



TUALATIN VALLEY
WATER DISTRICT

Board Work Session Minutes

May 7, 2024

WORK SESSION – 6:00 PM

CALL TO ORDER

Commissioners Present: Jim Doane, PE; Jim Duggan, PE; Carl Fisher; Elliot Lisac, Todd Sanders, PhD

Staff Present: Paul Matthews, Chief Executive Officer; Justin Carlton, Chief Financial Officer; Pete Boone, PE, Chief Operating Officer; Dave Kraska, PE, Water Supply Program Director; Kylie Bayer, Human Resources Director; Andrew Carlstrom, Customer Service Director; Tim Boylan, IT Services Director; and Sam Kaufmann, District Recorder.

ANNOUNCEMENTS

Paul Matthews presented the Chief Executive Officer announcements.

DISCUSSION ITEMS

- A. Willamette Water Supply System Commission Update. *Staff Report – Dave Kraska, PE, Willamette Water Supply Program Director.*

Dave Kraska, PE, gave his update on the Willamette Water Supply System Commission.

- A. Service Line Inventory Project Update. *Staff Report – Joel Cary, Water Resources Division Manager*

Joel Cary presented his update on the service line inventory project.

Commissioner Doane expressed his support for the service line inventory project.

ADJOURNMENT

There being no further business, President Sanders adjourned the meeting at 7:03 PM

Todd Sanders, President

Jim Doane, Secretary





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SENATE BILL 1530 UPDATE

Press Release

- On Thursday, May 2, TVWD sent a press release highlighting the Oregon legislature's allocation of \$3 million award to TVWD for the 189th Ave Pump Station and Pipeline Project.
- The press release thanked the legislature, Representative Ken Helm, and Governor Tina Kotek for recognizing the importance of water infrastructure in housing development.

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TALKIN' WATER

Tips for Irrigation Systems

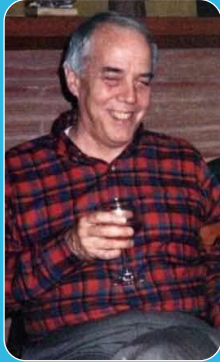
- As a reminder, the next *Talkin' Water* virtual forum will be held at noon tomorrow, May 8.
- This *Talkin' Water* virtual forum will provide our customers tips for turning on their irrigation systems and setting their irrigation controllers.
- The virtual forum will also emphasize backflow prevention and the requirement for annual testing.
- The District's website has the link to join this event; Commissioners are welcome.

DEI PROJECT UPDATE

Successful Staff Survey

- Staff provided thoughtful DEI feedback through a survey where nearly 90 percent of employees responded.
 - This high level of employee participation is extraordinary even if we're finding it to be routine.
- Next steps:
 - Focus groups and interviews to further explore TVWD's DEI practices;
 - Consultants will conduct detailed data analysis to better interpret survey results;
 - Consultants will provide a draft findings report, including insights and recommendations; and
 - Once approved by District leadership, consultant will present its findings to the organization.

PASSING OF HARRY BODINE



- Community Leader that lived in Cedar Hills for 58 years
- Active in his church and community
- Served in many roles for the Washington County Community Library System
- Family member of Dale Fishback, retired Manager of TVWD's Field Operations Department
- Advocate for the District's investment in the Willamette Water Supply System

TVWD KID'S DAY

- In closing, I'm including a few more photos from Kid's Day held April 25th.
- This event teaches future generations about the water industry and is a tradition enjoyed by staff and youth alike.



KID'S DAY 2024



BOARD COMMUNICATIONS LOG

There was one update to the Board Communications Log this month. Notes from the April 2nd Water Supply Committee meeting were emailed to Commissioners.

Willamette Water Supply
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**Willamette Water Supply System Commission
Update**

TVWD Board Work Session
May 7, 2024

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Outline

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

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REVIEW JUNE WWSS COMMISSION BOARD MEETING AGENDA


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Willamette Water Supply System Commission June 6, 2024 Board Meeting Agenda

1. Executive Session
2. Public Comment
3. General Manager's Report
4. Consent Agenda
 - A. Approve the April 4, 2024 meeting minutes
 - B. Adopt Resolution WWSS-XX-24 Adopting FY 2024-25 WWSS Board Meeting Schedule
5. Business Agenda
 - A. Approve WTP_1.0 GMP No. 3 Contract for Construction
 - B. Approve WWSP Program and Construction Management Services FY25 Annual Work Plan
 - C. Approve Amendment to Public Outreach Services Contract
 - D. Approve Amendment to WTP_1.0 Design Contract
 - E. Approve as Local Contract Review Board (LCRB) a Special Procurement for DCS_1.0 Control System Support
6. Information Items
 - A. Water Treatment Plant Schedule Recovery Progress Update
 - B. Completed Construction Project Cost Management/Performance
 - C. Planned August Business Agenda items
 - D. The next Regular Board Meeting scheduled on August 1, 2024


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REVIEW APPROVALS AND PROCUREMENTS FORECAST

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Approvals and Procurements Forecast for April – August 2024

Program Baseline or Related Plans

Description	Program Director	WWSS Management Committee	WWSS Commission Board
WWSP 2024 Rebaseline Schedule and Budget and WWSS Fiscal Year 2024-25 Work Plan and Budget	N/A	3/21/2024	4/4/2024

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Approvals and Procurements Forecast for April – August 2024

Real Estate

Description	Program Director	WWSS Management Committee	WWSS Commission Board
None	--	--	--

Approvals and Procurements Forecast for April – August 2024

IGAs, MOUs, Permit Commitments

None currently

Approvals and Procurements Forecast for April – August 2024

Contracts

Title	Goal	Value	Key Dates
None	--	--	--

Approvals and Procurements Forecast for April – August 2024

Contract Amendments and Change Orders*

Title	Goal	Value	Key Dates
Permitting Services Contract Amendment for Next One-year Period	System-wide permitting services for the next year	\$819K	WWSS Board Approval: 4/4/2024
WTP_1.0 GMP3 for Construction	Perform finished water system startup and commissioning	TBD	WWSS Board Approval: 6/6/2024
WWSP Program and Construction Management Services FY 2025 Annual Work Plan	Approve scope, staffing, and fee for program and construction management services for FY 2025	TBD	WWSS Board Approval: 6/6/2024
Public Outreach Service Contract Amendment	Provide additional public outreach during the term April 2024 – April 2025	TBD	WWSS Board Approval: 6/6/2024
WTP_1.0 Design Services Contract Amendment	Amend contract for related to additional required engineering services	TBD	WWSS Board Approval: 6/6/2024

*having values higher than the Program Director’s authority

Approvals and Procurements Forecast for April – August 2024

Local Contract Review Board Rule Exemption

Title	WWSS Management Committee Approval	WWSS Board Informational Item	WWSS Board Consider Approval
DCS_1.0 Special Procurement	5/23/2024	4/4/2024	6/6/2024



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Approvals and Procurements Forecast for April – August 2024

Other

Description	Program Director	WWSS Management Committee	WWSS Commission Board
Board Action Related to WWSP Performance Audit	--	3/21/2024	4/4/2024
Congressional Directed Spending Grant Technical Correction	--	3/21/2024	4/4/2024
WWSS Board Policies	--	7/18/2024	8/1/2024


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WWSP Schedule Recovery Progress Update
WWSP Construction Updates

