4.8 HAZARDS AND HAZARDOUS MATERIALS

4.8.1 Regulatory Setting

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) gives the Environmental Protection Agency (EPA) the authority to control the generation, transportation, treatment, storage, and disposal of hazardous wastes. The RCRA framework was set in 1976, with 1986 amendments added to govern the environmental hazards that could result from underground storage tanks. The Office of Resource Conservation and Recovery (ORCR) implements RCRA (USEPA 2014b).

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known as Superfund, defines which hazardous substances or materials are designated for special consideration by the federal Environmental Protection Agency (USEPA). The substances are designated by USEPA for special consideration under the Clean Air Act, Clean Water Act, Toxic Substances Control Act, or the Resource Conservation and Recovery Act. USEPA may also designate other substances as hazardous based on at least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity) that can pose a hazard to human health (DRECP 2014).

Superfund Amendments and Reauthorization Act

The Superfund Amendments and Reauthorization Act established the Emergency Planning and Community Right-to-Know Act as the national legislation on community safety. This law helps local communities protect public health, safety, and the environment from releases of hazardous substances. In implementing provisions of the Emergency Planning and Community Right-to-Know Act, Congress requires each state to appoint a State Emergency Response Commission. Each state commission then must divide its state into Emergency Planning Districts and appoint a Local Emergency Planning Committee for each of those districts (DRECP 2014).

Hazardous Materials Release Response Plans and Inventory Act of 1985

The Hazardous Materials Release Response Plans and Inventory Act of 1985 require local agencies to develop area plans in order to respond to releases of hazardous wastes and materials. An area plan includes pre-emergency planning procedures for emergency response, coordination of affected government agencies and responsible parties, follow-up, and training. The California Hazardous Materials Incident Reporting System collects data involving the accidental release of hazardous materials. This information is reported to and maintained by the California Office of Emergency Services and California Emergency Management Agency (OES/Cal EMA).

The California Highway Patrol (CHP) and the California Department of Transportation (Caltrans) enforce federal and State regulations and respond to hazardous materials transportation emergencies. The California Highway Patrol enforces labeling and packing regulations to prevent leaks and spills of material in transit. It also provides information to cleanup crews in the event of an incident. Caltrans has emergency teams throughout California (DRECP 2014).

California Health and Safety Code

The California Health and Safety Code establishes regulations for health care services, health research, local health and safety, health care facilities, health care service plans, local administration, community facilities, and state-county partnerships, among many other categories (California Health and Safety Code 2014).

California Fire Code and Guidelines

The California Fire Code was established by the California Building Standards Commission, including collaboration with the Department of Housing and Community Development, the Division of State Architect, the Office of the State Fire Marshal, the Office of Statewide Health Planning and Development, the California Energy Commission, the California Department of Public Health, the California State Lands Commission, the Board of State and Community Corrections, and the California Building Standards Commission (CBSC). The California Fire Code and Guidelines provides guidance regarding general requirements, emergency planning and preparedness, building equipment and design features, instructions for special occupancies and operations, and hazardous materials (CBSC 2013).

California Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (Cal/OSHA) is a state agency that strives to protect workers from job-related health and safety hazards. Cal/OSHA establishes standards as well as enforcement and consultation programs (Cal/OSHA 2014). OSHA operates under the U.S. Department of Labor as part of the Occupational Safety and Health Act of 1970.

Imperial County-Mexicali Emergency Response Plan

The Binational Prevention and Emergency Response Plan between Imperial County, California, and the city of Mexicali, Baja California, was established as part of a joint contingency plan (JCP) between the United States of America (U.S.) and Mexico. The JCP was signed in 1999 and provided a foundation for collaboration for the border area and the basis for preparedness, mitigation, response, and prevention of hazardous substances along the inland international boundary. A memorandum of understanding (MOU) was developed to reinforce the jurisdictional cooperation between the two nations. The MOU with the corresponding emergency preparedness and response plan was developed with the support of USEPA (County 2005).

Imperial County Multi-Jurisdictional Hazard Mitigation Plan Update

The Imperial County Multi-Jurisdictional Hazard Mitigation Plan (MHMP) Update was developed in partnership with the County of Imperial, the City of Brawley, the City of Calexico, the City of Calipatria, the City of El Centro, the City of Holtville, the City of Imperial, the City of Westmorland, the Imperial County Irrigation District, and the Imperial County Office of Education. This document is a comprehensive update of the original MHMP. The purpose of the MHMP is to reduce death, injury, and disaster losses from both natural and human-caused disasters in Imperial County through outlining goals, strategies, and actions regarding hazard mitigation (County 2013c).

