

Tualatin Valley Water District



Delivering the Best Water 💧 Service 💧 Value

Board Work Session Minutes

January 4, 2022

This meeting was held by phone and the internet.

WORK SESSION – 6:00 PM

CALL TO ORDER

Commissioners Present: Bernice Bagnall; Jim Doane, PE; Jim Duggan, PE; Todd Sanders; Dick Schmidt

Staff Present: Tom Hickmann, PE, Chief Executive Officer; Paul Matthews, Chief Financial Officer; Dave Kraska, PE, Water Supply Program Director; Joelle Bennett, PE, Water Supply Program Assistant Director; Clark Balfour, General Counsel; Tim Boylan, IT Services Director; Andrew Carlstrom, Customer Service Manager; Matt Oglesby, Asset Management Division Manager; Andrea Watson, Communications and Public Affairs Supervisor; Debbie Carper, District Recorder

Other Attendee: Teri Doherty

ANNOUNCEMENTS

Mr. Hickmann highlighted the upcoming Talkin' Water presentation on the 209th Farmington Facility Project on January 19 (see attached memo).

He also said that Washington County Commissioner Roy Rogers would like to attend an upcoming Board meeting to share his long-term vision for Washington County. Commissioners were in support of hearing his perspective at the February 1 Board work session.

Mr. Kraska gave the safety moment on frostbite and hypothermia prevention.

1. DISCUSSION ITEMS

- A. Willamette Water Supply System (WWSS) Commission Update and Cost Trends.
Staff Report – Dave Kraska

Mr. Kraska reviewed the WWSS Commission January agenda, the current approvals and procurement forecast and recent Willamette Water Supply Program activities. He also described how the Willamette Water Supply Program (WWSP) team, including partners, are strategizing regarding the higher-than-expected project bid amounts received for the RES_1.0/PLM_5.3 and WTP_1.0 projects (see attached presentation). Mr. Kraska explained the construction

manager/general contractor project approach, where the contract is brought into the process at the 30% design completion stage and works with the team through full design completion. The contractor then breaks up the project into bid packages and assembles those packages into a guaranteed maximum price (GMP) to complete all of the work. He shared how the WWSP team is analyzing GMP results for both projects.

In response to questions, staff said:

- Partnering agencies remained committed to the completion of the WWSS on time.
- The projects that have already been approved to be deferred until around 2029 are not included in these budget impact assessments.
- Any additional information that has been collected between now and the special WWSS Commission Board meeting on January 20 will be provided to the TVWD Board at their January 19 regular meeting.
- There will be meetings of both the Board subcommittees for both finance and water supply in the near term to discuss potential financial options and strategies.

Commissioners expressed support for continuing toward WWSS completion in 2026.

ADJOURNMENT

There being no further business, President Sanders adjourned the meeting at 7:31 p.m.

Todd Sanders, President

Jim Doane, Secretary



MEMO

Date: January 4, 2022

To: TVWD Board of Commissioners

From: Tom Hickmann, CEO

Re: CEO Announcements

The following Announcements will be covered during the work session:

1. **Be Sure to Unmute and Mute** – Please remember to unmute whenever you are speaking and mute yourself when you are done during the work session this evening.
2. **January 19 Talkin' Water** – As a reminder, TVWD's next virtual forum event will be held noon, January 19, and feature the 209th Farmington Facility project, which will break ground in the spring 2022. Our project team will discuss the site's future layout, functionality, and the upcoming construction impacts to bring the project from conceptual to completed. The 209th & Farmington Facility will be an important location for TVWD as we transition the water system to the WWSS in 2026 and beyond. Pre-registration is not required for this event. You can find the link at: www.tvwd.org/talkingwater.
3. **Board Communications Log** – There were no updates to the Board communications log this month.
4. **Safety Minute** – Dave Kraska, Willamette Water Supply Program Director, will present tonight's safety minute.