UPDATE ON WWSP ACTIVITIES

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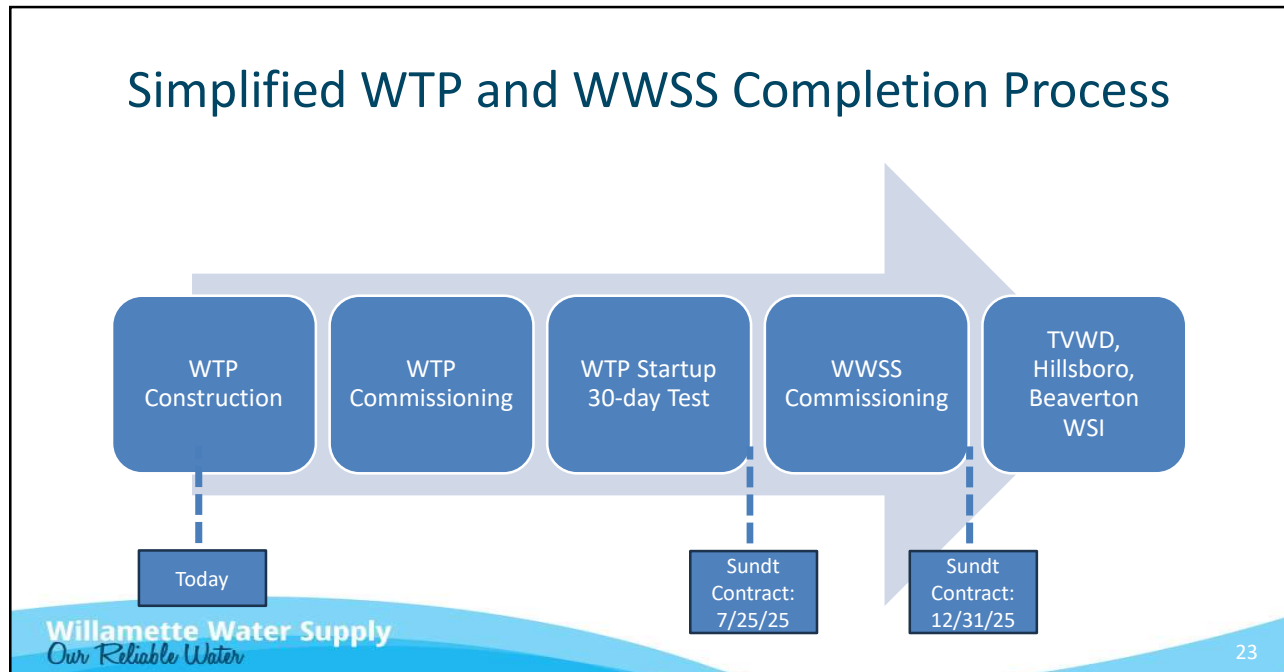
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WWSP SCHEDULE RECOVERY PROGRESS UPDATE

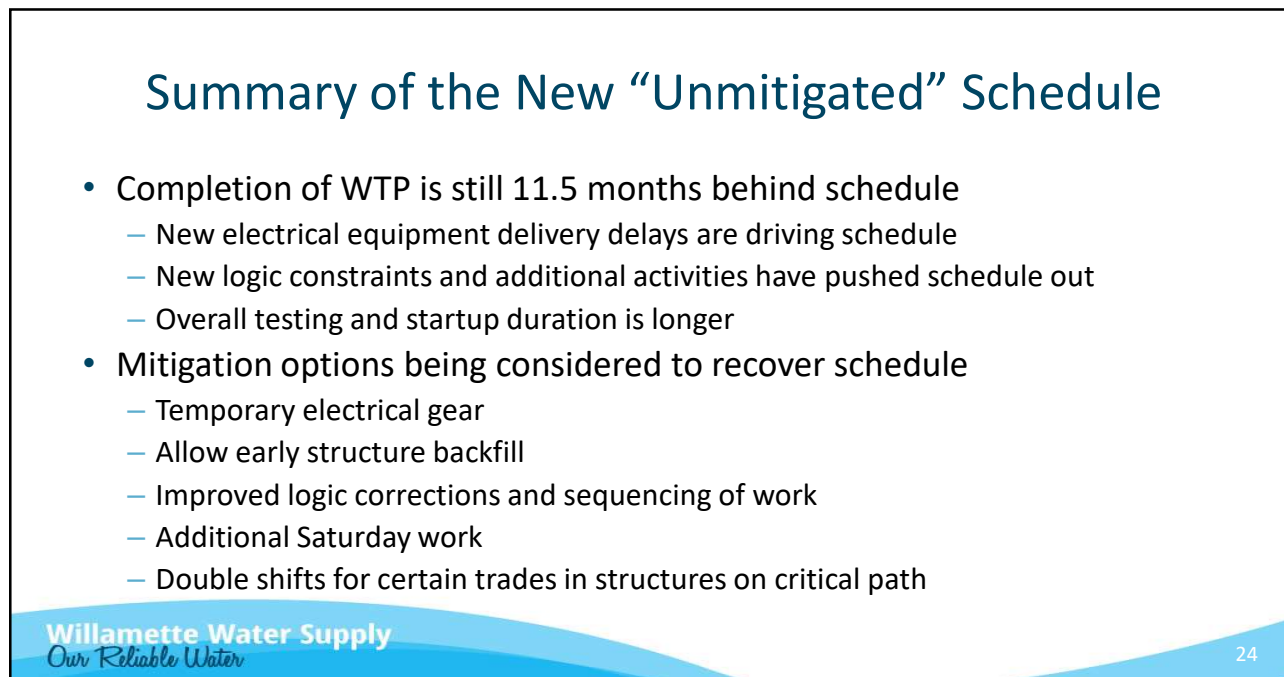
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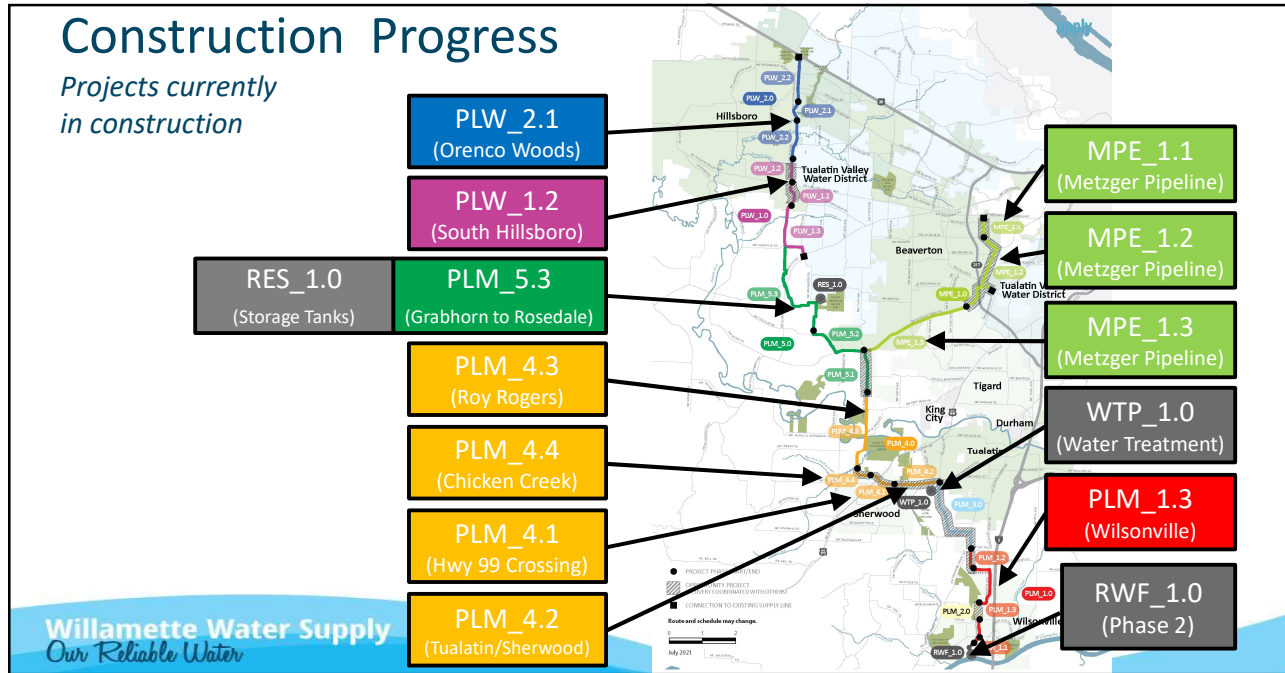


