LA PLATA WATER CONSERVANCY DISTRICT
1362 County Road 126
HESPERUS, CO 81326

Application for funding from the CWCB Statewide Water Supply Reserve Account

La Plata River Water Resources Operations Plan

January 2011

COLORADO WATER CONSERVATION BOARD

WATER SUPPLY RESERVE ACCOUNT
GRANT APPLICATION FORM

La Plata River Water Resources Operations Model	Southwest Basin

Name of Water Activity/Project | **Approving Basin Roundtable**

$148,823	**Amount from Statewide Account**	$148,823
Total Amount of Funds Requested	**Amount from Basin Account**	$0

Application Content

Attachments

1. Reference Information
2. Insurance Requirements (Projects Over $25,000)
3. WSRA Standard Contract (Projects Over $100,000)
4. W-9 Form (Required for All Projects)

Instructions

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

Once approved by the local Basin Roundtable, the applicant should submit this application, a detailed statement of work, detailed project budget, and project schedule to the CWCB staff by the application deadline.

The application deadlines are:

- Basin Account – 60 calendar days prior to the bi-monthly Board meeting
- Statewide Account – 60 calendar days prior to the September Board meeting

Board Meeting Dates	Basin Account Deadlines	Statewide Account Deadlines
July 20-21, 2010	May 21, 2010	n/a
September 21-22	July 23, 2010	July 23, 2010
November 16-17	September 17, 2010	n/a
January 2011	60 days prior	n/a
March 2011	60 days prior	n/a
May 2011	60 days prior	n/a
July 2011	60 days prior	n/a
September 2011	60 days prior	60 days prior

When completing this application, the applicant should refer to the WSRA Criteria and Guidelines available at: http://cwcb.state.co.us/IWMD.

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:

Mr. Todd Doherty
Colorado Water Conservation Board
Water Supply Planning Section
WSRA Application
1580 Logan Street, Suite 200
Denver, CO 80203
Todd.Doherty@state.co.us

If you have questions or need additional assistance, please contact Todd Doherty of the Water Supply Planning Section at 303-866-3441 x3210 or todd.doherty@state.co.us.

Water Supply Reserve Account – Grant Application Form
Form Revised March 2009

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

1. Applicant Name(s): La Plata Water Conservancy District

Mailing address: 1362 County Road 126
Hesperus, CO 81326

Employer ID# 841191941 Email address: eric@bikiswater.com

Phone Numbers: Business: 970-385-2340
Home:
Fax: 970-385-2341

2. Person to contact regarding this application if different from above:

Name: Eric Bikis

Position/Title Project Manager

3. Eligible entities that may apply for grants from the WSRA 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.

[X] Public (Districts) – special, water and sanitation, conservancy, conservation, irrigation, or 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.

4. Provide a brief description of your organization

La Plata Water Conservancy District (LPWCD), located in southwest La Plata County, was formed in 1944 by area irrigators and continues to be run by a volunteer board. The purpose of the District is to improve allocation of water rights in the La Plata River basin, including the construction and operation of facilities necessary to meet this goal. The main assets of LPWCD include various water rights such as those for Long Hollow Reservoir, Soldiers Draw Reservoirs, and a second fill on the Red Mesa Ward Reservoir. The LPWCD also operates the Marvel Spring, which is used by many local residents to haul water.

LPWCD contracts with a consultant and water rights attorney. The contact for LPWCD's President, Brice Lee, is 970-588-3369 or brice@obii.net. LPWCD's consultant is Eric Bikis at Bikis Water Consultants, LLC: 970-385-2340 or Eric@BikisWater.com.

LPWCD has been active in promoting the beneficial use of surface water rights in the La Plata River basin for decades by working with irrigators, ditch companies and the Office of the State Engineer (SEO) to monitor and to help to solve water shortage and allocation issues.

The La Plata River originates in the La Plata Mountains, 15 miles northwest of the City of Durango, in La Plata County, Colorado. The river flows from its headwaters in the mountains, ≈40 river miles south to New Mexico where it eventually becomes tributary to the San Juan River. LPWCD covers approximately 21,600 acres of irrigated land served by 16 main ditches and other smaller diversions. LPWCD works with a range of water users to achieve large goals such as water conservation, development of the Long Hollow Reservoir and protection of irrigation water rights. LPWCD also manages Marvel Spring, an important, non-potable, water supply source and hauling station for local residents that do not have domestic water supply.

The project area is primarily rural and agricultural with few small town sites. Residential development in the project area is limited mostly by the lack of domestic water supply. The common agricultural crops in the region are hay and alfalfa with irrigation and dry land beans and wheat without irrigation. A few farms in the area include orchards, vegetable production, corn and other crops according to the 2007 USDA Agricultural Census. Most farms in the area are less than 1,000 acres and commodity totals are less than $50,000 per year (USDA, 2007).

LPWCD's annual budget is approximately $12,000. The funds are spent on existing District operations and management commitments. This budget does not include the LHR allocations.

