

City of Hayward Recycled Water Project



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Water Resources Manager

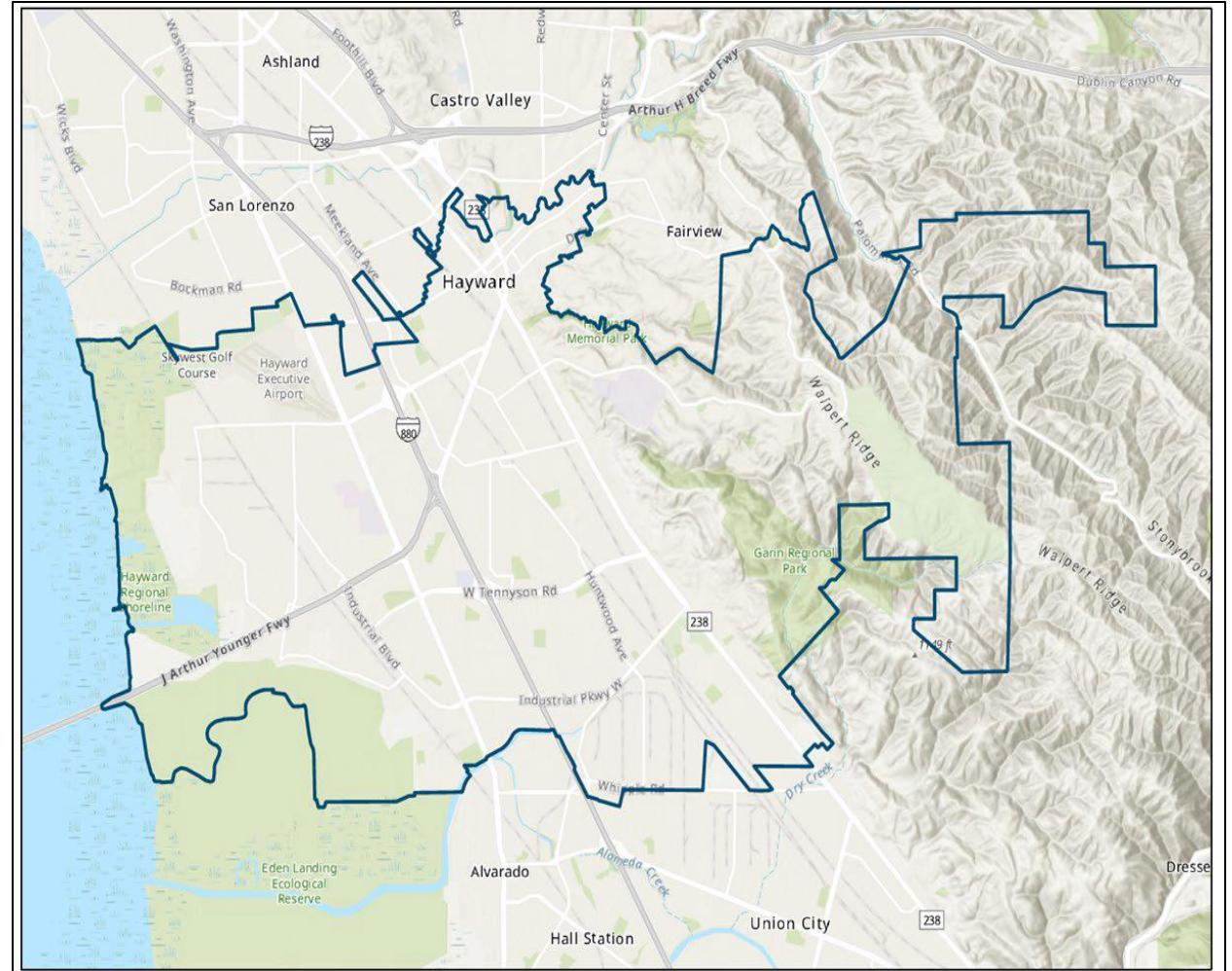
Suzan England
Utilities Engineering Manager

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Utilities Services Provided by Hayward

- **Water** - procurement, transmission, and distribution.
- **Sewer Collection** - maintaining network of sewer collection pipelines and wastewater lift stations.
- **Wastewater Treatment** - biological and environmentally friendly processes.

