



**TUALATIN VALLEY**  
WATER DISTRICT

# Board Work Session Minutes

October 4, 2022

## WORK SESSION – 6:02 PM

### CALL TO ORDER

Commissioners Present: Jim Doane, PE; Jim Duggan, PE; Carl Fisher (arrived at 7:24 p.m.); Elliot Lisac; Todd Sanders

Staff Present: Tom Hickmann, PE, Chief Executive Officer; Paul Matthews, Chief Financial Officer; Dave Kraska, PE, Water Supply Program Director; Clark Balfour, General Counsel; Pete Boone, PE, Chief Operating Officer; Katherine Lipari DeSau, Executive Assistant

Other Attendees: Tony Iaccarino (DHM)

### ANNOUNCEMENTS

Mr. Hickmann described recent Water Week events, the next Talkin' Water virtual forum featuring cold weather preparedness and recent Board room upgrades (see attached presentation).

Mr. Kraska gave the safety moment on holiday decorating safety.

### 1. DISCUSSION ITEMS

#### A. Willamette Water Supply System Commission Update. *Staff Report – Dave Kraska*

Mr. Kraska reviewed the Willamette Water Supply System (WWSS) Commission October agenda, the current approvals and procurement forecast and recent Willamette Water Supply Program (WWSP) activities (see attached presentation). In response to Commissioner questions, staff stated:

- WWSS contractors are skilled in managing construction projects within northwest weather conditions. No concerns resulting from last week's rainfall have been brought to staff's attention.
- WWSP is working through permit matters with Wilsonville. The team is negotiating an agreement with Wilsonville to commence work in areas which are not in dispute. Staff remain in close communication with contractors about areas of authority.

Commissioner Doane commented on the cleanliness of two of the construction sites he drove by.

#### B. 2022 Customer Satisfaction Benchmark Survey Results. *Staff Report – Andrea Watson*

Staff explained that Tualatin Valley Water District's (TVWD) customer satisfaction survey was delayed due to the pandemic, staffing changes and a desire to time the survey to benefit the Rate Advisory Committee. Mr. Hickmann conveyed that the survey questions were reassessed to include both historical and new questions of interest. Project Manager Andrea Watson emphasized the importance of and need to understand TVWD

customer viewpoints. She explained survey methodology changes, indicated that crosstables were provided within the meeting packet and introduced Tony Iaccarino from DHM Research. Mr. Iaccarino then discussed the purpose of the research, methodology, survey results and next steps (see attached presentation).

[Recorder's Note: Commissioner Fisher arrived at 7:24 p.m.]

In response to Commissioner questions, Mr. Iaccarino stated:

- North and south area distinctions were divided by zip codes.
- He does not have comparative data about fluoridation preferences outside of TVWD.
- It is not tenable to pursue data collection at census tract levels given TVWD's population.
- 85% customer satisfaction is a good number for a utility agency.

Ms. Watson conveyed that a response plan will be developed based on the customer feedback received.

Commissioner Sanders commented that the new Customer Information System (CIS) is validated by the survey data which indicates a preference for monthly billing and text communications. Ms. Watson clarified that the CIS system does not enable TVWD to text customers, but it has the capability to connect with a third-party system for that purpose.

In response to a question from Commissioner Duggan, Ms. Watson stated that in the past, Washington County has transmitted emergency information for TVWD through its 911 service. The District is in the process of researching text communication methods for a future budget request; however, this additional system would likely require a significant investment. Mr. Hickmann stated that Advanced Metering Infrastructure systems typically contain software which include a texting component.

## **ADJOURNMENT**

There being no further business, President Sanders adjourned the meeting at 7:56 p.m.

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Todd Sanders, President

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Jim Doane, Secretary



## WATER WEEK

Last week, TVWD hosted a series of educational events for staff that showcased the District's history, the "anatomy" of the water system, field staff's work, and the WWSS.



1 | Board Work Session - October 4, 2022



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## WATER WEEK

Staff:

- Visited pump stations and reservoirs to see how water moves through the system
- Participated in hands-on demonstrations of field equipment and operations
- Attended a tour of WWSS assets under construction



2 | Board Work Session - October 4, 2022



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## WATER WEEK

These events, termed Water Week, strengthened relationships and increased employees' knowledge base to better serve our customers.



3 | Board Work Session - October 4, 2022



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## TALKIN' WATER

The next Talkin' Water will be held at noon, October 19 and feature cold weather preparedness. Pre-registration is not required for this virtual forum event. You can find the link at: <https://www.tvwd.org/district/page/talkin-water>.



4 | Board Work Session - October 4, 2022



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**Willamette Water Supply**  
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**Willamette Water Supply System  
Commission Update**  
TVWD Work Session  
October 4, 2022

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**Outline**

Review October WWSS Commission Board Meeting Agenda → Review Approvals and Procurements Forecast → Update on WWSP Activities

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## REVIEW OCTOBER WWSS COMMISSION BOARD MEETING AGENDA

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## Willamette Water Supply System Commission October 6, 2022 Board Meeting Agenda

1. Executive Session
2. General Manager's Report
3. Public Comment
4. Consent Agenda
  - A. Approve the September 1, 2022 meeting minutes
5. Business Agenda
  - A. Approve PLM\_1.3 BPA Engineering and Construction Agreement Amendment
6. Information Items
  - A. The next Board Meeting scheduled on December 1, 2022

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# REVIEW APPROVALS AND PROCUREMENTS FORECAST



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## Approvals and Procurement Forecast for September – November 2022 Program Baseline or Related Plans

Description	Program Director	WWSS Management Committee	WWSS Commission Board
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## Approvals and Procurement Forecast for September – November 2022

### Real Estate

Description	Program Director	WWSS Management Committee	WWSS Commission Board
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## Approvals and Procurement Forecast for September – November 2022

### IGAs, MOUs, Permit Commitments

#### City of Sherwood

- DCS\_1.0 Broadband Services IGA (April)

#### Pahlisch

- PLW\_1.3 Developer Agreement

#### Bonneville Power Administration

- PLM\_1.3 Engineering and Construction Agreement Amendment (October)

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## Approvals and Procurement Forecast for September – November 2022

### Contracts

Title	Goal	Value	Key Dates
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## Approvals and Procurement Forecast for September – November 2022

### Contract Amendments and Change Orders\*

Title	Goal	Value	Key Dates
RWF_1.0 GMP 2 for Construction	Construct remaining elements of the RWF_1.0 project	\$61.9 M	WWSS Board Approval: 9/1/2022

\*having values higher than the Program Director's authority

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## Approvals and Procurement Forecast for September – November 2022

# Local Contract Review Board Rule Exemption

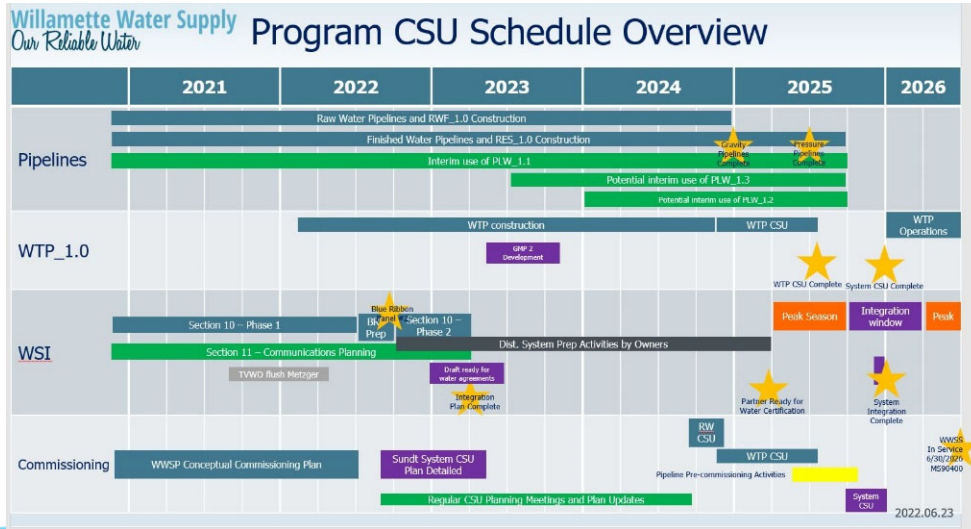
Title	WWSS Management Committee Approval	WWSS Board Informational Item	WWSS Board Consider Approval
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## UPDATE ON WWSP ACTIVITIES

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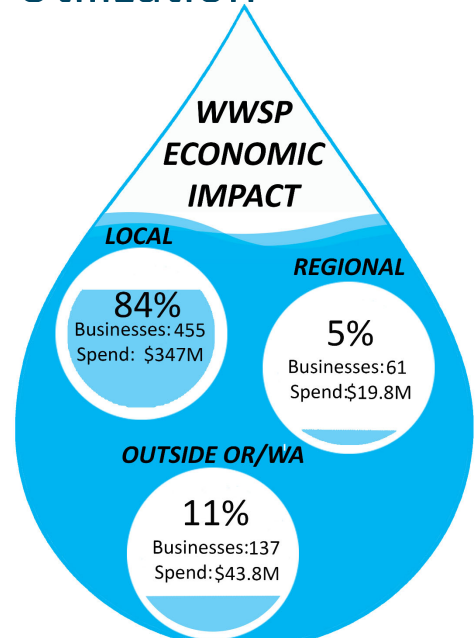
# Preparation for Operations