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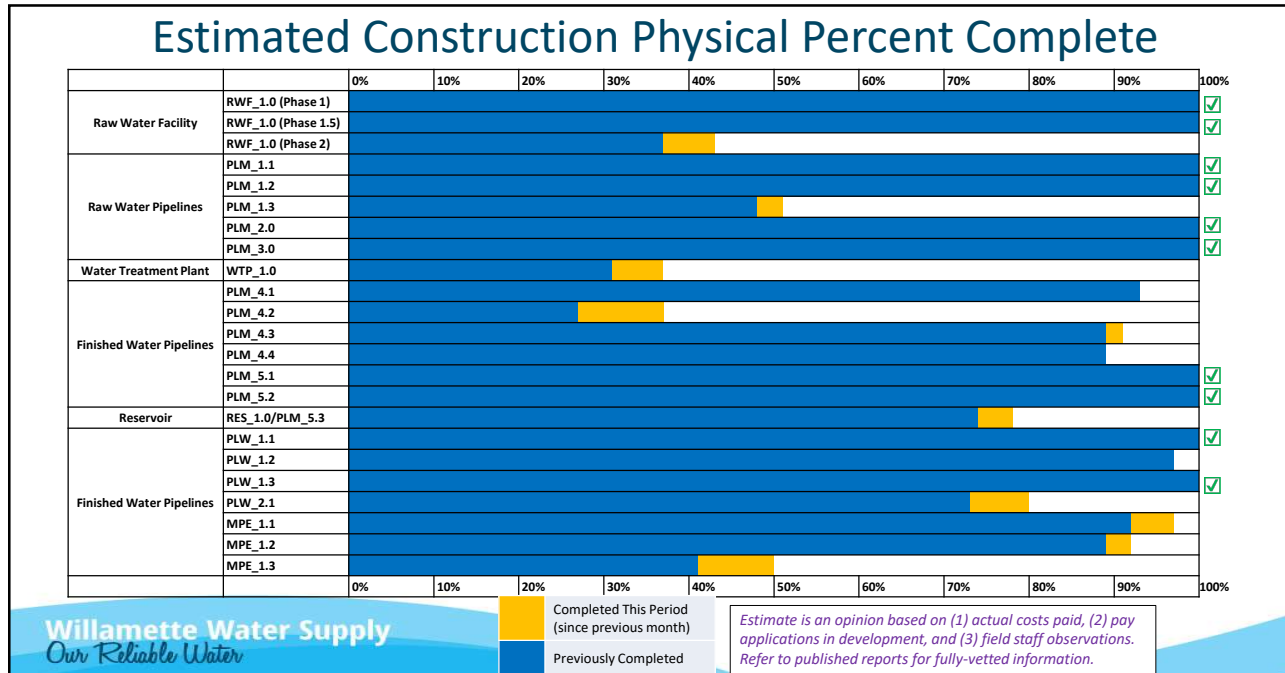
Some Current Actions & Next Steps

- Schedule recovery underway – working overtime and weekends.
- Electrical delay mitigation efforts are ongoing almost complete.
- Previous mitigation options are now slated to be included into the schedule update and should show substantial improvement.
- New Commissioning & Startup subconsultant improving that plan.
- WWSP Site Team continues to use delay tracking tools and management protocols to address and account for any delays.
- WWSP implemented a new weekly Schedule Performance Meeting with Sundt.
- Final “Recovery Plan” expected End of May.

WWSP CONSTRUCTION UPDATES



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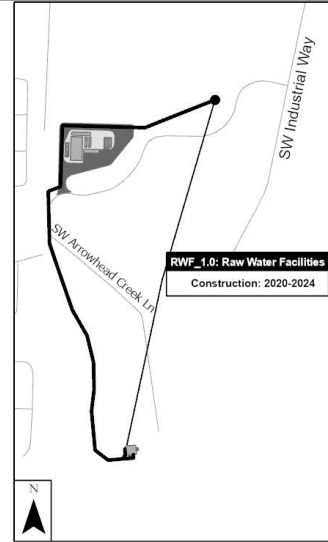
RWF_1.0 (GMP-2)

Contractor: Kiewit Infrastructure West Co.

Designer: Black & Veatch

Current and Planned Activities:

- Site grading and landscaping preparation
- Completed perimeter fence
- Continued work on interior HVAC ducting and controls
- USEB interior lighting fixtures and electrical
- Interior painting, flooring, plumbing, cabinets, etc.
- Surge tank piping connections
- Header pipe connections for vertical turbine pumps
- PGE continued work on 1.5MW electrical feeder project



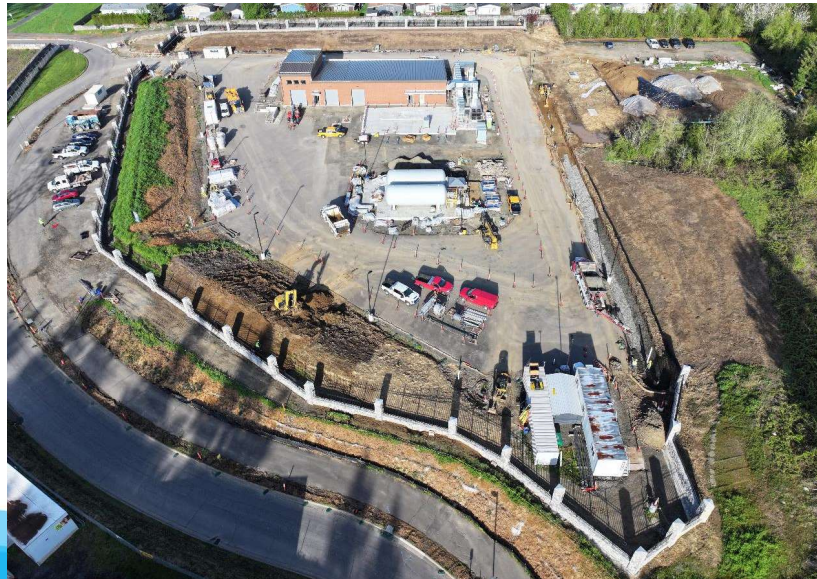
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Construction Photos – RWF_1.0 (GMP-2)

RWF_1.0 Upper Site –
perimeter fence complete



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Construction Photos – RWF_1.0 (GMP-2)

Surge tank piping connections

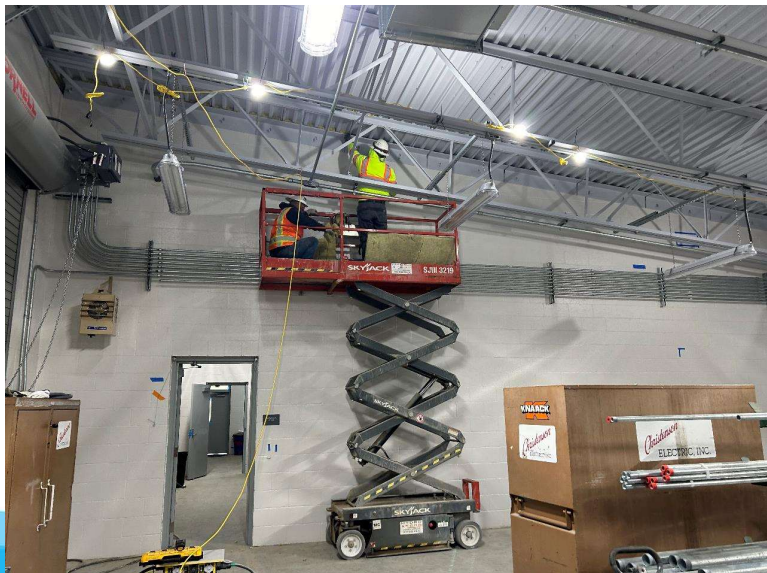


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Construction Photos – RWF_GMP-2.0

USEB Interior electrical work



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Construction Photos – RWF_GMP-2.0

Emergency Operations Center –
plumbing and interior fixtures



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PLM_1.3

Contractor: Moore Excavation Inc.
Designer: HDR

Current and Planned Activities:

- Completed pressure test of 66-inch pipe on Kinsman Rd.
- Began connections to PLM_1.1 and PLM_2.0 on Kinsman Rd.
- 66-inch waterline installation on 95th Ave.
- COW 12-inch waterline relocation on 95th Ave.
- Approximately 7,820 LF of 66" waterline installed (64% of total)
- Continued roadway restoration on Kinsman Rd.



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Construction Photos - PLM_1.3

66-inch waterline installation at Hillman Ct. and 95th Ave.



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Construction Photos - PLM_1.3

Installing dowels for concrete pavement restoration on Kinsman Rd.



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WTP_1.0

Contractor: Sundt Construction, Inc.
 Designer: CDM Smith

Current and Planned Activities:

- Area 03 (Site Work): 66" RAW and 66" FNW pipe continues.
- Area 04 (Offsite): SW 124th Ave. road widening
- Area 08 (Admin Building): Work continues with column foundations.
- Area 22 (Flash Mix): Concrete slab complete. Placing full height concrete walls.
- Area 25 (Ozone Generation): Duct bank work is on-going. Began elevator pit.
- Area 26 (Ozone Contactor) Concrete for effluent channel overflow box walls.
- Area 28 (Filters): Building lower gullet walls and decks.
- Area 30 (UV): Continue working on 84" pipe. Structural steel has begun.
- Area 34 (Chemical Building): Concrete containment walls and tank pads.
- Area 35 (Clearwell): Continue concrete walls and columns.
- Area 37 (EQ basin): Filling basin with water for hydrotest.
- Area 40 (Thickeners): Rebar and concrete work has begun.
- Area 50 (Dewatering): Duct bank and foundations.
- Area 52 (Thickened Sludge Pump Station): Placed concrete slab and began walls.
- Area 53 (FWPS): Process pipe installation has begun. Backfilling outside structure.



