

3.7 Hazards and Hazardous Materials

Potential hazards addressed in this section include uses of hazardous materials during the construction and operation of the proposed program, hazardous materials in soil and groundwater from existing contaminated sites, and hazards related to schools, airports, emergency preparedness, and wildfires. Mitigation measures to reduce impacts to a less-than-significant level are identified, as needed.

3.7.1 Environmental Setting

Hazardous Materials and Hazardous Waste

A hazardous material is defined as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment (Health and Safety Code §25501(o)). The term “hazardous materials” refers to both hazardous substances and hazardous wastes. Under federal and state laws, any material, including wastes, may be considered hazardous if it is specifically listed by statute as such or if it is toxic (causes adverse human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gases).

Hazardous wastes are hazardous substances that no longer have practical use, such as materials that have been spent, discarded, discharged, spilled, contaminated, or are being stored until they can be disposed of properly (22 California Code of Regulations [CCR] Section 66261.10). Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific 22 CCR criteria. While hazardous substances are regulated by multiple agencies, as described in the Regulatory Framework below, cleanup requirements of hazardous wastes are determined on a case-by-case basis according to the agency with lead jurisdiction over the project.

Preschools, schools, daycare centers, nursing homes, and hospitals are considered sensitive receptors for hazardous material issues because children and the elderly are more susceptible than adults to the effects of many hazardous materials. There are numerous sensitive receptors located throughout the proposed EWMPs or “program” service area.

Urban Runoff

Within the EWMP area, much of the environment has been developed, resulting in large areas of impervious surfaces that include rooftops, highways and roads, and other hardscapes. Stormwater and urban runoff from these impervious surfaces tends to pick up trash, sediment, and other pollutants including (US EPA, 2003):

- Sediment
- Fuels, oil, grease, and chemicals from motor vehicles and mechanized equipment
- Fertilizers, pesticides and herbicides from landscaping and gardens

- Viruses, bacteria, and nutrients from pet waste and failing septic systems
- Road salts
- Heavy metals from roof shingles, motor vehicles, and other sources

Impacted stormwater and urban runoff that is then directed to a structural Best Management Practices (BMPs) to retain and filter or infiltrate the runoff may accumulate concentrations of chemicals in the upper soils and/or filter media such as petroleum hydrocarbons (fuels, oils, and greases), metals (copper, lead and zinc), polycyclic aromatic hydrocarbons (created as combustion byproducts of gasoline and other fossil fuels), bacteria, nutrients (nitrogen, phosphorus, nitrate, and organic nitrogen), and pesticides.

Hazardous Material Sites

Hazardous materials are currently stored and used at numerous facilities and locations within the EWMP area for a variety of purposes. Some facilities within the area that use or store hazardous materials or hazardous wastes may have experienced unauthorized releases into soil or groundwater, and these releases may or may not have been reported to the appropriate agency or agencies.

In California, regulatory databases listing hazardous materials sites provided by numerous federal, state, and local agencies are consolidated in the “Cortese List” pursuant to Government Code Section 65962.5. The Cortese List is located on the website of the California Environmental Protection Agency (Cal EPA; <http://www.calepa.ca.gov/sitecleanup/corteselist/>) and is a compilation of the following lists:

- List of Hazardous Waste and Substances sites from Department of Toxic Substances Control (DTSC) EnviroStor database
- List of Leaking Underground Storage Tank Sites by County and Fiscal Year from the State Water Resources Control Board (SWRCB) GeoTracker database
- List of solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit
- List of “active” Cease and Desist Orders and Cleanup and Abatement Orders from the SWRCB¹
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC and listed on their EnviroStor database

The five databases cited above identify sites with suspected and confirmed releases of hazardous materials to the subsurface soil and/or groundwater. The SWRCB GeoTracker database includes

¹ This list contains many Cease and Desist Orders and Cleanup and Abatement Orders that do NOT concern the discharge of wastes that are hazardous materials. Many of the listed orders concern, for example, discharges of domestic sewage, food processing wastes, or sediment that do not contain hazardous materials, but the Water Boards’ database does not distinguish between these types of orders. See more at: <http://www.calepa.ca.gov/sitecleanup/corteselist/default.htm#sthash.oSjMvSw7.dpuf>

leaking underground storage tanks (LUSTs), permitted underground storage tanks (USTs), and Spills, Leaks, Investigations, and Cleanup Database (SLIC) sites. The DTSC EnviroStor database includes federal and state response sites; voluntary, school, and military cleanups and corrective actions; and permitted sites. The reporting and statuses of these sites change as identification, monitoring, and cleanup of hazardous materials sites progress. Typically, a listed site is considered to no longer be of concern once it has been demonstrated that existing site uses combined with the levels of identified contamination present no significant risk to human health or the environment.

The Los Angeles County Fire Department (LACFD) is the designated Los Angeles County Certified Unified Program Agency (LAC CUPA), described further in the Regulatory Framework. The LAC CUPA is responsible for the regulatory oversight of aboveground storage tanks (ASTs) and USTs, county hazardous materials and waste programs, and the California Accidental Release Prevention (CalARP) Program. The LAC CUPA would be the primary source of information regarding hazardous materials use and hazardous waste disposal for facilities that are at or near proposed program within the EWMP area.

The DTSC delegated corrective action oversight authority to LAC CUPA under Chapter 6.5 of Division 20 of California Health and Safety Code to implement corrective action under consent agreement at LAC CUPA facilities within its jurisdiction.

Schools

Schools are considered sensitive receptors for hazardous materials because children are more susceptible than adults to the effects of hazardous materials. There are over a thousand public and private schools, colleges, and universities within Los Angeles County. The proximity of a proposed project to day care centers would also need to be considered.

Airports

Aviation safety hazards can result if projects are sited on or in the vicinity of airports. Specifically, the land use compatibility plans at airports have land use restrictions, such as height, distracting light or glare, and attractants to wildlife, such as birds. The Federal Aviation Administration (FAA) Advisory Circular No: 150/5200-33B provides guidance on development projects affecting aircraft movement near hazardous wildlife attractants (FAA, 2007). The following list indicates the minimum separation criteria for specific aircraft types:

- Airports Serving Piston-Powered Aircraft: Airports that do not sell Jet-A fuel normally serve piston-powered aircraft (propeller-powered). General aviation airports typically serve piston-powered aircraft. However, there are exceptions. For example, the Santa Monica Airport is a general aviation airport but does serve turbine-powered aircraft. The FAA recommends a separation distance of 5,000 feet at these airports for hazardous wildlife attractants. This distance is to be maintained between an airport's air operations area (AOA) and the hazardous wildlife attractant.
- Airports Serving Turbine-Powered Aircraft: Airports selling Jet-A fuel normally serve turbine-powered aircraft (jet- or turbo-prop-powered). The FAA recommends a

separation distance of 10,000 feet at these airports for hazardous wildlife attractants. This distance is to be maintained between an airport's AOA and the hazardous wildlife attractant.

