

MATES-3 Proposed Emissions Inventory

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December 9, 2003

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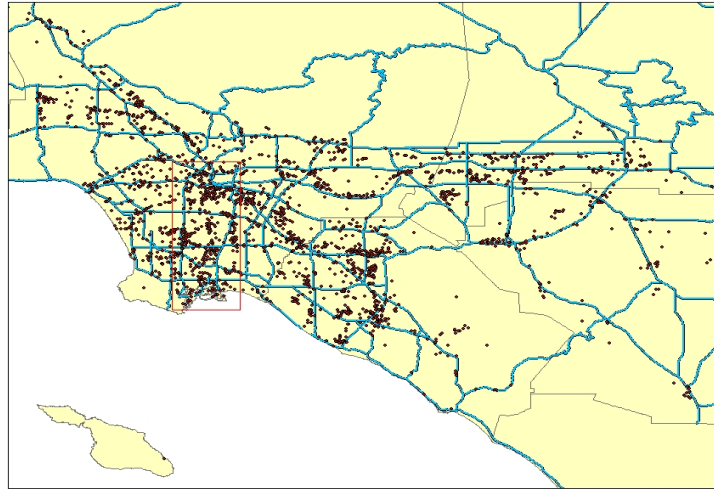
Major Source Categories

- Point
 - Sources with discrete locations
 - AER facilities - emit 4 or more tons per year of VOC, NOx, SOx, or PM
 - AB 2588 facilities
- Area
 - Sources without discrete locations
 - e.g., dry cleaners, gas stations, auto-body shops, residential heating, consumer products, etc.
- On-Road
 - e.g., roadway vehicles
- Off-Road
 - e.g., ships, trains, planes, construction equipment, etc.

Point Sources – Data & Methods

- AER facilities
 - 3000+ facilities report annually (see attached map)
 - Criteria pollutants & 24 TACs
 - Toxics emissions estimated from VOC & PM emissions using source-specific speciation profiles
 - www.arb.ca.gov/emisinv/speciate/speciate.htm

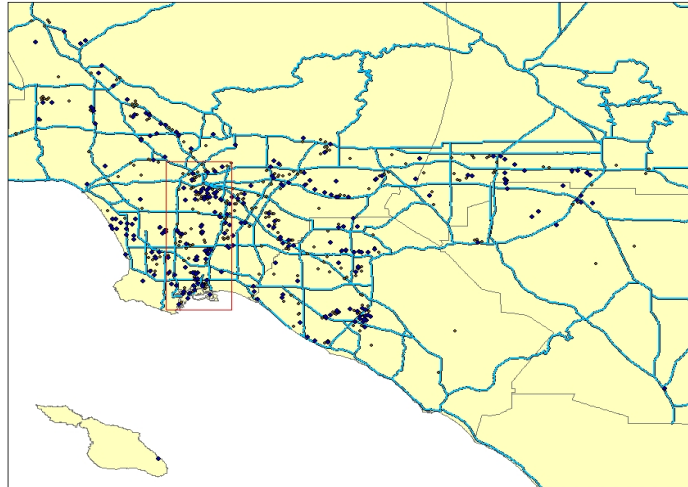
AER Facilities



Point Sources – Data & Methods (continued)

- AB2588 facilities
 - 700+ facilities report quadrennially (see attached map)
 - 170+ toxics reported
 - Toxic emissions estimated from source activity & emission factors

AB 2588 Facilities



Area Sources – Data & Methods

- For area source categories estimated by ARB, statewide emission estimates apportioned to county levels
- For area source categories estimated by SCAQMD, emissions estimated at the county level
- Emissions allocated to 2 km by 2 km grid cells using spatial surrogates
- Toxics emissions estimated from VOC & PM emissions using source-specific speciation profiles
- Emissions based of 2003 AQMP (1997 baseline)
- Emissions projected to year of interest

On-Road Sources – Data & Methods

- EMFAC2002 – ARB's on-road emission factor model
- Toxics emissions estimated from VOC & PM emissions using source-specific speciation profiles
- Emissions allocated to 2 km by 2 km grids based on link activity using DTIM
- Emissions based on 2003 AQMP

Off-Road Sources – Data & Methods

- Majority of off-road source categories estimated by ARB's OFF-ROAD model
- Aircraft and ship emissions estimated by SCAQMD
- Toxics emissions estimated from VOC & PM emissions using source-specific speciation profiles
- Emissions allocated to 2 km by 2 km grid cells using spatial surrogates
- Emissions based on 2003 AQMP

Enhancements

(Subject to Resource Availability)

- Point sources
 - Convert form-based emissions to SIC/SCC based emissions (i.e., De-aggregation process)
- Area sources
 - Develop microscale inventories at selected locations
- On-road sources
 - Develop link-based emissions and perform microscale modeling near freeways

Enhancements

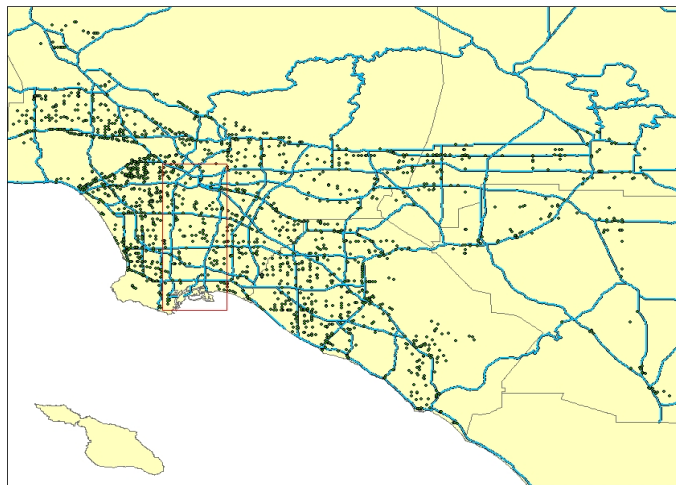
(Subject to Resource Availability)

- Off-road sources
 - Incorporate emission inventory developed for the PoLA study if available
- Assign locations and emissions to important area source categories
 - gas stations (see attached map)
 - dry cleaners (see attached map)
 - metal plating & finishing (see attached map)
 - autobody shops (see attached map)

Retail Gas Stations



Perchloroethylene Dry Cleaners



Metal Plating & Finishing Facilities



Autobody Shops