Construction Photos - WTP_1.0



Construction Photos - WTP_1.0



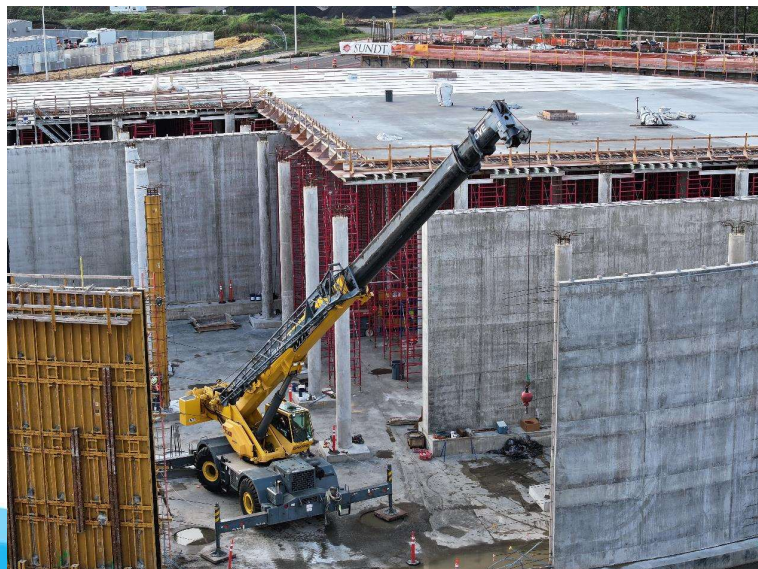
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Construction Photos - WTP_1.0

Clearwell roof deck
forming and shoring



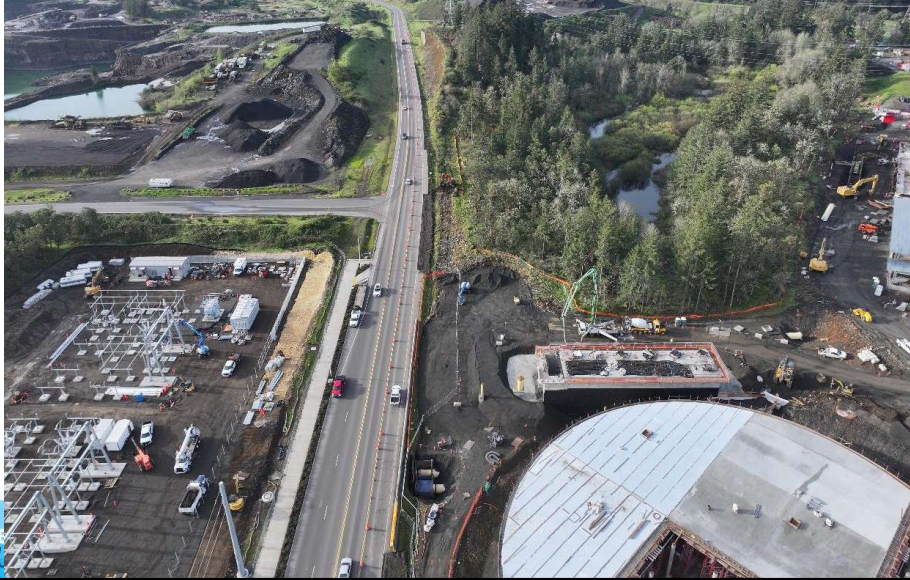
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Construction Photos - WTP_1.0



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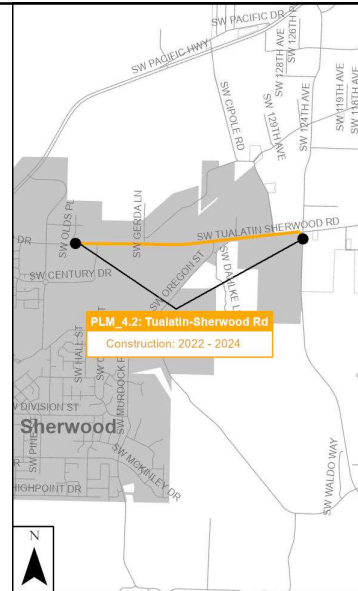
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PLM_4.2

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

Current and Planned Activities:

- 66-inch waterline installation along Tualatin-Sherwood Rd.
- Total of 2,000 LF of pipe installed (28% of total)
- Installed pipe across SW Wildrose Pl. and re-opened road
- Installing CARV vaults and associated piping
- County continuing road improvements
- Working through possible RR permit changes



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Construction Photos – PLM_4.2

66-inch waterline installation along Tualatin-Sherwood Rd.



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PLM_4.1

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

Current and Planned Activities:

- Continued preliminary deficiency list corrective work
- Continued road-related scope for Washington County



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Construction Photos – PLM_4.1

County road work near Hwy. 99 and Tualatin-Sherwood Rd. intersection



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PLM_4.4

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

Current and Planned Activities:

- Continued road-related work for Washington County
- Continued sewer forcemain work for CWS
- No WWSP work this period



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Construction Photos – PLM_4.4

Installing HDPE sewer forcemain in Roy Rogers Rd.



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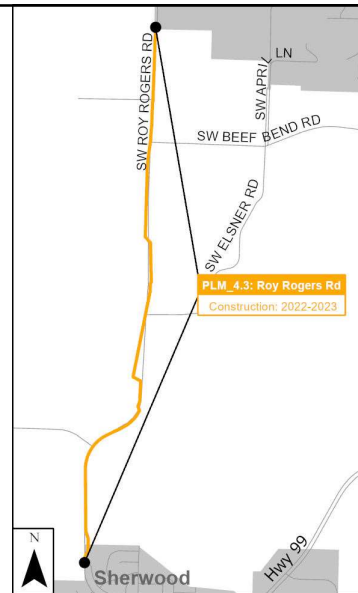
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PLM_4.3

Contractor: Tapani Inc.
Designer: Brown & Caldwell

Current and Planned Activities:

- Completed 66-inch waterline on north end of project
- 100% of waterline installed
- Disinfection and pressure testing
- Appurtenance installation



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Construction Photos – PLM_4.3

Installing trench shoring along Roy Rogers Rd. at north end of project.

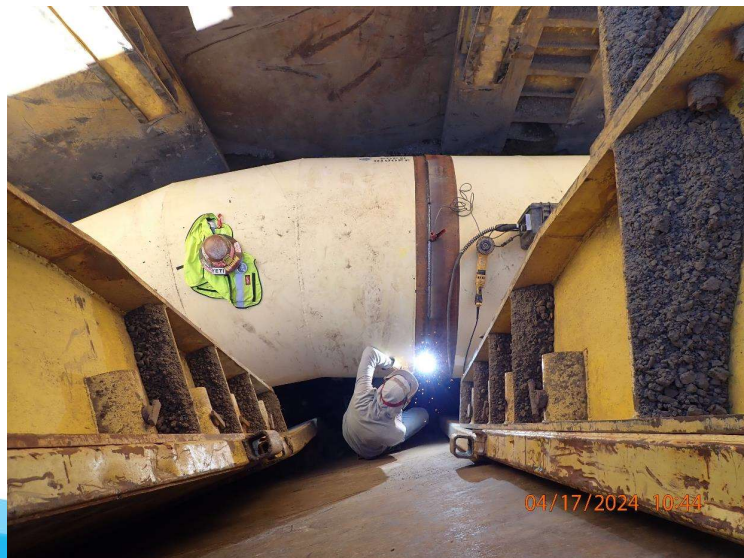


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Construction Photos – PLM_4.3

