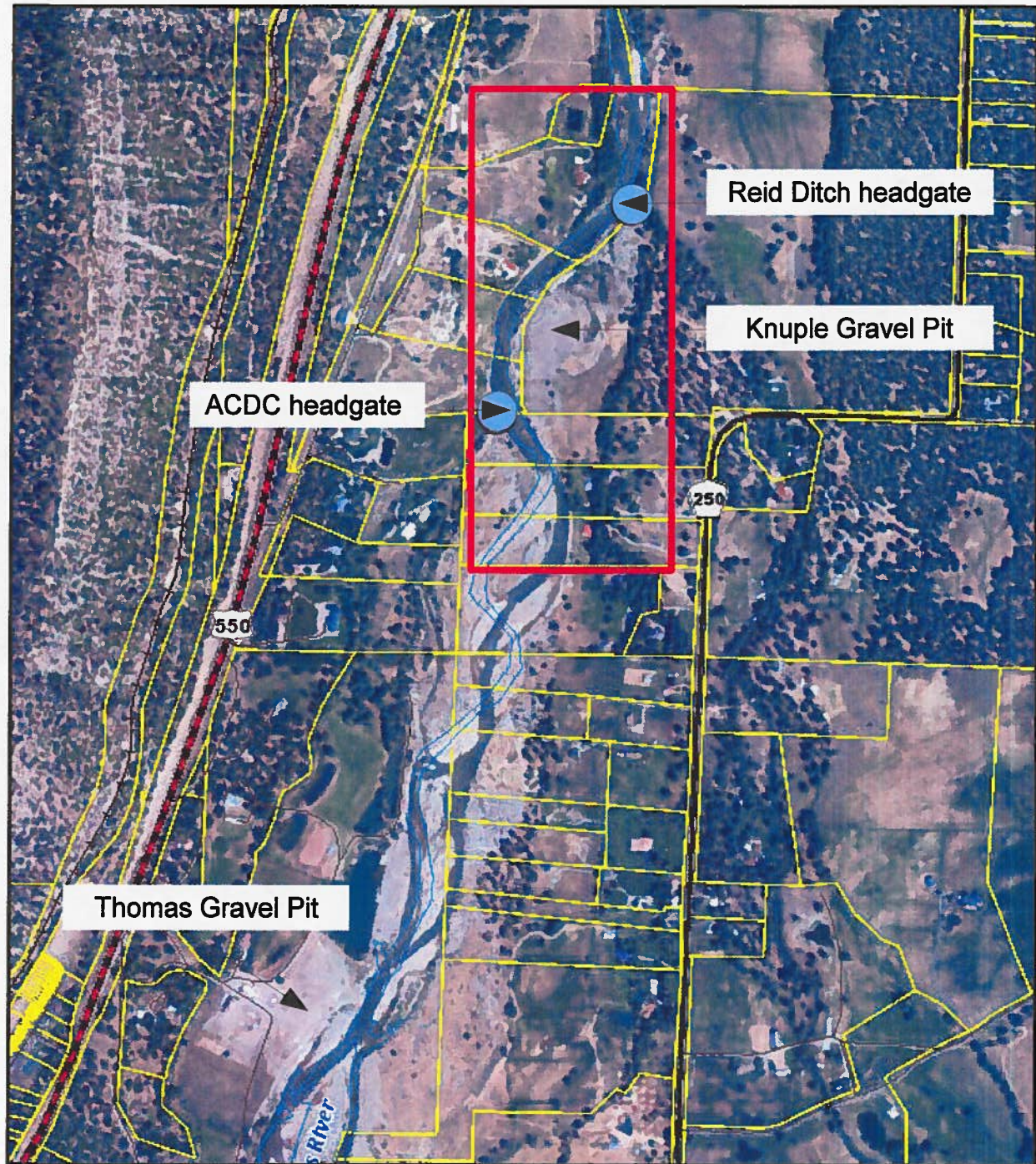
At completion of the project, the applicant shall provide the CWCB a final report that summarizes the project and documents how the project was completed. This report may contain photographs, summaries of meetings and engineering reports/designs.

		Technical					
		Principal Engineer		Associate Engineer I		Surveyor Field Work	
	\$120	Subtotal	\$80	Subtotal	\$125	Subtotal	
Labor Distribution							
Task 1 Site Assessment	6	\$720	6	\$480	8	\$1,000	Total Subtotal \$1,000
Task 2 Survey field data collection	0.5	\$80	1	\$80	76	\$9,500	\$100 Total \$1,000
Task 3 Research historic data	3.5	\$420	21.75	\$1,740	0	\$0	35 Total \$3,500
	Total	\$1,200	Total	\$2,300	Total	\$10,500	0 \$0 Total \$4,500

* Contractors bld as one job not by individual tasks.

