

EAST BAY MUNICIPAL UTILITY DISTRICT

DATE: August 6, 2026

MEMO TO: Board of Directors

THROUGH: Clifford C. Chan, General Manager CCC

FROM: Serge V. Terentieff, Director of Engineering and Construction ST

SUBJECT: Orinda Water Treatment Plant (WTP) Disinfection and Chemical Systems Safety Improvements Project Update

This memorandum provides an update on construction of the Orinda WTP Disinfection and Chemical Systems Safety Improvements Project (Project). The attached progress report includes accomplishments and progress since the March 26, 2026 update, including community outreach, fiscal status, and near-term planned work. The reinforced concrete shell for the above-ground Maintenance and Ultraviolet Electrical building construction has been completed and the installation of the ultraviolet disinfection vessels has begun, representing a major milestone for the project.

Construction commenced in June 2022 and contract completion is expected by October 2027. The next update will be provided in an information memo on November 24, 2026.

CCC:SVT:mjh

Attachment: 2026 Triannual Progress Report No. 2 (Specification 2139)

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2026 Triannual Progress Report No. 2

Specification 2139: Orinda Water Treatment Plant (WTP) Disinfection and Chemical Safety Systems Improvement Project (CSSIP)

The project is progressing well despite some schedule delays, with project contract completion scheduled for October 2027. Major highlights included setting the new emergency generator on its foundation, beginning the Effluent 2 excavation, completing the reinforced concrete structure shell for the Maintenance and Ultraviolet Electrical (MAUVE) building, and commissioning the two prefabricated electrical buildings and the Los Altos Pumping Plant No. 2 electrical improvements. A detailed summary of the work progress is provided in this attachment.

Project Scope

The scope of work for this project includes:

- Construction of a new disinfection facility comprised of an Ultraviolet (UV) disinfection and Chlorine Contact Basin (CCB) facility and an above-ground MAUVE.
- Construction of a grounds maintenance building and associated parking area.
- Installation of new effluent piping and connections to the Claremont Tunnel and Los Altos No. 2 Pumping Plant (LAPP2).
- Construction of two new electrical buildings.
- Installation of two standby generators and fuel storage tanks.
- Modifications to the Briones Center.
- Modifications to the raw water channel.
- Demolition of existing grounds maintenance and mechanical maintenance facilities.
- Demolition and replacement of the chemical storage and feed systems and other chemical systems safety improvements.

Community Outreach Update

- The District identified and notified neighbors of upcoming construction impacts, including noise and traffic, emphasizing the need for preplanned extended work hours for concrete deliveries.
- The project was featured in *The Orinda News* on July 27, 2026, highlighting the overall project status and the delivery of the first UV vessels.

Progress Status Update

Safety

- The project has recorded 1,209 contractor craft working days completed without a lost time injury since construction began.

Raw Water Improvements

- No progress during this period.

Pipeline Tie-ins

- Began field measurement of existing Effluent 2 pipeline for connection to new Effluent 2 tunnel.
- Performed inspections of the welded steel piping.

Underground Construction

- Monitored the automated geotechnical monitoring system, which monitors ground movement and settlement during drilling, excavation, grouting, and tunneling.

UV-CCB Facility Construction

UV Influent Weir Structure

- Completed installation of interior baffle walls.

CCB Effluent Weir Structure

- Completed crack repairs and leak testing of concrete walls.
- Applied exterior wall waterproofing and began backfilling of structure.

CCB Structure

- Completed hydrostatic leak test and concrete crack repairs on the walls.
- Began chemical mixing piping installation.

UV Room

- Removed temporary shoring towers and decking.
- Completed installation of mechanical and electrical systems and piping on the ceiling.
- Continued installation of wall conduits and small diameter process piping.
- Completed wall finishing and joint sealant installation on the interior side of concrete walls.
- Completed installation of 84-inch gallery piping for the UV bypass.
- Continued installation of 48-inch gallery piping for each UV train.
- Completed installation of the traveling bridge crane for construction, inspection, and future maintenance.
- Began installation of UV disinfection vessels and connecting piping.
- Began installation of stainless-steel mixing piping.

MAUVE Building – North End

- Completed reinforced concrete equipment pads on the first floor.
- Completed steel wall stud framing.
- Completed drywall and painting in electrical priority rooms.
- Began door and window installation.
- Began electrical equipment installation.

