

4.9 HAZARDS AND HAZARDOUS MATERIALS

4.9.1 INTRODUCTION

This section describes hazardous materials and other hazards to public health and safety that could result from implementation of the proposed project. It addresses potential construction and operational impacts of the proposed project facilities related to hazards and hazardous materials, as well as mitigation measures as appropriate. The section also evaluates potential impacts from regional hazards including public and private airports and wildfire hazards. A Phase I Environmental Site Assessment was prepared in June 2015 to support the analysis in this section and is included as Appendix E (Hazen 2015).

For the purposes of this analysis, the term “hazardous materials” refers to both hazardous substances and hazardous wastes.¹ Under federal and state law, materials and wastes may be considered hazardous if they are specifically listed by statute or if they are toxic, ignitable, corrosive, or reactive. In some cases, past industrial or commercial activities on a site could have resulted in spills or leaks of hazardous materials to the ground, resulting in soil and/or groundwater contamination. Hazardous materials may also be present in building materials and released during building demolition activities. Hazardous materials may also be required as part of or result from operation of a project. If improperly handled, hazardous materials and wastes can cause public health hazards when released to the soil, groundwater, or air. The four basic exposure pathways through which an individual can be exposed to a chemical agent include: inhalation, ingestion, bodily contact, and injection. Exposure can come as a result of an accidental release during transportation, storage, or handling of hazardous materials. Disturbance of subsurface soil during construction can also lead to exposure of workers or the public from stockpiling, handling, or transportation of soils contaminated by hazardous materials from previous spills or leaks.

4.9.2 ENVIRONMENTAL SETTING

The study area for hazardous materials includes possible contaminating activities (e.g., leaking underground storage tanks) within 0.25 miles of the proposed project sites. The study area for the evaluation of airport and airstrip impacts is within two miles of each project site. The study area for the evaluation of wildfires and emergency access includes the project sites and nearby areas surrounding those sites.

¹ The California Health and Safety Code defines a hazardous material as “any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety, or to the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste radioactive materials and any material which handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment” (Health and Safety Code, Section 25501).

The settings for hazardous materials related to soil and groundwater, proximity to airports, and fire hazards for the project sites are summarized in Table 4-9.1, and discussed in detail following the table.

TABLE 4.9-1: SUMMARY OF HAZARDS AND HAZARDOUS MATERIALS SETTING			
CVWD Well/Site No.	Hazardous Materials Release Within 0.25 Mile¹	Airport or Airstrip Within 2 Miles	Fire Hazard Severity Zone
Desert Hot Springs			
WBA 3408-1	No	No	Moderate
WBA 3409-2	No	No	Moderate
WBA 3410-1	No	No	Moderate
ID-8 WBA Water Treatment Facility	No	No	Moderate
Raw and Treated Water Pipeline Alignments	Yes	No	Moderate
Palm Desert			
SBA 4610-1	No	No	Urban Unzoned
SBA 4720-1	No	Yes	Urban Unzoned
SBA 4721-1	No	Yes	Urban Unzoned
SBA 4722-1	No	Yes	Urban Unzoned
SBA 5632-2	No	No	Urban Unzoned
SBA 5657-2	Yes	Yes	Urban Unzoned
SBA 5664-1	No	No	Urban Unzoned
SBA 5676-2	No	No	Urban Unzoned
SBA 5677-1	No	No	Urban Unzoned
SBA 5678-1	No	No	Urban Unzoned
SBA 5679-1	No	No	Urban Unzoned
SBA 5720-1	No	Yes	Urban Unzoned
Rancho Mirage			
SBA 4510-1	No	No	Urban Unzoned
La Quinta			
SBA 5711-2	No	No	Urban Unzoned
SBA 5717-1	No	Yes	Urban Unzoned
SBA 5718-1	No	Yes	Urban Unzoned
SBA 6701-1	No	No	Urban Unzoned
SBA 6726-1	Yes	No	Urban Unzoned
SBA 6728-1	No	No	Urban Unzoned
SBA 6734-1	No	No	Urban Unzoned
WBA 6724-1	No	No	Urban Unzoned
WBA 6725-1	No	No	Urban Unzoned
WBA 6723-1	Yes	No	Urban Unzoned
La Quinta WBA Water Treatment Facility	No	No	Urban Unzoned

TABLE 4.9-1: SUMMARY OF HAZARDS AND HAZARDOUS MATERIALS SETTING			
CVWD Well/Site No.	Hazardous Materials Release Within 0.25 Mile ¹	Airport or Airstrip Within 2 Miles	Fire Hazard Severity Zone
Raw and Treated Water, and Sewer Pipeline Alignments	Yes	No	Urban Unzoned
Indio			
SBA 5719-1	No	Yes	Urban Unzoned
Thermal			
SBA 6805-1	No	Yes	Non-Wildland/Non-Urbanized
SBA 6808-1	No	Yes	Non-Wildland/Non-Urbanized
Central Resin Regeneration Facility	No	No	Non-Wildland/Non-Urbanized
¹ All cases are LUST sites. All those identified with a “yes” are closed and discussed further in Section 4.9.2.1 Potential Presence of Hazardous Materials in Soil and Groundwater Source: Geotracker database and Envirostor online database, 2015			

4.9.2.1 Potential Presence of Hazardous Materials in Soil and Groundwater

The evaluation of the potential to encounter hazardous materials in soil and groundwater is based on federal, State, and local regulatory database reviews which identified permitted hazardous materials uses, environmental cases, and spill sites within 0.25 miles of project facilities (Hazen 2015).

Additional information regarding identified cases was obtained from site investigation reports available from the State Water Resources Control Board (SWRCB) Geotracker database, the California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC) Envirostor online database, solid waste disposal sites identified by SWRCB, active Cease and Desist Orders and Cleanup and Abatement Orders from SWRCB, and hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC.

Permitted hazardous material uses, and environmental cases and spill sites identified within 0.25 miles of all project sites (including pipeline alignments) were characterized as to their potential to affect subsurface conditions that might be encountered during project construction according to the following classifications:

- Low Potential.** Facilities that are permitted to use or store hazardous waste, but have not had a documented release, would be considered to have a low potential to affect facility sites. In addition, environmental cases that are listed as closed, because remediation or cleanup has been completed and approved by the regulatory agency, would be considered to have a low potential to affect proposed facility sites. The potential to affect subsurface conditions at a site would also be considered to be low if any of the following three factors is known to occur: (1) the direction of groundwater flow is away from the facility site construction area; (2) the lateral extent of contamination from the occurrence is known and is not present within the proposed facility site construction area; or (3) only soil was affected by the occurrence and the potentially

contaminated site is not located within the proposed facility site or immediately adjacent to the site (i.e., within 200 feet of the construction area).

- **Moderate Potential.** The potential to affect subsurface conditions within a facility site would be considered to be moderate, and further investigation might be necessary, if the following three factors occur: (1) an off-site occurrence was reported within 0.25 miles of the facility site, but does not occur within the construction area; (2) the extent of contamination and remedial status is not known; and (3) the occurrence has affected groundwater and is located up-gradient from the facility site.
- **High Potential.** The potential to affect subsurface conditions within the facility site would be considered to be high and further investigation would be necessary, if either of the following two factors is known to occur: (1) an active on-site occurrence exists within the proposed facility site construction area; or (2) contamination from an off-site occurrence is known to be present within the proposed facility site construction area.

