



California Environmental Protection Agency
Department of Pesticide Regulation

Pesticide Air Monitoring Network

May 20, 2016

Pesticide Registration and Evaluation Committee

Email during meeting: precomments@cdpr.ca.gov

Topics of discussion

- Potential enhancement of the Air Network
- Comments on the March 18th proposed changes
- Ranking potential communities
- List of potential communities

Air Network Enhancement

Proposed budget change proposal to increase the air network

- Increase total number of sites to 8 and include analysis for all 32 chemicals at all sites
- DPR will rank and select all 8 communities
 - 3 core sites will be selected within the communities and monitored by DPR
 - 5 supplemental sites will be selected and monitored within the communities by ARB
 - Preference must be given to schools and environmental justice communities for the 5 sites managed by ARB

Air Network Enhancement – Cont.

- 3 seasonal monitoring studies per year
 - Conducted by ARB
- The funding for the supplemental sites is limited to 2 fiscal years so the ARB monitoring at the 5 sites and the seasonal studies will end in June 2018
 - Monitoring at DPR's 3 core sites will continue

Commentors

- PREC committee members
 - Lynn Baker, Air Resources Board
 - James Seiber for UC, Department of Environmental Toxicology
- Public commentors
 - Californians for Pesticide Reform (44 co-signatories)
 - Western Plant Health Association (16 co-signatories)
 - Chloropicrin Manufacturers Task Force and Metam Task Force
 - Nichino America, Inc.

Summary of Comments

- Possible changes to monitoring objectives
- Possible changes to pesticides monitored
- Possible changes to sampling frequency
- Possible changes to communities monitored
 - Alternating communities
- Possible changes to criteria for selecting sites within communities

Proposed revised method to rate communities for pesticide use

- Select two sets of communities
 - One based on 2012-2014 use of 4 fumigants
 - One based on 2012-2014 use of 11 organophosphates
- Use in 3 zones (greater weight to community use)
 - Use within community (community zone)
 - Use within community and 1 mile of community (local zone)
 - Use within community and 5 miles of community (regional zone)
- Determine use density (lbs/sq mi) by pesticide, year, and zone (36 or 99 use values) for each community
- Rank from highest to lowest community (1 to 1267) for each use value
- Each community assigned average ranking of 3 years, 3 zones and 4 or 11 pesticides

Parameters

Community boundary based on 2010 Census Bureau

- Cities with legally defined boundaries
- Census designated places (CDPs) – boundaries updated on annual basis, most current 2015.

Areas under consideration for pesticide use density

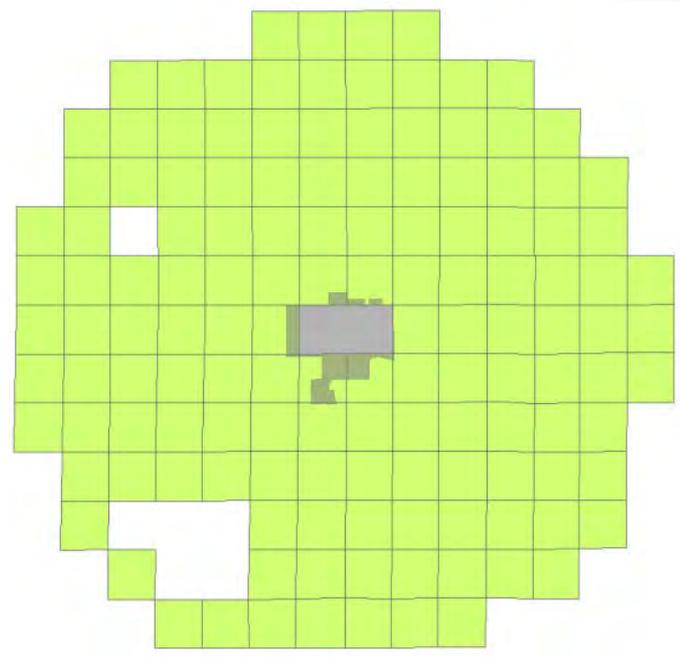
- Current
- Buffer
- Ring

Use is divided by average annual wind speed

Previous ranking - Current

Pesticide use from entire sections that are within 5 miles of the community boundary.