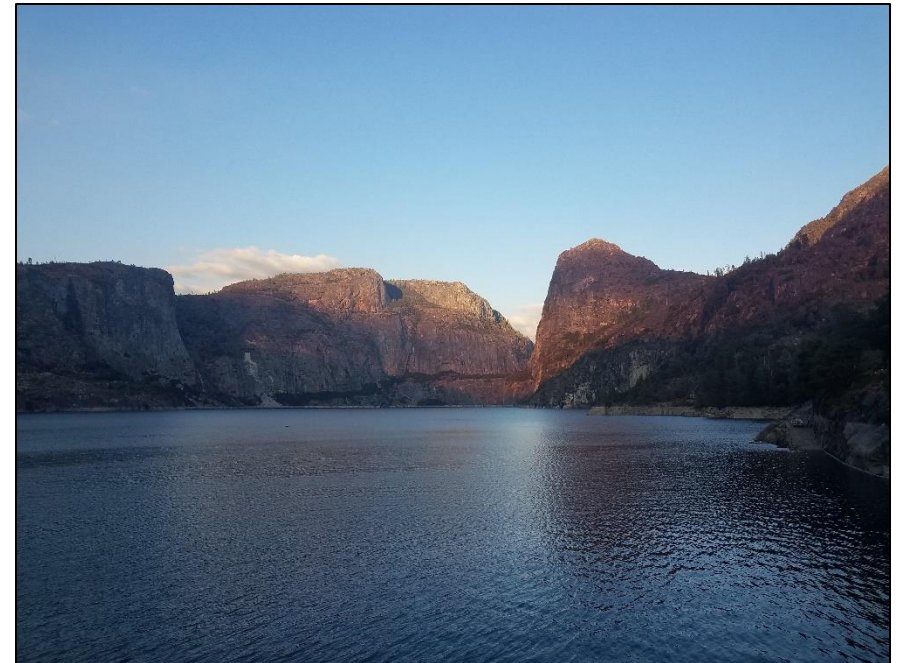


Recycled Water Project Objective

- To enhance the sustainability of the City's drinking water supply and help meet the long-term water needs of the City by using recycled water.
- A mix of water sources helps protect the City from potential disruptions due to emergencies or natural disasters, provides resiliency during periods of drought, addresses issues such as climate uncertainty, regulatory changes, and population growth.

Recycled Water Project Background

- Because of the City's dependence on the San Francisco Public Utilities Commission's Regional Water System for potable water supplies, several potential issues may be addressed or reduced by recycled water use:
 - Water Supply reliability during drought periods
 - Water supply reliability during service disruptions
 - Water supply availability during average year
 - Discharges to San Francisco Bay



Recycled Water Project Development

- Recycled Water Feasibility Study was prepared in 2007 to assess the technical viability of delivering recycled water and the potential recycled water market.
- Based on the results of the Feasibility Study, a Recycled Water Facility Plan was developed in 2009 and was updated in 2013. The Plan:
 - Confirmed potential recycled water users and their anticipated quantities
 - Developed a conceptual treatment and distribution system
 - Estimated project costs and financing alternatives

