

May 2023 Semi-Annual Report

# PUBLIC WORKS DEPARTMENT

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Public works director



# KEY PRESENTATION POINTS

1

## PW OPERATIONS

Projects, Emergency Preparedness, Efficiency, and Solutions

2

## PW ENGINEERING

Projects, Expanding Boundaries, and Cost-Saving Measures

3

## PW FACILITIES, PARKS, & MAINTENANCE

Accomplishments and Cost Savings

4

## PW WATER QUALITY

System Updates, Pump Replacements, and Upcoming Projects

5

## Waterfront Road & Utilities Extension Project Update

# 1.

# PUBLIC WORKS OPERATIONS

*The mission of the Public Works Operations Division is to enhance and sustain the livability and quality of life for citizens in the community of St. Helens, and to work efficiently and effectively to fulfill the goals as set by the City Council and Public Works Director.*

# PW Operations Projects

## **N 9th St Water Line Replacement (100 Block)**

Replaced existing old water line with a new mainline. Team has switched from using copper to using PEX piping because it is more cost effective. The cost of copper ranges from \$8 to \$26 per foot where as PEX pipe costs \$1 to \$10 per foot!

## **S 1st St Water Line Replacement (200 Block)**

Replaced a 40-year-old water main located in the alley feeding multiple businesses. Cost savings will be experienced through the reduction of water loss from the old pipe and reduced staff time spent on leak repairs.

## **Sunset and Shore Drive**

PW team has been installing new stormwater catch basins along Shore Drive to help alleviate drainage issues.





# PW Operations

## Emergency Preparedness

- PW Operations has been without emergency backup power for years. This year the team was able to find a very cost-effective way to supply emergency power in the event of a power outage.
- The PW Operations Team produced a plan for portable emergency power to keep the PW Operations building up and running.
- The entire PW Shops electrical panel was replaced with a new transfer switch. A portable generator can be moved into place when needed.
- The work was budgeted for \$100,000 and was installed for just under \$20,000!



# PW Operations

## Efficiency

### Ranney Well #3

- Public Works Ops team worked with Cascade Water Works to install and upgrade the well pump to make it more efficient at supplying water to the City.
- The project will help the Well site to run more efficiently and cost effectively .



# PW Operations Solutions



## Wastewater Treatment Plant Flow Meter

- PW Operations team provided the groundwork for installing the flow meter at the WWTP. Saving the City thousands of dollars doing the construction ourselves instead of hiring a contractor.!



# 2.

## PUBLIC WORKS ENGINEERING

*The mission of the Public Works Engineering Division is to provide the highest quality engineering, construction project management, and technical support and services to citizens, developers, builders, other City departments and consulting engineers and surveyors..*

# PW Engineering Projects

## Sherman Place Water Line Replacement

Replaced an existing 2inch diameter old water line which was falling apart with a new 4-inch water main. The new replacement has eliminated the large amount of PW staff time spent responding to callouts to repair the line.

## Salmonberry Water Rights Renewal

The City's Permit/Claim of Beneficial Use (COBU) for the Salmonberry Reservoir is past due. Currently the Engineering Team is working AKS Engineers to perform a hydrographic and topographical survey of the reservoir to renew the COBU in accordance with the Oregon Dept. of Water Resources

## Columbia Blvd Sidewalks from Gable to Sykes Rd

Construction of new sidewalks along Columbia Blvd from Gable Rd to Sykes Rd begins in July. In addition to sidewalks, a new Rapid Flashing Beacon will be installed near McBride Elementary School. The project is being funded by a Safe Routes to School Grant, Columbia County funds, and City Street Fund.