- Protection of Approach, Departure, and Circling Airspace: For all airports, the FAA recommends a distance of 5 statute miles between the farthest edges of the airport's AOA and the hazardous wildlife attractant if the attractant could cause hazardous wildlife movement into or across the approach or departure airspace.

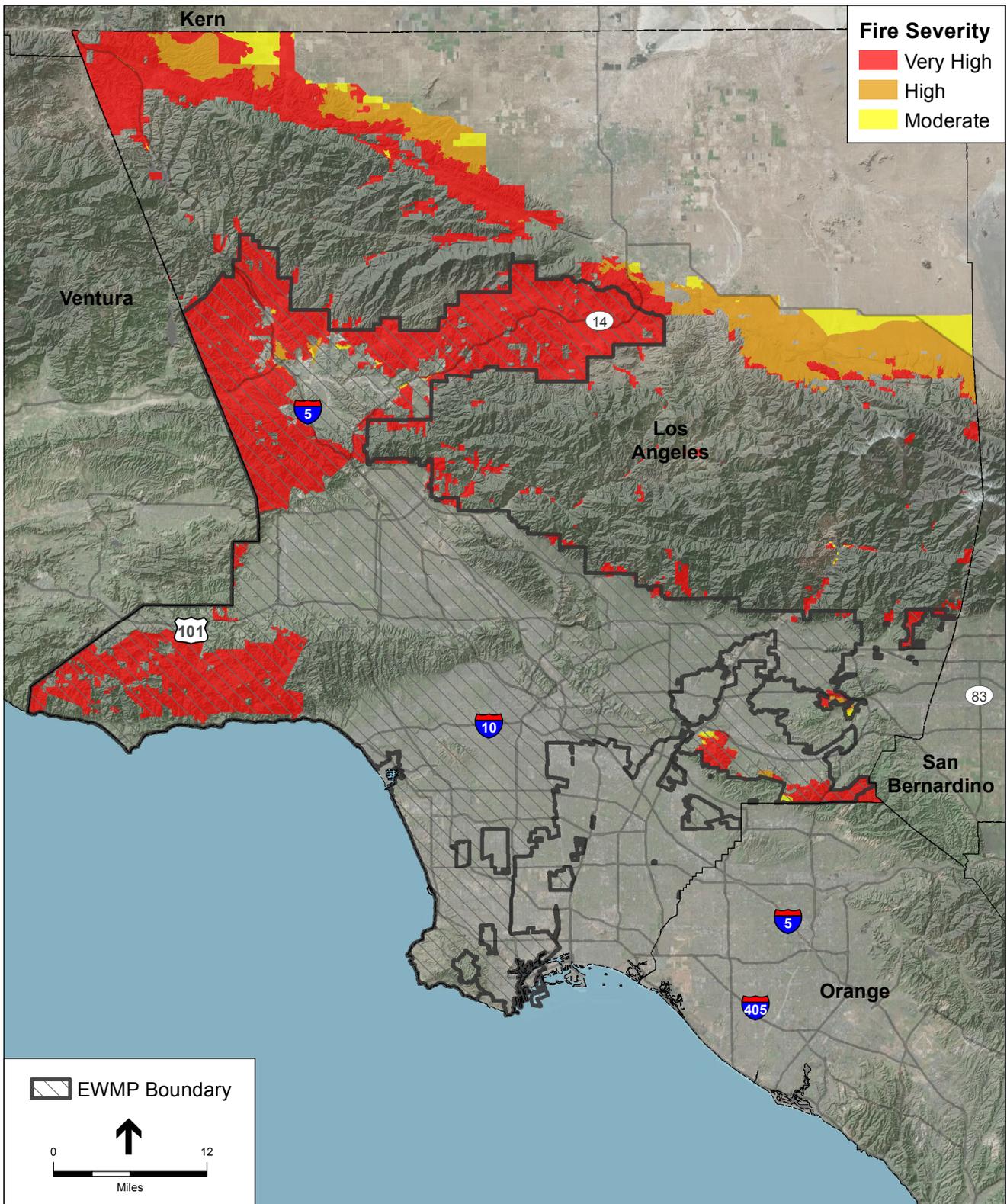
Specific information of the types of aircraft using a particular airport, airport land use compatibility plans, and land use maps for airports within Los Angeles County is available at the Los Angeles County Airport Land Use Commission website at <http://planning.lacounty.gov/aluc/airports>.

Emergency Preparedness

Los Angeles County Office of Emergency Management (LAC OEM) is the designated lead agency for emergency response and coordinates the development, maintenance, and implementation of the Los Angeles County Operational Area Emergency Response Plan (<http://lacoa.org/oaerp.htm>). This Plan serves as a guide for the County's response to emergencies/disasters in the County.

Wildfires

Both the State of California and the County of Los Angeles Fire Department map the Fire Hazard Severity Zones (FHSZs) within Los Angeles County. The FHSZs are based on an evaluation of fire history, existing and potential fuel, flame length, blowing embers, terrain, weather, and the likelihood of buildings igniting (California Department of Forestry and Fire Protection, 2012). **Figure 3.7-1** presents the countywide FHSZ map for the state responsibility areas. **Figure 3.7-2** presents the countywide FHSZ map for the county responsibility areas. The very high FHSZ areas tend to be outside of the urban developed areas in areas with flammable vegetation, such as brush.

