



General Aviation Airport Air Quality Monitoring Project

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Airport Project Overview

- **U.S. EPA Grant to Conduct Neighborhood-Scale Air Toxics Monitoring Studies**
- **Focus of Study is on General Aviation Airports**
- **Santa Monica and Van Nuys Airports**
 - **Van Nuys - ranked first in number of General Aviation Operations in the country**
 - **Santa Monica - runways adjacent to neighborhoods, increased small jet traffic**

Advisory Committee of Stakeholders

- **Membership**
 - Airport Management
 - Community Groups
 - Cities of Los Angeles and Santa Monica
 - Aviation Industry
 - State and Federal Congressional Offices
- **Role**
 - Provide Initial Input on Specific Issues
 - Comment on Sampling Locations
 - Coordinate Information Outreach

Objectives

- Characterize air toxics levels in the communities around GA airports
- Compare data to other air toxics studies such as MATES III
- If possible, determine impact of airport emissions on measured pollutant levels
- Provide baseline data for future studies
- Provide validation data for dispersion or health impact assessment modeling

Measurements

- TSP Lead and Hexavalent Chromium
- PM10 Mass and Carbon
- PM2.5 Mass & Components
- Continuous Particle Count (ultrafine)
- Volatile Organic Compounds (VOC)
- Carbonyls (acetaldehyde, etc.)
- Continuous Carbon Monoxide

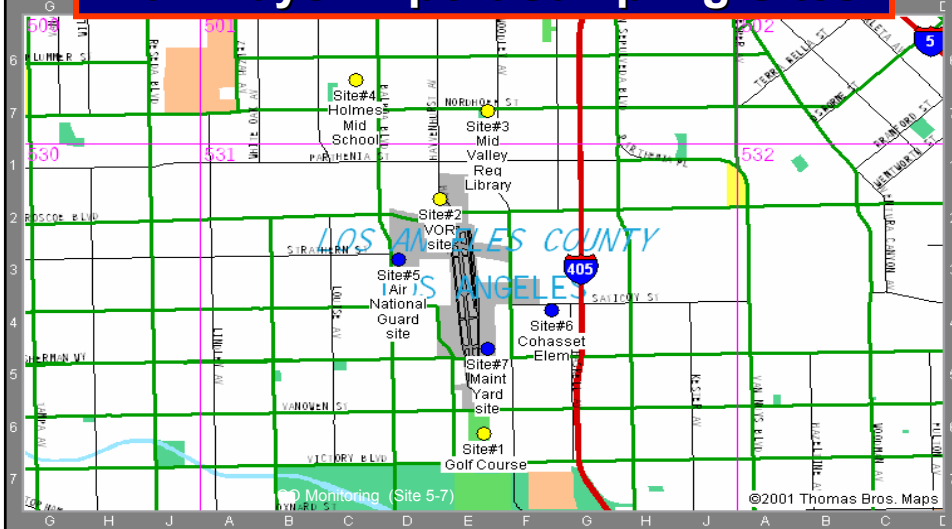


Sampling Schedule

- Approximately 12 months of sampling beginning November 2005
- Three months at each airport in two different seasons
- Van Nuys Complete
- Santa Monica to be complete end of February, 2007



Van Nuys Airport Sampling Sites



- Complete Sampling Array (Site 1, 2, 3, 4)
- Lead & CO Monitoring (Site 5, 6, 7)

Van Nuys Site #2

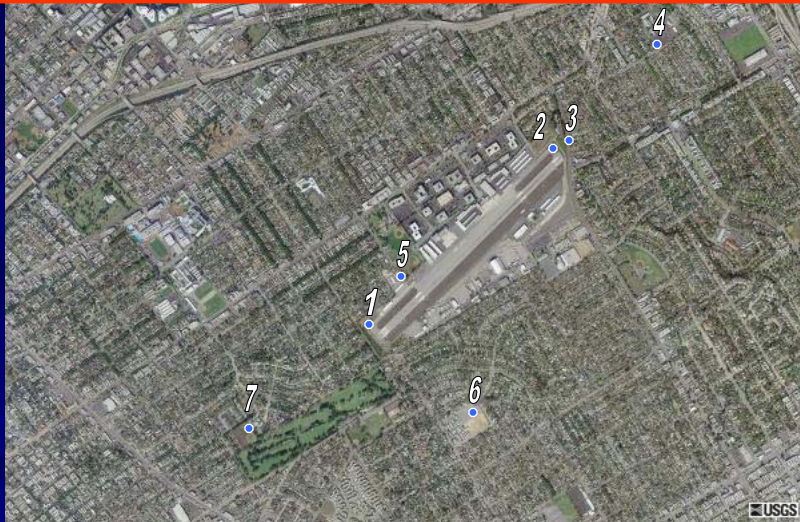


Santa Monica Airport Sampling Sites



- Complete Sampling Array (Site 1, 2, 3, 4, 7)
- Lead Monitoring & CO (Site 5, 6)

Santa Monica Airport Sampling Sites



Santa Monica Airport Sampling Sites



Santa Monica Airport Sampling Sites



Data Analysis Questions

- Does increased Lead content of GA fuel impact surrounding communities?
- Do airports impact PM levels and if so, what is the chemical speciation of PM from airports?
- Do airports impact ultrafine particle counts in the surrounding communities?
- Are there VOC and carbonyl emissions signatures from aircraft that differs from vehicles?
 - **Published emission factors suggest differences**

Future Plans

- **Complete Monitoring**
- **Complete Laboratory Analysis**
- **Compile Meteorological Data**
- **Reduce & Analyze Data**
- **Compare Data With MATES-III**
- **Draft Report to Advisory Committee and U.S. EPA**
- **Finalize Report**