



LOS ANGELES UNIFIED SCHOOL DISTRICT REFERENCE GUIDE

TITLE: Environmental Hazards in Proximity to Schools

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ISSUER: John Sterritt, Director
Office of Environmental Health and Safety

Enrique G. Boull't, Chief Operating Officer
Office of the Chief Operating Officer

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ROUTING
All Schools
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Centers

PURPOSE: The purpose of this Reference Guide is to define the responsibilities of school Site Administrators and the Office of Environmental Health and Safety (OEHS) regarding the identification of potential environmental hazards in proximity to schools as required under *Volume 2 – Emergency Procedures* for Safe School Plans (SSPs) and provide guidance to assist Site Administrators in procuring this information.

MAJOR CHANGES: This is a new Reference Guide.

INSTRUCTIONS: California Education Code, Section 32281 requires schools to write and develop comprehensive SSPs that include emergency preparedness procedures and associated response actions. Outlined below is a listing of responsibilities to ensure completion of the SSP hazard assessment requirements.

A. Roles and Responsibilities

Site Administrators

- Complete and annually update your SSP (see Reference Guide 5511.0).
- Consult with OEHS to obtain information regarding hazards in your community to complete *Volume 2 – Emergency Procedures, Section 1.3.3 Hazards In The Community – Vulnerability Assessment*.
- Conduct a physical survey of the community in proximity of your school to supplement information provided by OEHS.
- Notify OEHS of new or previously unidentified environmental hazards.



LOS ANGELES UNIFIED SCHOOL DISTRICT REFERENCE GUIDE

OEHS

- Provide guidance to schools on the identification of environmental hazards.
- Conduct periodic inspection of schools (Safe School Inspection Program) to verify that SSPs are completed and document that off-site risks are identified.
- Conduct a biennial evaluation of schools to identify high-risk facilities that may or are likely to contain toxic chemicals or radioactive materials and publish findings on the OEHS website.
- Provide periodic updates to the OEHS website when new information is received from schools and/or third parties regarding new or previously unidentified high risk facilities.

B. Types of Environmental Hazards

Volume 2, Section 1.3.3 of the SSP provides a list of potential hazards that may impact school operations in the event of an emergency. The following provides additional information and guidance for procuring information for each identified hazard category.

1. Facilities containing toxic chemicals or radioactive materials

OEHS has completed a District-wide survey to identify potential “high risk” facilities located within a 500 foot radius of each school. “High Risk” facilities are defined as an industrial facility whose normal operation presents a risk of explosion, or may potentially expose school occupants to hazardous air emissions.

The results of the survey are available on the OEHS Website at <http://www.lausd-oehs.org/industrial.asp>. Site Administrators can download a list and associated map that indicates the name and location of facilities located within 500 feet of their campus.

2. High voltage power lines and transformers

Downed power lines and electrical conveyance equipment such as transformers carry an electrical current strong enough to cause serious injury or even death. In the event of windstorms or a natural disaster, such as an earthquake, power lines and associated equipment may fall in close proximity of a school and/or adjacent to the school, which may impede the path of egress should an evacuation be required.



LOS ANGELES UNIFIED SCHOOL DISTRICT REFERENCE GUIDE

The electricity in a power line will always follow a path to ground which may include a tree, vehicle or fence that comes in contact with the power source. These objects then become energized. Once electricity reaches the ground, the ground itself becomes energized. The electricity then flows through the ground over a defined area. The voltage in the ground is generally high at the point of electrical contact. It is important that you never touch a downed or dangling wire or anyone or anything in contact with it. Always assume a downed line is still energized.

Site Administrators should establish evacuation routes based upon the location of any identified electrical conveyance equipment.

An illustrated guide identifying electric power system components may be accessed via the U.S. Department of Labor website at http://www.osha.gov/SLTC/etools/electric_power/illustrated_glossary/.

3. Transportation routes of vehicles carrying hazardous materials (truck routes or railroad right-of way)

Typically, transportation accidents involving hazardous materials are a small proportion of overall traffic accidents. However, the potential consequences of a hazardous material release can be severe. A hazardous material is any material that, in a particular amount and form, may pose an unreasonable risk to health, safety and/or property. Hazardous materials include gasoline, explosives, radioactive materials, compressed gas and many other substances.

It is advisable that Site Administrators identify transportation routes such as major highways and rail line right-of-ways to assist in developing emergency plans (e.g., shelter-in-place and/or emergency evacuation routes) associated with these potential sources.

A graphical interface displaying the location of major highways and rail lines may be accessed via the Federal Railroad Administration website at <http://fragis2.frasafety.net/GISFRASafety/default.aspx>.

4. Underground gas and oil pipelines

Buried pipelines are commonly used for the conveyance of natural gas and petroleum products. A sudden rupture of a high-pressure pipeline can result in the release of material within the line creating a potential fire and explosion hazard.



LOS ANGELES UNIFIED SCHOOL DISTRICT REFERENCE GUIDE

The U.S. Department of Transportation requires the use of signs to indicate the location of underground pipelines. Markers indicate the general location of the pipeline and are located at road, railroad and navigable waterway crossings. Markers are also posted along the pipeline right-of-way.

