

5.9 HAZARDS, HAZARDOUS MATERIALS, AND WILDFIRE

5.9.1 INTRODUCTION

This section describes the existing regulatory and environmental settings, and analyzes the Project's potential to create a significant hazard to the public or environment through the routine transport, use, disposal, or foreseeable upset and accident involving the release of hazardous materials; emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; be located on a site which is included in a list of hazardous materials sites compiled pursuant to California Government Code (CGC) § 65962.5 and create a significant hazard to the public or environment; be located within an airport land use plan or within two miles of a public airport or public use airport and result in a safety hazard or excessive noise for people residing or working in the Project area; and impair implementation of or physically interfere with an adopted emergency response plan or emergency evaluation plan.

This section also analyzes the Project's potential to expose people or structures to a significant risk of loss, injury, or death involving wildland fires; substantially impair an adopted emergency response plan or emergency evacuation plan; exacerbate wildfire risks due to slope, prevailing winds, and other factors; exacerbate fire risk due to installation or maintenance of associated infrastructure; and expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

Where significant impacts remain despite compliance with the existing regulatory framework, feasible mitigation measures are recommended to avoid or reduce the Project's potentially significant environmental impacts.

Proposed General Plan

Proposed General Plan-related information in this section is based on methodology and information discussed in **Section 5.9.3: Methodology for Evaluating Impacts** and **Section 5.9.4: Environmental Setting**, respectively.

Barstow International Gateway Project (BIG)

BIG-related information in this section is based primarily on the following studies:

- *Barstow International Gateway Hazardous Materials and Wastes Technical Report*; see **Appendix 5.9 BIG-1: Hazardous Materials and Wastes Technical Report**

Summary of Findings – Proposed General Plan:

Buildout of the proposed General Plan would include construction activities and the operation of uses that would handle, store, or transport hazardous materials. There is substantial regulatory framework that has been promulgated at the federal, State, and regional level that would apply to construction and operation of uses within the General Plan area. Compliance with these regulations would be required by

future development in the General Plan area and would reduce the proposed General Plan's impacts related to hazards and hazardous materials to a less than significant level.

As Barstow is in a desert region, wildland vegetation is limited. The City and the surrounding areas are not within a Very High Fire Hazard Severity Zone (FHSZ). Therefore, existing and future development, including residences, businesses, and other structures would not be susceptible to wildfire hazards, and impacts would be less than significant.

Summary of Findings – Barstow International Gateway

During construction, BIG may result in hazardous materials, petroleum products, and asbestos containing material may being encountered, which would require proper handling and transport to avoid environmental impacts. The construction process also includes extensive earthwork, which could lead to the release of dust containing hazardous materials if not properly managed. Mitigation measures, such as a soil management plan and frequent watering of exposed soil, are proposed to minimize these risks.

During operation, BIG would involve the transport of hazardous materials via rail, creating potential risks in case of accidents or spills. However, compliance with federal, state, and local regulations, along with BNSF's strict safety protocols and emergency response plans, would minimize these risks. BIG also includes a solar farm, which would incorporate systems to manage fire risks associated with battery storage.

Overall, the BIG Project's impacts related to hazards would be reduced to less than significant levels through compliance with federal, state, and local regulations regarding handling and transporting hazardous materials and wastes, as well as project-specific measures and BNSF safety protocols.

5.9.2 REGULATORY SETTING

5.9.2.1 Federal

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, commonly known as the Superfund, was enacted to protect the water, air, and land resources from the risks created by past chemical disposal practices such as abandoned and historical hazardous wastes sites. Through CERCLA, the U.S. Environmental Protection Agency (U.S. EPA) was given power to seek out those responsible for any release and ensure their cooperation in the cleanup. This federal law created a tax on the chemical and petroleum industries that went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites. CERCLA also enabled the revision of the National Contingency Plan, which provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The National Contingency Plan also established the National Priority List of sites, which are known as Superfund sites. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.

Emergency Planning and Community Right-To-Know Act (EPCRA)

In 1986, Congress passed the Superfund Amendments and Reauthorization Act. Title III of this regulation may be cited as the "Emergency Planning and Community Right-to-Know Act of 1986" (EPCRA). The Act

required the establishment of state commissions, planning districts, and local committees to facilitate the preparation and implementation of emergency plans. Under the requirements, local emergency planning committees are responsible for developing a plan for preparing for and responding to a chemical emergency, including:

- Identify local facilities and transportation routes where hazardous materials are present.
- The procedures for immediate response in case of an accident (this must include a community-wide evacuation plan).
- A plan for notifying the community that an incident has occurred.
- The names of response coordinators at local facilities
- A plan for conducting drills to test the plan.

