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Hyperion Water Reclamation Plant: City of El Segundo Tour

August 7, 2024

Presentation Outline

A. Background and Hyperion Overview

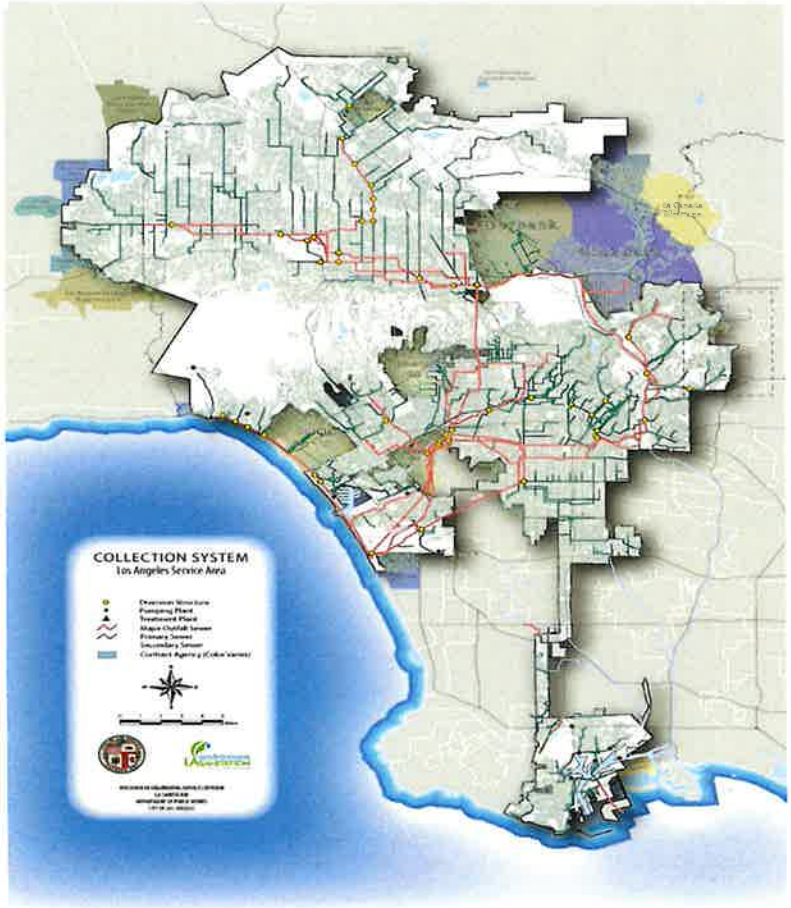
B. Hyperion Air Quality Improvement Projects
   a. Hyperion Odor (H2S) Fence Line Monitoring System
   b. Primary Sedimentation Tanks System (Odor Source)
   c. Headworks & Intermediate Pump Station (IPS) Biotrickling Filter (BTF) Facilities

C. Addressing AQMD Odor Abatement

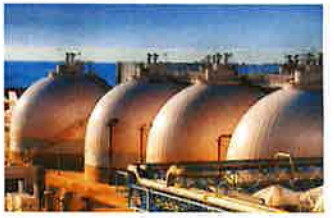
D. Hyperion Communication Update

E. Question and Answers

Background: Hyperion Water Reclamation Plant (HWRP) Overview



HYPERION WATER RECLAMATION PLANT



- HWRP is one of the largest treatment plants in the world
- HWRP is about the size of Disneyland: 144 Acres
- HWRP Staff: Over 400 Full-time Employees
- HWRP Operation & Maintenance Budget: $100 Million
- HWRP Capital Improvement Projects: >$5 Billion Planned in 15 years
- 450 MGD Design Capacity
- 850 MGD Peak Wet Weather Flow
- 260 MGD Current Average Dry Weather Flow
- 27% of flow is currently recycled
- 100% recycle of its wastewater by 2035
- Largest field of egg-shaped digesters in the world with a capacity of 50 million gallons
- Generates 20 Megawatts of power which is enough electricity to power 30,000 homes
- Biogas utilization to generate power results in 95,000 tons/year emission reductions of Greenhouse Gas which is equivalent to taking 20,000 cars of the road