Area:
0, 1, and 5 miles from community boundary



Buffer

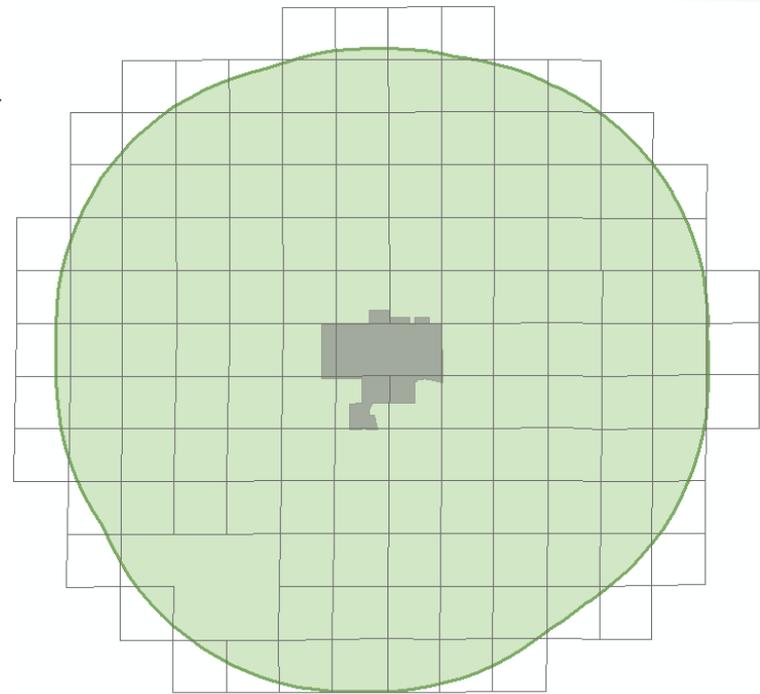
Pesticide use is calculated as the proportion of use based on the area of a section within the buffer.

Buffer Areas:

- 0, 1, and 5 miles from community boundary

Use:

- 1-mile area would include all use within 1-mile
- 5-mile area would include all use within 5-mile



Ring

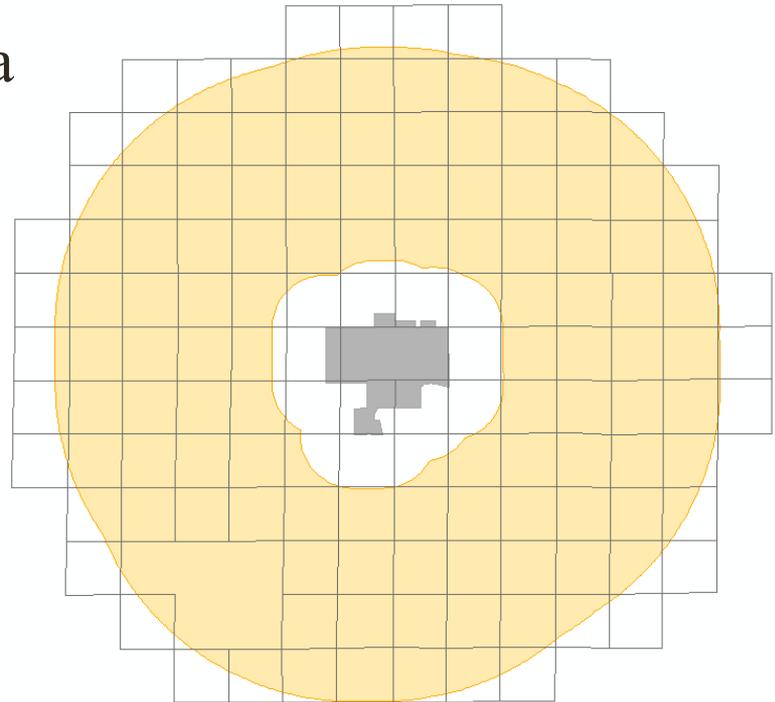
Pesticide use is calculated as the proportion of use based on the area of a section within the buffer.

