



Monitoring Pesticides

Arvin/Lamont Pesticides Subcommittee Meeting

JAMES PHAM

MARCH 28, 2023

Agenda

- Pesticide monitoring in Eastern Coachella Valley
 - Dr. Ryan Sinclair presents the community perspective
- Monitoring in Arvin/Lamont
 - Conducting air monitoring
 - Monitoring process and proposed timeline
 - Historical usage data for Arvin/Lamont community
 - Discussion

Arvin/Lamont Pesticides CERP Measure

| Commitment | Action(s) | Responsible Entity |
|---|---|--------------------|
| Work with the Kern County Agricultural Commissioner & the CSC to identify pesticide use & agricultural practices common to the community | <ul style="list-style-type: none"> Identify pesticides used in Arvin/Lamont Communicate to CSC the frequency, amount, and ingredients of pesticide use in community | DPR |
| Assist in the identification of pesticides of concern by the CSC & provide technical expertise to aid the CSC in prioritizing pesticide monitoring | <ul style="list-style-type: none"> Develop a screening approach for agricultural pesticides commonly used in community Support prioritization of pesticides for potential air monitoring based on screening criteria and other relevant information | OEHHA |
| Provide technical support to the CSC and Air District regarding pesticide monitoring | <ul style="list-style-type: none"> Plan and conduct field monitoring activities Provide laboratory analysis of pesticide samples (in-house or contracted lab) Evaluate potential community health risks/impacts based on air monitoring results and other relevant information Support data analysis and interpretation | CARB OEHHA |
| Engage with the CSC and the community on ongoing statewide regulatory development efforts | <ul style="list-style-type: none"> Provide opportunities for public engagement & feedback on regulatory development for mitigation projects | DPR |
| Engage with the CSC and the community on ongoing statewide pesticide notification development efforts | <ul style="list-style-type: none"> Regular updates to CSC on the temporary pilot notification efforts Regular updates to CSC on timeline for notification in Kern County through statewide regulation Provide opportunities for public engagement & feedback on regulatory development | DPR |
| Engage with the CSC and the community on ongoing Sustainable Pest Management | <ul style="list-style-type: none"> Regular updates to the CSC on the recommendations from the workgroup Provide opportunities for engagement in the workgroup and development of recommendations Provide education on the benefits of sustainable pest management | DPR |

Community Concerns

4.4 Regulation & Enforcement 4.4 Regulaciones y Cumplimiento



Blue sticky notes are community identified places for air monitoring

Las notas en azul son lugares identificados por la comunidad para monitorear el aire

1. Weed Patch and Kam st, Smells like used oil

5. Traffic parking 1241 Bear Mountain RD heavy duty truck also drive by

1. Weed Patch y Kam st, huele a aceite usado

5. Estacionamiento de tráfico 1241 Bear Mountain Rd camiones de servicio pesado también pasa por aquí

2. Along the boarder of the map a smell from the Bakersfield sewage facility is coming into Arvin

6. High school on campus drive

2. A lo largo del borde del mapa, llega a Arvin un olor procedente de las instalaciones de aguas residuales de Bakersfield

6. En la High school en campus drive

3. Odor Issues and HD truck Di giorgio and Duncan st

7. Almond orchard pesticides and dust, PM 2.5 monitors

3. Problemas de olores y camión de servicio pesado Di giorgio y Duncan st

7. Pesticidas y polvo de almendros. Monitores PM 2.5

4. Buena Vista & 184, Pesticide and heavy duty truck monitoring equipment

4. Buena Vista & 184, Equipos de monitoreo de pesticidas y camiones de servicio pesado

Pesticides Monitoring with CARB and DPR

- Over 30 years of collaboration
- Ambient network sites
 - San Joaquin City, Lindsay, Cuyama, Shafter, El Rio/Oxnard, and others
- Seasonal pesticide studies
 - Fresno, **Kern**, Imperial, Tulare, Santa Barbara, and Siskiyou Counties
 - Spring 2018 Seasonal Ambient Monitoring for Organophosphate Pesticides



