



San Diego County Air Pollution Control District

# Encina Wastewater Authority

Annual Public Meeting

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August 6, 2025





# 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 ~20 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

### 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.



# 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

*\*Reflects potential risk from facility operating at maximum capacity, vs. original HRA is based on actual operation*



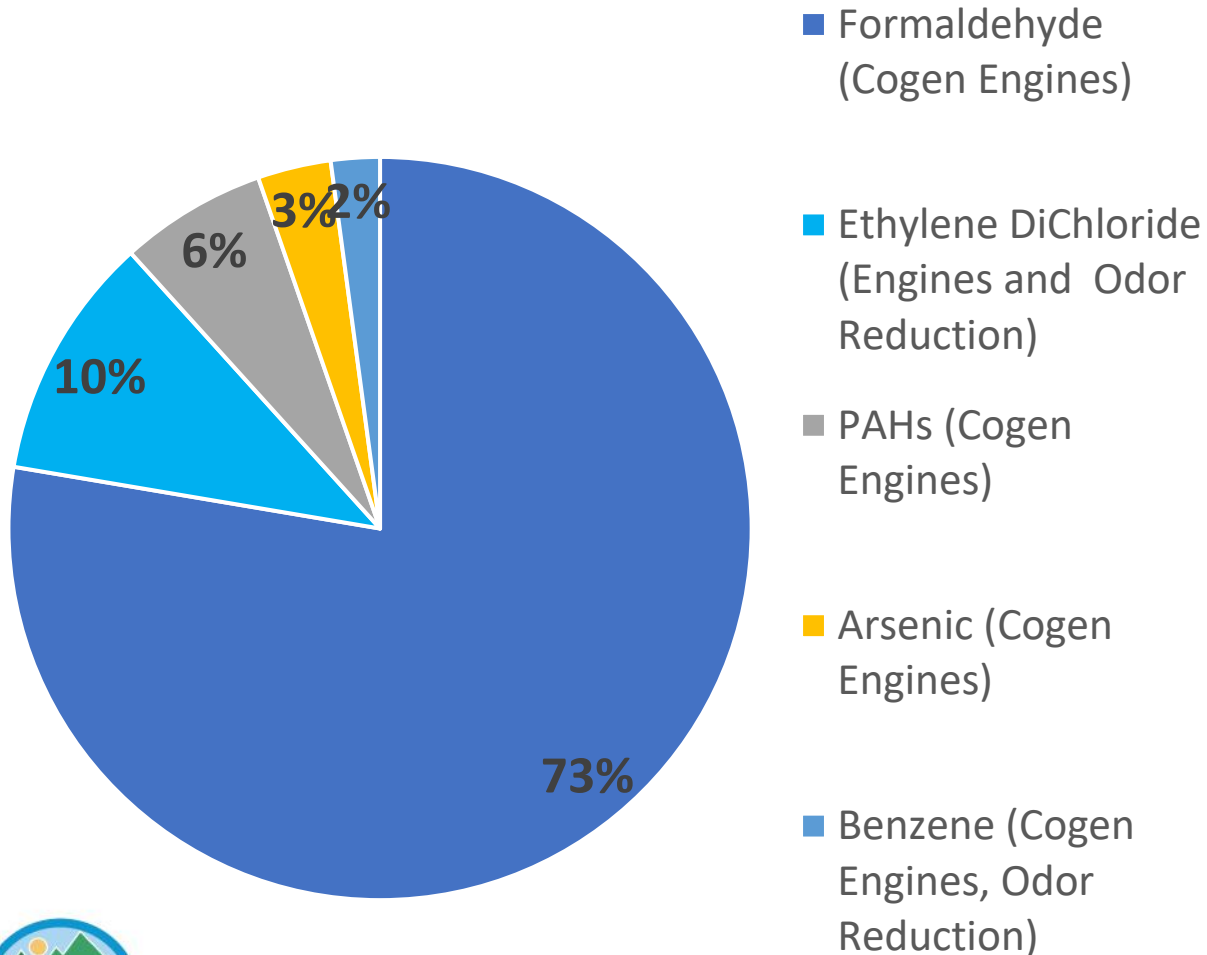
# Risk Reduction Measures

- Engine Emission Controls
  - Primarily to reduce formaldehyde emissions
  - Similar to a catalytic converter on a car
  - Minimum 80% reduction of formaldehyde
- ORF Emission Testing
  - Improve accuracy of ORF ethylene dichloride emission calculations
  - Previous factors may overestimate emissions
  - If testing is not successful, implement additional measures to reduce emissions



