

Development of Neighborhood Scale Emission Inventories

Local Air Toxics Assessment and
Reduction Training Workshop

November 14, 2001

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Air Resources Board

Neighborhood-Scale Emission Inventory Development

- ◆ Neighborhood-scale inventories developed to support Neighborhood Assessment Program
- ◆ Develop emission inventory methods to use for assessing cumulative risk
- ◆ Neighborhoods selected based on proximity to industrial complexes, freeways, and port facilities
- ◆ Primary focus on toxic rather than criteria pollutants

Study Areas

◆ Barrio Logan

Community in San Diego near shipyards and major freeways. Study area approximately 3 square miles.

◆ Wilmington

Community in Los Angeles near port and several oil refineries. Study area approximately 10 square miles.

Barrio Logan Community



Barrio Logan Emission Inventory Development

◆ Point sources

- Major point sources in neighborhood
- Small neighborhood businesses

◆ Off-road mobile sources

- Regional data supplemented with community-specific activity data

◆ On-road mobile sources

- EMFAC emission model and local traffic data
- Heavy-duty truck count verification in progress

Data Sources for the Barrio Logan Point Source Inventory

- ◆ CARB emission inventory database (CEIDARS)
- ◆ Health risk assessments
- ◆ Equipment permits from local districts
- ◆ Information from visiting 200 facilities
- ◆ Detailed facility surveys
 - Developed emission data survey
 - Focused on auto body/repair, welding, warehouses
 - 50 facilities inspected

Types of Facilities in the Barrio Logan Emission Inventory

| Facility Type | Number |
|-----------------------------------|------------|
| Major facilities in CARB database | 38 |
| Auto repair | 89 |
| Welding/metal fabrication | 24 |
| Warehouses | 9 |
| Furniture finishing | 6 |
| Gas stations | 4 |
| Other facilities | 35 |
| <i>total number of facilities</i> | <i>205</i> |

Off-Road Mobile Source Activity near Barrio Logan

◆ Airports

- Lindbergh Field commercial aircraft--74,000 operations per year
- North Island Naval Air Station--51,000 operations; 21,000 touch and go's per year

◆ Railways

- Used CEIDARS inventory about 3 miles of track

◆ Shipping

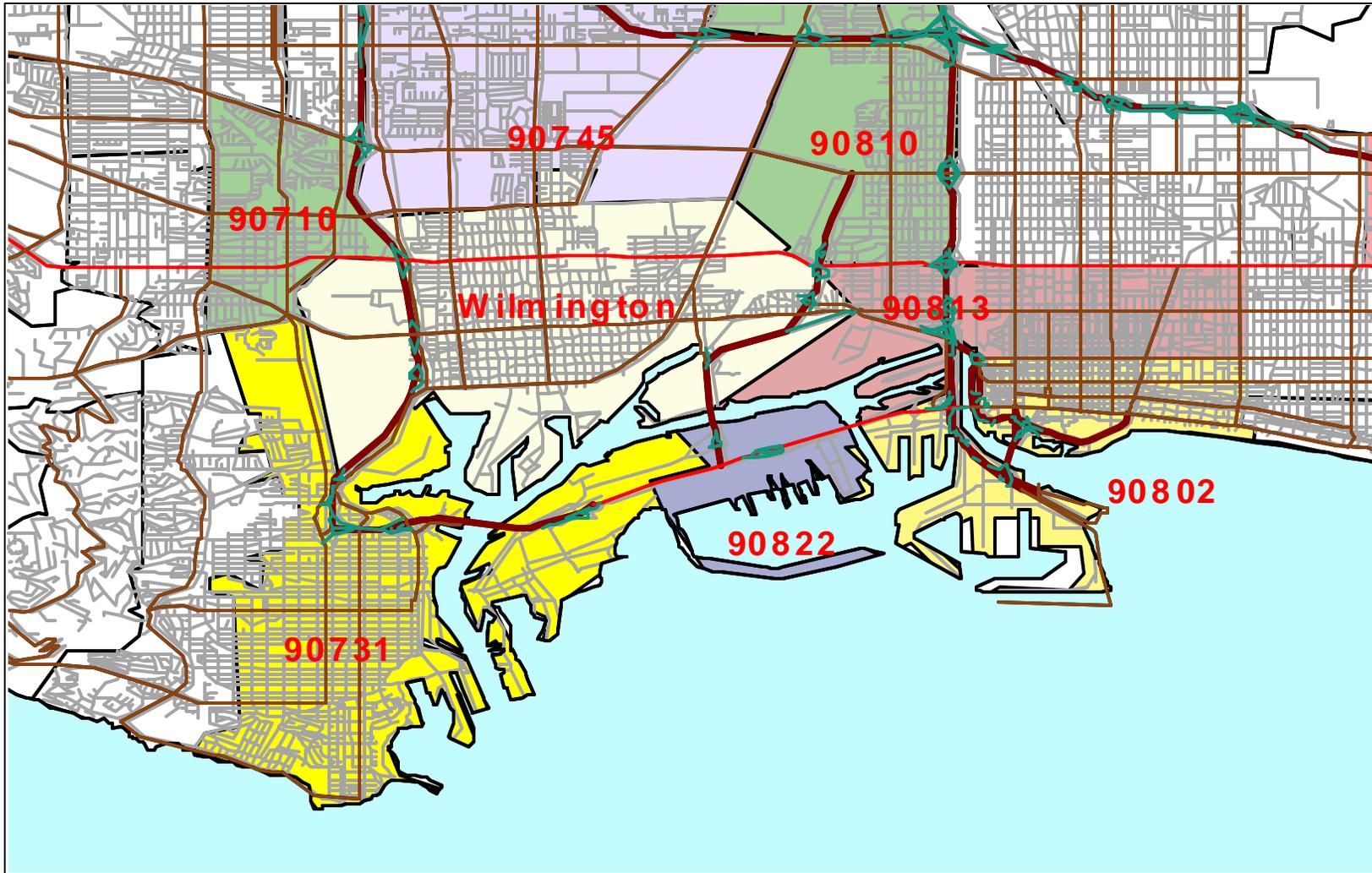
- 1 to 2 ships per day



On-Road Mobile Source Activity in Barrio Logan

- ◆ Determined on-road mobile source activity in Barrio Logan study area using regional transportation model from San Diego planning agency.
- ◆ EMFAC 2000 used to produce on-road motor vehicle emissions
- ◆ DTIM used to produce gridded motor vehicle emissions.
- ◆ Heavy-duty truck count verification in progress

Wilmington NAP Study Area



Preliminary Wilmington Facility List Development Zip Code 90744

| <u>Source of Data</u> | <u>Number of Facilities</u> |
|----------------------------------|------------------------------------|
| ARB Emission Inventory | 46 |
| SCAQMD Permit List | 600 |
| DTSC Waste Generators | 150 |
| WRCB Storm Water | 114 |
| City of LA Business List | 2000 |
| INFO USA (Commercial list) | 1400 |
| TOTAL (includes many duplicates) | 4310 |

Lessons Learned

- ◆ Multiple databases and site visits required to develop a comprehensive facilities list
- ◆ Community involvement essential
- ◆ Most emissions from large sources
- ◆ Small facilities in each community need to be assessed for cumulative & proximity effects for toxic pollutants

Lessons Learned

- ◆ Improved micro-scale methods needed for on-road mobile source emissions
- ◆ Improved activity data needed for diesel engines for on-road, off-road, and distribution centers

More Information

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