Environmental cases and spill sites within 0.25 mile of proposed project sites are summarized in Table 4.9-1. As shown in the table, five project sites are within 0.25 mile of documented hazardous materials release sites, including three well sites (SBA 5657-2, SBA 6726-1 and WBA 6723-1) and the La Quinta WBA Water Treatment Facility raw and treated water pipeline alignments. All of these documented sites are either Underground Storage Tank (UST) or Leaking Underground Storage Tank (LUST) cleanup sites, and all have been granted regulatory “case closed” status. Based on this regulatory status, these release sites are not anticipated to affect project construction or operation.

The results of the database search indicate that no proposed project facilities would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (the Cortese List).

4.9.2.2 Potential Presence of Hazardous Building Materials

Demolition or renovation of older structures that contain hazardous building materials could present a public health risk if such materials were released during construction. Hazardous building materials include asbestos-containing materials (ACM) in roofing, siding, walls, ceilings, floors, pipes and pipe fittings; certain electrical equipment, such as transformers and fluorescent light ballasts that contain polychlorinated biphenyls (PCBs) or di(2-ethylhexyl) phthalate (DEHP); fluorescent lights containing mercury vapors; and lead-based paints. If removed during demolition of a building, these materials would require special disposal procedures.

Lead in Construction

The California Occupational Safety and Health Act Lead in Construction Standard (8 CCR 1532.1) requires project proponents to develop and implement a lead compliance plan when lead-based paint would be disturbed during construction. The plan must describe activities that could emit lead, methods for complying with the standard, safe work practices, and a plan to protect workers from exposure to lead during construction activities. The Act requires 24-hour notification if more than 100 square feet of lead-based paint would be disturbed.

Abatement of Asbestos in Buildings and Structures

Regulatory requirements for asbestos abatement are set forth in California Health and Safety Code (CHSC) Section 19827.5, as well as Title 8 of the CCR, Sections 341.6 through 341.14 and 1529. CHSC Section 19827.5, adopted in 1991, requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants. The South Coast Air Quality Management District (SCAQMD) is vested by the California legislature with authority to regulate airborne pollutants, including asbestos. SCAQMD regulations pertaining to abatement of asbestos-containing materials are specified in Rule 1403, Asbestos Emissions from Demolition/Renovation.

In accordance with this regulation, SCAQMD must be notified 10 days in advance of any proposed demolition or abatement work. This notification must include the names and addresses of operations and persons responsible; description and location of the structure to be demolished/altered, including size, age and prior use; approximate amount of friable asbestos; scheduled starting and completion dates of demolition or abatement; nature of planned work and methods to be employed; procedures to be employed to meet SCAQMD requirements; and the name and location of the waste disposal site to be used. In accordance with this regulation, a survey must be conducted to identify asbestos-containing materials prior to demolition. Containment must be provided during work that disturbs asbestos-containing materials and there must be no visible emissions to the outside air from demolition operations that involve asbestos-containing materials. The contractor must use methods specified in the regulations for control of emissions, such as wetting of exposed asbestos-containing materials; use of a high-efficiency particulate air (HEPA) filter within an exhaust, ventilation, and control system; or removal in an entirely contained chute. In addition, asbestos-containing materials must be removed prior to demolition and the work site must be cleaned of asbestos materials.

Contractors who conduct asbestos related work activities (including abatement) in buildings and structures must follow State regulations contained in 8 CCR Section 1529 and 8 CCR Sections 341.6 through 341.14 where the work would involve 100 square feet or more of asbestos-containing material. Specifically, under 8 CCR Section 341.6, Cal OSHA must be notified of asbestos-related work activities to be performed. Contractors must be licensed as an Asbestos Qualified Contractor by the Contractors Licensing Board of the State of California, and registered as such with Cal OSHA. In addition, a one-time report of the use of carcinogens must be made to Cal OSHA under 8 CCR Chapter 4, Section 5203. The owner of the property where abatement is to occur must have a Hazardous Waste Generator Number assigned by and registered with the DTSC. The contractor and hauler of the material are required to file a Hazardous Waste Manifest that details the hauling of the material from the site and its disposal. Title 8 CCR Section 1529(b) defines asbestos-containing material as any material that contains more than one percent asbestos.

PCBs and Universal Wastes

Regulatory requirements for disposal of PCB wastes are set forth in 40 CFR Part 761. These requirements include identifying and labeling PCB-contaminated equipment prior to demolition, completion of a Notification of PCB Activity Form, obtaining a PCB disposal identification number, and disposing of waste at an approved PCB waste disposer under hazardous waste manifests. Regulatory requirements for disposal of universal wastes, such as mercury-containing non-incandescent lamps, batteries and other hazardous wastes commonly found in building components and equipment, are set forth in the

Department of Toxic Substance Control's Universal Waste Rule (22 CCR Sections 66261.9 and 66273.1 thru 66273.90). These requirements include guidelines for removing and recycling or disposing of such wastes.

Some demolition and/or rehabilitation of existing structures is anticipated at all of the SBA well sites and possibly some of the WBA well sites; it has not yet been determined if any of these existing structures were constructed using asbestos-containing materials. In addition, upgrades to existing transformers are anticipated at some well sites. There are no existing structures at the CRRF or WBA treatment facility sites; therefore, hazardous building materials would not be encountered at these sites. Although significant levels of hazardous building materials are not anticipated to be present at the well sites, the potential to encounter these materials does exist.

4.9.2.3 Airports

The nearest public airports to the project sites are the Bermuda Dunes Executive Airport and the Jacqueline Cochran Regional Airport. Table 4.9-2 identifies the project sites that are located within two miles of these airports. These airports are described below.

TABLE 4.9-2: PROJECT SITES WITHIN TWO MILES OF AN AIRPORT	
Well	Distance (miles)
Bermuda Dunes Executive Airport	
Palm Desert	
SBA 4720-1	1.4
SBA 4721-1	1.8
SBA 4722-1	2.0
SBA 5657-2	1.4
La Quinta	
SBA 5717-1	1.4
SBA 5718-1	0.7
Indio	
SBA 5719-1	0.7
Jacqueline Cochran Regional Airport	
Thermal	
SBA 6805-1	0.5
SBA 6808-1	0.7

Bermuda Dunes Executive Airport

Bermuda Dunes Executive Airport is located at 79880 Avenue 42 in the unincorporated community of Bermuda Dunes. Bermuda Dunes is a public use airport, and is owned by the Bermuda Dunes Airport Corporation. The airport has two runways and covers an area of approximately 87 acres. The Bermuda Dunes airport is surrounded by the cities of Indian Wells, Palm Desert, La Quinta and Indio.

Jacqueline Cochran Regional Airport

Jacqueline Cochran Regional Airport is located at 56-850 Higgins Drive in the unincorporated community of Thermal. Jacqueline Cochran is a public airport, owned and operated by Riverside County. The

airport has two runways and covers an area of approximately 1,850 acres. The Jacqueline Cochran Regional Airport is surrounded by the unincorporated communities of Thermal, Coachella, Valerie, and Vista Santa Rosa.

