EXHIBIT A

Rio Grande Reservoir Reoperation and Optimization Model

Finalization Scope of Work

WRSA Grant by San Luis Valley Irrigation District

This Scope of Work is a continuation of previous work performed under the same CWCB Board authorization. The unspent funds are needed to finish the original Scope of Work items defined in Phase 3 (Contract # C150437). The original contract expired prior to completion of all tasks due to delays in coordination efforts with multiple agencies in the Rio Grande Valley.

In general, this effort completes the Reservoir Reoperation and Optimization model that was developed as part of the previous phase of the rehabilitation and utilization of Rio Grande Reservoir for multi-use purposes. The District finalized the Phase 2 report which developed a model that provides the ability to analyze potential storage and releases from a rehabilitated Rio Grande Reservoir.

The model was presented and preliminarily reviewed by the Division of Water Resources, the Rio Grande Water Users Assoc., various environmental interests including Trout Unlimited, The Nature Conservancy, and the Rio Grande Wetlands Initiative, and the Basin Roundtable meeting. The feedback from those meetings and potential stakeholders was that further refinement and enhancement of the model would assist all water interests in the Basin in evaluating the potential impacts and benefits of changes in storage and release patterns from the Reservoir. The work proposed here includes working with and providing assistance to various entities interested in utilizing storage at the Reservoir, and made necessary enhancements to the model to provide specific results to those entities. Efforts have been made to work with entities not directly utilizing storage in the Reservoir, but have an interest in environmental effects of the storage and release patterns on stream flows.

The following tasks were originally defined in the Scope of Work under Contract #C150437:

Task 1. Workshop Presentations and Refining Model - **ACTIVE**

Tasks:

- Engineer will conduct 2 modeling workshops with Division Engineer and representatives of water users, including the Rio Grande Water Users and Rio Grande Water Conservation District, to refine water use data and beneficial Model enhancements including: water rights data, Compact deliveries and flow projections, curtailments, stream gains and losses, direct flow storage utilization, and potential demands from groundwater management subdistricts.

- Engineer will conduct 2 modeling workshops with potential storage pool holders, including Division Engineer (Compact Storage), Division of Wildlife, and San Luis Valley Water Conservancy District to refine long-term storage needs and water

delivery scenarios to best address water use needs and potentially meeting stream flow and riparian demands.

- Engineer will conduct 2 modeling workshops with environmental group representatives and U.S. Forest Service to refine and determine how to best optimize available flows to better meet fish, riparian and other environmental needs and quantify the benefits of the modeled changes.

Assumptions:

- At least 2 meetings per trip to the San Luis Valley
- 4 trips total to the San Luis Valley.

Deliverables:

- None for this task – information from workshops will be used in subsequent Tasks and associated deliverables.

Task 1 Original Total Cost: $25,000

Remaining Funds: $21,422.88

Task 2. Implement Model Enhancements - **ACTIVE**

Tasks:

The model developed in Phase II of the Rio Grande Reservoir Project was refined in the following areas based on feedback received from the modeling workshops with various interests and participants. Participants most likely to provide key information for each refinement are shown in parentheses.

- Simplified representation of water rights and deliveries (Division 3 Engineer, Water Users)
- Curtailment calculations given available Compact storage and streamflow forecasting (Division 3 Engineer)
- Refined stream gains and loss data (Division 3 Engineer, Water Users, Environmental Interests)
- Inclusion of stream flow forecasts (Division 3 Engineer)
- Dynamic linkage of hydropower analysis to Model (Engineer)
- More detailed and quantifiable environmental flow analysis (Environmental Interests)
- Other relevant data gathered from Division Engineer, water user organizations, storage participants and land use and environmental interests.

Assumptions:

- Information on water rights (in particular a reasonable separation of junior and senior rights at priority 216A) is available
- Methodology and tools used by the Division 3 Engineer in using stream forecasting for Compact administration will be available for use

- Participation from environmental interests to quantify environmental benefits
- Assistance may be required from outside consultants who are familiar with specific aspects of the Rio Grande basin (included in task cost)

*Deliverables: - **PENDING:***

- Technical Memorandum describing modeling methods, assumptions and results from enhancements listed above, as well as the use of the model. TM will be approximately 15 pages in length, plus figures and tables. Draft TM will be made available for comment from participants of the modeling workshops, and a final draft will be prepared after the close of the comment period.

- Reservoir Reoperation and Optimization Model will be provided in electronic format.

Task 2 Cost: $60,000

Remaining Funds: $2,000

Task 3. Hydropower Evaluation - **COMPLETE**

Tasks:

- Address other issues pertaining to hydropower usage including legal issues, permitting, existing power infrastructure evaluation, and investigation into available hydropower technical options.

Assumptions:

- Cooperation from local power company to assess existing infrastructure
- Legal analysis required from qualified attorney (included in task cost)

*Deliverables - **DELIVERED:***

- Technical Memorandum addressing all issues listed above. TM will be approximately 8 pages in length, plus figures and tables. Final version only.

Task 3 Original Cost: $15,000

Remaining Funds: $0

Project Schedule

Task and Activity	Expected Completion in Days from Notice to Proceed
Meeting I with water users, pool holders, environmental interests. Assist in running Model, listen to desired functionality, discuss approach, solutions and methods to incorporate desired functionality. (Task 1, partial completion)	60
Initial modeling enhancements based on Meeting I (Task 2, partial completion)	90
Meeting II with water users, pool holders, environmental interests to discuss and evaluated enhancements made from Meeting I. Discuss any further refinements (Task 1, partial completion)	120
Complete modeling enhancements from Meetings I and II (Task 2, completed)	150
Complete hydropower evaluation, including legal, infrastructure and potential funding opportunities (Task 3)	150
Present results to BRT and SLVID board (Task 1, completed)	180

Payment

Payment will be made based on actual expenditures and invoicing by the water activity sponsor. 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 CWCB in hard copy and electronic format as part of the project documentation.