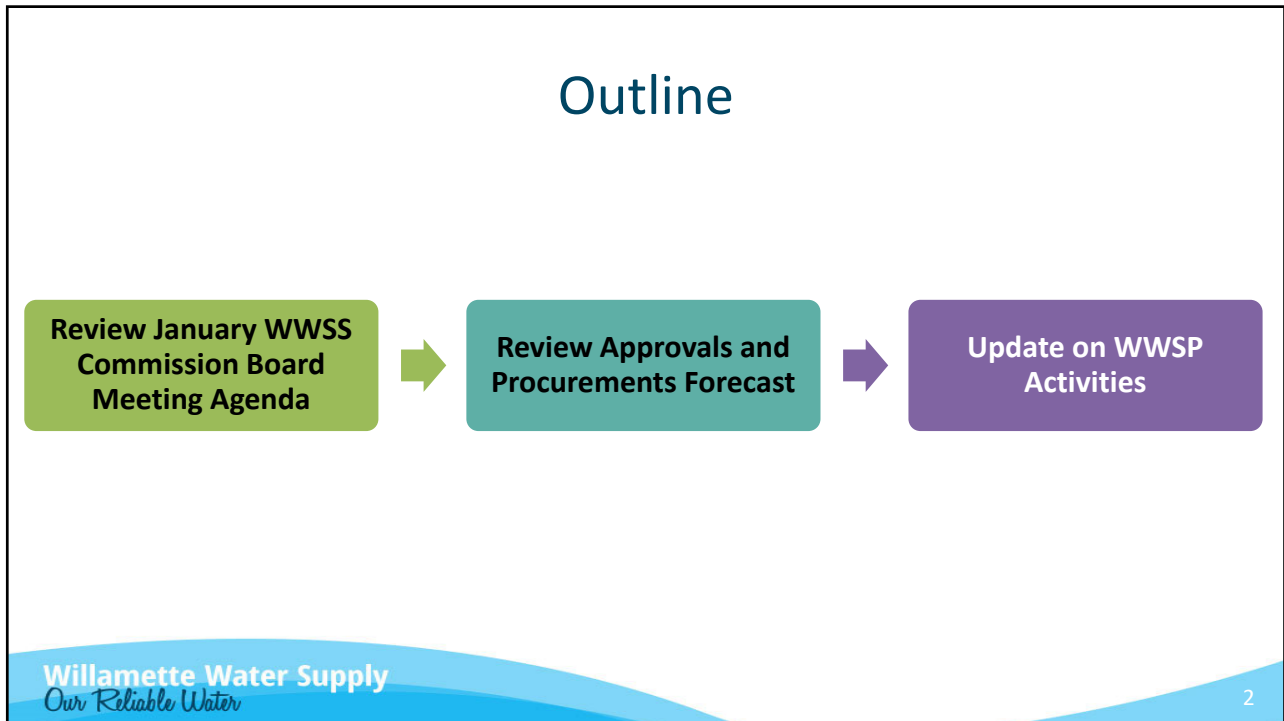
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**Willamette Water Supply System
Commission Update**

TVWD Work Session

January 4, 2022

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Outline

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graph LR; A[Review January WWSS Commission Board Meeting Agenda] --> B[Review Approvals and Procurements Forecast]; B --> C[Update on WWSP Activities];
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Review January WWSS Commission Board Meeting Agenda

Review Approvals and Procurements Forecast

Update on WWSP Activities

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REVIEW JANUARY WWSS COMMISSION BOARD MEETING AGENDA

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Willamette Water Supply System Commission January 6, 2022 Board Meeting Agenda

1. General Manager's Report
2. Public Comment
3. Consent Agenda
 - A. Approve the December 2, 2021 meeting minutes
 - B. Accept Financial Statements and Report of Independent Auditor for the Fiscal Year Ended June 30, 2021
4. Business Agenda
 - A. Election of Officers
 - B. Adopt PLM_5.3 Resolution of Need (fifth supplemental)
5. Information Items
 - A. Market Conditions and Outlook
 - B. Planned February Business Agenda items

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REVIEW APPROVALS AND PROCUREMENTS FORECAST

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Approvals and Procurement Forecast for December 2021 – February 2022 Program Baseline or Related Plans

| Description | Program Director | WWSS Management Committee | WWSS Commission Board |
|--|------------------|---------------------------|-----------------------|
| PLM_5.3 Add Accommodations for Temporary Pump Station Connection and Use during WWSS Commissioning | NA | 12/16/2021 | NA |

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Approvals and Procurement Forecast for December 2021 – February 2022

Real Estate

| Description | Program Director | WWSS Management Committee | WWSS Commission Board |
|---|------------------|---------------------------|-----------------------|
| PLM_1.3 Resolution of Need (5 th supplemental) | NA | 11/18/2021 | 12/2/2021 |
| PLM_5.3 Resolution of Need (5 th supplemental) | NA | 12/16/2021 | 1/6/2022 |

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Approvals and Procurement Forecast for December 2021 – February 2022

IGAs, MOUs, Permit Commitments

City of Sherwood

- DCS_1.0 Broadband Services IGA (April)
- Emergency Intertie IGA (February)

Bonneville Power Administration

- PLM_1.3 Reimbursement Agreement (June)

City of Wilsonville

- PLM_1.0 Ground Lease Amendment 1 (September)

Washington County Land Use & Trans

- RES_1.0 Grabhorn Road Realignment IGA (November)
- PLM_4.4 Construction IGA (November)
- PLM_4.2 Construction IGA (February)

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Approvals and Procurement Forecast for December 2021 – February 2022

Contracts

| Title | Goal | Value | Key Dates |
|-----------------------------------|--|----------|--------------------------------|
| WTP_1.0 Tree Clearing | Clear trees from WTP site before bird nesting season | \$1.1M | WWSS Board Approval: 12/2/2021 |
| PLM_1.3 Contract for Construction | Construct PLM_1.3 | ~\$37.6M | WWSS Board Approval: 2/3/2022 |

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Approvals and Procurement Forecast for December 2021 – February 2022

Contract Amendments and Change Orders*

| Title | Goal | Value | Key Dates |
|--------------------------------------|-------------------------------|----------|-------------------------------|
| RES_1.0/PLM_5.3 GMP for Construction | Construct RES_1.0 and PLM_5.3 | \$127.5M | WWSS Board Approval: 1/6/2021 |
| WTP_1.0 GMP for Construction | Construct WTP_1.0 | TBD | WWSS Board Approval: 2/3/2021 |

*having values higher than the Program Director's authority

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Approvals and Procurement Forecast for December 2021 – February 2022

