AGENDA: 4

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Update on Implementation of Regulation 11, Rule 18: Reduction of Risk from Air Toxic Emissions at Existing Facilities

Stationary Source Committee Meeting
December 16, 2019

Carol Allen
Assistant Manager
Engineering

OUTLINE

- Review of Regulation 11, Rule 18 (Rule 11-18) Requirements
- Current Implementation Process and Status
- Next Steps

RULE 11-18 REQUIREMENTS

Rule 11-18 Risk Action Levels*

Risk Action Levels	2018	2020
Cancer Risk	25 per million	10 per million
Non-Cancer:		
Chronic Hazard Index	2.5	1.0
Acute Hazard Index	2.5	1.0

*Based on Health Risk Assessment (HRA) Results

REGULATION 11, RULE 18 REQUIREMENTS

Facilities with HRA results above a Risk Action Level (RAL) must:

- Submit a Risk Reduction Plan (RRP) that demonstrates *either*:
  - Site risks will be reduced below the 2020 RALs or
  - All significant risk sources will meet Best Available Retrofit Control Technology for Toxics (TBARCT)
- Obtain Air District (AD) approval of this RRP
- Implement this RRP within five (5) years

RULE 11 – 18 IMPLEMENTATION PROCESS

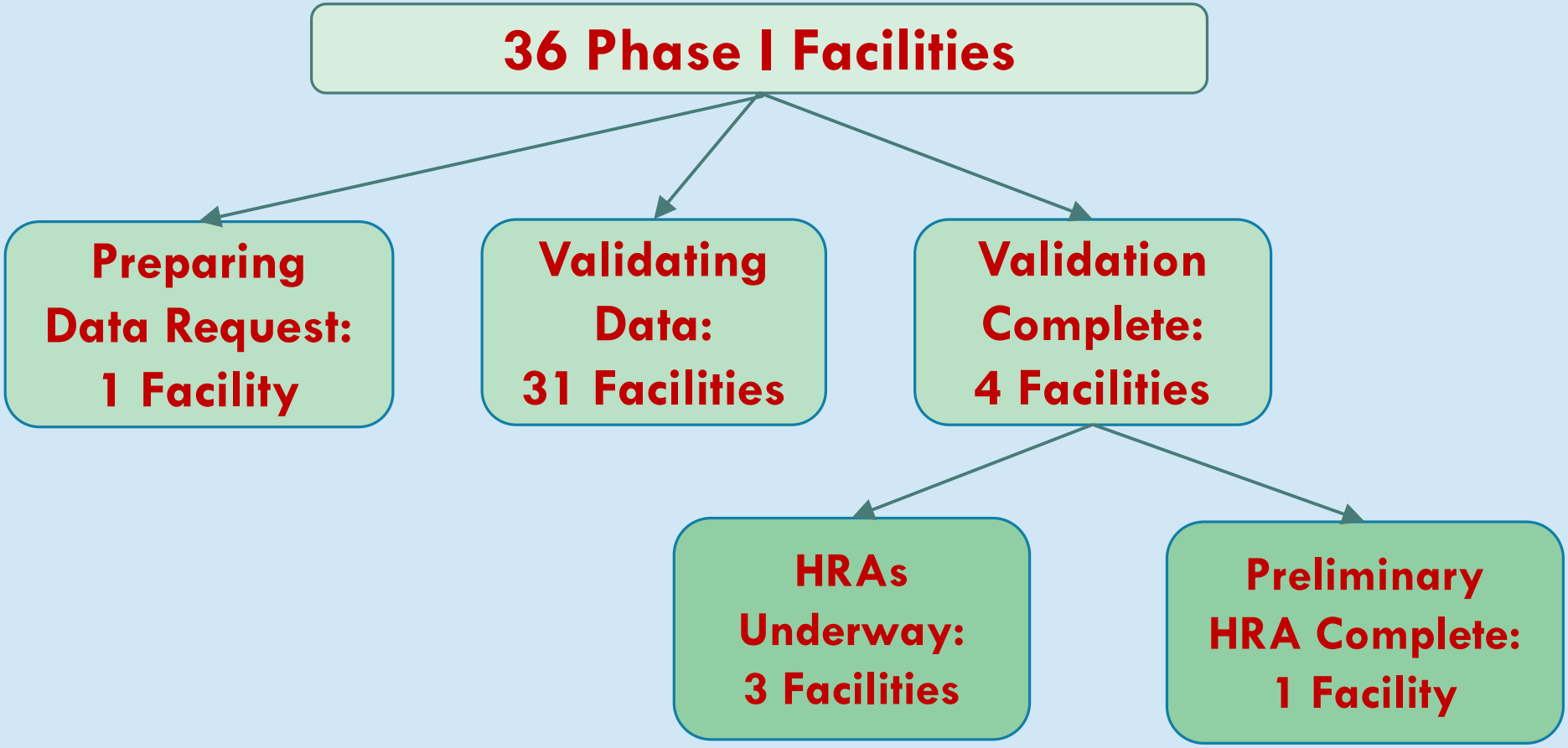
1. Screen and Classify Facilities
2. Validate Inventories and HRA Input Data
3. Conduct Health Risk Assessments
4. Approve Risk Reduction Plans
5. Implement Risk Reduction Measures