Tentative Task Completion Schedule		Completion Date
Task 1 - Site Assessment		31-Aug-13
Task 2 - Survey field data collection		31-Oct-13
Task 3 - Research historic data		31-Oct-13
Final Report		20-Nov-13

Site Location Map



Harris Water Engineering, Inc.
954 E. 2nd. Ave., Ste. #202
Durango, CO 81301
(970)-259-5322

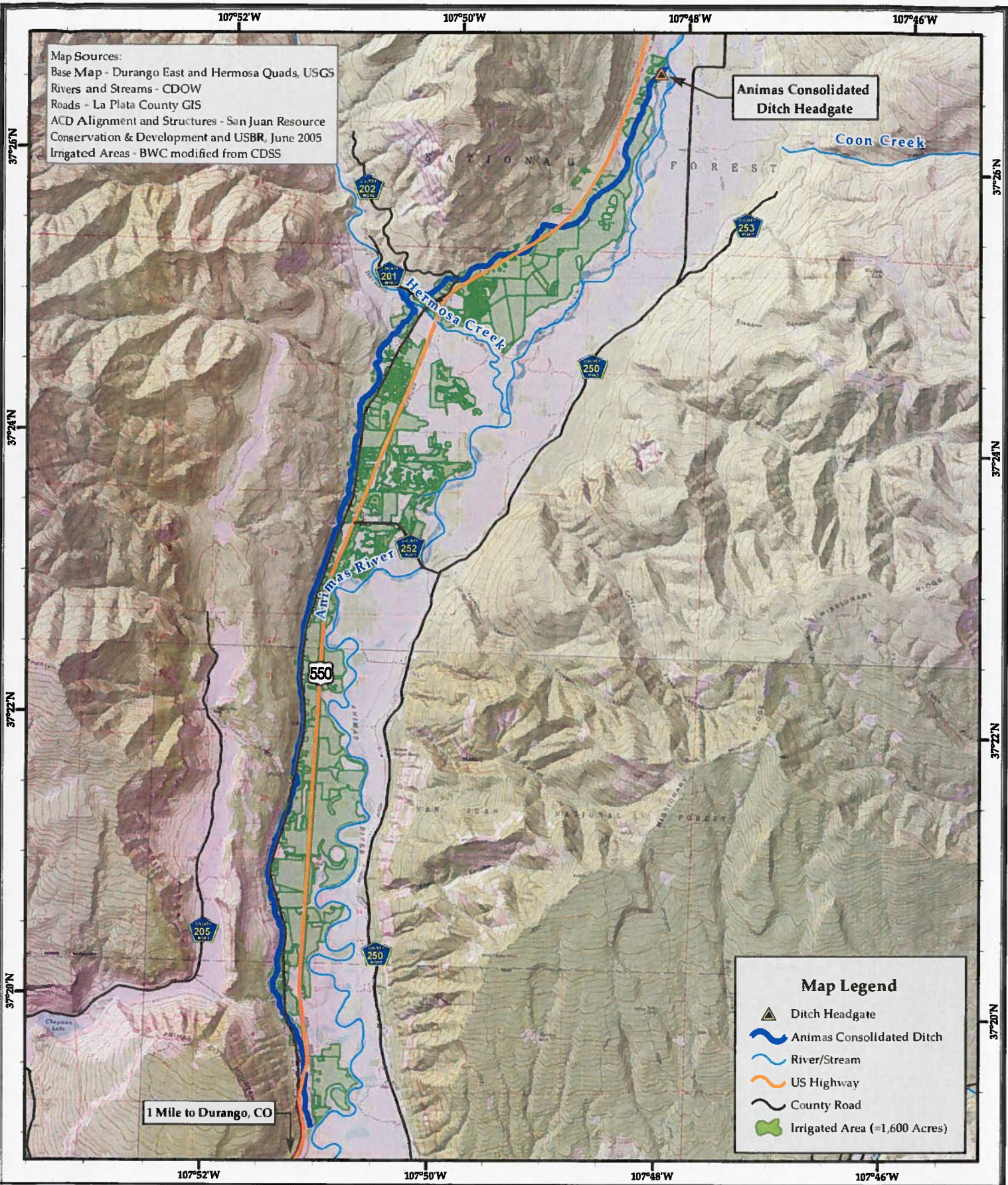
Animas River Diversion Headgate
Monitoring Study

WRSA Grant Application

Animas Valley, CO
Courtesy La Plata County GIS
Not to Scale
Sec 25, T37N, R9E, NMPM

Map Sources:
 Base Map - Durango East and Hermosa Quads, USGS
 Rivers and Streams - CDOW
 Roads - La Plata County GIS
 ACD Alignment and Structures - San Juan Resource
 Conservation & Development and USBR, June 2005
 Irrigated Areas - BWC modified from CDSS

**Animas Consolidated
 Ditch Headgate**



Map Legend


- Ditch Headgate
- Animas Consolidated Ditch
- River/Stream
- US Highway
- County Road
- Irrigated Area (=1,600 Acres)

1 Mile to Durango, CO



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

N



0 0.25 0.5 1 1.5 Miles

1 Inch = 1 Mile

Designed by: MJK
 Checked by: EAB
 Date: 12/31/2012
 Scale: 1:63,360

**Animas Consolidated
 Ditch Company
 WSRA Grant Application**

**Exhibit
 B**