Conducting Air Monitoring

- Monitoring and laboratory methods must exist for the particular pesticide/compound of interest
- Air samples are collected in vacuum canisters or sorbent tubes
 - Laboratory analysis is required for these types of sample media
 - Real-time measurements are not available
- Sample collection is very detailed and involved
 - Staff must be on site to set up and start each sample
- Laboratory extraction and analysis can be complex
 - Preliminary results 6-9 months post completion of field monitoring

Monitoring Equipment

- Met One SASS (PSASS, Custom)
 - Sorbent tubes
 - Sample cartridges
- Xonteck 901
 - Summa canisters
- Vacuum pumps and flow controllers
 - Sorbent tubes



Monitoring Equipment Cont'd



Capturing and Managing Data

- Utilize field and laboratory standard operation procedures
- Follow Air Monitoring Plan
- Proper documentation
 - Chain-of-custody forms
 - Traceable flow standards
- AQView – Air Quality Viewer
 - Data visualization and download tool

Monitoring Process and Proposed Timeline

2023 - Q2

- Assess past usage from Pesticide Use Reports
- Gather community feedback
- Work with community on compounds of interest

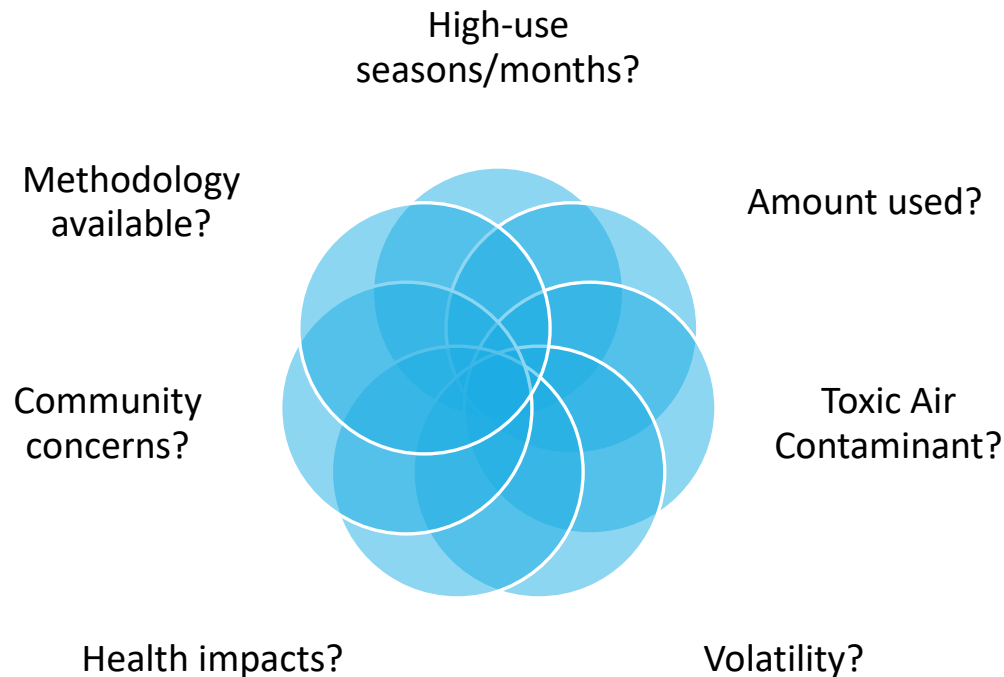
2023 - Q3

- Draft Air Monitoring Plan with community guidance
- Finalize Air Monitoring Plan
- Identify and establish sites

