



California Environmental Protection Agency
Department of Pesticide Regulation

Pesticide Air Quality Initiative: Status Update

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Pesticide Air Initiative

- Federal Clean Air Act, amended 1990 requires State Implementation Plan (SIP)
- California EPA, Air Resources Board is responsible for the California SIP
- Department of Pesticide Regulation is responsible for the pesticide element of the SIP including:
 - Tracking Pesticide Emissions
 - Reducing Pesticide Emissions



Pesticide Air Initiative

Two critical actions in 2007

Existing commitments - Establish regulations to meet existing commitments by December 31, 2007

New commitment - Develop by June 2007 an approach for future reductions

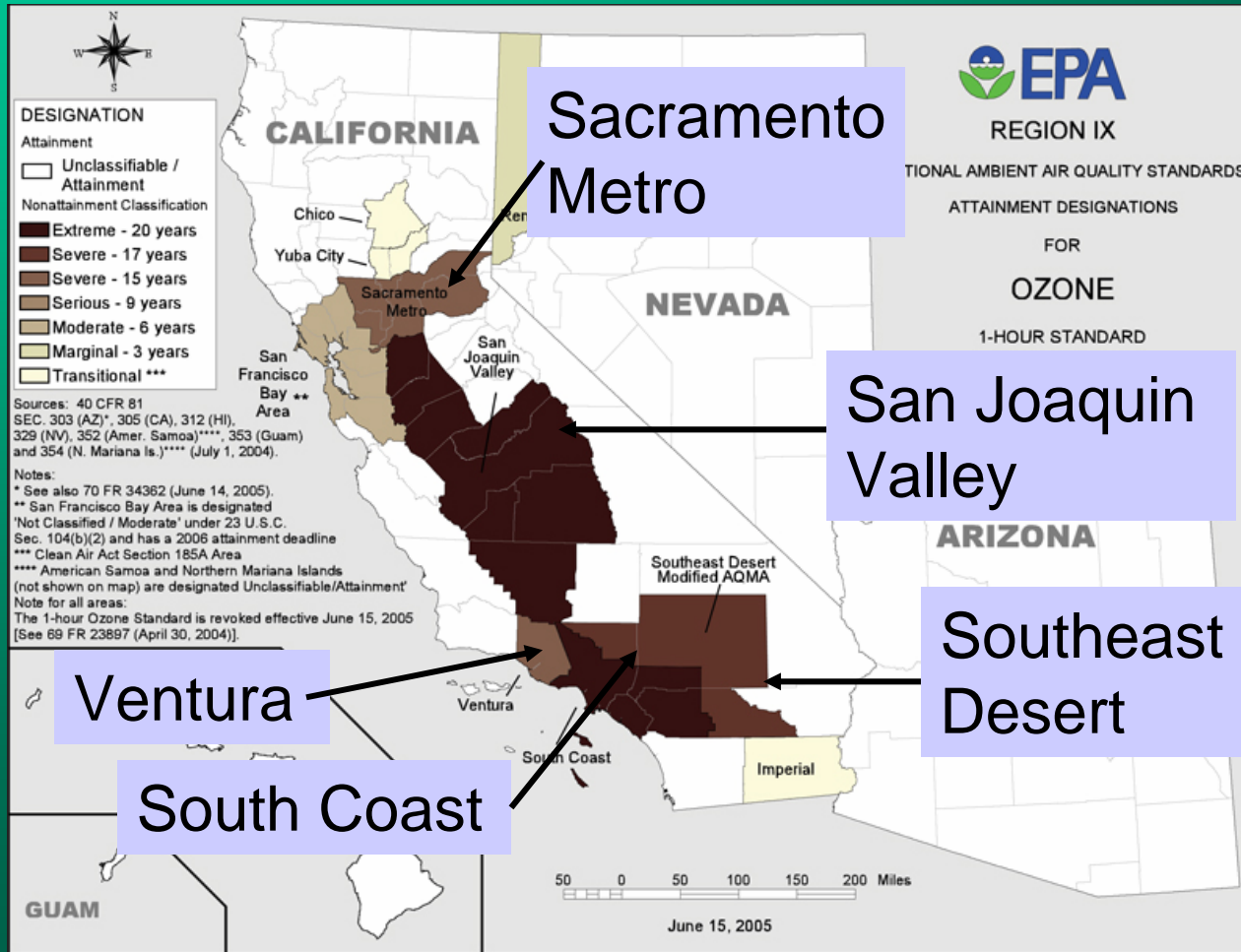


DPR's Role in the SIP Process

- Meeting current commitments
 - 1994 State Implementation Plan (SIP)
 - 2006 Federal court order
 - Reduce VOC emissions from pesticides in nonattainment areas
 - Will be achieved through fumigation regulations