Imperial County Hazardous Materials Area Plan

The Imperial County Hazardous Materials Area Plan addresses the use, storage, and transportation of hazardous materials, as well as the generation and transportation of hazardous wastes. The Hazardous Materials Area Plan identified the federal, State, and local agencies responsible for incidents involving the release or threatened release of hazardous materials. The primary responsibility and authority lie with the Incident Commander, who activates the responses consistent with the plan. The Hazardous Materials Area Plan also identifies the existing mutual aid agreements with Yuma County and Cal Fire. Existing plans and documents that have also been taken into account include the Imperial County Emergency Operations Plan, the Multi-Jurisdictional Hazard Mitigation Plan, the Imperial Valley Hazardous Emergency Assistance Team Joint Powers Agreement, and the U.S. – Mexico Environmental Program (County 2009).

4.8.2 Existing Environmental Setting

Hazardous Materials

A hazardous material accident has the potential to occur in Imperial County due to the agricultural economy, abundance of fuel tanks, complex canal system, and the confluence of major surface arteries and rail systems. Although a hazardous material accident can occur almost anywhere, specific regions are more vulnerable. The potential for an accident is increased in regions near roadways that are frequently used for transporting hazardous material and in regions with agricultural or industrial facilities that use, store, handle, or dispose of hazardous material. Hazardous material incidents are one of the most common technological threats to public health and the environment. Incidents may occur as the result of natural disasters, human error, and/or accident.

Locations of hazardous materials are shown on Figure 4.8-1. The largest concentrations of hazardous materials and the sources of huge leaks or spills in Imperial County include the following:

- **The Santa Fe Pacific Pipeline Tank Farm:** Located in Imperial City and a component of the Santa Fe Pacific Pipeline network that delivers gasoline, diesel, and jet fuel to southern California and Arizona. The tank farm contains 16 storage tanks with a total storage capacity of approximately 10 million gallons.

- **Naval Air Facility (El Centro):** Serviced by a 4-inch fuel line directly from the Santa Fe Pacific Pipeline Tank Farm. The facility also stores one million gallons of fuel, predominantly jet fuel, in underground tanks. Munitions storage is limited to aircraft and small arms training ammunition.

- **ST Services:** Located south of the Santa Fe Pacific Pipeline Tank Farm with the capacity to store 70,000 gallons of fuel.

- **Crop Production Services:** Located in the City of Heber and serves as a chemical and fertilizer storage facility.

- **United Agriculture Products:** Handles hazardous wastes, chemicals, insecticides, and pesticides in the City of Imperial.