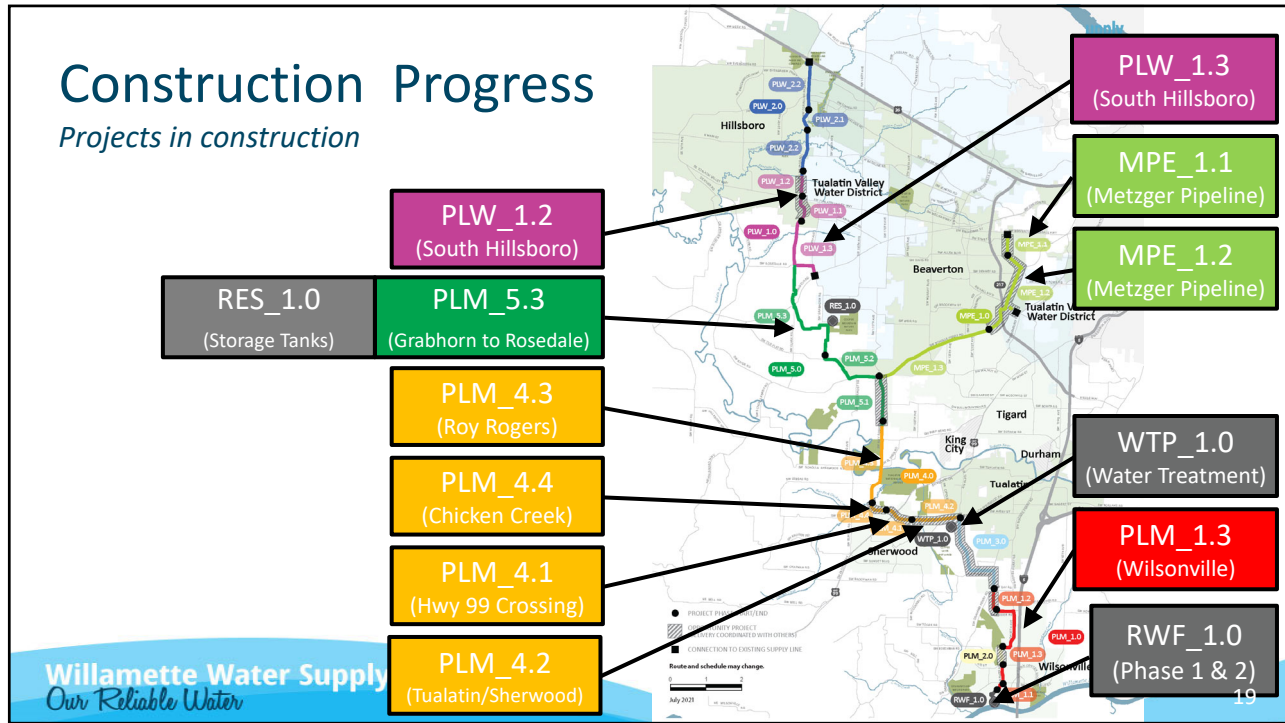
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# Notable Topics: Business Utilization

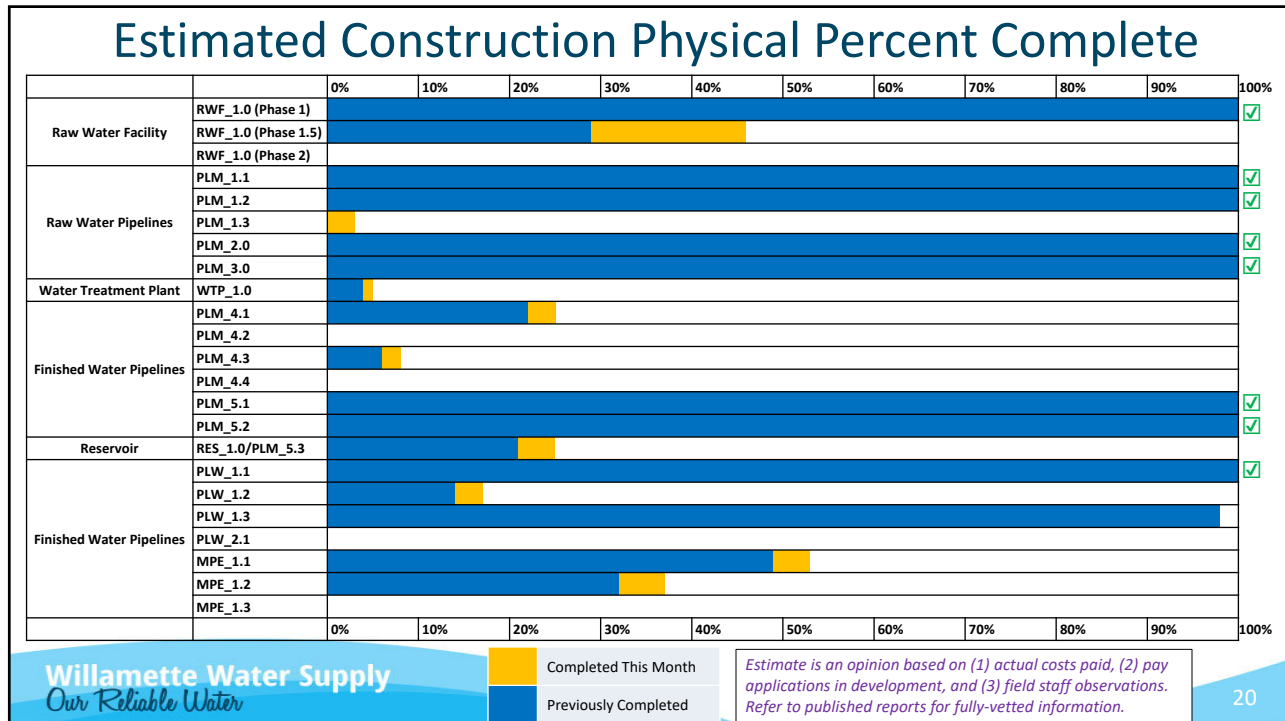
- Recent Accomplishments
  - Local businesses used tops 400
  - Local spend 84%
- Current Focus Areas
  - Publishing semi-annual Business Utilization Report



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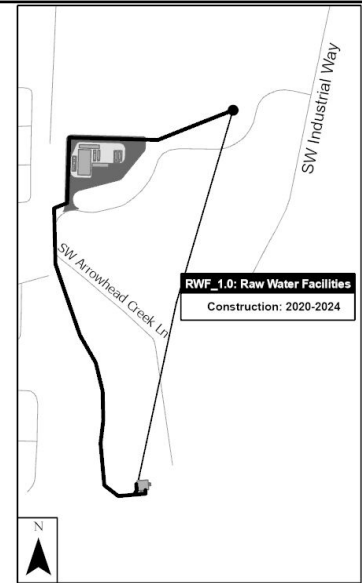
20

## RWF\_GMP-1.5

Contractor: Kiewit Infrastructure West Co.  
 Designer: Black & Veatch

### Current and Planned Activities:

- Upper Site Utilities work
- Beginning Upper Site fine grading and base rock placement
- Continued work on Lower Site stormwater improvements



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## Construction Photos – RWF\_GMP-1.5

Upper Site Utilities: 18" SD from Upper Site Bioswales to Arrowhead Creek outfall



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## Construction Photos – RWF\_GMP-1.5

Lower Site Drainage Improvements and City of Wilsonville WRWTP Upgrade work.

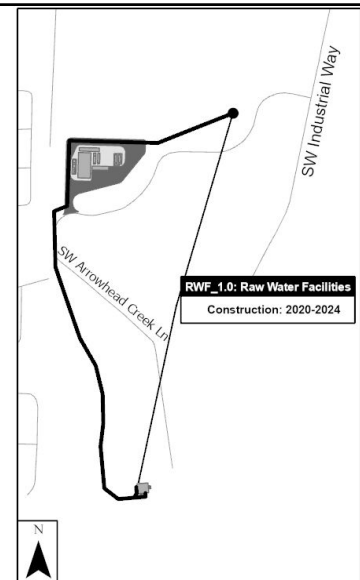


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## RWF\_1.0 GMP-1.5 Notable Topics

- External Coordination
  - Coordination with City of Wilsonville re: WRWTP Upgrade project and clearwell work in park.
  - Coordination with City of Wilsonville re: 5<sup>th</sup> & Kinsman roadway project. Arrowhead Creek Lane was closed to all traffic for three weeks in August.
  - Continued Coordination with Portland General Electric re: new utility feeder project to CoW WRWTP and WWSP RWF sites.
- Potential Claims
  - None.
- Delivery Challenges
  - None



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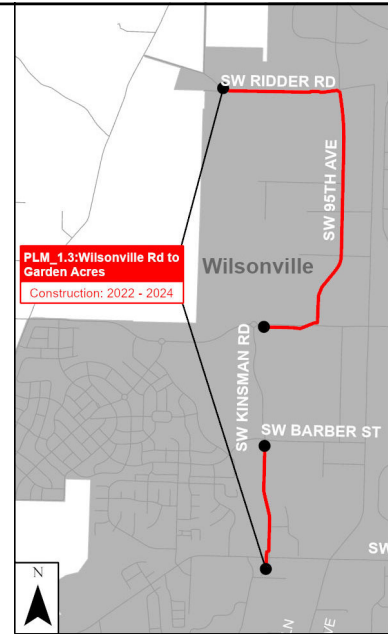
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# PLM\_1.3

Contractor: Moore Excavation Inc.  
 Designer: HDR

## Current and Planned Activities:

- Working with City of Wilsonville to get permits to allow work to start
- Potholing utility crossings
- Processing PCOs, submittals and RFIs



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# PLM\_1.3 Notable Topics

- Partner Coordination
  - None
- Potential Claims
  - None
- Delivery Challenges
  - Delay to start of work due to Wilsonville permits
  - Delay to easements for Schedule B work



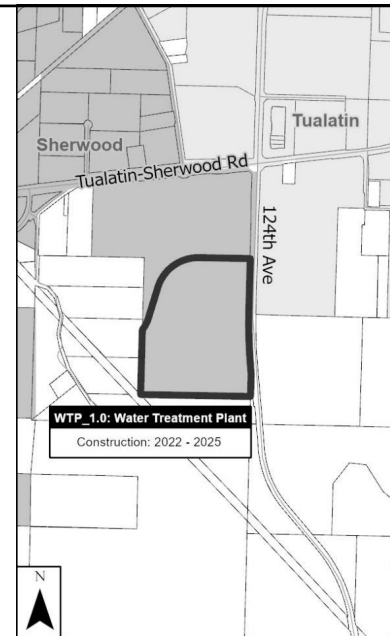
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## WTP\_1.0

Contractor: Sundt Construction, Inc.  
Designer: CDM Smith

### Current and Planned Activities:

- Continue mass excavation and embankment fill
- Continue drilling and controlled rock blasting
- Continue rock crushing
- Temporary electrical service
- Critical submittals including baseline CPM schedule



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## Construction Photos - WTP\_1.0

Looking north: Clearwell  
and Pump Station subgrade  
prep.



