Scientific Review Panel on Toxic Air Contaminants

Public Meeting
May 12, 2022

Additional Information at https://ww2.arb.ca.gov/resources/documents/scientific-review-panel-toxic-air-contaminants

Meeting Agenda

- Welcome and Introductions
- Review of “1-Bromopropane (1-BP) Reference Exposure Levels (RELs) – Technical Support Document for the Derivation of Noncancer RELs
- Informational Item 1 regarding a Proposed Process for Hot Spots Chemical Reviews.

Meeting Agenda

- Informational Item 2 - Update from the Department of Pesticide Regulation on 1,3-Dichloropropene (1,3-D) Emissions Monitoring Study and AB 617 Community of Shafter
- Informational Item 3 -Update on the Community Air Protection Program
- Consideration of administrative matters

Meeting Schedule

- Welcome and Introductions
- Review of "1-Bromopropane (1-BP) Reference Exposure Levels (RELs) – Technical Support Document for the Derivation of Noncancer RELs
  - Panel Discussion
  - Break

Meeting Schedule

- Informational Item 1 - regarding a Proposed Process for Hot Spots Chemical Review
  - Panel Discussion
  - Lunch Break 30 min

Meeting Schedule

- Informational Item 2 - Update from the Department of Pesticide Regulation on 1,3-Dichloropropene (1,3-D) Emissions Monitoring Study and AB 617 Community of Shafter
  - Panel Discussion
  - Public Comments

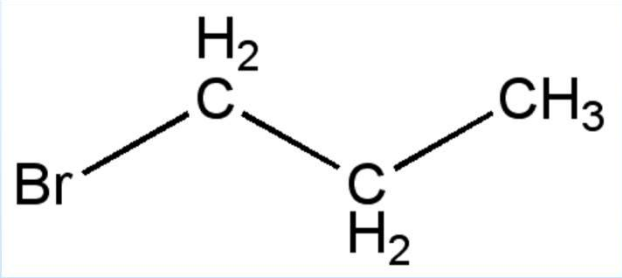
Meeting Schedule

- Informational Item 3 - Update on the Community Air Protection Program
  - Panel Discussion
  - Public Comments
- Consideration of administrative matters

Air Toxics Hot Spots Program

Noncancer Reference Exposure Levels (REL)

1-Bromopropane



Office of Environmental Health Hazard Assessment

Scientific Review Panel Meeting

May 12, 2022

1-Bromopropane
Chemical-Physical Properties

- **Also referred to as n-propyl bromide**
- **Colorless liquid at room temperature**
- **Soluble in organic solvents**
  Slightly soluble in water: 2,450 mg/L @ 20°C
- **Boiling point: 71°C at 760 mm Hg (torr)**
- **Vapor pressure: 110.8 mm Hg (torr) @ 20°C**

1-Bromopropane Listings and Uses

- **Listed as a carcinogen and a developmental and reproductive toxicant (males and females) under California Prop. 65**
- **Draft Hot Spots cancer inhalation unit risk value has been reviewed by the Scientific Review Panel**

Uses

- **Solvent vehicle for adhesives in laminates and foam products**
- **Degreasing/cleaning agent for metals, plastics, optics, and electronics**
- **Alternate solvent in modified perchloroethylene dry-cleaning machines**

1-Bromopropane California Emissions

Limited data on 1-bromopropane (1-BP) emissions:

- **Statewide 2011 CA survey reported a total of 160.7 tons of 1-BP emissions in 2008 due to solvent cleaning operations**
- **As of March 21, 2022 – now quantitatively reportable under the Hot Spots Program**
- **As of Feb. 4, 2022 – US EPA amended the HAP list to add 1-BP**

1-Bromopropane Toxicokinetics

- **Metabolism of inhaled 1-BP in rodents primarily through oxidative metabolism via P450 enzymes, conjugation with glutathione and debromination.**
- **In rats, the majority of absorbed 1-BP (40-71%) may be excreted unchanged or as CO_2 (10-31%) in exhaled air within 4 hours.**
- **Radiolabeled [1-^{14}C]-1-BP recovered in urine ranged from 17 to 23%.**
- **Main urinary metabolite excreted is N-acetyl-S-propylcysteine (37% of total urinary metabolites)**
- **Metabolite found in urine of 1-BP workers and in national biomonitoring studies of pregnant women and children**

1-Bromopropane Toxicokinetics in Children and Adults

- NIOSH observed a strong association between TWA inhalation exposure to 1-BP in workers and the urinary metabolite N-acetyl-S-propylcysteine
  - Considered N-acetyl-S-propylcysteine an effective biomarker for 1-BP workers
- National Children's Vanguard Study (2009-2010) found N-acetyl-S-propylcysteine in 99% of urine samples from ~ 500 3rd trimester pregnant women
- NHANES study (2011-2012) mean urinary levels of N-acetyl-S-propylcysteine was 2.6 ng/ml (boys) and 3.3 ng/ml (girls) in children's survey
- Surveys suggest wide-spread non-occupational exposure to 1-BP, although exposure to other chemicals could result in same urinary metabolite

1-BP Acute Effects: Humans

- **Lack of data for an acute REL (≤ 24 hr exposure)**
- **Multi-day (several days to several weeks) occupational exposure result in neurotoxicity**
- **Neurotoxic effects noted in exposed patients include ataxic gait, hypoesthesia (partial or total loss of sense of touch), numbness, dizziness, ocular symptoms, and limb pain**
- **Occupational exposure levels hard to pin down. >50-200 ppm for days or weeks leads to severe neurological findings**

1-BP Acute/Subacute Effects Experimental Animal Exposure

- Few acute (≤ 24 hrs) toxicity studies
- Multi-day (several days to several weeks) exposure protocols used to achieve neurotoxic effects
- Daily exposures in rats:
  - 1800 to 2000 ppm for <1 week results in ataxia
  - ≥ 800 ppm for 1 week resulted in axonal myelin sheath swelling of gracile nucleus and posterior tibial nerve
  - ≥ 200 ppm for 3 weeks resulted in decreased muscle strength

1-BP Acute/Subacute Effects Experimental Animal Exposure

- **Daily exposures in mice:**
  - **≥ 800 ppm for 6 hrs results in decreased sperm motility in males**
  - **≥ 500 ppm results in liver damage; higher concentrations can result in death on day 2**
  - **Respiratory airway lesions observed as low as 125 ppm after 2 week exposure**

1-BP Acute/Subacute Effects Developmental Studies

- Developmental abnormalities in newborn rodents resulting from 1-BP exposure during gestation considered to be acute exposure
- Huntingdon Life Sciences (2001): Maternal rat exposure to 1-BP 6 hrs/day to 0, 100, 498, 996 ppm 1-BP during GD 6-19
- In rat fetuses:
  - Reduced skull ossification at ≥498 ppm
  - Increase in bent ribs at 996 ppm
- Used as key study for the acute REL

Acute REL Derivation for 1-BP

Skeletal abnormalities in fetuses of 1-BP exposed rats

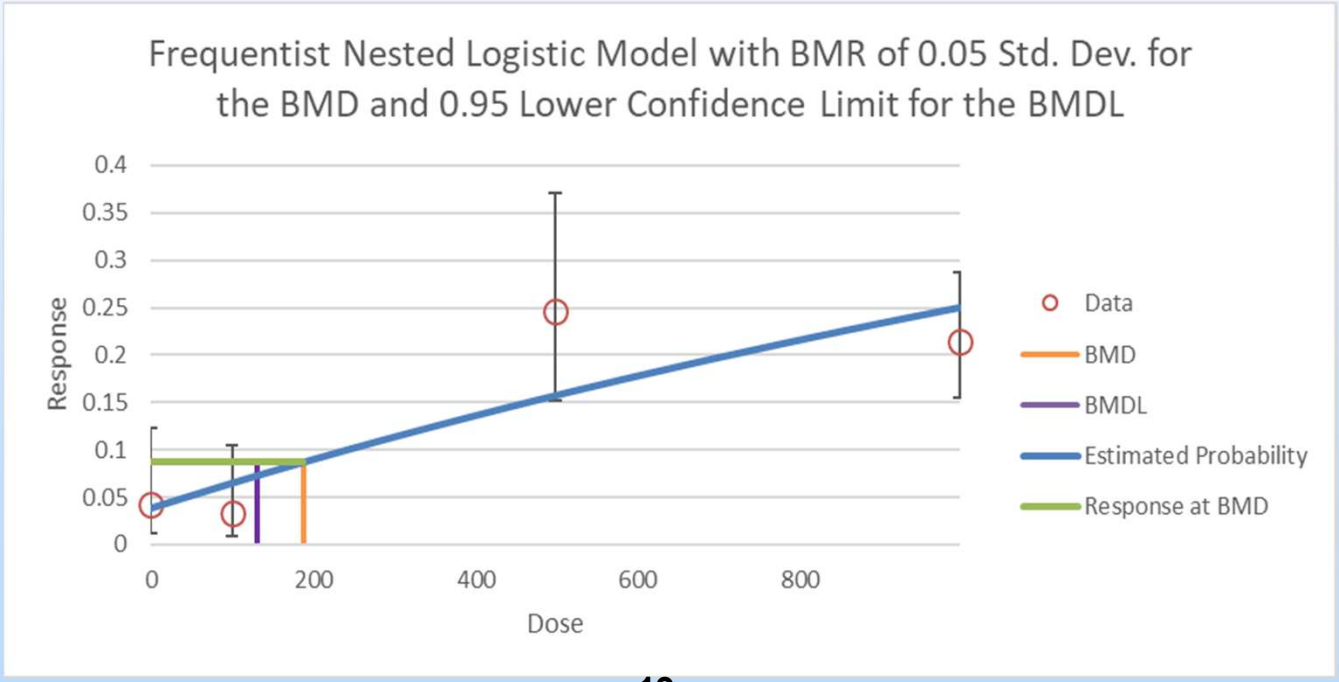
Exposure	**0 ppm**	**100 ppm**	**498 ppm**	**996 ppm**
Litters examined	23	23	25	24
Fetuses examined	145	146	153	151
Reduced skull ossification				
Fetal incidence	6	5	38	33
Litter incidence	**4**	**3**	**17***	**18***
Ribs bent				
Fetal incidence	0	0	7	26
Litter incidence	0	0	3	13*

*** p < 0.01**

Reduced skull ossification is the critical effect for the acute REL

Acute REL Derivation for 1-BP

Individual data for fetuses from each litter available for Benchmark Dose (BMD) nested dichotomous analysis.