# PW Engineering – Expanding Boundaries

## Design -Bid -Build

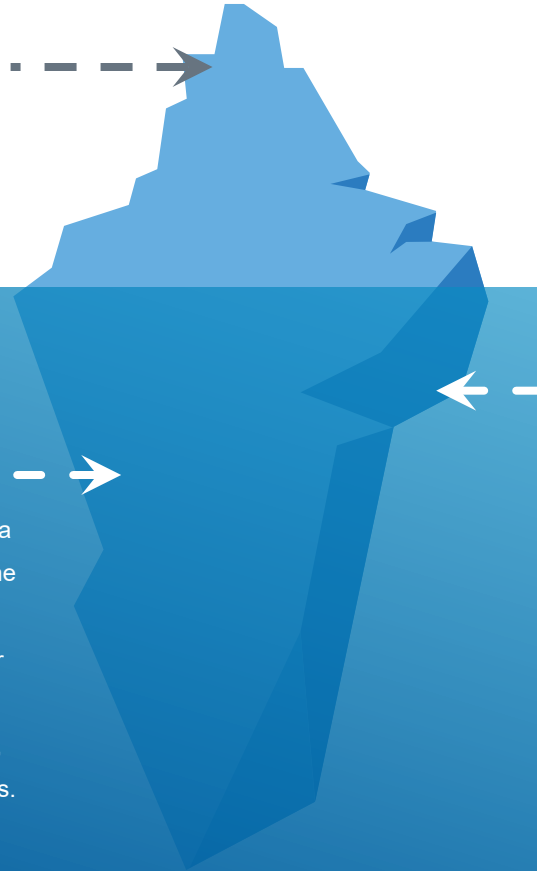
Traditional construction project delivery method that involves the completion of three distinct phases in sequence. Design the Project. Bid the Project. Build the Project. There is no overlap between design and construction.

## Design Build

Project delivery in which the City manages one contract with a entity single point of responsibility - the Design-Builder. The engineer and the contractor work together under a single contract to provide design and construction services. Major benefits are streamlined communication between the engineer, contractor, subcontractors and City, faster project completion, increased collaboration, and cost savings.

## Construction Manager/ General Contractor (CM/GC)

Project delivery method allows the City, designer, and contractor to collaboratively develop project scope, optimize design, improve quality, manage costs, and share risks. With this method, the City can maintain control of the design process and reducing or eliminate any unexpected setbacks during the construction phase, reducing project costs..



# PW Engineering

## Cost Savings/Cost Recovery

### Sanitary Sewer Capacity - \$16M Clean Water State Revolving Fund (SRF) Loan

- The SRF Loan will be split into three smaller loans which will result in a loan forgiveness of \$4.5M. The Community Block Development Grant (CBDG) will cover the Engineering and Design for an estimated \$2.5M

**TOTAL ANTICIPATED COST SAVINGS IS \$7M!**

### 2.0 MG Reservoir Replacement

- State Grant Funding of \$1M is anticipated in June. The anticipated project costs is \$2.5M. The grant funds will result in a savings of 40% in the City's water fund.

### Sherman Waterline Replacement

- Project budgeted at \$200,000. Signed contract with Advanced Excavating for \$83,500, and completed Contract under budget at \$83,113



# 3.

## PUBLIC WORKS PARKS, FACILITIES, & MAINTENANCE

*The mission of the Public Works Parks, Facilities, & Maintenance is to...*



# PW PARKS, FACILITIES, & MAINTENANCE

## 2023 Accomplishments

### 1. McCormick Park

Installed curb stops at McCormick Park

### 2. Mowing

Removal of mowing obstacles.

### 3. Japanese Garden

Japanese garden improvements

### 4. Ball Fields

Working with leagues to improve ballfields.

### 5. Training

Pesticide training for all park employees w/Chip Bubl.

### 6. Egress Window

Egress window installation in children's area of learning center.

### 7. Building Project

Recreation building remodel creating 4 offices, and a conference room

### 8. Tree Stumps

Stump grinding through parks.

### 9. New Hire Assistance

Assisted in preparing work spaces for new hires in Finance, Engineering, and Parks.

By moving rocks, logs and other items used as barriers we are now able to mow cleaner lines in less time and eliminate lots of weed eating. A good example is the use of curb stops as shown.



