

City Council Action Report

To: Mayor and Council
 Submitted By: Cory Peterson, Water Resources Engineer
 Subject: Croke Canal & Van Bibber Creek Crossing
 Date: December 14, 2006
 Strategic Council Goals: Goal #1 – Upgraded City Infrastructure and Facilities

Recommended Action:

- Authorize the transfer of funds for the reimbursement of the Croke Canal & Van Bibber Creek Crossing not to exceed \$118,400.

Background:

- The Croke Canal is owned by the Farmers Reservoir and Irrigation Company (FRICO) and delivers water from Clear Creek in Golden to Standley Lake for FRICO shareholders (including Northglenn, Thornton and Westminster). The Croke Canal water is a major component of Northglenn’s water supply.
- The Croke Canal is managed and operated by the Standley Lake Operating Committee (SLOC) comprised of representatives from the cities of Northglenn, Thornton and Westminster (SLOC Cities).
- The original timeline for this project was to complete the project in phases. The design phase was originally scheduled for completion in 2007 and the construction phase in 2008.
- In August 2006, heavy rains caused the crossing to collapse. As a result, it became impossible to use the Croke Canal to divert water from Clear Creek to Standley Lake when it normally comes into priority on November 1, 2006. Due to this failure and importance of this facility to the FRICO shareholders, FRICO and SLOC decided to accelerate the schedule and complete the entire project this year. This action was authorized pursuant to Section 11, Paragraph 3 of the 1979 4-Way Agreement which states that in no event shall FRICO be prevented from undertaking any action deemed necessary by FRICO to prevent or correct any emergency matter arising in the operation of the Croke Canal.
- FRICO performed the bidding and acted as the contracting agency for the design and construction of this project under the terms of the 4-Way Agreement between FRICO and the SLOC Cities. In addition, the 4-Way Agreement provides for Croke Canal operation and maintenance costs to be funded by SLOC with the SLOC Cities sharing the costs equally. Westminster and Thornton have previously committed their portion of the funding for this project.
- The City of Northglenn’s proportionate share of the funding for this project is budgeted in the 2006 Capital Improvement Program for Croke Van Bibber Bypass Reconstruction in the amount of \$142,000.

Policy Considerations

- The completed project will restore the functional capabilities of the facility, protect the canal bank integrity, improve water quality, improve the hydraulic efficiency of the Canal and control future maintenance costs for the Canal.
- This project meets Council’s Objective of “Adequate Water Supply for Northglenn through Adequate Water Rights, Fresh Water Storage, Improved Water Treatment and Distribution” under the goal of “Upgraded City Infrastructure and Facilities”.

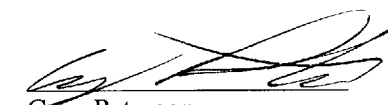
Budget Information:

- FRICO’s engineering consultant estimates the total project has cost \$322,910 and Northglenn’s one-third share would be \$107,637. Adding a 10% contingency of \$10,763 brings Northglenn’s total share to \$118,400.
- Northglenn’s \$118,400 contribution to the total project costs is within available unencumbered funding in Water and Sewer account number 510.69263.000.3999.651.

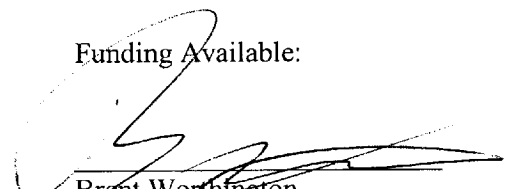
Respectfully Submitted:

Approved for Submittal:

Funding Available:


 Cory Peterson,
 Water Resources Engineer


 Steve Zoet,
 Interim City Manager


 Brent Worthington
 Finance Director

COUNCIL ACTION TAKEN:



Supplemental to Staff Report No. 06-34

To: Mayor and Council

From: Cory Peterson

CC: Steve Zoet

David Allen

Kurt Kowar

Date: December 14, 2006

Van Bibber Creek crosses under the Croke Canal at roughly 56th and Indiana St. in Arvada (see maps on page 2). The original project for this site called for replacement of the 30" siphon clay pipe to allow higher flows from Van Bibber to travel under the canal. The increased capacity would provide a higher safety factor when large rain events threaten the integrity of the canal. The initial project schedule included the design phase in 2005 with construction to begin in 2006. Appropriate funds were budgeted in Northglenn's capital improvement program (CIP) in each corresponding year. Communication issues between all involved parties and other maintenance priorities resulted in the project being delayed. The project schedule was subsequently revised for design to occur in 2006 and construction in 2007. The previously budgeted funds in Northglenn's CIP were subsequently rolled over to accommodate the new schedule.

In August 2006, a heavy rain event collapsed an existing clay pipe allowing all stormwater flows in Van Bibber to enter Croke Canal. Due to this unexpected failure, the construction phase was accelerated in an attempt to have the canal operational by November when it normally comes on line. Initially, a temporary solution was suggested; however, the costs for a temporary fix were comparable to a permanent repair. FRICO decided to commence construction in August and the Standley Lake Operating Committee (SLOC) cities concurred with FRICO's decision to move forward with construction at the October SLOC meeting.

Construction started in October and was completed in late November. Since it was apparent that the repairs would not be completed in time to place the Croke Canal back in service by November 1, 2006, FRICO made an agreement with Farmers' High Line (FHL) Canal to run the Croke Canal water during the short time that the Croke Canal was out of service in November. One of the primary concerns with extending the construction timetable further was that the FHL has a smaller capacity and would not be able to deliver the higher flows that the Croke Canal receives throughout its diversion season. The Croke Canal resumed operations on December 1, 2006.

Throughout this project the primary objective was reinstating the canal to carry water into Standley Lake. At this time, the final project cost has not been determined due to some minor outstanding change orders. A small contingency is recommended in Staff Report 06-34 in the event that these change orders exceed the original project estimate. Preliminary discussions with FRICO staff indicate that the project was successful and should be within the estimated costs.

Location:



Croke Canal (blue) flows N to S
Van Bibber Creek (green) flows W to E



Before



After



Close-up of the Failed Clay Pipe

Croke Canal – Van Bibber Creek Crossing



Excavation into east side embankment



View east from existing inlet structure



East embankment grading and fuse plug



View southeast of riprap placement



View east of center section of box culvert floor



View southeast of pipe diversions over culvert trench