RULE 11-18 FACILITY CLASSIFICATIONS

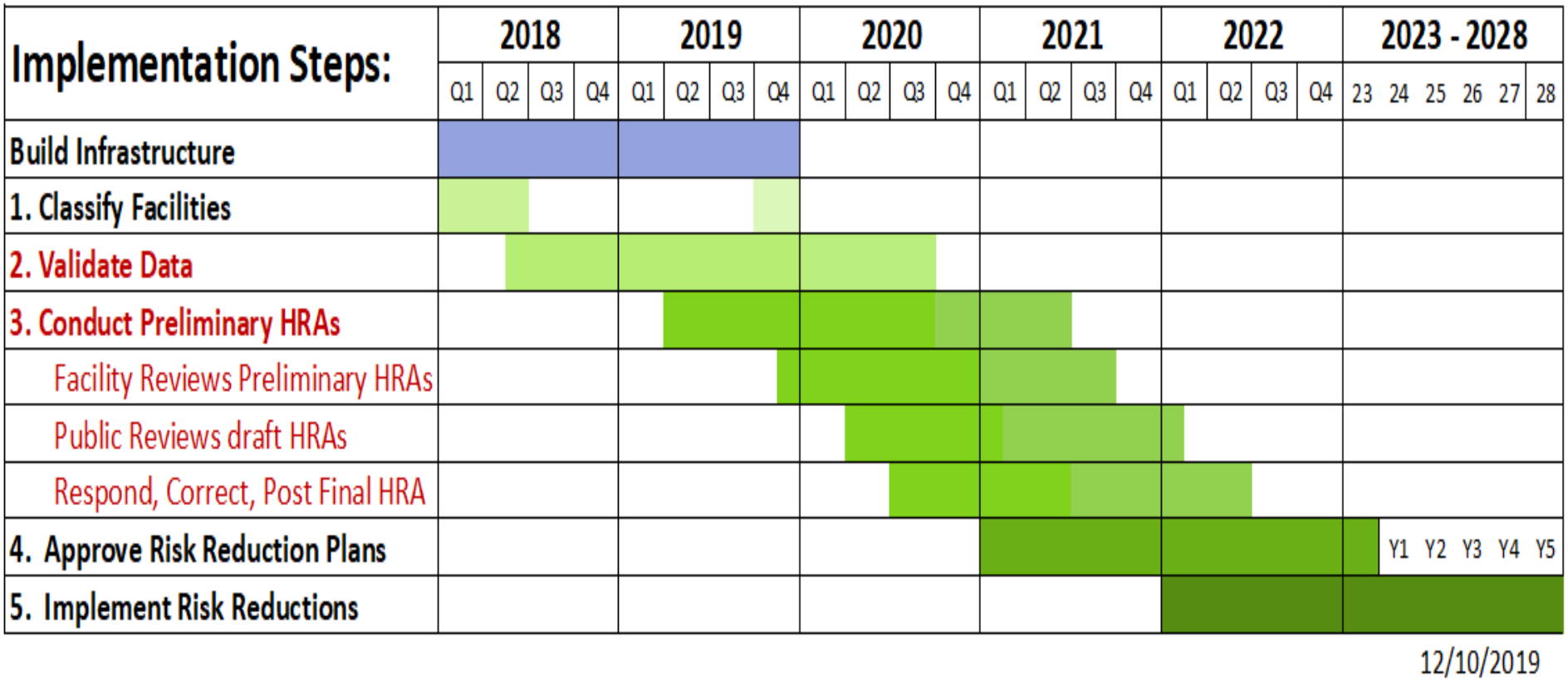
- Phase I – Highest Risk Facilities
  - Cancer Prioritization Score > 250 or
  - Non-Cancer Prioritization Score > 10
  - 36 Facilities

