

# Odors in the Community – The Air Quality Regulatory Challenge

Odor Detection, Mitigation, and Control  
Technology Forum  
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# Overview

- The AQMD Role
- The Regulatory Scheme
- Community Odor Complaint Profile
- Field Investigation and Inspection
- Complaint Resolution
- Air Quality Benefits

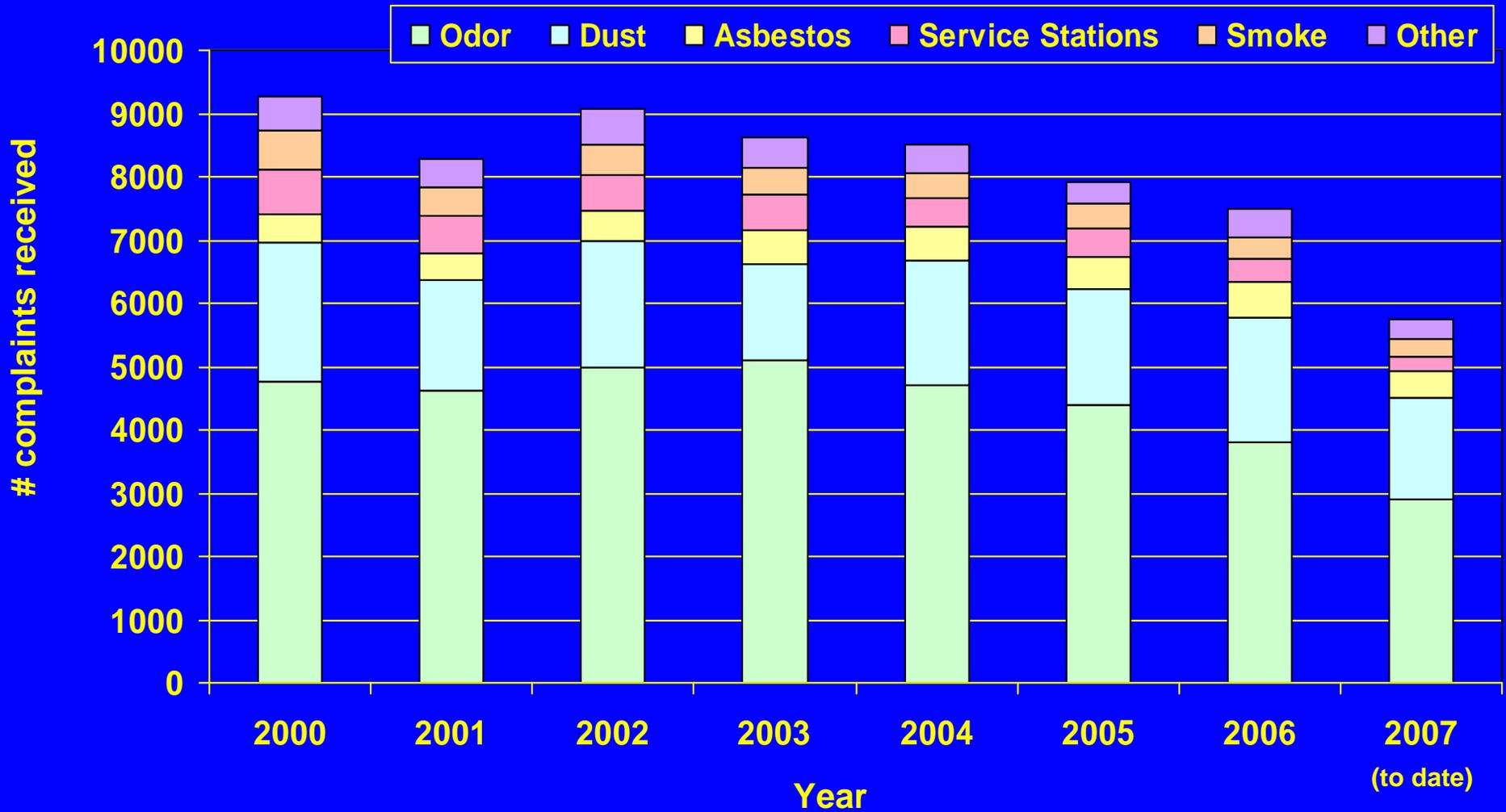
# The AQMD Role

- Protect Public Health from Air Pollution
- Ensure Facility Compliance
- Resolve Community Air Quality Problems
- Partner with the Community and Business

# 1 - 800 - CUT - SMOG

- 24 Hour Complaint Line
  - Air Pollution Complaints
  - Emergency Response Assistance to Fire, Police, and Health Agencies for Air Toxics/Hazardous Material Releases
  - Smoking Vehicle Reports

# Air Quality Complaints 2000 - 2007



# Air Quality Complaints Received 2004 - Present

	2004	%	2005	%	2006	%	2007	%
<b>Odors</b>	<b>4713</b>	<b>55%</b>	<b>4382</b>	<b>55%</b>	<b>3801</b>	<b>51%</b>	<b>2893</b>	<b>50%</b>
<b>Dust</b>	<b>1974</b>	<b>24%</b>	<b>1841</b>	<b>23%</b>	<b>1976</b>	<b>26%</b>	<b>1617</b>	<b>28%</b>
<b>Asbestos</b>	<b>533</b>	<b>6%</b>	<b>504</b>	<b>6%</b>	<b>571</b>	<b>7%</b>	<b>417</b>	<b>7%</b>
<b>Service Stations</b>	<b>452</b>	<b>5%</b>	<b>444</b>	<b>7%</b>	<b>358</b>	<b>5%</b>	<b>230</b>	<b>4%</b>
<b>Smoke</b>	<b>394</b>	<b>5%</b>	<b>399</b>	<b>5%</b>	<b>348</b>	<b>5%</b>	<b>277</b>	<b>5%</b>
<b>Other</b>	<b>454</b>	<b>5%</b>	<b>349</b>	<b>4%</b>	<b>444</b>	<b>6%</b>	<b>310</b>	<b>6%</b>
<b>Totals</b>	<b>8520</b>		<b>7919</b>		<b>7498</b>		<b>5744</b>	

