

# Composite Wood Product Airborne Toxics Control Measure

---

**October 24, 2001**



**California Environmental Protection Agency**

**Air Resources Board**



# California Health & Safety Code Requirements

---

- **§ 39657 - Requires ARB to identify toxic air contaminants that pose significant risk to the public; identify minimum threshold level if any**
- **§ 39658 - Requires ARB to develop ATCMs for identified compounds**
- **§ 39660.5 -Requires ARB to assess California's indoor exposure to TACs and the relative contribution to total exposure**
- **§ 39666 - For compounds with no threshold level, the HSC requires the development of control measures to reduce emissions to lowest level achievable through use of best available control technology or more effective control**



# California's 2-Part Air Toxics Program

## Identification

Potential Toxic Substance

ARB/OEHHA Publishes Draft Report

- Public Workshops
- Comment Period

SRP Reviews Report

Public Hearing

## Risk Management

Evaluate Exposure and Risk

Investigate Risk Reduction Option/s

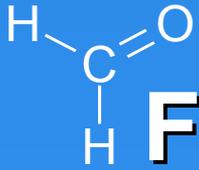
- Public Workshops

Publish Staff Report / Proposal

- Public Workshops
- Comment Period

Public Hearing

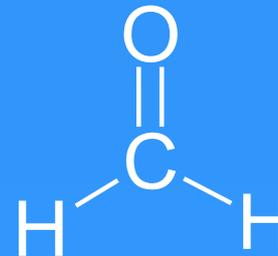




# Formaldehyde as a Public Health Concern

---

- Identified as a TAC by the ARB in 1992 with cancer and non-cancer (i.e., acute, chronic) health effects
- IARC Group 2A classification (probable human carcinogen)
- Data show that Californians are exposed to indoor and outdoor formaldehyde
- U.S. EPA ranked formaldehyde number 1 and 2 for chronic and acute indoor exposure
- Some studies show that formaldehyde exacerbates asthma in those sensitive to formaldehyde