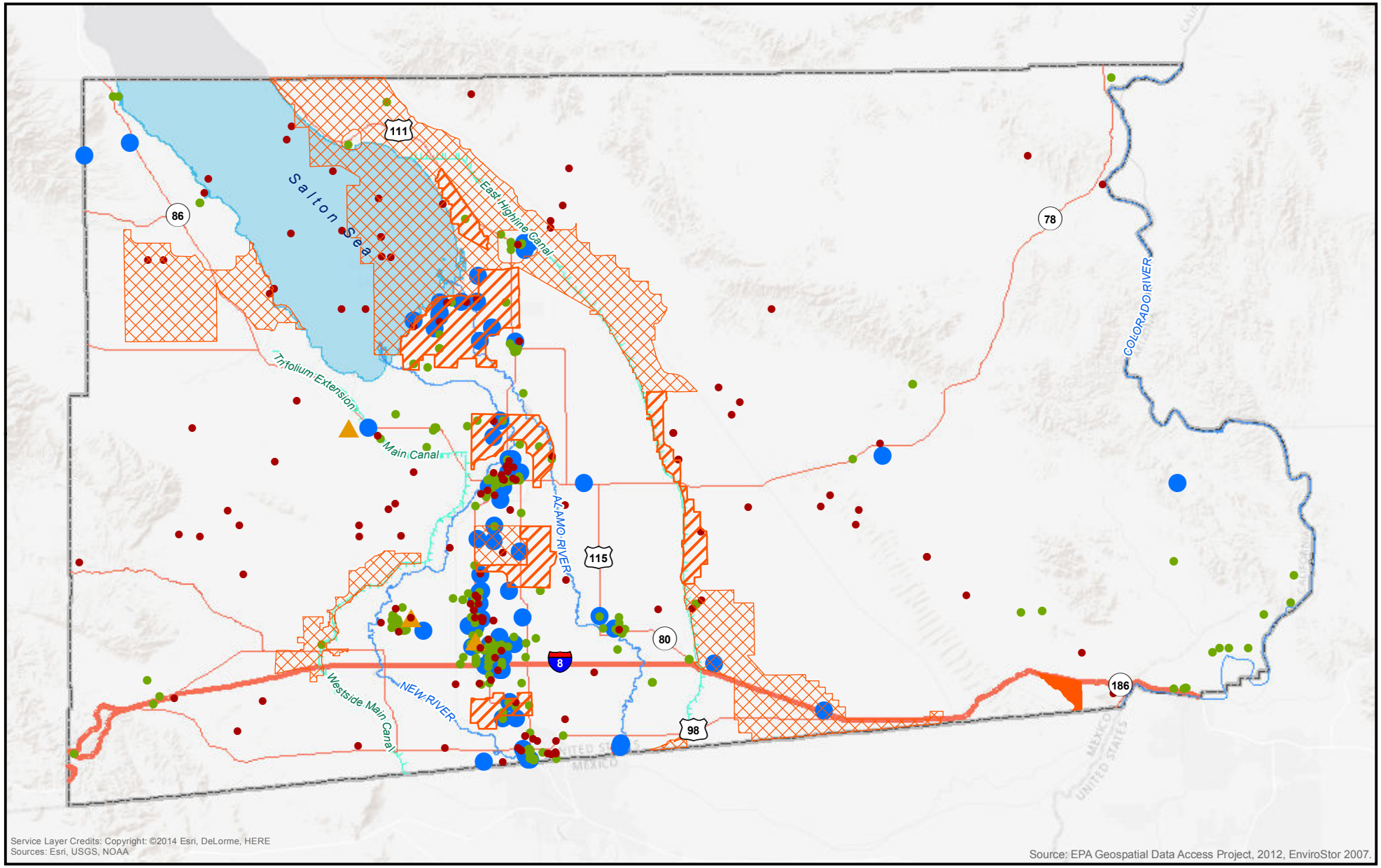
- **Puregro Company:** Handles chemicals and fertilizers in Brawley.

- **Rockwood Chemical Company:** Handles chemicals and fertilizers in Brawley.
- **Helena Chemical Products:** Handles chemicals, fertilizers, insecticides, and pesticides in Brawley.
- **Wilbur Ellis Company:** Handles chemicals, fertilizers, insecticides, and pesticides in Heber.
- **Pipelines:** Imperial County has 89.92 miles of pipeline that transport hazardous materials. Pipe sizes vary in size from 12 to 20 inches, and the average size is 12 inches. Pipelines are located adjacent to the Southern Pacific Railroad tracks from the Arizona border at Yuma to the Niland tank farm, north to the Riverside County Line, and south to the Imperial tank farm. The pipeline system has section fuel control valves (OES 2013).

The Clean Harbors hazardous waste facility is located west of Westmorland. Although the facility poses a potential hazard, it has strict design standards and monitoring is imposed on it to prevent failure. Other facilities that pose a risk are chemical handling and storage facilities that include distributors, transporters, and crop-dusting firms; however, these firms are not permitted to store the various chemicals in open areas or in buildings not adequately protected from flood conditions. During severe flooding, the potential for these chemicals to be mixed with the flood water can pose a potentially serious health concern.

Wildfires

Even though wildfires can start from natural sources, humans are the cause of four out of every five wildfires. Wildfires started by humans are usually the result of debris burns, arson, or carelessness. Lightning is often the natural cause for wildfires that can destroy personal property and public lands such as State and national forest lands. Wildfires cause the destruction of property, timber, and wildlife and injury or loss of life to people using a recreation area or living in the area. The MHMP states that the potential for wildfire or a major fire in the unincorporated areas of Imperial County is generally low. Fire hazards exist, however, at two different sites in the County: east of Niland and at the fuel storage farms located south of the City of Imperial. In the event of a fire, assistance from various fire departments within the County would be necessary. The MHMP states that the threat of fire spreading and causing major problems to other areas of the County is minimal, however, due to the isolated locations of the fuel storage farms.



