



2020-2021 CAPITAL IMPROVEMENT PROGRAM BUDGET

The Alderwood Water and Wastewater District (AWWD) maintains separate budgets for Water and Sewer capital projects. The budgets below were adopted by the Board of Commissioners in December 2019.

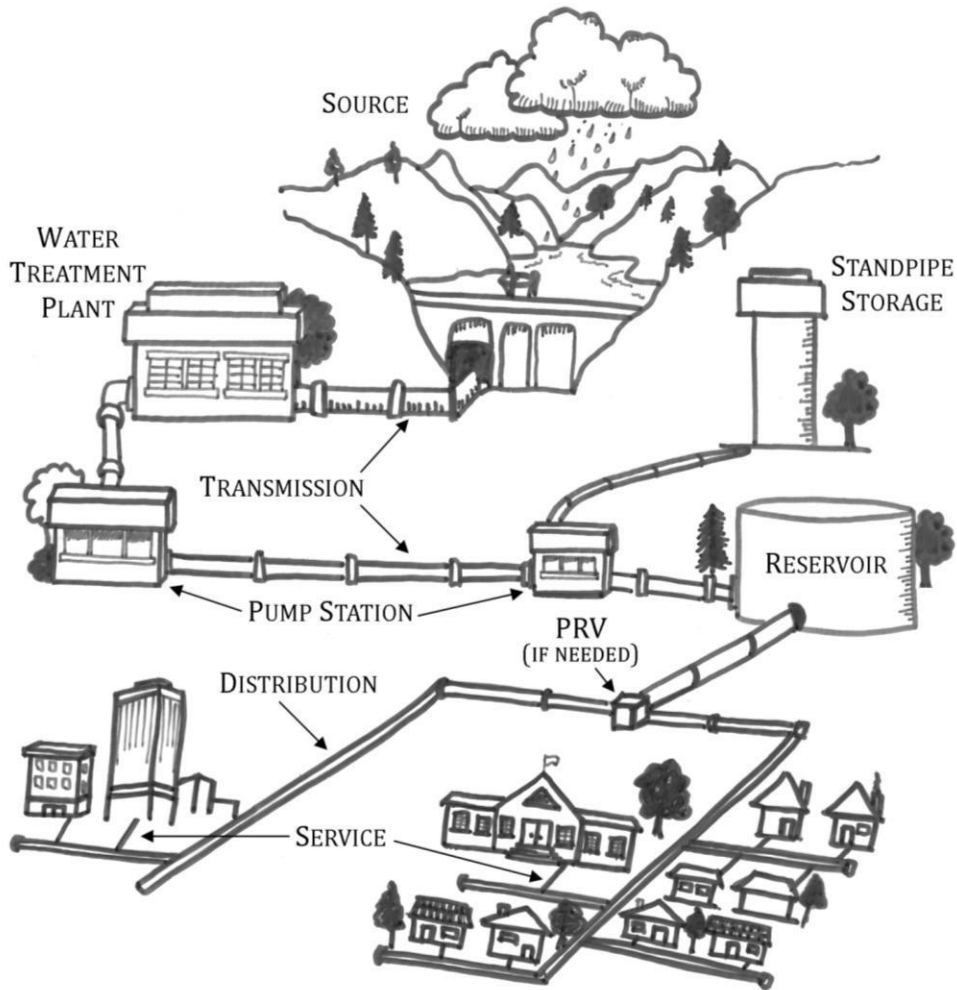


Questions about what any of these categories include? Explanations for each can be found on the following pages.