Hyperion Aerial Photo

Hyperion Air Quality Improvement Projects

Capital Improvement Project	Project Background and Intent of Project	Summary Status
Headworks Biotrickling Filters (BTF) for Odor Control	The project is to upgrade the facility in order to replace the chemical scrubbers that used caustic chemicals, thereby reducing the frequency of maintenance required as well as continue to eliminate odors.	**Completed June 2023.**
Intermediate Pumping Station BTF for Odor Control	The project is to upgrade the facility in order to replace the chemical scrubbers that used caustic chemicals, thereby reducing the frequency of maintenance required as well as continue to eliminate odors.	**Completed December 2022**
Truck Loading Facility Odor Control System Project	The project installed chemical scrubbers to eliminate odors from the Truck Loading Facility.	**Completed December 2022.**
Hyperion Continuous Fence Line Monitoring System	The project installed several locations to monitor and report H2S levels along the fence line adjacent to El Segundo.	**Completed December 2022.**

Headworks BTF

Hyperion Air Quality Improvement Projects (Cont'd)

Capital Improvement Project	Project Background and Intent of Project	Summary Status
Primary Treatment Chemical Scrubbers Refurbishment*	The project is to refurbish equipment to reduce maintenance and minimize odors.	**Completed September 2023.**
Primary Treatment Sedimentation Tanks Refurbishment	The project is to refurbish equipment to reduce maintenance and minimize odors.	**Refurbishment is ongoing. This is a long term project with a target completion of December 2025.**
Primary Treatment Sedimentation Tanks Cover Replacement*	The project is to upgrade the existing aging tank covers with new ones to better eliminate odors.	**Completed June 2024.**
Primary Treatment Biotrickling Filters	The project is to upgrade the facility in order to replace the chemical scrubbers that used caustic chemicals, thereby reducing the frequency of maintenance required as well as continue to eliminate odors.	**The project is currently in early stages and will be ongoing. The target completion is December 2028.**
*Capital Improvement Projects created due to Abatement Order. All other projects were previously scheduled.		