4.9.2.4 Fire Hazards

The California Department of Forestry and Fire Protection (CAL FIRE) identifies fire hazard areas and fire-threatened communities at the wildland urban interface. Classification of a zone as moderate, high or very high fire hazard is based on a combination of how a fire will behave and the probability of flames and embers threatening buildings. Within the project area, CAL FIRE has identified various classifications of fire hazard severity. As shown in Table 4.9-1, the project sites that are located in Desert Hot Springs have a Moderate fire hazard classification; project sites in the cities of Palm Desert, Rancho Mirage, La Quinta and Indio are classified as Urban Unzoned; and project sites in Thermal are classified as Non-Wildland/Non-Urbanized.

4.9.3 REGULATORY FRAMEWORK

4.9.3.1 Federal

U.S. Department of Transportation Hazardous Materials Transport Act (49 USC 5101)

The U.S. Department of Transportation, in conjunction with the U.S. Environmental Protection Agency (USEPA), is responsible for enforcement and implementation of federal laws and regulations pertaining to transportation of hazardous materials. The Hazardous Materials Transportation Act of 1974 directs the U.S. Department of Transportation to establish criteria and regulations regarding the safe storage and transportation of hazardous materials. CFR 49, 171–180, regulates the transportation of hazardous materials, types of material defined as hazardous, and the marking of vehicles transporting hazardous materials.

Federal Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) gives the USEPA the authority to control hazardous waste from "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Title 40, Code of Federal Regulations

Title 40 Code of Federal Regulations (40 CFR) Part 264 "Standards for Owners of Hazardous Waste Treatment, Storage and Disposal Facilities," establishes minimum national standards which define the acceptable management of hazardous waste. This standard applies to owners and operators of all facilities which treat, store, or dispose of hazardous waste.

Federal Aviation Administration

The Federal Aviation Administration (FAA) has jurisdiction over airspace in the United States. The Federal Aviation Regulations (FAR) provide criteria for evaluating the potential effects of obstructions on the safe and efficient use of navigable airspace within approximately two to three miles of airport runways. The FAA requires notification of proposed construction projects that meet specific height

requirements. As noted above, the Bermuda Dunes Executive Airport and Jacqueline Cochran Regional Airport are in the vicinity of some of the project sites.

4.9.3.2 State

California Occupational Safety and Health Act – California Labor Code, Section 6300 et seq.

The California Occupational Safety and Health Act of 1973 addresses California employee working conditions, enables the enforcement of workplace standards, and provides for advancements in the field of occupational health and safety. The Act also created the California Occupational Safety and Health Administration (Cal OSHA), the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal OSHA's standards are generally more stringent than federal regulations. Under the former, the employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure. The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings. At sites known or suspected to be contaminated by hazardous materials, workers must have training in hazardous materials operations and a Site Health and Safety Plan must be prepared. The Health and Safety Plan establishes policies and procedures to protect workers and the public from exposure to potential hazards at the contaminated site.

California Health and Safety Code, Title 22, Chapter 20 Hazardous Waste Permit Program

Title 22, Chapter 20 Hazardous Waste Permit Program, establishes provisions for the issuance and administration of hazardous waste permits pursuant to the Health and Safety Code. Regulations cover basic permitting requirements, such as application requirements, standard permit conditions, and monitoring and reporting requirements. Hazardous Waste Permits are required for the transfer, treatment, storage, and disposal of any waste which is hazardous waste pursuant to section 66261.3. Owners and operators of certain facilities require hazardous waste facility permits as well as permits under other programs for certain aspects of the facility operation.

California Health and Safety Code, Division 20, Chapter 6.5, Hazardous Waste Control Law

The California Health and Safety Code, Division 20, Chapter 6.5, Hazardous Waste Control Law regulates the safe disposal of hazardous wastes generated within the State of California. The Law identifies proper guidance for the handling, storage, use, and disposal of hazardous wastes. Additionally, the Hazardous Waste Control Law identifies the need for proper landfill disposal in order to reduce long-term threats to public health and to air and water quality. Included in this is the preparation of a Hazardous Materials Business Plans (HMBPs) (Chapter 6.95 of the Health and Safety Code, Sections 25501 et seq.) which is required of businesses that handle specified quantities of chemicals are required to submit a HMBP in accordance with community right-to-know laws. This plan allows local agencies to plan appropriately for a chemical release, fire, or other incidents. Hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; dictate the management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal and transportation; and identify hazardous wastes that cannot be disposed of in landfills.

California Code of Regulations, Division 4.5, Title 22

Hazardous Waste Generators pursuant to the California Health and Safety Code and Title 22, California Code of Regulations, regulates any person, by site, whose act or process produces hazardous waste or whose act first causes a hazardous waste to become subject to regulation. The Regulation requires an ID

number, regulates accumulation of on-site hazardous materials, shipping and transport, emergency procedures, and worker training.

California Code Title 23, Chapter 15 Discharges of Hazardous Waste to Land Section 2511(b)

California Code Title 23, Chapter 15 Discharges of Hazardous Waste to Land Section 2511(b) pertains to water quality aspects of waste discharge to land. The regulation establishes waste and site classifications and waste management requirements for waste treatment, storage, or disposal in landfills, surface impoundments, waste piles, and land treatment facilities. Requirements are minimum standards for proper management of each waste category, and allow regional water boards to impose more stringent requirements to accommodate regional and site-specific conditions. In addition, the requirements of California Code Title 23, Chapter 15 apply to cleanup and abatement actions for unregulated discharges to land of hazardous waste (e.g. spills).

License to Transport Hazardous Materials – California Vehicle Code, Section 32000.5 et seq.

Caltrans regulates hazardous materials transportation on all interstate roads. Within California, the State agencies with primary responsibility for enforcing federal and State regulations and for responding to transportation emergencies are the California Highway Patrol (CHP) and Caltrans. Together, federal and State agencies determine driver-training requirements, load labeling procedures, and container specifications for vehicles transporting hazardous materials.

California Fire Code, Title 24, Part 9, Chapters 33, 50 and 57

The 2013 California Fire Code (CFC), written by the California Building Standards Commission, is based on the 2012 International Fire Code. The International Fire Code (IFC) is a model code that regulates minimum fire safety requirements for new and existing buildings, facilities, storage and processes. The IFC addresses fire prevention, fire protection, life safety, and safe storage and use of hazardous materials in new and existing buildings, facilities, and processes.

Uniform Fire Code

The Uniform Fire Code, Article 80 (Section 80.103 of the Uniform Fire Code as adopted by the State Fire Marshal pursuant to Health and Safety Code Section 13143.9), includes specific requirements for the safe storage and handling of hazardous materials. These requirements are intended to reduce the potential for a release of hazardous materials and for mixing of incompatible chemicals, and specify the following specific design features to reduce the potential for a release of hazardous materials that could affect public health or the environment:

- Separation of incompatible materials with a noncombustible partition;
- Spill control in all storage, handling, and dispensing areas; and
- Separate secondary containment for each chemical storage system. The secondary containment must hold the entire contents of the tank, plus the volume of water needed to supply the fire suppression system for a period of 20 minutes in the event of catastrophic spill.

Emergency Response

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local government and private entities. Responding to hazardous materials incidents is one part of this plan. The plan is administered by the State Office of Emergency Services, which coordinates the responses of other agencies. The Riverside County Environmental Health Department's Emergency Response Team provides the capabilities for hazardous materials emergencies within the project area. Emergency Response Team members respond and work with local fire and police agencies,

California Highway Patrol, California Department of Fish and Wildlife, California Department of Transportation, U.S. Coast Guard and National Marine Sanctuary personnel.