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## Construction Photos - WTP\_1.0

Looking west: EQ Basin  
Subgrade Prep.



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## Construction Photos - WTP\_1.0

Temporary office trailer  
setup and laydown yard

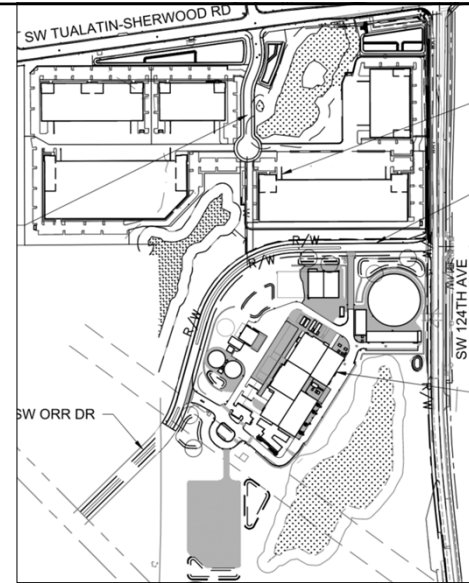


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## WTP\_1.0 Notable Topics

- External Coordination
  - Coordinating with PGE to get temporary power and easement delineated for future permanent power
- Potential Claims
  - None
- Delivery Challenges
  - City of Sherwood building permits taking longer than expected

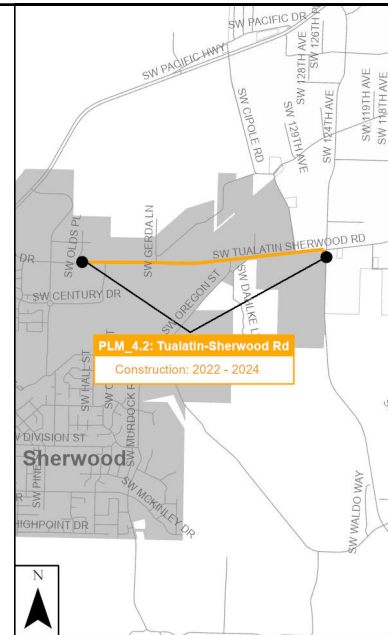


## PLM\_4.2

Partner: Washington County  
Contractor: Kerr/Emery JV  
Designer: Brown & Caldwell

### Current and Planned Activities:

- Clearing and demolition for roadwork activities
- Utility relocates
- WWSP submittals



## Construction Photos – PLM\_4.2

Road work along Tualatin-Sherwood Road

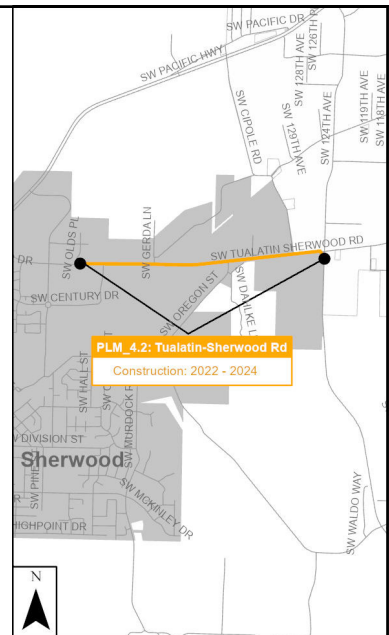


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## PLM\_4.2 Notable Topics

- Partner Coordination
  - No issues
- Potential Claims
  - None
- Delivery Challenges
  - None



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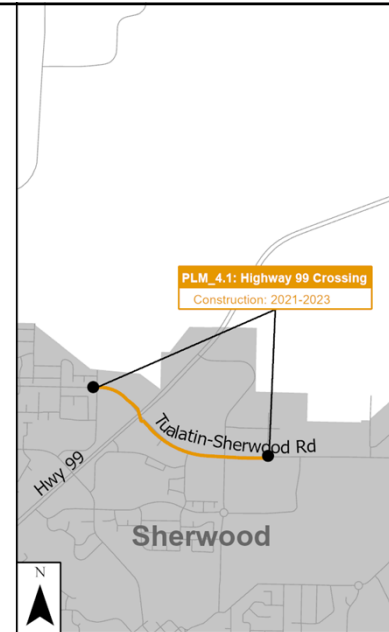
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## PLM\_4.1

Partner: Washington County  
 Contractor: Moore Excavation Inc.  
 Designer: Brown & Caldwell

### Current and Planned Activities:

- Completed trenchless crossing of Hwy 99
- 66" waterline installed in trenchless casing
- Annular space grouting and open cut pipe work starting in October
- Continue road widening on Tualatin-Sherwood Rd.



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## Construction Photos – PLM\_4.1

Filling carrier pipe with water  
 prior to annular space grouting

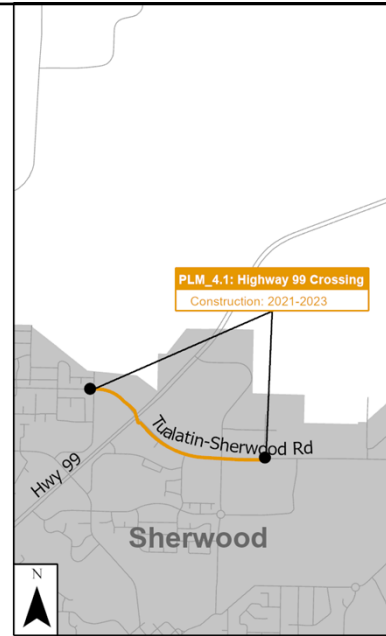


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## PLM\_4.1 Notable Topics

- Partner Coordination
  - No issues
- Potential Claims
  - None
- Delivery Challenges
  - None



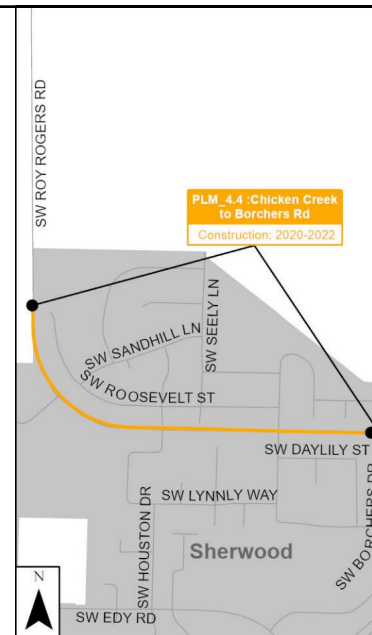
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## PLM\_4.4

Partner: Washington County  
 Contractor: Tapani Inc.  
 Designer: Brown & Caldwell

### Current and Planned Activities:

- Processing WWSP submittals and RFIs
- Sound walls currently being installed along the north side of Roy Rogers Rd.



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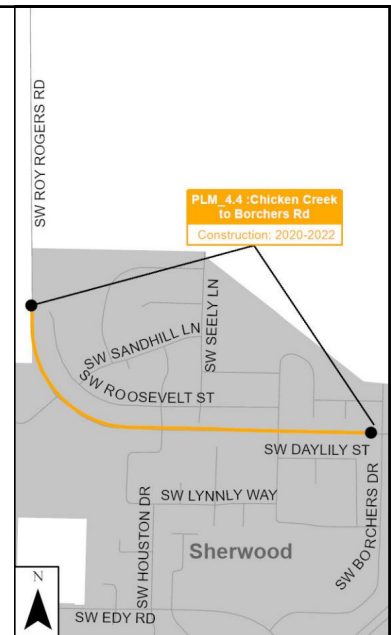
## Construction Photos – PLM\_4.4

Sound wall installation



## PLM\_4.4 Notable Topics

- Partner Coordination
  - No issues
- Potential Claims
  - None
- Delivery Challenges
  - None

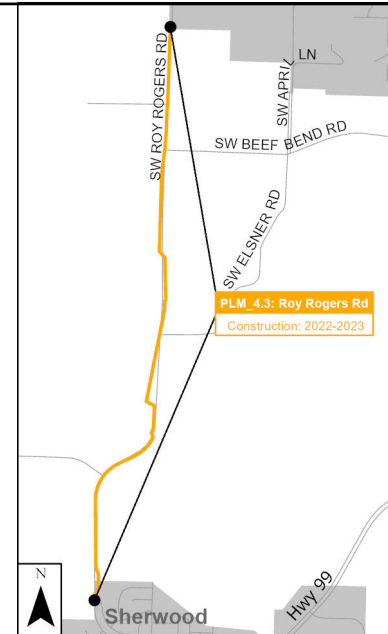


## PLM\_4.3

Contractor: Tapani Inc.  
Designer: Brown & Caldwell

### Current and Planned Activities:

- Access and haul roads for waterline construction
- Secant pile installation for north tunnel shaft
- Start of 66" open-cut pipe installation along Roy Rogers Rd.
- City of Sherwood pre-con and permitting completed
- Clearing and grubbing alignment



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## Construction Photos – PLM\_4.3

North shaft secant pile installations



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## Construction Photos – PLM\_4.3

Clearing, grubbing and haul  
road construction

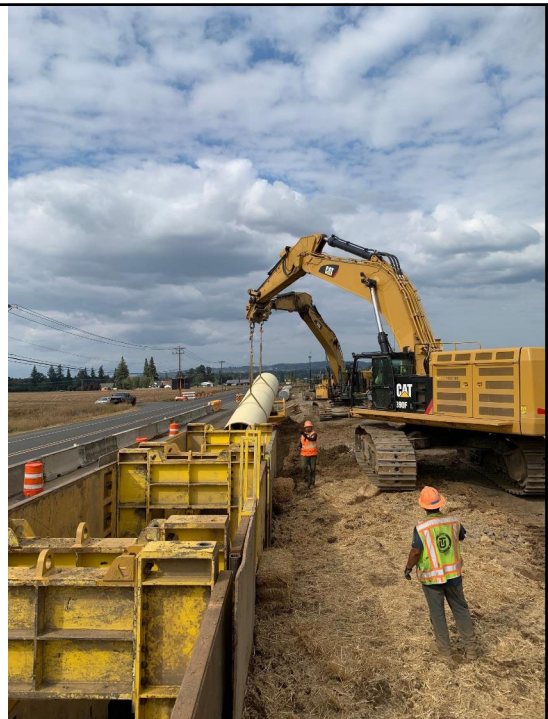


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## Construction Photos – PLM\_4.3

Open-cut pipe installation  
begins along Roy Rogers Rd.