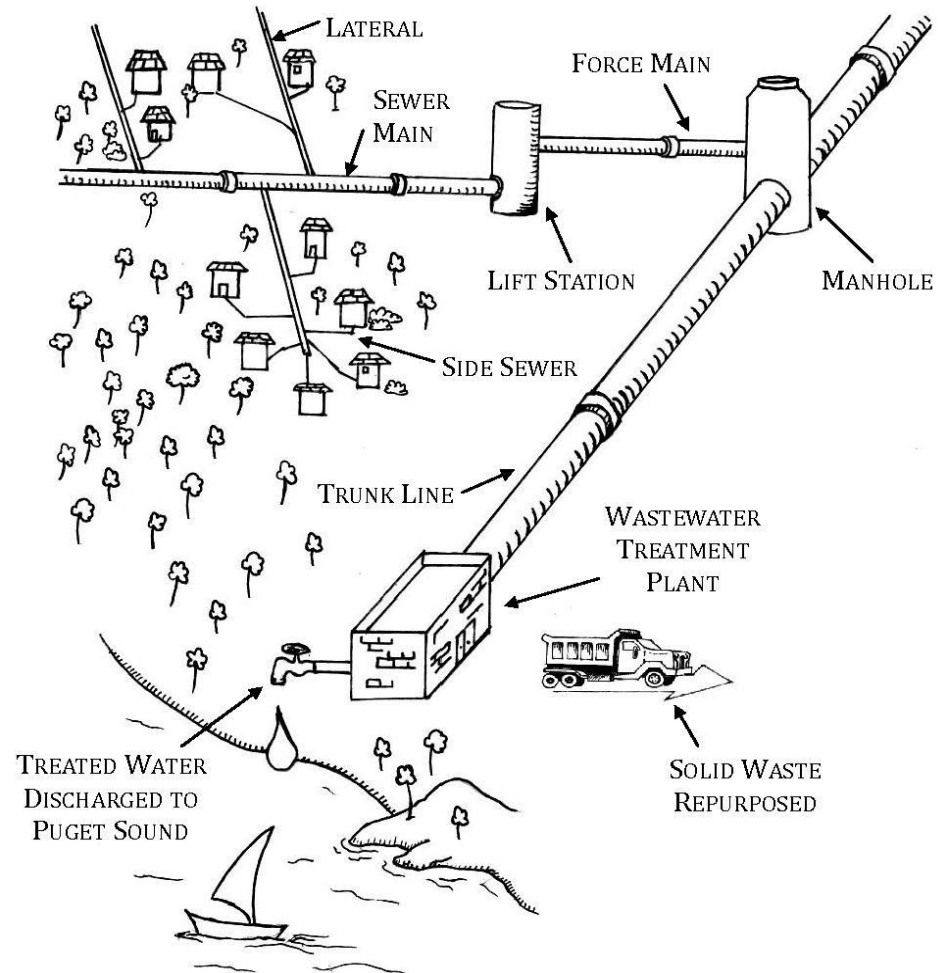
Water Capital Budget Category	2020 Budget	2021 Budget
Service & Meters	\$15,000	\$510,000
Distribution	\$2,217,000	\$1,528,400
Transmission	\$6,318,100	\$6,956,700
Pump Stations	\$745,000	\$2,320,000
ACV & PRVs	\$4,510,500	\$2,086,000
Storage	\$952,500	\$999,000
Supply	\$147,000	\$500,000
Capital Support	\$1,813,350	\$1,851,300
Franchise & Outside Agency	\$3,404,300	\$712,500
Buildings and Land	\$5,000,000	\$5,000,000
CIP Adjustment for Delivery	-\$4,940,000	-\$4,400,000
Water Total	\$20,182,750	\$18,063,900

Sewer Capital Budget Category	2020 Budget	2021 Budget
Laterals	-	-
Mains	\$2,821,300	\$3,034,300
Trunks	\$702,000	\$4,229,800
Lift Stations & Force Mains	\$206,300	\$2,107,000
Wastewater Treatment	\$3,524,800	\$2,352,900
Capital Support	\$2,249,050	\$1,687,900
Franchise & Outside Agency	\$822,000	\$1,513,000
CIP Adjustment for Delivery	-\$2,500,000	-\$3,725,000
Sewer Total	\$7,825,450	\$11,199,900

TYPICAL WATER SYSTEM COMPONENTS



TYPICAL WASTEWATER SYSTEM COMPONENTS



WATER BUDGET CATEGORIES



SERVICES & METERS

Service lines are small (typically 3/4" to 2") pipes which connect individual customers to larger distribution mains; they are essentially a freeway "off ramp" for the water system. Meters measure the volume of water delivered to each customer to help ensure accurate billing. AWWD maintains approximately 50,600 retail water meters and service lines.



