



San Diego County
**Air Pollution
Control District**



Encina Wastewater Authority

Annual Public Meeting
September 15, 2026



Encina Water Pollution Control Facility

- Regional provider of wastewater and recycled water
 - Cities of Carlsbad, Vista, Encinitas; Buena Sanitation, Vallecitos Water, and Leucadia Water Districts
 - 123 square mile service area; population 377k
- Average ~23 Million Gallons / Day
- Environmental Steward
 - Water Quality Protection
 - Biosolids => Fertilizer
 - Cogeneration Energy



Background

Air Toxics “Hot Spots” Program



Background

Air Toxics “Hot Spots” Program

Health Risk Assessment

- As required by State law, Encina conducted a Health Risk Assessment based on emissions that occurred in 2021.

Approval

- State law requires the District and the Office of Environmental Health Hazard Assessment (OEHHA) to review and approve Health Risk Assessments conducted by facilities subject to the Hot Spots Program, the HRA was approved in 2023.

Requirements

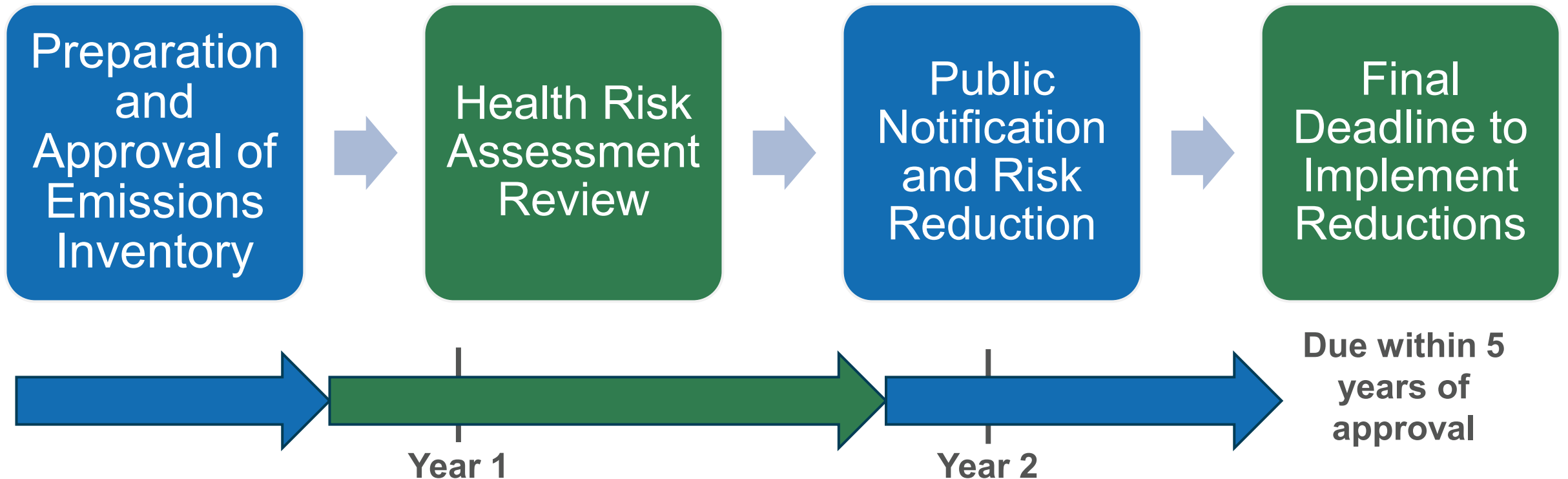
- Based on the approved Health Risk Assessment, Encina was required to conduct public notification and submit a Risk Reduction Audit and Plan to the District. This plan was submitted in May 2024 and approved in April 2025.