CAL FIRE

CAL FIRE maps identify fire hazard severity zones in the state and local responsibility areas. Wildland fire protection in California is the responsibility of either the state, local government, or the federal government. A Designated State Responsibility Area (SRA) is the area "in which the financial responsibility of preventing and suppressing fires is primarily the responsibility of the state" (Public Resources Code Section 4125). Local responsibility areas (LRA) in the project study area include incorporated cities, cultivated agricultural lands, and portions of the desert. LRA fire protection is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to local government.

4.9.3.3 Regional and Local

Underground Storage Tanks

Federal and state laws governing UST specify requirements for permitting, monitoring, closure and cleanup of these facilities (CFR 208-281; CCR Title 23). Regulations set forth construction and monitoring standards for existing tanks, release reporting requirements, and closure requirements. The Riverside County Environmental Health Department's Local Oversight Program also has regulatory authority for permitting, inspection and removal of underground storage tanks. A closure plan for each underground storage tank to be removed must be submitted to the County prior to tank removal. Upon approval of the underground storage tank closure plan, the County will issue a permit, oversee removal of the underground storage tank, require additional subsurface sampling if necessary, and issue a site closure letter when the appropriate removal and/or remediation has been completed. No USTs are proposed as part of the project; however, these regulations are relevant because of the location of existing or former USTs in the vicinity of some of the project sites.

Regional Water Quality Control Board (RWQCB)

The Colorado River Basin RWQCB regulates discharges and releases to surface and groundwater in the project area. The RWQCB generally oversees cases involving groundwater contamination. Within the Colorado River Basin RWQCB, the County of Riverside-Health Services Agency (CRHSA) handles most leaking underground storage tank (LUST) cases, so the RWQCB may oversee cases involving other groundwater contaminants; i.e. Spills, Leaks, Incidents, and Cleanup (SLIC) cases. In the case of spills at a project site, the responsible party would notify the CRHSA, and then a lead regulator (either the CRHSA, RWQCB or DTSC) would be determined.

County of Riverside Department of Public Health (CRDPH)

The CRDPH, which includes the Riverside County Department of Environmental Health (RCDEH), serves as the County Local Oversight Program within the County for hazardous materials and soil and groundwater contamination. This agency oversees several programs related to hazardous materials and releases. In general, LUST cases affecting groundwater within the project area are handled by the CRDPH. Other groundwater contamination cases may also be handled by the CRDPH, but can also be deferred to the RWQCB or DTSC, depending on the responsible party. The Hazardous Materials Division of the CRDPH oversees hazardous materials permitting, hazardous materials oversight, and hazardous materials facility closures.

Riverside County Fire Department Office of Emergency Services (OES)

The Riverside County OES is the lead agency in fulfilling the County's responsibility under the California Emergency Services Act (Chapter 7 of Division 1 of Title 2 of the CA Government Code) and also serves as the Operational Area Coordinator for Riverside County under the Standardized Emergency Management System (CA Government Code 8605). The Riverside County OES has established an Emergency Operating Plan (EOP) to address a spectrum of issues ranging from the minor incidents to disasters. As part of the Riverside County OEP, all departments and agencies of the County must be prepared to promptly and effectively respond to any foreseeable emergency. Similarly, Riverside County has developed the 2012 County of Riverside Multi Jurisdiction Hazard Mitigation Plan to identify the County's hazards, review and assess past disaster occurrences, estimate the probability of future occurrences, and set goals to mitigate potential risks to reduce or eliminate long-term risk to people and property from natural and man-made hazards.

In addition to the County-wide emergency plans, the cities of Desert Hot Springs and La Quinta have also developed EOPs, and all jurisdictions where project facilities are located have developed Community Emergency Response Team (CERT) Programs. These programs are educational and organizational in nature, and provide training to community members in basic disaster response skills.

CVWD Emergency Preparedness/Response Plan

CVWD has emergency preparedness steps to ensure safe drinking water in the event of a water emergency. As discussed in the Coachella Valley Water Management Plan, the Emergency Response Plan has been performed in compliance with the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 and in accordance with the USEPA Office of Water Planning Guidelines. The plan is routinely updated to assure compliance. The Emergency Response Plan addresses events like natural disasters, such as an earthquake or severe flooding, where CVWD has provided steps in case the water delivery system is compromised.

4.9.4 IMPACTS AND MITIGATION MEASURES

4.9.4.1 Significance Criteria

Based on Appendix G of the State CEQA Guidelines, a project would have a significant impact relating to hazards and hazardous materials if it would:

- a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- b. 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.
- c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

- d. 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.
- e. 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.
- f. 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.
- g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- h. 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.

4.9.4.2 Approach to Analysis

This impact analysis addresses the potential to encounter hazardous substances in soil and groundwater during project construction and/or operation, as well as potential use and disposal of hazardous materials or waste during operation and maintenance of the proposed project. The evaluation was performed in light of current conditions at the project sites, information in environmental databases, applicable regulations and guidelines, and proposed construction and operational activities. Relationships and proximities of project sites to schools, airports, and fire hazard zones were also identified. The above significance criteria are used in this section as the basis for determining the significance of impacts related to hazards and hazardous materials for both construction and operation. If necessary, mitigation measures are proposed to reduce significant impacts to a less than significant level.

Areas of No Project Impact

As explained below, the proposed project would not result in impacts related to five of the above-listed significance criteria. These significance criteria are not discussed further in the impact analysis for the following reasons:

- c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

The project would not result in hazardous emissions within 0.25 miles of an existing or proposed school. No schools have been identified within 0.25 miles of any proposed project facilities. Therefore, this criterion is not applicable to the project and is not discussed further.

- d. 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, create a significant hazard to the public or the environment.

According to the environmental database review, project facility sites are not included on any lists of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, this criterion is not applicable to the project and is not discussed further.

- f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Riverside County and the cities of Desert Hot Springs and La Quinta have developed EOPs, and all jurisdictions where project facilities are located have developed CERT Programs. The emergency response plans do not designate specific evacuation routes or sites within the cities. Therefore, neither construction nor operation, including pipeline installations that would extend into adjacent roadways, would impair implementation of or physically interfere with any adopted emergency response or evacuation plan. Therefore, there are no impacts under this criterion and it is not discussed further.

- g. 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.

Proposed project facilities would not be located within the vicinity of a private airstrip. Therefore, this significance criterion is not applicable to construction or operation of the project, and it is not discussed further.

- h. 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.

The proposed project would not increase the risk of wildland fire during construction or operations. Construction and operation of the project would not introduce potentially flammable activities in fire-prone areas. As shown in Table 4.9-1, the project sites that are located in Desert Hot Springs have a Moderate fire hazard classification; project sites in the cities of Palm Desert, Rancho Mirage, La Quinta and Indio are classified as Urban Unzoned; and project sites in Thermal are classified as Non-Wildland/Non-Urbanized. Project facilities that would be located within moderate fire hazard areas consist of underground water pipelines, existing well sites and the La Quinta WBA Water Treatment Facility. Implementation of these project facilities would not increase the risk of, or create the potential for fires to occur. Accordingly, there would be no increased risk of wildland fire hazards from project operations. Additional facility sites located on Urban Unzoned and Non-Wildland/Non-Urbanized are designated as "Non-Fire Hazard" (CAL FIRE 2008). Therefore, no impacts would occur under this criterion and it is not discussed further.