- Phase II – Other High Priority Facilities
  - Cancer Prioritization Score > 10 or
  - Non-Cancer Prioritization Score > 1
  - About 300 Sites

RULE 11-18 IMPLEMENTATION STATUS



RULE 11-18 SCHEDULE: PHASE I FACILITIES



RULE 11-18: NEXT STEPS

- Post Guidance Documents on Web Site
  - ✓ Emission Factors
  - ✓ 1-hour Inventories
  - ✓ Modeling Protocol
- Update Web Site
  - ✓ Design Opt-In for Rule 11-18 Related Notifications
  - ✓ Add Public Notice Posting Page for Draft HRAs
- Complete Data Validation for Phase I Facilities
- Complete and Publish HRAs for Phase I Facilities

Timeline for Data Review and Health Risk Assessment

Tasks	Months
AD Sends Data Request to Site	1
Site Adds & Corrects Data	2-4
AD Validates Data	1-2

Tasks	Months
AD Completes Preliminary HRA	2-3
Site Reviews Preliminary HRA	3
AD Responds to Comments & Prepares Draft HRA	1

Tasks	Months
AD Publishes Draft HRA	0.5
Public Comments on Draft HRA	1.5
AD Responds to Comments & Updates HRA	2

Timeline for Approval of Risk Reduction Plans

Tasks	Months
Facility Submits Initial RRP	6
AD Reviews RRP for Completeness	1
Facility Submits Complete RRP	1-3

Tasks	Months
AD Evaluates Complete RRP	1.5
Facility Responds to Deficiencies	1.5
AD Evaluates Facility Responses	1

Tasks	Months
AD Publishes Draft RRP	0.5
Public Comments on Draft RRP	1.5
AD Considers Comments & Makes Final Decision on RRP	1-2

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Odor Attribution Study in the South Bay

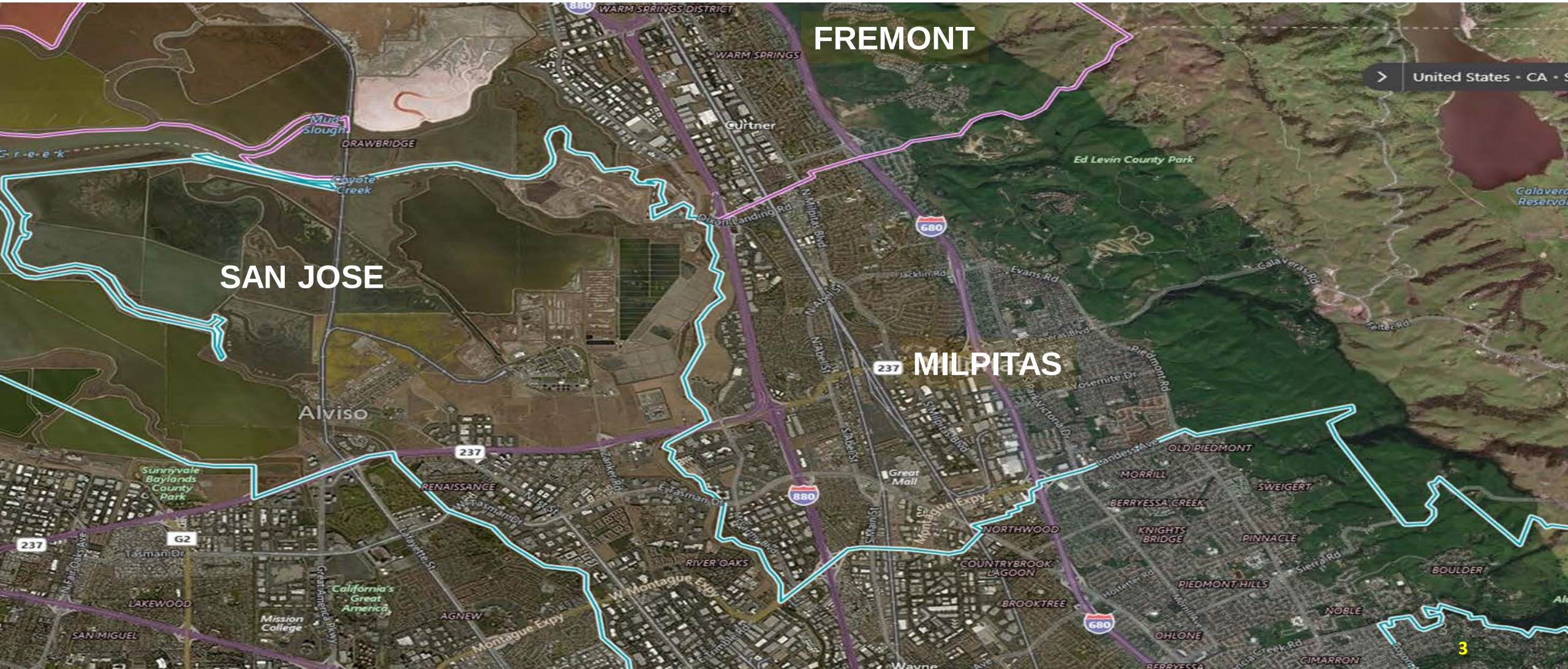
Stationary Source Committee Meeting
December 16, 2019