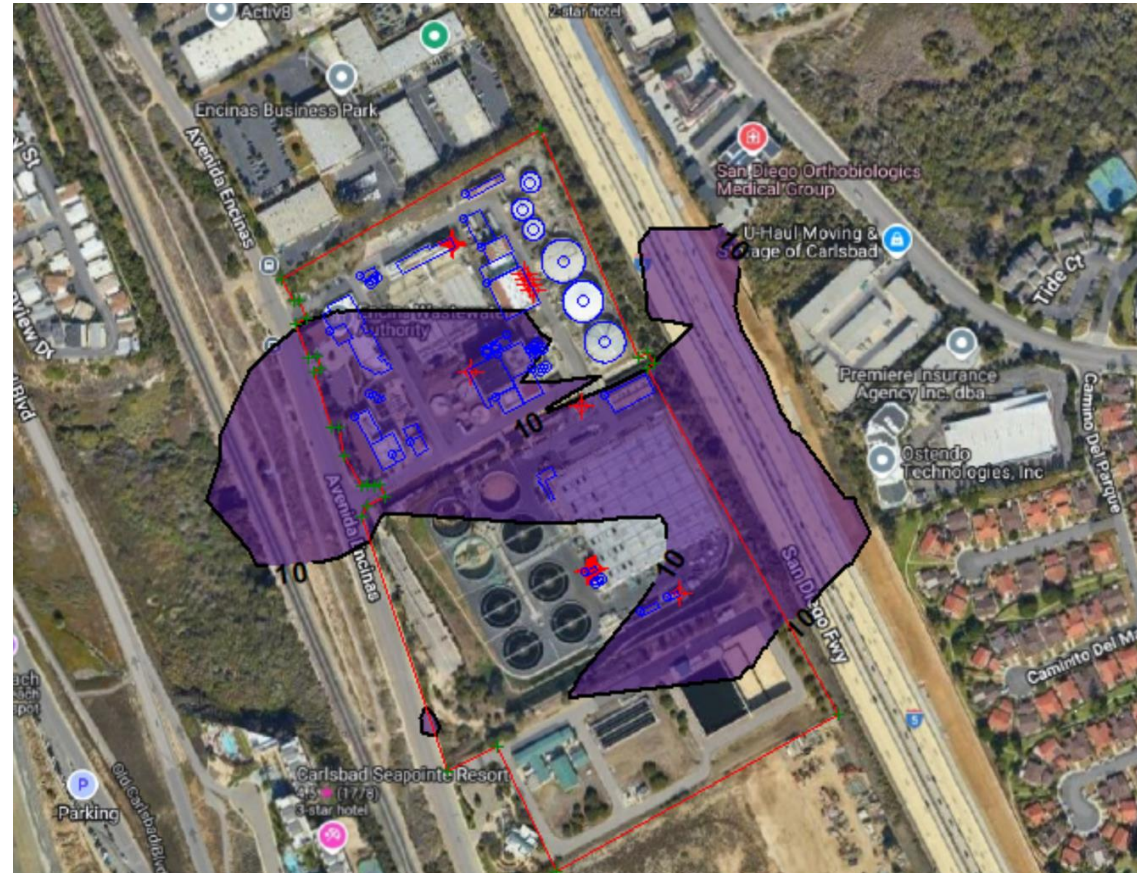
# Original 2021 HRA Emission Contributions