Double-lap weld on joint connection



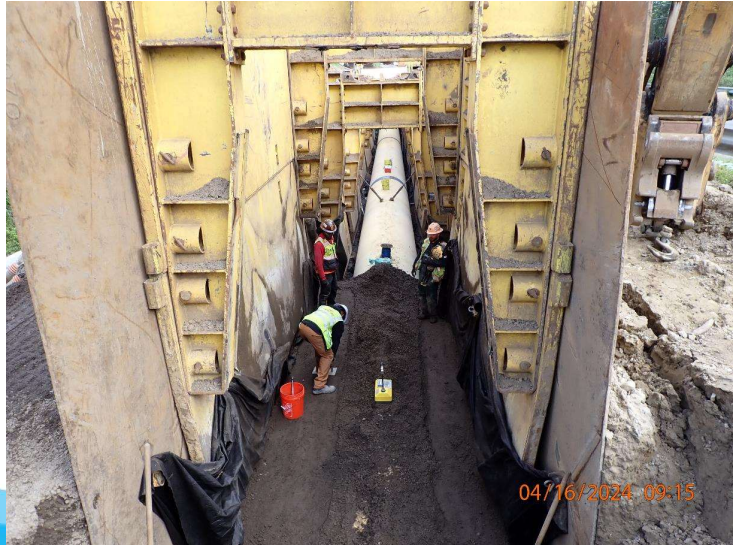
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Construction Photos – PLM_4.3

Backfill and compaction testing in trench for 66-inch waterline



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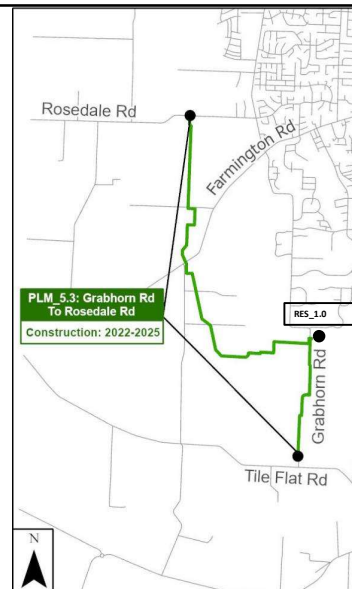
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RES_1.0 / PLM_5.3

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

Current and Planned Activities:

- RES_1.0
 - Completed pre-stress wire wrap and beginning final shotcrete layer on 15MG tank
 - Installing 4-inch washdown piping inside tank
 - Continued electrical duct bank and yard piping installation
 - Continued Water Quality Building interior painting and building systems
- PLM_5.3
 - Began remedial work to correct pipe deflection between Rosedale Rd. and Riggs Rd.
 - Continued appurtenance and cathodic protection system installations
 - Continued easement restoration in multiple locations



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Construction Photos – RES_1.0

Reservoir site



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Construction Photos – RES_1.0

Preparing for final shotcrete application to tank



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Construction Photos – RES_1.0

Interior of reservoir tank

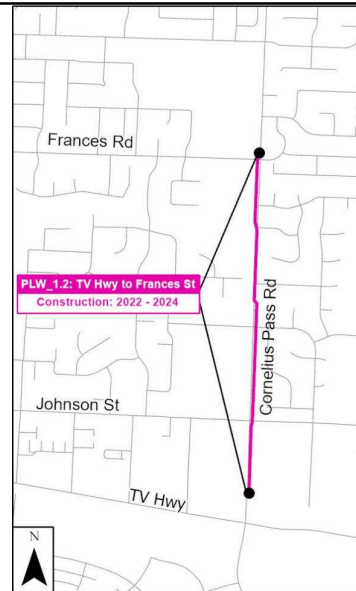


PLW_1.2

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

Current and Planned Activities:

- Final restoration of Reedville Creek Park
- Deficiency list items
- Closeout



Construction Photos – PLW_1.2

Striping parking lot at Reedville Creek Park



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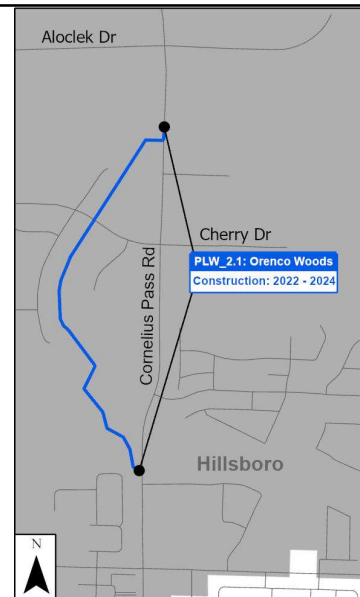
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PLW_2.1

Contractor: Moore Excavation, Inc.
Designer: Kennedy/Jenks

Current and Planned Activities:

- Completed grouting 48-inch waterline joints
- Completed 48-inch waterline pressure testing and disinfection
- Continued cathodic protection installation
- Began sidewalk and road restoration



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Construction Photos – PLW_2.1

Chart recorder for measuring pressure test of 48-inch waterline



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Construction Photos – PLW_2.1

Vent-Tech CARV and associated vent pipe installation inside vault



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Construction Photos – PLW_2.1

Sidewalk restoration along
Cornelius Pass Rd.



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MPE_1.1

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

Current and Planned Activities:

- Completed connections to existing Washington County Supply Line and returned line to service
- Completed trench paving at Western Ave. and re-opened intersection
- Continued appurtenance installation and testing at 96th Ave.



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Construction Photos – MPE_1.1

Trench paving at Western Ave. and Beaverton-Hillsdale Hwy.



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Construction Photos – MPE_1.1

New concrete island with CARV vault at Western Ave. and Beaverton-Hillsdale Hwy.



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Construction Photos – MPE_1.1

CARV vault and associated piping installation near 96th Ave.



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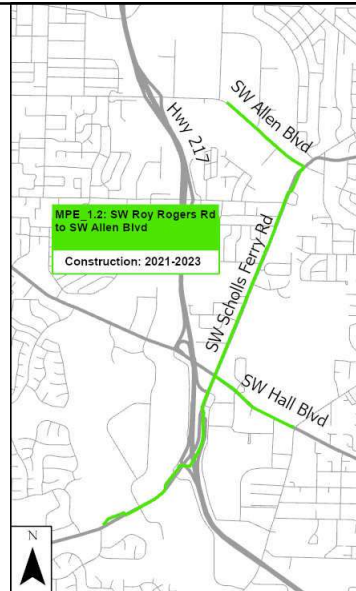
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MPE_1.2

Contractor: Emery & Sons
Designer: Brown & Caldwell

Current and Planned Activities:

- Completed backfill of receiving shaft at upper Fanno Creek
- Continued PFC building mechanical, HVAC, electrical and sitework
- Completed 48-inch tie-in at Scholls Ferry Rd. and Allen Blvd.
- Installing final 48-inch waterline section at Scholls Ferry Rd. and Denney Rd.



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Construction Photos – MPE_1.2

Removing sheet pile shoring at Fanno Creek trenchless crossing receiving shaft



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Construction Photos – MPE_1.2

Installation of 48-inch waterline across Scholls Ferry Rd. near Merry Lane.



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Construction Photos – MPE_1.2

Sitework at exterior of PFC Facility

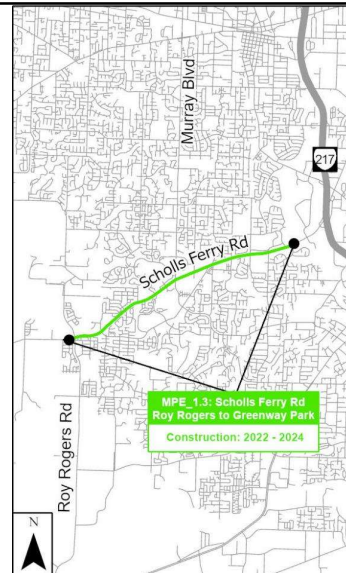


MPE_1.3

Contractor: Emery & Sons
Designer: Brown & Caldwell

Current and Planned Activities:

- 48" waterline installation on Scholls Ferry Rd.
 - Heading west near Murray Blvd. (night work)
 - Heading east near Barrows Rd. (day work)
- PGE relocation near Roy Rogers Rd.



Construction Photos – MPE_1.3

48-inch waterline installation on Scholls Ferry Rd. near Barrows Rd. (daytime crew)



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Construction Photos – MPE_1.3

48-inch waterline installation across intersection of Murray Blvd. and Scholls Ferry Rd.



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QUESTIONS?

