

Central Service Area Capital Program – Project Summaries

General Facilities Projects (Trunks, Pump Stations, Force Mains)

General Sewer Plan Update

Cost: \$279,300

Scope: The District's current General Sewer Plan (GSP) was adopted in 2001 and amended in 2006 and 2013. The plan is largely out of date in regard to accurate flow assumptions, cost estimating and timing of projects. This update will review the basin boundaries, basin service solutions, utilize flow monitoring data to develop a calibrated hydraulic model of the primary trunk lines and provide realistic planning assumptions for flow. The GSP update is necessary to maximize District investment in extending service. The update will also address the Ridgefield service area and the long-term plan for the Meadow Glade/Hockinson STEP system.

Basis: Planning

Glenwood Pump Station Upgrade

Cost: \$212,000

Scope: The Glenwood Pump Station is one of the District's largest and a critical link in its collection system. This project upgrades the existing pump station from a firm capacity of 3.4 million gallons per day (MGD) to 6.7MGD to accommodate expected growth in the Brush Prairie area. The project also includes upgrades to the electrical and heating/ventilation and cooling (HVAC) systems, modifications to the chemical feed system and odor control, and modifications to the roof.

Basis: Capacity

Pleasant Valley North Pump Station

Cost: \$2,500,000

Scope: This project extends service to the NE 50th Avenue corridor north of Salmon Creek Avenue in association with development at the WSU Vancouver campus and a new Vancouver Public Schools STEM School. The project includes a new pump station and force main.

Basis: Extending Service

Union Road Force Main Upgrade

Cost: \$283,000

Scope: Install 1,600 feet of 12-inch diameter force main in NE Union Road from the Union Road Pump Station to the discharge structure located near the intersection of NE 20th Avenue and NE 154th Street to increase capacity.

Basis: Capacity

Vista Terrace Reconstruction**Cost: \$110,000**

Scope: Replace 4,800 square feet of concrete panels and seal 300 feet of cracks that were damaged during a previous construction project.

Basis: Capacity

NE 20th Avenue Trunk Upgrade**Cost: \$2,400,000**

Scope: Planning documents for the Discovery Corridor Wastewater Transmission System (DCWTS) show that the NE 20th Avenue Trunk sewer between NE 155th Street and NE 139th Street will need to be upgraded to 24 and 30-inch pipe to accommodate additional flow from Ridgefield and growth in the Central service area.

Basis: Capacity

NE 10th Avenue Pump Station (NE 17th Ave Trunk to NE 10th Ave)**Cost: \$1,712,000**

Scope: Construct a new, duplex submersible pump station adjacent to NE 10th Avenue and north of Whipple Creek. Construct 2,300 feet of 6-inch force main beginning east of the intersection of NE 154th Street and NE 10th Avenue, where the NE 10th Avenue Bridge County Road Project (CRP) ends, and continue the force main installation east and then south along NE 15th Avenue crossing I-5 at NE 150th Street and connecting to an existing manhole on the east side of I-5 to extend service.

Basis: Capacity

NE 10th Avenue Bridge CRP (NE 154th St to NE 164th St)**Cost: \$1,420,000**

Scope: Install 1,600 feet of 6-inch force main across the proposed NE 10th Avenue bridge as part of a County road project. Also install 4,400 feet of 8-inch gravity and wetwell for the NE 10th Avenue Pump Station.

Basis: Capacity

NE 119th Street CRP (NE 87th Ave to NE 112th Ave)**Cost: \$340,000**

Scope: This project extends service in conjunction with a County Road Project along NE 119th Street from the Bowyer Pump Station west to NE 107th Avenue. The project consists of extending 1,300 linear feet of gravity sewer main and local lateral connections as needed to serve adjacent parcels. This project allows for the eventual abandonment of the Boyer Pump Station.

Basis: Extending Service

NE 119th Street CRP (NE 50th Ave to NE 72nd Ave)

Cost: \$800,000

Scope: This project extends service in conjunction with a County Road Project along NE 119th Street generally between NE 50th Avenue and NE 72nd Avenue. The project consists of 900 feet of 10-inch gravity trunk, 1,300 feet of 8-inch gravity main, 1,900 feet of 8-inch force main and extending side sewers as needed to serve adjacent parcels.

