

Source Area
Wells (7) and
Wellpoints (17)

150k Gal Tank
(peak demand)

Current Primary Water System Infrastructure



- 412 connections (415 approved), including
 - 403 active usage connections
 - 9 'ready to serve' connections
- Pumped Annual Volume
 - ~2.8M-3.7M CF
 - ~20.8M-28M Gal
 - ~64-86 Acre-Ft
- Sold Annual Volume
 - ~2.7M-3.5M CF
 - ~20.3M-26.2M Gal
 - ~62-80 Acre-Ft
- Water Rights
 - 245 gpm
 - 152.4 Acre-Ft per yr

North/South Tank Upgrades

- New Roof (N Tank)
- Replumb (in series for chlorine contact time; inflow manifold)

>30 psi for all connections

- Booster pump for upper
- Pressure-reducing valves for lower

Replace Remaining Galvanized Iron Pipe

- Prioritize areas of leaks
- Projects:
 - NW of Peninsula
 - 115th south of 238th

Fire Flows

- 6-inch main for loops with fire hydrants
- 8-inch main for dead ends to fire hydrants
- Projects:
 - Governor's Ln
 - 240th and 105th
 - Vashon Hwy south of Burton
 - Uphill from yacht club

See project descriptions on next page

Notable Cooperative-Funded Projects

*The location of an improvement does not always equal its benefit. Some projects provide system-wide benefits; others are local but are required to meet new regulations.

Notable Cooperative-Funded Projects – to be completed over time

- Chlorination system upgrades and North Tank re-roofing
 - The chlorination system requires an update to meet current WDOH disinfection requirements, which will involve replumbing the two rectangular tanks at the wellfield into series and adding baffles to increase chlorine contact time. At the same time, one of those tanks needs a roof replacement. This is a high-priority project for the operator.
 - This project is a regulatory requirement and will also reduce operational risk. It is scheduled for 2025.
- >30 psi solution for all customers – booster pump and pressure-reducing valve(s)
 - The upper part of the system (the connections on 107th Ave and west) currently requires booster pumps to provide adequate pressure because this area is close in elevation to the source tanks (i.e., not enough hydraulic head). The 107th Ave connections have one centralized booster pump. Other connections have individual booster pumps, which is out of compliance with WDOH regulations. This project will add a booster pump at the source area (i.e., the head of the system) to provide minimum required pressure to the upper part of the system. That will require pressure-reducing valves on the pipe going down the hill so the lower part of the system is not over-pressurized.
 - This project is a regulatory requirement and will also reduce operational risk. It is scheduled for 2025.
- 8-inch line out of 150k gal tank at wellfield
 - The large storage reservoir located at the source area on 232nd is not currently plumbed directly into the distribution system. This project will make that direct connection by replacing the current 1.25-inch PVC pipe with 8-inch PVC and connecting it directly to the start of the distribution system. This will add storage volume that is directly available for regular service and fire flows.
 - This project is both an operational risk reduction and fire flow improvement project for the entire system. It is scheduled for 2025-2030.
- Replace remaining galvanized iron pipe
 - Galvanized iron experiences reduced flow capacity and also begins to leak frequently with age. These sections of old galvanized pipe are beyond their expected useful life and are a risk for ongoing maintenance. This project will replace this old pipe with 6- or 8-inch PVC, improving flow conditions.
 - These projects are both an operational risk reduction and fire flow improvement projects. They are scheduled for 2025 (NW corner of the peninsula, which is currently experiencing frequent leaks) to 2040 (south end of 115th Ave).
- Upgrade small diameter PVC for fire flow improvements
 - Additional portions of the distribution system include multiple small diameter (1.5- to 2-inch) PVC segments, which are undersized for adequate fire flow. These projects will replace those small diameter segments with 6-inch PVC (where loops with fire hydrants are required) or 8-inch PVC (for dead-end runs to fire hydrants), creating better fire flow capacity. These projects are primarily fire flow improvement projects. Specific areas include:
 - 240th and 105th: planned for around 2040
 - Governor's Lane: planned for around 2030
 - Vashon Highway south of Burton: planned for around 2035
 - Short segment uphill from yacht club: planned for around 2040
- Other future projects (e.g., new/replacement wells)
 - There are numerous other projects that will be required over time, as system components age and need to be replaced or upgraded. Examples include new wells to replace the old shallow wellpoints at the source, a replacement storage tank for the 100k-gallon tank on 238th, and new source plumbing and controls.
- Install additional fire hydrants on all improved fire flow lines to meet King County fire code standards