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SERVICE LINE INVENTORY UPDATE

Joel Cary
May 7, 2024



TUALATIN VALLEY
WATER DISTRICT

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KEY PROJECT DRIVERS

- LCRR Service line inventory due October 2024
- TVWD's vision: "Our water sustains thriving communities - every day for everyone"
- Improving TVWD brand awareness in advance of the switch to the Willamette River in 2026
- 2020 service line inspection pilot work



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COMMUNICATION CHALLENGES

- Like most PNW utilities, lead service lines were never used (copper is TVWD's standard material)
- Using the term "Lead Service Lines" (LSLs) in communications implies otherwise
- Access to private side – GIS analysis showed ~25% of sites were outside right-of-way

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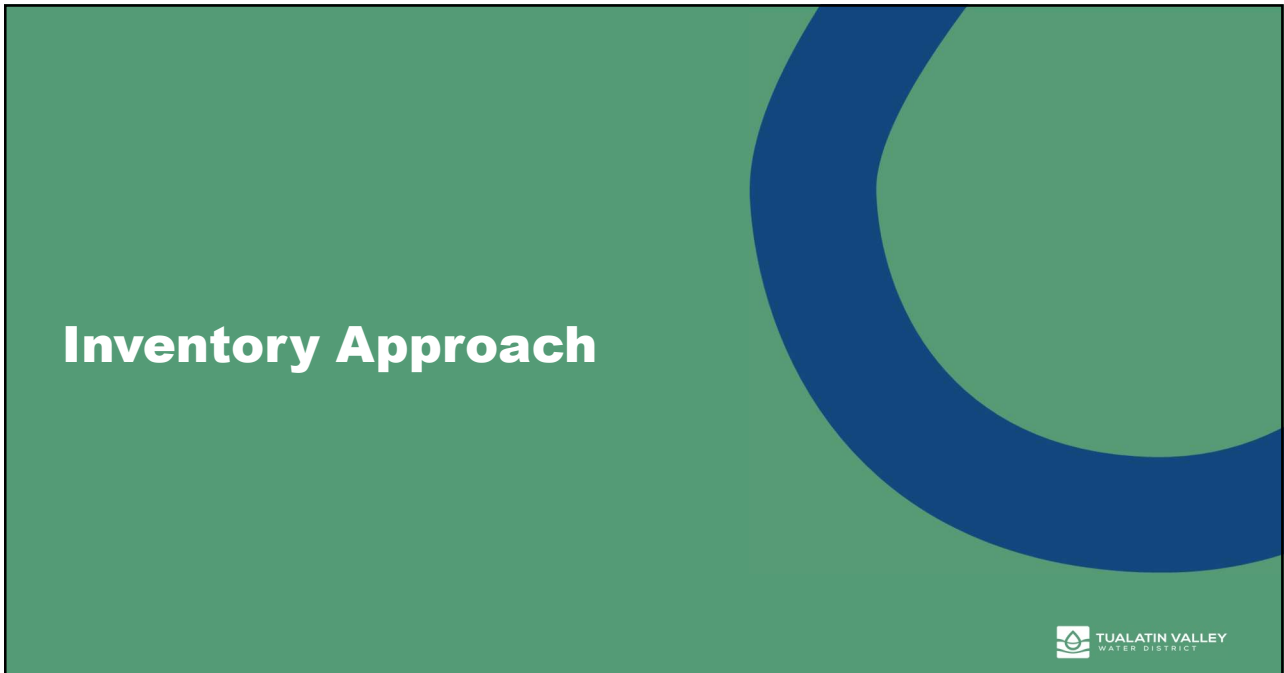


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PREVIEW OF INVENTORY OUTCOME

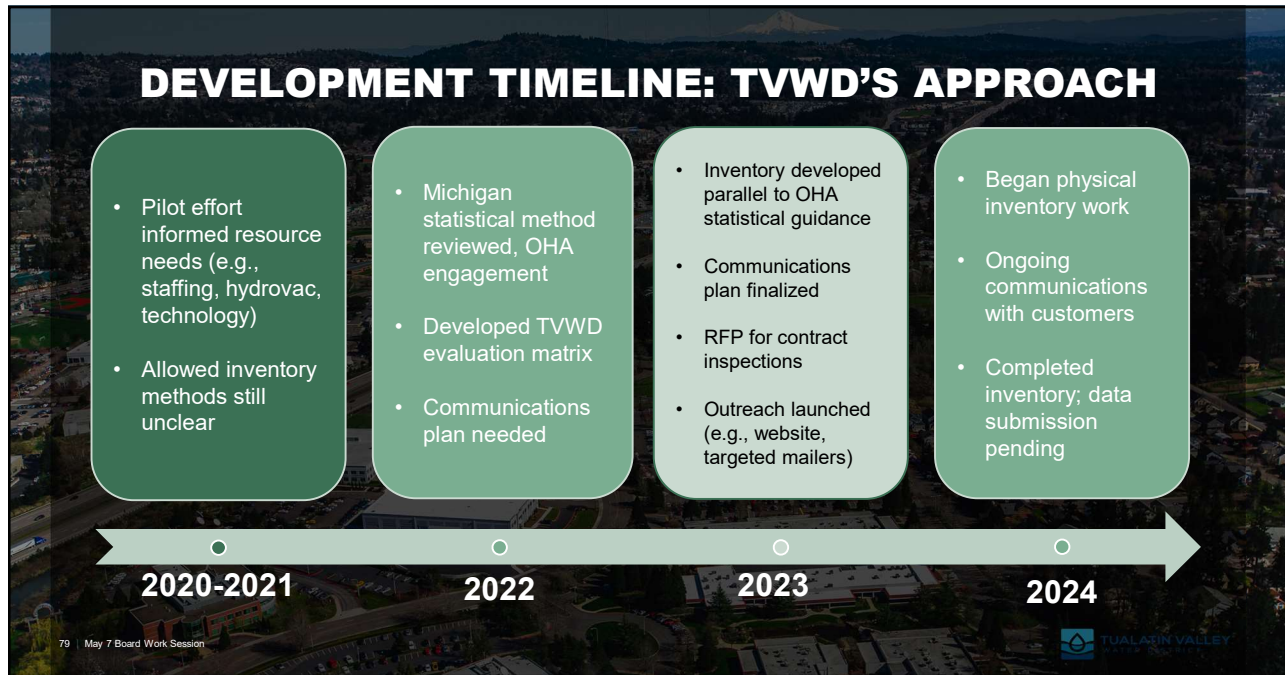
Nearly 390 randomly selected service lines were excavated on the public and private side, no lead services were discovered

- Consistent with TVWD's assumptions, all public side services were copper
- Private side services were plastic, copper, or galvanized



Inventory Approach





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2020-2021: FACTS, UNCERTAINTY, AND LOTS OF QUESTIONS...

Facts – what we knew

- 62,000 service connections
- No service installation cards
- Archived 70s design standards
- Lead services never used
- **Translation – lots of “unknowns” under the LCRR**

Uncertainty and questions

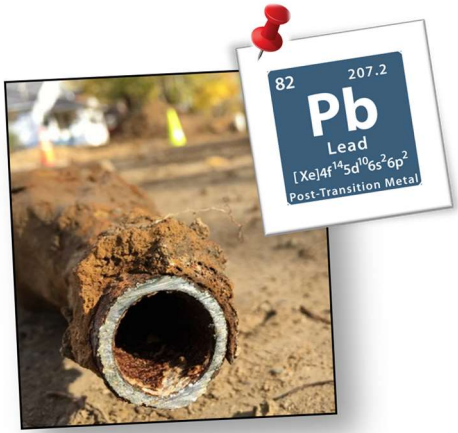
- What would Oregon allow?
- Would all 62,000 connections need inspection?
- How would the public react?
- **Resources are limited – this work would impact overall operations**

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2023 – KEY POINTS OF THE RECORDS INVENTORY PROCESS



Hierarchy of the process using our GIS data (what's in):

1. Owned by = TVWD
2. Status = Active
3. Service diameter = less than 2-inches
4. Tax lots date + meter sales date = 1985 and older
5. Design standards = Mid-70s era documents

