

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

Applicant: The Upper Walker Ditch Company

Water Activity Name: Yampa River/Walker Ditch River Restoration Project

Water Activity Purpose: Structural Project

County: Routt

Drainage Basin: Yampa/White

Water Source: Yampa River

Amount Requested: \$40,000

Source of Funds: \$20,000 (Statewide Account) and \$20,000 (Basin Account)

Matching Funds: \$20,000 cash (Basin Account), \$92,250 (Stakeholder match)
Total = 560% match for Statewide Account request

Staff Recommendation
Staff recommends approval of up to \$20,000 from the Yampa/White Basin Account and \$20,000 from the Statewide Account to assist in the funding of the Yampa River/Walker Ditch River Restoration Project contingent upon the resolution of the issues and additional needs identified in this summary.

Water Activity Summary:

The Walker Ditch point of diversion is located on the south side of the Yampa River on the Carpenter Ranch near Hayden. The Walker Ditch and its head gate were both constructed in the late 1800's. In the early 1900's the river evolved and moved to the point where the ditch had to be lengthened and a new diversion head gate had to be constructed. In 1985, the river moved again, causing the main body of the river to shift away from the second head gate. Since the river shift in 1985, the river has continued to migrate further north. During the last few years another new channel has developed North of the main river channel. This new channel is now capturing almost the entire flow of the river. Since 1985 when the river made a major shift, temporary gravel dams have been required to get water to the Walker ditch head gate in low flow times. Recently, with the main body of the river moving increasingly further away from the diversion point, more and bigger seasonal gravel dams are required to divert late summer low flows into the South meander bend (pre 1985 channel) that supplies water to the ditch. The goal of the project is to construct an obstruction of the new north side channel with root wads, boulders and other approved natural materials that will create an effective floodplain in the newly created north channel, decrease the rate of river migration, and maintain low flows in the south channel that feeds the Walker Ditch head gate. In addition to the north channel obstruction, two low head boulder diversion structures and a new concrete head gate structure will be installed to provide a long-term and sustainable diversion system that is not a barrier to fish migration and recreational boating, but will deliver a full decree of reliable irrigation water to local ranches, the Town of Hayden, and other users who make up the ditch members.

Specific Objectives of the Project include:

- Provide a full decree of irrigation water to the Walker Ditch
- Reconstruct the floodplain with natural materials to dissipate stream energy
- Provide water to critical aquatic and terrestrial habitat
- Eliminate routine annual excavation in the river bottom

- Construct two rock diversion structures that allow for fish and recreational boat passage
- Construct a concrete head gate structure with slide gate valves at the Walker Ditch point of diversion

Discussion:

Staff supports multi-objective diversion reconstruction projects. This project will allow the ditch owners/operators to more efficiently divert their decreed water rights at all levels. The elimination of annual gravel “push-up” dams will increase the stability of the channel downstream, and it will likely improve aquatic habitat in the downstream reaches of the Yampa. A newly constructed floodplain that allows dissipation of stream energy at 1-2 year recurrence interval flows can be effective in reducing channel migration. It will also provide valuable benefits to the riparian ecosystem. Finally, a newly constructed geomorphic floodplain that is routinely flooded will store more groundwater and may improve local base flows.

Issues/Additional Needs:

- Staff will work with the applicant to ensure that all applicable requirements in the CWCB Rules and Regulations for Regulatory Floodplains in Colorado are satisfied.
- The newly constructed headgate and rock diversion structures should be able to withstand a large flood event. The applicant should demonstrate this during the design process. The 100 year flow in this reach of the Yampa could exceed 15,000 cfs.
- The CWCB Colorado Watershed Restoration Program (CWRP) grant (\$20,000) has yet to be secured. This grant should be contingent upon the CWRP grant or an alternative source of equal cash funding.

Staff Recommendation:

Staff recommends approval of up to \$20,000 from the Yampa/White Basin Account and \$20,000 from the Statewide Account to assist in the funding of the Yampa River/Walker Ditch River Restoration Project contingent upon the resolution of the issues and additional needs identified in this summary.

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.