Basis: Extending Service

NE 99th Street CRP (NE 94th Ave – SR 503)

Cost: \$3,000,000

Scope: This project extends service in conjunction with a County Road Project along NE 99th Street from NE 94th Avenue to SR 503 (NE 117th Avenue). The project consists of 2,800 feet of gravity line and extending side sewers and local collection mains as needed to serve adjacent parcels. The project allows for the abandonment of Country Meadows Pump Station.

Basis: Extending Service

NE 179th Street CRP (NE Delfel Rd – NE 15th Ave)

Cost: \$1,150,000

Scope: This project extends service in conjunction with a County Road Project along NE 179th Street from the Fairgrounds Pump Station through the NE 179th Street Interchange with I-5. The project consists of 900 feet of gravity trunk and allows for the abandonment of the Fairgrounds Pump Station.

Basis: Extending Service

District Installed Infrastructure (DII)

Curtin Creek Pump Station-Phase 2

Cost: \$1,000,000

Scope: This project extends service north of NE 119th Street from the new Curtin Creek Pump Station west to NE 72nd Avenue. The project consists of 2,000 feet of 8-inch gravity main to serve the Fire Station and adjacent parcels along NE 72nd Avenue.

Basis: Extending Service

Septic Elimination Program (SEP)

Septic Project Allowance

Cost: \$1,050,000

Scope: The District invests approximately \$250,000 in the Septic Elimination Program on an annual basis. New projects will be identified for future years.

Basis: Septic Elimination

Developer Reimbursement

Developer Reimbursement Project Allowance

Cost: \$2,425,000

Scope: This allowance provides for future developer reimbursements to construct pump stations, force mains and trunk sewers in the Central service area in accordance with the General Sewer Plan.

Basis: Extending Service

District Installed Laterals Allowance

Cost: \$120,000

Scope: This allowance provides for side sewers to be constructed in the Central service area in conjunction with private development projects.

Basis: Extending Service

Columbia Resource Company Force Main

Cost: \$40,000

Scope: This project constructs about 100 feet of 4-inch force main from the Columbia Resource transfer station to a new development between NE 112th Drive and NE 117th Avenue.

Basis: Operational Optimization

Whipple Creek Trunk (Killian Commercial)

Cost: \$300,000

Scope: This project constructs about 1,500 feet of 18-inch gravity trunk on NE 179th Street from east of NE 15th Avenue to NE Union Road just east of the I-5 junction. The project is scheduled to be constructed in conjunction with commercial development east of the NE 179th Street / Interstate 5 interchange.

Basis: Extending Service

St. Johns Wood Pump Station

Cost: \$250,000

Scope: This project constructs a new pump station and 900 feet of force main to serve this residential area. The station is located near NE 88th Street and NE 51st Avenue.

Basis: Extending Service

Curtin Creek Pump Station-Phase 1

Cost: \$750,000

Scope: This project constructs a new pump station east of the Fire Station on NE 72nd Avenue and north of NE 119th Street.

Basis: Extending Service

Fleet & Facilities – New Capital Purchases

Campus Site Improvements

Cost: \$325,000

Scope: This project provides for District Office site improvements, including an expansion of staff and fleet asphalt parking.

Basis: Operational Optimization

Restoration and Replacement - Gravity

Spot Repair Program

Cost: \$625,000

Scope: This program allowance provides for minor repair and replacement projects, typically under \$35,000. The program includes District lateral repairs.

Basis: Condition

Infiltration and Inflow (I & I) Program

Cost: \$150,000

Scope: This program allowance provides for minor repair and replacement projects, typically under \$35,000. Geared towards removing sources of infiltration and inflow.

Basis: I & I Abatement

Main Repair Program

Cost: \$540,000

Scope: Projects identified via closed circuit television (CCTV) inspection and maintenance monitoring and cleaning records. Projects include open-cut lateral and mainline repair.

Basis: Condition

Main Lining Program

Cost: \$480,000

Scope: Projects identified via CCTV inspection and maintenance monitoring and cleaning records. Projects include cured in place pipe (CIPP) installation for mainlines.