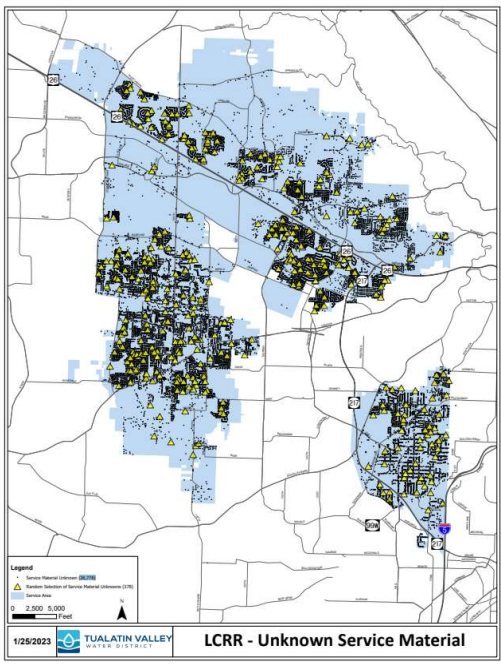
Data sets not used:

- Year main installed – old services can be attached to new mains
- Utility billing data – connection date unreliable

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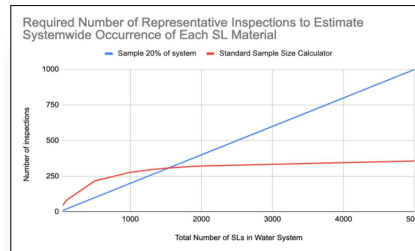
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METHOD OUTCOMES

26,788 services classified as “unknown” under OHA methodology

- Minimum of 378 randomly selected sites for inspection

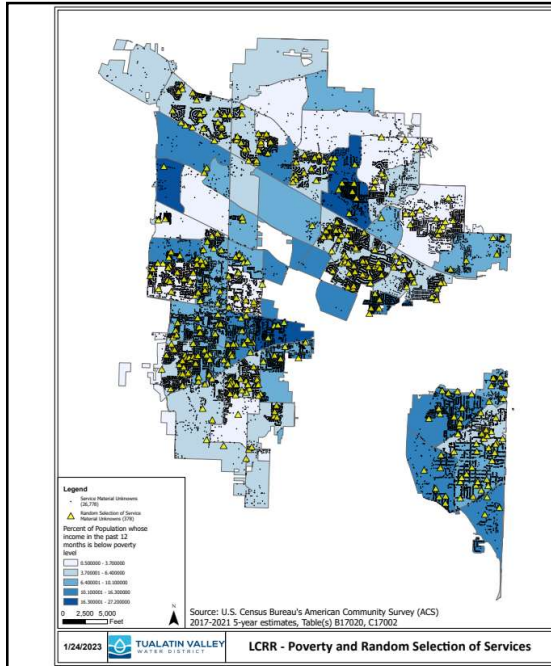


Example curve, ASDWA, 2020



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ADDITIONAL ANALYSES

How did the randomly selected inventory sites compare to TVWD's most financially impacted communities?

- Not part of statistical method, but a question worth asking considering the proposed LCRI's focus on disadvantaged communities
- Used most recent Census data
- Results largely aligned with Census data



Communications Goals and Toolkit




COMMUNICATION GOALS

Build upon
updated vision
and mission

Improve upon new
TVWD brand

Engage with
customers beyond
billing

Educate
audiences on
TVWD's water
system and work

Lead to a better
understanding
WWSS in advance
of 2026

OUTREACH TOOLKIT

Inventory participants and general customers

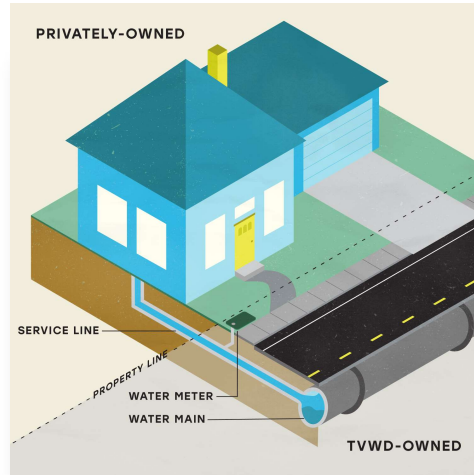
- Information on the service line inventory project

TVWD staff and contractor

- Materials for interacting meaningfully with curious customers



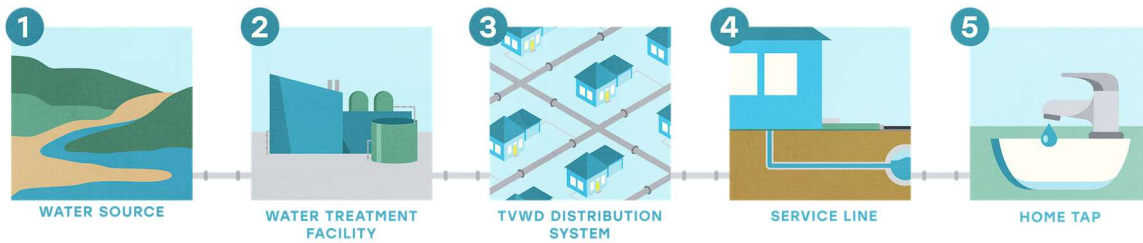
DEVELOPED GRAPHICS TO CONVEY COMPLEX TOPICS



- Inventory random sampling

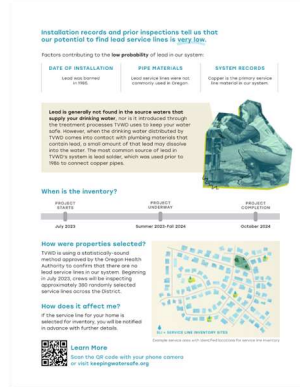
- Service line education

CONNECTING INVENTORY EFFORT TO PRIMARY TVWD SERVICES



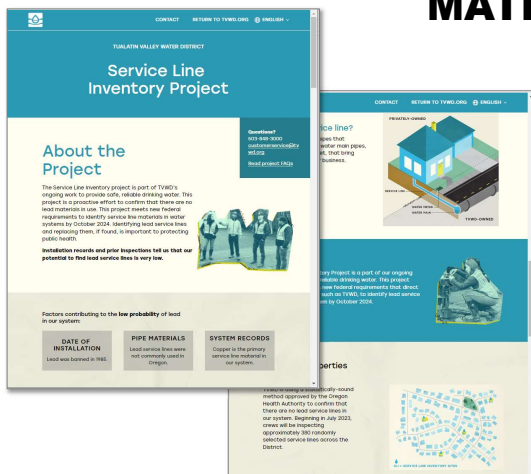
UNDERSTANDING INVENTORY PURPOSE AND PROCESS

- Fact sheets about the Service Line Inventory project
- Customized for inventory participants as well as general customers
- Available in English and Spanish



INVENTORY EDUCATION EXTENDED BEYOND PRINT MATERIALS

- New “microsite” allowed branding, imagery, footage, and graphics to be brought to life



Inventory Implementation



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WHY CONTRACT SERVICES?

Pros

1. Allowed TVWD to maintain current CIP efforts
2. Service levels maintained (e.g., leak responses, customer service)
3. Ongoing Willamette Supply work and planning could be maintained
 - UDF, construction support, etc.

Cons

1. More effort up front (e.g., RFP)
2. Increased daily project management needs
3. Greater risk for disconnected customer communications
 - Contractor ≠ TVWD level of customer service

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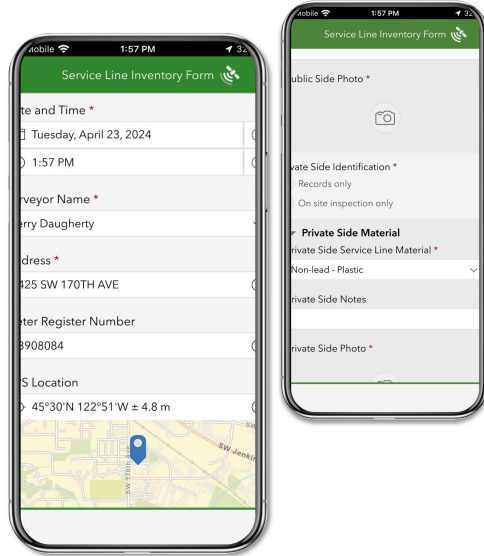
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LEVERAGING TECHNOLOGY

2020-2021 Pilot effort helped to establish data collection in the field

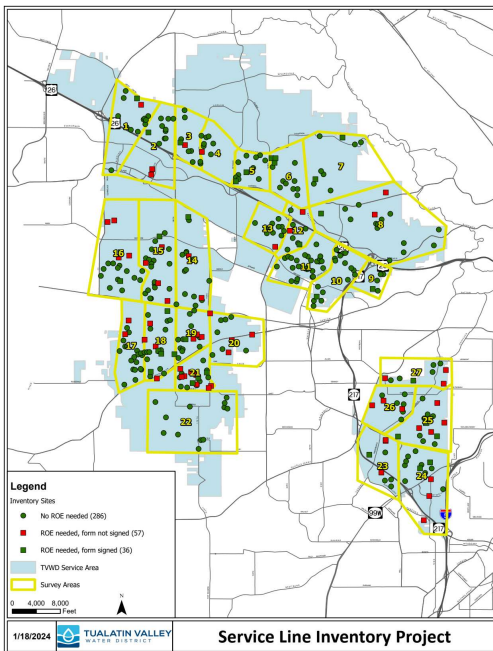
- Used mobile based field application called Survey123
- Aligned terminology to LCRR/OHA language
- Provided iPads to contractor
 - Security, minimize technology “hiccups,” etc.