Acute REL Derivation for 1-BP

- Benchmark Dose Response of 5% = 187 ppm (BMD)
- 95% lower confidence limit (BMDL) = 131 ppm
- 131 ppm is the Point of Departure (POD)
  - No time adjustment for exposure during gestation
  - Human Equivalent Concentration: RGDR = 1 for systemic effects

Acute REL Derivation for 1-BP

- **Interspecies Uncertainty Factor (UF):**
  - **Toxicokinetic UF = 2**

    For residual toxicokinetic differences not addressed by the RGDR
  - **Toxicodynamic UF = $\sqrt{10}$**

    For lack of toxicodynamic data

Acute REL Derivation for 1-BP

- **Intraspecies Uncertainty Factor (UF):**
  - **Toxicokinetic UF = 10**

    No information on pharmacokinetic differences for 1-BP among adults, infants, and children
  - **Toxicodynamic UF = $\sqrt{10}$**

    For using a sensitive endpoint (development) as the POD
- **Cumulative UF = 200**
- **Acute REL = 659 mg/m^3 (131 ppm) / 200**

  = 3.3 mg/m^3 (0.7 ppm) or 3,300 µg/m^3

1-BP Chronic/Subchronic Effects in Experimental Animals

Neurological studies in rats

- **12 week exposure (6-8 hrs/day, 5-7 days/week**
- **≥400 ppm**
  - **increased distal latency sciatic nerve**
  - **decreased forelimb strength**
  - **axonal degeneration and demyelination**
- **≥800 ppm**
  - **decreased motor nerve conduction velocity**

1-BP Chronic/Subchronic Effects in Experimental Animals

National Toxicology Program (NTP) 2-year study in rats and mice

- **No apparent lesions in the nervous system were found (pathological exam of brain and spinal cord)**
- **Respiratory tract lesions in mice at the lowest dose (62.5 ppm)**
- **Splendore Hoeppli material (abscesses) primarily in the nose and skin of exposed rats – evidence of immunosuppression**

1-BP Chronic/Subchronic Effects: Humans

- **Similar to occupational reports with shorter duration/higher 1-BP concentrations, neurological effects dominated: numbness in the lower limbs, decreased pallesthesia (vibratory sensation), unstable gait, and difficulty walking**
- **Several occupational studies performed nerve conduction tests**
- **Most common finding: reduced conduction velocity (CV) and increased distal latency (DL) in peripheral motor and sensory nerves of the lower limbs**

1-BP Chronic/Subchronic Effects Human Exposure

Case report by Sclar (1999)

- **Patient hospitalized following 2 months of occupational exposure to 95.5% 1-BP**
- **First nerve conduction exam of a patient poisoned by 1-BP**
- **Sural and peroneal sensory nerve conduction velocity (CV) of 29 - 36 m/sec well below range of normality of 40 - 41 m/sec**
- **Motor nerve distal latencies (DL) of 8.0 - 9.6 ms well above normal range of 6.1 - 6.5 ms**

Chronic REL Derivation for 1-BP

- **Li et al. (2010b) key study for the chronic and 8-hour RELs**
- **71 female workers from 4 Chinese 1-BP manufacturing plants – largest cohort of 1-BP workers studied thus far**
- **Compared to a control group of 71 female workers from the same region**
- **Geometric mean for 1-BP workers: 14.13 mg/m^3 (2.81 ppm); mean duration: 38.8 months**

Chronic REL Derivation for 1-BP

Results of nerve conduction velocity and distal latency tests (Li *et al.* 2010b)

Exposure Group	N	Tibial nerve DL (ms)	Tibial motor nerve CV (m/s)	Sural sensory nerve CV (m/s)
Control	71	6.7 ± 1.8	50.1 ± 10.3	48.3 ± 5.2
1-BP-exposed	71	7.5 ± 2.1*	44.8 ± 8.7*	45.5 ± 4.9*
Cut-off for normality		6.1[a]	42[b]	40[c]

*** P < 0.05 compared to the control group**

[a] Upper limit - 97th percentile, all ages combined (Chen *et al.*, 2016)

[b] Low limit – 3rd percentile (Chen *et al.*, 2016)

[c] Low limit – 3rd percentile (Benatar *et al.*, 2009)

Chronic REL Derivation for 1-BP

Results of the pallesthesia (vibratory perception) tests (Li *et al*. 2010b)

Exposure Group	N	Right foot vibration threshold (dB)	Left foot vibration threshold (dB)	Right foot vibration delay (s)	Left foot vibration delay (s)
Control	63	15.9±7.0	15.4±7.2	3.3±4.3	2.9±4.3
1-BP-exposed	63	16.1±6.8	18.3±7.5*	6.2±4.4*	5.7±4.4*

* ***p*<0.05 compared to the control group**

Chronic REL Derivation for 1-BP

POD = 14.13 mg/m^3 (2.81 ppm)

- **Time adjustment:**

14.13 mg/m^3 × 10m^3/20m^3 × 5d/7d

= 5.05 mg/m^3

- **LOAEL UF = $\sqrt{10}$ (subclinical findings)**

- **Subchronic UF = 10 (mean 38.8 month exposure - <8% of estimated lifetime)**

Chronic REL Derivation for 1-BP

- **Total interspecies UF = 1 (human study)**
- **Intraspecies toxicokinetic (UF_{H-k}) = 10**
  (protect infants and children)
- **Intraspecies toxicodynamic (UF_{H-d}) = 10**
  (neurotoxicity critical effect)
- **Cumulative UF = 3000**
- **Chronic REL = 5.05 mg/m^3 (1.00 ppm) / 3000**
  = 1.7 µg/m^3 (0.3 ppb)

8-Hour REL Derivation for 1-BP

- Based on same occupational study by Li et al. (2010b)
- Same POD of 14.13 mg/m^3 (2.81 ppm)
- Time adjustment is different:
  14.13 mg/m^3 × 5d/7d = 10.09 mg/m^3
  no 10/20 m^3 factor: key study occupational
- All UFs are the same as the chronic REL derivation
- 8-Hour REL = 3.4 µg/m^3 (0.7 ppb)

1-BP REL Summary

Proposed 1-BP RELs

Acute: 3,300 µg/m^3 (700 ppb)

Chronic: 1.7 µg/m^3 (0.3 ppb)

8-Hour: 3.4 µg/m^3 (0.7 ppb)

Public Comments/Workshop

- The 1-BP RELs document was released for a 45-day public comment period on January 8, 2022.
- A virtual public workshop was held on January 26, 2022.
- No public comments were received on the document.

Panel Discussion

10 Minute Break

The meeting will resume shortly

Informational Item

A proposed process for Hot Spots chemical reviews:

