

Children's Environmental Health Protection Site Summary

Boyle Heights

This page updated on October 22, 2001

Site Location:

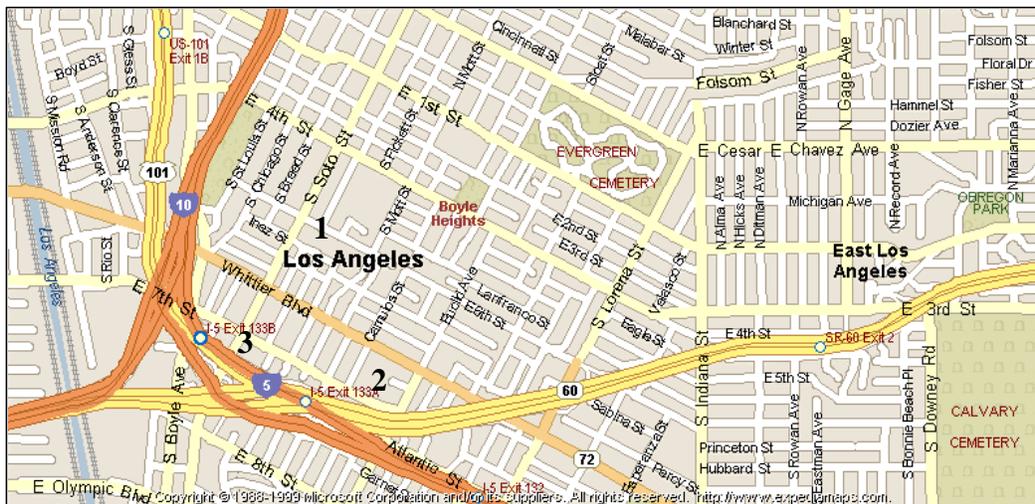
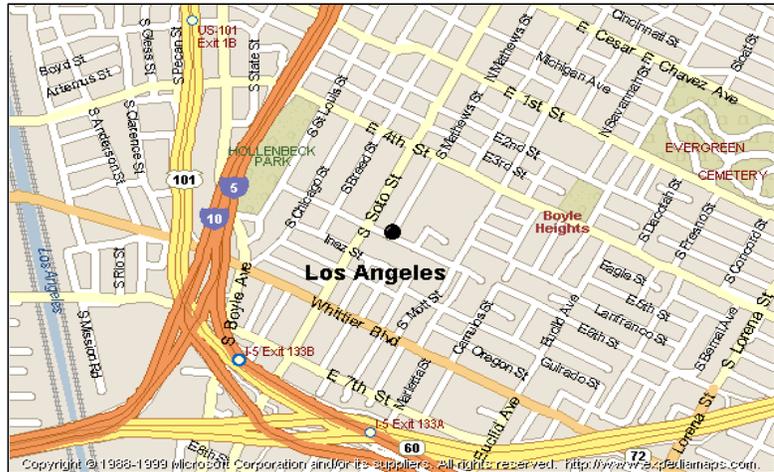
Hollenbeck Middle School, located in the Boyle Heights section of Los Angeles, is one of six sites chosen for Children's Environmental Health Protection monitoring. The site is located at 2510 East 6th Street in the residential area of Boyle Heights and is approximately one-half mile downwind of the convergence of four major Los Angeles area freeways.

Site Approval:

In the fall of 2000, administrators of Hollenbeck Middle School granted the Air Resources Board (ARB) permission to install an ambient air monitoring station on school property.

Expected Monitoring Start Date:

Collection of ambient air quality data is expected to begin on or about March 1, 2001.



1. Hollenbeck Middle School (*Primary Site*)
2. East Los Angeles Mathematics, Science and Technology Center (*Secondary Site*)
3. Soto Street Elementary School (*Secondary Site*)

Reason for Choosing Boyle Heights:

Boyle Heights was chosen because of its proximity to mobile source emissions and the because of the high number of children living in the community. There are approximately 16 schools and childcare

centers (public and private) in the area encompassed by the 60, 5, 10 and 101 freeways. The location of the monitoring station, Hollenbeck Middle School, has a student population of 2200. Theodore Roosevelt Senior High School, located directly across from Hollenbeck, is one of the largest high schools in Los Angeles County with an enrollment of over 5000.