Basis: Condition

Lateral Lining Program

Cost: \$600,000

Scope: Projects identified via CCTV inspection and maintenance monitoring and cleaning records. Projects include lining defective laterals either using the T-liner product or traditional CIPP and installation of mechanical spot repairs for mainline defects.

Basis: Condition

Access Manhole Program

Cost: \$300,000

Scope: Projects identified during attempts to retrieve CCTV inspection and attempts to conduct maintenance monitoring activities. Projects include new manhole installation.

Basis: Condition

Trunk Sewer Stabilization

Cost: \$150,000

Scope: Rebuild 500 feet of stream bank. Project areas include Tenny Creek, Cougar Canyon, Sylvan Terrace, Pruitt Park Canyon and Heron Ridge (Ridgefield).

Basis: Condition

NE 78th Street Trunk (NE 13th Ave to NE 20th Ave)

Cost: \$1,860,000

Scope: The existing 8-inch main is currently flowing near capacity and is on a quarterly cleaning cycle due to historic backups resulting in damage to neighboring property. The project replaces 1,550 feet of 12-inch gravity trunk and 997 feet of 8-inch gravity main from NE 13th Avenue to Heritage Farm.

Basis: Condition

NE 107th Avenue Sidewalks CRP

Cost: \$19,000

Scope: This project extends laterals and cleanouts behind the new sidewalk on NE 107th Avenue from NE Covington Road to NE 67th Street in association with a County Road Project.

Basis: Condition

NE 99th Street/SR 503 Intersection CRP

Cost: \$135,000

Scope: This project replaces 480 feet of 8-inch gravity main with 10-inch gravity trunk in conjunction with a County Road Project at the intersection of NE 99th Street and SR 503 (NE 117th Avenue).

Basis: Condition

Restoration and Replacement – Pump Stations & Force Mains

Pump Station Repair Program

Cost: \$600,000

Scope: This program allowance provides for annual pump, mechanical and electrical repairs and replacements over \$5,000.

Basis: Condition

Shadow Wood MOV Vault Improvements

Cost: \$125,000

Scope: This project extends service life of existing vaults by upsizing access ports from 3-inch to 8-inch on the 12-inch sewers and upsize the access ports from 3-inch to 6-inch on the 6-inch sewers.

Basis: Condition

Mill Creek Flood Protection**Cost: \$60,000**

Scope: Repair flood wall to prevent Mill Creek floodwaters from entering the pump station and modify the site to ensure the transformer is above the flood elevation. The 2015 December storm resulted in approximately 8-inches of standing water around the transformer and sand bags were placed within the flood wall to keep flood waters out of the pump station.

Basis: Condition**NB/SB Rest Area Pump Stations Tank Decommission****Cost: \$50,000**

Scope: Abandon four 20,000 gallon existing fiberglass septic tanks in the north and south bound rest areas when they are no longer needed due to the Discovery Corridor Wastewater Transmission System running continuously. Abandonment will include pumping out the existing tanks, removing the access hatches, filling the tanks with sand, and landscaping the area above the tanks.

Basis: Condition**Cathodic Protection Replacement****Cost: \$60,000**

Scope: This project will protect existing pump stations with steel-can drywells from corrosion protection. Pump stations with steel-can drywells include Knoll Ridge West, Pleasant Valley, Minnehaha and Green Meadows.

Basis: Condition**Oro-Vega Pump Station Replacement****Cost: \$426,500**

Scope: This project replaces the existing 1991 Dry Pit "Can" Station with a duplex submersible pump station.

Basis: Condition**Stag Leap Pump Station Removal****Cost: \$135,000**

Scope: This project constructs 570 feet of 8-inch gravity sewer from NE 107th Street to NE 43rd Place in order to abandon the existing pump station. Easements are required.

Basis: Condition**Klinline Pump Station Replacement****Cost: \$210,000**

Scope: This project replaces the existing 1973 2 HP self-priming pump station and force main at the intersection of NE 117th Street and NE Klinline Road.

Basis: Condition

Knoll Ridge South Pump Station Replacement

Cost: \$210,000

Scope: This project replaces the existing 1976 3 HP submersible pump station at NE 125th Circle and NE 6th Court.