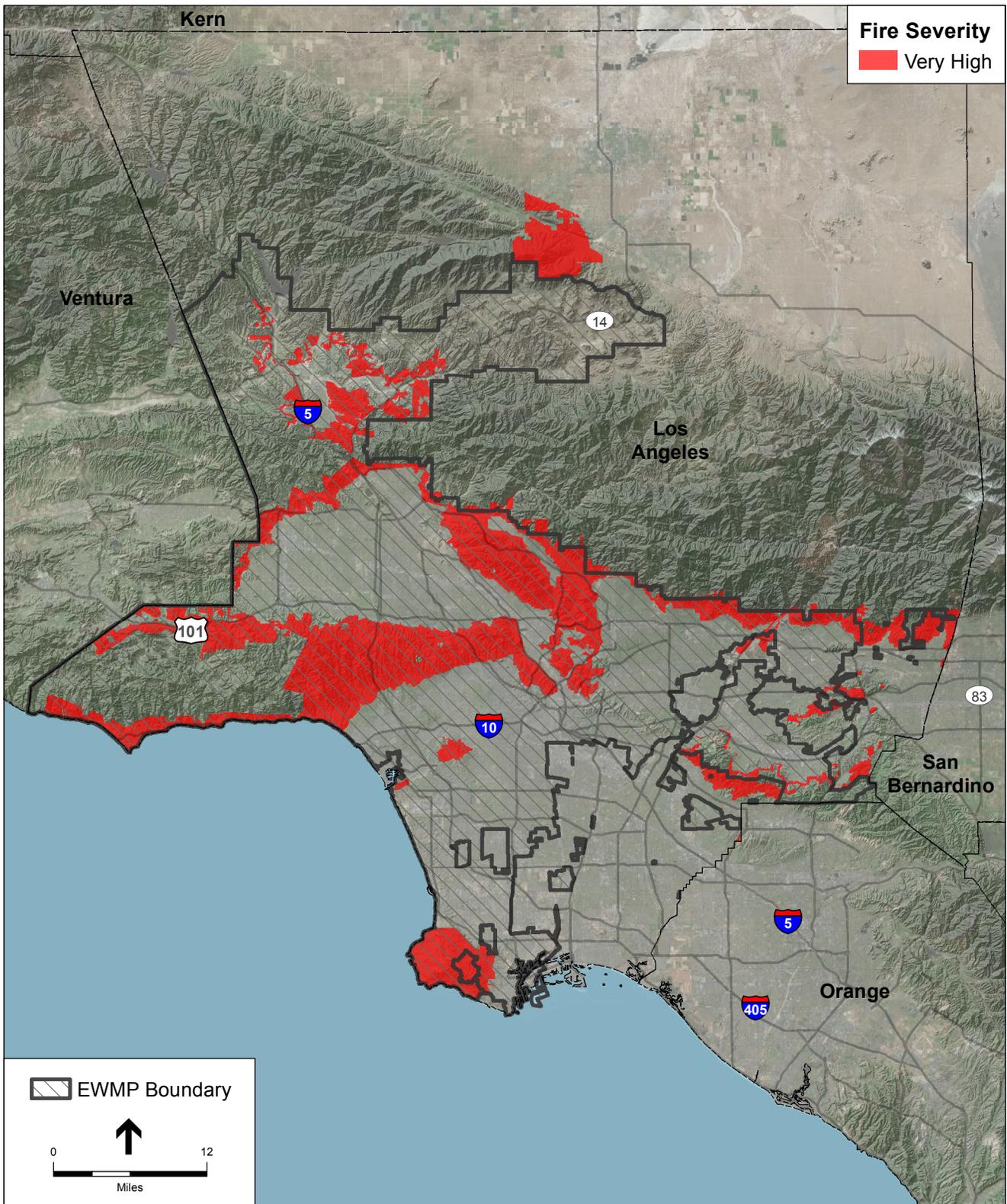


SOURCE: ESRI, Cal Fire 2007

LA County PEIR EWMP . 140474

Figure 3.7-1

Los Angeles County Fire Hazard Severity Zone Map for State Responsibility Areas



SOURCE: ESRI, Cal Fire 2007

LA County PEIR EWMP . 140474

Figure 3.7-2

Los Angeles County Fire Hazard Severity Zone
Map for County Responsibility Areas

3.7.2 Regulatory Framework

Hazards and hazardous materials are subject to numerous federal, state, and local laws and regulations intended to protect health, safety, and the environment. The U.S. Environmental Protection Agency (USEPA), the California DTSC, RWQCB, and the County of Los Angeles are the primary agencies enforcing these regulations. Local regulatory agencies enforce many federal and state regulations through the CUPA program. In 1997, LACFD Health Hazardous Materials Division became the LAC CUPA for the Hazardous Waste Generator Program, the Hazardous Materials Release Response Plans and Inventory Program, the CalARP Program, and the Aboveground Storage Tank Program and the Underground Storage Tank Program in Los Angeles County.

Federal

Primary federal agencies with responsibility for hazardous materials management include the USEPA, Department of Labor (Federal Occupational Health and Safety Administration [OSHA]), and Department of Transportation (DOT). Major federal laws and issue areas include the following statutes (and regulations promulgated there under):

- Resources Conservation and Recovery Act (RCRA) 42 USC 6901 et seq. – RCRA is the principal law governing the management and disposal of hazardous materials. RCRA is considered a “cradle to grave” statute for hazardous wastes in that it addresses all aspects of hazardous materials from creation to disposal. Federal regulations for USTs derive from RCRA. RCRA applies to this program because RCRA is used to define hazardous materials.
- Emergency Planning and Community Right-to-Know Act (EPCRA from SARA Title III) – EPCRA improved community access to information regarding chemical hazards and facilitated the development of business chemical inventories and emergency response plans. EPCRA also established reporting obligations for facilities that store or manage specified chemicals. EPCRA applies to this program because the contractors that construct the structural BMPs will be required to prepare and implement written emergency response plans to properly manage hazardous materials during construction and respond to accidental spills.
- DOT Hazardous Materials Transportation Act (49 USC 5101) – DOT, in conjunction with the USEPA, is responsible for enforcement and implementation of federal laws and regulations pertaining to safe storage and transportation of hazardous materials. The Code of Federal Regulations (CFR) 49, 171–180, regulates the transportation of hazardous materials, types of material defined as hazardous, and the marking of vehicles transporting hazardous materials. This Act applies to this program because contractors will be required to comply with its storage and transportation requirements that would reduce the possibility of spills.
- The Federal Motor Carrier Safety Administration (49 CFR Part 382) – The Federal Motor Carrier Safety Administration, a part of the DOT, issues regulations concerning highway routing of hazardous materials, the hazardous materials endorsement for a commercial

driver's license, highway hazardous material safety permits, and financial responsibility requirements for motor carriers of hazardous materials. This Act applies to this program because contractors will be required to comply with its storage and transportation requirements that would reduce the possibility of spills.

- Occupational Safety and Health Administration (OSHA; 29 USC 15) – OSHA is the federal agency responsible for ensuring worker safety. These regulations provide standards for safe workplaces and work practices, including those relating to hazardous materials handling. OSHA applies to this program because contractors will be required to comply with its hazardous materials management and handling requirements that would reduce the possibility of spills.
- The FAA Advisory Circular No: 150/5200-33B – The FAA Advisory Circular provides guidance on development projects affecting aircraft movement near hazardous wildlife attractants (FAA, 2007). This Circular applies to this program because BMPs will be required to comply with its restrictions if at or near airports.

State

The primary State agencies with jurisdiction over hazardous chemical materials management are the DTSC and the RWQCB. Other State agencies involved in hazardous materials management are the Department of Industrial Relations (State OSHA implementation), State Office of Emergency Services (OES)—CalARP implementation, California Air Resources Board (CARB), California Department of Transportation (Caltrans), State Office of Environmental Health Hazard Assessment (OEHHA—Proposition 65 implementation) and California Integrated Waste Management Board (CIWMB). Hazardous materials management laws in California include the following statutes and regulations promulgated there under.