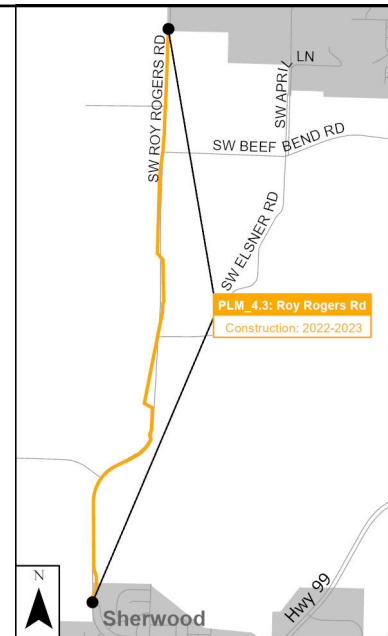
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## PLM\_4.3 Notable Topics

- Partner Coordination
  - No issues
- Potential Claims
  - None
- Delivery Challenges
  - None



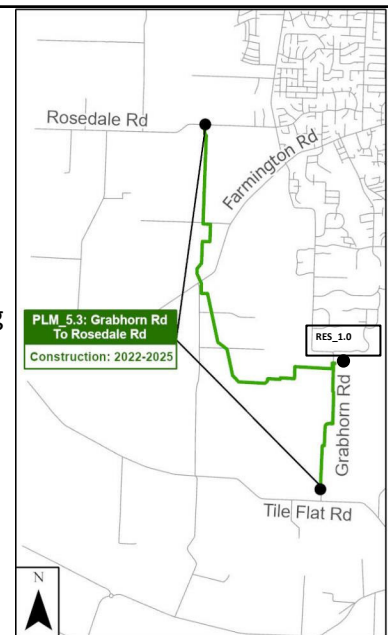
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## RES\_1.0 / PLM\_5.3

Contractor: Hoffman-Fowler JV  
Designer: Black & Veatch / Jacobs

### Current and Planned Activities:

- RES\_1.0 - Continued rock excavation and haul off
- RES\_1.0 - Continued construction of the soil nail/rock bolt retaining wall, approximately 75% complete
- RES\_1.0 - Began installation of 18" and 12" stormwater lines
- PLM\_5.3 - Continue installation of 66" waterline – Crew 1: approximately 2,500 LF installed and 2,350 LF backfilled
- PLM\_5.3 - Continue installation of 66" waterline – Crew 2: approximately 1,400 LF installed and 1,200 LF backfilled
- PLM\_5.3 - Ground improvement (cement deep soil mixing) approximately 72% complete



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## Construction Photos – RES\_1.0

Excavation and shotcrete application at RES\_1.0 site



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## Construction Photos – RES\_1.0

Soil nail wall at RES\_1.0 site



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## Construction Photos – PLM\_5.3

66" waterline installation  
near Koehler Rd. (2<sup>nd</sup> crew)



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## Construction Photos – PLM\_5.3

Ground improvements –  
Cement deep soil mixing

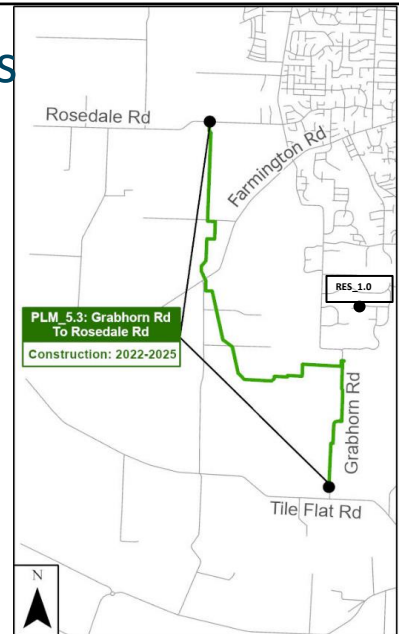


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## RES\_1.0/PLM\_5.3 Notable Topics

- External Coordination
  - Utility relocations with PGE, Ziplly and Comcast
- Potential Claims
  - Tree removal
- Delivery Challenges
  - Easement acquisition delaying work in some areas on PLM\_5.3



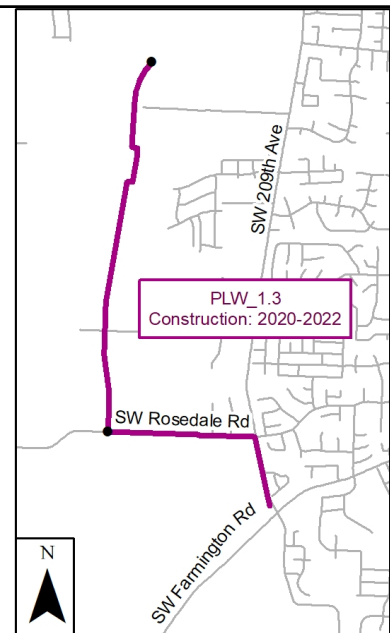
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## PLW\_1.3

Contractor: Tapani, Inc.  
Designer: Kennedy/Jenks

### Current and Planned Activities:

- Wetland planting
- Final restoration of pipeline alignment
- Farmington turnout vault piping and electrical work
- Butternut Creek turnout electrical and control panels



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## Construction Photos – PLW\_1.3

Restoration of work limits near Kinnaman / Cornelius Pass Rd.



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## Construction Photos – PLW\_1.3

Electrical/Controls conduits at Farmington Turnout



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## Construction Photos – PLW\_1.3

Farmington Turnout  
flowmeter vault

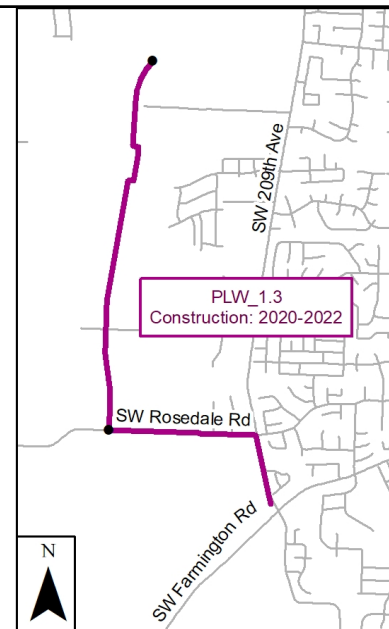


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## PLW\_1.3 Notable Topics

- External Coordination
  - Coordinating work at Farmington vault with TVWD's contractor
  - Developer coordination
- Potential Claims
  - None
- Delivery Challenges
  - Delivery date for some materials delayed until December 2022
  - Washington County requesting additional road repairs



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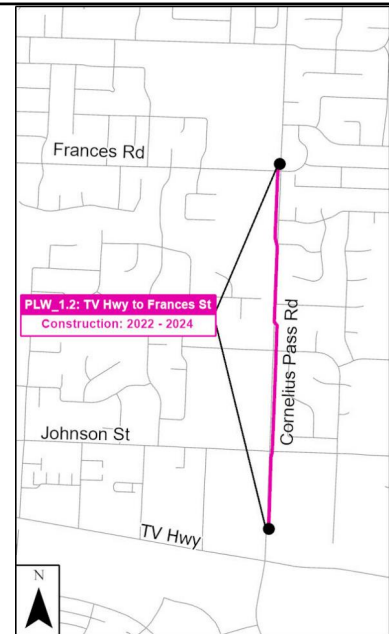
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## PLW\_1.2

Partner: Washington County  
 Contractor: Tapani, Inc.  
 Designer: Kennedy/Jenks

### Current and Planned Activities:

- Reedville Creek trenchless crossing
  - Slide rail shoring installed, dewatering wells installed and developed
  - 60" boring to commence third week of September
- Tree clearing and roadway subgrade prep on east side of Cornelius Pass Rd.
- Street lighting prep and install



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## Construction Photos – PLW\_1.2

Concrete collar thrust block installed on existing 18" TVWD water main prior to relocation and excavation for boring shafts



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## Construction Photos – PLW\_1.2

Reedville Creek Crossing:  
First bay of boring launch  
shaft installed (40' x 14' shaft)

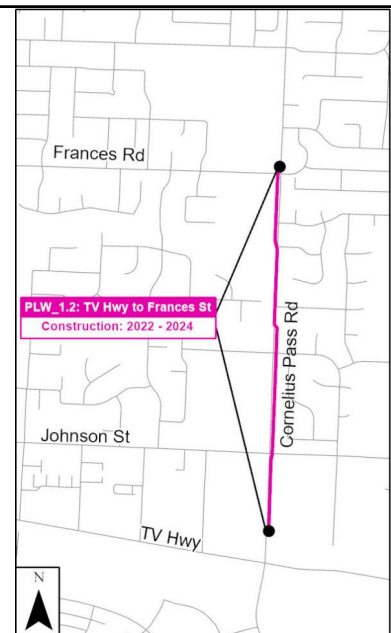


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## PLW\_1.2 Notable Topics

- External Coordination
  - Ongoing County coordination
- Potential Claims
  - None
- Delivery Challenges
  - Ziplay fiber ductbank relocation



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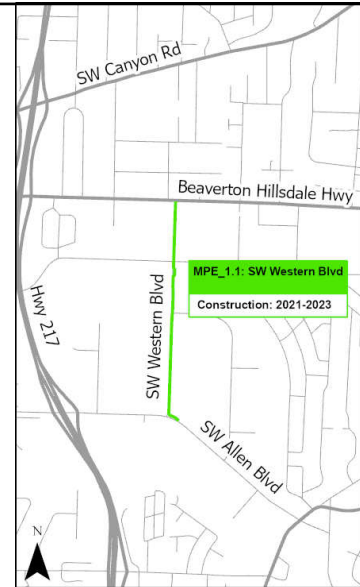


## MPE\_1.1

Partner: City of Beaverton  
 Contractor: Moore Excavation Inc.  
 Designer: Brown & Caldwell

### Current and Planned Activities:

- 48" WWSP waterline on Western Ave. nearly complete
- Continued work on test stations, blowoff assemblies and CARV appurtenance piping
- Continue WWSP flowmeter vault construction
- 48" waterline joint grouting
- Installation of COB 16" ductile iron water main from Arctic to Beaverton-Hillsdale Hwy
- City stormwater improvements along Western Ave.



