

Our Future Water Supply

Tualatin Valley Water District (TVWD), the cities of Hillsboro and Beaverton, collectively referred to as the Partners, have identified the Willamette Water Supply System as the best option for future delivery of drinking water to their service areas in Washington County. Development of the Willamette Water Supply System is being led by the Partners. Other water providers in the region are also looking at their options for future participation. The mid-Willamette River at Wilsonville will be the new water supply source for the Willamette Water Supply System. Although current demands are met through other sources, the addition of a new source will provide improved water supply reliability and system resiliency. Developing an additional water supply through a partnership prepares the region's plans for responsible growth within the urban growth boundary.

Willamette Water Supply *Monthly Progress Report*

Our Reliable Water Month End November 2019

Wilsonville Area Pipeline Project

The Wilsonville Area Pipeline Project (PLM_1.0) is a 3.3-mile section of pipeline that will be built in three phases from the Willamette River Water Treatment Plant (WRWTP) to the intersection of SW Garden Acres Road and Day Road.

Phase I (PLM_1.1) includes 0.26 miles of 66-inch diameter pipeline that will begin at the east bank of Arrowhead Creek near the entry to the WRWTP to just south of Wilsonville Road. Construction is scheduled to begin in December near the entry to the WRWTP. The general contractor, James W. Fowler Co., will prepare for construction by monitoring the manufacture of pipe, installing erosion control measures, and conducting safety training through 2019. Construction is anticipated to be complete by the fall of 2020.

Phase 2 (PLM_1.2) includes 0.58 miles of 66-inch diameter pipeline that extends from Ridder Road to Day Road. This opportunity

project is being managed by the City of Wilsonville in partnership with the Willamette Water Supply Program (WWSP) for construction of the City's Garden Acres Road expansion and PLM_1.2. Construction to expand the roadway is currently underway; installation of WWSP pipe will begin mid-2020. Construction is anticipated to be complete by early 2021.

Phase 3 (PLM_1.3) includes 2.46 miles of 66-inch diameter pipeline that extends from Wilsonville Road to Garden Acres Road and is scheduled to begin construction in late 2020.



Wilsonville Area Pipeline Project Phase 2 construction

Distributed Controls System Project

The Distributed Controls System (DCS_1.0) Project includes the planning, design, and programming of Willamette Water Supply System (WWSS) supervisory control and data acquisition (SCADA) system components that will be based at several WWSS facilities including: the Raw Water Facilities (RWF_1.0) located at the WRWTP in Wilsonville; the new water treatment plant (WTP_1.0) located near the City of Sherwood; the new storage reservoirs (RES_1.0) located on Cooper Mountain; and several other control facilities located along the pipelines.

SCADA is a hardware and software system that controls mechanical processes at remote locations; monitors, gathers, and

processes real-time data; interacts with sensors, valves, pumps, motors, and more through human-machine interface (HMI) software; and records events into reports.

S&B, Inc., the DCS_1.0 consultant, has spent the last year developing content for the SCADA system such as instrumentation and control (I&C) design criteria and standards that meet the vision and goals set by the Partners. S&B also produced a WWSS SCADA and I&C Manual that includes standards for WWSP design consultants to follow when preparing piping and instrumentation diagrams (P&ID) and instrumentation drawings. The Manual also specifies acceptable instrument types, manufacturers, hardware, software, and networking requirements.

Procurement & Business Opportunities

The WWSP staff are preparing for several upcoming professional services and construction contractor procurements. Listed below are active procurements and upcoming events and procurements. Procurement opportunities are also published at <http://www.ourreliablewater.org/business-opportunities>.