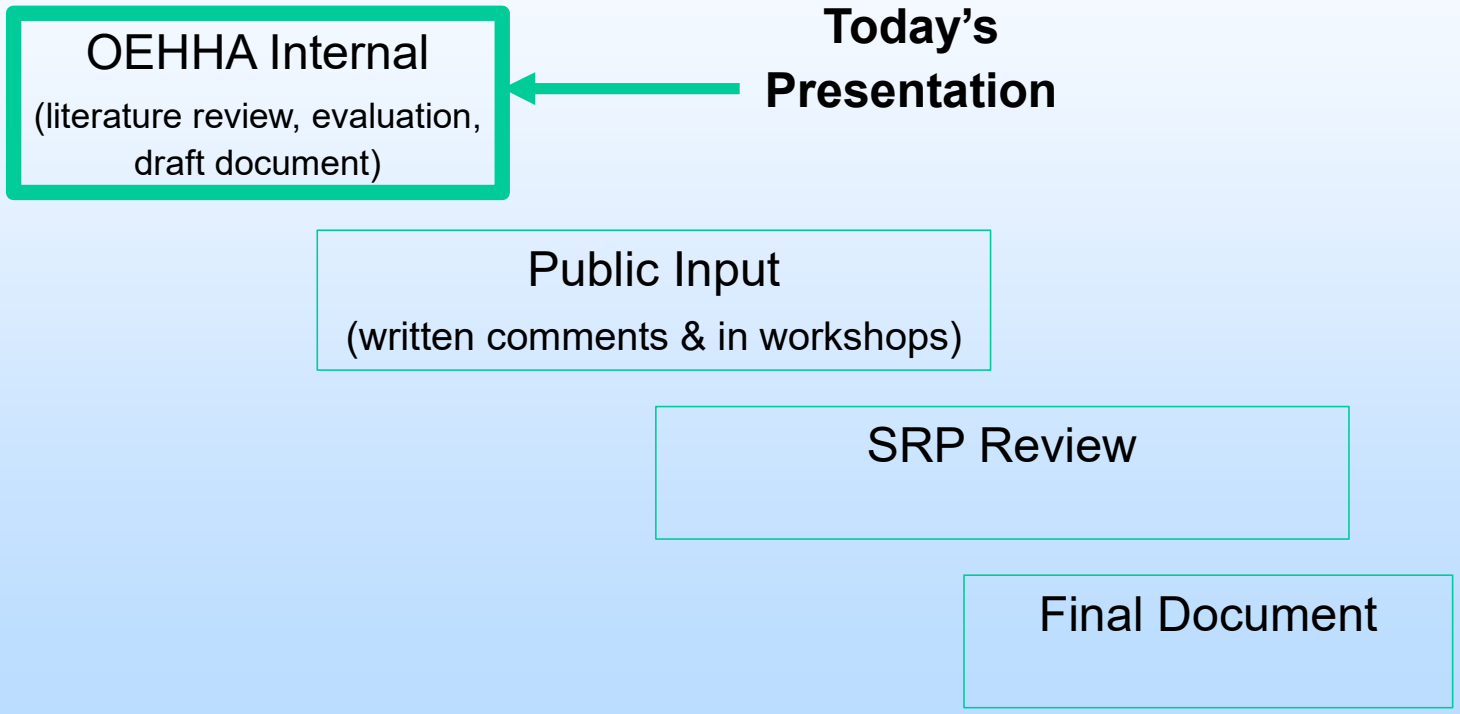
Leveraging authoritative sources in OEHHA documents

Office of Environmental Health Hazard Assessment

Presentation to the SRP

May 12, 2022

Developing a Hot Spots Assessment



Overview of Hot Spots Assessments

- Comprehensive search and evaluation of the scientific literature
- Detailed study-by-study descriptions
- Development of dose-response analysis to develop health guidance values
- Draft assessments are submitted for public and SRP reviews at the rate of 1-3 chemicals/year

Current Document Development Process

Document Contents:

- Description of use and occurrence
- Full descriptions of toxicokinetics, key mechanistic data and health effects studies
- Dose-response analysis performed, preferentially using inhalation exposure studies

Study-by-study descriptions, *in some cases*

- Can be time consuming
- Can repeat what is described elsewhere
- May not add value

Emerging Air Toxics Evaluation Needs

- **Many chemicals without cancer and non-cancer health effects values**
  - **Updates to Emissions Inventory Criteria and Guidelines regulation chemical list**
  - **Study of Neighborhood Air Near Pollution Sources, or SNAPS chemicals**
- **More rapid document development can support these efforts in a timely manner**

Suggested Internal Improvement

- Leverage work
  - From other health agencies (following OEHHA review of scope and methods)
  - From other OEHHA programs
- Streamline document contents
  - High level synthesis rather than study-by-study descriptions
- Improve efficiency to expedite the document development

Proposed Approach and Document Format for an Upcoming Assessment:

Ethylene oxide

Updating Cancer Dose-response of Ethylene Oxide (EtO)

- EtO is of interest to Hot Spots and Proposition 65 programs
- New relevant studies have become available since adoption of Hot Spots and Proposition 65 values, including new human cancer studies
- Joint development of assessment can produce deliverables for both programs
- Comprehensive and authoritative reviews available from other health agencies

Proposal to Update Cancer Inhalation Unit Risk (IUR) for EtO

Starting point:

- U.S. EPA (2016) assessment – full descriptions of studies published since California's Department of Health Services (pre-OEHHA) cancer IUR (1987)

Evaluation:

- Focus on literature search since 2016 EPA assessment
- Present an overall synthesis of relevant studies
- Develop dose-response analysis

Consistency across programs:

- Use same studies and dose-response modeling
- Concurrent public comment period & review

Summary of Proposed Modifications

Document content – would be streamlined

- Synthesis of relevant studies
  - US EPA document referenced as a source for older study descriptions
- Detailed descriptions of key cancer and other relevant studies (e.g., toxicokinetics)
- Full description of dose-response modeling, including study selection

Public input and SRP review process – will remain the same

SRP Feedback

- On expediting Hot Spots assessments by appropriately leveraging work of other authoritative entities and OEHHA programs
- On the proposal to update the cancer IUR for EtO

Panel Discussion

30 Minute Lunch Break

The meeting will resume after lunch

AB 617 – Shafter, CA
DPR's 1,3-Dichloropropene Mitigation Pilot Project Update

Minh Pham
Environmental Monitoring Branch
May 12, 2022

Agenda

- 1,3- Dichloropropene Mitigation Pilot Project Background
- Mitigation Pilot Status Update
- Preliminary Results and Comparisons
- Next Steps
- Contact Information and Questions

Background

1,3-Dichloropropene (1,3-D) is a pre-plant fumigant used to control nematodes, insects, and disease organisms in the soil. Its major uses in California include fruit and nut trees, strawberries, grapes, and carrots. It is currently registered and managed as a restricted material.

Shafter Community Interest -

- Shafter AB617 community expressed an interest in considering 1,3-D emissions reductions.
- Key question: Are there ways to achieve reduction in emissions similar to TIF tarping for 1,3-D?
  - Also consider impacts of tarps –practicality, disposal, cost, availability, etc.

Background

Goals of the pilot project –

- Develop feasible mitigation options and study potential 1,3-D emission reduction capabilities from these practices.
- Provide growers and applicators flexibility with feasible options that achieve emissions reductions comparable to TIF tarping.
- Support future mitigation development to address potential bystander exposure of 1,3-D.

Background

Partnership with Shafter –

- Partnered with Shafter Community for Air Monitoring Network Study since January 2017
- Collaborated with CARB and Shafter's AB617 Community Steering Committee on pesticide related projects and provided technical expertise to assist in addressing the community's concerns
- Collaborated with local partners in Kern county to conduct pilot study
- Engaged with local residents on progress of pilot study and provide updates on ongoing statewide regulation development

Status Update

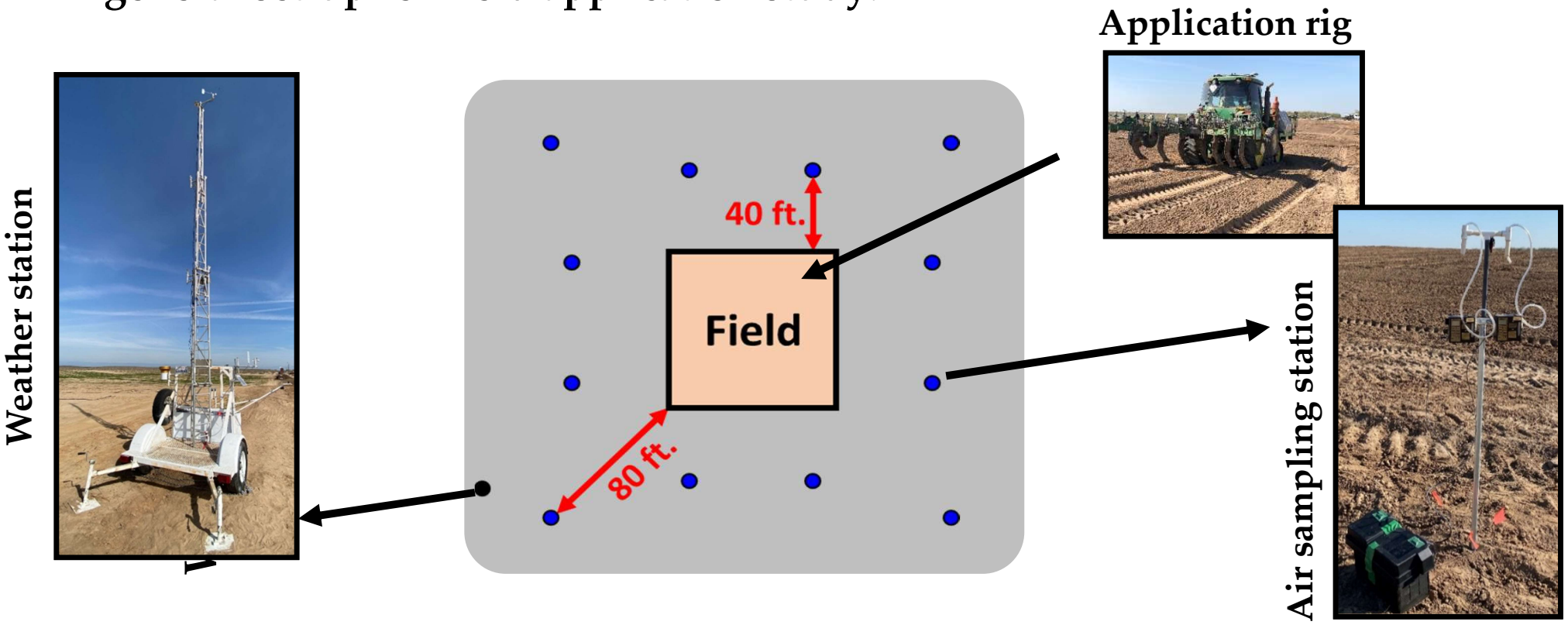
Completion of the Mitigation Pilot Project - 2021

- DPR's Air Program has completed five (5) field application studies in Kern, Merced, Stanislaus, and Sutter counties

- Field studies aimed to determine feasibility of proposed mitigation measures that provide emissions reductions comparable to TIF Tarping, validate emissions reductions determined from computer modeling, and collect additional soil and weather data for future monitoring studies
  - Mitigation options consist of application such as
    - Higher soil moisture (field capacity),
    - Additional soil compaction (e.g., flat roller),
    - Deeper injection (24-inch),
    - 50/50 TIF tarping (e.g., alternating rows of TIF and bare ground),
    - Or combinations of each

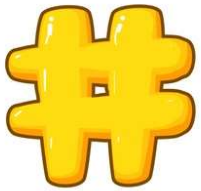
Status Update

A general set-up for field application study:



Status Update

What is gathered during a field application study?