LPWCD is developing the LHR project, which recently completed the design stage. The matching funds for this grant application will be from work associated with the LHR project, which are from a designated escrow account managed by the Colorado Water Resource and Power Development Authority (CWRPDA) and dedicated to benefit irrigation interests in the La Plata River basin. The escrow account was established with the purpose of "potential financial assistance or planning and construction of new water storage and/or water supply projects in the La Plata River Basin…"

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

   Not Applicable

6. 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 copy of this standard contract is included in Attachment 3. Please review this contract and check the appropriate box.

   [X] 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.

7. 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.

   LPWCD held a vote amongst its members on November 6, 2001 addressing budget issues related to TABOR. The results was an approval of the following referred issue:

   WITHOUT AUTHORIZING ANY PROPERTY TAXES, SHALL THE LA PLATA WATER CONSERVANCY DISTRICT OF LA PLATA COUNTY, COLORADO, BE AUTHORIZED TO COLLECT, AND EXPEND ORRETAIN THE FULLAMOUNTOF ANY REVENUERECEIVED AFTER NOVEMBER 6, 2001 FROM ANY SOURCE, INCLUDING NON-FEDERAL GRANTS, NOTWITHSTANDING ANY RESTRICTION ON REVENUE OR SPENDING, INCLUDING THE REVENUE GROWTH LIMITATIONS CONTAINED IN C.R.S. SECTION 29-1-301, et seq., AND IN ARTICLE X, SECTION 20, OF THE COLORADO CONSTITUTION, SUCH AUTHORIZATION TO CONSTITUTE A VOTER-APPROVED REVENUE AND SPENDING CHANGE?

Part B. - Description of the Water Activity

1. Name of the Water Activity/Project:

La Plata River Water Resources Operations Model

2. What is the purpose of this grant application? (Please check all that apply.)

[ ] Environmental compliance and feasibility study

[ ] Technical Assistance regarding permitting, feasibility studies, and environmental compliance

[X] Studies or analysis of structural, nonstructural, consumptive, nonconsumptive water needs, projects

Study or Analysis of:

- [ ] Structural project or activity
- [X] Nonstructural project or activity
- [ ] Consumptive project or activity
- [X] Nonconsumptive project or activity

[X] Structural and/ or nonstructural water project or activity

3. 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.

Meeting Colorado's obligations to New Mexico under the La Plata River Compact is a challenge due to natural conditions and limited water in the basin. The La Plata River originates in the La Plata Mountains, 15 miles northwest of the City of Durango, in La Plata County, southwest Colorado. The average annual discharge of the La Plata River at the Hesperus gage is approximately 31,500 acre-feet. The river flows from its headwaters in the mountains south to New Mexico where it eventually becomes tributary to the San Juan River. The interstate Compact, which governs Colorado's delivery obligation to New Mexico, requires Colorado to deliver ½ of the river's flow measured near the Town of Hesperus to the state line, ≈31 river miles to the south. Because the La Plata River is a losing stream in the reach from Breen to Cherry Creek, Compact administration often results in the curtailment of even the most senior Colorado water rights.

A key strategy for Compact compliance and optimizing beneficial use of water in Colorado is the construction and operation of Long Hollow Reservoir (LHR). This 5,400 AF reservoir will be built on Long Hollow, a tributary to the La Plata River approximately 4 mile upstream from the stateline (see Figure 1). The reservoir will have a dedicated Compact Pool of 300 AF and the remaining water in storage will constitute the District Pool to be used for exchange. By meeting Colorado's Compact delivery obligations from LHR releases instead of suffering transportation losses associated with delivery in the River channel, an upstream exchange will be made available to ditches otherwise called out by the Compact. Operations of LHR also will help to improve base flow conditions in the lower La Plata River. LHR will be operated in compliance with existing environmental agreements aimed at maintaining and enhancing aquatic habitat and base flow conditions in the La Plata River. The proposed project will provide a means to optimize use of LHR both for Compact compliance and for exchange.

The publically available La Plata River Water Resources Operations Model will be a robust and accurate baseline model for the La Plata River that will provide an invaluable tool integrating groundwater and surface water modeling. The model will allow water users to optimize water resources planning with the basin. It is expected that the proposed model will:

1) Allow the Division Engineer to evaluate alternative Compact compliance delivery conduits and assess any impact on water users.

2) Provide means for LPWCD to assess, optimize and account for LHR operations including reservoir filling whether directly or by groundwater recharge, account for and optimize the anticipated upstream exchange and evaluate alternative reservoir operations regimes.

3) Quantify exchange water by ditch and develop an Allocation Plan for the exchange water in LHR that is adopted by ditch companies and LPWCD

4) Allow water users and developers to evaluate alternative water development strategies in manner that does not injure existing water users.

The results of the model and recommendations will be summarized in a final report and be provided to the SEO, LPWCD and other vested entities. The existing Memorandum of Agreement between

LPWCD and SEO provides the necessary mechanisms for implementing the findings of the study.

LPWCD is requesting $148,823 from the Statewide account to undertake a La Plata River Water Resources Operations Model. LPWCD will supply 20% matching funds of $29,765.