Active Procurements

- N/A

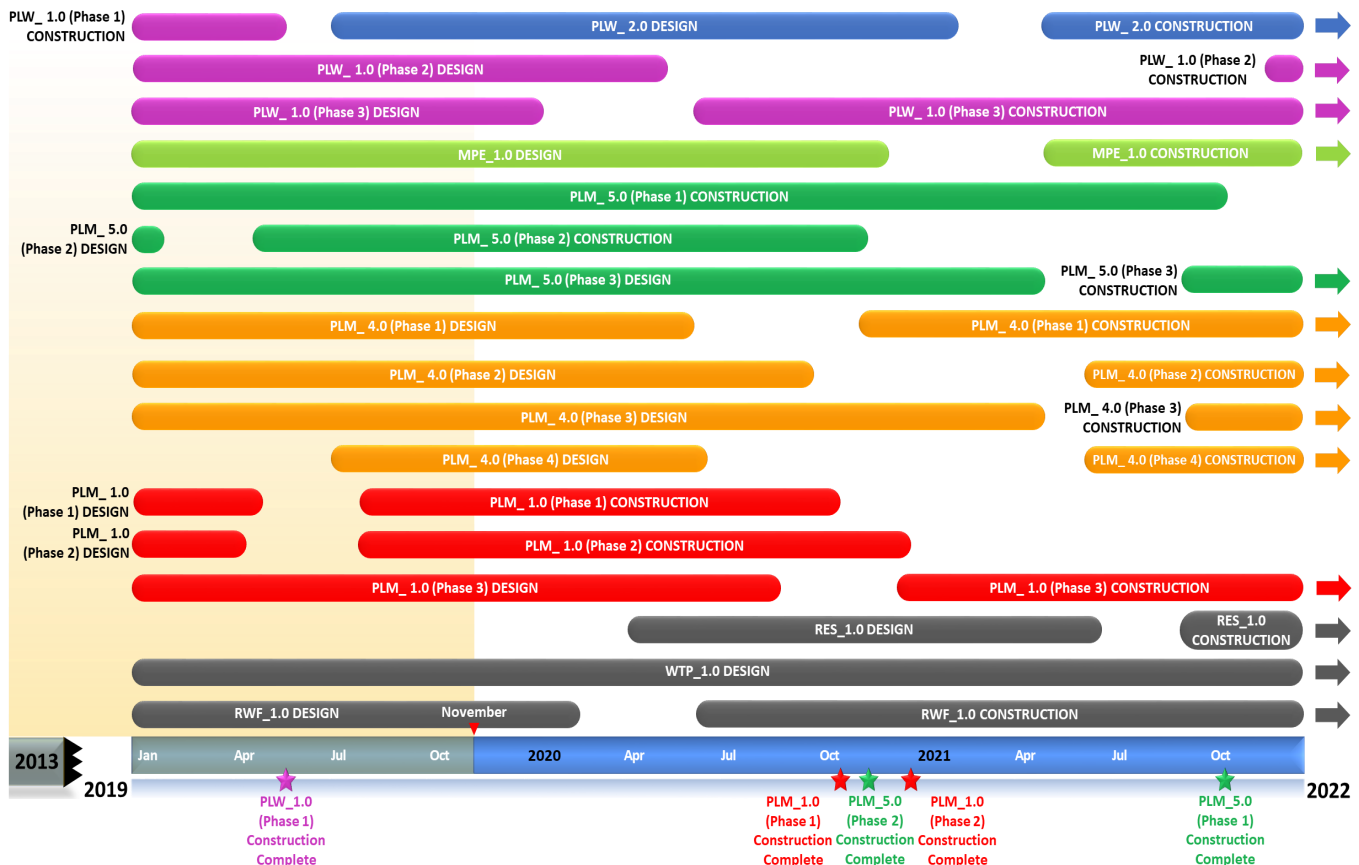
Upcoming Procurements

- Raw Water Facilities (RWF_1.0) Guaranteed Maximum Price (GMP) (Quarter 1, 2020)
- South Hillsboro Area Pipeline (PLW_1.3) Construction Request for Proposal (RFP) (Quarter 1, 2020)*

*Procurement method contingent upon public comment and WWSS

Schedule Summary

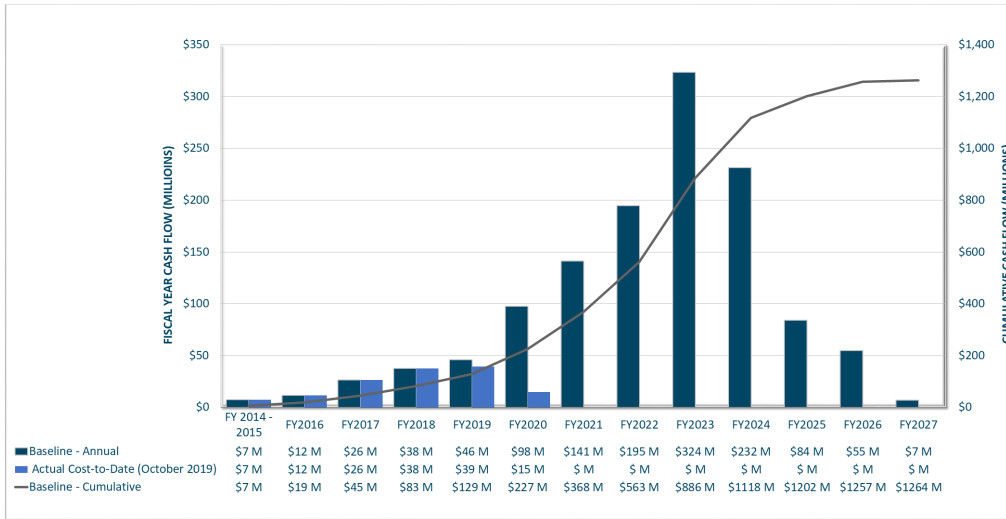
WWSP design and planning began in 2013; the Willamette Water Supply System is expected to be in service by July 2026. Below are the major milestones and activities forecasted from 2019 to 2022*. The WWSP team is committed to on-time delivery. See page 4 for descriptions of the projects referenced below.



