Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
Agenda Item 10.g

Applicant: La Plata Water Conservancy District

Water Activity Name: La Plata River Water Resources Operations Model

Water Activity Purpose: Study or Analysis of Non-Structural, Non-consumptive Water Project

County: La Plata

Drainage Basin: La Plata River

Water Source: La Plata River

Amount Requested: $148,823

Source of Funds: Statewide Account

Matching Funds: $29,765 (applicant)

Staff Recommendation
Staff recommends approval of up to $148,823 from the Statewide Account to help complete the La Plata River Water Resources Operations Model.

Water Activity Summary:
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 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, about 31 river miles 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 miles upstream from the state-line. 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 in 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.

Threshold and Evaluation Criteria
The application meets all four Threshold Criteria.

The application articulates how the project meets the Evaluation Criteria as summarized below:

Tier 1: Promoting Collaboration/Cooperation & Meeting Water Management Goals & Identified Needs: As a component of the LHR project this study 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 base-flows 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

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.

Discussion:
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.

The proposed study is an important component of the Long Hollow Reservoir, which is 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 an interstate compact requirement and will involve collaboration amongst water users, the SEO, and New Mexico.

Issues/Additional Needs:
No issues or additional needs remain.

Staff Recommendation:
Staff recommends approval of up to $148,823 from the Statewide Account to help complete the La Plata River Water Resources Operations Model.

All products, data and information developed as a result of this grant must be provided to the CWCB in hard copy and electronic format as part of the project documentation. This information will in turn be made widely available to Basin Roundtables and the general public and will help promote the development of a common technical platform. In accordance with the revised WSRA Criteria and Guidelines, staff would like to highlight additional reporting and final deliverable requirements. The specific requirements are provided below.

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

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

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