4.9.4.3 Construction Impacts and Mitigation Measures

Impact HAZ-1: The project would not create a significant hazard to the public or the environment related to transport, use, or disposal of hazardous materials during construction. (Less than Significant)

Project construction activities would include the use of hazardous materials such as fuels, lubricants, paints, and solvents. Numerous laws and regulations ensure the safe transportation, use, storage, and disposal of hazardous materials (see Section 4.9.3). Routine transport of hazardous materials to and from proposed facility sites could result in an incremental increase in the potential for accidents; however, Caltrans and CHP regulate the transportation of hazardous materials and wastes, including container types and packaging requirements, as well as licensing and training for truck operators, chemical handlers, and hazardous waste haulers. Worker safety regulations cover hazards related to the prevention of exposure to hazardous materials and a release to the environment from hazardous materials use. Regulations and criteria for the disposal of hazardous materials mandate disposal at an appropriate landfill. Cal OSHA also enforces hazard communication program regulations, which contain worker safety training and hazard information requirements, such as procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees. Therefore, because CVWD and its contractors would be required to comply with hazardous materials laws and regulations covering the transport, use, and disposal of hazardous materials, the impacts associated with this criterion would be less than significant.

Impact HAZ-2: The Project would result in a substantial adverse effect related to reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment during construction. (Less than Significant with Mitigation)

There are three types of accidental releases that could occur during construction. Hazardous materials are routinely used during construction activities and there is a potential for an accidental release associated with this routine use during construction. In addition, construction involves excavation that could encounter contaminated soil or groundwater that are already present at the construction site. Based on the “case closed” regulatory status of environmental cases within 0.25 miles of project sites, these release sites are not anticipated to affect project construction. Similarly, contaminated groundwater is not anticipated to be encountered during construction. The third type of accidental release involves demolition of structures that may have been construction with hazardous building materials such as asbestos.

Accidental Release during Construction

Hazardous materials assumed by this analysis to be used during construction activities include fuels, lubricants, paints, and solvents. Storage and use of hazardous materials at construction sites and staging areas could potentially result in the accidental release of small quantities of hazardous materials, which could pose a risk to construction workers and the environment, such as degradation of soil and groundwater quality and/or surface water quality. This is considered a potentially significant impact.

Potential impacts from an accidental release of hazardous materials associated with construction at all the above sites would be reduced to a less than significant level with implementation of Mitigation Measures M-HAZ-2a (Preconstruction Hazardous Materials Assessment), M-HAZ-2b (Health and Safety Plan), and M-HAZ-2c (Hazardous Materials Management Plan). These measures are described below and require: (1) a preconstruction hazardous materials assessment within three months of construction to identify new hazardous materials sites or substantial changes in the extent of contamination at known groundwater

contamination sites that could affect subsurface conditions at proposed well facility sites; (2) preparation of a site health and safety plan to protect construction worker health and safety; and (3) a hazardous materials management plan to ensure that appropriate procedures are followed in the event that hazardous materials, including unanticipated hazardous materials, are encountered during project construction, and to ensure that hazardous materials are transported and disposed of in a safe and lawful manner.

Mitigation Measure M-HZ-2a: Preconstruction Hazardous Materials Assessment

Within three months prior to construction, CVWD shall retain a qualified environmental professional to update the Phase I Environmental Site Assessment (ESA) prepared for this DEIR, to determine if any conditions identified in the Phase I ESA have changed. Should the update indicate a high likelihood of encountering contamination at the proposed project sites, follow-up sampling shall be conducted to characterize soil and groundwater quality prior to construction to provide necessary data for the site health and safety plan (Mitigation Measure M-HAZ-2b) and hazardous materials management plan (Mitigation Measure M-HAZ-2c). If needed, site investigations or remedial activities shall be performed at project sites in accordance with applicable laws and regulations.

Mitigation Measure M-HAZ-2b: Health and Safety Plan

The contractor shall, prior to construction, prepare a site-specific health and safety plan in accordance with federal OSHA regulations (29 CFR 1910.120) and Cal OSHA regulations (8 CCR Title 8, Section 5192) to address worker health and safety issues during construction. The health and safety plan shall identify the potentially present chemicals, health and safety hazards associated with those chemicals, all required measures to protect construction workers and the general public from exposure to harmful levels of any chemicals identified at the site (including engineering controls, monitoring, and security measures to prevent unauthorized entry to the work area), appropriate personal protective equipment, and emergency response procedures. The health and safety plan shall designate qualified individuals responsible for implementing the plan and for directing subsequent procedures in the event that unanticipated contamination is encountered.

Mitigation Measure M-HAZ-2c: Hazardous Materials Management Plan

The contractor shall, prior to construction, prepare a hazardous materials management plan that specifies the method for handling and disposal of both chemical products and hazardous materials during construction and contaminated soil and groundwater, should any be encountered during construction. Contract specifications shall mandate full compliance with all applicable local, State, and federal regulations related to identifying, transporting, and disposing of hazardous materials, including hazardous building materials (i.e., asbestos containing materials, lead-based paint, and electrical equipment) and any hazardous wastes encountered in excavated soil or groundwater. The contractor shall provide CVWD with copies of hazardous waste manifests documenting that disposal of all hazardous materials has been performed in accordance with the law.

If contaminated soil or groundwater is encountered, CVWD shall require the construction contractor to prepare and implement a construction Soil and Groundwater Management Plan. The contractor shall submit the Plan to CVWD and the Riverside County Department of Health

Services, Groundwater Protection Program, for review and approval. Elements of the plan shall include:

- Measures to address hazardous materials and other worker health and safety issues during construction, including the specific level of protection required for construction workers.
- Provisions for excavation of soil, stockpiling, dust, and odor control measures.
- Measures to prevent off-site migration of contaminated soil and groundwater.
- Location and final disposition of all soil and groundwater removed from the site.
- All other necessary procedures to ensure that excavated materials are stored, managed, and disposed of in a manner that is protective of human health and in accordance with applicable laws and regulations.

Hazardous Building Materials Release

WBA well 3410-1, the ID8 WBA Water Treatment Facility and the CRRF would not result in exposure of construction workers or the public to hazardous building materials because building demolition would not occur at any of these sites. WBA well 3410-1 is an existing site where no demolition is proposed. The ID8 WBA Water Treatment Facility and CRRF are new sites which do not require demolition to construct. Therefore, there would be no impact at these sites relative to the potential to 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 from hazardous building materials.

Demolition activities would take place to varying degrees at all SBA and WBA well sites (with the exception of WBA 3410-1). SBA well site demolition activities include the demolition of asphalt paving, electrical buildings, chlorine buildings, and eye wash stations. Additionally, several SBA well sites would have portions of screening walls that may be demolished in order to accommodate the installation of new gates. In locations where the demolition of buildings on site would occur, these building would be rebuilt in a different location on the well site. WBA wells 6723-1, 6724-1, 6725-1, and 3409-2 require the demolition of electrical and chlorine buildings. The eye wash and associated pipe would be demolished at WBA well 3408-1.

Lead-based paint is not anticipated to be present in piping or within any buildings located on well sites. In addition, asbestos-containing materials are not anticipated to be present in the roofing, flooring, ceiling, and piping (i.e., transit pipe and fittings) at the sites. PCB-containing electrical equipment, fluorescent light ballast containing DEHP, and fluorescent light tubes containing mercury could be present in electrical equipment at well sites.