*The actual order and duration of projects continues to be refined and is subject to change.

Forecast Cost Summary

The graph below illustrates the projected WWSP cash flow by fiscal year (FY July 1 to June 30)*. The cumulative cash flow establishes the budgeted \$1.3 billion, which accounts for actual and current projected costs, including projected escalation in the cost of labor, materials, and equipment required to build WWSP projects.



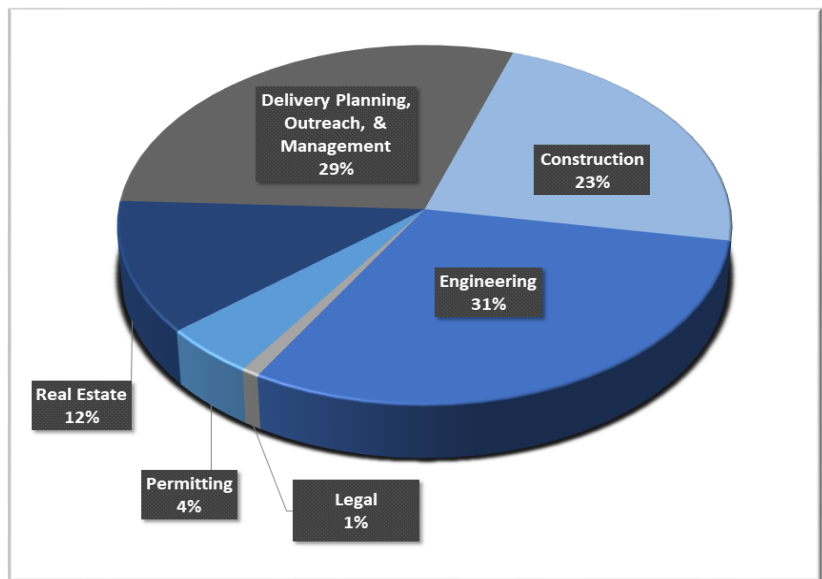
Costs to date for FY 2020 are \$15 million. Cumulative costs are projected to be \$220 million through the end of FY 2020.

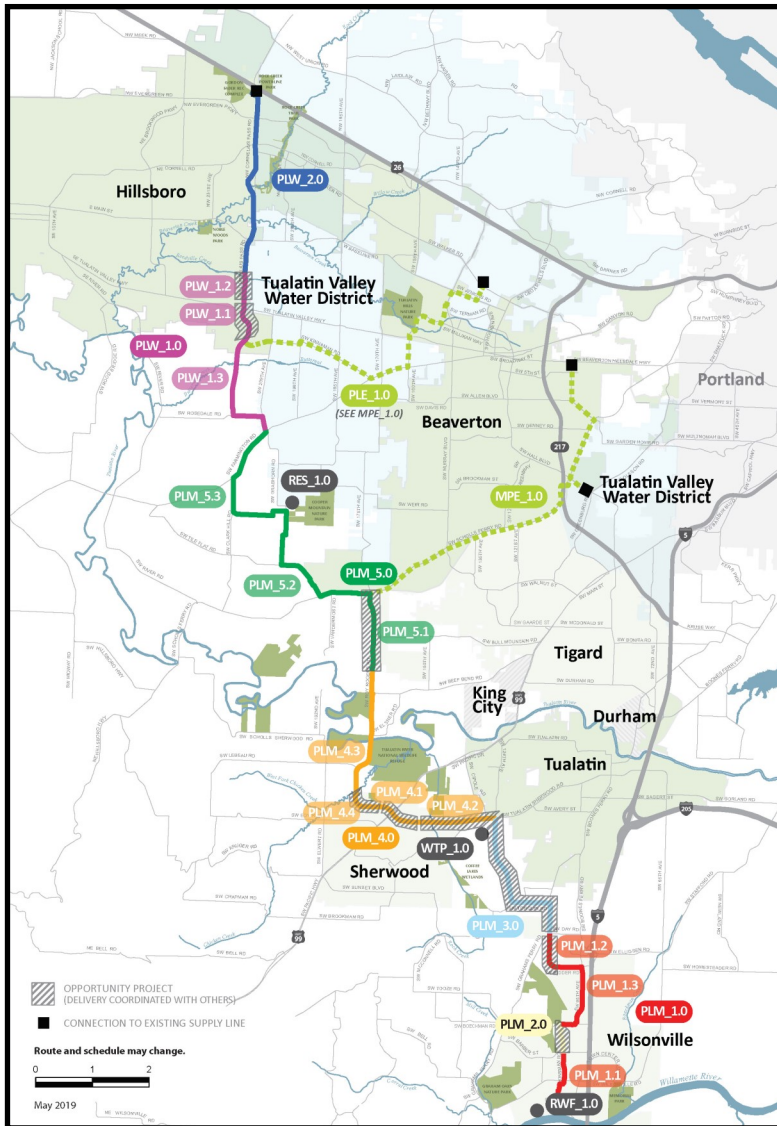
**Data continues to be refined and is subject to change.*