- Completed reinforced concrete second floor deck.
- Completed reinforced concrete second floor walls.
- Completed roof beam installation.
- Completed roof pan deck installation.
- Began reinforced concrete roof deck installation.

MAUVE Building – South End

- Completed reinforced concrete floor slab with UV Room access hatch.
- Completed reinforced concrete walls.

UV-CCB Facility Bridge

- Removed three approach ramps, bridge deck, and bridge beams in preparation for installing underground utilities.

Power Buildings

- Completed energization, testing, and commissioning of the Los Altos Power Building (LAPB) except for the 480-volt gear.
- Completed testing of South Electrical Building (SEB) except for the 480-volt gear.
- Completed control system functional testing and operational startup testing of SEB and LAPB.

Los Altos Pumping Plant No. 2 (LAPP2)

- Completed installation, testing, and commissioning of new electrical gear.

Emergency Generator

- Completed retaining wall and foundation for the new 2.5 MW plant generator and fuel storage tank.
- Began installation of generator and fuel storage tank.

Chemical Safety System Improvements

- Continued installation of new fluoride, ammonia, and caustic soda systems.
- Continued construction of chemical pipe expansion vaults and sumps throughout the project site.
- Continued installation of the replacement heating, ventilation, and air conditioning systems and fire protection systems in the chemical building.
- Completed construction of the new caustic soda room in the chemical building.

Scheduled Work

Raw Water Improvements

- Install the fourth and final phase of the welded steel pipeline for the Lafayette Aqueduct No. 1 Wasteway connection to San Pablo Creek. This pipeline is used when the aqueduct is dechlorinated and drained into the creek, which is done when the aqueduct is repaired and maintained.

Pipeline Tie-ins

- Complete field verification of the existing buried Effluent 2 pipeline to finalize design, shop drawings, and fabrication of piping modifications for Effluent 2.

Underground Construction

- Complete construction of the expanded Effluent 1 pipeline vault and backfill of the Effluent 1 excavation.
- Remove the Effluent 1 temporary access bridge.
- Excavate the Effluent 2 area and install shoring bracing.

UV-CCB Facility Construction

- Complete backfill of the CCB Structure.
- Complete MAUVE Building reinforced concrete structure.
- Continue installation of mechanical, electrical, and plumbing systems in the UV Room.

Power Buildings

- Test new emergency standby generator.

Chemical Safety System Improvements

Significant progress is being made on the chemical system improvements, although this portion of work has been delayed approximately one and half years due to differing site conditions, operational constraints, and supply chain issues.

- Complete installation of the new fluoride, ammonia, and caustic soda chemical systems.
- Complete construction of new caustic soda room within the chemical building.
- Continue installation of the permanent chemical feed lines through the project site.