Risk Reduction Plan

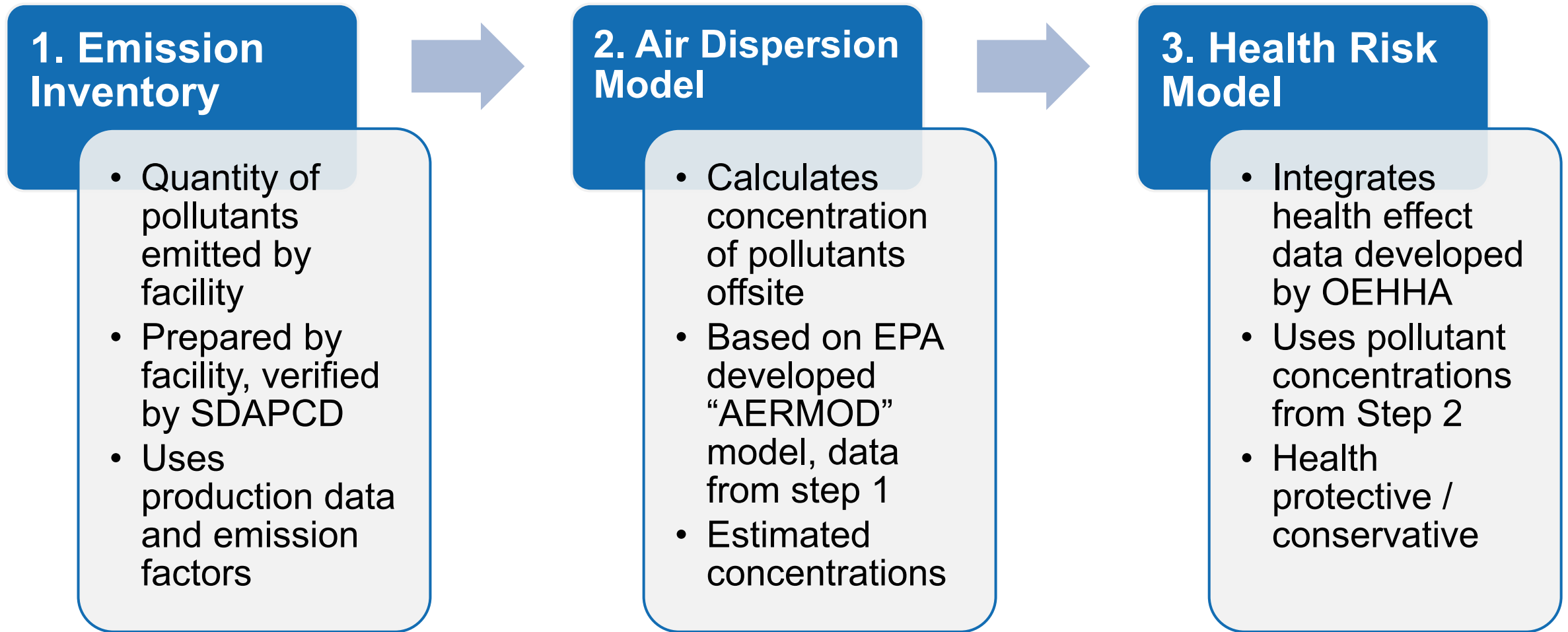
- Encina completed source testing of odor reduction facilities in 2025 to more accurately quantify toxic emissions. Encina submitted applications for engine controls in January 2026, and Authority to Construct was issued in July 2026.



Background: HRA Process



Background: Health Risk Assessments (HRA)





Encina Wastewater Authority

- Wastewater Treatment Plant
- 6200 Avenida Encinas, Carlsbad



Encina Equipment



Elevated Health Risks Encina's 2021 Emissions

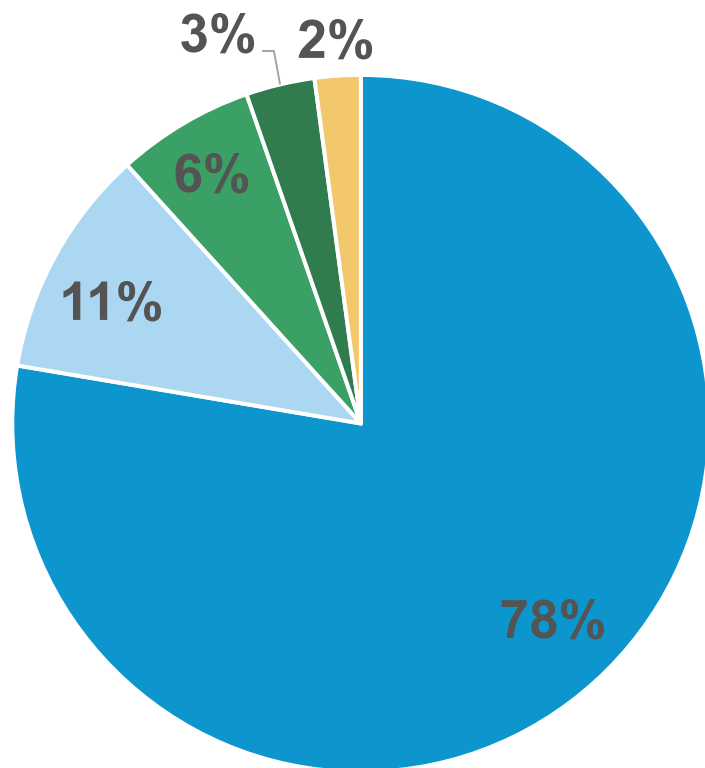
Health Risk	HRA Results*	Risk Notification Threshold	After Risk Reduction**
Maximum Residential Cancer Risk	16.0 in one million	10 in one million	8.84 in one million
Maximum Worker Acute Health Hazard Index	1.17	1.0	0.22
Maximum Residential Acute Health Hazard Index	1.01	1.0	0.21