Legend

- EPA Regulated Facilities
- Hazardous Waste Sites
- Cleanup Sites
- Hazardous Cleanup Sites

Overlay Zones (Total Acres)

- Geothermal (69,205 acres)
- Renewable Energy (2,848 acres)
- Renewable Energy/Geothermal (267,141 acres)

N

0 5 10 20

Miles

Figure 4.8-1

Imperial County Renewable Energy and Transmission Element Update PEIR
Hazardous Materials

Name: 20674 EIR Fig 4.8-1 HazMats.Mxd
Date Saved: 11/13/2014, Author: msimmons

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4.8.3 Significance Criteria

The thresholds for significance of impacts for the analysis are based on the environmental checklist in Appendix G of the State California Environmental Quality Act (CEQA) Guidelines. Consistent with the CEQA Guidelines and the professional judgment of the County's staff and environmental consultants, the proposed Project would result in a significant impact on the environment if it would:

- 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 reasonable 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 0.25 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 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 2.0 miles of a public airport or public use airport, would 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 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

4.8.4 Impacts and Mitigation

HAZ-1: Create a significant hazard to the public through routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving a release of hazardous materials into the environment.

Construction

Construction and decommissioning of future renewable energy facilities developed under the proposed Project would require the use of hazardous materials, including:

- Fluids for onsite maintenance of construction vehicles and equipment (e.g., gasoline, diesel fuel, lubricating oils, hydraulic fluids, glycol-based coolants, and spent lead-acid storage batteries)

- Chemical materials for the maintenance of equipment or application of corrosive-control protective coatings (e.g., paints, solvents, coatings)

- Debris from construction-related activities (e.g., lumber, stone, brick)

In addition to the types of debris and waste mentioned above, the construction and decommissioning of specific types of future solar facilities may involve spent heat transfer fluids (HTF), dielectric fluids, thermal energy storage (TES) salts, and steam amendment chemicals. Many of these wastes have options for recycling, but subsequent flushing and cleaning of the systems will require disposal of those wastes.

On site, HTFs are stored in tanks or circulated through the solar field in pipes; therefore, the potential for worker exposure is low when workers follow applicable handling instructions. Potential impacts during facility dismantlement and draining could include spills, leaks, and releases to the environment from the improper temporary onsite storage of recovered fluids.

Cadmium telluride (CdTe) has the potential to be present in photovoltaic solar panels used for solar energy projects. CdTe can be toxic if ingested or inhaled through dust particles; however, human contact would occur only if a panel, which is sealed in glass, generates dust particles. This could occur only if the panel surface had experienced severe pitting. Other potentially hazardous materials that could be present in solar panels include small amounts of selenium and arsenic, which could be emitted into the environment if panels were cracked or broken during construction or decommissioning work. Solar panels containing toxic chemicals would require special handling in order to prevent accidental breakage.

The construction and decommissioning of wind generating facilities could also generate both solid and industrial wastes. The turbine drive components use fluids that require disposal after use and drainage (e.g., coolants, lubricating oils, and hydraulic fluids). Most of the other components, including the towers, turbines, and electrical transformers, would not be considered hazardous once drained of their fluids.

The construction and decommissioning of future geothermal energy facilities would include the use, storage, and disposal of potentially hazardous materials (e.g., petroleum, lubricants, oils, paints, solvents, and herbicides).

During construction and decommissioning of future renewable energy projects associated with the Imperial County *Renewable Energy and Transmission Element* update, waste generation would occur. Solid waste would likely be disposed of using a locally licensed waste hauling service, and solid waste would be transported to a permitted facility. Imperial County has 10 County-operated Class III disposal sites throughout the County that do not accept hazardous waste. In addition, three private waste disposal facilities are located within the County. One of these, the Clean Harbors Westmorland Facility, is a Class I facility that is fully permitted to accept and manage a variety of hazardous wastes including RCRA hazardous waste.

Since solar panels contain materials such as cadmium, lead, or selenium, solar panels are considered a RCRA-regulated waste. The Clean Harbors Westmorland Facility is one of the facilities that is permitted to handle RCRA hazardous waste. In addition, RCRA hazardous wastes such as solar panels would be disposed of only at facilities permitted to accept such material.

Although the construction and decommissioning of future renewable energy facilities could create a hazard through the release of hazardous materials into the environment, specific impacts cannot be estimated at this time. The proposed Project will be implemented on a "project-by-project" basis based on County approval of individual renewable energy projects. Because the project only identifies suitable locations for renewable energy facilities and does not contain specific development proposals, construction-related impacts regarding release of hazardous materials cannot be accurately determined at this stage in the planning process. Future development of renewable energy facilities in the proposed Renewable Energy Overlay Zones would have the potential to result in hazards through the release of hazardous materials and may result in a significant impact.