- Hazardous Waste Control Act (HWCA; California Health and Safety Code, Section 25100 et seq.) – The HWCA is the state equivalent of RCRA and regulates the generation, treatment, storage, and disposal of hazardous waste. This act implements the RCRA “cradle-to-grave” waste management system in California but is more stringent in its regulation of non-RCRA wastes, spent lubricating oil, small-quantity generators, transportation and permitting requirements, as well as in its penalties for violations. HWCA applies to this program because contractors will be required to comply with its hazardous waste requirements that would reduce the possibility of spills.
- California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) – The Business Plan Act requires preparation of hazardous materials business plans and disclosure of hazardous materials inventories, including an inventory of hazardous materials handled, plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). Statewide, DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the state. Local agencies are responsible for administering these regulations.

Several state agencies regulate the transportation and use of hazardous materials to minimize potential risks to public health and safety, including CalEPA and the California Emergency Management Agency. The California Highway Patrol and Caltrans enforce regulations specifically related to the transport of hazardous materials. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roadways.

The Business Plan Act applies to this program because contractors will be required to comply with its handling, storage, and transportation requirements that would reduce the possibility of spills, and to prepare an emergency response plan to respond to accidental spills.

- California Division of Occupational Safety and Health (Cal/OSHA) – Cal/OSHA is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA requires many entities to prepare injury and illness prevention plans and chemical hygiene plans, and provides specific regulations to limit exposure of construction workers to lead. OSHA applies to this program because contractors will be required to comply with its handling and use requirements that would reduce the possibility of spills, and to prepare an emergency response plan to respond to accidental spills.
- California Vehicle Code Section 38366 – The California Vehicle Code, Section 38366, requires spark-arresting equipment on vehicles that travel off-road. This code applies to the program because the vehicles that construct structural BMPs in off-road areas will be required to have spark-arresting equipment to reduce the risk of wildfires.

Local

Certified Unified Program Agency

In 1993, Senate Bill (SB) 1082 was passed by the State Legislature to streamline the permitting process for those businesses that use, store, or manufacture hazardous materials. The passage of SB 1082 provided for the designation of a CUPA that would be responsible for the permitting process and collection of fees. The CUPA would be responsible for implementing at the local level the Unified Program, which serves to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities for the following environmental and emergency management programs:

- Hazardous Materials Release Response Plans and Inventories (Business Plans)
- California Accidental Release Prevention (CalARP) Program
- Underground Storage Tank Program
- Aboveground Petroleum Storage Act Requirements for Spill Prevention, Control and Countermeasure (SPCC) Plans
- Hazardous Waste Generator and On-Site Hazardous Waste Treatment (tiered permitting) Programs

- California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements

The CUPA in Los Angeles County is the LACoFD. As such, the Department is given the primary regulatory responsibility for implementing and managing the above-listed programs.

Los Angeles County Operational Area Emergency Response Plan

In 1998, the County of Los Angeles adopted the Los Angeles County Operational Area Emergency Response Plan, which provides emergency planning for the Los Angeles County Operational Area, an area that includes the project area. The purpose of this plan is to increase cooperation and coordination between relevant government agencies and jurisdictions in order to increase efficiency and minimize losses in the event of an emergency or disaster within the Operational Area (County of Los Angeles 1998).

Los Angeles County Fire Department Wildfire Action Plan

In 2009, the LACFD adopted a Wildfire Action Plan, which contains guidelines that recommend fire prevention measures such as creating defensible space and completing fire-resistive retrofits in homes (LACFD 2009). In addition, this plan provides residents with information regarding emergency preparedness and planning in the event of a wildfire.

Los Angeles County General Plan

A General Plan is a basic planning document that, alongside the zoning code, governs development in a city or county. The State requires each city and county to adopt a General Plan with seven mandatory elements: land use, open space, circulation, housing, noise, conservation, and safety, along with any number of optional elements as appropriate. The proposed EWMPs would be subject to local plans and policies of the areas in which they are located.

The County of Los Angeles is currently updating their General Plan from the element versions adopted in the 1980s and 1990s; the new comprehensive plan is expected to be complete by late 2014. Below are the relevant goals and policies from both the existing General Plan (County of Los Angeles, 1980, 1990) and the Draft General Plan 2035 (County of Los Angeles, 2014a) which relate to the EWMP.

Existing General Plan – Safety Element, Adopted 1990

Goal: Reduce threats to public safety and protect property from wildland and urban fire hazards.

Policy 16: Continue to coordinate firefighting efforts with State, Federal and local agencies in fire hazard areas; and review and update mutual and automatic aid agreements between the County and other fire protection agencies.

Policy 19: Promote improved watershed management practices to reduce the risk of damaging runoff and debris movement into urban areas.

Goal: Reduce threats to public safety and protect property from hazardous materials.

Policy 20: Review proposed development projects involving the use or storage of hazardous materials, and disapprove proposals which cannot properly mitigate unacceptable threats to public health and safety to the satisfaction of responsible agencies.

Policy 21: Promote the safe transportation of hazardous materials.

Policy 22: Encourage businesses and organizations which store and use hazardous materials to improve management and transportation of such materials.

Policy 24: Encourage improved, timely communication between businesses and emergency response agencies regarding hazardous materials/waste incidents.

Draft General Plan, 2014 – Conservation and Natural Resources Element

Goal – C/NR-5: Protected and useable local surface water resources.

Policy C/NR 5.6: Minimize point and non-point source water pollution.

Goal – C/NR-6: Protected and usable local groundwater resources.

Policy C/NR 6.5: Prevent stormwater infiltration where inappropriate and unsafe, such as in areas with high seasonal groundwater, on hazardous slopes, within 100 feet of drinking water wells, and in contaminated soils.

County of Los Angeles Low Impact Development Manual

The County of Los Angeles (County) prepared the 2014 Low Impact Development Standards Manual (LID Standards) to comply with the requirements of the National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit for stormwater and non-stormwater discharges from the MS4 within the coastal watersheds of Los Angeles County (CAS004001, Order No. R4-2012-0175), referred to as the 2012 MS4 Permit (County of Los Angeles, 2014b). The LID Standards provide guidance for the implementation of stormwater quality control measures in new development and redevelopment projects in unincorporated areas of the County with the intention of improving water quality and mitigating potential water quality impacts from stormwater and non-stormwater discharges.

The November 2013 LID Ordinance became effective December 5, 2013, and requires that all Designated, Non-Designated, street and road construction, and single family hillside home projects comply with Los Angeles County Code Title 12, Chapter 84. The LID Standards were prepared to complement and be consistent with the November 2013 LID Ordinance requirements.

