



California Environmental Protection Agency  
Department of Pesticide Regulation

# Pesticide Air Monitoring Network

May 2009

# Background

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- Food and Agricultural Code:
  - Section 11501. (a) . . . . . protection of public health and safety.
  - (b) To protect the environment from environmentally harmful pesticides . . . . .
  - Section 12824. . . . . the director shall develop an orderly program for the continuous evaluation of all pesticides actually registered.

# Background

- Air Resources Board (ARB), DPR, and others conduct pesticide air monitoring
  - Usually monitor single pesticide
  - Usually measure shorter exposures (hours – weeks)
  - Extrapolate data for longer exposures
- DPR gathered valuable data from its Lompoc and Parlier projects
  - Monitored multiple pesticides
  - Measured longer exposures (2 – 12 months)



# Air monitoring network

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- Air network will provide data for risk assessment and mitigation
  - Provide data for multiple pesticides, complementing monitoring for single pesticides
  - Provide data for long-term exposures (several years), minimizing need to extrapolate data based on assumptions
  - Provide data for developing suitable mitigation measures, minimizing need to extrapolate data based on assumptions
  - Measure effectiveness of regulatory and voluntary restrictions

# Air monitoring network, cont

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- DPR will develop air network based on methods from the Lompoc and Parlier projects
- DPR soliciting input on monitoring plan
  - Technical input (Pesticide Registration and Evaluation Committee)
  - Community input (public meeting)

# Proposed air monitoring network objectives

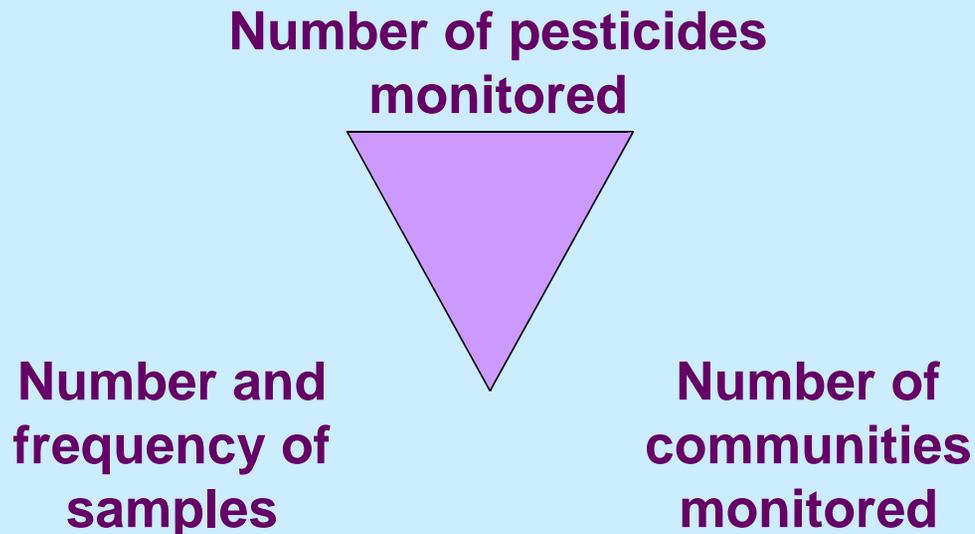
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- 1) Identify common pesticides in air and determine concentrations
- 2) Compare concentrations to health levels
- 3) Estimate cumulative exposure to multiple pesticides
- 4) Track trends in air concentrations
- 5) Correlate concentrations with use and weather patterns

# Air monitoring network resources

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- DPR will monitor with existing staff, equipment, and laboratory resources
- Assuming major new objectives are not added, air network will balance



# Proposed criteria for selecting pesticides

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- Probably include approx 30 pesticides (and several breakdown products) based on
  - Statewide use (exposure factor)
  - Volatility (exposure factor)
  - DPR risk assessment priority (toxicity factor)
  - Feasibility of including in multi-residue monitoring method

# Considerations for number and frequency of samples

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- Number of monitoring locations in each community
- Number of days sampled each week
- Number of weeks sampled each year
- Consider longer sampling intervals to capture more days (48-hour instead of 24-hour samples)
- Consider sampling alternate communities in alternate weeks or years
- Consider other types of monitoring

# Suggested regions for monitoring

- San Joaquin Valley
- Sacramento Valley
- Salinas Valley
- Imperial Valley
- Others?



# Proposed criteria for selecting communities

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- Use of approx 30 pesticides included in monitoring
  - Use within 1 mi of community
  - Use within 5 mi of community
- Demographic factors (Census data)
  - Population density of people less than 18 yrs old
  - Population density of people greater than 65 years old
  - Population density of people greater than 5 yrs old with disabilities
  - Non-white population percentage
  - Hispanic population percentage
  - Median family income

# Additional considerations for community selection

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- Weighting of criteria
- Suitable monitoring site identified – permanent location meeting U.S EPA siting criteria
- Communities with existing monitoring, complementary studies
- Geographic distribution of communities to monitor different cropping and pesticide use patterns
- Future changes in use, demographics, other factors

# Planning process

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- Discuss at public meetings
- DPR releases document with proposed pesticides and proposed communities for public comment; discuss at PREC meeting
- DPR selects communities and reassesses pesticide use
- DPR releases draft monitoring protocol for public comment; discuss at PREC meeting
- DPR finalizes protocol and begins monitoring
- Reassess protocol after first year; consider revising pesticides monitored, number of samples, communities

# Public meetings

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- May 15: PREC meeting
  - Cal/EPA building, 10:00
  - Webcast ([www.calepa.ca.gov/Broadcast/](http://www.calepa.ca.gov/Broadcast/))
  - Comments and questions taken in person or online
- June 25: public meeting in Tulare
- July 17: PREC meeting (tentative)

# Questions, comments, additional information

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- DPR web site: [www.cdpr.ca.gov](http://www.cdpr.ca.gov)
  - Select “Air” under Quick Finder
  - Select “Air Monitoring Network”

- Lead staff

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