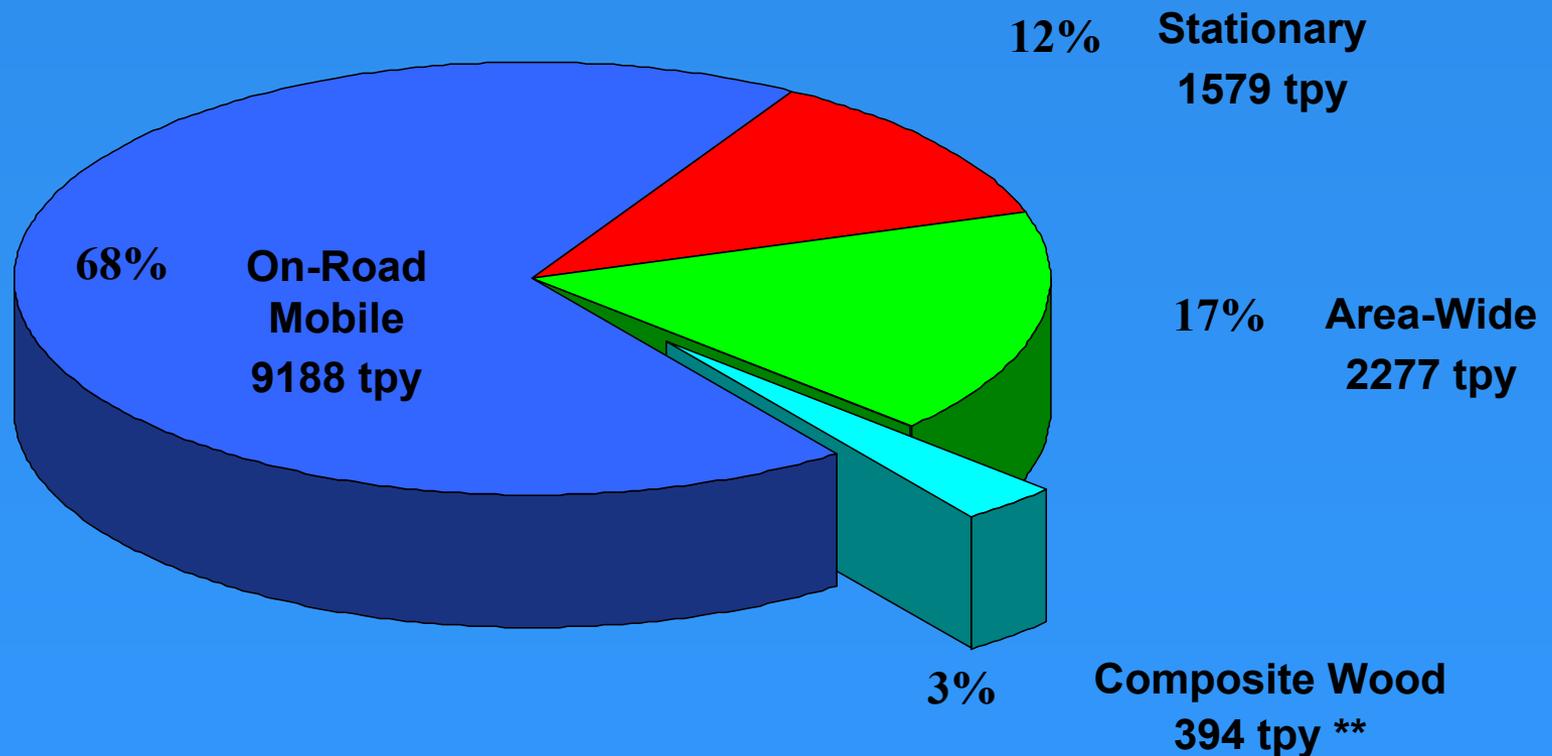
# Sources of Ambient Formaldehyde

---

- **Directly emitted to ambient air from mobile, area-wide (e.g., paints) and stationary sources**
- **Studies show significant emissions from various building products, wallpaper, paints, and other consumer products**
- **Secondary formation contributes significantly to ambient level**



