

## Our Future Water Supply

The Willamette Water Supply System Commission (WWSS Commission) is an Oregon intergovernmental entity formed by Tualatin Valley Water District (TVWD), the City of Hillsboro, and the City of Beaverton. The WWSS Commission was formed to build the Willamette Water Supply System (WWSS) in response to planned growth in their service areas. TVWD has been designated the Managing Agency for the WWSS Commission, and TVWD operates the Willamette Water Supply Program (WWSP) to plan, design, and construct the WWSS. The WWSS will provide an additional resilient water supply for Washington County. When complete, the WWSS will be one of Oregon’s most seismically-resilient water systems—built to better withstand natural disasters, protect public health, and speed regional economic recovery through restoring critical services more quickly. The new system will be completed by 2026.

# Willamette Water Supply

## Our Reliable Water

Monthly Progress Report

Month End August 2020

### National Water Quality Month

To celebrate National Water Quality Month, this issue covers the many ways the Willamette Water Supply Program (WWSP) is preparing for delivery of quality water to households and businesses by 2026. A variety of resources are available on the Mid-Willamette River page on our website at [www.ourreliablewater.org](http://www.ourreliablewater.org).

#### Willamette River Water Quality

The mid-Willamette River near Wilsonville was selected as a water source because it produces consistent, high-volume flows with good water quality. Over the last 30 years, stringent environmental protection laws and significant ongoing restoration activities have greatly improved water quality conditions in the Willamette River. The effects of upstream activities on the river’s water quality in this section of the river are minimal. The intake for the mid-Willamette in Wilsonville is miles upstream from any water quality influences from Portland and Portland Harbor superfund site.

#### WWSS Water Treatment

The new Willamette Water Supply System (WWSS) treatment plant will include enhanced coagulation sedimentation, ozone and ultraviolet (UV) treatment, granulated activated carbon filtration, sand filtration, and chlorine disinfection, which provides treatment specifically for the types of contaminants that might be present from upstream influences.

#### Step-by-Step Water Treatment Process

**Step 1:** Intake: Raw Willamette River water flows through intake screens and is pumped to the start of the process.

**Step 2:** Enhanced coagulation, sedimentation: Raw water is treated with a coagulant and enters the ballasted flocculation process, which effectively removes turbidity and other similar contaminants.

**Step 3:** Ozonation: Serves multiple functions including disinfection (to kill bacteria, viruses, *Giardia*, *Cryptosporidium*); breakdown of organic chemicals; breakdown of taste/odor causing compounds; and enhance removal of organic material by the filters. After bubbling through the water, the ozone quickly decomposes into harmless oxygen gas.

**Step 4:** Granulated activated carbon filtration (GAC): Disinfected water passes through GAC filters that effectively remove particulates and dissolved organic molecules.

**Step 5:** Sand filtration: Removes remaining silt or particles.

**Step 6:** UV disinfection: Destroys illness-causing pathogens.

**Step 7:** Chlorination: Filtered water is treated with chlorine, which protects the water as it travels through the distribution system to customers.

### Protecting Water Quality—Source to Tap

Safe drinking water is our top priority. Your drinking water will be monitored and protected, from source to tap.



#### Source

Our drinking water sources are protected by strict laws and monitored for quality.



#### Filtration and More

Filtration and advanced treatment will remove impurities and disinfect to produce high water quality, and it will be tested daily.



#### Storage and Water Lines

Filtered and treated water will be delivered to our homes and businesses through a series of storage tanks and water lines, where it is tested again.



#### Tap

From source to tap, your water will be protected, filtered, and monitored.