Jerry Bovee, Source Test Manager
Meteorology and Measurements

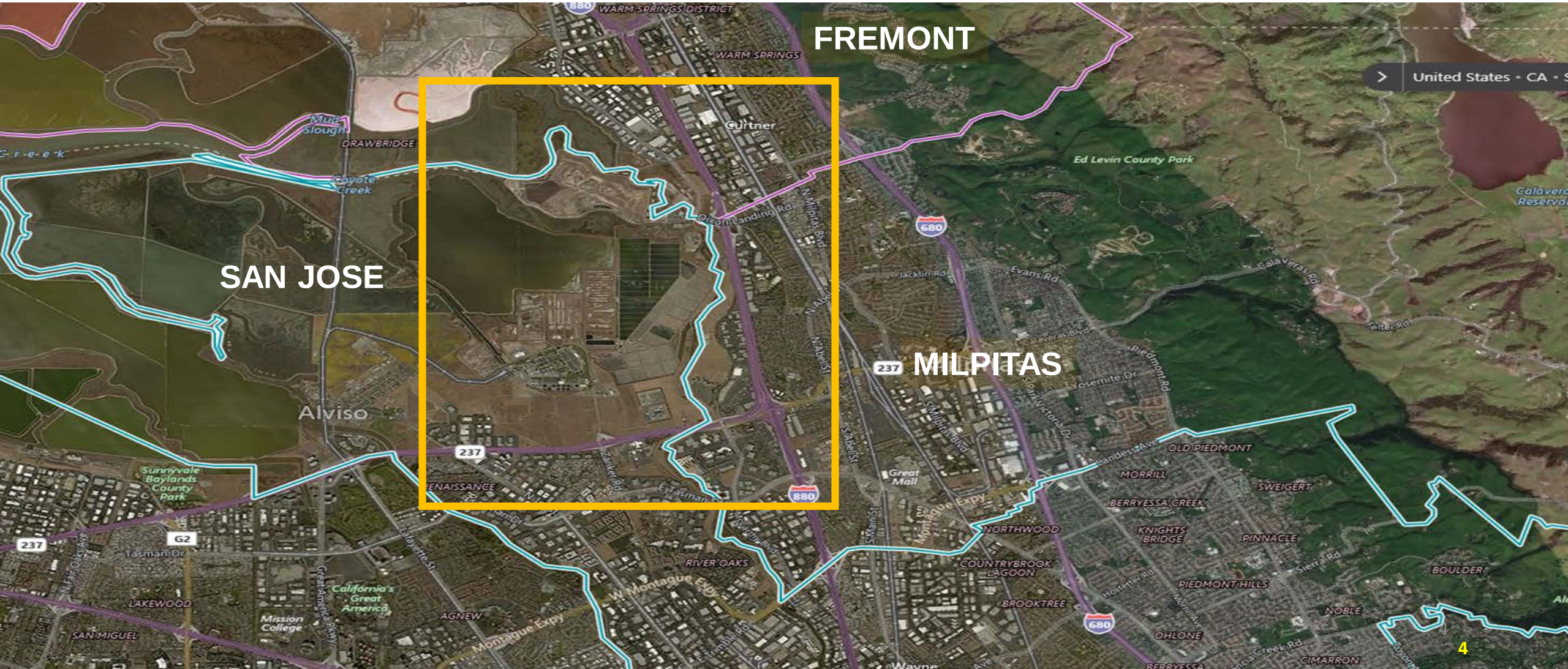
Outline

- Waste facilities near Milpitas
- South Bay Odor Stakeholder Group (SBOSG)
- Odor Attribution Study
  - ✓Goals
  - ✓Project Summaries
- Next Steps

