

City of Rapid City, SD

Contact Stacey Titus
 Department Water
 Type Improvement
 Useful Life 50
 Category Infrastructure
 Priority 1 Urgent

Project # **50406**
 Project Name **Low Level Water Reservoirs Interconnection**

Last Revised 1/13/04

Const. No.

Description

The project consists of an interconnection between the two reservoirs at the the Signal Heights site location. It will consist of an approximately 20 inch diameter, 600 ft. long main. The two Low Level Reservoirs (2 MG & 5 MG) are not hydraulically connected at the reservoirs; instead they are hydraulically connected approximately 2000' away on Quincy St. The reservoirs level controls are connected only to the 5 MG reservoir and not to the 2 MG reservoir. The 2 MG reservoir is filled via a 12" main and the 5 MG reservoir is filled via a 20" main. Because of pipe frictions losses and varing demands on the system, the reservoirs' hydraulic elevations vary between the two reservoirs. Modeling of the hydraulic performance of the interconnection, the final sizing, and evaluating the need for flow controls or control modifications will be part of the consultant service agreement. This project is related to the Elm Ave. 20 inch watermain cathodic protection rehab. Project (#50480), therefore, these two projects need to be coordinated together.

Justification

Recently a situation has occurred where the 5 MGAL. reservoir has been drawn down and the controls are imitating a fill situation, however, the 2 MGAL. reservoir is not drawn down as far and thus starts an overflow condition. Project is needed to conserve water during peak demands of summer months and provide better control of the reservoirs.

Expenditures	2004	2005	2006	2007	2008	Total
Professional Services	15,000					15,000
Construction	100,000					100,000
Total	115,000					115,000

Funding Sources	2004	2005	2006	2007	2008	Total
933 - Water Enterprise Fund	115,000					115,000
Total	115,000					115,000

Operational Impact/Other