Potential impacts associated with encountering hazardous materials during construction at all the above sites would be reduced to a less than significant level with implementation of Mitigation Measures M-HAZ-2d (Lead Content Sampling), and M-HAZ-2e (Asbestos Sampling).

Mitigation Measure M-HAZ-2d: Lead Content Sampling

CVWD or its contractor shall sample the lead content in the paint at demolition sites to determine whether the Lead in Construction Standard applies. If lead is detected, the construction contractor shall comply with the standard. The standard requires that a contractor develop and implement a lead compliance plan, which must include a description of the activities that could emit lead, methods that would be used to meet the safe work practices, Cal

OSHA notification requirements, and a plan to protect workers from lead exposure during construction activities. Therefore, compliance with the regulations and procedures already established would ensure that potential impacts due to disturbance of lead-based paint during demolition would be less than significant.

Mitigation Measure M-HAZ-2e: Asbestos Sampling

In accordance with SCAQMD Rule 1403, Asbestos Emissions from Demolition/Renovation Activities, a survey must be conducted to identify asbestos-containing materials prior to demolition. If asbestos is discovered, all of the following requirements must be met.

- The SCAQMD must be notified 10 days in advance of any proposed demolition or abatement work.
- Containment must be provided during work that disturbs asbestos-containing materials and there must be no visible emissions to the outside air from demolition operations that involve asbestos-containing materials.
- The contractor must use methods specified in the regulations for control of emissions, such as wetting of exposed asbestos-containing materials; use of a high-efficiency particulate air (HEPA) filter within an exhaust, ventilation and control system; or removal in an entirely contained chute.
- The contractor and hauler of the material are required to file a Hazardous Waste Manifest that details the hauling of the material from the site and its disposal.

Compliance with the required handling and disposal procedures established by the State of California would ensure that potential impacts related to reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment during construction would be less than significant.

4.9.4.4 Operation Impacts and Mitigation

Impact HAZ-3: The project would not create a hazard to the public or environment from the routine transport, use, or disposal of hazardous materials or accidental release of hazardous materials during operation. (Less than Significant)

WBA Well Sites

WBA well sites would not store or use chemicals for disinfection or water treatment and therefore, accidental releases from stored chemicals would not occur. However, emergency generators would be installed at WBA wells 6723-1 and 6724-1. Water pumped at WBA well sites would be sent directly to WBA treatment facilities and would not require the onsite disinfection and treatment previously required for potable water distribution. WBA well 6723-1 would be the only site to retain the existing calcium hypochlorite storage and chemical feeder system. Calcium hypochlorite storage and the chemical feeder system would be required to blend water with the potable supply at WBA 6723-1. The proposed emergency generators for WBA wells 6723-1 and 6724-1 would be automatically exercised every week for five minutes at a time, and would use diesel fuel to operate. Generators located at these two wells would be required to meet all local and state permitting requirements. Therefore, no significant impact would occur relative to transport, use, or disposal of hazardous materials or an accidental release during operation of WBA well sites.

SBA Well Sites

The SBA resin treatment process for individual well sites is described in Chapter 3 Project Description, Section 3.4.2.1. To accomplish the treatment process, proposed facilities at each SBA site include chemical storage in the form of two resin treatment vessels and chemical disinfection facilities. The resin would be transported between the SBA well sites and the CRRF in specially designed trailer tanks. The resin is not considered a hazardous material, and the ion exchange treatment process does not result in the creation of hazardous materials at these well sites.

CVWD uses calcium hypochlorite tablets for chlorine dosing at well sites, and this method would continue to be used after the SBA treatment systems are installed. The calcium hypochlorite tablets would be dispensed through a tablet feeder after the water exits the resin vessel before blending with the bypass water. Tablets are stored in small pails within a structure onsite in accordance with applicable regulations.

As described above, treatment at SBA wells would not involve regular transportation of hazardous materials. However, Caltrans and the CHP strictly regulate container types and packaging requirements, as well as licensing and training for truck operators, and chemical handlers. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are the responsibility of CHP, which conducts regular inspections of licensed transporters to assure regulatory compliance. Caltrans has emergency chemical spill identification teams at locations throughout the State that can respond quickly in the event of a spill. The Uniform Fire Code, Article 80, includes specific requirements for the safe storage and handling of chemicals. These requirements are intended to reduce the potential for an accidental release and for mixing of incompatible chemicals.

Design of chemical storage facilities at SBA well sites would comply with the current Uniform Fire Code requirements and other applicable federal, State, and local regulations, including design features (including noncombustible partitions, spill control features and separate secondary containment) that would reduce the potential for a release of chemicals that could affect public health or the environment. Therefore, because CVWD would be required to comply with these laws and regulations that are designed to protect the public against potential impacts associated with the use of chemicals and accidental chemical releases, and the use of SBA resin is not considered a hazardous material, potential hazardous materials impacts during operation would be less than significant.

WBA Treatment Facilities

Similar to the SBA resin, the WBA ion exchange resin will be manufactured by a resin vendor, and then delivered to and stored at the WBA treatment facility sites. The WBA resin is not classified as a hazardous material. In addition to the resin, various chemicals required for the WBA treatment process would also be used and stored at the treatment facilities, including carbon dioxide, anti-scalant, sodium hydroxide, and calcium hypochlorite. Table 4.9-3 identifies the anticipated use and storage chemicals at the WBA treatment facility sites. After the initial delivery of chemicals for start-up of operations, deliveries would be made to each site monthly.

	ID8 WBA Site	La Quinta WBA Site
Carbon Dioxide	50 Ton Tank	100 Ton Tank
Delivery Load	20 ton delivery trucks	
Anti-Scalant	2,000 gallons	4,000 gallons
Delivery Load	Split load from 4,500 gallon truck (approximate)	
Sodium Hydroxide (50%)	2,000 gallons	3,000 gallons
Delivery Load	Split load from 3,500 gallon truck (approximate)	

WBA resin would be disposed once every two years. The spent resin is classified as non-RCRA hazardous low level radioactive waste (LLRW) due to total chromium concentrations exceeding the California Total Threshold Limit. Waste from WBA treatment facilities would be transported to EnergySolutions' Clive, Utah Landfill for disposal.

As noted above, Caltrans and the CHP strictly regulate the transportation of hazardous materials and wastes, including container types and packaging requirements, as well as licensing and training for truck operators, chemical handlers, and hazardous waste haulers. CVWD would be required to comply with hazardous materials laws and regulations covering the transport, use, and disposal of hazardous materials.

The Uniform Fire Code, Article 80, includes specific requirements for the safe storage and handling of chemicals. These requirements are intended to reduce the potential for an accidental release and for mixing of incompatible chemicals. Design of chemical storage facilities at WBA treatment facilities would comply with the current Uniform Fire Code requirements and other applicable federal, State, and local regulations, including design features (including noncombustible partitions, spill control features and separate secondary containment) that would reduce the potential for a release of hazardous materials that could affect public health or the environment. CVWD would be required by the Riverside County Health Department to prepare an HMBP for WBA treatment facilities that store hazardous chemicals (see *M-HAZ-2c: Hazardous Materials Management Plan*). In addition, CVWD would be required to incorporate legally mandated design features into the facilities and prepare HMBPs for chemical storage. Therefore, because CVWD would be required to comply with these laws and regulations that are designed to protect the public against potential impacts associated with the use of chemicals and accidental chemical releases, potential hazardous materials impacts during operation would be less than significant.