Part C. – Threshold and Evaluation Criteria

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

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

The proposed model will be a tool to more effectively meet Colorado's La Plata River Compact obligations to New Mexico and to optimize the beneficial use of the La Plata River in accordance with Colorado Water Law. The study will work within the SEO's framework of water rights administration and receive input from the SEO.

   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 BRTs 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 proposal was reviewed by the Southwest Basin Roundtable at their January 12, 2011 meeting.

[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.

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

The proposed study is an important component of the Long Hollow Reservoir, which on the SWSI list of Identified Projects and Processes (IPP). The recent IBCC report (Dec 15, 2010) emphasizes the need to support IPPs to ensure they are implemented and the water supply 'gap' does not increase.

The project is in a water-short basin with a River Compact requirement and will involve collaboration amongst water users, SEO and New Mexico.

[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.

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. 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 Part D of this application)

LPWCD is requesting $148,823 from the Statewide account and will meet the matching fund requirement with $29,765 from the LHR Project escrow account. The matching funds will be used for tasks that contribute data, groundwater investigations and input for the to the proposed model, which include Water Rights and Allocation work completed by LPWCD in conjunction with the SEO and for the Reservoir Water Rights Operations Plan. The detail budget and work to be completed with these matching funds is shown in Part D of this application.

2. For Applications that include a request for funds from the Statewide Account, describe how the water activity meets the **Evaluation Criteria.** (Detailed in Part 3 of the Water Supply Reserve Account Criteria and Guidelines.)

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

The LHR project is a prime example of the Tier 1 goals. The proposed study, as a component of the LHR project, will bring together irrigators and the SEO in both Colorado and New Mexico. The SWSI reports states the LHR project will "maximize in-basin supplies" which addresses identified water needs in the water-short La Plata River basin. The study will provide efficient means to improve delivery of Compact flows while optimizing beneficial use within Colorado. Per the SWSI report, "[The LHR] project would help reduce agricultural shortages in the La Plata drainage." Additionally, the study will include operational conditions of LHR which will meet environmental requirements such as baseflows for non-consumptive (environmental) uses, channel protection measures, water quality monitoring and creation of a wetland mitigation area.

Tier 2: Facilitating Water Activity Implementation

The escrow account established for the benefit of irrigators for the purpose of "potential financial assistance or planning and construction of new water storage and/or water supply projects in the La Plata River Basin…" will be entirely used to fund the LHR project. A detailed budget for escrow account non-construction expenditures has been completed and includes on-going Water Rights and Allocation and Water Rights Operations tasks. These tasks will contribute to the model input, allocation plan and collaboration of stakeholders involved in the study; this constitutes matching funds totaling $29,765.

LPWCD is requesting the CWCB assist in funding project tasks including the model as it will benefit the SEO, ditch companies, individual irrigators and the state. While the escrow account will provide for the

construction of LHR, the proposed study is critical in developing methods for optimizing operations and administration of LHR and the La Plata River.

The SEO will be responsible for operating the LHR Compact Pool of 300 AF in LHR designated for delivering Colorado's Compact obligations to New Mexico under the La Plata River Compact. The remaining water in LHR constitutes the 'District Pool' and will be used for exchange. A Memorandum of Understanding regarding LHR operations was established between the District, the CO Division of Wildlife, the SEO and the Department of Natural Resources to benefit the native fishery in the La Plata River. The MOU includes conditions to bypass flows entering Long Hollow Reservoir to help sustain native fish.

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

The proposed study helps to sustain agriculture by improving the efficiency of Compact compliance and providing exchange water, and thus conserving water in the water-short La Plata River basin. Irrigators in this basin are constantly threatened by a lack of water supply; the improvements in administration and availability of exchange water resulting from the proposed model will help to improve water supply availability and preserve agriculture in the region.

The primary goal of the LHR project is to improve La Plata River Compact compliance by the State of Colorado while providing supplemental irrigation supply to Colorado. The model will also provide a tool for identifying futile calls rather than wasting water while determining a futile call, thus optimizing the use of water supplies in Colorado.

LHR will be operated in compliance with environmental requirements from the U.S. Army Corps of Engineers as well as the Colorado Division of Wildlife. These conditions include minimum flows and bypass requirements aimed at preserving aquatic habitat for threatened and endangered fish species.

The requested funds will provide valuable information and modeling to enhance implementation and administration of a the multi-million dollar LHR project. This demonstrates a high benefit from the investment CWCB makes to the project. The proposed study also will build on initial StateMod work completed by the CWCB in 2005, thereby contributing to specific CWCB investigations as well as larger SWSI goals.

Part D. – 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 the name/location of water bodies affected by the water activity.

The study addresses the La Plata River operations which involve Compact waters and required delivery, LHR water rights, future exchange water as well as other direct diversion water rights in the La Plata River basin. The study will recommend methods and provide a model for the SEO to use in administration of all of these rights under the new conditions that will be present with LHR.

LHR has 2 storage water rights that include an initial fill of 5,400 AF plus 2 refills for a total of 11,200 AF. In addition there are 48 diversions on the La Plata River mainstem with an estimated direct flow rights of ≈ 570 cfs (CDSS).