12 - Air Monitors
300 - Air Samples

Samples collected
- Every 6 hours for days 1-4
- Every 12 hours for days 5-9

Also Collected Field Soil Characteristic, Field Moisture, & Real-Time Weather

HYDRUS –
Emissions (Flux) Modeling

AERMOD –
Air Dispersion Modeling

Status Update

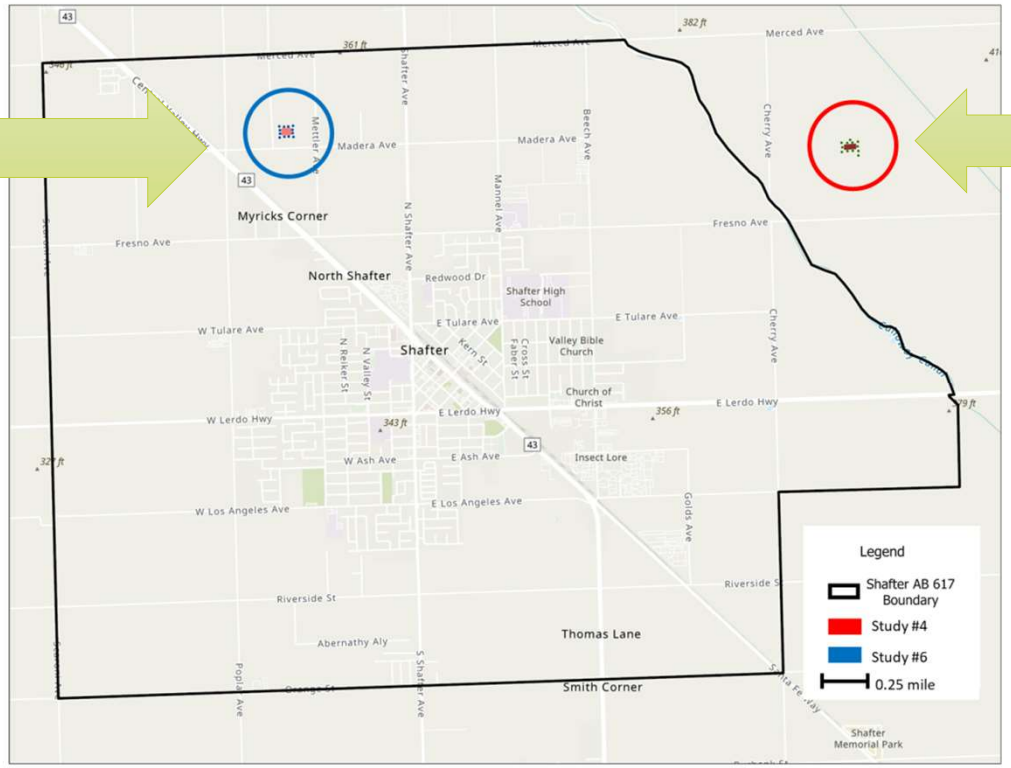
Study#	Mitigation options	Location (County)
1*	18" deep broadcast + higher moisture	Oakdale (Stanislaus)
2*	18" deep broadcast + flat roller + higher moisture	Oakdale (Stanislaus)
3*	24" deep broadcast + higher moisture	Oakdale (Stanislaus)
4	18" deep broadcast + higher moisture	Shafter (Kern)
5	24" deep broadcast + organic matter amendment	Denair (Stanislaus)
6	24" deep broadcast + compaction	Shafter (Kern)
7	24" deep broadcast	Atwater (Merced)
8	18" deep broadcast + 50% TIF	Rio Oso (Sutter)

* Studies 1,2, and 3 were performed in collaboration with UC Researchers and DOW. Data from these studies will be evaluated by DPR and compared when they become available.