INVENTORY DEPLOYMENT

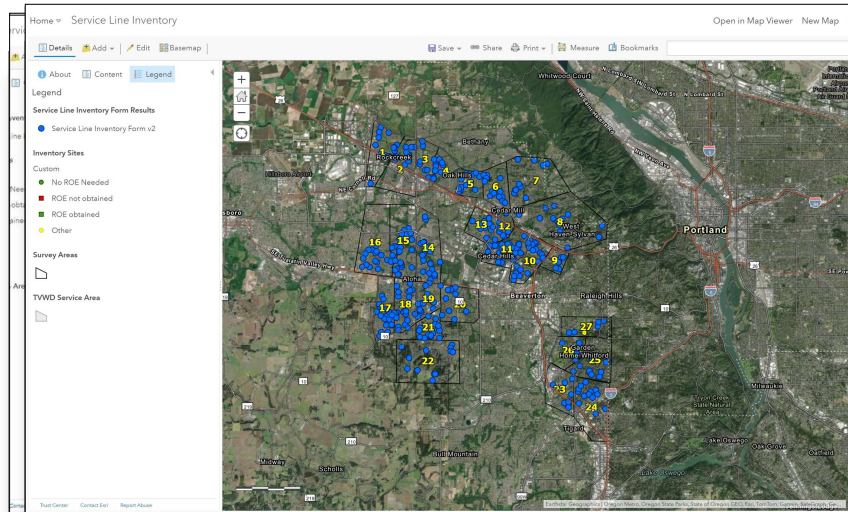
Collaboration with contractor led to dividing project into 27 “zones”

- Workload leveling for TVWD and contractor
- Expedited review of data/photos
- Better ability to perform advanced outreach as work progressed
- Customer follow-up more effective (e.g., “what was my material?”)



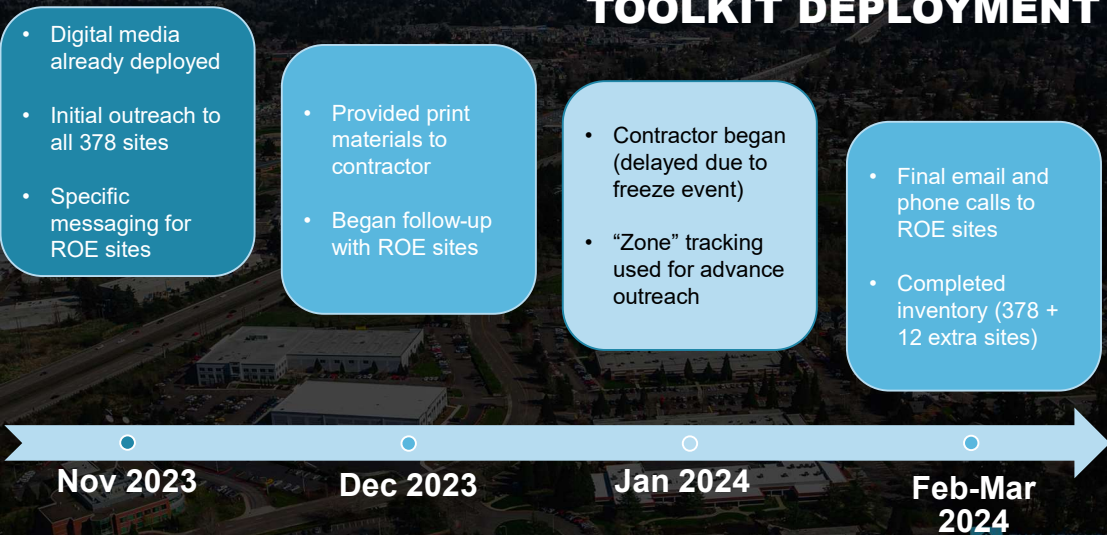
PROGRESS TRACKING

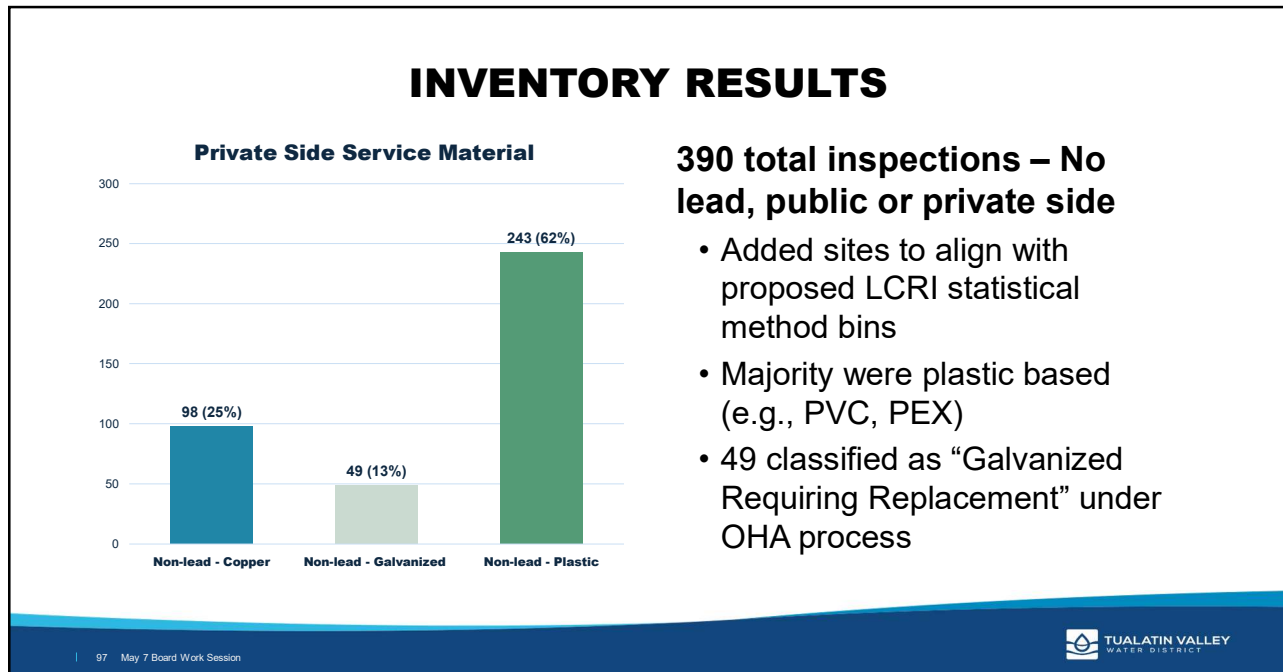
- Able to track progress in real time
- Initial project duration was two months
- Final project duration was four weeks



Time-lapse of project duration, January 29 – February 19, 2024

INVENTORY: COMMUNICATIONS TOOLKIT DEPLOYMENT





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INVENTORY PROCESS SUMMARY

Challenges

- ROE sites – 35% non-respondent
- Remaining sites replaced with randomly selected non-ROE sites (34 sites)
- Initial contracting slowed progress
- More training and coordination with contractor vs. internal staff
- Some initial site inspections weren't adequate (e.g., not enough material exposure, poor photos)

Successes

- ROE sites – 65% were responsive
- Little to no customer complaints
- Feedback loop w/ contractor – use of real time data collection (i.e., Survey123)
- Inspection timeline halved
- Under budget
- Data collection process minimized errors

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WHAT LESSONS DID WE LEARN

- Well prepared communications supports TVWD customers
- Input from a large cross section of TVWD led to buy-in and a higher quality toolkit
- Contract services net positive:
 - Early technology vetting led to a near seamless process
 - TVWD maintained current service levels
- Early regulatory planning is beneficial



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