2. Please provide a brief narrative of any related or relevant previous studies.

Existing studies completed for LHR will be used, as appropriate, for the proposed project. Background data may be taken from the Red Mesa Aquifer Study and subsequent groundwater monitoring data (BWC, 2007 & 2010), the Red Mesa Ward Reservoir Enlargement Hydrology Study (WWE, 2002), LPWCD Water Management and Conservation Plan Update (to be completed by Feb 2011), Long Hollow Reservoir 404 permit and supporting documents (USACE, BWC), LHR design documents (GEI 2011), MOA between LPWCD, SEO, CDOW, USACE, and the Draft Operations Plan for the proposed LHR (WWE 2004). Data available from technical resources (such as USGS gages, CDSS data, weather stations, etc.) will also be used to inform the model.

The Colorado Water Conservation Board (CWCB) completed a basic model of the La Plata River in StateMod in 2005. This model included operations of LHR and associated water rights in order to evaluate the increased Compact compliance that will result from operations of LHR. The La Plata River study fits into the larger San Juan/Dolores River Basin Water Resource Planning Model. Information and data from the existing CWCB model of the La Plata River will be used for the proposed project as feasible. However, the model includes assumptions and data that need to be updated in order to provide results that can be used to implement La Plata River administration and accounting.

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.

Please provide a detailed statement of work using the following template. Additional sections or modifications may be included as necessary. Please define all acronyms. If a grant is awarded an independent statement of work document will be required with correct page numbers.

Statement of Work

WATER ACTIVITY NAME – La Plata River Water Resources Operations Model

GRANT RECIPIENT – La Plata Water Conservancy District

FUNDING SOURCE – Statewide Water Supply Reserve Account

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)

The La Plata River Water Resources Operations Model will be a robust and accurate baseline model for the La Plata River. The model will integrate groundwater and surface water and provide a invaluable tool for water users and the Office of the State Engineer (SEO) to use to optimize water resources planning with the basin.

The Long Hollow Reservoir (LHR) will be built near the state line, in order to improve compliance with the La Plata River Compact and optimize beneficial use of water in Colorado (see Figure 1). By allowing Colorado's Compact delivery obligations to be met from the reservoir releases rather than suffer the transportation losses associated with delivery in the River channel, La Plata Water Conservancy District will be able to operate upstream exchange to ditches otherwise called out by the Compact. The proposed project will develop a model and methods for determining the most efficient and effective means for La Plata River operations. This study will take into account the new conditions presented by the operations of the LHR Compact Pool as well as LHR exchange water. The proposed study will benefit irrigators, the State, and SEO while meeting environmental and Compact requirements.

OBJECTIVES

List the objectives of the project

It is expected that the proposed model will:

1) Allow the SEO to evaluate alternative Compact compliance delivery conduits and assess any impact on water users.

2) Allow LPWCD to assess, optimize and account for LHR operations including reservoir filling (whether directly or by groundwater recharge), account for and optimize the anticipated upstream exchange, and evaluate alternative reservoir operations regimes.

3) Quantify exchange water by ditch and develop an Allocation Plan for the exchange water in LHR that is adopted by ditch companies and LPWCD.

4) Allow water users and developers to evaluate alternative water development strategies in manner that does not injure existing water users.

TASKS

Task 1: Refine and Improve the baseline La Plata River Model in StateMod

Description:
The study will begin by refining and improving the existing Colorado Decision Support System's StateMod model for the La Plata River basin in Colorado. Additional data and nodes will be added, updated and refined. Groundwater return flows and/or depletions will be added to the model. All of the additional inputs will be used to run the model with historic diversion records in order to establish a more robust baseline condition for the La Plata River.

Method:
- Review and enhance irrigated acreage assessment by ditch and/or by water rights
- Refine inputs for irrigation and reservoir operations using input from irrigators, reservoir operators, commissioners and records
- Update datasets with current records from HydroBase, CDSS, USGS gages, WRCC, groundwater field measurements and other sources
- Obtain parameters for modeling groundwater return flows from irrigation and recharge; Hydrographs of wells and groundwater studies will be a source of inputs for model
- Develop more nodes to include input for tributaries and groundwater return flows
- Refine assumptions on Compact calls
- Develop historical model data set and documentation
- Run and calibrate the baseline model, including simulating split river conditions

Deliverables:
- Documentation of all input parameters and assumptions
  - All files for the DMIs TSTool and State DMI used to create the historical model data set.

  - Narrative, geographic and other documentation of input parameters
- StateMod model for La Plata River including LHR
  - Includes groundwater return flows modeling
  - Includes simulation of split river conditions
  - Tabulation of monthly diversions, broken down by ditch and by direct vs. exchange diversions, for all basin diversions included in the model
- All information will be made available to SEO, CWCB and others for future use and updates

Task 2: Analyze means of administering the La Plata River and LHR

Description:
Several aspects of river operations and accounting will be analyzed using the improved model, and recommendations for accounting and administration will be made based on results.

