

# Air Toxics Program

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## Board of Directors Santa Barbara County Air Pollution Control District

**Kaitlin McNally**  
Engineering Supervisor

**David Harris**  
Air Quality Engineer

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# Overview

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- Background
- Air Toxics
- Health Risk
- Toxics Regulations
- Risk Management
- New Source Review Health Risk Program
- Accomplishments
- Work in Progress
- Next Steps

# Background

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- Children's Environmental Health Protection Act
- OEHHA revising health risk assessment Guidance Manual
- Risk may increase



# Air Toxics

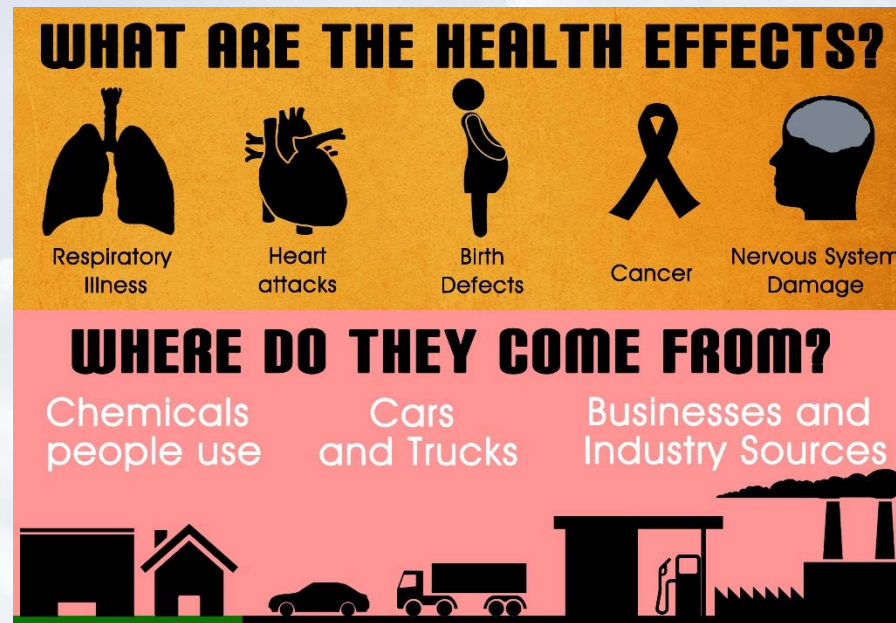
- Air Toxic: Chemical in the air with potential to cause health problems





# Health Risk

- Health Risk: Increased likelihood that exposure to air toxics will result in negative health effects



# Health Risk

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- Cancer risk
  - Expressed as probability: number of chances-in-a-million
- Non-cancer risk
  - Chronic
  - Acute
  - Expressed as Hazard Index (HI)
  - Hazard Index =  $\frac{\text{Predicted Air Toxic Exposure}}{\text{Acceptable Air Toxic Exposure}}$

# Health Risk Assessments

- OEHHA *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments*
- ARB Hotspots Analysis Reporting Program (HARP)

The screenshot shows the 'Air Dispersion & Health Risk Analysis' software window. The interface includes a menu bar with 'File' and 'Help'. A left sidebar contains a tree view with options: 'Calculate Risk' (expanded), 'Select Risk Scenario', 'Select Pathways to Evaluate', 'Press Calculate', 'View Risk Results', 'Spatial Averaging Risk (Optional)', 'Create Risk Contours', and 'Export Mandatory Reports & Files'. The main area is titled 'Select Risk Scenario' and contains four sections: 'Analysis Type' with radio buttons for 'Cancer Risk' (selected), 'Chronic Risk (Non-cancer)', '8-Hour Chronic Risk (Non-cancer)', 'Acute Risk (Non-cancer)', and 'Cancer, Chronic, and Acute'; 'Receptor Type' with radio buttons for 'Individual Resident' (selected), 'Population-Wide', and 'Worker'; 'Exposure Duration' with radio buttons for '70 Year', '30 Year' (selected), '25 Year (Worker)', '9 Year', and 'User Defined (Tier 2)' (with a dropdown set to '70'); and 'Intake Rate Percentile' with radio buttons for 'OEHHA Derived Method' (selected), '95th (High End)', '65th (Mean)', 'Risk Management Policy (RMP) - \*Inhalation Only\*', and 'RMP using the Derived Method'. Each section has a 'Help me choose' link at the bottom.

# Toxics Regulations

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- State:
  - Air Toxics "Hot Spots" Information and Assessment Act
  - Airborne Toxic Control Measures (ATCMs)
- Federal:
  - National Emission Standards for Hazardous Air Pollutants (NESHAPs)



# Air Toxics “Hot Spots” Information and Assessment Act (AB 2588)

1. Identify amount of air toxics emitted by facilities;
2. Estimate potential health risk for members of public exposed;
3. Inform individuals exposed to significant health risk; and
4. Protect the public health by reducing significant health risks



# Risk Management

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- Board actions:
  - Adopted AB 2588 public notification thresholds in 1993
  - Adopted AB 2588 risk reduction thresholds in 1998
- Health Risk Significance Thresholds:
  - Cancer risk  $\geq 10$  in a million
  - Chronic risk HI  $> 1$
  - Acute risk HI  $> 1$

# New Source Review Health Risk Program

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- Health risk evaluated during permitting
- Goal: Prevent a new/modified facility from creating a significant risk to community
- Uses significance criteria established by the AB 2588 program



# Accomplishments

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- AB 2588: 100% reduction of significant risk facilities
  - 1991: 51 significant risk facilities
  - 2015: 0 significant risk facilities
- New Source Review Health Risk Program:  
No additional significant risk facilities created since 1991



# Work In Progress

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- Dedicated resources to Air Toxics Program
- Formed South Central Coast air toxics team
- Evaluating impacts of revised Guidance Manual for health risk assessments
- Updating air toxics webpage



I want to learn about  
air toxics and health »



I want air toxics  
information for  
businesses »

# Next Steps

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- Ascertain how best to execute revised Guidance Manual
- Work with:
  - South Central Coast air toxics team
  - California Air Pollution Control Officers Association (CAPCOA)
- Return to your Board with findings at a future date

# Questions?

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