Status Update

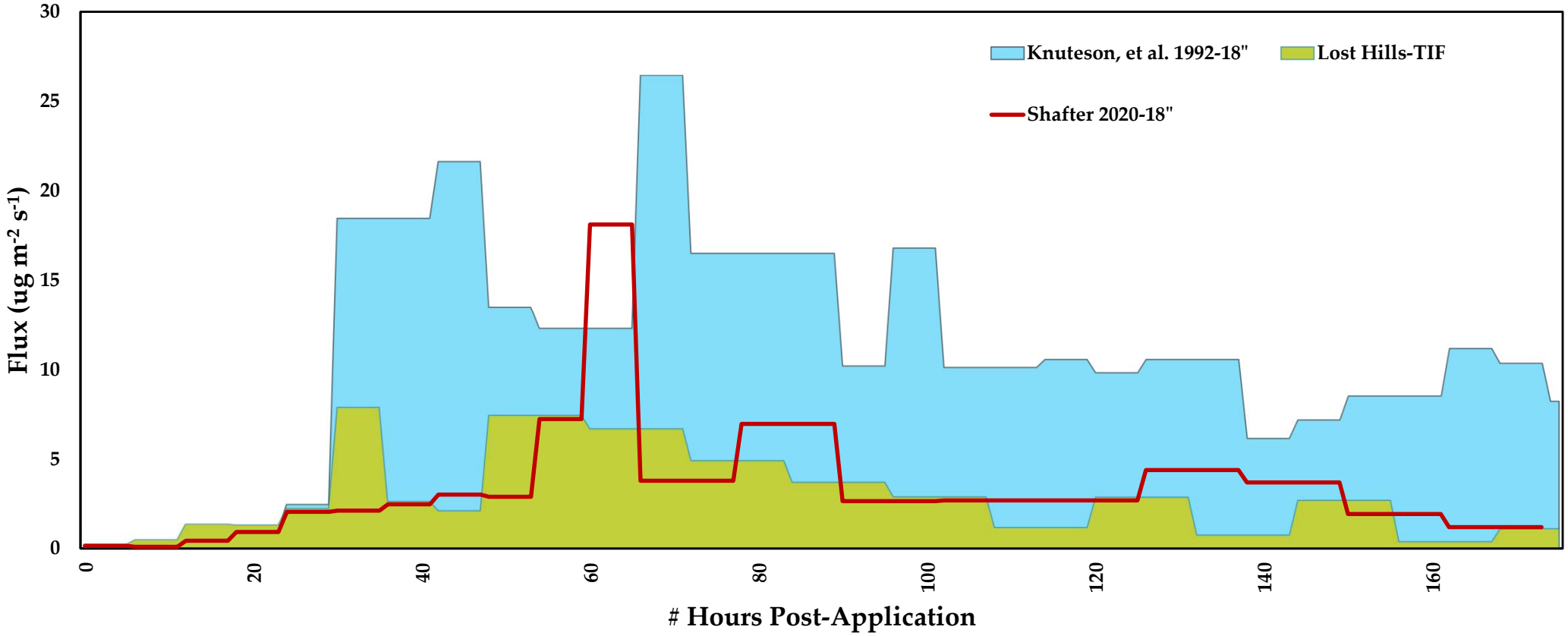
Field application studies in Shafter

24" deep broadcast + compaction

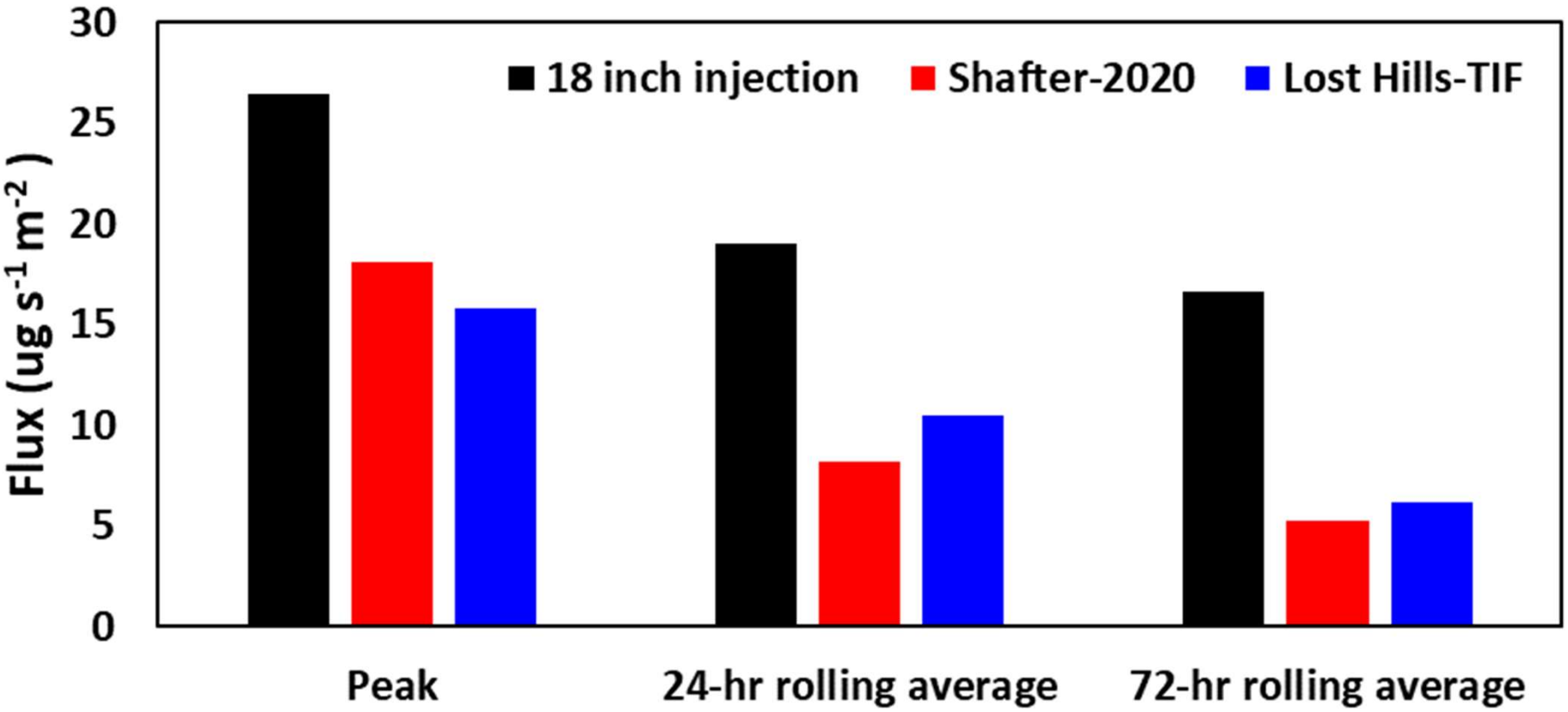


18" deep broadcast + higher moisture

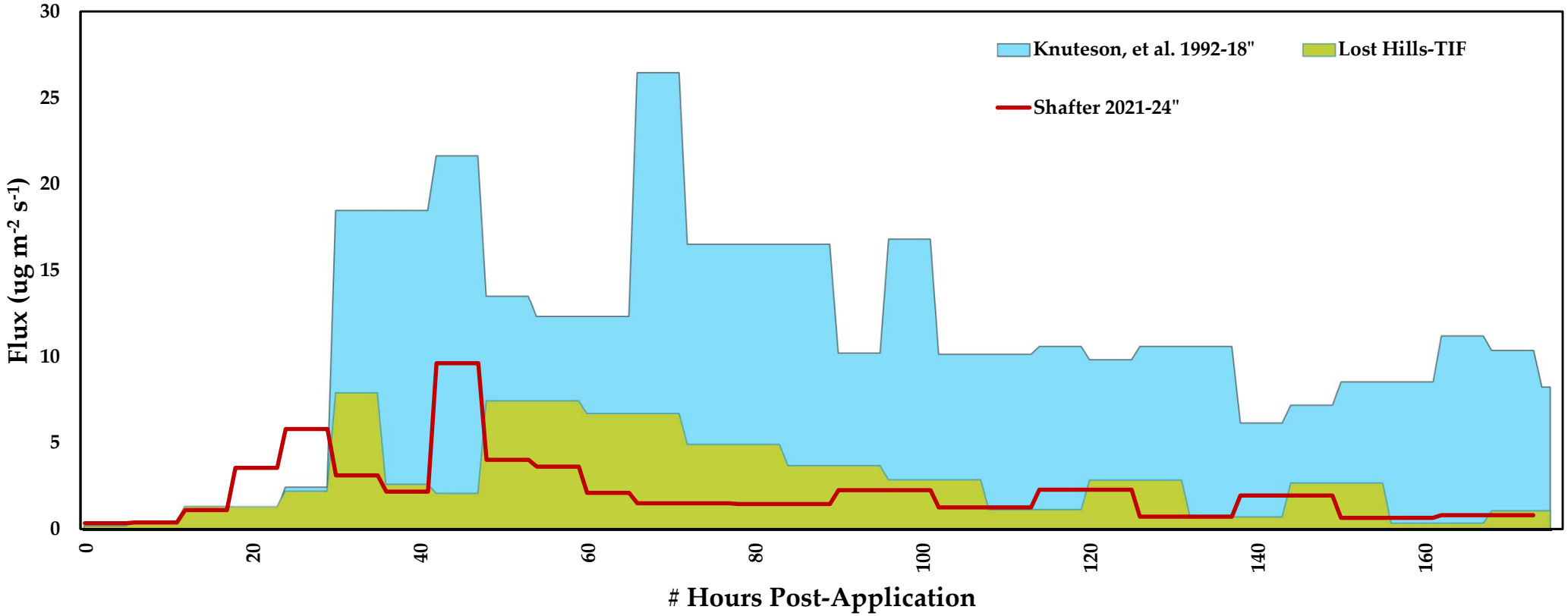
Shafter 2020 – 18" deep broadcast + higher moisture



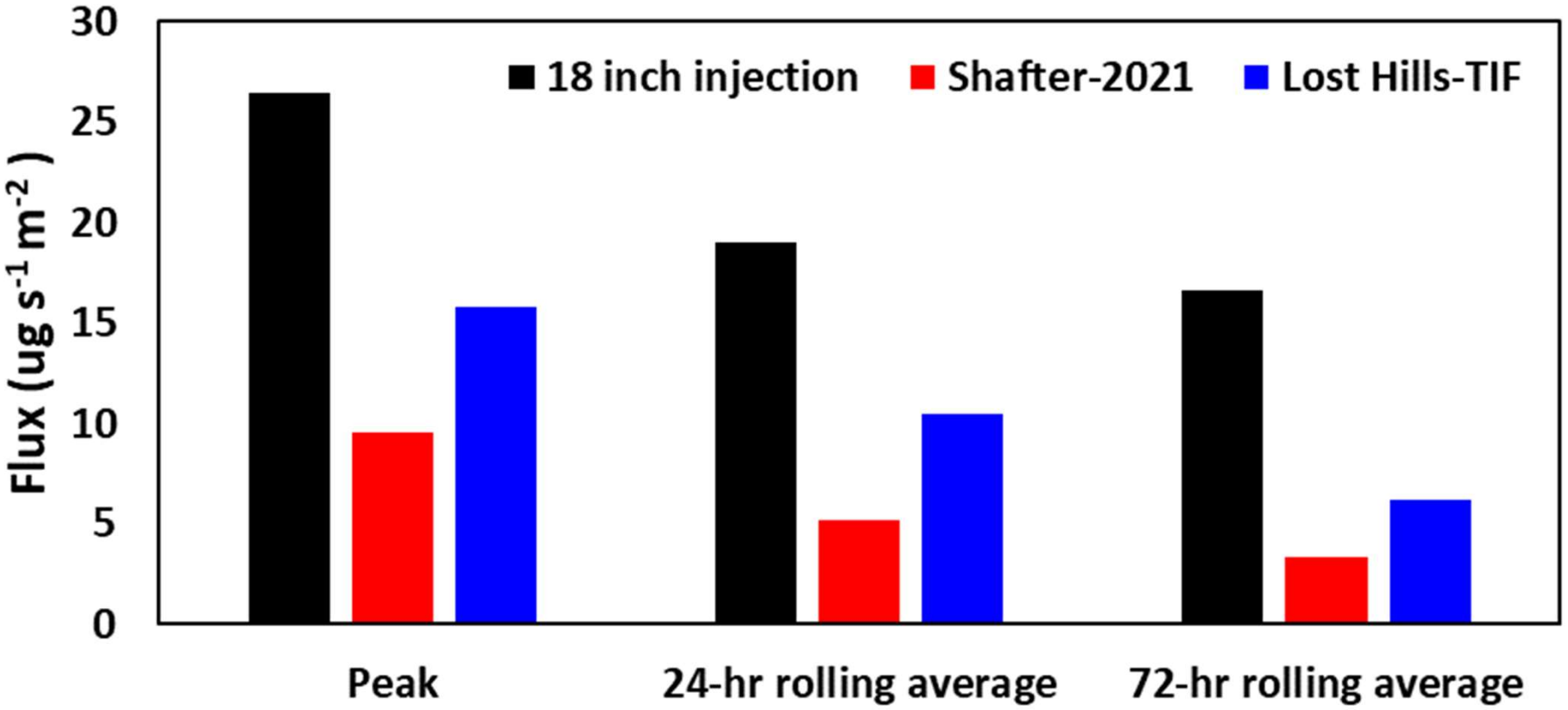
Shafter 2020 – 18" deep broadcast + higher moisture