Method:
LHR predictive model
- Using the historical data set, revise demands, water rights, return flows and operations to reflect current conditions for the model period
- Model futile calls and operations of Compact Pool
- Quantification of exchange water associated with LHR District Pool releases
- Appropriate allocation of exchange water to ditches based on historical data
- Means of accounting for direct flow diversions and exchange water diversions

Alternate conveyance feasibility and associated impacts
- Develop a baseline of operations and streamflow during late-season call periods when Compact Pool is empty
- Model alternate conveyance of Compact water via up to three irrigation ditches
- Assess the potential groundwater recharge and/or depletions related to baseline and alternative conveyance methods

Deliverables:
- StateMod model for operations of LHR and quantification of exchange water
  - All associated documentation
- Findings and recommendations for operations of Compact Pool
- Findings and recommendations for quantification and allocation of exchange water
- Findings and recommendations for potential means of alternative conveyance of late-season Compact water

Task 3: Collaboration amongst LPWCD, SEO and water users

Description:
Personnel working on the model will meet with LPWCD, water users and SEO staff to obtain information and buy-in on the operating parameters used in the model. This will include criteria for administration of the Compact Pool, groundwater administration based on recharge, and strategies for exchange water accounting. Meetings throughout the study period will help to support that the findings of the model being adopted and implemented by the SEO.

Method:
Meetings may occur in Denver, Durango and/or on-site, as necessary, and will be coordinated by the project manager.

Deliverables:
- Documented meetings between LPWCD, SEO and water users
- Guidance from SEO on development of model

Task 4: Develop Allocation Plan

Description:
The exchange water quantified in Task 2 will be used to develop an Allocation Plan for the District Pool. The plan will be used to reach agreements with all participating ditches anticipated to receive exchange water. The agreements with ditches and associated payments for exchange water will provide the capital for operations and maintenance of LHR.

Method:
An Allocation Plan will be developed based on:
- Quantification of exchange water by the model using historical data (see Task 2)
- Negotiations with Ditches
- Maintaining compliance with environmental requirements, Compact Pool requirements and La Plata River Compact

Deliverables:
- A summary of the Allocation Plan will be provided to the CWCB describing the overall agreements and value of exchange water
- A detailed Allocation Plan will be prepared for LPWCD for use in operations of LHR

Task 5: Documentation, Reporting and Recommendations

Description:
Bi-annual reporting will be completed per CWCB requirements. A summary report will be prepared and made available to the CWCB, SEO and public.

Method:
A summary report will be prepared, including the following:
- Documentation of assumptions and data used in the model to facilitate future use and updates of the model
- Results and discussion of the analyses on administration and accounting
- Summary of Allocation Plan
- Recommendations and tools for administration (such as spreadsheets and models)
- Preliminary recommendations on alternative conveyance methods

Deliverables:

- Status reports to the CWCB on the progress of the project, obstacles and budget will be provided bi-annually
- Final report for the project
  - Report will include spreadsheets, graphs, mapping, model inputs and/or other formats to best represent the study methods and results
  - A draft report will be prepared; LPWCD and the SEO will have the opportunity to make comments and revisions
  - A final report will be provided in hard copy and electronic format
  - Report will be made available to LPWCD, CWCB, SEO and other entities as appropriate

REPORTING AND FINAL DELIVERABLE

See Task 4

BUDGET

Provide a detailed budget by task including number of hours and rates for labor and unit costs for other direct costs (i.e. mileage, $/unit of material for construction, etc.). A detailed and perfectly balanced budget that shows all costs is required for the State's contracting and purchase order processes. Sample budget tables are provided below. Please note that these budget tables are examples and will need to be adapted to fit each individual application. Tasks should correspond to the tasks described above.

The proposed project will be completed by a qualified modeling expert and water consultant with extensive experience in LHR, the La Plata River and specific water rights concerns. Participation of the LPWCD Board, ditch companies and water rights owners, and the SEO will be involved with the development and implementation of the project. Support and guidance will be provided by the LPWCD water attorney as needed. Qualifications of key personnel are available upon request.

Table 1. Total Costs				
Task	Labor Cost	Direct Cost	Total Costs	In-Kind
	(1)	(2)	(3)	(4)
1. Refine and Improve the baseline La Plata River Model in StateMod	$34,950	$3,275	**$38,225**	LPWCD and water users
Operations and Exchange Water Allocation	$20,098	$1,860	**$21,957**	LPWCD and water users
3. Collaboration with stakeholders and model refinement	$27,625	$2,013	**$29,638**	LPWCD, SEO, water users
4. Allocation Plan	$45,293	$3,099	**$48,392**	LPWCD and water users
5. Documentation, Reporting and Recommendations	$37,114	$3,261	**$40,375**	LPWCD
Total Costs	**$165,080**	**$13,508**	**$178,588**	-
Statewide Grant			**$148,823**	-
LPWCD Matching Funds (20% of Statewide)			**$29,765**	-

Notes:

(1) Labor costs shown in Table 1a (below).

(2) Direct Costs equal 10% of labor costs (excluding Legal). Direct costs include mileage, copies, software, travel time, etc.

(3) Total Project Cost equals sum of columns 1 and 2.

(4) In-Kind contributions consist of time from LPWCD Board, Ditch Companies, SEO and other stakeholders. These contributions are not quantified or counted as matching funds.