Buffer Areas:

0, 0-1, and 1-5 miles from community boundary

Use:

- 1-mile area would include use from community boundary to 1-mile
- 5-mile area would include all use within the 1 to 5 mile area



Resulting differences

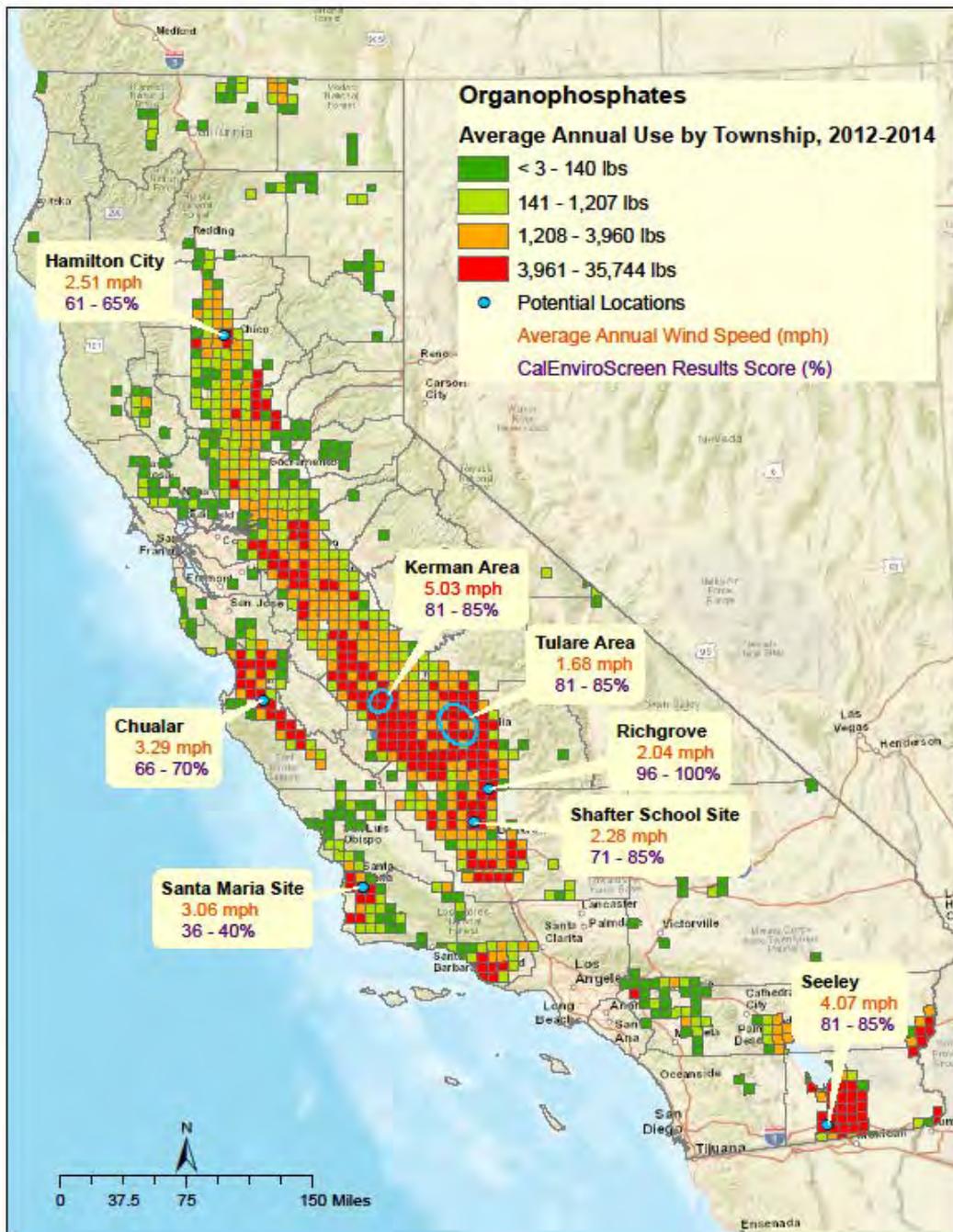
Community	Current/ Community	Current	Buffer/ Community	Buffer	Ring/ Community	Ring
Edmundson Acres CDP	1	6	2	5	2	5
Mettler CDP	2	4	1	1	1	2
Macdoel CDP	3	12	3	8	3	6
La Vina CDP	4	38	7	33	7	35
Saticoy CDP	5	9	28	39	28	38
Delft Colony CDP	6	51	9	38	9	40
Pajaro CDP	7	3	4	3	4	3
El Rio CDP	8	2	6	2	6	1
Boronda CDP	9	23	8	13	8	12
Castroville CDP	10	11	10	9	10	10