CRRF

As described in Chapter 3 Project Description, Section 3.4.3.1, the resin regeneration process would occur within an enclosed building. SBA resin would be transported between the SBA treatment facilities at individual well sites and the CRRF site in tank trailers which would be able to drive into the building to load and unload resin. Inside the CRRF building, the spent resin would be transferred from the tanks to resin regeneration vessels. Each vessel is designed to regenerate 600 cubic feet of spent SBA resin at a time.

Within the CRRF, spent brine would be treated using an electrocoagulation (EC) or chemical coagulation (CC) process. Both processes result in the same product by reducing chromium-6 to chromium-3 and producing a chromium-3 and iron solid precipitate. Chemicals used during the EC and CC process are identified in Tables Table 4.9-4 and 4.9-5. The resulting product is a treated brine which contains iron and chromium solids. The treated product is then transferred to a filter press for the dewatering process to separate solids and treated brine. The portion of the brine that can be recycled without additional treatment is returned to the regeneration process for reuse. Iron and chromium solids generated from the process would result in approximately 3,900 pounds of waste per day. Iron and chromium solids are classified as non-RCRA hazardous waste due to total chromium concentrations exceeding the California Total Threshold Limit Concentration (TTLC). Iron and chromium solids would be disposed of every nine days, or 19 times per year, via hauling to EnergySolutions' Clive, Utah Landfill. Disposal methods would meet CalTrans non-RCRA hazardous LLRW for the iron solids.

TABLE 4.9-4: CRRF CHEMICALS USED REGULARLY	
Sodium Hypochlorite, 5%	For tank truck and feedwater disinfection
Monthly Usage	70 gallons
Yearly Usage	825 gallons
Storage Provided	One duty and one spare tote
Delivery Load	300-gallon totes
Hydrochloric Acid, 15%	Electrocoagulation Blade Cleaning
Monthly Usage, gallons	500
Yearly Usage, gallons	6,000
Storage Provided	One duty and one spare tote
Delivery Method	400-gallon totes
Salt	Electrocoagulation Blade Cleaning
Monthly Usage	60 tons
Yearly Usage	720 tons
Storage Provided	One tote
Delivery Method	22 tons

TABLE 4.9-5: CRRF CHEMICALS USED FOR EMERGENCIES DURING OPERATIONS	
Sodium Bisulfite, 38%	For tank truck and feedwater dechlorination
Monthly Usage, gallons	4.0
Storage Provided	One drum
Delivery Method	55-gallon drums
Ferrous Chloride, 18-32%	For chemical coagulation process
Monthly Usage	2,100 gallons
Storage Provided	One 6,000-gallon tank
Delivery Load	Approximately 4,500 gallons
Polymer	For chemical coagulation process
Monthly Usage	1 gallons

TABLE 4.9-5: CRRF CHEMICALS USED FOR EMERGENCIES DURING OPERATIONS	
Storage Provided	One pail
Delivery Load	5-gallon pails
Sodium Hydroxide, 25%	For pH adjustment if acid is used for CC
Monthly Usage	2,500 gallons
Storage Provided	One 6,000-gallon tank
Delivery Method	Approximately 4,200 gallons
Calcium Chloride, 28-40%	For sulfate and selenium removal
Monthly Usage	7,000 gallons
Storage Provided	Two 7,500-gallon tanks
Delivery Load	Approximately 4,200 gallons

Following removal of the iron solids, the treated spent brine would be disposed as liquid to sanitary sewer or offsite, or disposed after treating the brine through crystallization or evaporation process.

If disposed of as a liquid, the treated brine and mixed waste water would be combined and disposed to a proposed new sanitary sewer pipeline that would convey wastewater from the CRRF facility to WRP-4. WRP-4 would provide secondary treatment consisting of pre-aeration ponds, aeration lagoons, polishing ponds, and disinfection. The treated brine would be discharged to the Coachella Valley Stormwater Channel (CVSC) pursuant to CVWD's current National Pollution Discharge Elimination System permit. Another option for liquid brine disposal is to haul it offsite to an approved facility. Under this option, CVWD would use its existing brine hauler for the arsenic ion exchange treatment plants (K-VAC) to perform this disposal function. Disposal via trucking the liquid brine offsite is not the preferred method and would not be employed frequently. Disposal methods would meet CalTrans policies for the non-hazardous treated brine.

In both the spent brine crystallization and evaporation methods, treated brine is dried into a non-hazardous solid. Under the spent brine crystallization process, treated brine would be dried to a solid form using crystallizers. The distillate from the brine crystallizer would be used for beneficial reuse onsite or disposed via the proposed sanitary sewer to the adjacent WRP-4 treatment facility as wastewater. Purge or rinse water from the crystallizer would be mixed with the distillate and discharged to WRP-4. The distillate would undergo secondary treatment in the WRP-4 before being discharged to the CVSC. The spent brine crystallization process generates 3.5 tons of salt cake per regeneration, and would be hauled to Class II landfill disposal every five operation days, or 39 times a year. The crystallization process results in a non-hazardous salt cake and may contain below-threshold limits of the following constituents: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, zinc, thorium, and uranium. Crystallization waste would be disposed of at the Riverside County Lamb Canyon Landfill. Disposal methods would meet CalTrans policies for the non-hazardous salt cake.

Under the evaporation process, the treated brine solution would be piped to onsite solar evaporation ponds, where the solids (sodium chloride and other trace elements) would precipitate from the water and form a solid material on the bottom of the pond; this material would be removed periodically for disposal at a landfill. Waste disposal of the evaporation solids from the evaporation process would occur every three days, or 65 times a year, with 5.6 tons of evaporation solids disposed at a time. The resulting solid from the evaporation process would contain the following constituents similar to the crystallization process, but with higher thresholds of selenium: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, zinc, thorium, and uranium. Evaporation waste would be disposed of at the Riverside County Lamb Canyon Landfill. Disposal methods would meet CalTrans policies for the non-hazardous evaporation solid.

Chemicals Used for Treatment

The SBA ion exchange resin will be manufactured by a resin vendor, and then delivered to and stored at the CRRF in 600 cubic foot vessels. In addition to the resin, various chemicals required for the SBA resin regeneration process would also be used and stored at the CRRF. Table 4.9-4 identifies chemicals which would be used on a daily basis. Table 4.9-5 identifies chemicals that are not used regularly and used only for emergency back-up treatment only. Two chemicals would be used on a daily basis: sodium hypochlorite and hydrochloric acid. Five chemicals would be used for emergency back-up treatment only: sodium bisulfite, ferrous chloride, polymer, sodium hydroxide, and calcium chloride. Chemical use for spent brine crystallization and evaporation are discussed further below. No additional chemicals would be used if the treated brine is discharged to the WRP-4 or disposed at an approved landfill.

