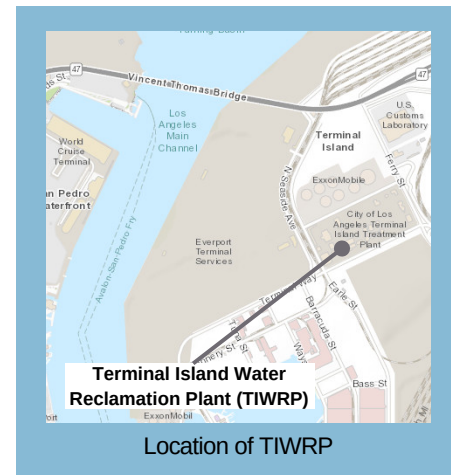


Terminal Island Water Reclamation Plant Advanced Oxidation Process (AOP) Improvements



Los Angeles Sanitation & Environment's (LASAN) Terminal Island Water Reclamation Plant (TIWRP) serves the communities of San Pedro, Harbor City, and Wilmington, with approximately sixty percent of incoming flow coming from nearby industries and the remaining forty percent coming from residential areas. In 2000, it became the first of LASAN's four water reclamation plants with an advanced treatment process for recycled water. A part of this water is now being used for injection at the Dominguez Gap Barrier to prevent seawater intrusion. The remainder is conveyed to industrial users in the Harbor area.



The AWPF

TIWRP's Advanced Water Purification Facility (AWPF) converts tertiary effluent from TIWRP's conventional wastewater treatment process into highly purified recycled water by using Microfiltration, Reverse Osmosis, and Ultraviolet Advanced Oxidation Process (UV AOP) treatment processes. The AWPF has the capability of producing up to 12 million gallons per day (MGD) of recycled water.

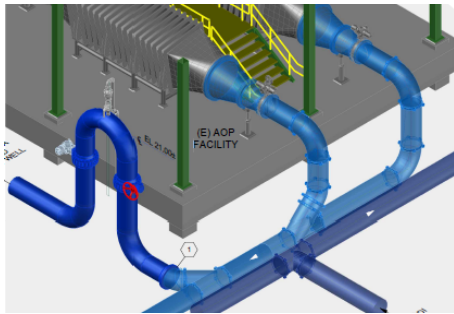
Upcoming work

The Advanced Oxidation Process (AOP) is a critical process in TIWRP's Advanced Water Purification Facility by providing final disinfection of water after the reverse osmosis membranes. The Advanced Oxidation Process Improvements Projects will increase the reliability of the AOP, conserve water, and make improvements to process control. The design and construction of the Advanced Oxidation Process Improvements, which consists of two projects, is managed by LASAN and the Bureau of Engineering.



Project 1:
AOP Effluent
Recirculation System

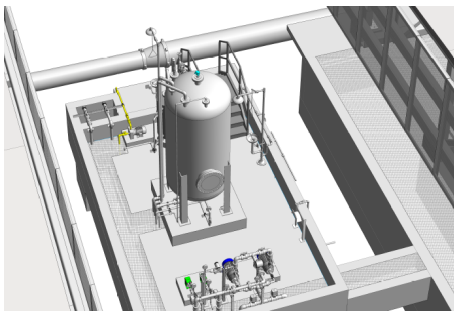
Project 2:
AOP Ammonia Injection
System



PROJECT 1: AOP EFFLUENT RECIRCULATION SYSTEM

Constructs an automatically-controlled system that will recirculate any noncompliant water from the end of the Advanced Oxidation Process (AOP) to the beginning of the Advanced Water Purification Facility for retreatment.

Benefit: Provides a path to recirculate and re-treat any noncompliant water that would otherwise be dumped to prevent contamination of the recycled water storage tank. The rerouting of noncompliant water will also allow the available recycled water to continue flowing unhindered, as the production of noncompliant water is resolved.



PROJECT 2: AOP AMMONIA INJECTION SYSTEM

Adds an automatically-controlled ammonia injection system to the front end of the Advanced Oxidation Process (AOP) to reduce bromate formation in the AOP UV reactors.

Benefit: Ammonia is currently dosed manually to control the formation of bromate, an undesirable disinfection byproduct, in the Advanced Oxidation Process. The addition of an automatically-controlled system will improve the efficiency and fine-tuning of the dosing, which will allow for the production of recycled water of even higher quality and consistency.

LASAN Clean Water Program:

LASAN serves more than four million people and operates and maintains the largest wastewater treatment and collection system in the United States. LASAN serves Los Angeles and 29 contracting cities and agencies, has more than 6,700 miles of public sewers and conveys over 300 million gallons per day of flow from residences and businesses to LASAN's four water reclamation plants.

Terminal Island Water Reclamation Plant:

TIWRP handles the wastewater from the Harbor Area in the City of Los Angeles. The plant was built in 1935, underwent several major upgrades over the years, and became the first 100% recycled water facility in Los Angeles in 2017.

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To learn more visit:
www.lacitysan.org/recycledwater



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