

SLFRF (ARPA) Projects

Water Filtration Plant Filters Upgrade

Filtration is one of the steps the Allentown Division Water Filtration plant uses to produce clean, safe drinking water. Filtration removes particulate matter from water by forcing the water to pass through porous media. The filtration system consists of filters with varying sizes of pores and is made up of anthracite (hard coal) and sand.

Notes

- 8 conventional dual bay gravity filters
- Bay filter area = 900 sq ft (each)
- Filter composition = anthracite over sand
- 2008 – last filter rehabilitation with new filter media.
- Filter underdrains are clay tile and ~60 years old. They have exceeded their useful life expectancy
- Obsolete filter components result in difficulty obtaining spare parts.
- Hazen and Sawyer *Filter Asset Condition Assessment*, February 2021

Expense

- Anticipated total budget = ~\$12M
- LCA Suburban Division will contribute ~7/21 about 33%. Result of the Settlement Agreement – amendment to the Water Supply Agreement.
- Rate payer savings on \$7,200,000 - 30-year loan with an “equity funding rate of 5.445%”
 - \$ 492,400 Annually
 - \$14.8M over the life of the 30-year loan
- 200% provision waiver in the Settlement Agreement. This is the project that highlighted issue. “...the City may withhold its Approval of any proposed Capital Cost Recovery Charge that includes for any Reporting Year during the permitted Cost Recovery Period a Capital Cost Recovery Charge that is greater than 200% of the Capital Cost Recovery Charge for any other Reporting Year.” LCA §7.1 (f).

Project Scope – presumed

Rehabilitation of the existing filters, replacement of filter underdrains, media, filter valves, actuation system, and filter control panels, and installation of air scour auxiliary wash. The 2021-2025 Capital Plan only includes one-half of the filters; the remaining would be completed in the subsequent years.

The Office of Compliance has requested LCA move up the project after reading the *Hazen and Sawyer study*. The backup backwash valve is of particular concern to us.

Regulatory - Properly functioning filter underdrains and optimized filter media and backwash routines are critical to maintaining regulatory compliance.