Basis: Condition

Plantation Pump Station Replacement

Cost: \$210,000

Scope: This project replaces the existing 1975 1.5 HP pump station and force main at 12003 NE Plantation Road.

Basis: Condition

Buckman Gardens Pump Station Removal

Cost: \$362,000

Scope: This project constructs 1,300 feet of 8-inch gravity sewer from NE 97th Street to NE 94th Street in order to abandon the existing pump station. Easements are required.

Basis: Condition

Sierra Vista/Hunter's Glen Pump Station Removals

Cost: \$552,000

Scope: This project constructs 1,000 feet of 8-inch gravity sewer from the intersection of NE Meadows Drive and NE 66th Street east under I-205 and then north in order to abandon the existing pump stations. Easements are required.

Basis: Condition

	Restoration and Replacement – Fleet and Facilities
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Campus Restoration and Replacement Program

Cost: \$265,000

Scope: This program allowance provides for restoration and replacement of critical components of the existing District office campus, including as-needed replacement of aging HVAC units and VCT tiles, and painting of open office area.

Basis: Operational Optimization

Office Hub Room Fire Suppression

Cost: \$60,000

Scope: This project provides a clean agent fire protection system and power interlock to shut down power to the equipment within the server room.

Basis: Operational Optimization

Office Security System Replacement**Cost: \$110,000**

Scope: This project will replace and enhance the existing security system for the office and shop areas. Current system hardware is no longer supported or parts are not available for replacement.

Basis: Operational Optimization

Office Workstation Replacement**Cost: \$125,000**

Scope: This project will replace the cubical workstations in the main level of the District office to make more effective use of the space.

Basis: Operational Optimization

Maintenance Bay Crew Quarters Expansion**Cost: \$900,000**

Scope: This project expands the locker room and crew quarters to accommodate existing and future staff.

Basis: Operational Optimization

Operations Vehicle Replacements**Cost: \$893,000**

Scope: Replace operations vehicles that have exceeded the District mileage or year policy. These include two (2) lead service trucks, the Meadow Glade van, the electrician's van, the on-call van, the locate truck, the TV truck, the generator fueling truck, a pump station maintenance truck, the dump truck, a new track hoe and a new fork lift.

Basis: Condition

Engineering Vehicle Replacements**Cost: \$160,000**

Scope: Replace engineering vehicles that have exceeded the District mileage or year policy. These include three (3) inspector vehicles and the industrial pretreatment van.

Basis: Condition

Closed Circuit TV (CCTV) Cable Replacement**Cost: \$14,000**

Scope: The CCTV cable requires replacement about every four years (or about every 1.0 million feet of inspection performed).

Basis: Condition

Buried Pipe Locating Instrument**Cost: \$60,000**

Scope: This allowance is to obtain equipment/technology to locate lines not locatable by visual/as-built/tracer wire or other standard locate practices.

Basis: Operational Optimization

Easement Machine**Cost: \$50,000**

Scope: Invest in an easement machine to optimize staff time when cleaning gravity lines with restricted access. This equipment will optimize the use of District staff when sewer lines are in backyards. This work currently requires four (4) staff members to perform and can be done by two (2) staff members with an easement machine.

Basis: Condition**Portable Flow Meters****Cost: \$13,000**

Scope: Purchase meter capable of handling a wide range of pipe sizes and accurate when measurements are being performed on short pipe runs.

Basis: Condition**Telemetry System Upgrade****Cost: \$60,000**

Scope: Build out the District's third node to support the addition of new pump stations to maintain a maximum polling rate of 30 seconds. The investment includes the hardware and technical support as needed due to workload constraints on District staff.

Basis: Operational Optimization**Office Telephone and Voicemail Systems Replacement****Cost: \$100,000**

Scope: Replace telephone and voicemail hardware and software with modern technology. Vendor to provide training for staff.

Basis: Operational Optimization**Office Business Machine Replacements****Cost: \$25,000**

Scope: Replace office printers, copiers, plotters and other office machines over \$5,000.

Basis: Operational Optimization**Office Network System Replacement****Cost: \$15,000**

Scope: Replace or upgrade system servers, including phone servers and related infrastructure.

Basis: Operational Optimization