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## Construction Photos – MPE\_1.1

48" WWSP waterline  
 installation near Beaverton-  
 Hillsdale Highway



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## Construction Photos – MPE\_1.1

Project alignment looking south from Beaverton-Hillsdale Hwy.



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## Construction Photos – MPE\_1.1

Installation of dished head, south of Beaverton Hillsdale Highway

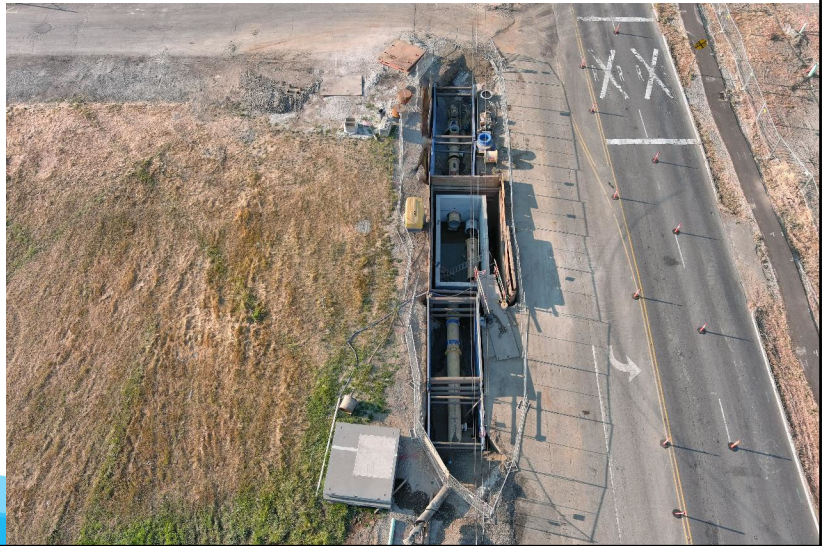


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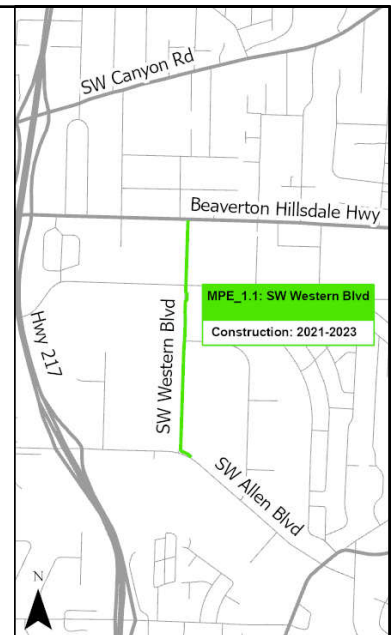
## Construction Photos – MPE\_1.1

Flowmeter vault construction



## MPE\_1.1 Notable Topics

- Partner Coordination
  - Ongoing coordination with City of Beaverton
- Potential Claims
  - None
- Delivery Challenges
  - None

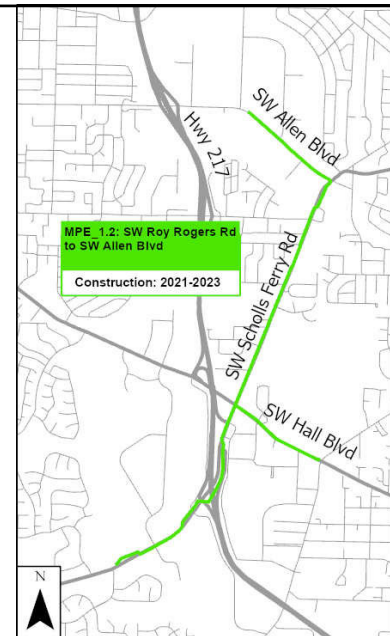


## MPE\_1.2

Contractor: Emery & Sons  
Designer: Brown & Caldwell

### Current and Planned Activities:

- Begin tunnel #1 at lower Fanno Creek
- 16" COB waterline on Scholls Ferry Rd.
  - Continue installation to Homestead Ln.
  - Test from Nimbus Ave. to Homestead Ln.
- Install 48" open cut waterline north of Hall Blvd.
- Install 48" waterline on Scholls Ferry Rd, west of Hwy 217



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## Construction Photos – MPE\_1.2

Completed construction of  
launch shaft at Tunnel #1



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## Construction Photos – MPE\_1.2

Slide rail installation for  
Receiving Pit #1



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## Construction Photos – MPE\_1.2

48" waterline installation on  
Scholls Ferry Rd. near  
Homestead Ln.



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## Construction Photos – MPE\_1.2

Tunnel #1 launch shaft near Greenway Park and Fanno Creek Trail



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## MPE\_1.2 Notable Topics

- External Coordination
  - Resident notifications for upcoming work
- Potential Claims
  - None
- Delivery Challenges
  - PGE design completion for power line shoofly



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# Tualatin Valley Water District Customer Benchmark Survey

August 2022



**TUALATIN VALLEY**  
WATER DISTRICT



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## Research purpose

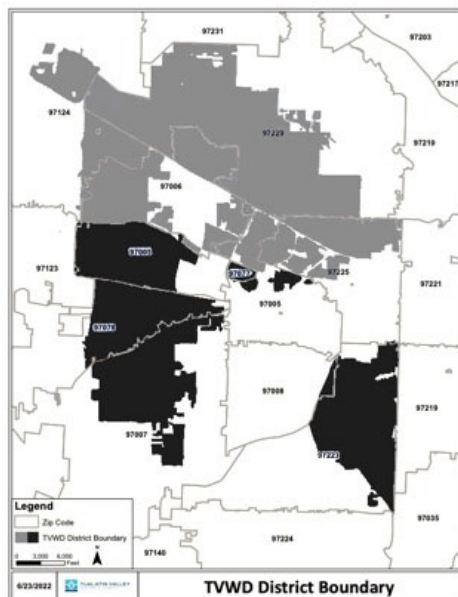
- Measure customer satisfaction with key services
- Assess customer priorities
- Identify communications preferences
- Compare satisfaction, priorities, and preferences over time

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## Methodology

- Hybrid (phone and text-to-online) survey of N=400 residential customers
- Conducted August 2–8, 2022; 12 minutes to complete
- Quotas set by age, gender, and area; and data weighted by race, ethnicity, income, and education to ensure a representative sample
- Margin of error  $\pm 4.9\%$
- Due to rounding, some totals may differ by  $\pm 1$  from the sum of separate responses.

75



**This report uses zip codes to divide the Tualatin Valley Water District service area into North and South areas.**

North  
South

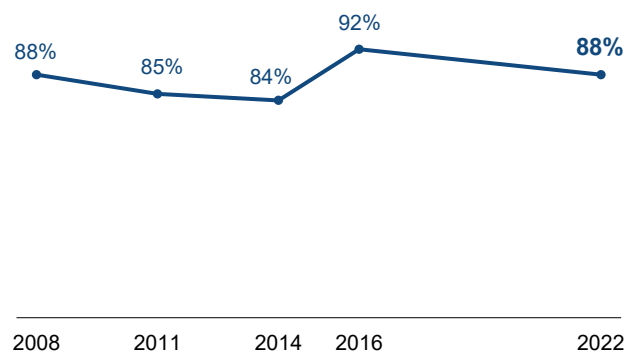
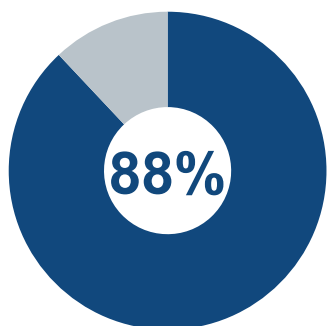
76



## General awareness and satisfaction

77

**Most TVWD customers can name their water provider. Awareness has remained steady since 2008.**

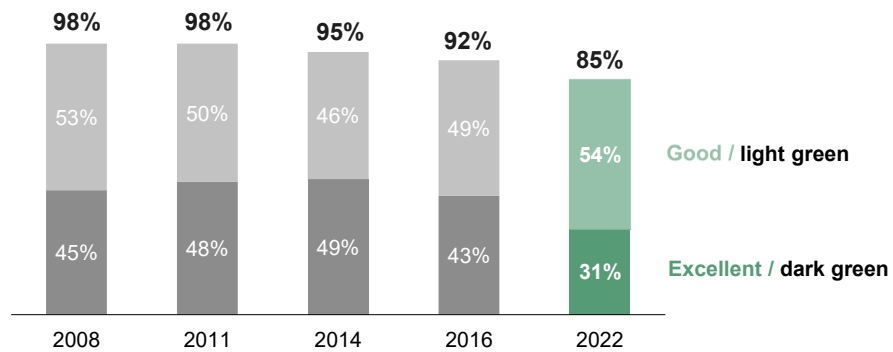


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78

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**Most customers have an overall positive impression of TVWD, but positive impressions have softened since 2016.**

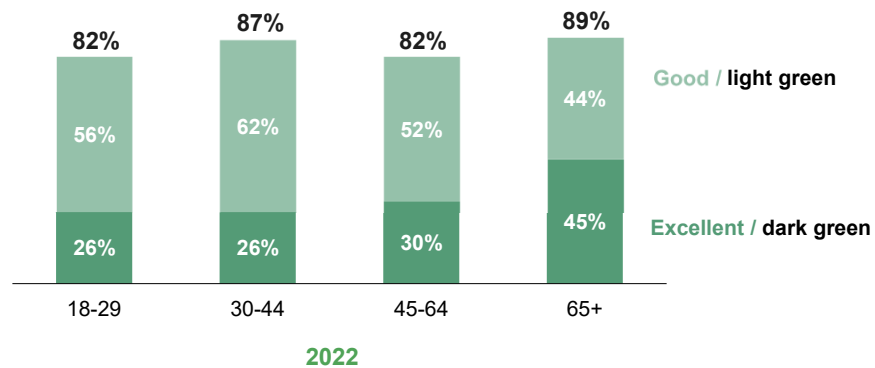


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**While positive impressions are high among all groups, older customers are the most positive.**



