

Environmental Justice Pilot Project

Air Monitoring for Pesticides in a San Joaquin Valley Community

Local Advisory Group Meeting
June 9, 2005

DPR EJ Pilot Project

- Ambient air monitoring for pesticides in a rural community of the Central Valley
- DPR conducted similar monitoring for Lompoc
- Held workshops to solicit ideas for
 - Project objectives
 - Pesticides to monitor
 - Community to monitor

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Proposed Project Objectives

- DPR proposes the following objectives:
 - Are residents of the community exposed to pesticides in air?
 - Which pesticides are people exposed to and in what amounts?
 - Do measured air levels exceed levels of concern to human health, particularly children?

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Proposed Study

- Conduct air monitoring for pesticides at 2 – 4 locations in Parlier
- Collect 24-hour samples 2 – 4 days per week for 52 consecutive weeks
- Compile data for other contaminants in Parlier
- Evaluate individual and cumulative impact of pesticides and other contaminants in Parlier
- Evaluate current and reduced-risk pest management practices for crops in Parlier area
- Scientific review by Technical Advisory Group

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Proposed Pesticides for Monitoring

- DPR proposes to monitor 21 – 27 higher risk pesticides
- Higher risk pesticides are those that have higher toxicity and/or higher exposure
- Pesticides rated from 1 – 4 in the following categories:
 - Statewide use
 - Volatility
 - DPR risk assessment priority

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Community for Monitoring

- DPR evaluated 83 communities
 - All communities listed in 2000 Census for Merced, Madera, Fresno, Kings, and Tulare, except foothills
 - Grayson (Stanislaus) and Arvin (Kern)
- Each community evaluated for 14 criteria within 3 categories (3 categories equally weighted)
 - 4 criteria for EJ
 - 2 criteria for availability of cumulative impact data
 - 8 criteria for pesticide use

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Area Considered for Monitoring



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EJ Criteria

- 83 communities rated 1 – 4 (4 representing higher priority for monitoring) in 4 EJ subcategories
 - Child population density (<18 yrs old)
 - Non-white population percentage
 - Median family income
 - Number of non-occupational drift illnesses
- Overall EJ rating is average of 4 subcategories

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Highest EJ Ratings

Community	Rating (max of 4)
Earlimart (Tulare County)	4.0
Arvin (Kern County)	3.5
6 communities (including Parlier)	3.0

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Cumulative Impact Data Criteria

- 83 communities rated 0 – 4 in 2 subcategories for availability of cumulative impact data
 - Monitoring density for pesticides in municipal wells
 - Number of criteria air pollutants monitored
- Overall cumulative impact rating is average

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Highest Cumulative Impact Data Ratings

Community	Rating (max of 4)
Clovis (Fresno County)	3.5
Parlier (Fresno County)	3.5
Visalia (Tulare County)	3.5
Fresno (Fresno County)	3.0
Madera (Madera County)	2.5
23 communities	2.0

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Pesticide Use Criteria

- 83 communities rated 0 – 4 in 8 pesticide use density (lbs/sq mi) subcategories
- 2 use distances
 - Regional use (within 5 mi of community)
 - Local use (within 1 mi of community)
- 4 pesticide types (2002)
 - 4 fumigants
 - 14 organophosphates
 - Sulfur and copper
 - 13 other pesticides
- Overall pesticide rating is average

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Highest Pesticide Use Ratings

Community	Rating (max of 4)
Kingsburg (Fresno County)	3.9
London (Fresno County)	3.8
Huron (Fresno County)	3.6
6 communities (including Parlier)	3.5

Propose monitoring for 12 months, so seasonal use patterns immaterial

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Highest Overall Ratings

Community	Rating (max of 12)
Parlier (Fresno County)	10.0
Arvin (Kern County)	8.4
Visalia (Tulare County)	8.4
Orange Cove (Fresno County)	8.1
London (Fresno County)	8.0

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Other Considerations

- Air Sampling Feasibility
- Weather Considerations
- Possible collaboration with other projects
 - UCD health study of migrant farmworkers in Mendota
 - UCSF study of asthma and air toxics in Fresno County
 - Environmental Health Tracking Program study of environmental exposure and health outcomes

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Community for Monitoring

- DPR selected Parlier for monitoring
 - Highest rated community
 - UCSF asthma study
 - Several preferred monitoring sites

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Issues for Discussion

- Project objectives
- Pesticides for monitoring
- Sampling locations and frequency

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Pesticide Selection

- Pesticides that will likely be included
- Pesticides that may be included
- Pesticides that may be very difficult to include
- Pesticides that are high use in Parlier area

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Sampling Locations

- Location must meet following:
 - 6-50 ft above ground
 - Unobstructed air flow
 - Site permission and accessible to DPR personnel
 - Electricity
 - Secure from tampering
- Prefer to sample at school or other “sensitive site”
- Prefer to sample at edge of town, near ag fields

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