Local Contract Review Board Rule Exemption

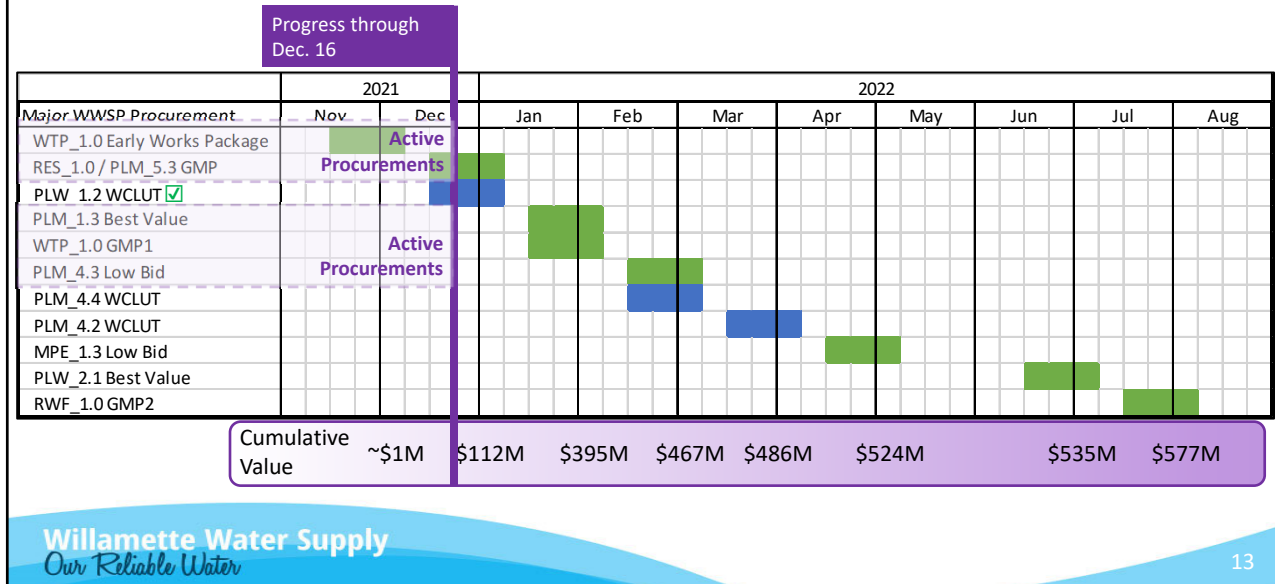
| Title | WWSS Management Committee Approval | WWSS Board Informational Item | WWSS Board Consider Approval |
|-------|------------------------------------|-------------------------------|------------------------------|
| -- | -- | -- | -- |

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UPDATE ON WWSP ACTIVITIES

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Status of Major FY22 Procurements



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Recent Guaranteed Maximum Price Results

RES_1.0/PLM_5.3

- Status: CM/GC's final (amounts may change)
- Value: ~\$150M (GMP 1, GMP2)
- Baseline: \$117M
- Baseline Schedule:
 - Final Submittal – Dec 7
 - Stage Gate – Dec 9
 - MC – Dec 16
 - Board – Jan 6
- Proposed Approval: Jan 20, 2022 Special WWSS Board Meeting

WTP_1.0

- Status: Draft (amounts may change)
- Value: ~\$420M (Tree clearing, GMP1, GMP2)
- Baseline: \$292M (w/MR "earmark")
- Baseline Schedule:
 - Draft Submittal – Dec 17
 - Final Submittal – Jan 12
 - Stage Gate – Jan 19
 - MC – Jan 20
 - Board – Feb 3
- Proposed Approval: Mar 3, 2022 Regular WWSS Board Meeting

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Quality of GMPs

| Considerations | WTP_1.0 GMP | RES_1.0/PLM_5.3 GMP |
|---------------------|--|--|
| Market Outreach | Local organizations outreach Prebid meetings with potential subs/vendors Advertisements (early and bid) Website (WTP bid page) | Local organizations outreach Prebid meetings with potential subs/vendors Advertisements (early and bids) Website |
| Bidders per Package | <u>Example Packages (~60% of cost)</u> Concrete, 2 bids, \$41.0M Earthwork/Utilities, 2 bids, \$57.0M Process Install, 3 bids, \$48.9M Electrical, 5 bids, \$41.1M | <u>Bid Response for GMP2 Packages and Total Cost</u> 1 bidder, \$5.5M 2 bidders, \$10.2M 3 bidders, \$74.9M >3 bidders, \$2.0M |
| Bid Spreads | <u>Example Packages (low bid v. 2nd low)</u> Concrete, 2.5% Earthwork/Utilities, 0.03% Process Install, 15% Electrical, 2.4% | <u>Example Packages (low bid v. 2nd low)</u> Structural Concrete, 14.4% Earthwork, 2.1% Pipeline Install 1.8% Electrical 0.8% |
| Vetting Process | Reviewed bid packages (approx. 70) Reviewed and negotiated leveling SME/Estimator review GCs review (in process) <i>This process is continuing</i> | Reviewed bid packages (40) Reviewed and negotiated leveling SME/Estimator review GCs review Early staffing negotiations Determined escalation allowance |