**Based on Encina's actual operation and emissions in 2021*

***Based on operating at permitted maximum capacity (higher than actual), and accounting for risk reduction*



Original 2021 HRA Emission Contributions Residential Cancer Risk 16.0 in One Million



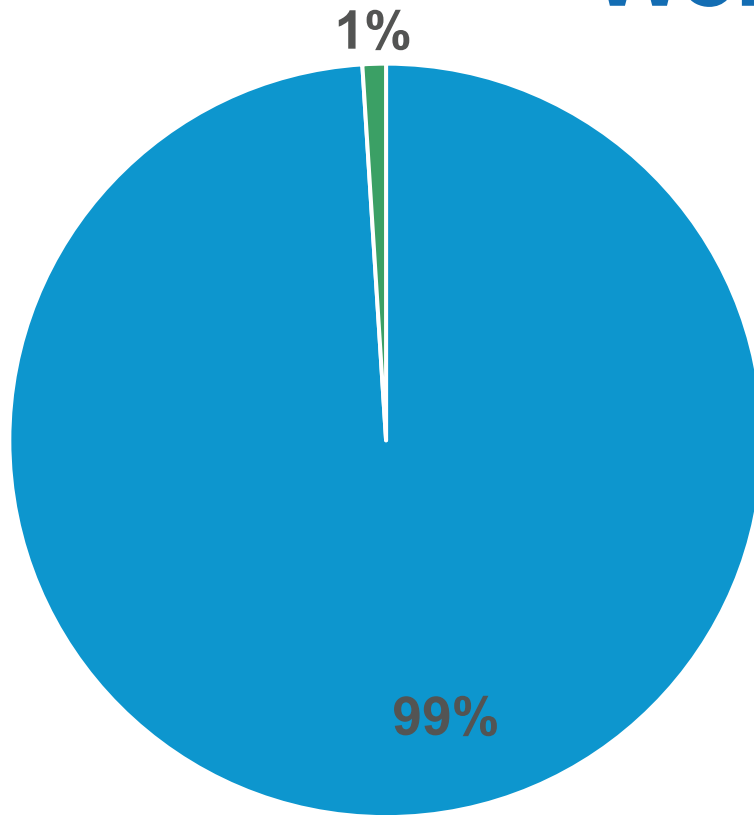
- Formaldehyde (Cogen Engines)
- Ethylene DiChloride (Engines and Odor Reduction)
- PAHs (Cogen Engines)
- Arsenic (Cogen Engines)
- Benzene (Cogen Engines, Odor Reduction)



Original 2021 HRA Emission Contributions

Acute Health Hazard Index

Worker 1.17; Residential 1.01



- Formaldehyde (Cogen Engines)
- Acrolein (Cogen Engines, emergency diesel engine)