Connection to Other Air Resources Board Programs:

In addition to providing data necessary to determine the exposure of children to criteria pollutants, non-methane hydrocarbons (NMHC), and air toxics, data collected at Hollenbeck will be used to support the ARB's Community Health Program (<http://www.arb.ca.gov/ch/ch.htm>). Data from Hollenbeck Middle School will also provide information for the ARB's ongoing efforts to mitigate the health risks from diesel particulate (<http://www.arb.ca.gov/diesel/background.htm>).

Monitoring Parameters:

Criteria pollutants, NMHC, air toxics, and meteorological parameters will be measured using standard methods. Special instruments and methods will also be used to approximate the concentration of diesel particulate. The pollutants to be measured include carbon monoxide, ozone, oxides of nitrogen, sulfur dioxide, PM10, PM2.5 (real-time), NMHC, and toxic gases and metals, including 1,3-butadiene, benzene, formaldehyde, and hexavalent chromium. Diesel particulate will be indexed to elemental carbon and black carbon measurements. Meteorological parameters will include wind speed, wind direction, ambient temperature, and relative humidity.

Monitoring Schedule:

Monitoring for gaseous criteria pollutants (carbon monoxide, ozone, oxides of nitrogen, and sulfur dioxide) and NMHC will be continuous for the duration of the project. PM2.5 and black carbon measurements will be made continuously in real-time or near real-time. PM10 samples will be collected every sixth day for mass analysis and for elemental carbon analysis. Samples collected for analysis of aldehydes, total metals, and hexavalent chromium will also be collected every sixth day as will samples analyzed for toxic compounds including 1,3-butadiene, benzene, and toluene. Meteorological information at the site will be collected continuously.

Anticipated End Date:

The ARB anticipates that ambient air monitoring will end at Hollenbeck Middle School on or about March 1, 2002.

Monitoring at Multiple Sites in Boyle Heights:

Additional monitoring will be conducted at two other locations within the Boyle Heights community to better assess the gradient impact of vehicular emissions on children in the area. The locations of these secondary, or "satellite," sites will be at or very near other schools in the area. The satellite site locations are the East Los Angeles Mathematics, Science, and Technology Center located at 961 Euclid Avenue and the Soto Street Elementary School located at 1020 South Soto Street. The primary focus of monitoring at both satellite sites will be to approximate the concentration of diesel particulate.

Agencies/Resources/Roles:

The ARB is the lead agency for carrying out Children's Environmental Health Protection monitoring and has overall responsibility for the project. The South Coast Air Quality Management District (SCAQMD) provided equipment resources and assistance in selecting the Hollenbeck station. Laboratory analysis of samples collected at Hollenbeck Middle School will be performed by the ARB. ARB staff will conduct quality control and quality assurance activities.

Within the ARB, the Monitoring and Laboratory Division, Air Quality Surveillance Branch (Air Monitoring South Section and Special Purpose Monitoring Section) will have operational oversight for the station and will collect samples and perform instrument quality control checks on an ongoing basis. The Quality Management Branch (Operations, Planning and Assessment Section) will have the lead role in coordinating and tracking the project, validating the data, and preparing the initial project report. The Organic and Inorganic Laboratory Sections will perform the analytical work.

The Planning and Technical Support Division is coordinating the Community Health Program and will use the data generated at the Hollenbeck Middle School monitoring station to support other Community Health studies currently under development. Public outreach for the Community Health Program is being coordinated by the Planning and Technical Support Division.

Emission Sources:

In addition to mobile source emissions, point sources in and around Boyle Heights were determined through emissions inventory data and physical survey of the area. Major sources identified include printing and refinishing facilities, trucking operations, large-scale boilers, and textile facilities. Other sources of air pollution in Boyle Heights include neighborhood scale sources such as dry cleaners and service stations.

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