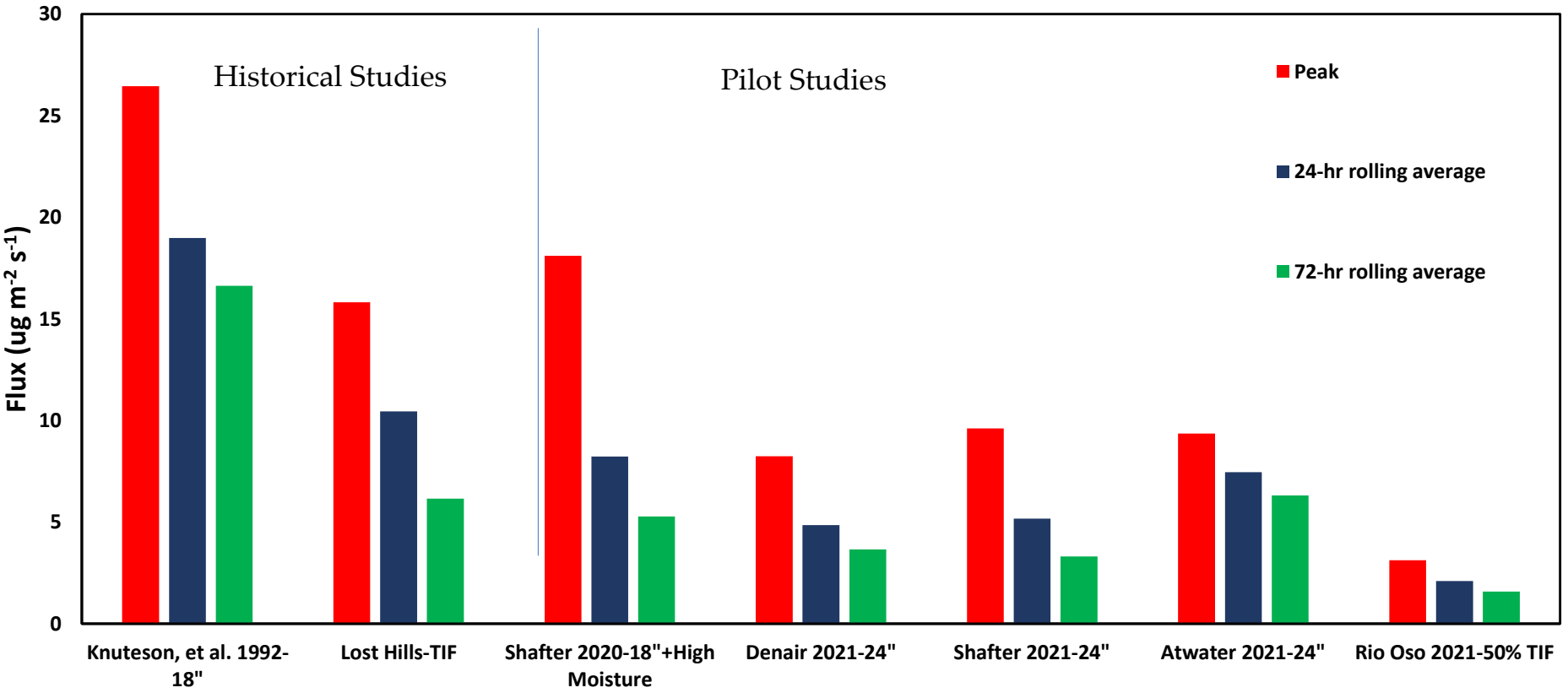
Shafter 2021 – 24" deep broadcast + compaction



Shafter 2021 – 24" deep broadcast + compaction



Comparing all Field Studies



Next Steps

Data from field studies undergoing analysis and will be used to further verify these conclusions

- Air concentration, soil characteristics, meteorological, and moisture data collected from all field studies will be used as inputs to refine computer modeling

Results from all field studies will be used to support mitigation development in addressing acute and cancer risk from 1,3-D

- Upcoming 1,3-D Mitigation Regulation in development with tentative noticing by Q4 2022.

Questions?

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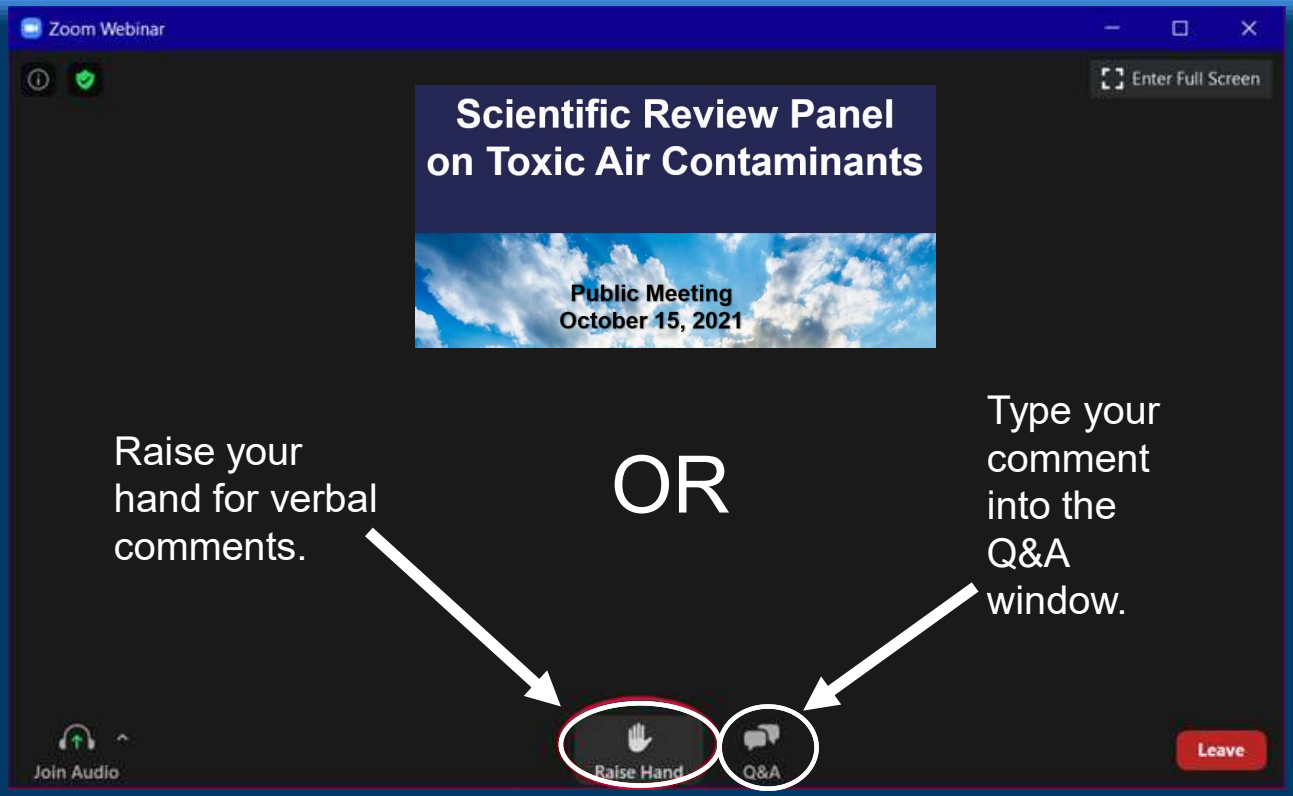
30TH ANNIVERSARY
dpr
1991-2021
PROTECTING PEOPLE AND THE ENVIRONMENT