Intermediate Pumping Station BTF

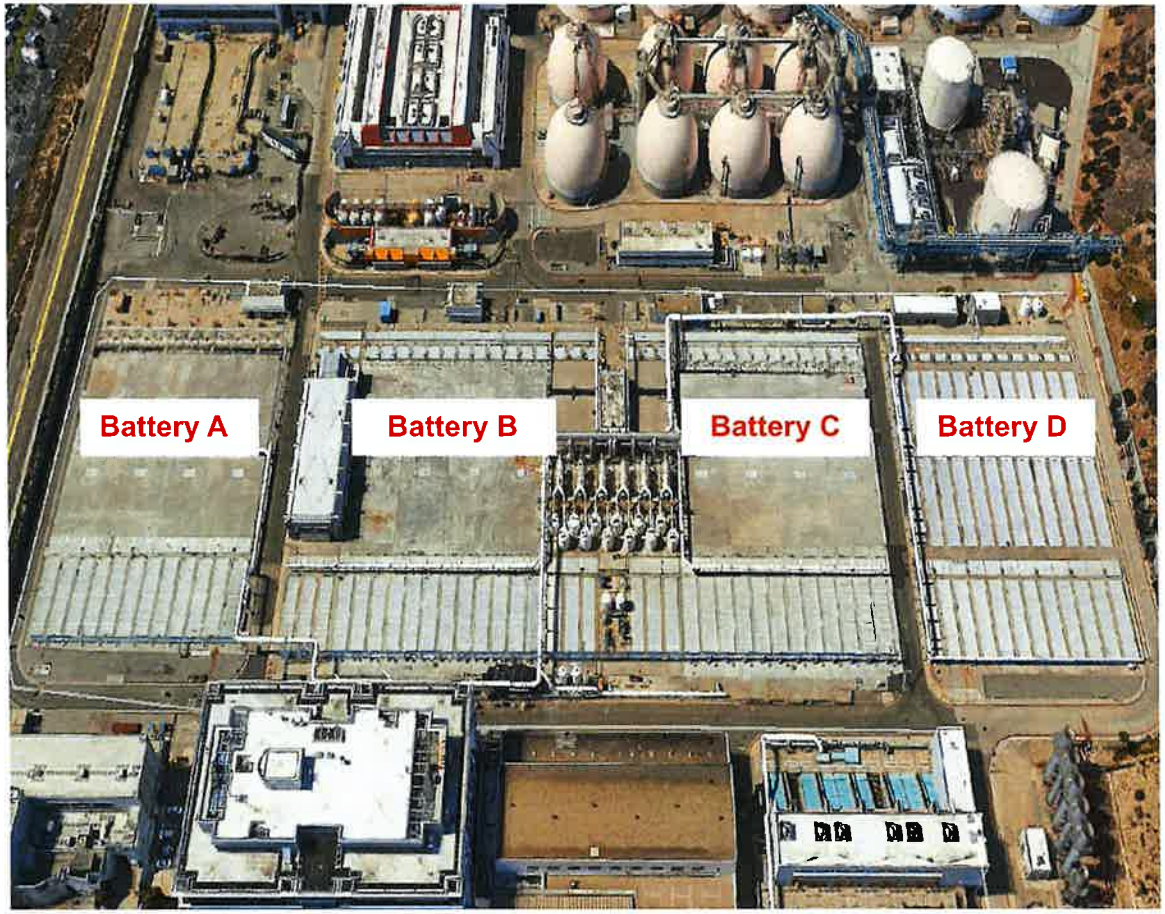
Hyperion Odor (H2S) Fence Line Monitoring System

North, Central and South Monitoring Station Locations along the Fence Line Boundary with El Segundo

FENCE LINE MONITORING EQUIPMENT

- Hydrogen Sulfide Monitoring (H2S)
- LASAN installed three Continuous Fence Line Monitoring Stations at the eastern boundary of Hyperion (Imperial Hwy to W. Grand Blvd.) and the city of El Segundo at a cost of over $723,000.
- Continuous fence line monitoring data is available at: http://www.lacitysan.org/hyperionair.

Primary Sedimentation Tanks System (Odor Source)



Reasons For Primary Tank Odors

- Preliminarily treated wastewater flows through the primary sedimentation tanks to further separate solid materials over a 2 hour period. This slow moving wastewater allows solids to settle, but also releases gas or odors.
- Tank covers allow this released gas to be collected by the odor control system, scrubbed and polished before the air is released.
- All corroded and broken covers at Hyperion have been replaced. The project was completed in June 2024. Covers have a lifespan of 15 years.
- Factors such as wind direction, wind velocity, and temperature impact the dispersion rates of odors into the community.

Improvements to Address AQMD Odor Abatement Order

CLEAN TANKS

REPLACE SLUDGE HANDLING EQUIPMENT

REPLACE TANK COVERS

REFURBISH PRIMARY TREATMENT FOUL AIR SCRUBBERS

- Completed Refurbishment of Primary Battery A in December 2022.
- Complete installation of temporary covers on Primary Clarifier Batteries B, C, and D by no later than May 25, 2023.
- Completed Primary Treatment Chemical Scrubbers refurbishment in September 2023.
- Complete installation of all in service primary tank covers by December 2023 (Primary Battery A, B, & C).
- Completed installation of all primary tank covers in June 2024 (Primary Battery A, B, C, & D).