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80

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**Customers say the lack of any problems is the key reason they have a positive impression.**

**32% No problems**

17% Reliable water

13% No reason

12% Good customer service

5% Clean

4% Good tasting

*n=340*

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81

81

**High rates are the main reason the minority of customers have a negative impression.**

**70% Expensive**

**26% Poor water quality**

9% Bad customer service

7% All other responses

6% Billing issues

*n=38 (small sample size)*

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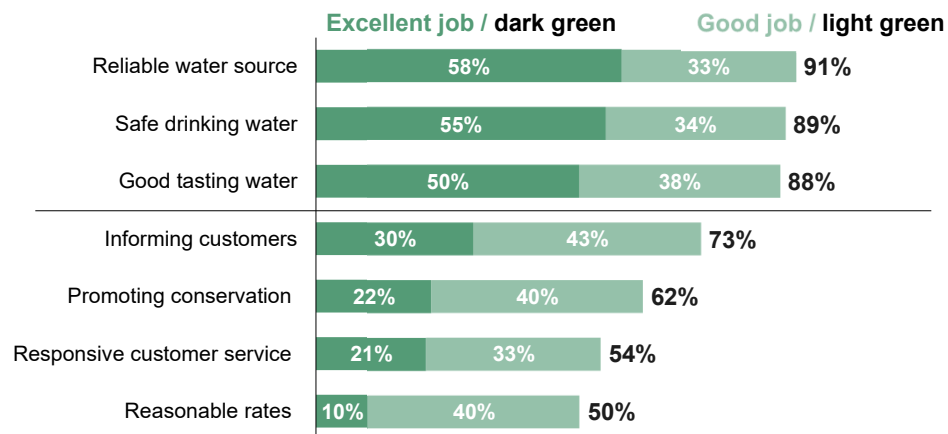
82

82

## Satisfaction with services

83

**Most customers are satisfied with TVWD, especially when it comes to providing reliable, safe, and good-tasting water.**

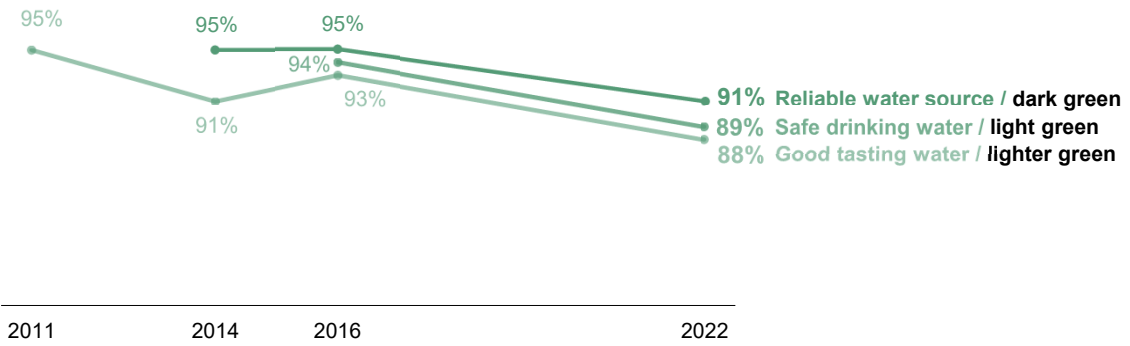


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84

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### When it comes to providing reliable, safe, and good-tasting water, satisfaction has remained high over time.

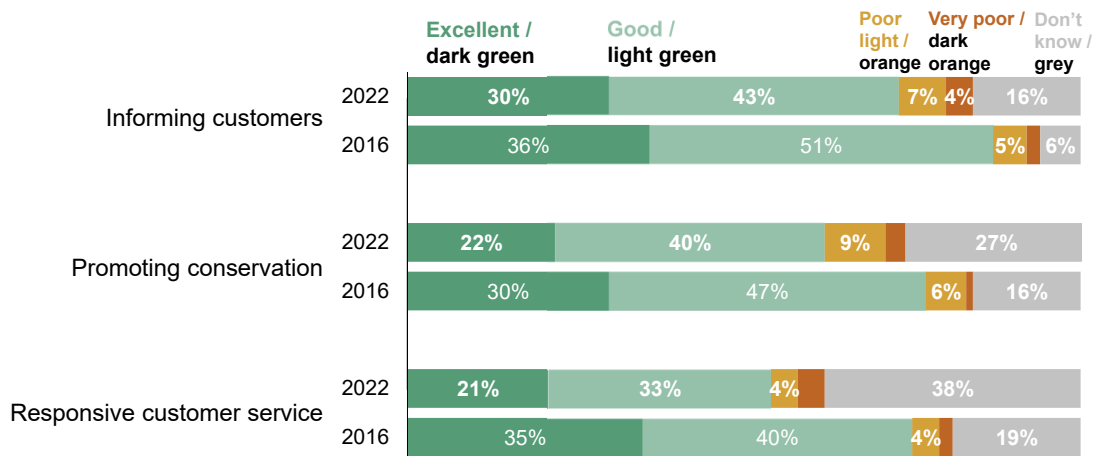


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### When it comes to lower-rated services, satisfaction has declined since 2016, but this is mainly due to more customers saying they simply don't know.

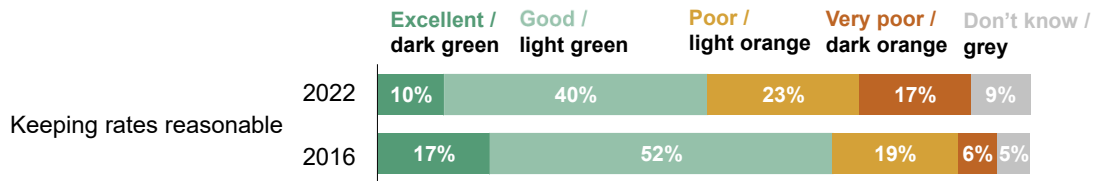


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**Customers are least satisfied when it comes to keeping rates reasonable, with an evident increase in dissatisfaction since 2016.**

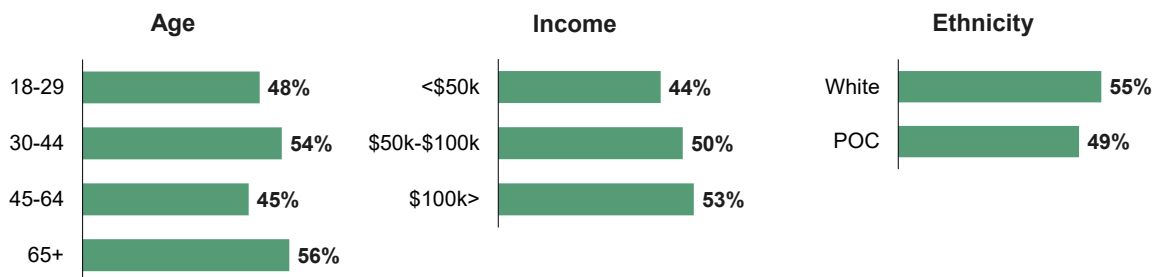


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**When it comes to satisfaction with keeping rates reasonable, there are no statistically significant differences between groups, including by age, income, and ethnicity.**



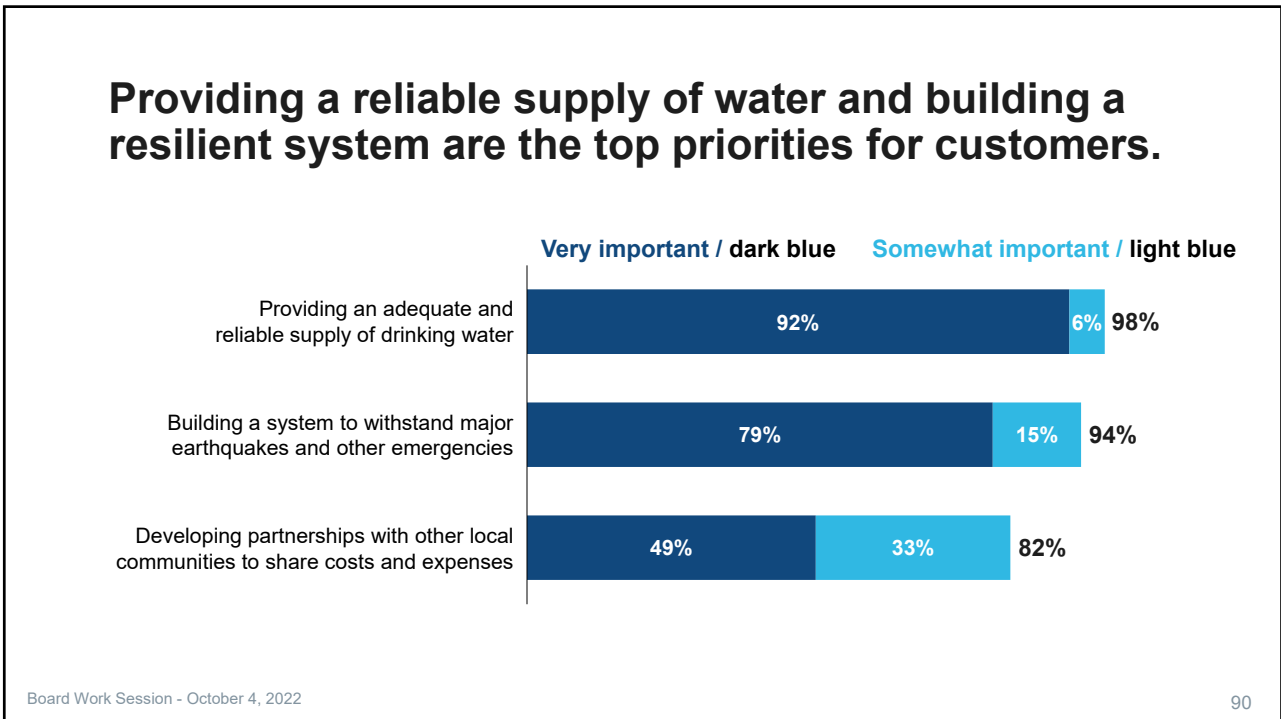
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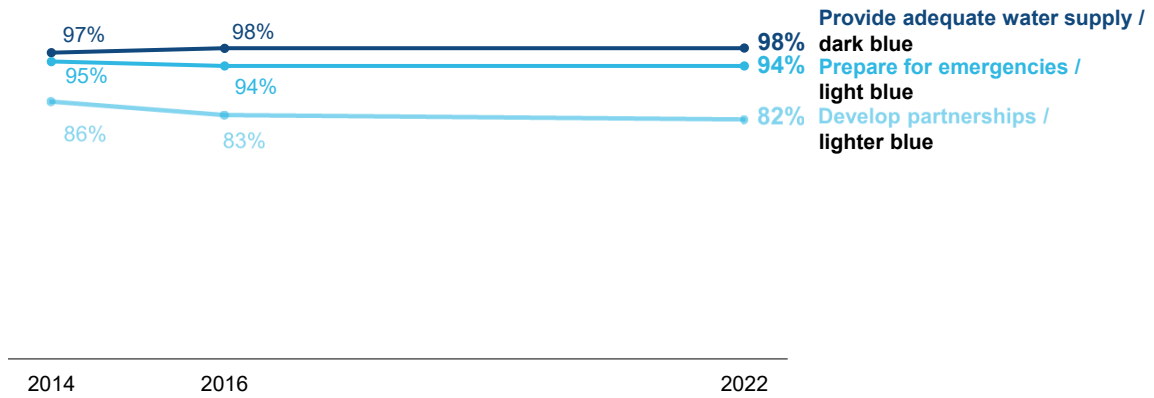
# Customer priorities and values