2023 - Q4

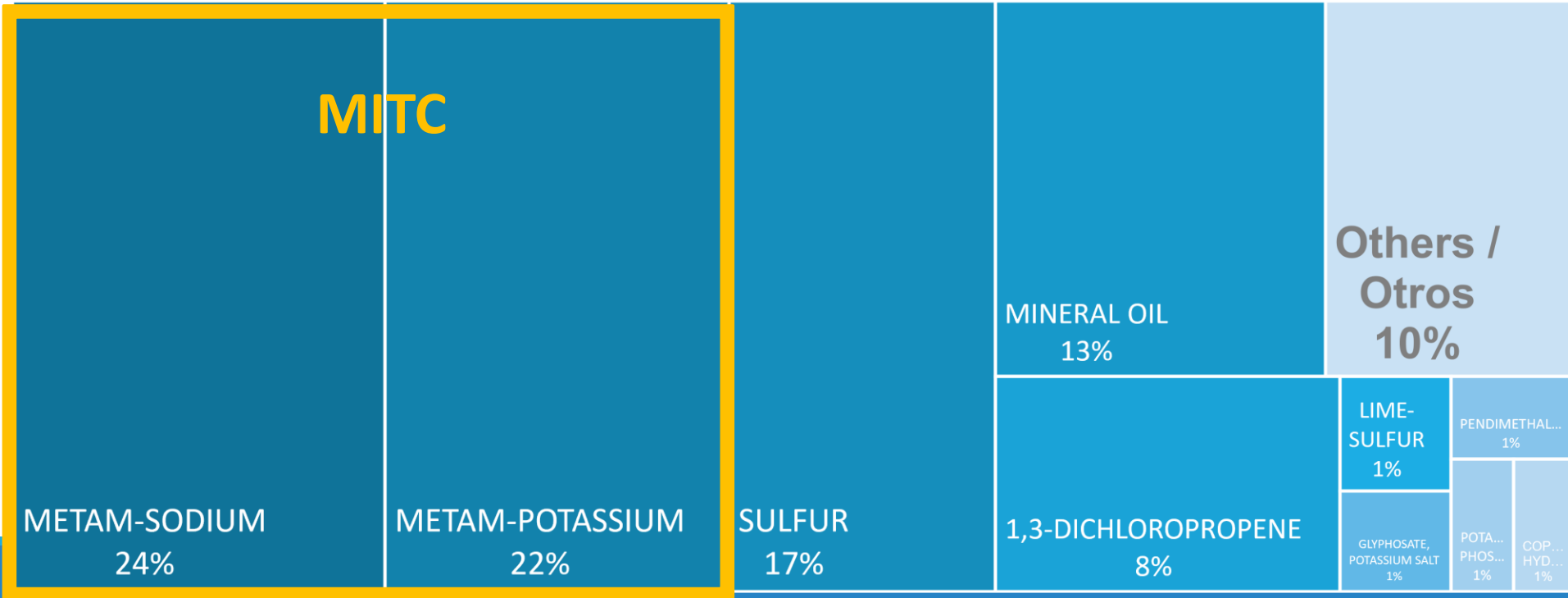
- Start monitoring (Based on high-use period)
- 2024 - Laboratory analysis; Preliminary results 6-9 months post completion of field monitoring

Assessing Compounds of Interest



Pesticide Usage in Arvin/Lamont

10 Most Applied Pesticide Active Ingredients by Weight (% of Total), 2019-2021



Pesticides Monitoring in an AB 617 Community, Eastern Coachella Valley

- Monitoring locations
 - Thermal, Mecca, Torres-Martinez Tribal Community
- Seasonal monitoring
 - During high-use period
 - Four, consecutive 24-hour samples per week
 - Randomized schedule
- Results pending
 - Field sampling completed 02/2023

Community Discussion

- What are the pesticide air monitoring concerns of the community?
- Are there any specific causes for the concern?
 - Odors?
 - Possible incorrect usage?
- Are there any specific locations of concern?
- When have you been concerned?

Resources

Toxic Air Contaminant List (TAC)

ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants

DPR Pesticide Air Monitoring

www.cdpr.ca.gov/docs/emon/airinit/air_monitoring_reports.htm

DPR Pesticide Use Reports (PUR)

www.cdpr.ca.gov/docs/pur/purmain.htm

AQView

aqview.arb.ca.gov/map



Community Air Protection Program

CommunityAir@arb.ca.gov (or)

AireComunitario@arb.ca.gov

CARB liaison:

Michelle Byars Michelle.Byars@ARB.CA.Gov

(279)208-7983

CARB Monitoring:

James Pham James.Pham@ARB.CA.Gov

CARB, Technical:

Hanjiro Ambrose Hanjiro.Ambrose@ARB.CA.Gov

OEHHA Toxicologist:

Lily Wu Lily.Wu@OEHHA.CA.Gov

Contacts