Table 1a. Budget per Personnel				
Task	Prof Staff	Tech & Admin	Legal	Total
	(1)	(2)	(3)	(4)
1. Baseline Modeling	$30,750	$2,000	$2,200	**$34,950**
2. Modeling Scenarios	$15,598	$3,000	$1,500	**$20,098**
3. Collaboration & Model Refinement	$18,125	$2,000	$7,500	**$27,625**
4. Allocation Plan	$27,993	$3,000	$14,300	**$45,293**
5. Reporting	$26,614	$6,000	$4,500	**$37,114**
Total Costs	**$119,080**	**$16,000**	**$30,000**	**$165,080**

Notes:

(1) Professional staff includes project manager, modeling expert and support staff. Rates range from $65/hr to $154/hr.

(2) Technicians and Adminstrative Assistant rates range from $44/hr to $60/hr.

(3) Legal fees are a lump sum of $30,000 for the project and have been approximately allocated per

(4) Equals sum of columns 1 through 3.

SCHEDULE

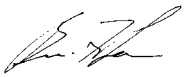
Provide a project schedule including key milestones for each task and the completion dates or time period from the Notice to Proceed (NTP). This dating method allows flexibility in the event of potential delays from the procurement process. Sample schedules are provided below. Please note that these schedules are examples and will need to be adapted to fit each individual application.

Task	Start Date	Finish Date
1. Refine and Improve the baseline La Plata River Model in StateMod	Upon NTP	NTP + 3 months
2. Analyze means of administering the La Plata River and LHR	Upon Completion of Task 1	Task 1 + 3 months (Task 2 and 3 to be completed concurrently)
3. Collaboration with Stakeholders and Model Refinement		
4. Allocation Plan	Upon Completion of Task 2 and 3	Task 2 and 3 + 4 months
4. Documentation, Reporting and Recommendations	Upon Completion of Tasks 2 and 3	Task 2 and 3 + 5 months
Total Project	**NTP**	**NTP + 11 months**

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.

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

Signature of Applicant: 

Brice Lee, LPWCD President

Print Applicant's Name: La Plata Water Conservancy District

Return this application to:

Mr. Todd Doherty
Intrastate Water Management and Development Section
COLORADO WATER CONSERVATION BOARD
1580 Logan Street, Suite 200
Denver, CO 80203

To submit applications by Email, send to: todd.doherty@state.co.us

Attachment 1
Reference Information

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

Colorado Water Conservation Board (http://cwcb.state.co.us/)

Loan and Grant policies and information are available at – http://cwcb.state.co.us/Finance/

Interbasin Compact Committee and Basin Roundtables (http://ibcc.state.co.us/)

Interbasin Compact Committee By-laws and Charter (under Helpful Links section) –

http://ibcc.state.co.us/Basins/IBCC/

Legislation

House Bill 05-1177 - Also known as the Water for the 21st Century Act –

http://cwcbweblink.state.co.us/DocView.aspx?id=105662&searchhandle=28318

House Bill 06-1400 – Adopted the Interbasin Compact Committee Charter –

http://cwcbweblink.state.co.us/DocView.aspx?id=21291&searchhandle=12911

Senate Bill 06-179 – Created the Water Supply Reserve Account –

http://cwcbweblink.state.co.us/DocView.aspx?id=21379&searchhandle=12911

Statewide Water Supply Initiative

General Information – http://cwcb.state.co.us/IWMD/

Phase 1 Report – http://cwcb.state.co.us/IWMD/SWSITechnicalResources/SWSIPhaseIReport/

Attachment 2
Insurance Requirements

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

13. INSURANCE

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

A. Grantee

i. Public Entities

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

ii. Non-Public Entities

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

B. Sub-Grantees

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

i. Worker's Compensation

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

ii. General Liability

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

iii. Automobile Liability

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

iv. Additional Insured

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

v. Primacy of Coverage

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

vi. Cancellation

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

vii. Subrogation Waiver

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

C. Certificates

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

Attachment 3
Water Supply Reserve Account Standard Contract

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

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

Attachment 4
W-9 Form

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

Form **W-9**
Substitute Form
State of Colorado 8-2007

Request for Taxpayer Identification Number and Certification

Give form to the requester. Do not send to the IRS.

Print or Type
See Specific Instructions on page 3.

Name
La Plata Water Conservancy District

Business name, if different from above

Check appropriate box:
☐ Individual/ Sole Proprietor ☐ Corporation ☐ Partnership ☒ Other ▶ Gov ☐ Exempt from backup withholding

Address (number, street, and apt. or suite no.)
c/o Trudy O'Brien PO Box 1136

Requester:

City, state, and ZIP code.
Durango CO 81302

List Account number(s) here (optional)

Phone Number:
970 259-2612

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. For individuals, this is your social security number (SSN) **However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3.** For other entities, it is your employer identification number (EIN). If you do not have a number, see **How to get a TIN on page 3.**

Social Security number

Note: *If the account is in more than one name, see the chart on page 3 for guidelines on whose number to enter.*

Employer identification number
84-1191941

Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), **and**
2. I am not subject to backup withholding because. **(a)** I am exempt from backup withholding, or **(b)** I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or **(c)** the IRS has notified me that I am no longer subject to backup withholding, **and**
3. I am a U.S. person (including a U.S. resident alien).