89



90

## These top priorities have remained consistent over time.

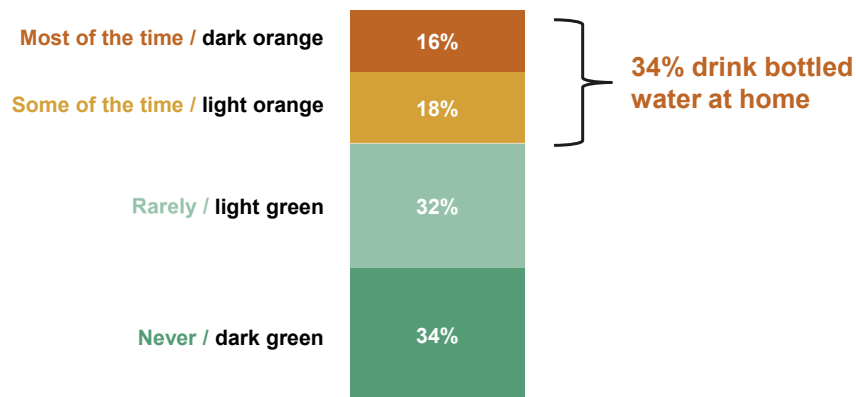


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## About one in three customers choose to drink bottled water at home.



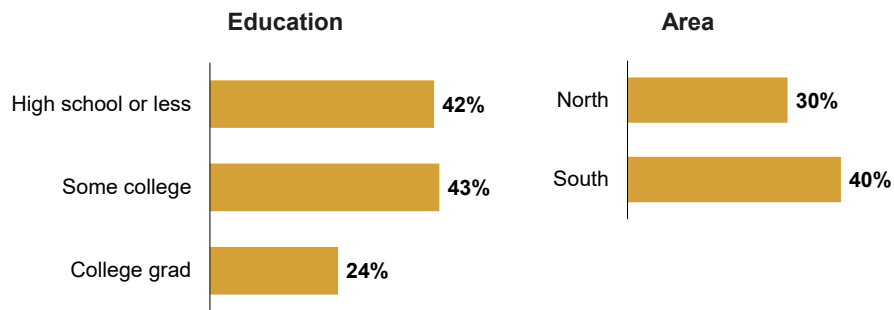
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### Customers with some college or less, and customers in the “South” service area, are more likely to drink bottled water at home.

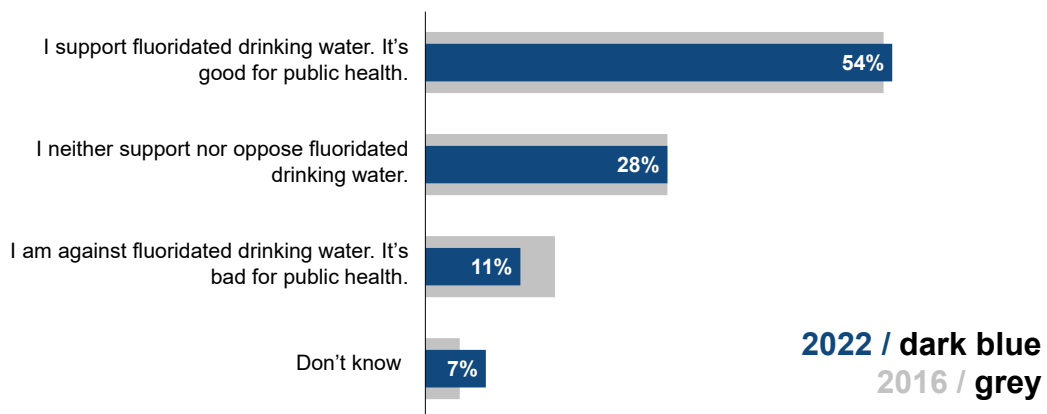


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### Most customers either continue to support fluoridation or have no preference.

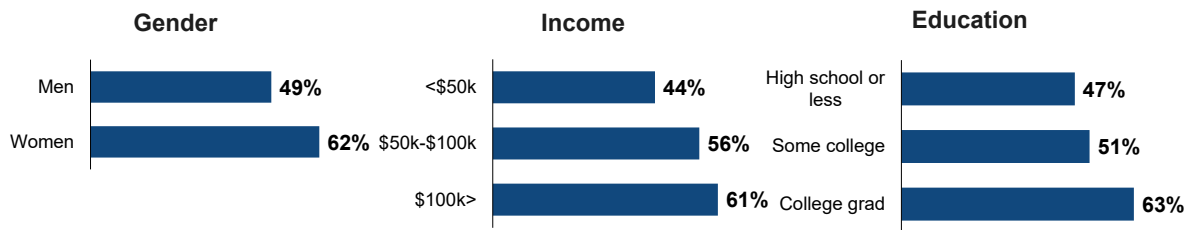


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## Women, higher-income customers, and college graduates are more likely to support fluoridation.



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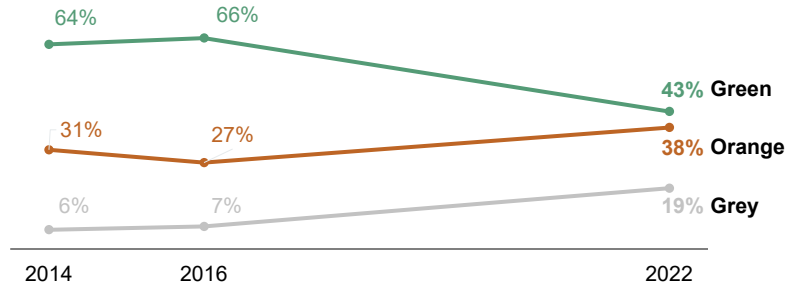
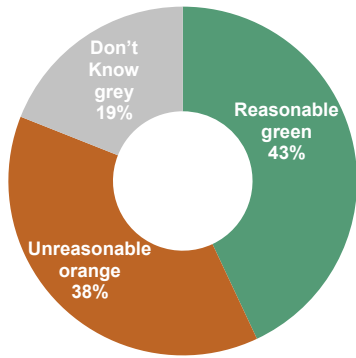
95

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## Rates and satisfaction

96

## A plurality of customers consider water rates reasonable, but fewer than in previous years.

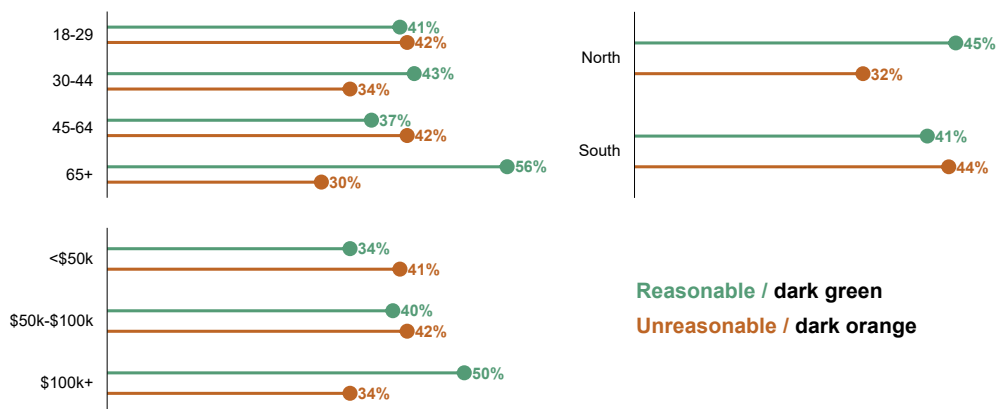


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## Older customers, higher income customers, and residents in the “North” service area are more likely to view rates as reasonable.

