

Addressing Degrading Infrastructure in Peoples Creek, Washington:

A Drinking Water State Revolving Fund (DWSRF) Small System Success

Peoples Creek is a small community-run system roughly 35 miles northeast of Seattle. The system is in a remote area of the Cascade Mountains foothills. The system has a total of 30 residential connections with no commercial opportunity. Most of the people who live in this area commute 30-60 minutes each way for their employment.



The water system was initially constructed in the 1970s as an investor-owned utility. After years of neglect and several water quality violations, the system was placed into receivership and the community took ownership of the system and formed a Homeowner Association (HOA) in 2007.

Peoples Creek (Snohomish County)

Demographics:

Population: 75

Median Household Income: \$89,273

WA MHI: \$77,006

Poverty: 7.1%

Employment Rate: 66.9%

Bachelor's Degree or Higher: 32.8%

Homeowner Rate: 68%

U.S. Census: 2019 American Community

Soon after, Peoples Creek was not only struggling to bring the run-down system up to existing standards but also found their spring source met the new definition of Ground Water Under the Direct Influence of Surface Water and required surface water treatment. A permanent boil water advisory was placed on the system until the issue could be resolved.

Consolidation was evaluated and found to be cost-prohibitive due to the closest utility boundary being roughly two miles away. The system decided to try and drill a well to replace the spring source and resolve the boil water advisory. A DWSRF loan was awarded for this purpose in 2011. There was no community-level data, so the general demographics in the Snohomish County area was used and as a result, no subsidy was awarded, however, this small community could have benefited greatly from subsidy.

Issues Facing the Water System

Several significant deficiencies have been noted in previous sanitary surveys. The chlorination system was inconsistent, the main tank acted as a chlorine contact chamber and had significant structural issues allowing for entry of birds and insects. Water loss was significant due to failing distribution system pipes improperly bedded for the rocky terrain. Revenue collection was problematic as nobody wanted to shut off the water in a small community.

Were there technical, financial, or managerial (TMF) capacity issues at the system?

The system lacked significant financial resources needed to invest in improving infrastructure. Rates were artificially held low to support struggling neighbors and several households were refusing to pay. The system also lacked technical managerial capacity. Due to lack of funds the system has relied on volunteers from the community to act as the certified operator. This impacts the system's ability to respond to technical challenges.



What approach was ultimately selected to solve the problem(s)?

The community decided to drill two wells to replace the spring source and remove the requirement for surface water treatment. The geology in the area is fractured bedrock and the system was unable to successfully find water that met their supply needs. When water was discovered it was heavy in iron and manganese with reduced volumes. A lack of managerial and financial capacity made treating the well unfeasible as Peoples Creek struggled to pay back the existing SRF loan. After several years and a board change, the system decided to try and rebuild their spring source and their strategy was successful. However, Peoples Creek is still struggling to replace their crumbling storage tanks needed to meet the required 4-log chlorine treatment. The distribution pipe continues to break due to the improper installation.

What funding and/or technical assistance was provided?

Because Peoples Creek is a HOA they are not eligible for several forms of funding available to larger utilities. In 2011 Peoples Creek applied for a DWSRF loan worth \$118,000 to drill a new well and discontinue use of their spring. The well was not able to produce the volume needed and was abandoned. A second well was drilled and found to have elevated iron and manganese and produced reduced volume in summer months.

How have things turned out?

Peoples Creek was able to successfully rebuild their springs and test out of the surface water treatment requirement. The permanent boil water advisory was lifted after the completion of the project. The system still has many challenges with crumbling infrastructure and a heavy reliance on community volunteers to meet any technical, financial, or managerial components to run the system. Washington State Department of Health continues to invest heavily in fostering a working relationship with the utility to chart a path forward to meet the needs of the community.

Lessons Learned:

- Systems need a “champion” (or two) to shepherd the community through the process.
- Small Homeowner Association systems are challenging as they rely heavily on community volunteers which need constant assistance with TFM capacity development.