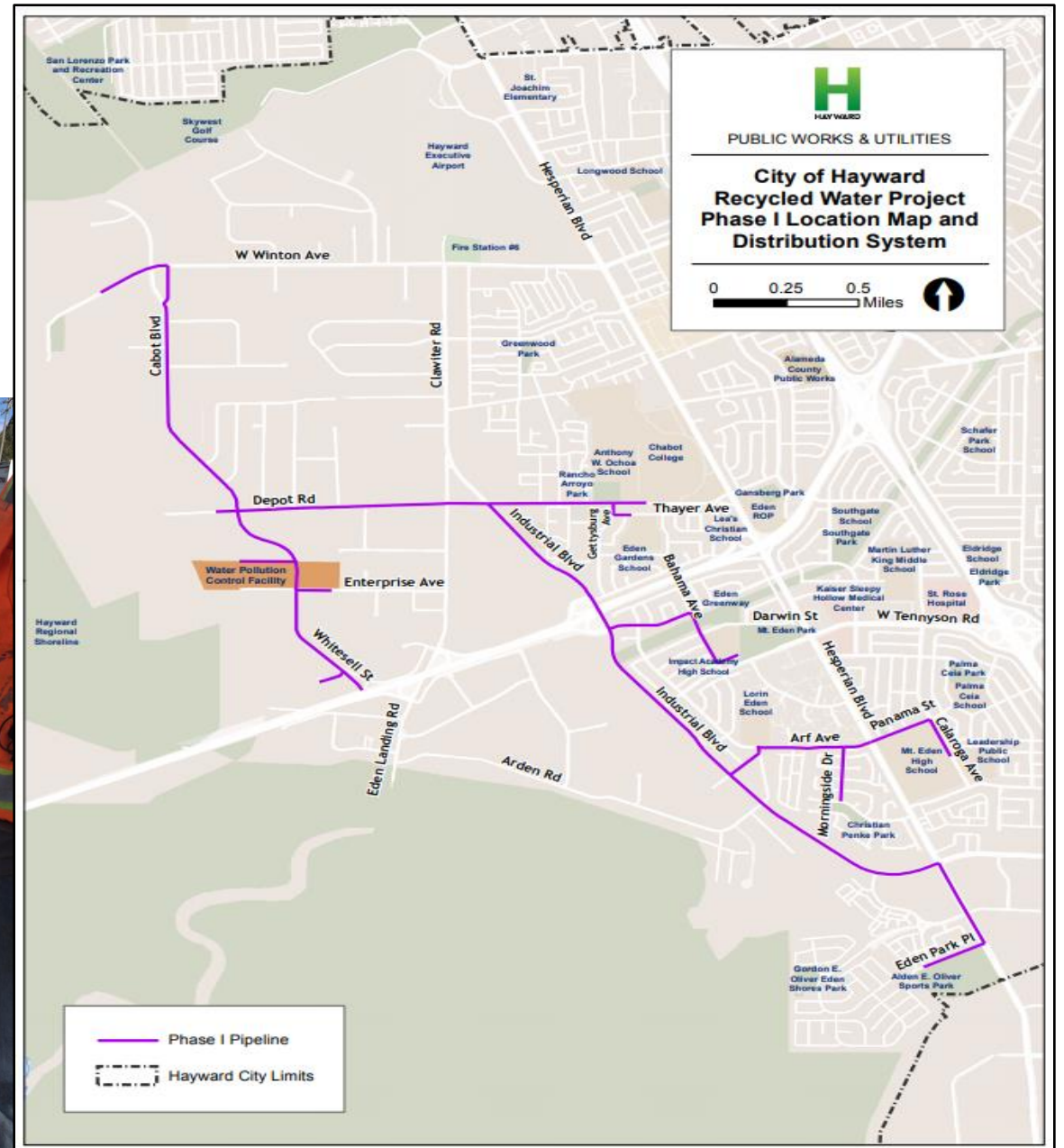
Recycled Water Project – Phase 1

- Based on information from the Feasibility Study and Facility Plan, Phase 1 of the Recycled Water Project was developed.
- System of a treatment facility, storage tank and pump station, and distribution pipelines will deliver an estimated 290 acre-feet per year, or about 260,000 gallons per day.
- 31 Phase 1 customer sites – irrigation use at four parks, six schools, one college, nineteen private businesses, and City-street landscaping

Recycled Water Project – Phase 1

Project Element	Description	Total Project Cost
Distribution System	8.5 miles of pipeline	\$16,268,000
Storage Tank and Pump Station	1 MG storage tank, 0.5 MGD pump station	\$ 5,419,000
Treatment Facility	0.5 MGD package membrane treatment facility	\$ 2,450,000
Customer Retrofits	31 sites converted to recycled water	\$ 3,127,000
Total Project Cost		\$27,264,000