## 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

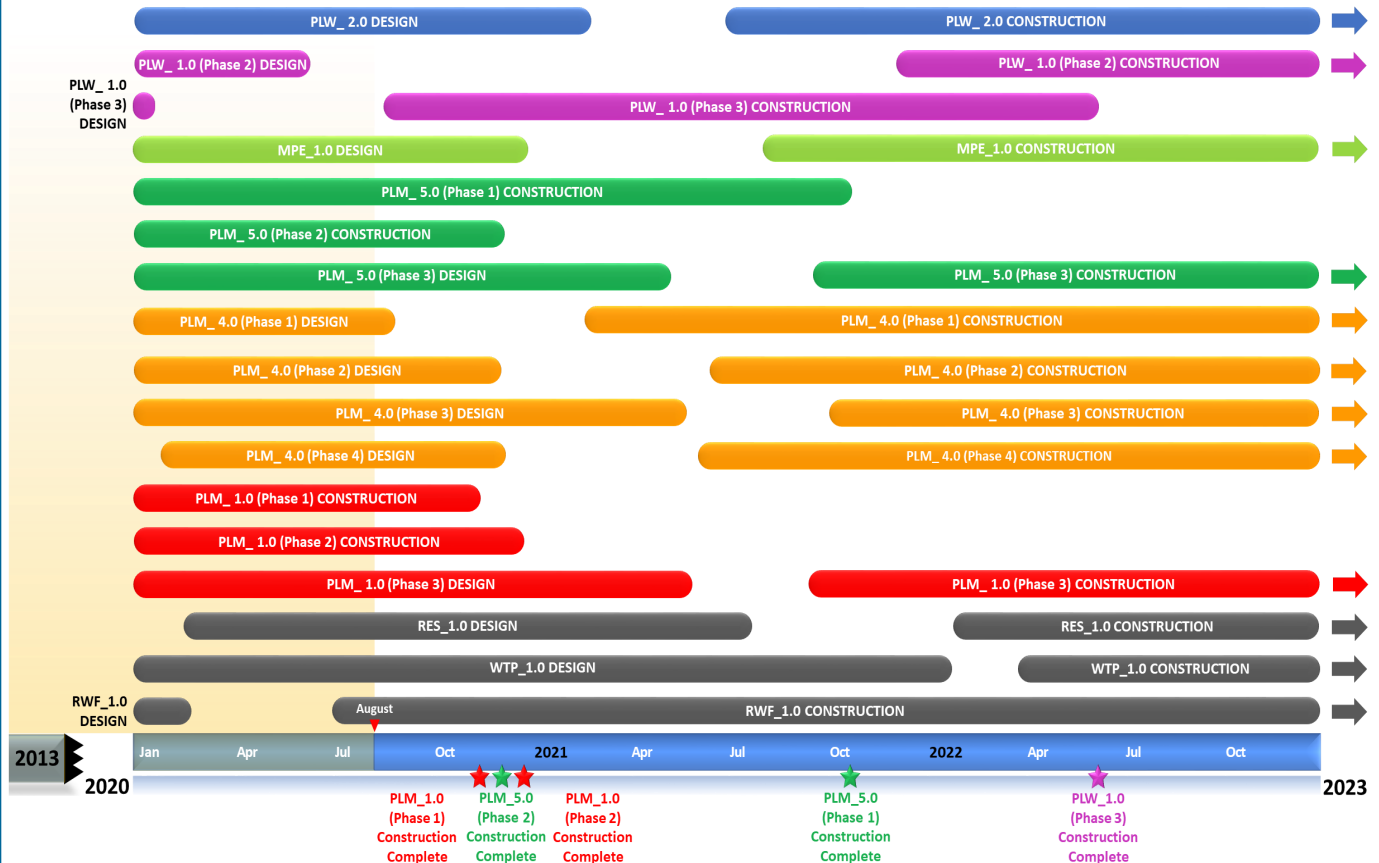
- South Beaverton Area Water Storage Tanks (RES\_1.0)/Scholls Area Pipeline (PLM\_5.3) Construction Manager/General Contractor (CM/GC) Request for Proposal (RFP) (Quarter 3, 2020)

### Upcoming Procurements

- Tualatin-Sherwood Area Pipeline (PLM\_4.1) Construction Invitation to Bid (ITB) by Washington County (Quarter 4, 2020)
- Metzger Pipeline East (MPE\_1.1) Construction ITB by City of Beaverton (Quarter 4, 2020)
- Metzger Pipeline East (MPE\_1.2) Design Request for Proposal (RFP) by City of Beaverton (Quarter 4, 2020)