The LID Standards address the following objectives and goals:

- Lessen the adverse impacts of stormwater runoff from development and urban runoff on natural drainage systems, receiving waters, and other water bodies;

- Minimize pollutant loadings from impervious surfaces by requiring development projects to incorporate properly-designed, technically-appropriate BMPs and other LID strategies; and
- Minimize erosion and other hydrologic impacts on natural drainage systems by requiring development projects to incorporate properly-designed, technically appropriate hydromodification control development principles and technologies.

City of Los Angeles Low Impact Development Manual

In November 2011, the City of Los Angeles adopted the Stormwater Low Impact Development (LID) Ordinance #181899) with the stated purpose of:

- Requiring the use of LID Standards and practices in future developments and redevelopments to encourage the beneficial use of rainwater and urban runoff
- Reducing stormwater/urban runoff while improving water quality
- Promoting rainwater harvesting
- Reducing off-site runoff and providing increased groundwater recharge
- Reducing erosion and hydrologic impacts downstream
- Enhancing the recreational and aesthetic values in our communities

The City institutionalized the use of LID techniques for development and redevelopment projects. Subsequent to the adoption of the Stormwater LID Ordinance, the City prepared the *Development Best Management Practices Handbook, Low Impact Development Manual*, dated June 2011, to describes the required BMPs (City of Los Angeles, 2011).

Other Cities LID

Various other cities within the County also have LID standards or guidance. The goals, objectives, and content of the LID document are similar to that of the County and City of Los Angeles, and are not referenced here.

City General Plans

The numerous cities encompassed by the EWMP area all have their own respective city General Plans, some of which may contain policies that address hazards and hazardous materials. As implementation of the individual structural BMP projects proceed, specific policies and objectives pertaining to hazards and hazardous materials from applicable city General Plans will be identified and evaluated on a project-by-project basis during subsequent CEQA environmental processes.

3.7.3 Impact Analysis

The proposed program's potential impacts were assessed using the CEQA Guidelines Appendix G Checklist. The following sections discuss the key issue areas identified in the CEQA Guidelines with respect to the program's potential hazard and hazardous material impacts.

Thresholds of Significance

Implementation of the proposed program may result in a potentially significant impact if any one of the following conditions would occur:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area.
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Project Impact Discussion

Routine Hazardous Materials Transport, Storage, Use, and Disposal and Accidental Release of Hazardous Materials Related to Construction and Maintenance

Impact 3.7-1: The proposed program would create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or the accidental release during construction and maintenance activities.

Structural (Regional, Centralized, and Distributed) BMPs

Construction activities required for implementation of proposed program would potentially involve excavation, grading, drilling, trenching, and other ground-disturbing activities. Once constructed, the structural BMPs would require periodic maintenance activities such as channel clearing of sediment and vegetation maintenance that could include the use of chainsaws and weed-whackers that require fuel and oil. These anticipated construction and maintenance activities would likely require the transport, storage, use, and disposal of small amounts of hazardous materials, including fuels (e.g., gasoline, diesel), hydraulic fluids, oils and lubricants,

paint, and other similarly related materials in varying quantities on each project site. The release of these materials could occur during routine transport, disposal, or use, and could potentially injure construction workers, contaminate soil, and/or affect habitats, surface water bodies, or groundwater. Impacts associated with release, although likely localized and short-term, could potentially create a significant hazard to the public or the environment.

The majority of BMPs are more likely to be smaller-scale, site- or parcel-specific distributed type BMPs that do not use chemicals for treatment. Distributed BMPs primarily use passive treatment techniques that capture stormwater and then reduce pollutant loads and stormwater volumes through containment, filtration, infiltration, and/or treatment techniques. Stormwater is directed to these BMPs and contained or stored to settle or filter out sediment and trash load (e.g., detention basins and ponds, debris booms and nets), and then allow the stormwater to infiltrate or filter through pervious surfaces that can be vegetated (e.g., bioswales, green streets, planter boxes, bioretention, bioswales, planter boxes, green streets).

The regional and centralized structural BMPs that include the construction of a smaller number of larger physical structures would use more equipment and materials, and could use larger volumes of potentially hazardous materials for longer periods of time. For example, low flow diversion structures may require chlorine treatment facilities rather than discharge to the sewer for treatment, in which case larger volumes of chlorine would be required to be stored on-site. However, the materials used would mostly be chemicals, fuels, oils, and lubricants, all of which are relatively common to store, transport, and handle. In the unlikely event of a spill, these petroleum products are relatively easy to clean up, treat, or biodegrade. Hazardous materials that are more difficult to treat, such as solvents and metals, would not be expected to be used or released in large quantities. Centralized structural BMPs that are treatment facilities may use treatment chemicals, such as chlorine depending on the treatment techniques (other options include ozone, ultraviolet, or electrocoagulation), and the structures may be painted. However, chlorination and dechlorination uses should consider proximity to residential areas for safety reasons, as well as access for chemical deliveries.

The implementing agency and construction contractor would be required to comply with all relevant and applicable federal, state, and local laws and regulations that pertain to the transport, storage, use, and disposal of hazardous materials and waste during construction of the proposed program. Because the implementing agency and its contractor would be required to comply with all relevant laws and regulations associated with the transport, storage, use, and disposal of hazardous materials and waste, the construction impacts would be less than significant.

Operation of proposed structural BMPs would generally require minimal to no transport, usage, or disposal of hazardous materials for activities such as maintaining detention basins, constructed wetlands, or infiltration galleries, which would require periodic transport and use of chemicals for purposes of operating equipment (e.g., weed-whackers), maintenance activities, and the transport of workers in vehicles. The implementing agency would be required to comply with all relevant and applicable federal, state, and local laws and regulations that pertain to the transport, storage, use, and disposal of hazardous materials and waste during operation of the proposed program.

Under the Unified Program, the CalARP Program requires facilities that use regulated substances to develop a Risk Management Plan (RMP). A RMP would be required for the proposed program that uses hazardous materials. The RMP would be kept on file with the LACFD, in addition to a Hazardous Materials Release Response Plan within a Hazardous Materials Business Plan (HMBP). Existing treatment plants that undergo expansion will require an updated RMP and HMBP to include new facilities and any associated hazardous material use, storage, or transport. These are public documents that reflect a facility's overall effort to manage and prevent risks associated with the storage, use, and/or processing of regulated substances.

The California Hazardous Materials Release Response Plans and Inventory Program (CCR Title 19, Division 2, Chapter 4) requires companies that store, use, and/or transport hazardous materials to prepare a HMBP that includes an inventory of hazardous substances and an Emergency Response Plan (ERP) to address emergencies such as accidental releases. For example, a contractor using fuels for chainsaws and weed-whackers to control vegetation at detention basins and infiltration galleries would be required to prepare and implement an HMBP and an ERP for their company activities. The ERP would include procedures for responding to accidental spills of fuels that might occur at any site they work at. The ERP would describe the cleanup procedures to be implemented in the event of an accidental release.