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the Certification, but you must provide your correct TIN. (See the instructions on page 3.)

Sign Here | Signature of U.S. person ▶ Judy A O'Brien Date ▶ 12-22-10

Minority and Women-owned Businesses (M/WBEs) Self Certification (Please check all boxes that apply)

In an effort to track levels of participation by women and minorities doing business with the State of Colorado, the following information is requested. Please indicate the appropriate category of ownership for your company. "Owned" in this context means a business that is at least 51 percent owned by an individual(s) who also control(s) and operate(s) it. "Control" in this context means exercising the power to make policy decisions. "Operate" means actively involved in the day-to-day management. If you business is jointly owned by both men and women or is a large publicly held corporation, please check the box labeled "Not Applicable."

Gender Information:

☐ Female-Owned ☐ Male-Owned ☐ Not Applicable

Owner Ethnicity Information

☐ African American ☐ Asian/Pacific American ☐ White (non-Hispanic) ☐ Not Applicable

☐ Hispanic American ☐ Native American ☐ Other: _____

Small Business Information

Small Business (a business that is organized for profit, is independently owned and operated, and has 25 or fewer full time equivalent employees.)

☐ Yes ☐ No

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?

The proposed project provides will benefit irrigators and water rights owners, the State of Colorado, SEO staff and residents of rural La Plata County by contributing to the following goals:

- Improved compliance with the La Plata River Compact by the State of Colorado,
- Increased efficiency of La Plata River Operations, resulting in more efficient use of limited water resources,
- Develop a Exchange Water Allocation Plan for ditches participating in the LHR project, and
- Support of local agriculture by increasing supply via exchange water.

These goals will be met by developing a robust model of the La Plata River and analyzing several conditions including the addition of Long Hollow Reservoir (LHR). The

results of the model will provide a basis for La Plata River Operations, allocation of exchange water from LHR and methods for accounting by the SEO.

Another benefit of the proposed project will be to increase the return flows year-round, which will be particularly beneficial during low flow conditions (i.e. base flow). This will improve the aquatic habitat and environmental resource present in a naturally water-limited area.

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?

The proposed study will be accomplished in the following steps:

1) Complete StateMod model for La Plata River including LHR and other conditions
2) Use model to analyze
    a. Operations of the LHR Compact Pool
    b. Quantification and allocation of exchange water in LHR
    c. River accounting and administration
    d. Feasibility of alternate conveyance methods of Compact water
3) Collaborate with stakeholders for input data and buy-in of model and methods
4) Develop Allocation Plan and agreements with ditches
5) Summarize findings and provide model and data for future use in administration and provide to CWCB, SEO and other entities

LPWCD has been working with the SEO as well as state and federal agencies to successfully obtain all necessary permits for the reservoir. The proposed study will not require a permit and will benefit from continued involvement by the SEO in the project.

The requested funds are for each of the steps outlined above. The integration of each of the component steps will accomplish the final goal which is providing a tool for improving Compact compliance, operating LHR and accounting in the La Plata River Basin.

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

The proposed study can be completed within the proposed detailed budget. The LHR will be constructed using funding from a designated escrow account.

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 SEO, LPWCD and water right owners will contribute their support, knowledge and time to the study. To the extent possible, LPWCD is committing matching funds for work that will contribute to the study (a total of $29,765).

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 matching funds are from the escrow account used to fund the LHR project and go to specific tasks that fit within the LHR project. The proposed model is not within the scope of the escrow account. LPWCD does not have a income basis adequate to fund the study or repay a loan. As noted in the IBCC Report on December 15, 2010 "The ability of smaller, rural water providers and agricultural water users to adequately address their existing and future water needs is significantly affected by their financial capabilities."

Given the importance of the project to water users in the basin as well as the State of Colorado in meeting Compact requirements, LPWCD finds it appropriate to request the CWCB to fund the study. The outcomes of the study also will provide more StateMod input and water supply information that can be used by the CWCB to update its statewide work.

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

The goal of the study is to explore a range of water management and administration options in order to determine the most efficient means of operating and accounting for the La Plata River and optimizing beneficial use of water. The study is intended benefit all water rights users in the basin, therefore, no water rights conflicts are anticipated.

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 support of area irrigators is evident in the decades of work that has gone into increasing agricultural water supply in the basin. Ditch companies will actively participate in the project, particularly in creating and implementing an Allocation Plan. The local beneficiaries do not have adequate financial resources to fund the study. The SEO has been working with LPWCD to begin to develop means for administering LHR.

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

There is no known opposition to the proposed study. Environmental and other concerns associated with LHR have been addressed through an extensive 404 permitting process as well as agreements with state and federal agencies.

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

The project will provide a system for administering and allocating exchange water from LHR to ditches in the La Plata River Basin. The exchange water will provide increased

irrigation, which will, in turn, result in increased return flows. The La Plata River below Cherry Creek is perennial, with streamflows occurring largely due to irrigation return flows. Therefore, it is anticipated that the return flows associated with the LHR project exchange water will provide improvements to existing aquatic habitat, particularly in the lower La Plata River which supports endangered fish species.