## Schedule Summary

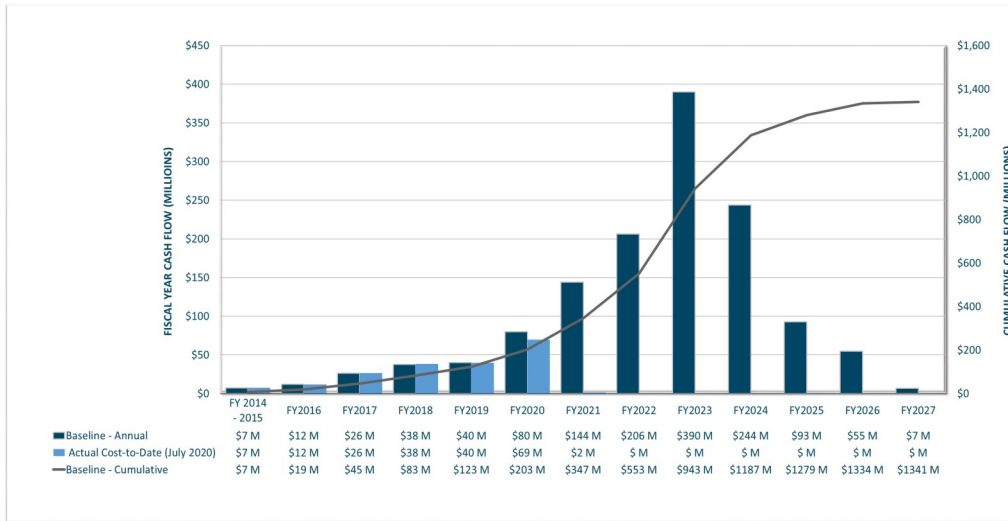
WWSP design and planning began in 2013; the Willamette Water Supply System is expected to be in service by July 2026. Below are the major milestones and activities forecasted from 2020 to 2023\*. The WWSP team is committed to on-time delivery. See page 4 for descriptions of the projects referenced below.



\*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.



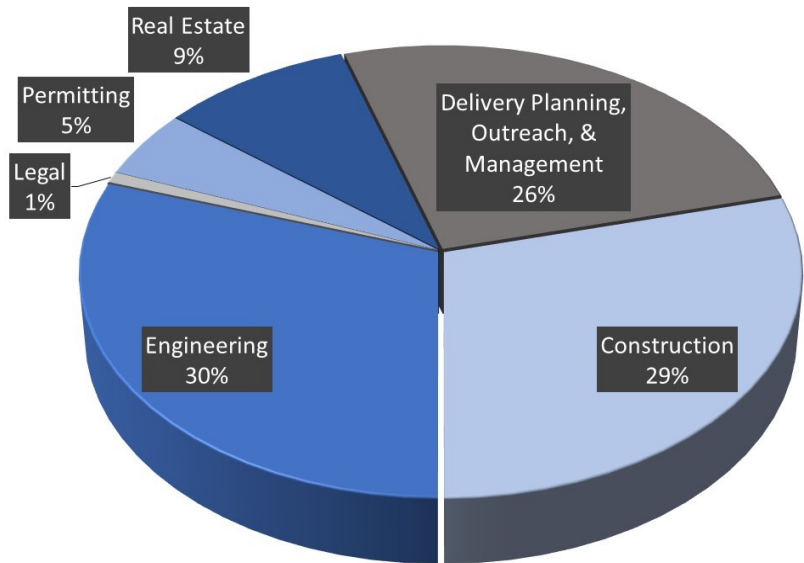
Costs to date for FY 2021 are \$2 million. Cumulative costs are projected to be \$336 million through the end of FY 2021.