# Removing Mowing Obstacles

McCormick Park

# Removing Mowing Obstacles, Cont'd





# PW PARKS, FACILITIES, & MAINTENANCE COST SAVINGS AT RECREATION CENTER

- Recreation building remodel est. savings of \$50,000 by doing work in house
- Removal of dumpster from county parking lot \$1,500 dollars annually
- Removal of unnecessary power service at Walnut Tree Park \$500 dollars annually

# Cost Savings at Recreation Center, Cont'd



# Cost Savings at Recreation Center, Cont'd





4.

# PUBLIC WORKS WATER QUALITY

*The mission of the Public Works Water Quality is to...*

# PW Water Quality Caustic System Update

- Installed smaller, more efficient pump
- Rerouted the injection line to pump into a pressure of 10psi instead of 85psi
- Same pump as the chlorination system to improve redundancy
- The project is the focus of a case study done by blue white

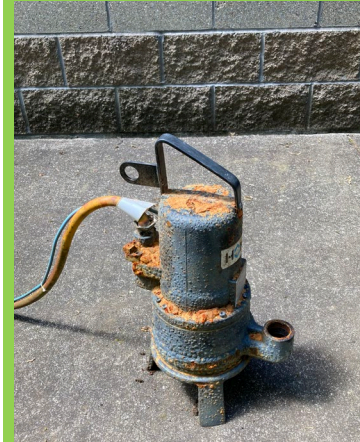




# PW Water Quality

## Grinder Pump Replacement

- One pump failed with no backup to install
- Replaced the pump and now are looking into options for a more appropriate pump station



# PW Water Quality

## Upcoming Projects

### Headworks Screen #1 Rebuild

- Screens are 12 years old, and this should extend their useful life by 78 more years
- The other screen is scheduled to be rebuilt next year

### NPDES permit renewal

- Previous permit expired in 2008
- DEQ has provided us with the 90% completed permit for comments

# 5.

## WATERFRONT ROAD AND UTILITIES EXTENSION PROJECT UPDATE

# Project Roadmap & Timeline

New Sanitary Sewer  
Pump Station In Progress  
Estimated Completion  
June 2024



Bluff Trail  
July 2023 – Aug. 2023



Cowlitz St – S 1<sup>st</sup> St  
Intersection  
Sept. 2023 – Dec. 2023



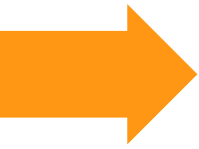
S 1<sup>st</sup> St – St. Helens St  
Intersection  
June 2023 – Nov. 2023\*



Tualatin – S 1<sup>st</sup> St  
Intersection & Stairway  
July 2023 – Sept. 2023

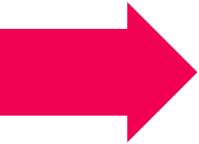


Strand St/Cowlitz Street  
Roadway Construction  
Nov. 2023 – July 2024



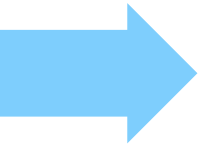
**2,500 ft Sewer & Storm Pipe**

And much more to go



**20 New Manholes**

And a lot of users



**76,000 Gallons of  
Contaminated Groundwater**

And Disposed of over 2,300 Tons of Contaminated Soil!

# Project Cost Saving Measures

## All Hands On Deck

With the PW Director at the helm, Engineering Staff is responsible for inspections, submittals, verifying pay quantities, reviewing pay requests, change orders, and managing project meetings. The Communications officer manages project website, newsletters, and other project information to the public. The City Administrator and Assoc. Planner manage the Business Oregon Loan process.

## Erosion Control Inspections

Because all the Engineering Staff are certified Erosion and Sediment Control Inspectors, the PW Director opted to use internal staff to conduct all required Erosion and Sediment Control inspections instead of using a third party. This measure has saved the City \$XXX,XXX.



# Compacting After Manhole Installation





# Rock Removal & Shoring Installation on S 1<sup>st</sup> Street





# February 2023 Site Drone Video



Thank You!

Any questions?