Proposed method to rate communities for pesticide use

- Monitor for 32 pesticides, but base community selection on use of fumigants and organophosphates
- Adjust pesticide use by dividing by average wind speed
- Rank the communities for both fumigants and organophosphates
- Determine CalEnviroScreen 2.0 results score

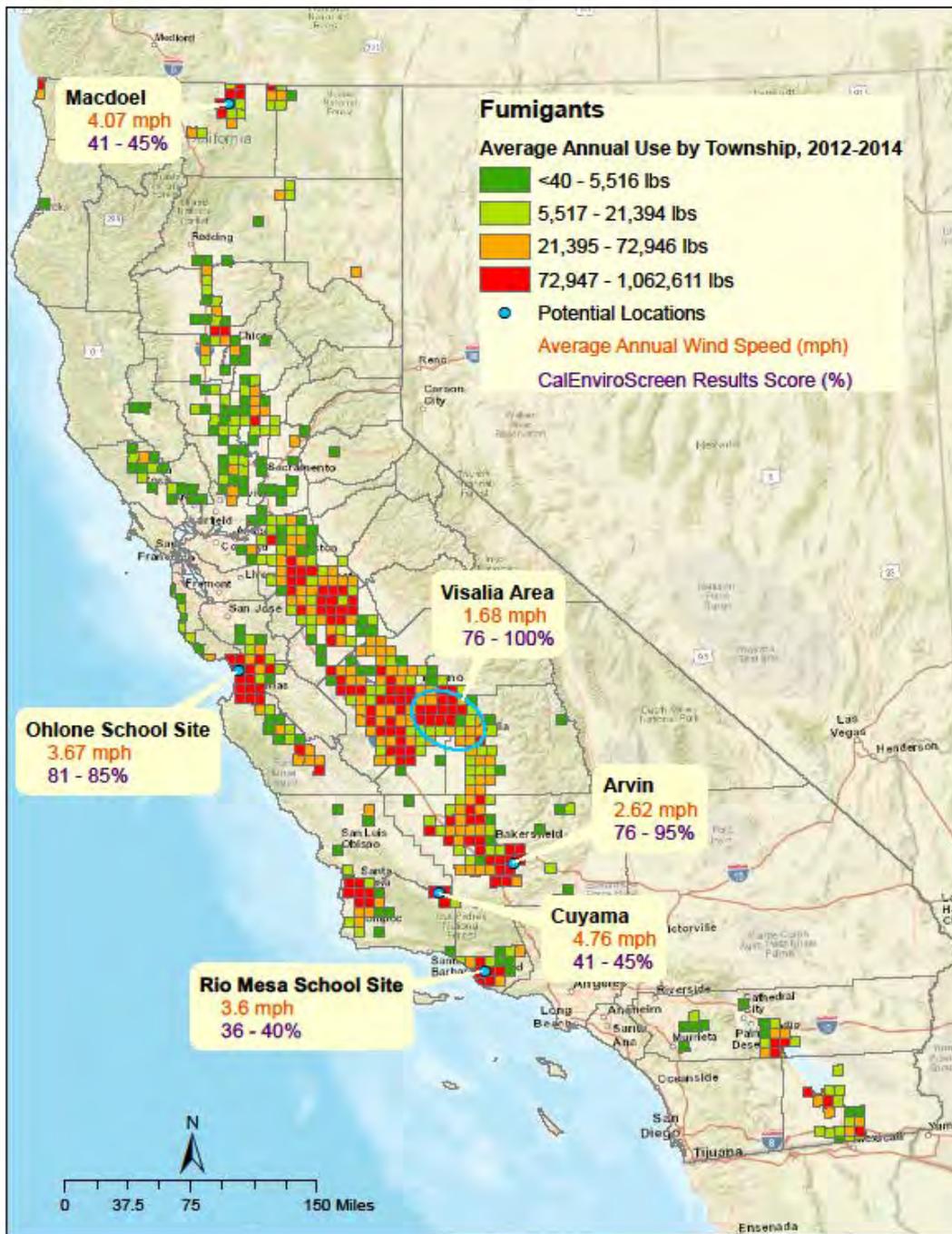
Communities with the highest adjusted use rankings for organophosphates (2012-14 data)