# AQMD Complaint Profile 1997

- Total Complaints Received = 9,535
  - Odors 5983 63%
  - Dust 1149 15%
  - Miscellaneous 817 9%
  - Smoke 521 6%
  - Asbestos 353 4%
  - Gas Service Stations 294 3%
  - Paint Overspray 130 1%
  - Surface Spots 10 <1%
  - Open Fire 8 <1%

# Odor Complaint Profile

June - December 1997 - 2006

- Coating 27% - 7%
- Unknown 12%
- Refinery 10% - 10%
- Chemical 10%
- Refuse 9% - 34%
- Natural Gas 5%
- Plastic 4%
- Burning 4%
- Sewage 3%
- Rendering 3%
- Metal Casting 3% - 5%
- Dry Cleaning 3%
- Asphalt 3%
- Restaurants 1%
- Plating 1%
- Rubber Products 1%
- Coffee Roasting 1%

# The Challenge of Field Investigation

- **Fleeting Nature of Some Odors**
  - Changing Weather and Wind Conditions
  - Short Odor Emission
  - Timely Complaint Report = Important
  - Timely Complaint Response = Important

# More Challenges

- Varied Individual Sensitivity
  - Complainants
  - Inspectors
  - Facility Owners and Operators
- Varied Acceptability of Odors
  - Bakeries and Coffee Roasting vs. Waste, Sewage, and Chemical Odors
- Complainant Emotion – Exposure Concerns
  - The Unknown

# Still More Challenges -- *Odor Thresholds of the Human Nose*

- Lower than Most Monitoring Equipment
  - No Relationship to Health Hazard
    - Hydrogen Sulfide
      - TLV = 0.5 ppm      The Nose = 0.0081 ppm
    - Methyl Mercaptan
      - TLV = 0.5 ppm      The Nose = 0.0016 ppm
    - Benzene
      - TLV = 0.5 ppm      The Nose = 1.5 ppm
    - Vinyl Chloride
      - TLV = 1 ppm      The Nose = 3000 ppm
- \*data for illustration purposes, wide variation by source and study

# The Inspector's Toolbox

- One Public Nuisance Regulation
- One Nose
- Grab Sample Equipment/Canisters
- Source Specific Ambient Air Monitoring

# The Public Nuisance Regulation

- Health & Safety Code Section 41700
- AQMD Rule 402
  - “...No person shall discharge from any source whatsoever such quantities of air contaminants or other material which may cause injury, nuisance, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.”

# Inspection Goals

- Verify Nature of Odor
- Identify Odor Source
  - Facility
  - Equipment or Process
  - Cause of Emissions
- Resolve Odor Situation
- Resolve Complainant Concerns

# Inspection Goals

- Determine if Contaminant Poses Public Health Concern
  - Identify Contaminant(s)
  - Quantify Contaminant(s)
  - Partner with Health Authorities
- Determine Compliance Status
  - AQMD Rules and Regulations
  - AQMD Permits / Other Agency Issues
  - Public Nuisance

# Investigation Procedure

- Check Complainant Premises / Area
- Interview Complainant
- Track Emissions Upwind to Source
- Exclude Other Potential Sources
- Inspect Source Facility
  - Establish Emission Source - Equipment/Process
  - Sample Emissions if Possible
  - Check Permits to Operate

# Investigation Procedures

*(Continued)*

- Contact All Complainants
- Explain Inspection Findings
- Collect Complaint Forms if Violation Found
- Document Findings and/or Violation

# Public Nuisance Violations

- Observe, Identify, Establish Evidence of Emissions at Complainant Premises
- Establish Emissions Source
- Eliminate Other Potential Sources
- Document Multiple Complaints
- Document Findings
- Use Notice as Tool to Solve Problem

# Complaint Resolution = Problem Solving

- Facility Partnership
- Emission Reduction or Change
  - Add-On Control Equipment
  - Material Substitution
  - Equipment Modifications
  - Operational Modifications
  - Change Working Hours or Days
  - Relocate Equipment at Facility

# Complaint Resolution Tools

- Community Participation
- Facility Assistance
- Site Specific Ambient Air Monitoring
- Technology Advancement
- Variances
- Permit Modifications
- Notices of Violation
- Rule Development

# Complaint Resolution Program

## Air Quality Benefits

- Assists AQMD to Provide Community Service and Assure Compliance
- Provides Community Assistance to AQMD
  - Increases “Inspection” Resource
  - Identify Facility Violations
  - Identify and Solve Local Air Quality Problems
  - Increase Compliance = Enhance Air Quality

# Compliance Program Resources

- AQMD Website [www.aqmd.gov](http://www.aqmd.gov)
- California Air Resources Board Website  
[www.arb.ca.gov](http://www.arb.ca.gov)