Cumulative Cost Summary

WWSP cumulative costs are tracked and updated monthly. The chart below summarizes the distribution of cumulative costs through October 2019.

Cumulative Water Supply Program costs to date are approximately \$137 million, with the majority spent on planning, engineering, construction, and real estate activities.





WTP_1.0 Willamette Water Supply System Water Treatment Plant (Water Treatment Plant (WTP))

Description: 60-million gallon per day water treatment plant (WTP_1.0), including a finished water pump station (FPS_1.0) and a control system (DCS_1.0) located near Sherwood.

Status: Design Phase (WTP/FPS Construction Start: 03/2022)
Design Phase (DCS Construction Start: 03/2022)

RWF_1.0 Raw Water Facilities Expansion (Raw Water Facilities (RWF) Expansion)

Description: Expansion of the existing raw water pump station and intake at the Willamette River WTP (WRWTP) in Wilsonville to 60 million gallons per day of initial capacity for the Willamette Water Supply System.

Status: Design Phase (Construction Start: 06/2020)

For more information about the WWSP, visit www.ourreliablewater.org or call 503.941.4570.

PLW_2.0 Cornelius Pass Pipeline Project (Frances Road to Highway 26)

Description: 3.3-mile water pipeline along Cornelius Pass Rd. from Frances St. to Hwy 26; connects to existing supply lines for City of Hillsboro and TVWD.

Status: Design Phase (Construction Start: 06/2021)

PLW_1.0 South Hillsboro Area Pipeline Project (Farmington Road to Frances Street)

Description: 3.9-mile water pipeline from SW Farmington Rd. at SW 209th Ave. to Cornelius Pass Rd. at Frances St.; also east on Kinnaman Rd. between Cornelius Pass Rd. and SW 209th Ave.

Status: Construction Phase (Phase 1: Complete; Phase 3 Construction Start: 05/2020)

MPE_1.0 Metzger Pipeline East Project (Roy Rogers Road to Beaverton Hillsdale Hwy)

Description: 7.3-mile water pipeline to be built in lieu of PLE_1.0 along SW Scholls Ferry Rd. between SW Roy Rogers Rd. and Allen Blvd.; connects to Metzger service area at SW Oleson Rd. and TVWD's system.

Status: Design Phase (Construction Start: 04/2021)

RES_1.0 South Beaverton Area Water Storage Tanks (Storage Tanks)

Description: Two 15-million gallon storage tanks located on Cooper Mountain.

Status: Planning Phase (Design Start: 02/2020)

PLM_5.0 Scholls Area Pipeline Project (North of Beef Bend Road to Farmington Road)

Description: 7.2-mile water pipeline from SW Roy Rogers Rd. 0.5-mile north of SW Beef Bend Rd. to SW Farmington Rd. at SW 209th Ave.

Status: Construction Phase (Phase 1 Complete: 10/2021; Phase 2 Complete: 11/2020; Phase 3 Start: 09/2021)

PLM_4.0 Tualatin-Sherwood Area Pipeline Project (SW 124th Avenue to north of Beef Bend Road)

Description: 5.3-mile water pipeline from 124th Ave. at SW Tualatin Sherwood Rd. along SW Roy Rogers Rd. to 0.5 miles north of SW Beef Bend Rd.

Status: Design Phase (Phase 1 Construction Start: 11/2020)

PLM_3.0 124th Avenue Partnership Project (SW 124th Avenue Extension)

Description: 2.7-mile water pipeline from Grahams Ferry Rd. at Day Rd. to 124th Ave. at SW Tualatin Sherwood Rd.

Status: Complete

PLM_2.0 Kinsman Road Partnership Project (Kinsman Road Extension)

Description: 0.5-mile water pipeline along Kinsman Rd. between Barber St. and Boeckman Rd.

Status: Complete

PLM_1.0 Wilsonville Area Pipeline Project (WRWTP to Day Road)

Description: 3.3-mile water pipeline from WRWTP to the intersection of SW Garden Acres Rd. at Day Rd.

Status: Construction Phase (Phase 1 Complete: 10/2020; Phase 2 Complete: 12/2020; Phase 3 Start: 12/2020)