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GMPs Cost Drivers

| Cost Drivers | WTP_1.0 GMP | RES_1.0/PLM_5.3 GMP |
|---|--|---|
| Supply chain interruptions | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Labor availability (including competition & vaccine mandates) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Trucking and shipping (availability and fuel cost) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Project duration (future market risk) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> (to re-bid fencing & site concrete) |
| Market escalation (including compounding) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Bid exclusions | <input checked="" type="checkbox"/> (to be resolved) | <input checked="" type="checkbox"/> |
| General material and market uncertainty | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Project elements (scope development/clarification since Baseline 6.1) | Scope clarifications for 124 th Ave and City of Sherwood requirements | 2 nd retaining wall for detention basin, security system, Flow & Eddy materials, landscaping (rock excavation & temp. irrigation), fencing |

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Cost Drivers for Recent GMPs are Consistent With Prevailing Market Conditions

San Francisco Public Utilities Commission

- Construction activity increasing rapidly due to pent up demand
- Large increases in raw materials prices and labor shortages
- Anticipate bids to continue coming in 30 – 40% over estimate

Association of General Contractors of America

- “The construction industry is in the midst of a period of exceptionally steep and fast-rising costs for a variety of materials”

Clark Construction Market Insight (Q3 2021)

- “All indicators denote a large amount of work coming to market in the next 12 months and beyond”

Sundt

- Experiencing similar cost increases across the country
- Highest increases are in markets with limited competition – in other words, the smaller Oregon market is seeing higher increases than in larger metropolitan markets like San Francisco or Los Angeles
- Increases are due in part to the current market uncertainty combined with the long project duration
 - Everyone is short on staff – admin, craft, delivery
 - No one is certain of the direction materials prices will take, and our GMP needs to hold into 2025
- The construction industry is not seeing a let up even with the higher prices
- The private industrial market is competing with the public side – private industrial projects have hard deadlines and owners are willing to pay whatever it takes to meet them including paying a premium to get the craft they need
- Facilities project like the WTP are very different from pipeline projects – with pipelines, all materials are bought within 30 days of NTP and far fewer trades are involved

Recent (2021) Water Infrastructure Examples from Other Utilities Completing Similar Projects

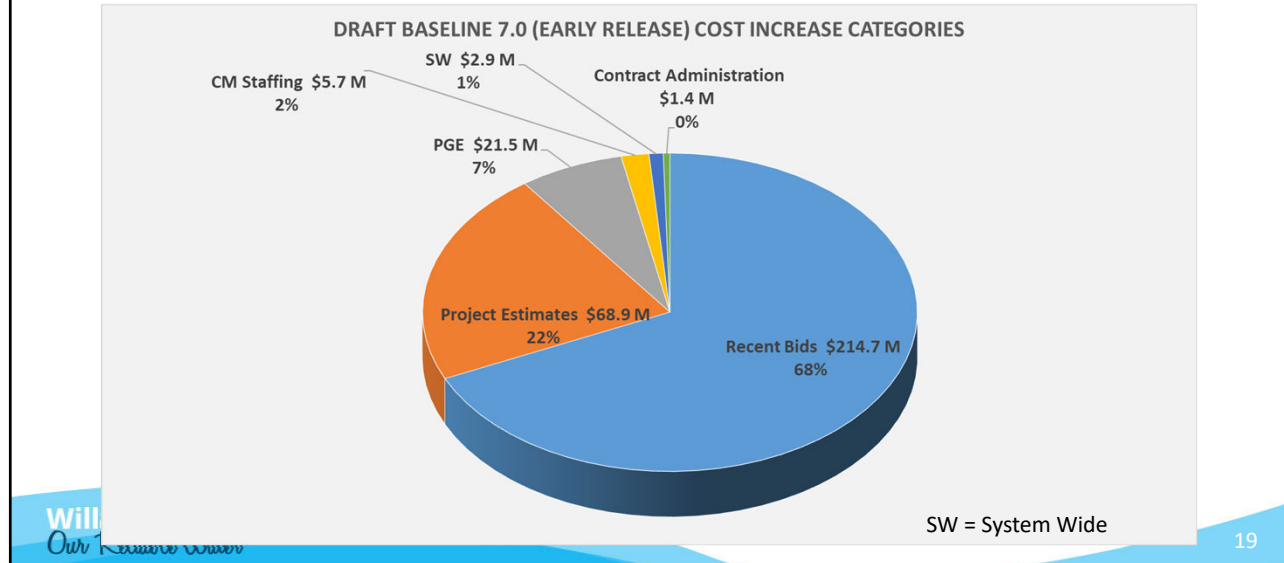
| Owner | Project | Estimate (\$M) | Median Bid (\$M) | Median Bid / Estimate |
|--|--|----------------|-----------------------|-----------------------|
| South County Regional Wastewater Authority, CA | Plant Capacity Expansion Project | \$57.0 | \$73.2 | 28% |
| Miami-Dade Water and Sewer Department, FL | Wastewater Plant 2 Digester Cluster 3 Facility Upgrade | \$36.8 | \$51.1 | 39% |
| Tuolumne Utilities District, CA | Sonora Regional Wastewater Treatment Facility Upgrades * | \$25.0 | >\$35.0 | >40% |
| East Bay Municipal Utilities District, CA | San Pablo Reservoir Hypolimnetic Oxygen System | \$7.1 | \$10.0 | 41% |
| City of Antioch, CA | Antioch Brackish Water Desalination | \$67.0 | \$95.0 | 42% |
| Santa Clara Valley Water District, CA | Rinconada Water Treatment Plant | \$17.3 | \$24.5 | 42% |
| Central Contra Costa Sanitary District, CA | Dewatering Project ** | \$130.0 | >\$200.0 | >54% |
| Confidential Client (Seattle Area) | Pump Station * | \$16.0 | >\$25.0 | >56% |
| Union Sanitation District, CA | Aeration Basin Upgrades | \$84.0 | \$142.0 | 68% |
| | | | Overall Median | >42% |