Area Overview



Area Overview



Waste Facilities

International Disposal Corp of CA (Newby Island)

- Landfill
- Material Recovery Facility
- Composting Operation

San Jose Santa Clara Regional Wastewater Facility

- Sewage Treatment Plant
- Sludge Ponds & Drying Beds

Zero Waste Energy Development (ZWED)

- Dry Anaerobic Digestion
- In-vessel Composting

South Bay Odor Stakeholder Group

Community Members

Industry Representatives

Government

Air District
Santa Clara County
Fremont
Milpitas
San Jose
Congressman Ro Khanna
Assemblymember Kansen Chu
Senator Bob Wieckowski

- Formed in 2015
- Reviewed Air District actions to date
- Identified the need for an odor study in 2019

Challenges in Determining Sources of Odors

Facilities

- Proximity and similarity of three facilities make it difficult to trace odors to specific facilities
- Processes vary over time and space

Sensory

- Characteristics of odors can change with concentration and olfactory fatigue

Meteorology

- Wind, temperature, humidity, inversion, seasonal fluctuations

Technology

- Humans can detect smells at very low concentrations, which are difficult to measure with currently available equipment

Odor Attribution Study

Questions

- Contribution of odors from the three facilities?
- Composition of odors?
- Variability of odors?
- Concentrations of odor-causing compounds at facility boundaries and in community?

Goals

- Inform future actions to reduce odors
  - ✓ Best practices
  - ✓ Enforcement
  - ✓ Rules
- Establish methods to measure progress on facilities' future odor reduction actions
- Educate community

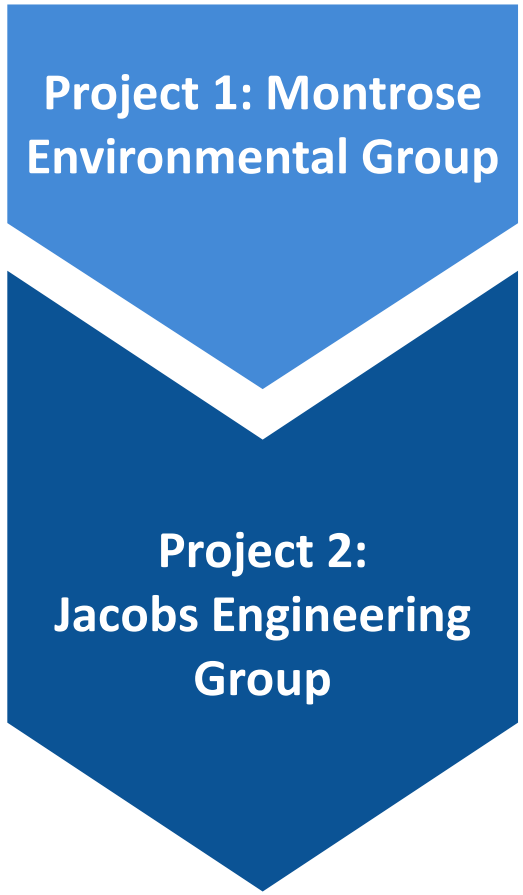
Project 1: Montrose Environmental Group

Goal:	Preliminary one-month screening study to identify compounds for further investigation
Strengths of Proposal:	• Identify wide range of individual compounds • Mobile platform allowing measurement at various locations around the facilities • Measurement in the parts per trillion (ppt) level in real time
Methods:	• Sample analysis will use a Proton Transfer Reaction – Mass Spectrometer (PTR-MS), a Fourier Transform Infrared (FTIR) Spectrometer and Gas Chromatography
Budget:	$92,000, does not require Board authorization

Project 2: Jacobs Engineering Group, Inc.

Goal:	Characterize diurnal and seasonal odors through focused field sampling and data collection over a minimum of three seasons
Strengths of Proposal:	• Extensive experience in odor characterization and mitigation • Highly qualified professional staff assigned to the project • Well defined study approach and methodology • Versed in public engagement and communication of results
Methods:	• Odor compound identification • Modeling of odorous releases based on results • Develop method to measure ongoing performance of the facilities in reducing odors • Conduct public meetings
Budget:	$500,000

Complementary Project Elements



Low concentration (ppt) baseline

Broad range compound identification

Targeted odor marker sampling

Odor intensity and quality characterization

Source attribution and identified action

Next Steps

- SBOSG provides input on draft work plans
- Finalize contracts and launch projects
- Provide periodic status updates to Board Committees and community