

**Water Supply Reserve Account – Grant and Loan Program
Water Activity Summary Sheet
Agenda Item 11c**

Applicant: Northern Colorado Water Conservancy District

Water Activity Name: Data Logger and Telemetry Installation Project

Water Activity Purpose: Structural Activity

County: Denver, Weld

Drainage Basin: South Platte

Water Source: South Platte River

Amount Requested: \$46,000

Source of Funds: Basin Account

Matching Funds: Yes, applicants will provide in-kind services related to the installation of equipment.

Staff Recommendation
Staff recommends approval of up to \$46,000 from the South Platte Basin Account to help complete the Data Logger and Telemetry Installation Project.

Water Activity Summary:

This project would allow installation of stage discharge data loggers and cell phone modems on diversion structures and return flow augmentation structures to provide real time flow information. In addition, the project will allow the installation of combined meter/data loggers on wells close to the river that are pumped as ditch alternate points or to recharge during free river periods or when there are available credits in the river. The well meters have data loggers built in and can be paired with telemetry at some point in the future once the most cost effective option is determined.

The principal focus will be on structures on the Big Thompson drainage, District 4, and the main stem of the South Platte downstream of Kersey and upstream of the state line, District 1 and 64. Data loggers and telemetry has already been set up on most major diversion structures along the South Platte and tributaries within the District boundaries of LSPWCD and Northern Water in a cooperative program between Northern Water, LSPWCD, and DWR. Support for previous installations have come from the entities included in the application along with Colorado Water Conservation Board (CWCB), the South Platte Roundtable, and the Saint Vrain and Left Hand Water Conservancy District. The South Platte Roundtable previously approved a funding request for 48,800 for data loggers and cell phone telemetry.

All of the equipment secured with this funding have been installed and are in successful operation. The only cost associated with this grant will be to purchase equipment. As in-kind service, purchased equipment will be installed in coordination with the various ditch companies by DWR, LSPWCD and/or Northern Water representatives. In addition, these agencies will set up necessary networking to transfer, store and present the information on the Internet.

Data loggers and telemetry allow for continuous information for users and water administrators concerning flows. Even users not directly benefiting from obtaining equipment on their diversions will be benefited because these users will have real time information concerning other diversions.

Data loggers also eliminate the workload of ditch users and water commissioners to break down charts. The data loggers allow near real time accounting to occur for augmentation of wells and diversions. This is extremely critical in the case of augmentation as real time information is necessary to determine recharge and direct flow credits to assure there is not an injury to senior water rights.

The project provides an excellent complement to the State's existing diversion and stream gage satellite program and is also complimentary to the work being done for the Colorado Decision Support System in obtaining better data concerning river flows and diversions. In summary, maximizing the use of existing supplies within the basin for decreed purposes with existing infrastructure is the first step in meeting the future needs of users along the South Platte. The increase in diversion and stream flow data on the web has improved administration because users and DWR staff are immediately aware of any problems associated with diversion quantities. Extending the near real time network helps assure there is not waste and allows all augmentation credits to be accounted for in near real time. It also provides transparency concerning administration and helps assure all users are "on a level playing field".

Discussion:

Assisting in the funding of real-time data loggers and telemetry will facilitate the maximum use of waters in the basin. Namely, this technology will allow for the optimization of the resource, streamlining the record keeping process, providing for more precise and accurate records and providing for a more transparent environment where water users are able to verify when and how much other water users are diverting. Considering the intense competition of water in the South Platte River, every effort should be made to encourage wise and efficient use of the resource and this technology is a simple means to achieve that goal.

Issues/Additional Needs: No issues have been identified.

Staff Recommendation:

Staff recommends approval of up to \$46,000 to assist with the costs associated with purchasing data loggers and telemetry equipment.

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.