## Residential Cancer Risk 16.0 in One Million



# Cancer Risk after Risk Reduction

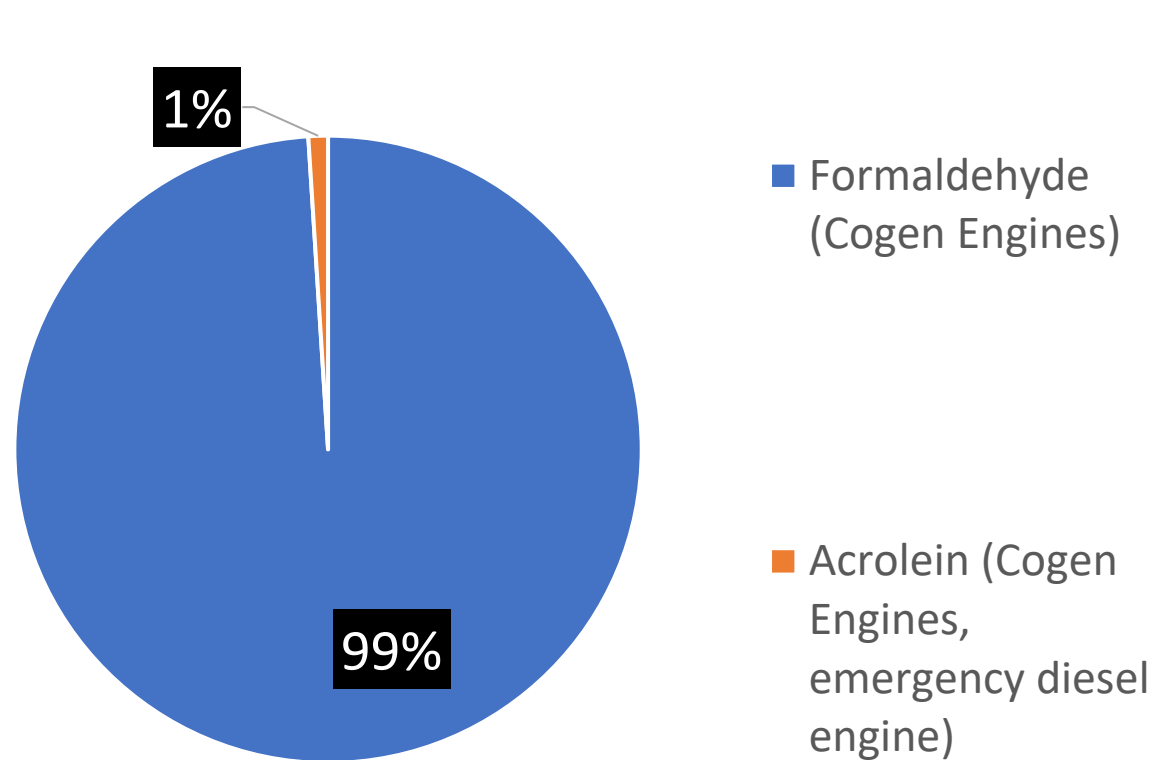
- Updated figure showing 10 in one million isopleth
- Risk reduced below threshold at all residences
- Accounts for risk reduction measures and is reflective of maximum facility capacity



# Original 2021 HRA Emission Contributions

## Acute Health Hazard Index

### Worker 1.17; Residential 1.01



MEIW

MEIR



# 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





# 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 – currently at 30% design



# Next Steps



Emission testing conducted in June, awaiting final test report

Encina will finalize engineering design for engine controls and apply for construction permits by end of 2026

After SDAPCD review and issuance of construction permits, 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.



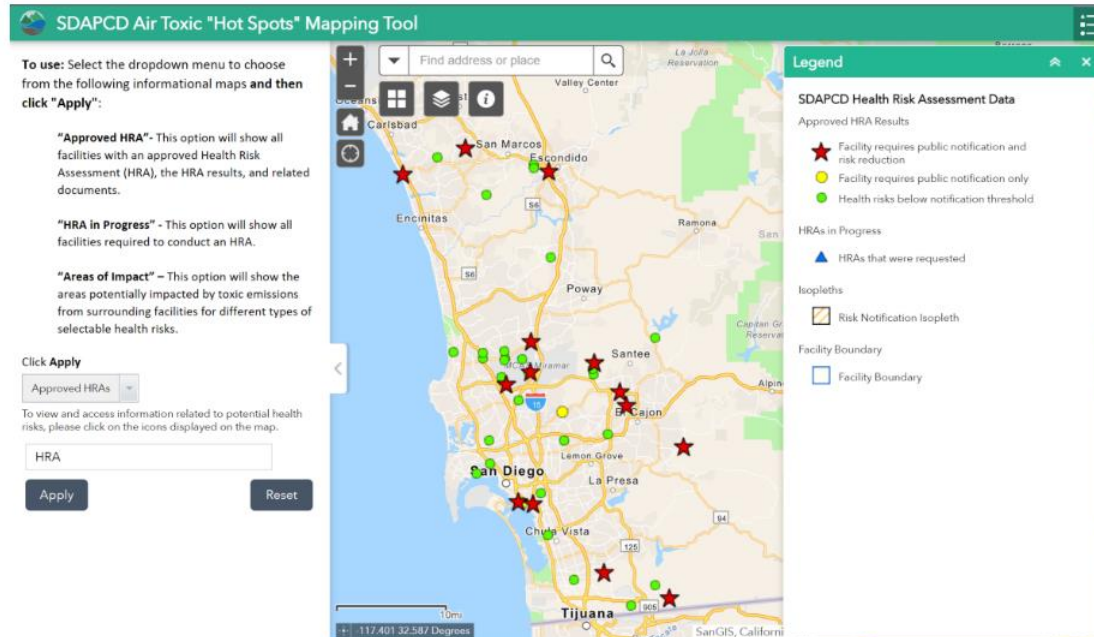
# Stay Informed

## 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