MEIW
MEIR



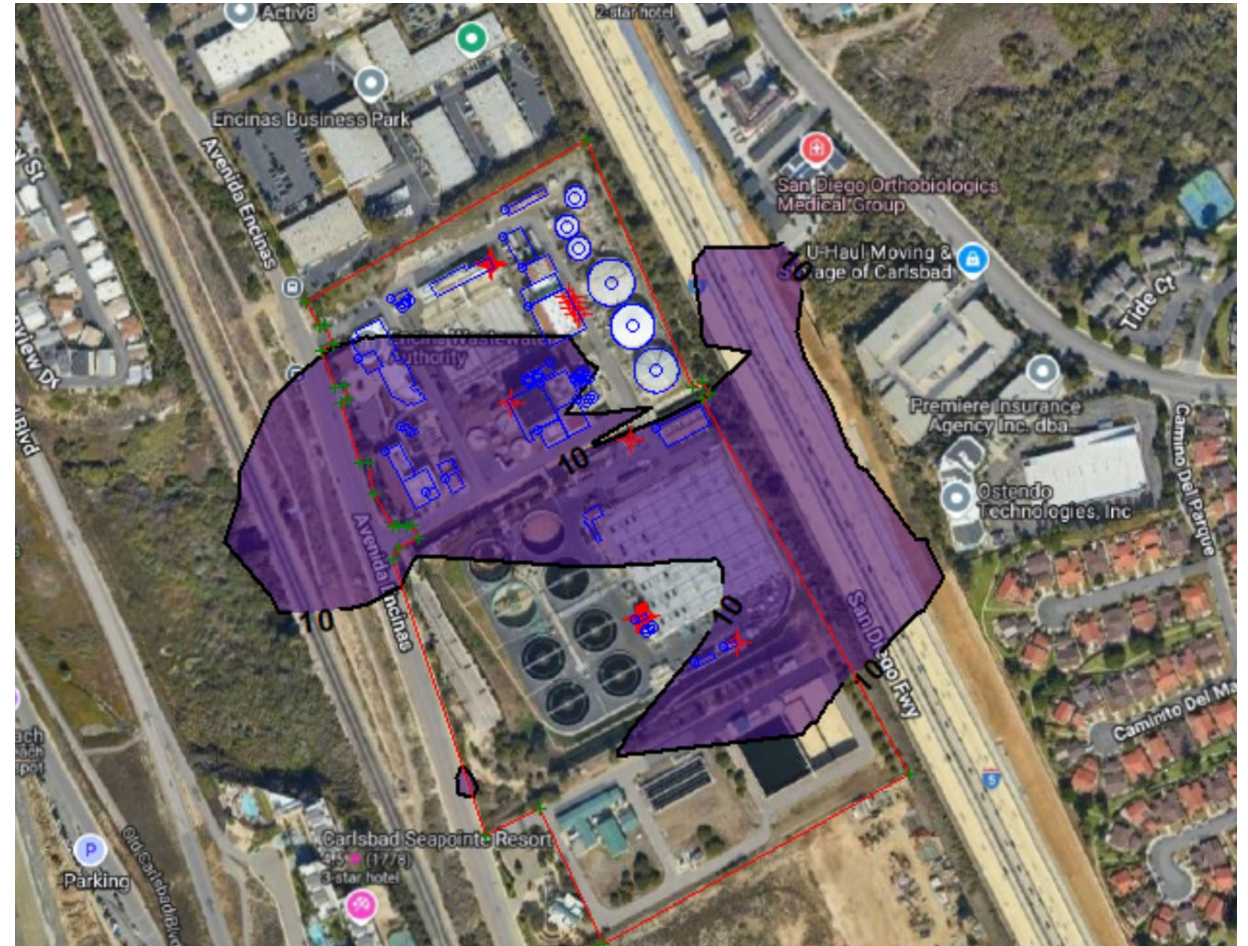
Risk Reduction Measures

- Engine Emission Controls
 - Primarily to reduce formaldehyde emissions
 - Similar to a catalytic converter on a car
 - Minimum 80% reduction of formaldehyde
 - Construction approved by SDAPCD, Encina working on final design and installation
- ORF Emission Testing
 - **Completed in 2025**
 - No detectable levels of ethylene dichloride (EDC) emissions, consistent with proposal in risk reduction plan



Cancer Risk after Risk Reduction

- Updated figure showing 10 in one million isopleth
- Risk reduced below threshold at all residences
- Accounts for risk reduction measures and is reflective of maximum facility capacity



Acute HHI after Risk Reduction

- Updated figure showing maximum HHI is < 1
- This means acute HHI is reduced below the threshold at all locations
- Accounts for risk reduction measures and is reflective of maximum facility capacity



Next Steps



Emission testing conducted in June 2025. Successfully met requirements.