Notes:

*Only winning (presumably lowest) bid amount available

**Complete bid data not available

Preliminary Evaluation of Market Conditions on Remaining WWSP Work Forecasts Overall \$315M Increase

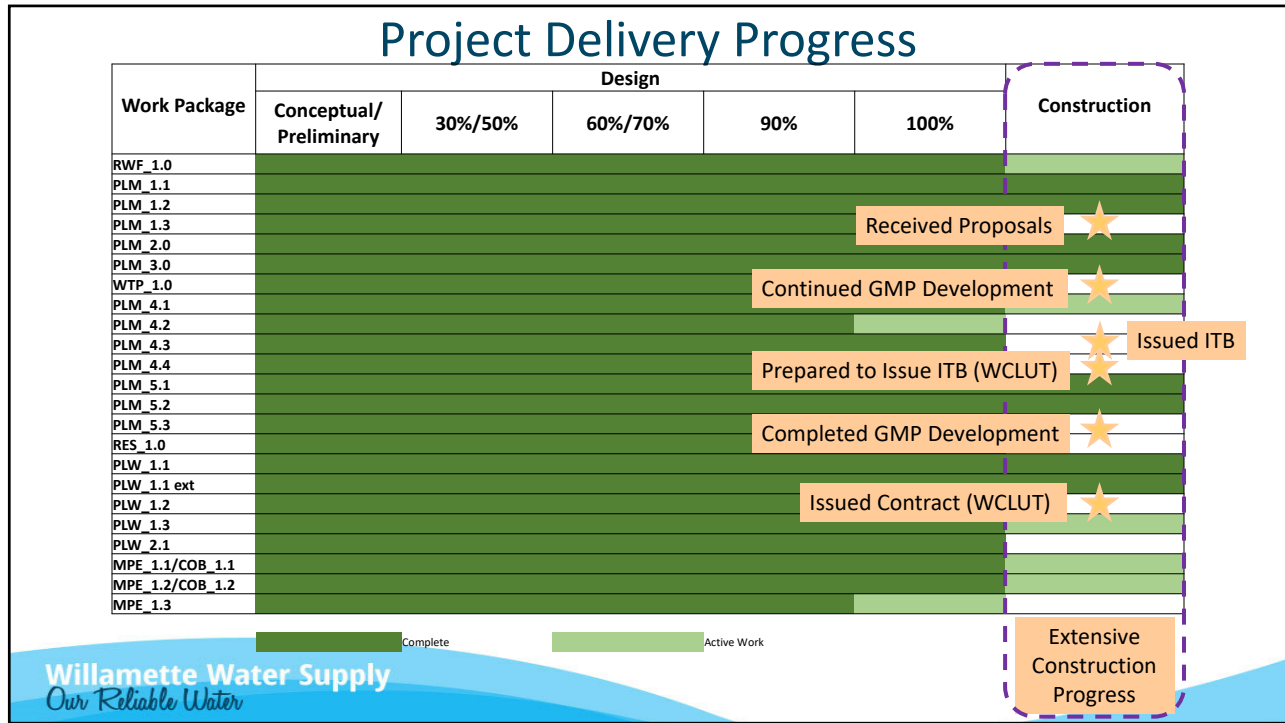


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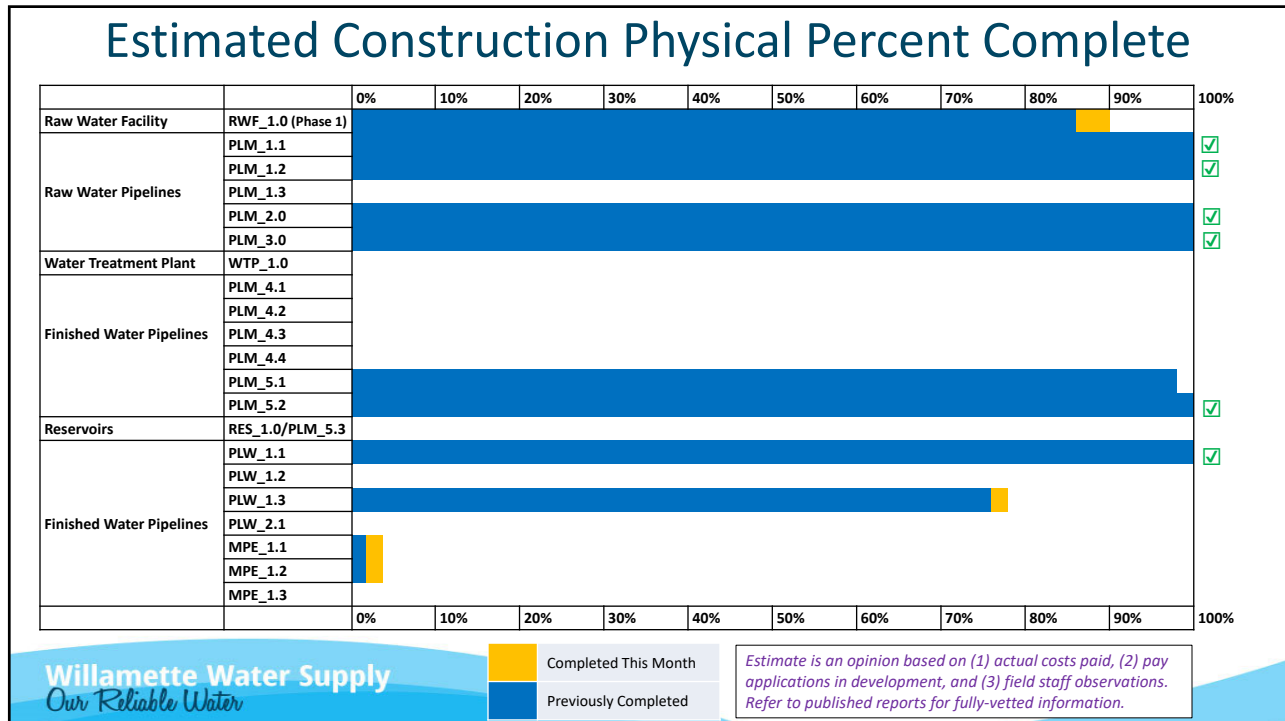
Financial Evaluations are Underway, but Schedule Maintenance Remains a Key Concern

- WWSP provided updated cash flow spreadsheets (early-release version of Baseline 7.0) on December 28 to the Partners
