**GUEST OF THE MONTH/September 2024**

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**Los Angeles Department of Water and Power**

**UPDATE ON THE PURE WATER LA PROJECT**

**By Robert Yoshimura**



Formerly known as Operation NEXT and Hyperion 2035, the project was rebranded in July 2024 under the unified name of Pure Water LA, encompassing all the work by both LADWP and the Bureau of Sanitation (LASan). The project was initiated by a directive in 2019 by former Mayor Eric Garcetti. Since then, LADWP and LASan have been developing plans for each agency’s role in the program. The rebranding under a common name reflects the change in focus to a unified planning process and has resulted in unified mission and vision statements.

LADWP is currently working on a Master Plan under the direction of the Board of Commissioners to validate the program strategy and develop a roadmap for implementation. That plan is scheduled for completion in December 2024. Concurrently, LASan has produced a technical memorandum regarding the feasibility of the project, a Program Implementation Plan defining specific capital projects needed at the existing Hyperion Water Reclamation Plant, a Program Management Plan, and is working on a Conceptual Design Report for the first phase of the project.

The two agencies are now jointly working on two active projects. One is a satellite Advanced Water Purification Facility being built in conjunction with the Los Angeles World Airports (LAWA) to provide recycled water to them. The facility is complete and will begin delivering water in early 2025. The second project is a Membrane Bioreactor (MBR) Pilot Plant on Hyperion property to provide research and regulatory acceptance testing and will help develop criteria for the replacement of existing oxygen activated sludge treatment with MBR. The primary benefit of such a conversion is that MBR has half the footprint of conventional processes and produces a better effluent. One scenario for the conversion to MBR will take place in three phases as follows:

* Phase 1 – produce 50 million gallons per day (MGD) for indirect potable reuse (IPR),
* Phase 2 – produce an additional 40 MGD for indirect potable reuse (90 MGD total),
* Phase 3 – produce an additional 120 MGD for direct potable reuse (DPR), (210 MGD total).

At full build-out, the goal of the Pure Water LA project is to supply IPR water to the Los Angeles Aqueduct Filtration Plant (LAAFP) for treatment to meet drinking water standards. From there, DPR water can be supplied to most areas of the city. Supply pipelines (see figure below) will be built to enable the transmission of IPR water to the far northern part of the San Fernando Valley and to numerous groundwater basins and reservoirs along the way (San Fernando, Central, and West Basins). DPR by adding IPR water to reservoirs is possible so long as the ratio of treated drinking water to IPR water is greater than 10:1. Those pipelines will also connect to facilities owned by or to be built by the Metropolitan Water District of Southern California (MWD) to deliver IPR water to the MWD Jensen Filtration Plant next door to LAAFP, and to a backbone pipeline that will deliver water to the eastern portions of the MWD service area.

A map of water management

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Preliminary cost estimates of the various alternatives being considered range from less than $21 billion to more than $25 billion depending on the degree of DPR developed. The capital improvements program for Pure Water LA has identified the following new facilities needed to complete the project:

* IPR treatment facility at Hyperion Water Reclamation Plant
* One new DPR treatment facility
* Two new groundwater treatment facilities
* Two new production well fields
* Three new 9-million gallon storage tanks
* Three new pumping stations
* Forty miles of new trunklines
* A variety of new power supply facilities

Community engagement is an essential part of the roll-out of Pure Water LA. During the next few months, LADWP will brief each of the City Council Districts, The Neighborhood Council MOU Oversight Committee, a Stakeholder Engagement Group, and hold a series of community meetings in October and November 2024.

Next steps for the joint program in the next few months include:

* A 90% deliverable on the Detailed Analysis of the Master Plan will be completed in October 2024. Subsequently, cost refinements and input from public outreach efforts will be added with an expected final report in December.
* Shortly thereafter in early 2025, staff will update the LADWP Board.
* The Hyperion Program Implementation Plan will be completed and adopted.
* Decisions will be made regarding Facilities Ownership, Treatment Location, a Program Environmental Impact Report in accordance with CEQA, and other partnering considerations.
* Proceed with Hyperion Phase 1A (IPR delivery to LAWA).

One sticky issue that the City will have to deal with as these next steps are taken is how to integrate with competing water sources such as MWD’s Pure Water Southern California water reuse project (150 MGD), reuse projects in Orange County and San Diego, and existing water supplies to determine the rate of progress needed to efficiently meet the water needs of the City and region. Thoughts are also being given to resolving the issues that arose during 2022 when shortages occurred in regions where Colorado River water could not be delivered.