DISTRIBUTION

Distribution lines (mains) transport water throughout the system and range from 4" to 12" in size at AWWD. They transport water to customers for use and also provide water for fire protection via sprinkler systems and fire hydrants.



TRANSMISSION

Transmission mains are the largest pipes within a water system. They transport water from treatment facilities and pump stations to storage facilities, wholesale customers, and smaller distribution mains. Transmission mains range from 12" to 36" in size at AWWD, though they can be much larger in other water systems. Transmission mains do not typically have any service connections to retail customers, which differentiates them from distribution lines.



PUMP STATIONS

Pump stations (sometimes called "booster pump stations") mechanically pump water from one location or pressure zone in a water system to another, generally along a transmission main or at a reservoir. AWWD currently owns and maintains three pump stations. It also operates and maintains the Clearview Pump Station on behalf of the Clearview Water Supply Agency.



ACV & PRVs

Automatic Control Valves (ACVs) and Pressure Reducing Valves (PRVs) are installed throughout the distribution system and help to control pressure in the pipes, ensuring appropriate pressure for delivery to customers and fire flow. System PRVs are housed in PRV stations along the water mains, and private PRVs are used by households or businesses to reduce pressure to the level for which the plumbing system was designed. AWWD currently has three ACV stations and six PRV stations within its system.



STORAGE

Water storage facilities (or reservoirs) are holding tanks for water throughout the system. Proper management of storage facilities ensures that there is sufficient water to meet daily customer needs, fire flow requirements, and include reserves to support continued water supply in the event of an emergency. AWWD maintains and operates eight reservoirs and participates in the operation and shared use of the Clearview Reservoir.



SUPPLY

AWWD has a long-term water supply contract with the City of Everett. This contract provides treatment and supply for all of AWWD's water. In addition, AWWD has four additional sodium hypochlorite systems that provide additional disinfection for water throughout the District to ensure that the water stays safe for consumption.



CAPITAL SUPPORT

Capital support items are AWWD assets that are not directly a part of the water system, but that are critical to the proper function and maintenance of the utility and its assets. These include major equipment and vehicles, communication and data management systems, and other related items.



FRANCHISE & OUTSIDE AGENCY

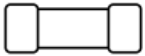
AWWD partners with multiple other neighboring agencies on capital projects. These agencies influence the projects that AWWD addresses as part of its capital program. For example, a City or County road-widening project may necessitate the relocation of an AWWD water line, sewer line, or meters.

SEWER BUDGET CATEGORIES



LATERALS

Laterals are pipes that connect privately owned side sewer lines (e.g., from houses, schools, and businesses) to the sewer mains that collect and convey wastewater to treatment facilities.



MAINS

Main lines are the second largest pipes within a wastewater system. They are used to convey wastewater from the collection facilities (side sewers and laterals) to lift stations and trunk lines.



TRUNKS

Trunk lines are the largest pipes in a system and have very few connections in them in order to limit inflow and infiltration (commonly referred to as I&I). Trunks are used to convey wastewater from the collection mains to wastewater treatment facilities.



LIFT STATIONS & FORCE MAINS

Sewer lift stations are used for pumping wastewater from lower elevations to higher elevations in the system as it is conveyed from customers to wastewater treatment facilities. Sewer lines normally flow by gravity, but in locations where the pipe would be too deep to access safely or is below the intended delivery point, a lift station is used to raise the wastewater.

Each of AWWD's lift stations is associated with a force main, which is a pressure pipe conveying wastewater out of the lift station and towards the treatment facilities. AWWD currently operates and maintains twelve sewer lift stations and twelve force mains.



WASTEWATER TREATMENT

Wastewater treatment covers the components of the system that process wastewater into clean, treated water so that it can be safely discharged back into the ecosystem. Treatment plants remove human waste, solids, harmful organisms, heavy metals, and other chemical waste from incoming wastewater. AWWD operates and maintains its Picnic Point Wastewater Treatment Facility, and also has wastewater treatment contracts with King County Wastewater Treatment Division and the City of Everett.



CAPITAL SUPPORT

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