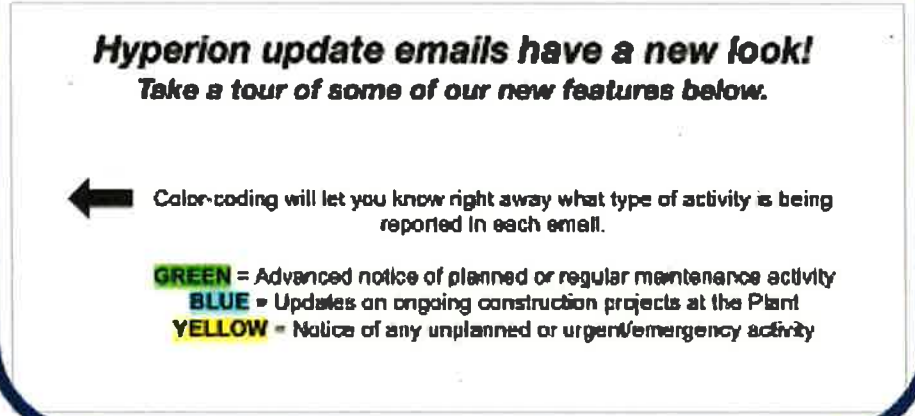
HWRP COMMUNICATIONS UPDATES

Our goal is clear, consistent communication.

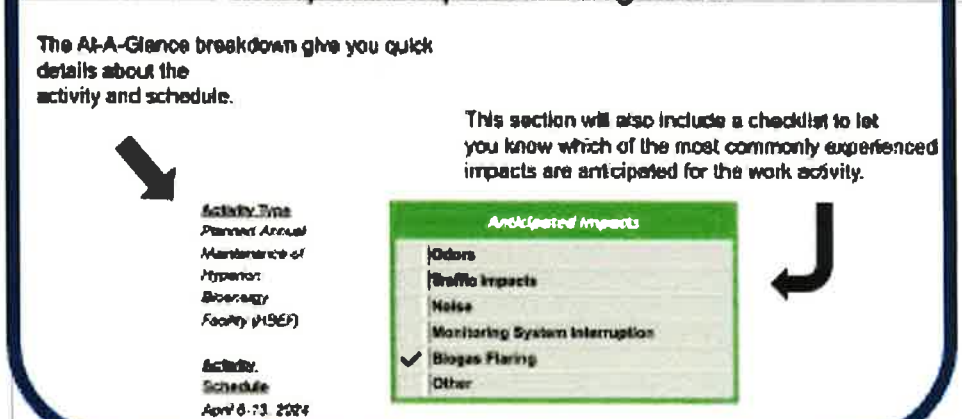
In April 2024, LASAN developed a new system for Hyperion updates sent to the public via email. These changes were made with the intention to make email updates more straightforward with the option to get information at a glance.

Every email update now features a "tour" of new features so residents can become familiar with the system.

The bottom of each email contains details about the color coding system.



Current emails illustrate the ease of the new At-A-Glance feature, with quick facts and information on anticipated impacts during work.

