



# Patterson Pass Water Treatment Plant Upgrades and Ozonation Project

November 17, 2021 - Zone 7 Board of Directors Meeting

Presented by Mona Olmsted, Associate Engineer, Zone 7 Water Agency

Construction Progress Report

# Project Overview

## Project Objectives

- Increase plant capacity from 12 to 24 MGD
- Increase treated water storage capacity an additional 5 MG
- Replace or upgrade many major plant components that are reaching the end of their useful life
- Improve treated water quality and plant reliability with the addition of ozone treatment

## Cost

- Approximately \$110 million for planning, design, and construction

## Funding Sources

- Funded by water rates, new connection fees, and bonds (\$19 million)

In Service Date: Spring 2022



# Project Supports Multiple Strategic Plan Initiatives



## Water Reliability

### Initiative 3

Continue to effectively implement infrastructure projects in the Water System CIP



## Ozone Treatment

### Initiative 4

Implement Ozone




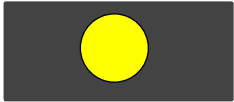



## Water Quality

### Initiative 5

Meet or surpass all drinking water health and safety requirements

# Project Status

Overall project status is **YELLOW**.

Schedule		<ul style="list-style-type: none"><li>• Project is approximately 85% complete</li><li>• Project completion is anticipated in Spring 2022</li><li>• 1- to 2-month delay in final completion</li><li>• Working towards startup and testing of 5 MG Clearwell and part of Treated Water Pump Station in Nov. – Dec.</li></ul>
Budget		<ul style="list-style-type: none"><li>• Project budget is under control, at 83% spent overall</li><li>• Negotiated and executed change orders total \$3.1M to date (4% of original construction contract amount)</li></ul>
Issues		<ul style="list-style-type: none"><li>• Project issues are under control</li></ul>
Decisions		<ul style="list-style-type: none"><li>• No decisions are requested at this time</li></ul>
Risks		<ul style="list-style-type: none"><li>• COVID-19 related cost impacts unknown at this time</li></ul>

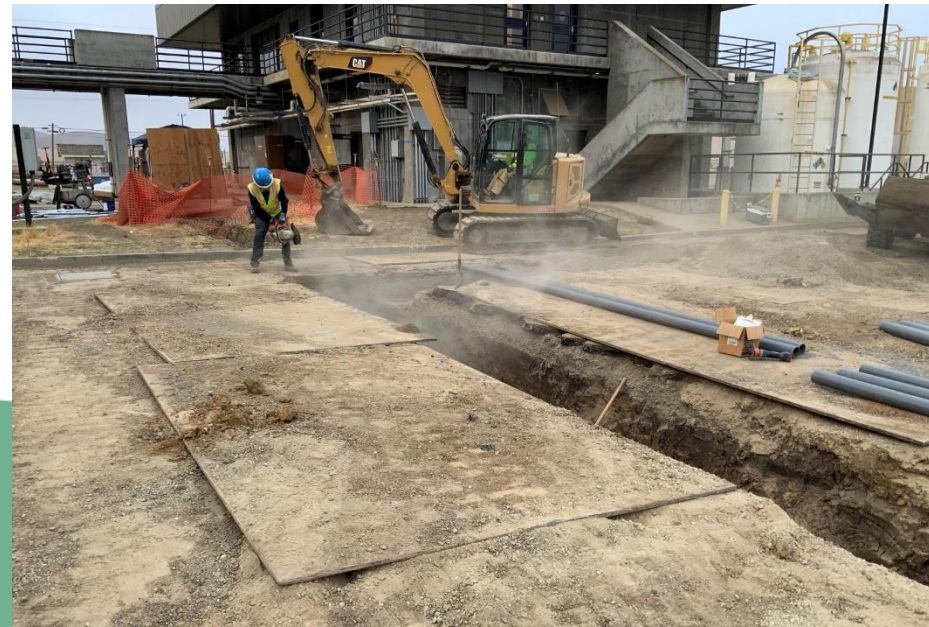


# Sitework

- On-going installation of chemical pipes, water pipes, and electrical conduits



Excavating Chemical Duct Bank – 9/14/21



Installing Chemical Pipes – 9/16/21



Constructing Chemical Containment Vault – 9/20/21



Installing Plant Water Piping – 10/21/21



# Ozone Generation Building

- Installation of minor items (lighting, doors, downspouts, etc.) is in progress
- Ozone equipment supplier, Suez, on-site during Nov. and Dec. for their testing activities