- Finance teams are reviewing the impacts of these cost changes
- Finance coordination meeting scheduled for February 11
- Approving the RES_1.0/PLM_5.3 GMP on January 20 is critical to staying on schedule for permitted work
- Approving the WTP_1.0 GMP on March 3 is critical to maintain schedule and avoid rebidding work

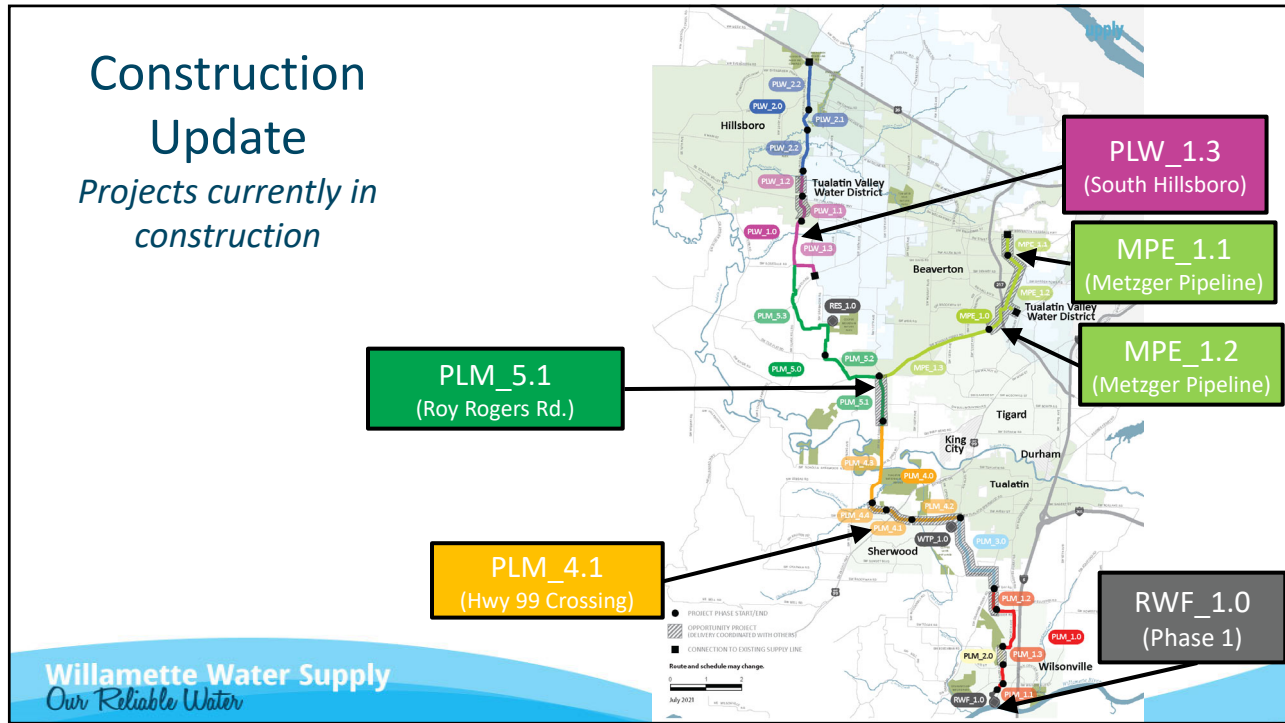
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RWF_1.0

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

Current and Planned Activities:

