West Oakland Steering Committee Meeting

BAAQMD Technical Assessment Presentation

October 3, 1018

Phil Martien, Ph.D.
Acting Director, Assessment, Inventory, & Modeling Division
Candidate Actions

• BAAQMD & WOEIP will conduct **assessments**
• Successful actions will depend on broader participation
Assessment

• Assessment guides the selection of candidate actions
• Shaped by **community knowledge** and **technical work**
Assessment: Step-by-Step

1. Define local area boundaries
2. Identify pollutants
3. Identify all sources that impact area
4. Gather information about sources
5. Do the assessment
6. Evaluate results
1a: Define boundary for local sources

- Propose boundary for sources
- All sources of pollution would be identified within “source” boundary
1b: Define boundary for exposure

- Propose boundary for exposure
- All people exposed to pollution would be identified within the “receptor” boundary
2: Identify pollutants

Particulate Matter

Toxic Air Contaminants

Black Carbon

The greatest health burden from air pollution is from particulate matter.

Diesel PM is a major concern in West Oakland and including toxics will allow us to estimate cancer risk.

Measurements are available in West Oakland and we can use these to compare with modeling results.
3a: Identify local sources

Port of Oakland
Trucks, ships, harbor craft, locomotives, cargo-handling equipment, and other off-road equipment

Trains
Passenger and freight

Permitted stationary sources
Metal melters, scrap handlers, diesel engines, backup generators, boilers, and gas stations

Cars and trucks
Freeways and surface streets

Truck-related businesses
Distribution centers, parking, recyclers, scrap handlers

Ships, ferries, harbor craft
3b: Add regional contribution

Use regional model to determine how much air pollution comes into West Oakland from outside of local area.
3c: What local sources are we thinking will NOT be included

- Construction*
- Restaurants
- Future Sources
- Wood-Burning
- Fires and Accidental Releases

*Consider case studies
4: Gather information about sources

- West Oakland Truck Traffic Survey
- Air Resources Board Camera Pilot Study
- Community Knowledge about Local Activity
5: Do the Assessment

Assess local and regional sources, and contribution of each to air pollution exposure.
6: Evaluate results

Other studies can be used to compare to modeling results

West Oakland 100 x 100 BC Study

% of community sites are more polluted than central site, daytime average BC up to 1.75x higher

Ratio of Site-to-Central Daytime Average

- < 1.00
- 1.00 - 1.25
- 1.25 - 1.50
- 1.50 - 1.75

BAAQMD Central Monitoring Site

Preliminary results: Please don’t cite

Preble/Kirchstetter 2017 West Oakland 100×100 Study

$C_{\text{amb}} = 0.5 \, \mu g \, m^{-3}$

$\star = \text{concentration } C_{\text{amb}} \text{ at fixed-site monitor}$