By helping to provide means for continued irrigation, the study will support agriculture and provide an alternative to selling senior agricultural water rights for development. The LHR project will meet environmental goals including minimum streamflow bypasses that will benefit endangered fish habitat downstream.

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

The study will provide new information on the potential effects to groundwater in the area due to various La Plata River operation scenarios. Groundwater is a very limited but important (and often non-decreed) resource for some landowners in the project area. The model will calculate the relationship (in time and amount) between irrigation practices and lagged return flows downriver. As discussed above, increased exchange water used for irrigation is anticipated to benefit downriver surface flows during base flow periods.

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

The study area is within the Fort Lewis Mesa Planning District of La Palta County. The districts land use plan emphasizes the importance of preserving the agricultural way of life through whatever means feasible. The proposed study contributes to this goal by providing better tools for water rights administration and allocation of exchange water.

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

There are no intra-basin water or conflicts in the proposed project.

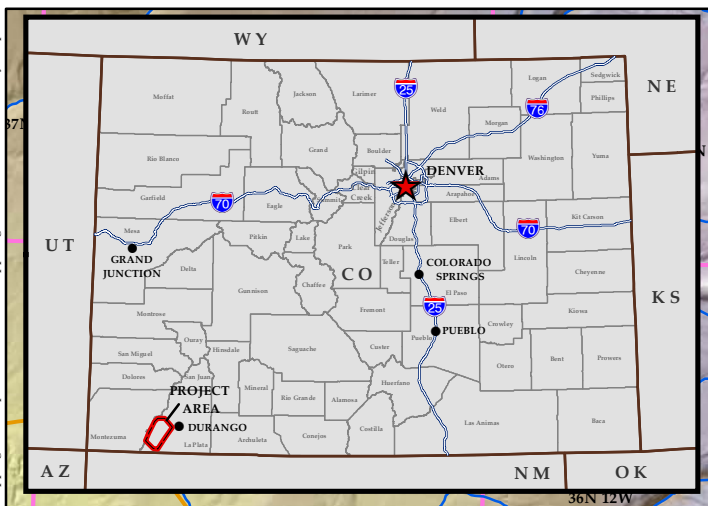
13. Identify any interbasin impacts and how any conflicts would be addressed.

See above

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

As discussed above, the project supports the agriculatrual economy by developing recommendations and methods for improved Compact compliance, more efficient adminstiration of the water rights and an Allocation Plan for the exchange water.

P:\Project Files\002-06 LPWCD\Mapping\ArcMap_files\2010\Grant App\Figure 1 La Plata River Vicinity Map.mxd



Montezuma County

La Plata County

Mancos

Mayday

Hesperus

LA PLATA RIVER AT HESPERUS, CO

Durango

Lightner Creek

Junction Creek

160

140

SUIT Boundary

Lake Nighthorse
(ALP Reservoir)

La Plata River

Breen

LA PLATA RIVER NEAR BREEN

HAY GULCH ABOVE
RED MESA WARD RESERVOIR

RED MESA
WARD RESERVOIR

HAY GULCH BELOW
RED MESA WARD RESERVOIR

Cherry Creek

Kline

CHERRY CREEK AT THE
MOUTH NEAR RED MESA

CHERRY CREEK NEAR RED MESA, CO.
(HISTORIC)

LA PLATA RIVER BELOW
MOUTH OF CHERRY CREEK
NEAR RED MESA

Marvel

Long Hollow

Animas River

Red Mesa

Proposed Long
Hollow Reservoir

LONG HOLLOW AT THE
MOUTH NEAR RED MESA

Colorado

New Mexico

LA PLATA RIVER AT
COLORADO-NEW MEXICO STATE LINE

La Plata

LA PLATA RIVER AT LA PLATA, NM

37N 12W
37N 11W
37N 10W
37N 9W
36N 12W
36N 11W
36N 10W
36N 9W
35N 13W
35N 12W
35N 11W
35N 10W
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34N 13WA
34N 12WA
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34N 12W
34N 11W
34N 10W
33N 14W
33N 13W
33N 12W
33N 11W
33N 10W
32N 14W
32N 13 1/2W
32N 13W
32N 12W
32N 11W

Map Legend

- Major Irrigation Ditch Headgate
- Gaging Station
- Irrigation Ditch
- River/Stream
- US Highway
- State Highway
- County Road
- Proposed Long Hollow Reservoir
- Perennial Lake
- Urban Area
- SUIT Boundary
- County/State Boundary
- Township/Range

Elevation (ft. asl)

High : 13,100

Low : 5,700

Map Sources:
Background - hillshade from USGS 10 DEM
Roads - CDOT
Rivers- CDOW/USGS
Towns and County - ESRI
Stream Gages - CDSS

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

Miles
0 1.25 2.5 5

1 inch = 2.5 miles

Designed by: DSS
Checked by: RKH
Date: 1/3/2011
Scale: 1:158,400

La Plata River Water Resources Map

Figure 1