In addition, the transport of hazardous materials is regulated by Caltrans. Transporters of hazardous waste would be required to be certified by Caltrans. All hazardous materials would be tracked by Caltrans and delivery vehicles would be required to use roadways approved for transportation of hazardous materials and maintain the proper storage containers for hazardous materials.

Implementation of the RMP, HMBP, and ERP and compliance with existing regulations would reduce potential risks to the public and environment due to accidental release of hazardous materials to less than significant.

Mitigation Measures: None required

Significance Determination: Less than significant

Non-Structural (Institutional) BMPs

As discussed in Chapter 2.0, *Project Description*, non-structural/institutional BMPs do not include the construction of new facilities. Consequently, there would be no new facilities that would require additional or new use of hazardous materials. While the non-structural BMPs would include a broad range of municipal practices such as street cleaning, landscape management, storm drain operation, and more, which does produce debris and trash for disposal, the materials collected are not considered hazardous waste or materials requiring hazardous waste disposal. Regular street sweeping is one of the most cost-effective non-structural BMPs used to remove sediment, metals, petroleum products, trash, and vegetation that accumulate on streets. Maintaining a regular street sweeping schedule reduces the buildup of trash on streets and

prevents trash from entering catch basins and the storm drain system. The trash removed is disposed of in local landfills. Therefore, this program would have no impact relative to the routine use of hazardous materials.

Mitigation Measures: None required

Significance Determination: Less than significant

Accumulation of Potentially Hazardous Materials into BMPs

Impact 3.7-2: The proposed program could create a significant hazard to the public or the environment through the accumulation of potentially hazardous materials into BMPs.

Structural (Regional, Centralized, and Distributed) BMPs

The existing storm sewer systems convey stormwater and dry-weather flows to receiving waters that ultimately flow to the ocean. Operation of structural BMPs would not increase the potential for accidental releases of hazardous materials into the environment. Because of their function as water conveyance systems, the entire storm sewer system, as augmented by structural BMPs, would collect and retain sediment and chemicals from urban runoff, along with any accidental or illicit spills of hazardous materials. The introduction of hazardous materials into the storm sewer system could occur in large events as in a catastrophic spill, or could occur in small concentrations as in petroleum hydrocarbons and heavy metals picked up and carried by stormwater in urban runoff from the streets. Contaminants in the runoff water or as discrete concentrated spills could accumulate in the soils and vegetation of structural BMPs, as discussed below.

In the case of large spills that occur within the capture area of a BMP, regional BMPs would retain the spill and prevent any further contamination downstream since they would be designed to retain in-flow. Centralized BMPs, although generally designed to use flow-through or filter techniques, would still slow and retain much of the spill volume. Even distributed BMPs would slow and retain spills, although on a smaller scale. This retention would help to minimize impacts of large spills compared to existing conditions. Responding to major spills is the responsibility of local municipalities, usually led by the local fire department. Local jurisdictions prepare spill response plans that outline measures to contain and remediate spills of all kinds. The LAC OEM leads emergency response activities within Los Angeles County that would include responses to large hazardous spills. LAC OEM has prepared an Emergency Response Plan to coordinate response efforts. The responsibility for responding to and remediating spills would be similar to existing conditions.

All BMPs (regional, centralized, and distributed) would require cleanup following a spill event. Large spills could adversely affect the treatment systems including natural vegetation and filter matrices, including soil. Implementation of the BMPs would serve to add some protection against accidental or illicit spills compared with existing conditions. Cleanup of major spills would be

coordinated through the LAC OEM in coordination with applicable regulations and regulatory agencies, specifically the RWQCB or the Department of Toxic Substance Control (DTSC).

In the case of small concentrations of contaminants either from small spills or the accumulation of contaminants from urban runoff, BMPs would collect and retain pollutants on site. Potential contaminants include typical urban runoff contaminants, such as fuels, oil and grease, pesticides, PCBs, PAHs, metals, and nutrients, as well as sediment that would clog filter media (e.g., soil) or reduce volume capacity of the receiving BMP. Over time, infiltration of stormwater runoff could increase contaminant loading in shallow soils and groundwater. Contaminants behave differently when filtered through native soils. Some contaminants (e.g., oil, grease, metals) adsorb onto surficial soils and remain within a few feet of the surface, while other more soluble contaminants (e.g., fuels, nitrate, and phosphate) may be entrained to deeper soils or migrate all the way to the groundwater. Over a long period of time, concentrations of these contaminants could increase resulting in contaminated soils and groundwater. Pretreatment of source water in areas with the potential for heavy contaminant loading would be implemented as a required design feature for regional and centralized BMPs to assist in reducing long-term loading. In addition, non-structural source control BMPs would help reduce contaminant loading over time. The LID Standards for the County of Los Angeles and the various cities participating in the EWMP provide protocols for designing regional and centralized BMPs that minimize the potential for contaminant loading. For example, the LID Manual requires a certain distance to groundwater to ensure that adequate soil filtration occurs prior to the percolating water reaching a drinking water aquifer.

Distributed BMPs, although on a smaller parcel or site scale, would also be designed to collect and treat stormwater to reduce the loading of the smaller amounts of contaminants transported by their relatively smaller receiving areas. This would reduce contaminant loading to receiving waters compared with existing conditions while capturing contaminants in filter media. The vegetation and microbial activity in soil would work to biodegrade the typical fuels, oil, and grease in local urban runoff.

To address the accumulation of contaminants in soil at BMPs, operations and maintenance plans for BMPs that might accumulate constituents in surface soils and media will be developed to include periodic removal and replacement of these potentially impacted surface materials to reduce the potential for long-term loading leading to hazardous concentrations in soils and groundwater. Implementation of **Mitigation Measure HAZ-1** would reduce the potential for impacts to less-than-significant levels.

Mitigation Measure:

HAZ-1: Implementing agencies shall prepare and implement maintenance practices that include periodic removal and replacement of surface soils and media that may accumulate constituents that could result in further migration of constituents to sub-soils and groundwater. A BMP Maintenance Plan shall be prepared by Implementing Agencies upon approval of the BMP projects, that identifies the frequency and procedures for removal and/or replacement of accumulated debris, surface soils and/or media (to depth where constituent concentrations do not represent a hazardous conditions and/or have the potential

to migrate further and impact groundwater) to avoid accumulation of hazardous concentrations and the potential to migrate further to sub-soils and groundwater. The BMP Maintenance Plan may consist of a general maintenance guideline that applies to several types of smaller distributed BMPs. For smaller distributed BMPs on private property, these plans may consist of a maintenance covenant that includes requirements to avoid the accumulation of hazardous concentrations in these BMPs that may impact underlying sub-soils and groundwater. Structural BMPs shall be designed to prevent migration of constituents that may impact groundwater.