- Completed sediment removal from existing intake piping
- Completed seismic reinforcing at all joints on existing intake piping
- Completed all seismic structural modifications all RWPS walls and roof
- Completed roof repairs/reinstallation at Raw Water Pump Station
- Began replacement of new air burst system
- Completed permeable paving roadway
- Continued landscape work at riverbank slope, pedestrian trails and overlook
- Continued restoration/grading of upper site

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Construction Photos – RWF_1.0

Raw Water Pump Station
concrete complete, lower
slope landscaping work



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Construction Photos – RWF_1.0

Raw Water Pump Station
seismic modifications and
new concrete walls
complete



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Construction Photos – RWF_1.0

Hillside reconstruction
at sending shaft



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Construction Photos – RWF_1.0

Precasting concrete for
flowmeter vault lid



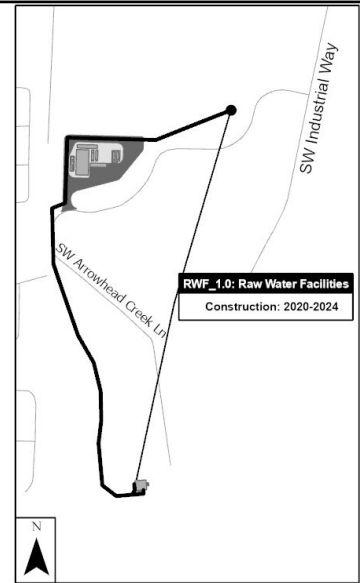
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RWF_1.0 Notable Topics

- External Coordination
 - Continued coordination w/City of Wilsonville and Veolia Operations staff.
- Potential Claims
 - None.
- Delivery Challenges
 - None.



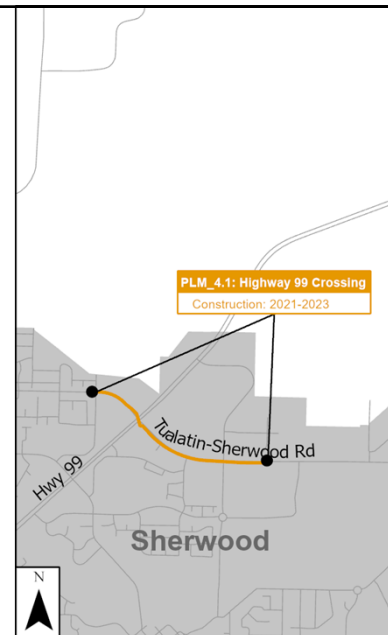
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PLM_4.1

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

Current and Planned Activities:

- Sidewalk demolition
- Clearing and grubbing
- Early road widening activities
- WWSP submittals and RFIs



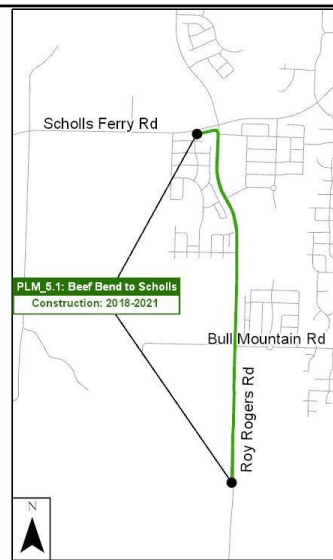
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PLM_5.1

Partner: Washington Co.
 Contractor: Tapani, Inc.
 (Moore Excavation Inc. – Waterline Sub)
 Designer: Jacobs

Current and Planned Activities:

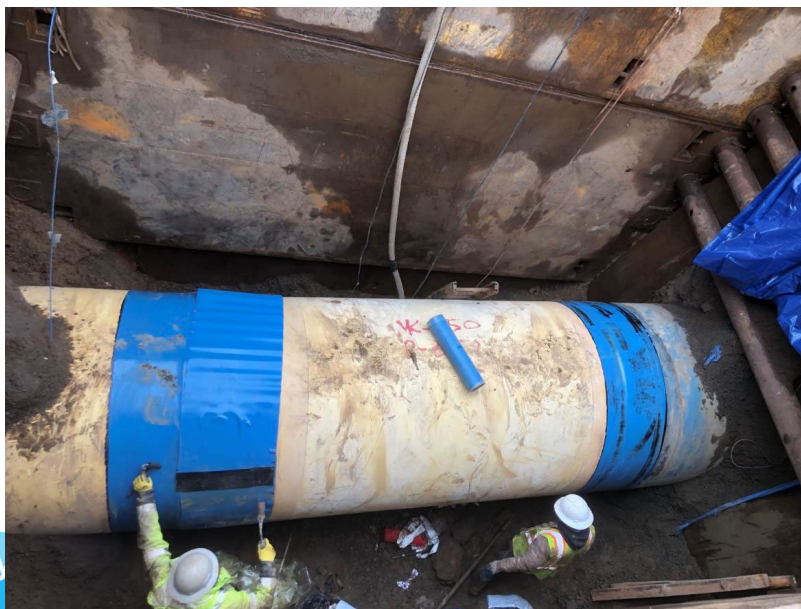
- Disinfection and flushing complete
- Tie-in to PLM_5.2
- Punch list work



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Construction Photos – PLM_5.1