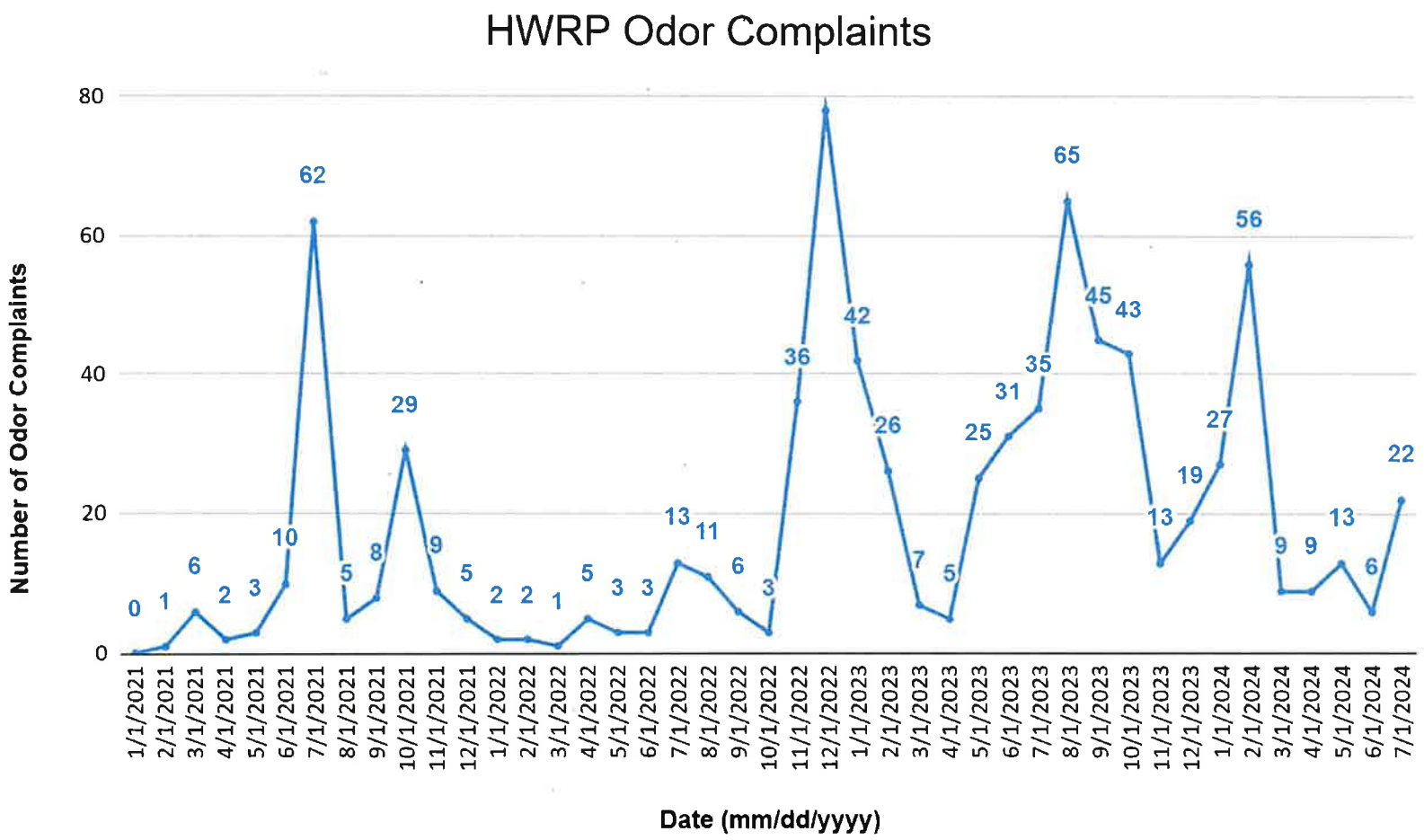


HWRP COMMUNICATIONS UPDATES

Our goal is clear, consistent communication.

- A spot check in January 2024 showed a 98% response rate to those calling the hotline with odor and other Hyperion complaints.
- Reports are provided in writing via email, text, and hard-copy mail as requested by residents.
- Reports submitted to residents include details such as:
  - What work is taking place at Hyperion on the day of the call
  - Any noticeable odors in-plant, along with their cause if known
  - Any H2S readings taken, both in-plant and at the caller's address
  - Any corrective actions taken (if needed)
  - Additional details as provided by survey operators
- We continue to aim for call back within 24 hours when requested, and a written report for all calls sent within 96 hours.
- We have a dedicated, 24/7 service to field calls related to Hyperion concerns. Please note that residents MUST call the dedicated Hyperion hotline number provided by LASAN to be able to receive these reports; calls to AQMD or any other agency do not trigger this response by LASAN.

HWRP Odor Complaints



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Open Discussion

@LACITYSAN

Thank you!

lacitysan.org/recycledwater

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