A graphical representation of common signage may be viewed at <http://www.pipeline101.com/pipelinesyou/id.html>. An interactive map is also available from the Southern California Gas Company website at <http://www.socalgas.com/safety/pipeline-maps/LA.shtml> to assist in locating high pressure gas lines within their service area.

Site Administrators should access the above referenced website and conduct a survey around their school and proposed routes where students and staff may travel in the event of an off-site evacuation to identify the presence of buried pipelines. Evacuation routes should be revised based upon the location of any identified conveyance lines.

5. Reservoirs, water towers and tanks

Reservoirs and above ground water tanks or towers provide storage for drinking, irrigation, fire suppression and related applications. A sudden release of water from a reservoir or rupture from an above ground water tank or tower can result in the release of a large volume of water at the point of failure. As a result, subsequent flooding of the immediate area and along the path of drainage to lower ground levels may occur.

Knowledge of these sources and their location in the vicinity of a school can provide information regarding the potential for a flood event to occur. Based upon this information, emergency response/evacuation plans can be developed to incorporate the relocation of students and staff to higher ground. Site Administrators can obtain information regarding the location of sources within their community by contacting OEHS at (213) 241-3199.

6. Unreinforced masonry buildings

Unreinforced masonry buildings are typically the most seismically vulnerable type of building construction. When unreinforced masonry buildings are compromised during an earthquake, heavy debris can fall on adjacent buildings or onto the exterior where pedestrians are located. When masonry debris falls, serious injury and even death can result. A single brick weighs from 6 to 12 pounds and just one square foot of a



LOS ANGELES UNIFIED SCHOOL DISTRICT REFERENCE GUIDE

typical wall weighs 120 pounds or more. Parapets, which are the short walls that often extend around the perimeter of a roof, are particularly vulnerable, as are chimneys and cornices (the decorative ledges that run around the top of the building).

The Los Angeles Unified School District has surveyed and seismically retrofit all masonry buildings throughout its school campuses. Site Administrators should establish off-site evacuation routes based upon the location of any identified unreinforced masonry buildings.

Guidance provided by the Federal Emergency Management Agency (FEMA) may be accessed via their website at <http://www.fema.gov/library/viewRecord.do?id=4067> to assist in the identification of masonry structures.

C. Program Updates and Reporting

Periodically, OEHS receives notice from the South Coast Air Quality Management District (SCAQMD) regarding businesses that apply for permits to construct/operate new equipment within 1000 feet of existing schools. Specifically, SCAQMD Rule 212 requires public notification for any new or modified permit unit that has the potential to emit air contaminants. OEHS receives this information from the SCAQMD for review and approval prior to distribution to schools. When notice is received, OEHS will review and enter the business into the industrial facilities database should the business be located within 500 feet of an existing school.

In addition, OEHS receives notice from local land use and planning agencies of special permits (e.g., conditional uses) and variances for businesses within a given community. Such actions are generally discretionary in nature and subject to the provisions of the California Environmental Quality Act (CEQA). Referred to as the Districts' 3rd Party Review program, OEHS Site Assessment staff evaluates proposed projects to determine their potential impacts to nearby schools. Potential impacts include construction-related traffic, pedestrian safety, noise and air quality. Should the project be approved, constructed and qualify as a high risk facility, information related to this facility will be incorporated into the high risk facility database.

When school administration or staff become aware of other commercial/industrial facilities or community hazards within proximity of their school that were not previously identified, OEHS should be notified



LOS ANGELES UNIFIED SCHOOL DISTRICT REFERENCE GUIDE

at (213) 241-3199 or via the OEHS Website at <http://www.lausd-oehs.org/questions.asp>. Schools that experience incidents involving odorous or potentially toxic emissions should promptly report them to OEHS at (213) 241-3199 and the SCAQMD at (800) 288-7664.

RELATED RESOURCES:

Office of Environmental Health and Safety, Safe School Inspection Guidebook
http://www.lausd-oehs.org/docs/SafetyInspections/SSIP_Guidebook_RevApr2011.pdf

Office of Environmental Health and Safety, Industrial Facilities in Proximity to Schools
<http://www.lausd-oehs.org/docs/SafetyAlerts/XX-XX.pdf>

Office of Environmental Health and Safety, Procedures – Responding to Toxic Air Emissions
<http://www.lausd-oehs.org/docs/SafetyAlerts/03-02.pdf>

Board Resolution on Siting of New Schools Near Industrial Facilities, February 22, 2005
http://lausd-oehs.org/docs/Resolutions/Air%20Pollution%20Resolution_2008.pdf

Board Resolution on High Risk Land Use, January 14, 2003
<http://lausd-oehs.org/docs/Resolutions/HighRiskLandUse.pdf>

Office of General Council, Administrator Certification Form.
http://www.lausd.net/lausd/offices/Office_of_ADMINISTRATOR_CERTIFICATION_2011-2012_MEM-4207.5_%207-1-11.pdf

Office of School Operations, Safe School Plan
http://notebook.lausd.net/portal/page?_pageid=33,1095525&_dad=ptl&_schema=PTL_EP

South Coast Air Quality Management District
<http://www.aqmd.gov/>