Operation

The operation of renewable energy projects would also involve the use, storage, and disposal of hazardous materials, similar to those required for the construction and decommissioning of facilities. Waste from solar facilities that could be potentially hazardous include herbicides and HTFs in pipes used in solar facilities using parabolic troughs, as well as hazardous chemicals used to treat water used in the steam cycle at parabolic trough and power facilities. Some wastes that could be generated in large volumes during operation include lubricating oils, compressor oils, and hydraulic fluids. Nitrate salts used as TES for solar facilities are used at extremely high temperatures and can cause or accelerate fires. In addition, the nitrate salts can also cause irritation if inhaled or ingested, or if they come into contact with skin. Photovoltaic panels contain potentially hazardous materials in solid form which could be released to the environment if panels are broken or burned during a fire.

Renewable energy projects developed under the proposed Project may generate waste during operation. As noted above, solid waste would likely be disposed of using a locally licensed waste hauling service, and solid waste would be transported to a permitted facility. The County has five County-owned Class III disposal sites throughout the County that do not accept hazardous waste. In addition, three private waste disposal facilities are located within the County. One of these, the Clean Harbors Westmorland Facility, is a Class I facility that is fully permitted to accept and manage a variety of hazardous wastes including RCRA hazardous waste.

Since solar panels contain materials such as cadmium, lead, or selenium, solar panels are considered a RCRA regulated waste. The Clean Harbors Westmorland Facility is one of the facilities that is permitted to handle RCRA hazardous waste. In addition, RCRA hazardous wastes such as solar panels would only be disposed of at facilities permitted to accept such material.

As described above in the analysis for construction impacts, the proposed Project would be implemented on a "project-by-project" basis; and operational impacts regarding the release of hazardous materials into the environment cannot be estimated at this time. Nevertheless, future operation of renewable energy projects in the proposed overlay zones would have the potential to result in the release of hazardous materials into the environment and may result in a significant impact.

Mitigation Measures

HAZ-1a: Implement hazardous materials and waste minimization measures including conducting a Phase I Environmental Site Assessment to determine the presence of hazardous materials from past site activities.

HAZ-1b: Proponents of future renewable energy facilities developed under the proposed Project that would handle hazardous materials that exceed regulatory thresholds would need to prepare and submit a Business Emergency Response Plan for approval to the State Department of Toxic Substance Control.

Significance After Mitigation

Implementation of mitigation measures HAZ-1a and HAZ-1b would reduce potential impacts related to routine transport, use, or disposal of hazardous materials or release of hazardous materials to a level less than significant.

HAZ-2: Emit hazardous emissions or handle hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.

Construction and Operation

The proposed Project has taken steps to minimize impacts on sensitive receptors, including schools, by developing a 0.5-mile buffer around all urban areas for the overlay zones. Consequently, all future renewable energy facilities developed under the proposed Project would be located at least 0.5 mile from any urban area within Imperial County which, in turn, would prevent impacts to existing schools. Therefore, impacts would be less than significant, and no mitigation is required.

HAZ-3: Be located on a site that is included on a list of hazardous materials sites and, as a result, could create a significant hazard to the public.

Construction and Operation

Future renewable energy facilities developed under the proposed Project would have the potential to be located on sites that possess hazardous materials that could be exposed during construction. As shown in Figure 4.8-1, documented hazardous materials are located within the proposed Overlay Zones. The number of documented hazardous materials within the proposed Overlay Zones is presented in Table 4.8-1.

Table 4.8-1: Documented Hazardous Materials Within the Proposed Overlay Zones

Hazardous Materials Category	Geothermal Overlay Zone	Renewable Energy Overlay Zone	Renewable Energy/Geothermal Overlay Zone
Hazardous Cleanup Sites	8	0	14
Cleanup Sites	20	0	6
EPA Regulated Facilities	12	0	7
Hazardous Materials Sites	0	0	0
Hazardous Waste Sites	0	0	0

Based on the presence of documented hazardous materials within the proposed Renewable Energy Overlay Zones, future renewable energy facilities developed under the proposed Project may be located on a site that is included on a list of hazardous materials sites; however, a determination of which existing hazardous materials may be located on a future renewable energy facility site cannot be determined at this time. The proposed Project would be implemented on a "project-by-project" basis

based on County approval of individual renewable energy projects. Because the proposed Project only identifies locations suitable for renewable energy facilities and does not contain specific development proposals, potential impacts associated with known hazardous materials sites are speculative and cannot be accurately determined at this stage of the planning process. Nonetheless, future development of renewable energy facilities within the proposed Renewable Energy Overlay Zones have the potential to be located on hazardous materials sites and may result in a significant impact.