Deliveries of chemicals would vary depending on the usage of each chemical, and available storage. Sodium hypochlorite is used on a daily basis for regeneration and requires regular deliveries. It is anticipated that sodium hypochlorite would be delivered to the CRRF approximately three times per year. Hydrochloric acid would be used for electrocoagulation blade cleaning, and it is anticipated that the CRRF would require approximately 1-2 deliveries of hydrochloric acid for electrocoagulation blade cleaning per year. The treatment process would also require 710 tons of salt per year, and would require 33 tanker truck deliveries annually. Additional chemicals including sodium bisulfite, ferrous chloride and polymer would be delivered to the CRRF site as well. These chemicals would not be delivered regularly and would be used for emergency back-up treatment only. Because CVWD would be required to comply with laws and regulations that are designed to protect the public against potential impacts associated with the use of chemicals and accidental chemical releases, potential hazardous materials impacts during operation would be less than significant.

As noted above, Caltrans and the CHP strictly regulate the transportation of hazardous materials and wastes, including container types and packaging requirements, as well as licensing and training for truck operators, chemical handlers, and hazardous waste haulers. CVWD would be required to comply with hazardous materials laws and regulations covering the transport, use, and disposal of hazardous materials.

The Uniform Fire Code, Article 80, includes specific requirements for the safe storage and handling of chemicals. These requirements are intended to reduce the potential for an

accidental release and for mixing of incompatible chemicals. Design of chemical storage facilities at the CRRF would comply with the current Uniform Fire Code requirements and other applicable federal, State, and local regulations, including design features (including noncombustible partitions, spill control features and separate secondary containment that would reduce the potential for a release of hazardous materials that could affect public health or the environment. CVWD would be required by the Riverside County Health Department to prepare an HMBP for CRRF treatment facilities that store hazardous chemicals. Waste products produced from the regeneration process are non-hazardous, and would not create a hazard to the public or environment. In addition, CVWD would be required to incorporate legally mandated design features into the facilities and prepare HMBPs for chemical storage. If the evaporation ponds are used, CVWD would be required to fit the area with bird netting. Therefore, because CVWD would be required to comply with these laws and regulations that are designed to protect the public against potential impacts associated with the use of chemicals and accidental chemical releases, potential hazardous materials impacts during operation would be less than significant.

Impact HAZ-4: The project would not result in a safety hazard for people residing or working in the vicinity of a public use airport. (Less than Significant)

SBA wells 6805-1 and 6808-1 are located within two miles of the Jacqueline Cochran Regional Airport but outside of the Jacqueline Cochran Regional Airport Master Plan Area. SBA wells 4720-1, 4721-1, 4722-1, 5657-2, 5717-1, 5718-1 and 5719-1 are located within two miles of the Bermuda Dunes Executive Airport, which does not have a master plan. Master plans are generally used to determine the long-term development plans for an airport. The heights of the well facility buildings would be designed to be below the Federal Aviation Regulation Part 77 for airport-related height limitations. Therefore, operation of the project would not result in a safety hazard for people residing or working in the vicinity of the Bermuda Dunes and Jacqueline Cochran Regional airports. This impact would be less than significant.

4.9.5 SIGNIFICANCE AFTER MITIGATION

With implementation of mitigation measures in Section 4.9.4 above, potential impacts of the project related to hazards and hazardous materials would be reduced to a less than significant level.

4.9.6 CUMULATIVE IMPACTS

The geographic scope for the analysis of cumulative impacts relating to hazards and hazardous materials consists of all project facility sites (including the well sites, treatment facility sites, and the pipelines) and an area of 0.25 miles surrounding the sites where an adverse effect could occur, including roadways. Based on lists of cumulative projects provided by relevant jurisdictions where project facilities are proposed, no cumulative projects would be located sufficiently close to proposed project facilities such that a combined impact from hazards and hazardous material would occur.

WBA well sites would not store or use chemicals for disinfection or water treatment and therefore, would not contribute to cumulative impacts related to hazards and hazardous materials. WBA ion

exchange resin delivered to and stored, and then subsequently disposed of from the ID8 and La Quinta WBA treatment facilities is non-hazardous and would not contribute to cumulative impacts in the area.

Caltrans and the CHP require compliance with specific hazardous materials transport regulations. Therefore, the current and continued use of SBA wells for pumping groundwater, and the transportation of resin to and from the CRRF, would not contribute to cumulative impacts related to hazards and hazardous materials. The resin regeneration process would take place within enclosed building, with all chemicals stored onsite meeting required regulatory standards. Such storage and use of these treatment chemicals would have less than significant impacts associated with the accidental release of chemicals, and CVWD would be required to comply with the existing and future laws and regulations governing the storage, use, transport, and disposal of such hazardous materials. These legal requirements are designed to protect the public against potential impacts associated with the use of chemicals and accidental chemical releases.

As analyzed above, the project would have less than significant hazardous impacts associated with hazards and hazardous materials during both construction and operations. CVWD and its contractors would be required to comply with the laws and regulations governing the use, transport, and disposal of hazardous materials.

Any proposed project in the vicinity project facilities would also need to comply with existing and future laws and regulations governing the hazardous materials. For this reason, the potential cumulative impact from the use, transport, and disposal of hazardous materials during construction and operation would be less than significant. As a result, there would be no significant cumulative impact associated with increased hazards relative to the use, transport, or disposal of hazardous materials during construction or operation to which the proposed project would contribute.

4.9.7 REFERENCES

California Department of Transportation. 2015. *Division of Aeronautics Planning Division*.

California Department of Transportation. 2011. *Division of Aeronautics California Airport Land Use Planning Handbook*.

California Department of Forestry and Fire Protection (CAL FIRE). 2008. *Very High Fire Hazard Severity Zones in LRA – Riverside County (West)*.

City of Desert Hot Springs. 2008. *Emergency Operations Plan*.

City of Desert Hot Springs. January 26, 2016. Personal communication (e-mail) with Planning Department to obtain list of projects in Desert Hot Springs.

City of Indio. January 7, 2016. *Community Development Status Report*.

City of La Quinta. 2010. *Emergency Operations Plan*.

City of La Quinta. January 8, 2016. Personal communication (e-mail) to obtain a list of projects within La Quinta.

- City of Palm Desert. 2015. *Non-Residential Approved Project List - April 2015 Applicant(s) Case*
- City of Palm Desert. 2015. *Number(s) Location Project Name and Description Approval*. Retrieved January 09, 2015, from <http://www.cityofpalmdesert.org/Index.aspx?page=163>
- City of Palm Desert. 2015. *Residential Approved Project List - April 2015 Applicant(s) Case*.
- City of Rancho Mirage. January 8, 2016. Development Activity Summary.
- Department of Toxic Substances Control (DTSC). 2015. *EnviroStor Database*. Database accessed 2015 at: <http://www.envirostor.dtsc.ca.gov/public/>.
- FEMA. 2015. *Community Emergency Response Team (CERT) webpage*. <https://www.fema.gov/community-emergency-response-teams>
- Hazen. June 15, 2015. *Chromium 6 Water Treatment Facilities Project Phase I Environmental Site Assessment. Memorandum*.
- Jacqueline Cochran Regional Airport. 2004. *Jacqueline Cochran Regional Airport - Master Plan*.
- Riverside County Airport Land Use Commission. 2004. *Riverside County Airport Land Use Compatibility Plan*. Volume 1.
- Riverside County. 2006. *Emergency Operations Plan*.
- Riverside County. January 8, 2016. Personal communication (e-mail) to obtain a list of projects within Thermal.
- South Coast Air Quality Management District. 1989. *AQMD Rule 1403 (PDF)*.
- State Water Resources Control Board (SWRCB). 2015. *GeoTracker Database*. Database accessed at: <http://geotracker.waterboards.ca.gov/>