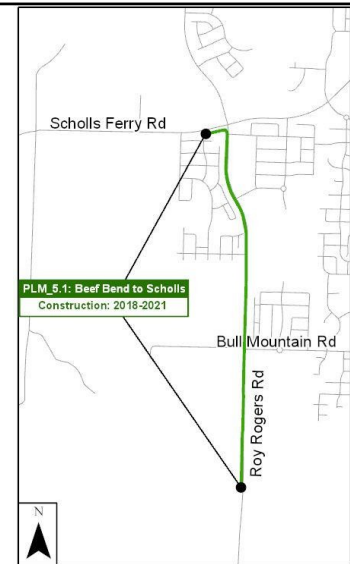
Tie-in connection to
 PLM_5.2.
 Shrink sleeve
 installation



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PLM_5.1 Notable Topics

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



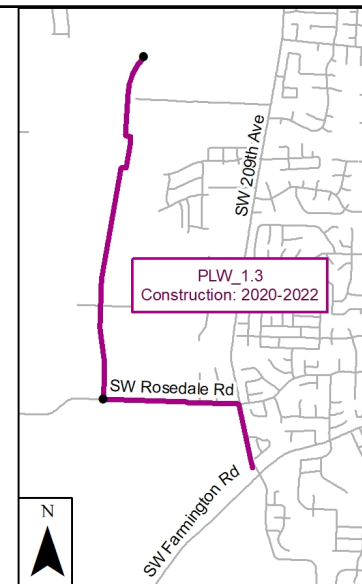
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PLW_1.3

Contractor: Tapani, Inc.
Designer: Kennedy/Jenks

Current and Planned Activities:

- Continue 66-inch open cut pipe installation (approx. 4600 LF or 68% installed)
- Haul road and wetland restoration
- Completed retaining wall construction for Butternut Creek turnout vaults
- South shaft backfill completed



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Construction Photos – PLW_1.3

Retaining wall construction at Hillsboro turnout



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Construction Photos – PLW_1.3

Backfill of 66" waterline north of Butternut Creek



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Construction Photos – PLW_1.3

Placing 66" waterline south of Butternut Creek



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Construction Photos – PLW_1.3

Wetland restoration and haul road removal on south end of alignment



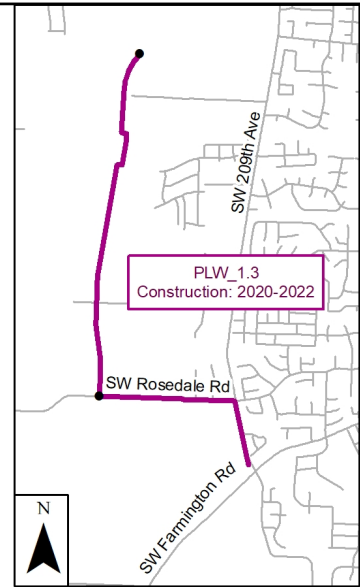
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PLW_1.3 Notable Topics

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



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MPE_1.1

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

Current and Planned Activities:

- Storm drain installation
- Beginning sewer pipeline work
- Utility potholing
- WWSP submittals and RFIs



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Construction Photos – MPE_1.1



Utility potholing



Fiber optic conduit in pothole

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MPE_1.1 Notable Topics

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



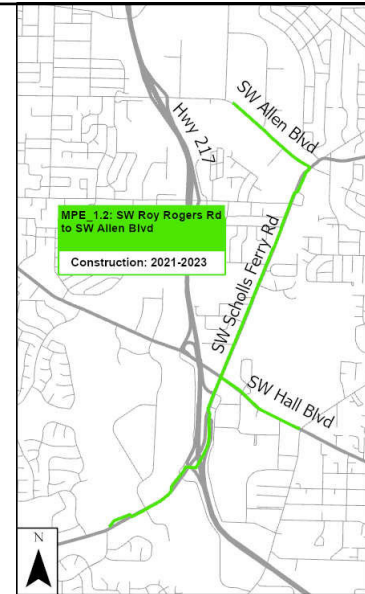
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MPE_1.2

Contractor: Emery & Sons
Designer: Brown & Caldwell

Current and Planned Activities:

- Excavate and install shoring for jacking pit on west side of Hwy 217
- Excavate and install shoring for receiving pit on east side of Hwy 217
- Settlement monitoring
- Dewatering and erosion and sediment control



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Construction Photos – MPE_1.2

Excavation and shoring for Hwy 217 tunnel jacking pit



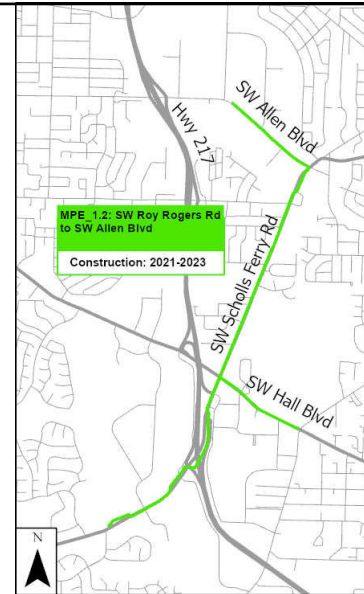
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MPE_1.2 Notable Topics

- External Coordination
 - Coordinating with ODOT on adjacent projects
- Potential Claims
 - None
- Delivery Challenges
 - None



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QUESTIONS?

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