

Railroads, Pipelines, and Schools

Districts seeking state funds must satisfy the requirements of the Education Code and Title 5 of the California Code of Regulations. Because of growing concerns over student health and safety, greater attention has been focused on the potential hazards associated with railroads and major pipelines near schools. A starting point for any district facing these issues should be the agencies that regulate these facilities. This **CENTERVIEWS** identifies these agencies and their roles and responsibilities.



RAILROADS

Any proposed school site within 1,500 feet of a railroad track easement requires a safety study “by a competent professional trained in assessing cargo manifests, frequency, speed, and schedule of railroad traffic, grade, curves, type and condition of track” (CCR, §14010(d)). Agencies that regulate railroad safety are the Federal Rail Administration (FRA) and the California Public Utilities Commission (CPUC).

FEDERAL RAILROAD ADMINISTRATION

The primary mission of the FRA is to ensure railroad safety. It originates and enforces railroad safety regulations based on provisions of the Federal Railroad Safety Act of 1970 and earlier, related statutes. FRA helps the railroad industry to train its workforce on railroad safety laws and educate the public about rail hazards. FRA also conducts research, investigates major train accidents, and promotes cooperative efforts within the railroad industry to advance railroad safety. (See www.fra.dot.gov.)

RAIL SAFETY AND CARRIERS DIVISION

The Rail Safety and Carriers Division of the CPUC has authority over common carrier railroads and rail/highway crossings. It secures the compliance of railroads and rail transit systems with state and federally mandated safety rules, and ensures that passenger carriers operate safely, legally, and in the public interest. The responsibility is divided between three branches of the Division: Railroad Safety, Highway/Rail Safety Crossings, and Rail Transit Safety.

The **Railroad Safety Branch** oversees heavy freight/passenger railroads. Staff inspectors coordinate with the FRA to ensure that railroads in California comply with federal safety regulations. In addition, this branch investigates railroad accidents and answers safety-related inquiries from community officials, railroad labor organizations, and the general public. When necessary, it recommends measures to mitigate hazards and improve the safety of railroad operations.

RAILROADS, PIPELINES, AND SCHOOLS

The **Highway/Rail Safety Crossings Branch** investigates and evaluates requests to construct or modify rail crossings. Staff performs safety reviews on all proposals for crossings, investigates deficiencies of warning devices or other safety features at existing at-grade crossings, recommends engineering improvements at existing crossings to prevent accidents, reviews applications for new grade-separated crossings, and investigates incidents and accidents that occur at rail crossings. A database is maintained for all crossings in California and can be accessed through the CPUC Web site.



The **Rail Transit Safety Branch** oversees light rail, rapid rail, and cable car transit, which do not share tracks with other trains and are powered by an outside source, such as electricity (third rail, overhead wires, cable). Staff reviews the design of new light rail systems and system extensions; works with transit agencies to mitigate safety hazards; inspects construction for conformance to applicable standards; and oversees the safety of operations, including accident investigations and resolution of safety complaints. Two major transit systems regulated by the CPUC are the San Francisco Bay Area Rapid Transit and the Los Angeles County Metropolitan Transportation Authority, which operates the Metro system. (See the CPUC Web site at www.cpuc.ca.gov.)

PIPELINES

Section 14010(h) of the California Code of Regulations requires a risk analysis study for any proposed school site “near an above-ground water or fuel storage tank or within 1,500 feet of the easement of an above ground or underground pipeline that can pose a safety hazard.” And Education Code Section 17213 prohibits the acquisition of a school site if it “contains one or more pipelines, situated under-ground or aboveground, which carries hazardous substances, acutely hazardous materials, or hazardous wastes, unless the pipeline is a natural gas line which is used only to supply natural gas to that school or neighborhood.”

Pipelines are regulated by three agencies: (1) the State Fire Marshal’s Office (SFM); (2) the CPUC; and (3) US Department of Transportation, Office of Pipeline Safety (OPS). The SFM has jurisdiction over hazardous liquid pipelines in California, the CPUC has jurisdiction over natural gas pipelines in California, and the Office of Pipeline Safety provides federal regulation for both hazardous liquid and natural gas pipelines. The sections below explain what agencies should be contacted to determine the status of pipelines within 1,500 feet of a proposed school site. Local public works departments should also be contacted to identify high-volume water lines (diameters equal or greater than 12 inches) or open aqueducts that are near school sites.



OFFICE OF PIPELINE SAFETY

The Pipeline and Hazardous Material Safety Administration acts through OPS and administers the national program to assure the safe transportation of natural gas, petroleum, and other hazardous materials by pipeline. The OPS also develops regulations and other approaches to risk management to assure safety in design, construction, testing, operation, maintenance, and emergency response of pipeline facilities.

Pipeline accident and incident statistics are compiled by OPS for natural gas distribution and transmission pipelines, as well as hazardous liquid pipelines, and are available on their Web site. In addition, OPS maintains a National Pipeline Mapping System, which provides the location and owner information for all regulated pipelines in the U.S. and is available for viewing via a GIS system (see <http://www.npms.phmsa.dot.gov>). However, some pipelines within a 1,500-foot radius of a school site are missing from this GIS system. The OPS Web site is www.phmsa.dot.gov/pipeline.

HAZARDOUS LIQUID PIPELINES IN CALIFORNIA

The Pipeline Safety Division of the SFM oversees and regulates about 5,500 miles of hazardous-liquid pipelines in California. Pipeline Safety staff inspects regulated pipelines, enforces federal and state pipeline safety laws and regulations, and investigates the causes of accidental releases. All ruptures, spills, fires, or releases from hazardous liquid pipelines must be reported to the SFM, which maintains GIS-based maps of all regulated pipelines. To find the locations of hazardous liquid pipelines, submit a Pipeline Location Request to the SFM. Additional information about operating pressures and exact locations must be obtained from the pipeline owner/operator. (See the SFM Web site at osfm.fire.ca.gov.)

NATURAL GAS PIPELINES IN CALIFORNIA

Over 85 percent of the natural gas used in California is delivered by pipelines from production areas in the western United States and Canada; the rest comes from in state. Once the gas arrives in California, it is distributed by the state's three major gas utilities—San Diego Gas & Electric, Southern California Gas Company, and Pacific Gas and Electric—which provide 98 percent of the state's natural gas. Long Beach and Palo Alto are the only cities in California that own and operate utility services for natural gas customers.

To determine if there are natural gas pipelines within 1,500 feet of a school site, contact the gas utility for that service area. It also is important to determine whether the line is a transmission or distribution line, because they have different failure rates. Transmission lines operate at greater than 20 percent of the specified minimum yield strength (SMYS) and typically are 24 inches or more in diameter. Distribution lines operate at less than 20 percent of the SMYS and normally are 16 inches in diameter or less. However, there are exceptions to this rule, so the gas utility should determine the appropriate pipeline classification.



In addition, there are several companies that operate interstate pipelines and deliver natural gas to California utilities: Questar (Southern Trails Pipeline), El Paso Natural Gas Company, Kern River Transportation Company, etc. The California Energy Commission Web site provides a map of major natural gas pipelines in California, as well as utility contacts and pipeline statistics (see <http://energyalmanac.ca.gov/naturalgas/index.html>).

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The Planning Center|DC&E has completed environmental documentation for more than 350 new and expanded schools. We are available to assist school districts with the special requirements related to railroads and pipelines.

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