Communities	County	Ranking	CalEnviro Score
Guadalupe, Woodlands CDP, Santa Maria , Callendar CDP , Garey CDP	Santa Barbara, San Luis Obispo	1, 2, 14, 22 , 23	36-75
Chualar, Gonzalez	Monterey	3, 11	66-70
Tulare-Kingsburg area (18 communities)	Tulare	4-30	76-100
Richgrove CDP, Rodriguez Camp CDP	Tulare	5, 6	96-100
San Joaquin, Tranquility, Cantua Creek	Fresno	9,14,17	81-85
Hamilton City CDP	Glenn	10	61-65
Lost Hills CDP	Kern	15	86-90
Seeley CDP	Imperial	20	81-85
Shafter	Kern	23	71-85



Communities with the highest adjusted use rankings for fumigants (2012-14 data)

Communities	County	Ranking	CalEnviro Score
El Rio (Rio Mesa), Camarillo City, Oxnard City, Ventura	Ventura	2,5,15,28	11-95
Watsonville Area (10 communities) (Ohlone)	Monterey, Santa Cruz	4 - 29	36-95
Santa Maria , Guadalupe City, Woodlands, Nipomo, Callender, Orcutt, Garey,	Santa Barbara, San Luis Obispo	7, 9, 12, 18, 19 23, 27	1-75
Mettler, Edmundson Acres, Weedpatch, Arvin, Rosedale, Lamont	Kern	1, 3, 6, 14, 20, 24	6-100
Macdoel, Mount Hebron	Siskiyou	7	41-45
Cuyama, New Cuyama	Santa Barbara	8,17	41-45
Farmersville City, Reedley, Caruthers	Tulare, Fresno	23,28,30	51-100
Delhi	Merced	26	76-95



DPR proposed sites

- Retain monitor at Shafter High School
 - Would exceed 1,3-D regulatory target if concentration continues
 - Highest organophosphate concentrations relative to screening levels
 - Ranked 23 for OP use around the community
 - Allows for continuing trend analysis
 - OP site

DPR proposed sites – cont.

- Retain the three sites ARB is currently monitoring:
 - Ohlone Elementary
 - Second highest rated region
 - Allows for continuing trend analysis
 - Santa Maria Site
 - Exceeded chloropicrin sub-chronic screening level
 - Allows for continuing trend analysis
 - Rio Mesa High School
 - Highest ranking region for fumigant use
 - Allows for continuing trend analysis

Ohlone, Santa Maria and Rio Mesa area sites would monitor top 3 regions for fumigant use

Potential communities

- **Chualar**
 - Community ranked 3 for OP use – 2nd highest region of use
 - CalEnviroScreen results score of 66-70
- **Tulare area community**
 - 3rd highest region for OP use
 - CalEnviroScreen results score of >75% for most communities

Santa Maria, Chualar and Tulare area sites would monitor top 3 regions for OP use

Environmental justice

For SB 525 (Cap and Trade bill), CalEPA has defined a disadvantage community as one that scores at or above the 75th percentile using the CalEnviroScreen.

Communities ranked in top 15 which do not meet the ≥ 75 %tile:

Organophosphate use			Fumigant use		
	rank	score		rank	score
Guadalupe	1	71-75	El Rio	2	36-65
Woodlands	2	51-55	Camarillo	5	31-75
Chualar	3	66-70	Pajaro Dunes	7	46-50
Hamilton City	10	61-65	Interlaken	8	41-55
Gonzales	11	66-70	Cuyama	8	41-45
			Guadalupe	9	71-75
			Amesti	10	46-50
			Woodlands	13	51-55

Key issues

- Proposed Plan

- Use annual average wind speed to adjust use
- Select 4 location based on organophosphate use
 - Retain Shafter High School – Select Chualar and Tulare area
 - select 1 more
- Select 4 locations based on fumigant use
 - Retain Rio Mesa High School, Ohlone Elementary, Santa Maria
 - select 1 more

- Decisions left

- How to incorporate Environmental Justice considerations
 - What tool or system of rating to use
 - When to use

Additional information and questions

- DPR web site
 - www.cdpr.ca.gov
 - “Air” tab
 - Click on “Air Monitoring Network”
- Contact
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 - 916-324-4137
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