General View of Ozone Generation Building – 9/27/21



Installing Valves and Gauges on Ozone Piping – 10/5/21

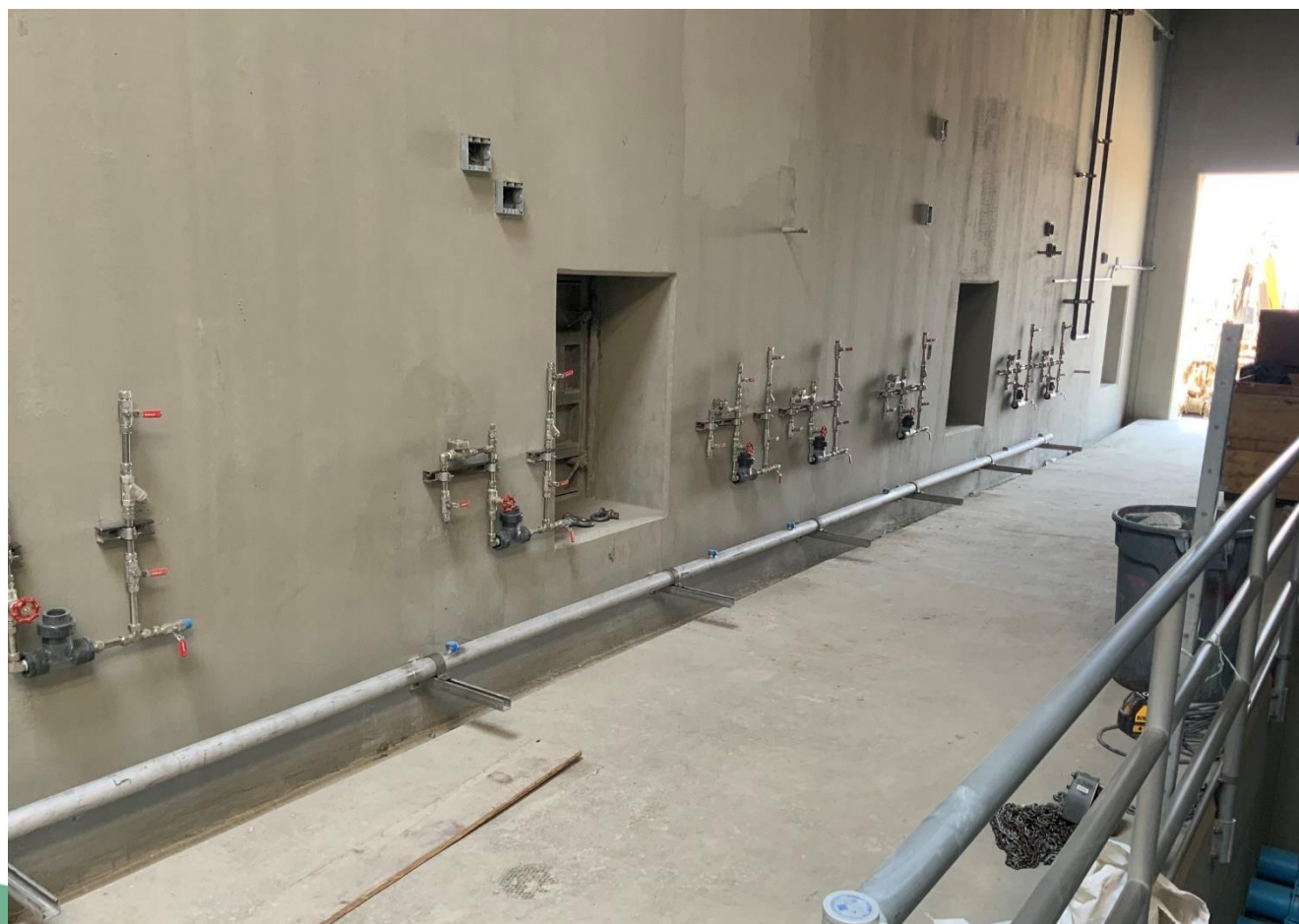


# Ozone Contactor Structure

- Finished installing sample lines
- Installation of minor items (electrical conduits, doors, downspouts, etc.) is in progress



General View of Ozone Contactor Structure – 9/10/21



Installing Sample Taps in Ozone Contactor Structure – 9/2/21



# Filter Structure

- Installation of most piping and underdrain system is complete
- During Nov. & Dec:
  - Finish installing electrical conduits and instrument racks in filter pipe gallery
  - Test filter-to-waste pumps
  - Finish installing filter backwash troughs
  - Conduct underdrain performance test
  - Load and flush filter media

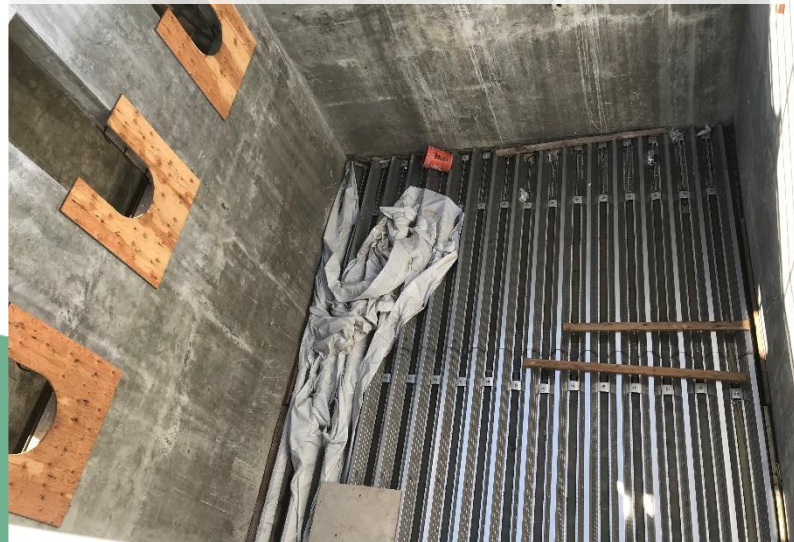


General View of Filter Structure and Filter-to-Waste Pump Station – 10/27/21

Installation of Filter Troughs – 11/2/21



Underdrains – 10/27/21



General View of Filter Pipe Gallery – 10/27/21





# Chlorine Contact Basin

- Testing of instrumentation and pumps at CCB to occur during November



General View of Deck of Chlorine Contact Basin – 8/4/21



Installing Sodium Hypochlorite Injection Diffuser – 9/15/21

# Treated Water Pump Station & 5 MG Clearwell

- Exterior tank coating and installation of piping are complete
- Minor work is in progress (installing pipe supports, concrete pads; painting exterior pipe)
- Startup and testing activities during Nov. and Dec.



General View of Treated Water Pump Station –  
9/17/21



General View of 5 MG Clearwell and Treated Water Pump Station – 9/3/21



# Questions?



**WATER  
AGENCY**