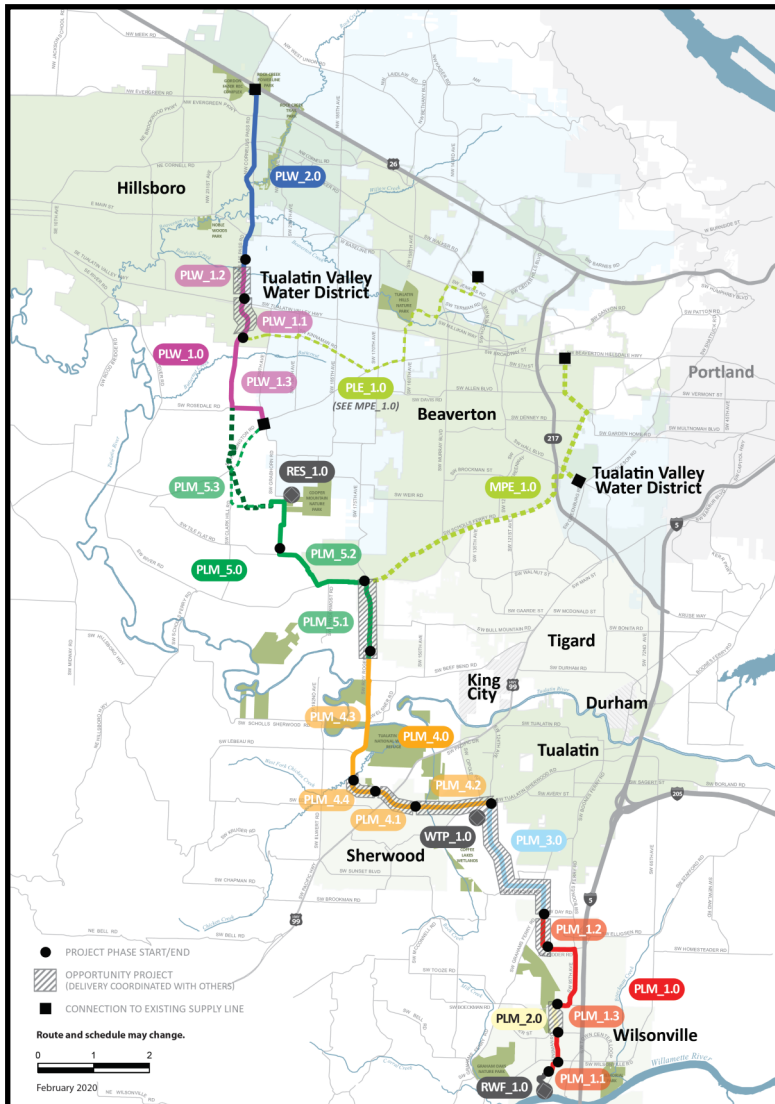
\*Data continues to be refined and is subject to change.

## Cumulative Cost Summary

WWSP cumulative costs are tracked and updated monthly. The chart below summarizes the distribution of cumulative costs through July 2020.

**Cumulative Water Supply Program costs to date are approximately \$194 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)
- FPS\_1.0**
- DCS\_1.0**
- 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)

The mid-Willamette River at Wilsonville is the supply source for the WWSS. The system consists of modifying the existing river intake and expanding pumping capacity, building more than 30 miles of drinking water pipeline, reservoir storage facilities on Cooper Mountain, and a new WTP in Sherwood.

For more information about the WWSP, visit [www.ourreliablewater.org](http://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:* 4-mile water pipeline from SW Farmington Rd. at SW 209th Ave. to Cornelius Pass Rd. at Frances St.  
*Status:* Construction Phase (Phase 1: Complete; Phase 2 Start: 11/2021; Phase 3 Complete: 05/2022)
- 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: 08/2021)
- RES\_1.0 South Beaverton Area Water Storage Tanks (Storage Tanks)**  
*Description:* Two 15-million gallon storage tanks located on Cooper Mountain.  
*Status:* Design Phase (Construction Start: 01/2022)
- PLM\_5.0 Scholls Area Pipeline Project (North of Beef Bend Road to Farmington Road)**  
*Description:* 7-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: 10/2021)
- PLM\_4.0 Tualatin-Sherwood Area Pipeline Project (SW 124th Avenue to north of Beef Bend Road)**  
*Description:* 5.2-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: 02/2021; Phase 2 Start: 06/2021; Phase 3 Start: 9/2021; Phase 4 Start: 05/2021)
- 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:* 0.6-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: 12/2022; Phase 3 Start: 9/2021)