Significance Determination: Less than significant with mitigation (The application of this mitigation measure to specific BMP types and categories are identified in Table 3.7-1.)

Non-Structural (Institutional) BMPs

As discussed in Chapter 2.0, *Project Description*, non-structural/institutional BMPs do not include the construction of new facilities. As a result, there would be no new facilities that would require additional or new use of hazardous materials. Therefore, this impact would have no impact relative to the accidental release of hazardous materials.

Mitigation Measures: None required

Significance Determination: Less than significant

Hazardous Materials near Schools

Impact 3.7-3: The proposed program could emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing school.

Structural (Regional, Centralized, and Distributed) BMPs

BMPs may be installed throughout the watersheds. Some facilities may be installed within one-quarter mile of a school. Because construction and operation activities could potentially involve hazardous materials, the proposed program would have the potential to emit hazardous emissions or handle hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. In addition, BMPs that are constructed on school properties may collect spills from off-site sources or accumulate contaminants from urban runoff in soil in the BMPs over time.

As discussed in Impact 3.7-1, individual BMP projects would be required to comply with regulations that would avoid or minimize the potential for releases of hazardous materials during the construction of the BMPs, in response to accidental spills either during the construction of the BMP, or as a result of the BMP collecting contaminants from an off-site spill. Air quality emissions are discussed in Section 3.2. Therefore, the potential impacts to nearby schools are considered less than significant.

As discussed in Impact 3.7-2, BMPs that use soil to filter contaminants from urban runoff may accumulate contaminants over time. Implementation of the Mitigation Measure HAZ-1 discussed above would reduce the potential for impacts to less than significant levels.

Mitigation Measure: HAZ-1

Significance Determination: Less than significant with mitigation (The application of this mitigation measure to specific BMP types and categories are identified in Table 3.7-1.)

Non-Structural (Institutional) BMPs

As discussed in Chapter 2.0, *Project Description*, non-structural/institutional BMPs do not include the construction of new facilities. Consequently, there would be no new facilities that would require additional or new use of hazardous materials. Therefore, this impact would have no impact relative to schools.

Mitigation Measures: None required

Significance Determination: Less than significant

Hazardous Materials Sites

Impact 3.7-4: The proposed program could be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, could create a significant hazard to the public or the environment.

Structural (Regional, Centralized, and Distributed) BMPs

If a BMP were to be located on a hazardous materials site, construction workers could be exposed to hazardous materials during earth-moving activities. In addition, the earth-moving activities could mobilize hazardous materials to downslope or downgradient locations. If a BMP were to be located downslope or downgradient of a hazardous materials site, construction workers at the selected proposed project could be exposed to hazardous materials migrating from the nearby site. This could be considered a significant impact requiring mitigation.

As discussed in Section 3.7.1, information on the presence of known hazardous materials sites is provided within the databases that make up the Cortese List, which includes information on hazardous materials sites from five regulatory agency lists. In addition, the LACFD is the designated LAC CUPA and maintains a list of sites under its responsibility. Reviewing these lists would identify known hazardous materials sites. It is possible that a proposed project may be on an unknown hazardous materials site not yet included in the databases. Contaminated soil and/or groundwater could be encountered during excavation posing a health hazard to construction crews, the public, and the environment. Implementation of **Mitigation Measure HAZ-2** would reduce the potential impact to less than significant.

Mitigation Measure:

HAZ-2: Prior to the initiation of any construction requiring ground-disturbing activities in areas where hazardous material use or management may have occurred, the implementing agencies shall complete a Phase I Environmental Site Assessment (ESA) in accordance with American Society for Testing and Materials Standard E1527-13 for each construction site. Any recommended follow up sampling (Phase II activities) set forth in the Phase I ESA shall be implemented prior to construction. The results of Phase II studies, if necessary, shall be submitted to the local overseeing agency and any required remediation or further delineation of identified contamination shall be completed prior to commencement of construction.

Significance Determination: Less than significant with mitigation (The application of this mitigation measure to specific BMP types and categories are identified in Table 3.7-1.)

Non-Structural (Institutional) BMPs

As discussed in Chapter 2.0, *Project Description*, non-structural/institutional BMPs do not include the construction of new facilities. Consequently, there would be no new facilities that would require additional or new use of hazardous materials. Therefore, this impact would have no impact relative to known hazardous materials sites.

Mitigation Measures: None required

Significance Determination: Less than significant

Hazards near Public or Private Airports and Airstrips

Impact 3.7-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, for a project within the vicinity of a private airstrip, the project could result in a safety hazard for people residing or working in the project area.

Structural (Regional, Centralized, and Distributed) BMPs

Aviation safety hazards can result if projects are sited in the vicinity of airports. Specifically, the land use compatibility plans at airports have land use restrictions, such as height, distracting light or glare, and attraction of birds. The construction of an object high enough to intersect the flight path of aircraft would result in aircraft collision hazards and risks of death or injury to people in the aircraft and on the ground if the aircraft crashes. Similar hazards would be created if a proposed project were to result in distracting light or glare that could interfere with a pilot's ability to control the flight path of the aircraft, or if a proposed project were to create an attraction to wildlife, especially birds, that would pose hazards to aircraft.

The paved areas of airports (excluding the landing areas and taxiways, which have specific aircraft support requirements), and the undeveloped buffer zones around airports are potential sites for BMPs. Paved areas not used by aircraft could use permeable pavement and rainwater from buildings and paved areas could be routed to infiltration basins, bioswales, and subsurface infiltration galleries.

None of the proposed structural BMPs would result in the construction of structures of significant height or generating significant glare or distracting light. Larger regional or centralized BMPs, such as treatment facilities or larger aboveground detention basins would not be permitted within the landing and takeoff flight paths. However, some structural BMPs, such as detention basins that store water for a period of time or constructed wetlands that would increase or improve wildlife habitat, could be constructed on or near airports and could result in attracting wildlife. Deer and birds are known wildlife hazards to airports. If the proposed project is at or near an airport, this could increase hazards to aircraft from wildlife.

The FAA Advisory Circular No: 150/5200-33B provides specific guidance on development projects for new stormwater management facilities and artificial marshes. Implementation of **Mitigation Measure HAZ-3** for all BMPs that are within the airport land use plan area, regardless of whether the airport receives federal funding, would reduce the potential impact to less than significant.

Mitigation Measure:

HAZ-3: Implementing Agencies shall require that those BMPs that are within an airport land use plan area are compatible with criteria specified in FAA Advisory Circular No: 150/5200-33B (FAA, 2007). If the proposed BMP is within the minimum separation criteria, the Implementing Agency shall consult with the airport and collaboratively evaluate whether the potential increase in wildlife hazards can be mitigated.