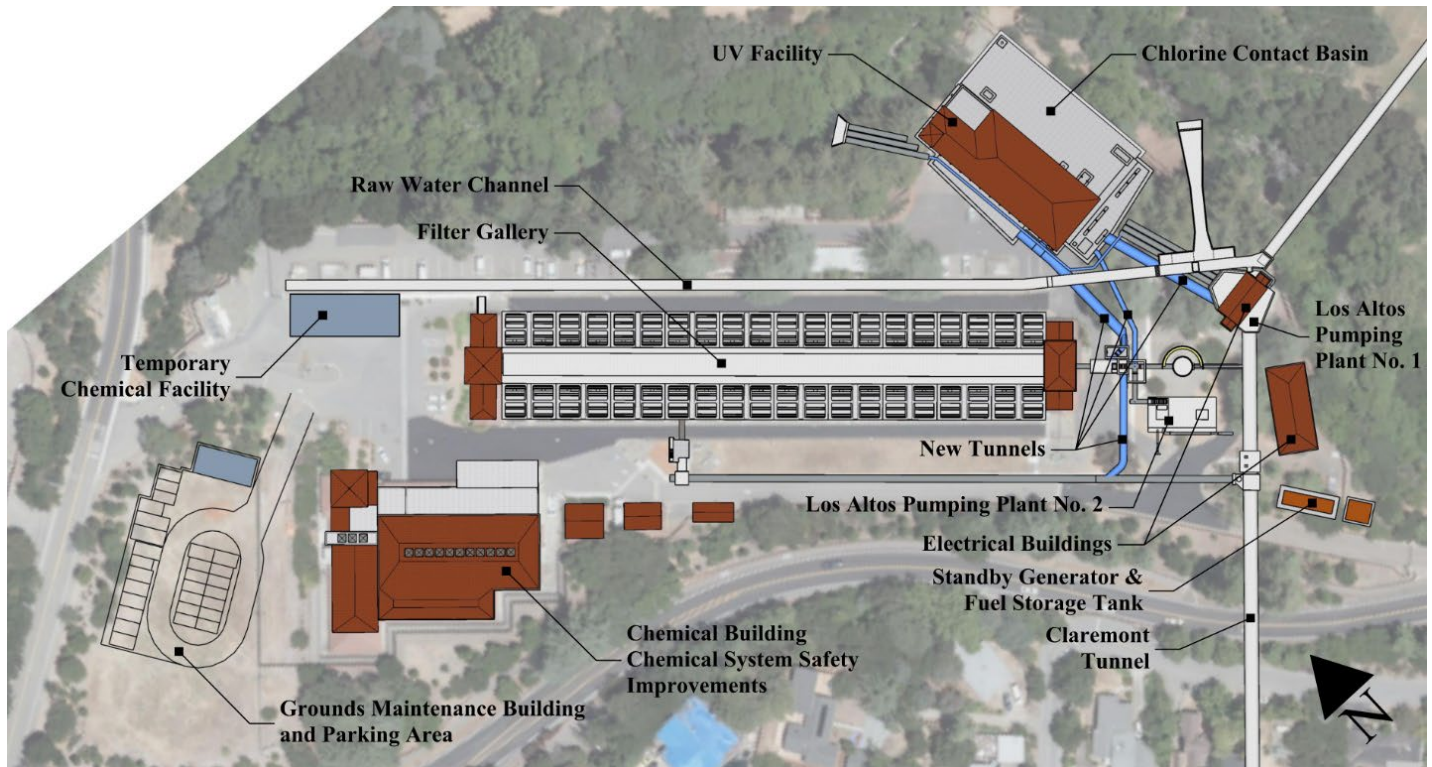
Fiscal Update

Budget Category	Spent To-date	Budget	% Spent
Construction Contract (base)	\$ 230,832,088	\$267,721,132	86.2%
Construction Contract (change orders – see Note 1)	\$ 11,528,419	\$ 18,740,479	61.5%
Engineering Support and Construction Management Costs	\$ 35,181,296	\$46,653,553	75.4%
Notes: 1. The current total approved change order contingency budget is \$18,740,479, equivalent to 7% of the original contract amount of \$267,721,132.			

Schedule Update

Schedule Category	Days Elapsed	Contract Days	% Elapsed
Construction Contract Calendar Days	1,569	1,853	84.7%

Overall Site Plan



Construction Progress Photos



Figure 1 – View of workers placing and compacting engineered fill above the UV Inlet Channel in preparation for underground utilities for the MAUVE building.



Figure 2 – View of workers installing black waterproofing material on the concrete roof of the Chlorine Contact Basin (CCB) which will be buried below the ground surface. The concrete ‘chimneys’ are the some of the accessways for the underground CCB.



Figure 3 – View of an excavator filling a miniature dump truck with engineered fill which will cover the buried CCB.



Figure 4 – View of workers burying the underground CCB. The photo shows a miniature dump truck emptying engineered-fill with other machinery redistributing and compacting the backfill in place.



Figure 5 – View of workers excavating the top six feet of the engineered shoring system which supported the 65-foot deep excavation. This part of the shoring system is being removed to allow for installation of underground utilities. The walls of the underground Effluent Weir Structure can be seen behind the workers.



Figure 6 – View of workers beginning the excavation of the Effluent 2 engineered shoring system. The excavation is where the project will make the final piping connection to allow the water to flow from the existing water treatment plant to the new part of the plant.



Figure 7 – View of rough terrain crane lifting an excavator from the Effluent 2 excavation to allow the ironworkers to install the next level of excavation bracing. This excavation requires six levels of bracing to get to the bottom of the 40-foot-deep excavation where the piping connections will be made. Note the EBMUD truck adjacent to the excavation showing the challenges of constructing the project at a water treatment plant which operates 24/7.