Panel Discussion

Public Comments: Two Options for Sharing Comments



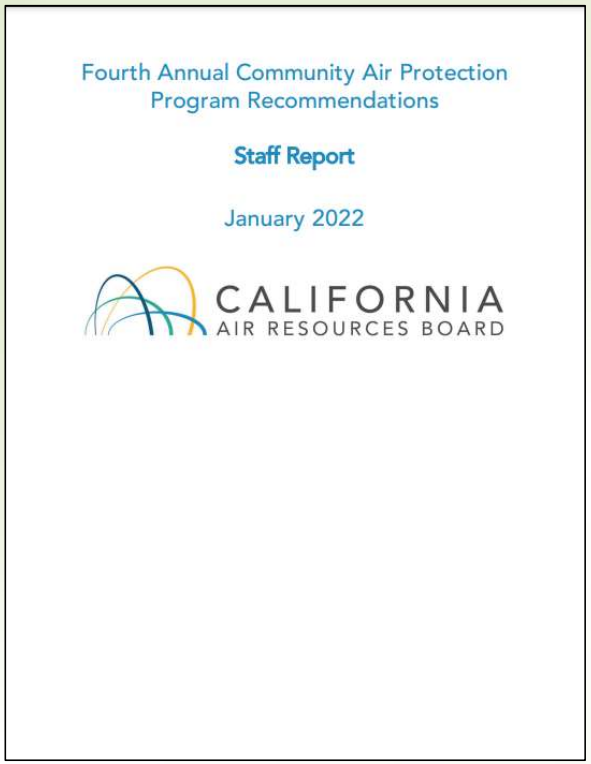
Community Air Protection Program Update

Scientific Review Panel Meeting

May 12, 2022

Outline

Fourth Annual Community Selection

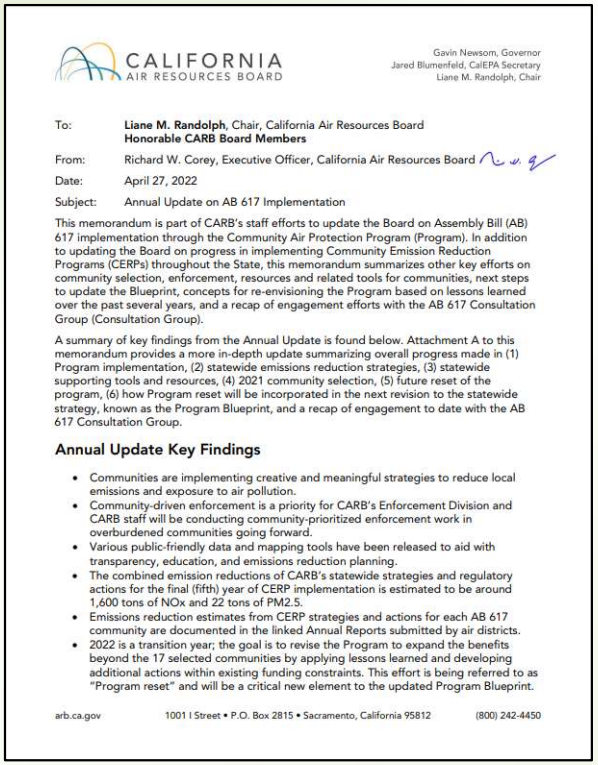

Fourth Annual Community Air Protection Program Recommendations

Staff Report

January 2022

CALIFORNIA AIR RESOURCES BOARD

Annual Program Update


CALIFORNIA AIR RESOURCES BOARD

Gavin Newsom, Governor
Jared Blumenfeld, CalEPA Secretary
Liane M. Randolph, Chair

To: **Liane M. Randolph**, Chair, California Air Resources Board
Honorable CARB Board Members

From: Richard W. Corey, Executive Officer, California Air Resources Board

Date: April 27, 2022

Subject: Annual Update on AB 617 Implementation

This memorandum is part of CARB's staff efforts to update the Board on Assembly Bill (AB) 617 implementation through the Community Air Protection Program (Program). In addition to updating the Board on progress in implementing Community Emission Reduction Programs (CERPs) throughout the State, this memorandum summarizes other key efforts on community selection, enforcement, resources and related tools for communities, next steps to update the Blueprint, concepts for re-envisioning the Program based on lessons learned over the past several years, and a recap of engagement efforts with the AB 617 Consultation Group (Consultation Group).

A summary of key findings from the Annual Update is found below. Attachment A to this memorandum provides a more in-depth update summarizing overall progress made in (1) Program implementation, (2) statewide emissions reduction strategies, (3) statewide supporting tools and resources, (4) 2021 community selection, (5) future reset of the program, (6) how Program reset will be incorporated in the next revision to the statewide strategy, known as the Program Blueprint, and a recap of engagement to date with the AB 617 Consultation Group.

Annual Update Key Findings

- Communities are implementing creative and meaningful strategies to reduce local emissions and exposure to air pollution.
- Community-driven enforcement is a priority for CARB's Enforcement Division and CARB staff will be conducting community-prioritized enforcement work in overburdened communities going forward.
- Various public-friendly data and mapping tools have been released to aid with transparency, education, and emissions reduction planning.
- The combined emission reductions of CARB's statewide strategies and regulatory actions for the final (fifth) year of CERP implementation is estimated to be around 1,600 tons of NOx and 22 tons of PM2.5.
- Emissions reduction estimates from CERP strategies and actions for each AB 617 community are documented in the linked Annual Reports submitted by air districts.
- 2022 is a transition year; the goal is to revise the Program to expand the benefits beyond the 17 selected communities by applying lessons learned and developing additional actions within existing funding constraints. This effort is being referred to as "Program reset" and will be a critical new element to the updated Program Blueprint.

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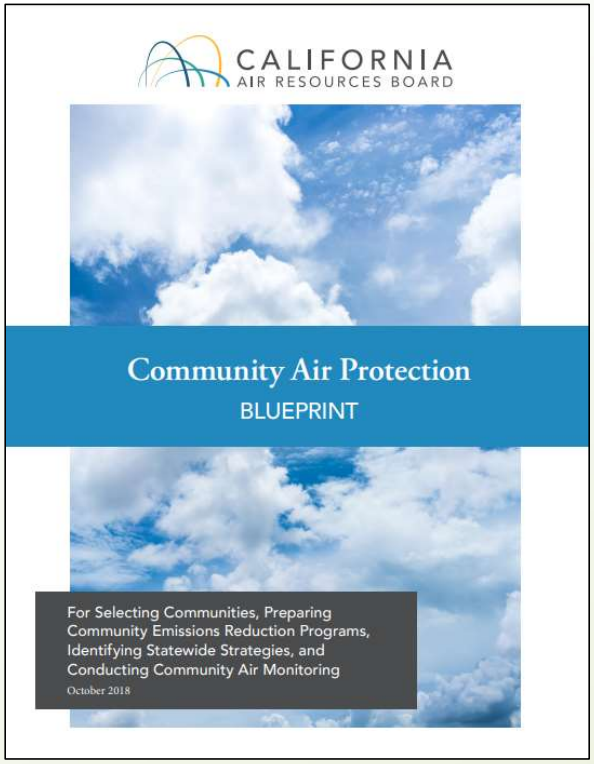
Statewide Strategy Revision Process


CALIFORNIA AIR RESOURCES BOARD

Community Air Protection

BLUEPRINT

For Selecting Communities, Preparing Community Emissions Reduction Programs, Identifying Statewide Strategies, and Conducting Community Air Monitoring

October 2018

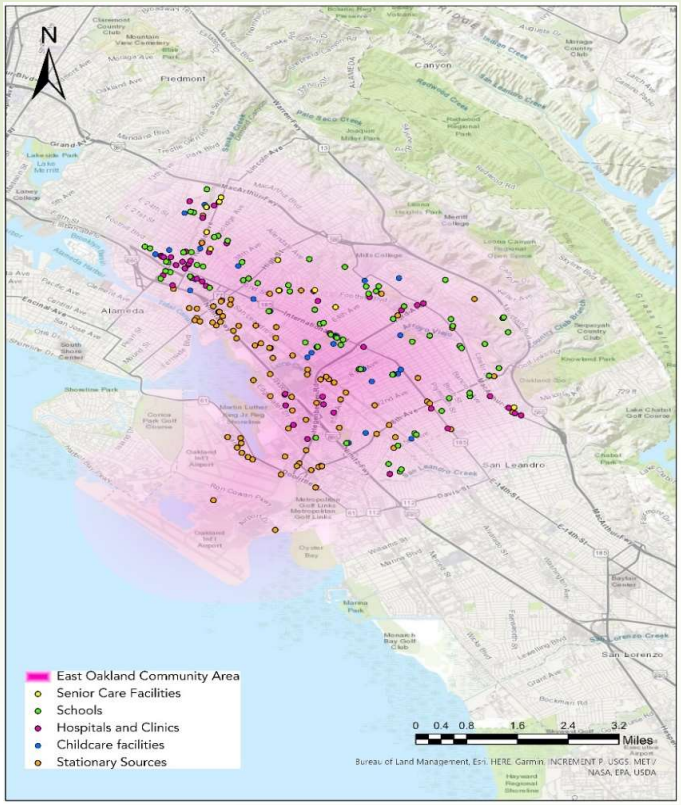
Fourth Annual Community Selection

- February 2022 CARB Board Meeting
- Two new communities selected

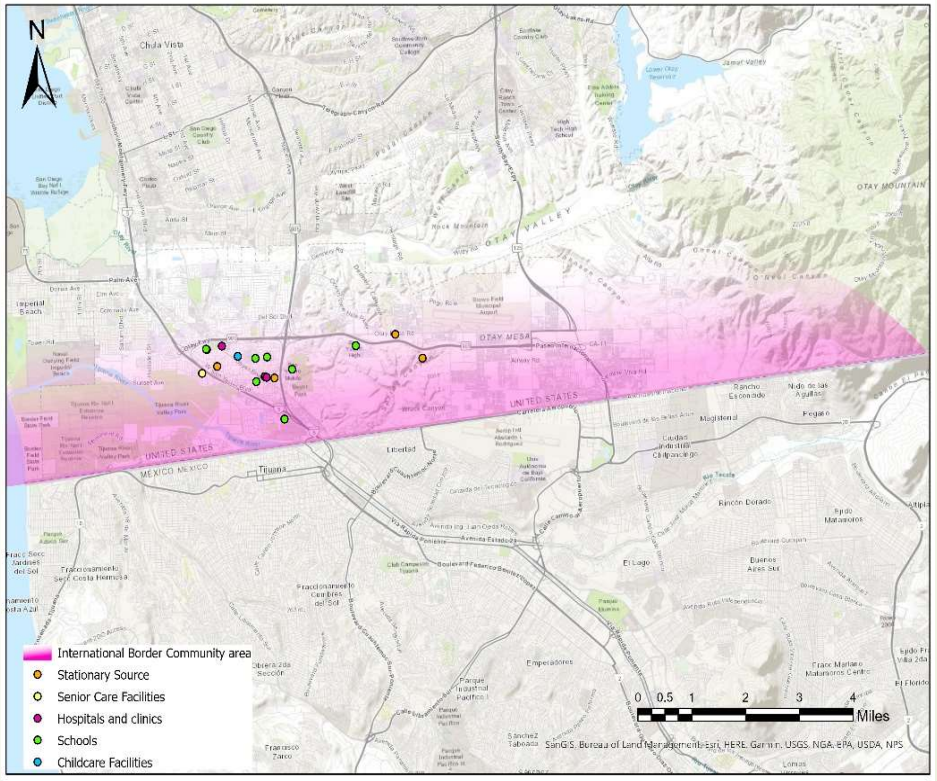
East Oakland

International Border (San Ysidro / Otay Mesa)