# Directly Emitted Formaldehyde Sources\*



\*Based on the 2001 California Almanac of Emissions and Air Quality, ARB

\*\* Estimation based on U.S. Census Bureau and Random Lengths Publication Data



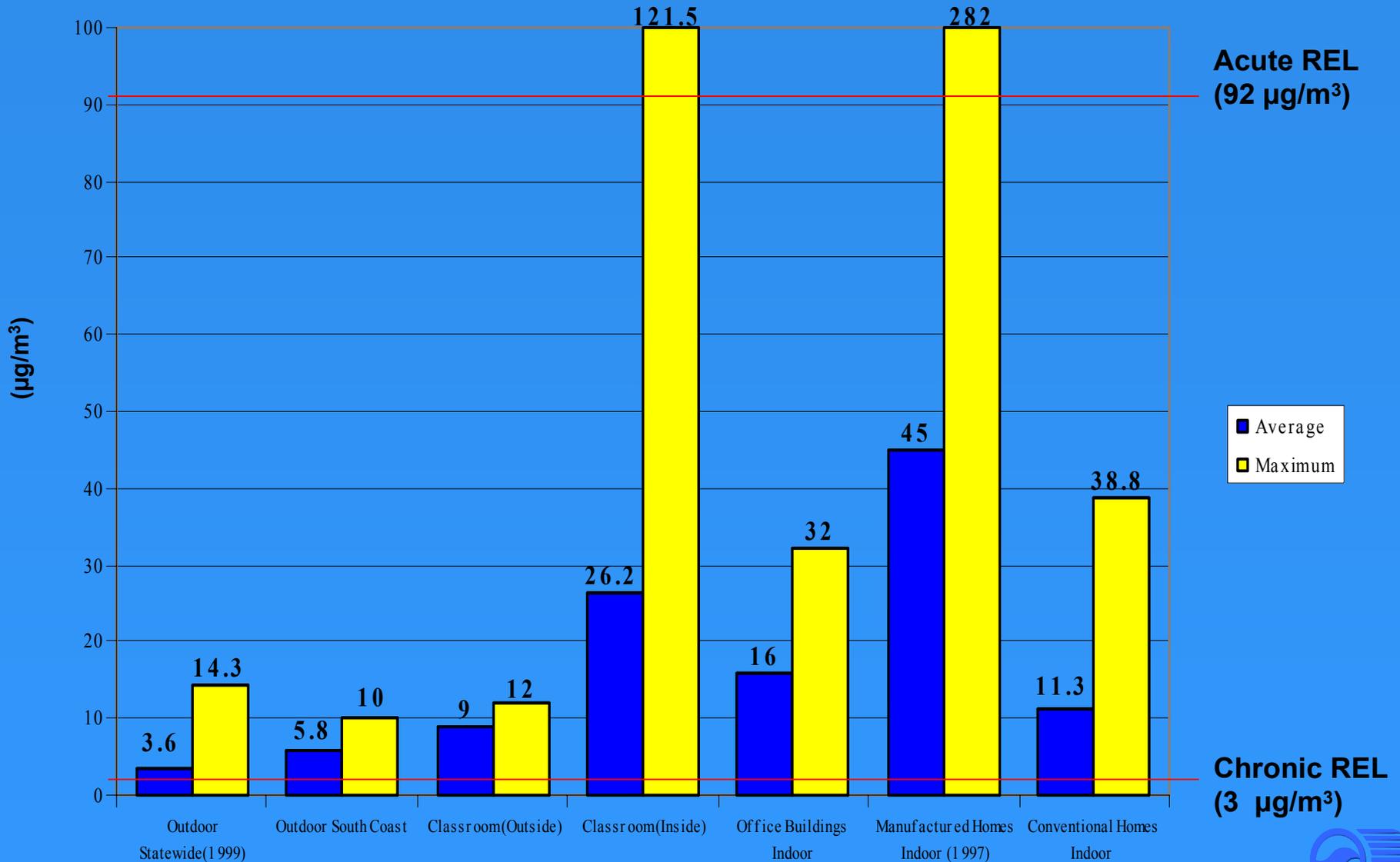
# Composite Wood Products

---

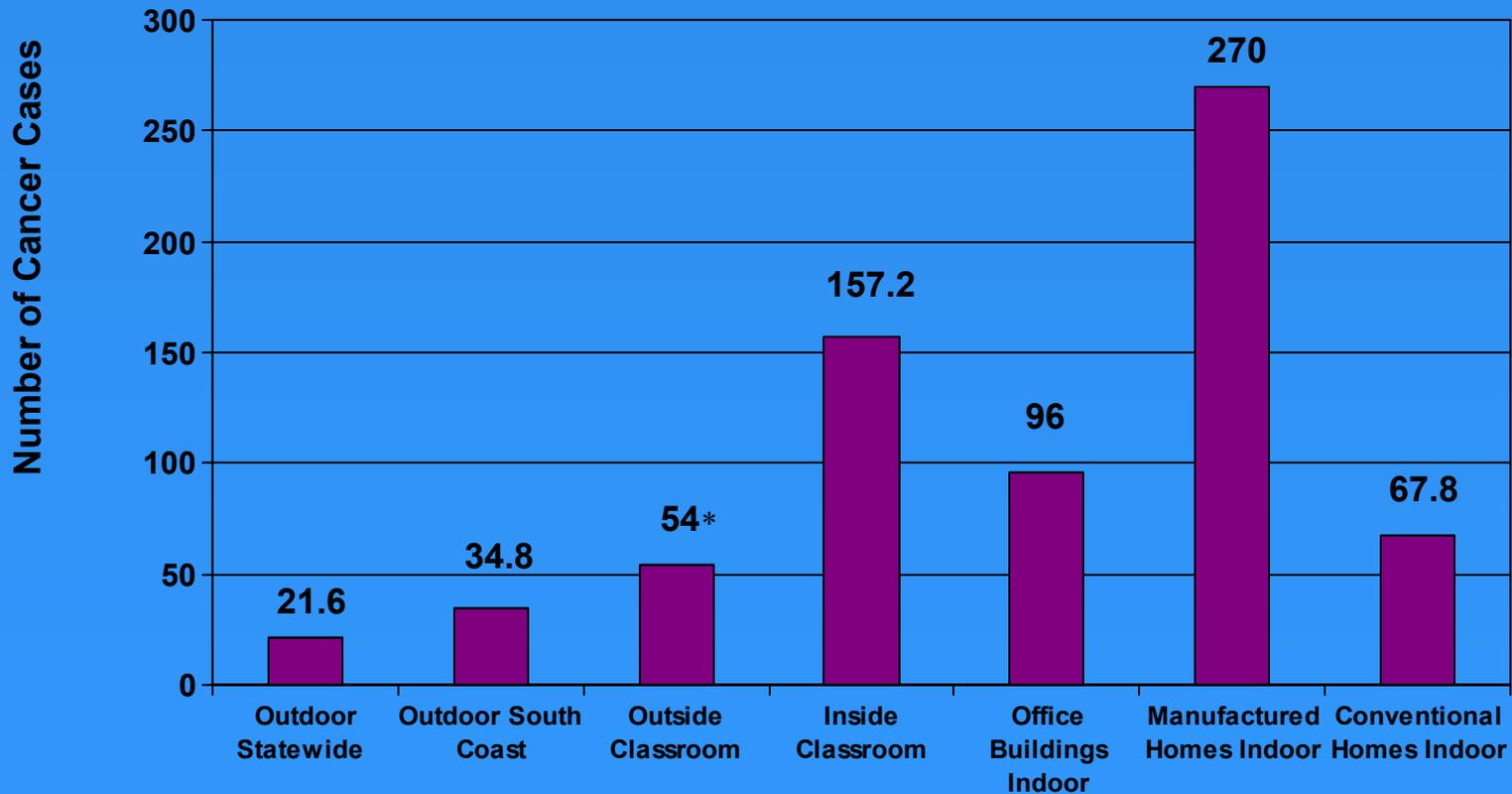
- **About 2.5 billion ft<sup>2</sup> of “composite panel” produced annually in California**
- **Products include particleboard, medium density fiberboard, oriented strandboard, hard & softwood veneers**
- **Significant formaldehyde emissions from the use of urea-formaldehyde resins**
- **Low or zero formaldehyde resins are available as substitute**



# Formaldehyde Levels



# Cancer Cases per Million People Over Life Time Exposure



\* Includes outdoor ambient background levels



# Composite Products ATCM Schedule

---

## Year 2001

- Form workgroup
- Product survey
- Conduct monitoring
- Staff evaluation



## Year 2002

- Develop draft ATCM proposal
- Workgroup meetings
- Public workshops
- Comment periods
- Public hearing



# Information Needs

---

- **Composite wood product production and use in California**
- **Current emission rate data from alternative products**
- **Best available control technology and use of alternatives**
- **Formaldehyde concentration levels inside and outside buildings that use composite wood products**



# Contact Information

---

For more information on formaldehyde-emitting products, please contact :

**Substance Evaluation Section**

**Robert Krieger (916) 327-5615**

**[rkrieger@arb.ca.gov](mailto:rkrieger@arb.ca.gov)**



**California Environmental Protection Agency**

**Air Resources Board**