Drinking Water State Revolving Fund Green Project Reserve

- Final –

Weston City Drinking Water Project

SRF Loan #DW 1802 (pop. 425)

$2,249,500

Final Green Project Reserve Justification

Business Case GPR Documentation

INSTALLS NEW WATER STORAGE TANK AND TRANSMISSION LINE FOR GRAVITY FEED TO SYSTEM, ELIMINATING MAIN BOOSTER PUMP STATION (Energy Efficiency) Business Case per 3.5-3: *Projects that cost effectively eliminate pumps or pumping stations.* ($480,000).

State of Idaho SRF Loan Program
November 2018

STORAGE TANK & TRANSMISSION LINE

Summary

- A new storage reservoir and transmission line was constructed as part of a water system upgrade project; the new tank replaced two old, deteriorating tanks.
- Multiple alternatives were identified to reduce operational costs and improve system capacity. The City chose the most energy-efficient alternative of locating the new reservoir such that the main booster pump station was eliminated, and constructing a new transmission line from the well to the storage tank.
- Loan amount = $2,249,500
- Energy savings (green) portion of loan = 21% ($480,000) [Final]

Background

- The booster pump station was located to the southeast of the existing storage tanks. It included (1) 25 Hp and (3) 50 Hp pumps. The pump station used approximately 61,500 KWH/year.
- The Facility Plan identified an opportunity to eliminate the need for the booster pump station, by building a new storage tank on a hill to the north of the existing tanks.
- The additional height of the new tank and the new transmission line provides sufficient head to provide the City with enough pressure without the use of a booster pump station.

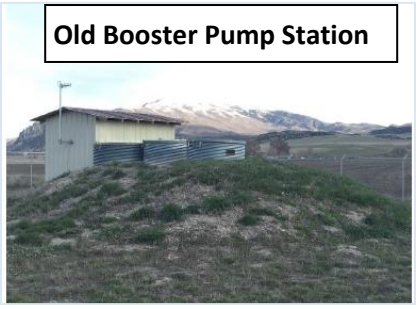
Old Tanks

Results[1]

- The new tank eliminates the existing booster pump station.
- This results in eliminating 61,500 KWH/year, resulting in an annual cost savings of $12,000. For the 40 year life of the tanks & main, the cost savings = $480,000 savings (= 40 x $12,000).

Conclusion

- The project addressed the current and future water system requirements of Weston City while eliminating the main booster pumping station. This is the most cost-effective and energy-efficient option considered for the water system upgrade project.
- **GPR Costs**: Storage Reservoir and Transmission Main = $480,000 (power savings)
- **GPR Justification**:
  The project is Business Case GPR-eligible (Energy Efficiency) per Section 3.5-4[2]: *projects that cost effectively eliminate pumps or pumping stations.*



Old Booster Pump Station

[1] Weston City Culinary Water Facilities Plan, September 2016
[2] Attachment 2. 2012 EPA Guidance for Determining Project Eligibility. p.10