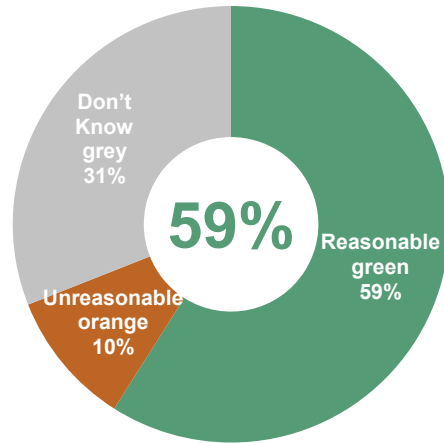


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**A majority say it's reasonable to pay two cents per gallon for drinking water to be treated, stored, and delivered. About a third of customers are unsure.**

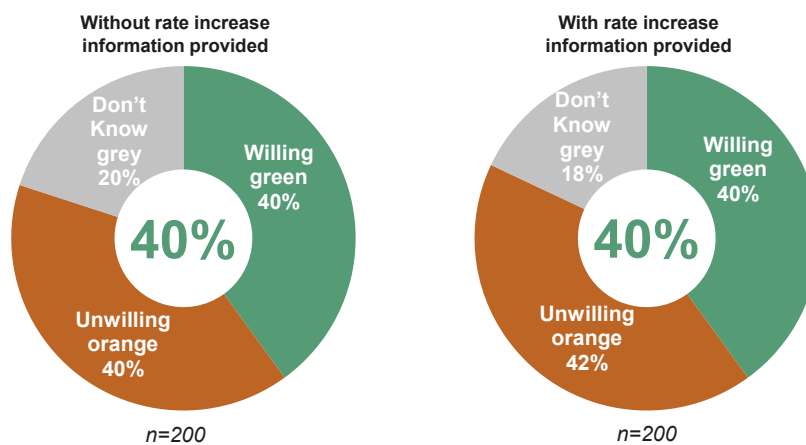


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**About 4 in 10 are willing to pay more on each bill to help low-income customers, regardless of whether they have knowledge of pending rate increases.**



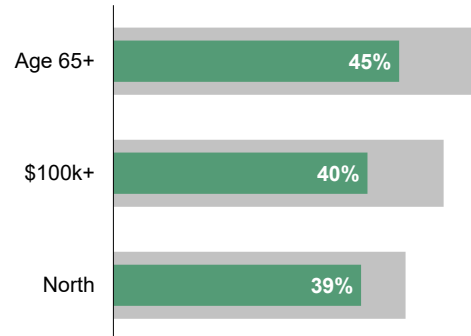
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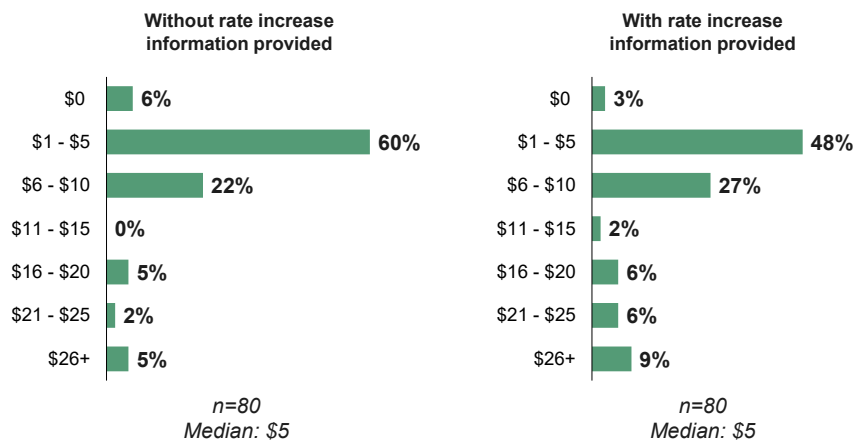
**Willingness is higher among customers who are older, higher income, and residing “North,” but less so for these same groups who know about pending rate increases.**

**With (green) vs. without (grey) rate increase information provided**



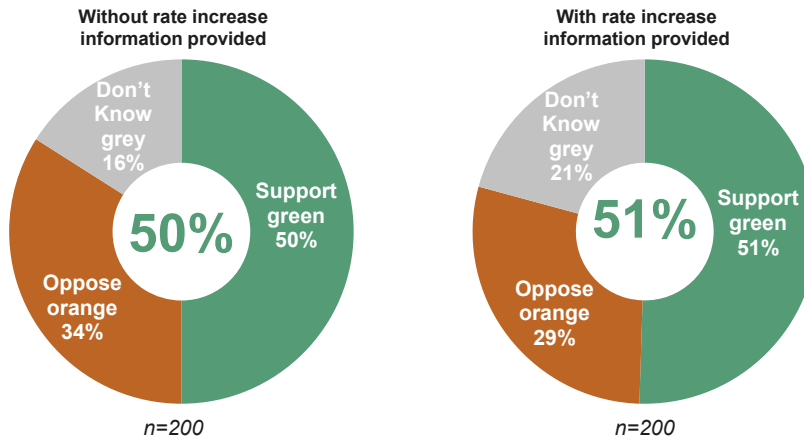
101

**Of those willing to pay more on their bill to help low-income customers, about half say 1 to 5 dollars.**



102

**1 in 2 support a billing assistance program offering regular discounts to low-income customers, even though it might raise rates for other customers.**



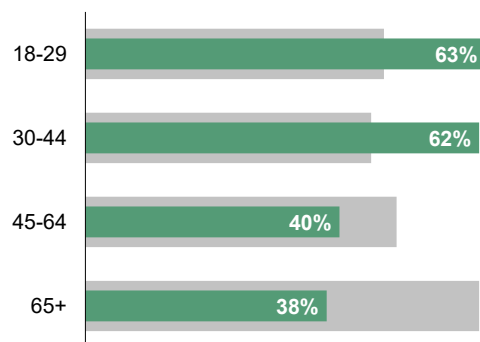
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**Knowledge of pending rate increases, increases support for a discount program among younger customers but decreases support among older customers.**

**With (green) vs. without (grey) rate increase information provided**



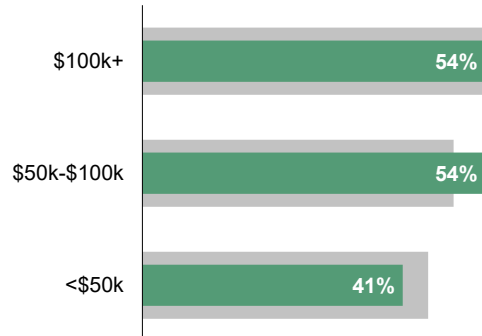
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**Knowledge of rate increases has little impact among different income groups on support for a discount program. Lower support among low-income groups may be due to uncertainty about eligibility.**

With / green vs. without / grey rate increase information provided



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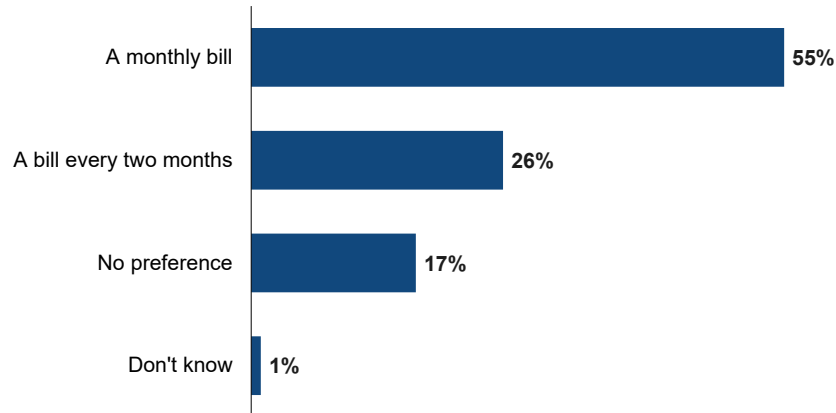
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**Customer communications preferences**

106

## Most customers either prefer monthly billing or have no preference.



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## Asked open ended, customers most often say email is the best way to keep them updated on their water service.

**59% Email**

**15% Text message**

11% Mail

4% Bill

2% Newsletter/pamphlet

2% Flyers

1% Internet

5% Other

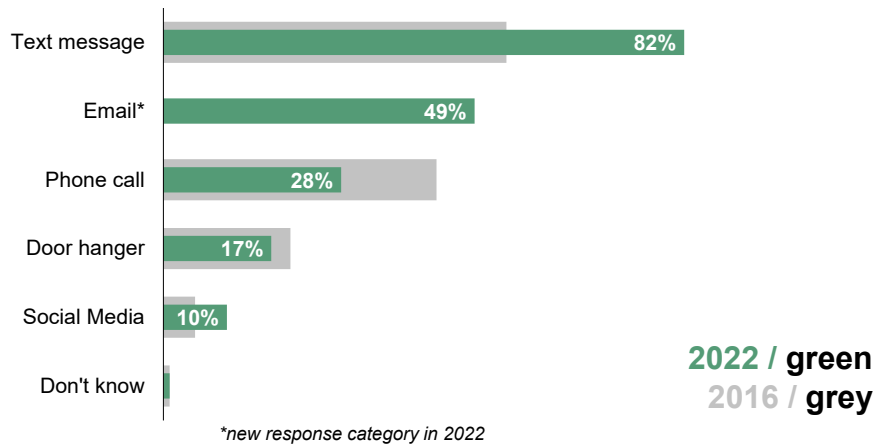
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## In cases of emergency, customers increasingly prefer to be notified by text message.



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## Next steps: awareness and satisfaction

- Keep customers informed about developments at TVWD. Customers appear to want to know more about conservation efforts and want to understand why their water rates are increasing.
- While most customers appear satisfied with the quality of their water, continue to monitor satisfaction, especially as the source of water is changing. Communicate TVWD efforts to ensure high-quality, good-tasting water.

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**Next steps: affordability**

- Provide options for customers willing to pay more on their utility bill so they can help others struggling to afford their water.
- While only half of customers currently support implementation of a potential program offering a regular discount to low-income customers, continue to monitor opinions about such a program.

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**Next steps: communications and billing**

- Use email as a regular way to communicate with customers and use text notifications to inform them about emergencies.
- Consider monthly billing, as a majority of customers prefer this option.

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## Next steps: further research

- Conduct regular benchmark surveys—at least every two years—to assess satisfaction and priorities and to measure progress over time.
- Conduct focus groups with low-income and regular customers to address potential concerns about water quality and affordability.

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