Ozone Nonattainment Areas for Federal 1-Hour Standard





Meeting Current Commitments

Fumigant emission reductions

- Fumigants represent 40-80% of emissions
- Current inventory assumes 100% applied is emitted
- Application methods vary widely in actual emissions
- Regulatory approach: limit application methods to low emissions



Meeting Current Commitments

Fumigant emission reductions

- Data show variations in emissions based on application methods
 - High emission methods – untarped, shallow, bed
 - Low emission methods – tarps, deep, water seals
- Reduced emissions through degradation in soil and/or adsorption to soil column.
- Paper detailing the approach will be released for external peer review and public comment



Meeting Current Commitments

Accounting for actual emissions

Current formula

$$\text{VOC emissions (lbs.)} = [\text{lbs applied}] * [\text{EP}]$$

New formula

$$\text{VOC emission (lbs.)} = [\text{lbs applied}] * [\text{EP}] * [\text{EF}]$$

EP = product emission factor

EF = application emission factor



Meeting Current Commitments

Fumigant emission regulations

- Addresses all fumigants
- Three distinct sections
 - VOC emission reductions
 - MITC mitigation measures
 - Regulatory consistency
 - Pest control business requirement
 - Permit notification
 - 48 notice of intent to County Agricultural Commissioners
 - Worksite plans



Current Methyl Bromide Regulations

- Current regulations for methyl bromide field fumigations that may apply to other fumigants include:
 - Permittee submits work site plan to ag commissioner
 - Permittee notifies neighbors
 - Ag commissioners establish buffer zones
 - Applicators must use specific fumigation methods



Methyl Bromide Work Site Plan

- Permittee must submit work site plan to ag commissioner at least 7 days prior to Notice of Intent and include:
 - Fumigation method description
 - Field/block identification
 - Acreage and rate
 - Notification procedure
 - Tarp removal and repair plan
 - Worker protections (respirators, work hour limits)



Methyl Bromide Notification

- Permittee must notify all residences, schools, hospitals, and other sites identified by ag commissioner within 300 ft of the buffer zone
 - Initial notification at least 7 days prior to the Notice of Intent
 - Specific notification at least 48 hrs prior to fumigation to people who request notification
 - Notification includes chemical name, contact info, earliest and latest dates of fumigation



Methyl Bromide Buffer Zones

- Inner buffer zone
 - At least 30 ft from treated area
 - May be larger depending on acreage, rate, method
 - Only fumigation handling and transit allowed
 - Can extend into other properties with certain conditions
- Outer buffer zone
 - At least 60 ft from treated area
 - May be larger depending on acreage, rate, method
 - Only fumigation handling, transit, and ag commissioner approved activities allowed
 - Can extend into other properties with certain conditions



Methyl Bromide Fumigation Methods

- Only certain fumigation methods allowed
- Requirements for
 - Type of tarpaulin
 - Injection depth
 - Tractor implements
 - Tarpaulin removal
 - Restricted entry interval



Future Commitment – 2008 SIP

- Improve upon and replace 1994 SIP
- Enforceable commitments
 - Focus on fumigant emissions and emulsifiable concentrates (>90% of pesticide emissions)
- Strategic partnerships (Commodity partnerships
Stewardship agreements)
- Draft for public comment in mid-March



Future Commitment – 2008 SIP

Fumigant emission reductions

- Build upon 2007 fumigant regulations as new research is developed
- Non-field fumigation emission reductions (capture systems)
- Reducing the reliance on fumigants (need for research)



Future Commitment – 2008 SIP

Emulsifiable concentrates

- Build upon reevaluation
- Establish product standards based on highly reactive components



Future Commitment – 2008 SIP

Strategic partnerships

- Non-regulatory but must be accountable
- May be achieved through agreements or grants
- Encourage continued progress in pest management and technology



Research Needs

- VOC Reactivity
- Emissions under field conditions
- Alternative methods for determining emissions potential
- Economics of VOC reductions
- Innovative technologies
- Pest management methods



Funding opportunities

- For partnerships
- For technology
- For alternatives to high VOC pesticides

Potential funding sources:

- DPR grants
- Commodities
- US EPA grants
- USDA-NRCS cost-share agreements



Future Steps

- Current commitment
 - Draft fumigant regulations will be released for public comment in March
 - Implemented by January 1, 2008
- New commitment
 - Draft 2008 SIP will be released for comment in the March
 - Approved by the Air Resources Board and submitted to U.S. EPA by June 2007