Significance Determination: Less than significant with mitigation (The application of this mitigation measure to specific BMP types and categories are identified in Table 3.7-1.)

Non-Structural (Institutional) BMPs

As discussed in Chapter 2.0, *Project Description*, non-structural/institutional BMPs do not include the construction of new facilities. Consequently, there would be no new facilities that would require additional or new use of hazardous materials. Therefore, this impact would have no impact relative to airports.

Mitigation Measures: None required

Significance Determination: Less than significant

Impact 3.7-6: The proposed program could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Structural (Regional, Centralized, and Distributed) BMPs

Construction activities associated with implementation of structural BMPs may include installations of pipelines or other infrastructure within roadway rights-of-way. These construction activities could potentially result in temporary lane or roadway closures or block access to roadways and driveways for emergency vehicles. Such construction-related impacts, although temporary, could potentially impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Impacts to access would be possible during the construction of larger scale regional or centralized BMPs, and less likely for the smaller-scale distributed BMPs.

Notification to emergency services providers would ensure that emergency responsiveness was not impaired. Once installed, the BMPs would have no effect on emergency response plans or evacuations plans.

Mitigation Measure: None required

Significance Determination: Less than significant

Non-Structural (Institutional) BMPs

As discussed in Chapter 2.0, *Project Description*, non-structural/institutional BMPs do not include the construction of new facilities. Consequently, there would be no new facilities that would require additional or new use of hazardous materials. Therefore, this impact would have no impact relative to emergency response plans or emergency evacuation plans.

Mitigation Measures: None required

Significance Determination: Less than significant

Impact 3.7-7: The proposed program could expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Structural (Regional, Centralized, and Distributed) BMPs

The grading of unimproved areas could require the use of mechanized equipment with internal combustion engines. The equipment would include excavators, backhoes, drilling rigs, and support trucks. Parts of the engines and exhaust systems could get hot enough to ignite dry vegetation and cause a wildfire and expose people or structures to significant risk.

Most of the BMPs are likely to be distributed BMPs constructed within developed urban areas with no possibility for wildfires. However, some regional and centralized BMPs could be

constructed in rural undeveloped areas. Larger-scale centralized BMP treatment facilities could be built in previously undeveloped areas, since the urban areas are largely built out.

As discussed in the Setting section, the CAL FIRE fire hazard severity zone maps identify areas within the EWMP with high and very high fire hazard severity categories. Structural BMPs conducted within these areas would have the added potential of causing wildfires. However, the requirements of the DOT and California Vehicle Code for spark arrester protection on vehicles would reduce the potential risk. Therefore, adherence to federal and state regulations would reduce the potential impacts from wildfires to less than significant. No mitigation measures would be required.

Mitigation Measures: None required

Significance Determination: Less than significant

Non-Structural (Institutional) BMPs

As discussed in Chapter 2.0, *Project Description*, non-structural/institutional BMPs do not include the construction of new facilities. As a result, there would be no new facilities that would have the potential to create a risk of wildfire. Therefore, this impact would have no impact relative to wildfires.

Mitigation Measures: None required

Significance Determination: Less than significant

Cumulative Impact Discussion

Structural (Regional, Centralized, and Distributed) BMPs

BMPs would be constructed throughout the watersheds. Most of the distributed BMPs would be small in scale and would not result in cumulatively significant impacts due to increased hazards from construction or operation. However, the combination of BMPs throughout the region would change the flow paths of stormwater and urban runoff that currently occurs in the region, resulting in the retention of pollutants generally within the soil of the BMPs that use soil for filtration and retention. Mitigation Measure HAZ-1 would reduce the potential for concentrations of these pollutants to result in localized hazardous conditions at individual BMP locations. Mitigation Measure HAZ-2 would mitigate the accumulation of contaminants in soil at BMPs. Cumulatively, throughout the region, the retention and treatment of pollutants within each watershed and the reduction of pollutant loading in waterways will substantially benefit water and sediment quality of the region's habitats, rivers, and beaches. Therefore, the project's potential contribution to cumulative effects on hazards and hazardous materials is considered beneficial.

Mitigation Measures: HAZ-1 and HAZ-2

Significance Determination: Less than significant with mitigation. (The application of this mitigation measure to specific BMP types and categories are identified in Table 3.7-1.)

Non-Structural (Institutional) BMPs

As discussed in Chapter 2.0, *Project Description*, non-structural/institutional BMPs do not include the construction of new facilities. Consequently, there would be no new facilities that would contribute to cumulative impacts.

Mitigation Measures: None required

Significance Determination: Less than significant

**TABLE 3.7-1
SUMMARY OF HAZARDS IMPACTS REQUIRING MITIGATION MEASURES**

Structural BMPs	Thresholds of Significance								
	Transport, use or disposal of hazardous materials	Accumulation of hazardous materials	Hazardous emissions near schools	Located on hazardous materials site	Vicinity of airport or airstrip	Impair implementation of emergency response plan	Exposure to wildland fires	Cumulative Impacts	
<i>Applicable Mitigation Measures:</i>	None Required	HAZ-1	HAZ-1	HAZ-2	HAZ-3	None Required	None Required	HAZ-1 and HAZ-2	
Regional BMPs									
Regional Retention and Infiltration	No	Yes	Yes	Yes	Yes	No	No	Yes	
Regional Capture, Detention and Use	No	Yes	Yes	Yes	Yes	No	No	Yes	
Centralized BMP									
Bio-filtration	No	Yes	Yes	Yes	Yes	No	No	Yes	
Constructed Wetlands	No	Yes	Yes	Yes	Yes	No	No	Yes	
Treatment/Low-Flow Diversions	No	Yes	Yes	Yes	Yes	No	No	Yes	
Creek, River, Estuary Restoration	No	Yes	Yes	Yes	Yes	No	No	Yes	
Distributed BMPs									
Site-Scale Detention	No	Yes	Yes	Yes	Yes	No	No	Yes	
LID – Infiltration/Filtration BMPs – Porous Pavement, Green Streets, Bioswale/Filter Strips, downspout disconnects	No	Yes	Yes	Yes	Yes	No	No	Yes	
LID – Green Infrastructure – Capture and Use – Cisterns, Rain Barrels, Green roofs, Planter Boxes	No	Yes	Yes	Yes	Yes	No	No	Yes	
Flow-through Treatment BMPs	No	Yes	Yes	Yes	Yes	No	No	Yes	
Source-Control Treatment BMPs (catch basin inserts/screens, hydrodynamic separators, gross solids removal devices)	No	Yes	Yes	Yes	Yes	No	No	Yes	
Low-Flow Diversion	No	Yes	Yes	Yes	Yes	No	No	Yes	

NOTE: These conclusions are based on typical size and function of BMPs.