Encina applied for construction permits in January 2026. These applications were reviewed by SDAPCD, and construction permits were issued in July 2026.

Encina will procure and construct new equipment and must start operation of controls by August 30, 2029.

Encina will notify and host a public meeting annually until the Risk Reduction Plan is fully implemented.

Encina's toxic emissions will be re-evaluated every four years under AB2588. 2025 will be the next emissions year analyzed under this program.





ENCINA

WASTEWATER AUTHORITY

- Biogas is a local renewable source of energy
 - Saves Public Agency \$3.5 million annually in electricity and heat costs
 - Provides backup power in case of grid outage
- Capital Improvement Program assesses + funds needs across the facility
- Cogeneration Low-Emission Augmentation Retrofit (CLEAR) project
 - Biogas pretreatment and catalyst
 - Design-Build Project – nearly 90% design



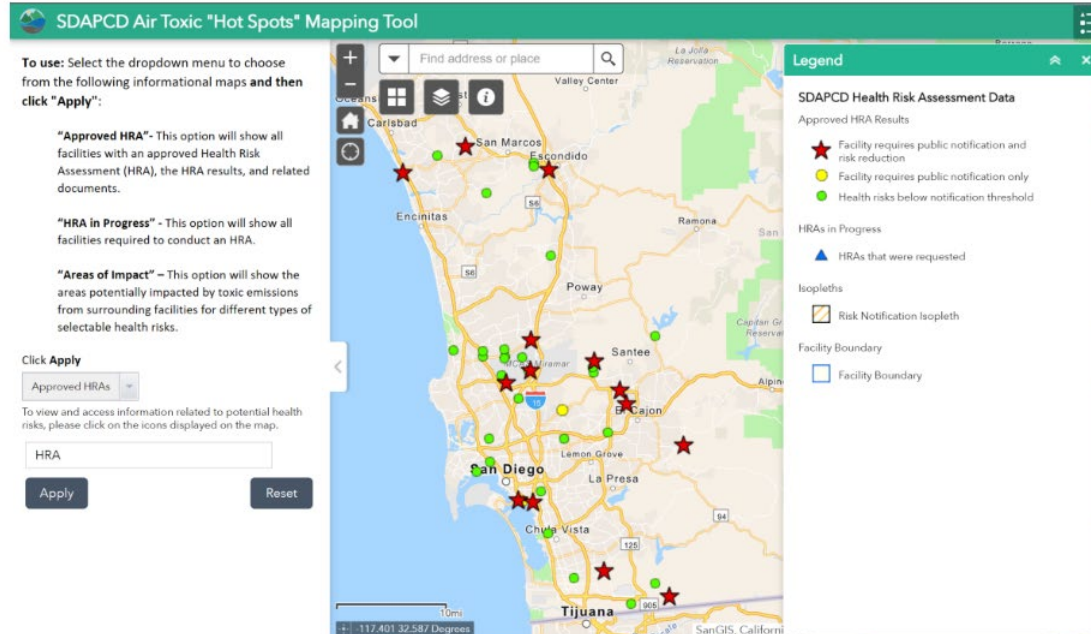
Stay Informed

Sign up for District Updates

- <https://bit.ly/SDAPCD-Updates>

Visit District Hot Spots Page

- <https://sdapcd.org/hotspots>



Procedures & Guidelines

Public Documents for "Hot Spots" Facilities

The facilities listed below are subject to the notification requirements of the "Hot Spots" program. Select a facility to see documents related to this program. The most recent facility documents below are also available when viewing a facility record in the [SDAPCD Air Toxics "Hot Spots" Mapping Tool](#) presented above.

BAE Systems Ship Repair - San Diego - 92113 - 2017

Pacific Ship Repair - San Diego - 92113 - 2019

Vulcan Materials (Carrol Canyon) - San Diego - 92126 - 2017

Superior Ready Mix (Escondido Asphalt) - Escondido - 92024 - 2019

Encina Wastewater Authority - Carlsbad - 92011 - 2017

Minnesota Methane - San Diego - 92111 - 2018

Vulcan Materials (Otay) - San Diego - 92154 - 2019

Otay Landfill - Chula Vista - 91911 - 2017





San Diego County
**Air Pollution
Control District**



For more information

Alicia Appel | 442.320.7018

Aappel@encinajpa.com