Mitigation Measures

Mitigation measure HAZ-1a would also be implemented to reduce impacts associated with hazardous materials sites.

Significance After Mitigation

Implementation of mitigation measure HAZ-1a would reduce potential impacts related to known hazardous materials sites to a level less than significant.

HAZ-4: Result in a safety hazard for people working or living in the area of a public airport or private airstrip.

Construction and Operation

The proposed Renewable Energy Overlay Zones do not include areas within an airport land use plan or within 2.0 miles of public or private airport. Therefore, impacts would be less than significant and no mitigation is required.

HAZ-5: Impair implementation or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Construction and Operation

Construction and decommissioning of future renewable energy facilities associated with the proposed Project could generate large numbers of vehicle trips that could interfere with an adopted emergency response or emergency evacuation plan by degrading traffic levels of service (LOS). Similarly, operation and maintenance activities associated with future renewable energy facilities would have the potential to affect existing LOS; however, specific impacts cannot be estimated at this time. The proposed Project will be implemented on a "project-by-project" basis based on County approval of individual renewable energy projects. Because the proposed Project only identifies suitable locations for renewable energy facilities and does not contain specific development proposals, construction- and decommissioning-related impacts from additional traffic on roadways cannot be accurately determined at this stage in the planning process. Nonetheless, development of future renewable energy facilities under the proposed Project would have the potential to interfere with emergency response plans or emergency evacuation plans and may result in a significant impact.

Mitigation Measures

Implementation of mitigation measure TR-1a through TR-1d and TR-4a through TR-4c described in Section 4.16.4 would be implemented to reduce impacts associated with interference with an adopted emergency response plan or emergency evacuation plan.

Significance After Mitigation

Implementation of mitigation measure TR-1a through TR-1d and TR-4a through TR-4c would reduce potential traffic impacts associated interference with an adopted emergency response plan or emergency evacuation plan to a level less than significant.

HAZ-6: Expose people to significant risk of loss, injury, or death involving wildland fires

Construction and Operation

Land in Imperial County consists primarily of urban areas, active farmlands, recreation areas, and undeveloped land; the County does not possess wildlands with the potential for fires. Therefore, no impacts would occur, and no mitigation is required.

4.8.5 Cumulative Impacts

The construction and operation of renewable energy facilities associated with the proposed Project, in combination with approved, proposed, and other reasonably foreseeable projects in the County, would not increase the risk of public exposure to hazardous materials. A significant cumulative hazardous materials impact would occur through the uncontrolled release of hazardous materials from multiple locations in a form (gas or liquid) simultaneously that could cause a significant impact where the release of one hazardous material alone would not cause a significant impact. While cumulative impacts are potentially possible, they are not probable because of the many practices that are implemented to both prevent and control any accidental releases. The chance of one uncontrolled release occurring is unlikely. The chance of two or more releases occurring simultaneously is even more remote.

As discussed above, implementation of mitigation measures HAZ-1a and HAZ-1b would reduce impacts, including cumulative impacts to a level less than significant. Other projects that could have a potentially cumulative effect would have similar project-specific mitigation measures or requirements. Therefore, no significant cumulative impact from the use, transport, and disposal of hazardous materials is expected.

The proposed Project, in combination with approved, proposed, and other reasonably foreseeable projects in the County, would not increase hazards from airports or airstrips in the vicinity. The proposed Renewable Energy Overlay Zones would not include areas within an airport land use plan or within 2.0 miles of public or private airport.

Cumulative impacts that could potentially interfere with emergency response plans or emergency evacuation plans would include road closures or infrastructure additions, such as adding a new railway crossing, road segment removal, or other such additions. Although the construction and decommissioning of renewable energy facilities could create additional traffic that could impact emergency response or evacuation plans, cumulative impacts would be unlikely, as impacts from future renewable energy projects are unlikely to occur at the same time and in the same vicinity as each other. Therefore, it is not expected that a significant cumulative impact relating to the interference with emergency responses would occur.

Land in Imperial County consists primarily of urban areas, active farmlands, recreation areas, and undeveloped land; the County does not possess wildlands with the potential for fires, nor is this area

classified by the State as being in a fire hazard severity zone. Therefore, no cumulative impacts would occur, and no mitigation is required.