Recycled Water Distribution System Phase 1



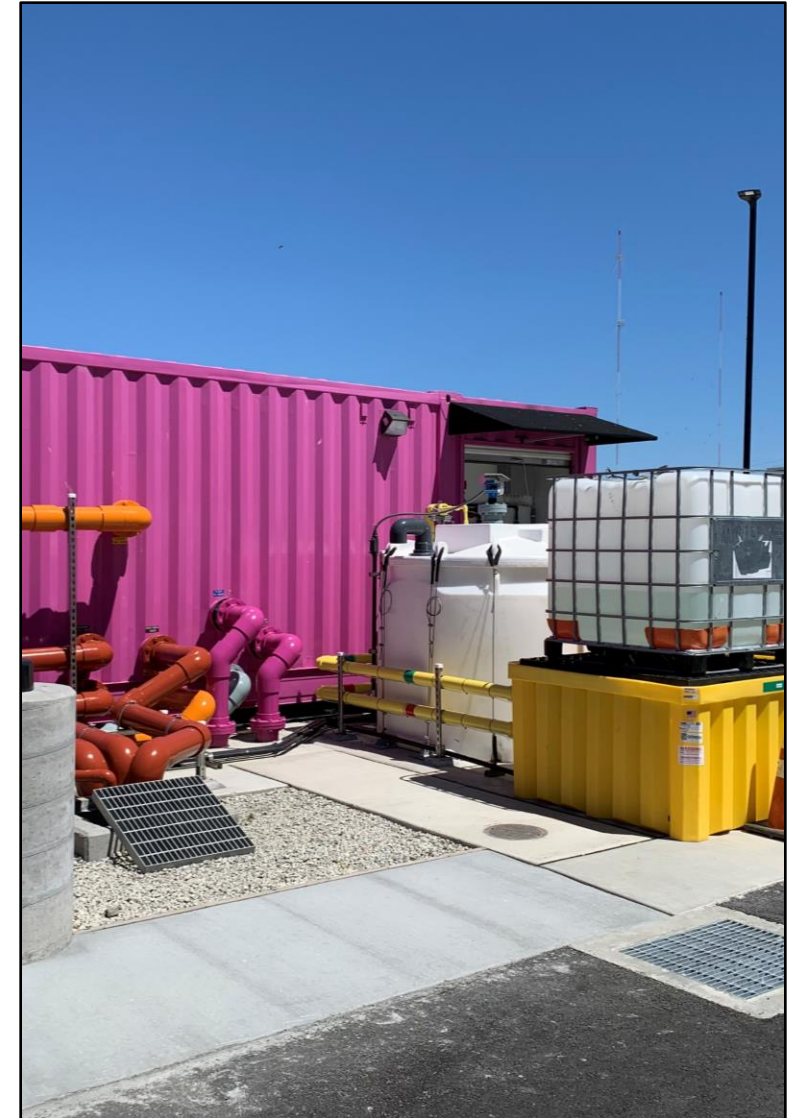
Storage Tank and Pump Station



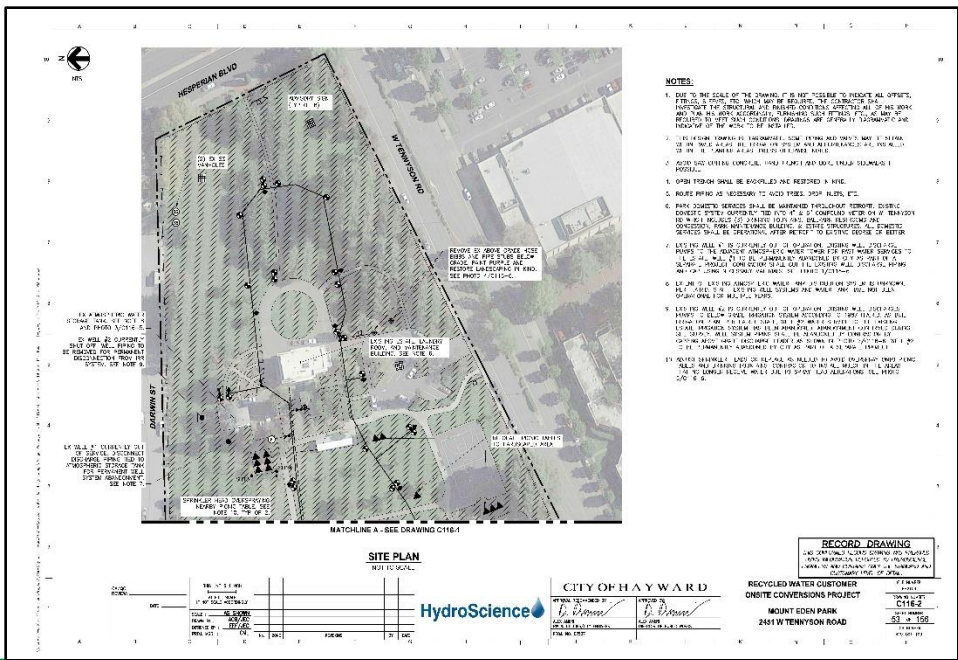
Treatment Facility – Container Skid



Treatment Facility



Customer Retrofits



Major Milestones

- Feasibility Study – Woodard & Curran (Formally RMC) – Completed 2007
- Recycled Water Facility Plan – Woodard & Curran – Completed 2009 and updated 2013
- Environmental Study – Completed 2017
- Storage Tank & Pump Station – West Yost
 - Design Complete 2017; Construction Complete February 2020
- Recycled Water Pipeline – West Yost
 - Design Complete 2017; Construction Complete May 2019
- Recycled Water Treatment System - HydroScience with SPI
 - Design Complete December 2018; Construction Complete December 2020
 - Storage Tank CT Testing
 - Conduct Testing Summer 2020
 - Final Approval by Division of Drinking Water September 2021; Notification of Startup March 2022
- Customer Retrofits Project – HydroScience
 - Design Complete July 2019; Construction Complete November 2020

State Recycled Water Permit

- State Water Resources Control Board Order WQ 2016-0068-DDW permits production, distribution, and use of recycled water for non-potable uses.
- Allows State to delegate authority for managing recycled water programs to public agencies and private entities. Agencies can issue use permits to customers.
- RWQCB and DDW approved enrollment under General Order in September 2021.



Looking Forward

- Continue to provide technical assistance to customers.
- Work with additional potential Phase 1 customers.
- Begin preparing a Recycled Water Mater Plan – identify infrastructure expansion needs, pipeline routes, customers and cost estimates for Phase 2 and beyond.



Questions