East Oakland - Community Emissions Reduction Program (CERP)



International Border (San Ysidro / Otay Mesa) Community Air Monitoring Plan and CERP



Considerations for Selection of Communities

- Air pollution emissions and exposure
- Vulnerability measures
- Regional and source diversity
- Prioritize monitoring communities
- Strongly-supported communities
- Resource availability

Annual Program Update

Key Findings

- Communities are implementing creative and meaningful strategies
- CARB is prioritizing community-driven enforcement
- CARB and air districts have released data visualization tools
- 2022 is a transition year for the Program

Annual Program Update

Air Toxics: Community Concerns

- Metals
- Ethylene oxide from sterilizers
- Charbroiling
- Residential wood burning
- Consumer product/fume suppressants in chrome plating
- Solvents
- Pesticides

Annual Program Update

Plan Development

East Oakland
International Border Community
South Los Angeles
Arvin/Lamont
Richmond, N. Richmond, San Pablo

Year 1 Implementation

Southeast Los Angeles
Stockton
Eastern Coachella Valley
Portside Community

Year 2 Implementation

West Oakland*
El Centro, Heber, Calexico
Shafter
South Central Fresno
East LA, Boyle Heights, West Commerce
San Bernardino, Muscoy
Wilmington, Carson, West Long Beach

Statewide Strategy Revision

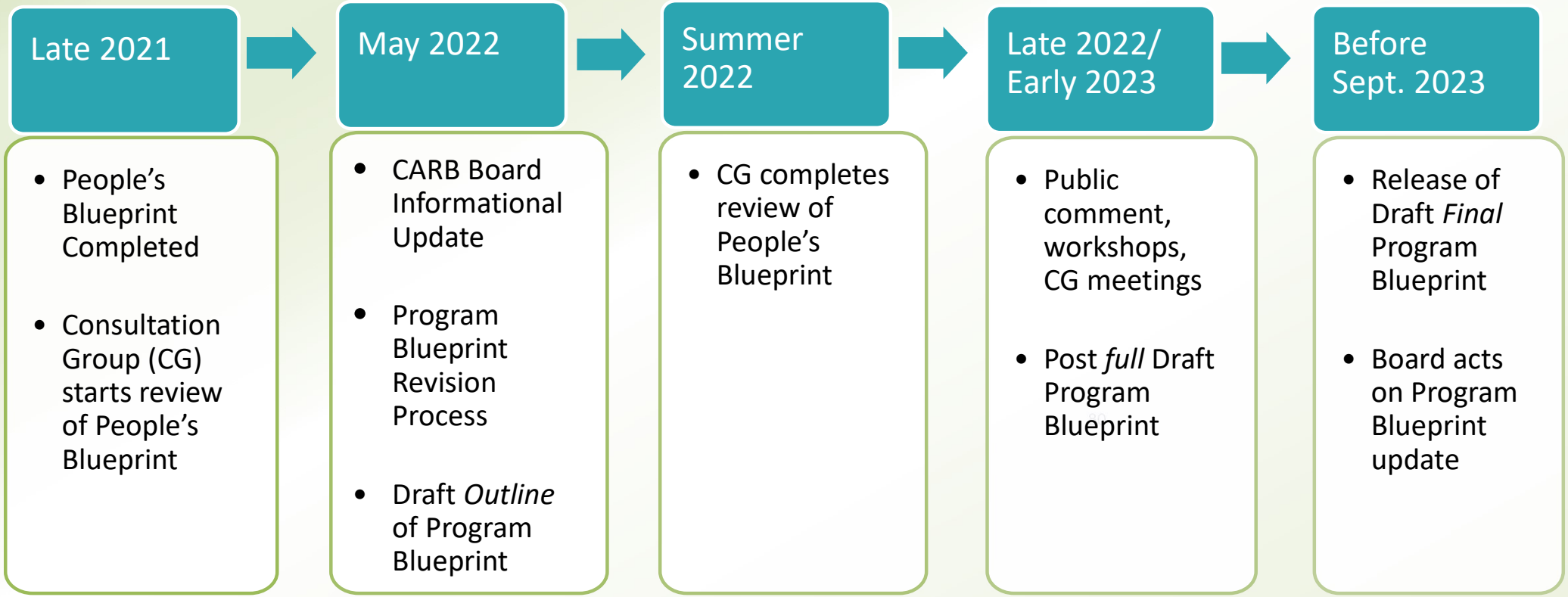
- CARB's Statewide Strategy is captured in the Program Blueprint
- Statute requires updates to Statewide Strategy at least every 5 years
- AB 617 Consultation Group deliberation of the People's Blueprint will significantly inform the next Program Blueprint
- Lessons learned and robust stakeholder engagement will inform reset of the program

Statewide Strategy Revision Concepts

Program Reset

- Racial Equity
- Community Engagement
- Engagement with Air District Partners
- Lessons Learned
- Alternative Models
- AB 617 Consultation Group

Statewide Strategy Revision Process Timeline



Questions?

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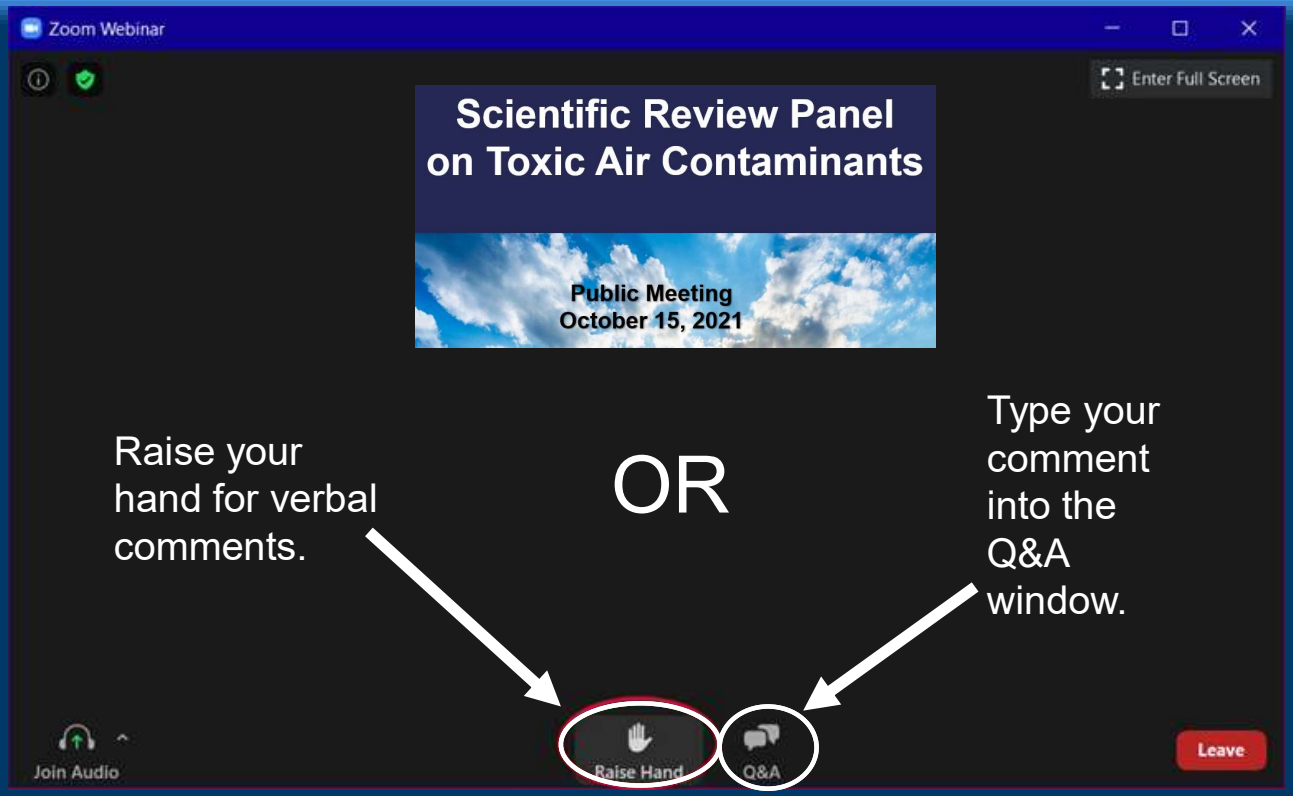
Panel Discussion

Public Comments: Two Options for Sharing Comments



Administrative Considerations

Thank You for Attending!

Public Meeting
May 12, 2022

Additional Information at https://ww2.arb.ca.gov/resources/documents/scientific-review-panel-toxic-air-contaminants