Figure 8 – View looking down into the Effluent 2 excavation with the multiple layers of bracing supporting the excavation walls and adjacent roadway.



Figure 9— Engineer performing inspection at the interim bottom of the Effluent 2 excavation. The engineer is standing adjacent to the existing 78-inch Effluent 2 pipeline which must be evaluated and field measured accurately to complete the design and fabrication of the connecting pipeline. The excavation will continue another 15 feet below the feet of the engineer to fully expose the existing Effluent 2 pipeline and the new Effluent 2 connection tunnel.



Figure 10 – View of electricians demolishing the transformer for Los Altos Pumping Plant No. 2 in preparation for constructing the foundation for the new emergency generator.



Figure 11 – View of carpenters drilling holes and installing underground beams in holes. The beams are part of the retaining wall system which allows the hillside to be supported while it is excavated down to a level surface.



Figure 12 – Closeup view of carpenters placing concrete around underground beams as part of the retaining walls which will support the hillside during excavation.



Figure 13 – View of retaining walls after excavation of the hillside. The workers on the manlift are applying shotcrete to the retaining walls to strengthen them. The level area created by the excavation is the location of foundation for the future emergency generator.



Figure 14 – View of ironworkers placing reinforcing steel for the concrete foundation which will support the future emergency generator. The decorative face of the retaining wall can be seen behind the workers.



Figure 15 – View of crane lifting 2.5 megawatt emergency standby generator onto its concrete foundation pad.



Figure 16 – Electricians installing medium voltage switching equipment in the underground Los Altos Pumping Plant No. 2. This pumping plant is located 40 feet below the ground surface at the Orinda WTP.



Figure 17 – View of the ironworkers installing rebar for the final wall segments for the underground Effluent 1 Valve Vault.



Figure 18 – Workers gather for the safety briefing each day before work begins in the MAUVE Building. At the peak of construction, up to 14 specialty subcontractors will be working on the finishes in this building.



Figure 19 – View of the first floor of the MAUVE Building north end under construction. The building is constructed in two segments. The large opening in the MAUVE Building concrete floor in the foreground serves as easy access for very large piping into the UV Room located 30-feet below the floor.



Figure 20 – View of the MAUVE Building under construction. The green articulating boom in the photo is pumping concrete from the concrete trucks to the wall forms for the second floor.



Figure 21 – Ironworkers installing rebar on wood decking for the MAUVE Building floor. This is the MAUVE Building south end.



Figure 22 – Laborers using a large hopper to place concrete with the aid of the tower crane on the backside of the MAUVE Building. Hard-to-access areas such as this require special concrete placement techniques.



Figure 23 – View of the wood decking which will support the reinforced concrete for the MAUVE Building second floor.



Figure 24 – Engineer inspecting ironworkers as they place the second layer of reinforcing steel for the second floor of the MAUVE Building north end.



Figure 25 – Workers finishing concrete for the second floor of the MAUVE Building north end.



Figure 26 – View of the MAUVE Building south end walls under construction.



Figure 27 – Ironworker placing reinforcing steel wall curtain for MAUVE Building south end concrete walls.



Figure 28 – View of MAUVE Building concrete shell completed. This includes both the south and north ends.



Figure 29 – View of ironworkers placing metal pan deck which will support the MAUVE Building north end roof.



Figure 30 – View of carpenters installing metal stud interior walls on the first floor of the north end.



Figure 31 – View of big rig truck delivering the first two UV disinfection vessels from Germany. The District initiated procurement of these vessels six years ago.



Figure 32 – View of crane lifting first ultraviolet disinfection vessels into the MAUVE Building.



Figure 33 – Closeup view of crane lowering first UV disinfection vessel through the access hatch in the first floor of the MAUVE Building with the careful guiding hands of many workers.



Figure 34 – Closeup view of crane lowering first UV disinfection vessel onto the floor of the UV Room. The access hatch in the first floor of the MAUVE Building is above the workers. The 84-inch green bypass piping can be seen in the background.



Figure 35 – Pipefitters installing connecting piping to the first UV disinfection vessel in the UV Room.

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