The emergency plan is reviewed by the State Emergency Response Commission and publicized throughout the community. The local emergency planning committee is required to review, test, and update the plan each year. The San Bernardino County Department of Environmental Health is responsible for coordinating hazardous material and disaster preparedness planning and appropriate response efforts with City departments and local and state agencies. The goal is to improve public- and private-sector readiness and to mitigate local impacts resulting from natural or man-made emergencies.

Another purpose of EPCRA is to inform communities and citizens of chemical hazards in their areas. EPCRA §§ 311 and 312 requires businesses to report to state and local agencies the location and quantities of chemicals stored on a site. Under EPCRA § 313, manufacturers are required to report chemical releases for more than 600 designated chemicals. In addition to chemical releases, regulated facilities are also required to report off-site transfers of waste for treatment or disposal at separate facilities, pollution prevention measures, and chemical recycling activities. The U.S. EPA maintains the Toxic Release Inventory database that documents the information that regulated facilities are required to report annually.

Resource Conservation and Recovery Act

At the federal level, the principal agency regulating the generation, transport, treatment, storage, and disposal of “hazardous wastes” is the U.S. EPA, under the authority of the Resource Conservation and Recovery Act (RCRA) (42 United States Code [USC] § 6901 et seq.). The RCRA gave the U.S. EPA authority to control hazardous waste from “cradle to grave,” that is, from generation to transportation, treatment, storage, and disposal. The RCRA also sets forth a framework for the management of nonhazardous wastes. RCRA was amended in 1984 by the Hazardous and Solid Waste Amendments of 1984 which specifically prohibited the use of certain techniques for the disposal of various hazardous wastes and required phasing out land disposal of hazardous waste. The 1986 amendments to the RCRA enabled the U.S. EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. In California, the U.S. EPA has delegated many of the RCRA requirements to the State’s Department of Toxic Substances Control (DTSC). It should be noted that the RCRA focuses only on active and future facilities and does not address abandoned or historical sites. Some of the other

mandates of this strict law include increased enforcement authority for the U.S. EPA, more stringent hazardous waste management standards, and a comprehensive UST program.

Clean Air Act

The Clean Air Act (CAA) (42 USC § 7401 et seq.) was enacted to protect the general public from exposure to airborne contaminants that are known to be hazardous to human health. Under the CAA, the U.S. EPA established National Emissions Standards for Hazardous Air Pollutants, which are emissions standards for air pollutants, including asbestos. Under the CAA, businesses that use extremely hazardous substances must develop a Risk Management Plan. A Risk Management Plan must contain an off-site consequence analysis, five-year accident history, accident prevention program, emergency response program, and a certification of the truth and accuracy of the submitted information.

Clean Water Act

The Clean Water Act (CWA) (33 USC § 1251 et seq., also known as the Federal Water Pollution Control Act of 1972), was enacted with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the U.S. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and certain non-point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (33 USC § 1242 or CWA § 402). In California, NPDES permitting and regulatory authority is delegated to, and administered by the nine RWQCBs. The Project is within the jurisdiction of the Lahontan RWQCB.

Section 402 of the CWA authorizes the State Water Resources Control Board (SWRCB) to issue NPDES General Construction Storm Water Permit (Water Quality Order 99-08-DWQ), referred to as the “General Construction Permit.” Projects that disturb one or more acres are required to obtain NPDES coverage under the Construction General Permits. Construction activities can comply with and be covered under the General Construction Permit if they:

- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that would prevent all construction pollutants from contacting stormwater and with the intent of keeping all products of erosion from moving off-site into receiving waters;
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation; and
- Perform inspections of all BMPs.

Safe Drinking Water Act

The Safe Drinking Water Act (42 USC § 300[f] et seq.) regulates discharges of pollutants to underground aquifers and establishes standards for drinking water quality. The act authorizes U.S. EPA to establish minimum standards to protect tap water and requires all owners or operators of public water systems to comply with these primary (health-related) standards.

Lead Exposure in Construction – Occupational Safety and Health Administration

Title 29, CFR § 1926.62, sets standards for occupational health and environmental controls for lead exposure in construction, regardless of the lead content of paints and other materials. The standards include requirements addressing exposure assessment, methods of compliance, respiratory protection, protective clothing and equipment, hygiene facilities and practices, medical surveillance, medical removal protection, employee information and training, signs, recordkeeping, and observation and monitoring.

National Emission Standard for Asbestos

Title 40, CFR Part 61 Subpart M establishes national emission standards for asbestos containing materials during demolition and renovation. Furthermore, the regulation outlines procedures for asbestos emission control during demolition or renovation activities.

Toxic Substances Control Act

The Toxic Substances Control Act of 1976 (TSCA) (15 USC § 2601 et seq.) regulates manufacturing, inventory, and disposal of industrial chemicals including hazardous materials and wastes (HMW). The TSCA provides the U.S. EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint. The U.S. EPA repeatedly screens these chemicals and can require reporting or testing of any that may pose an environmental or human health hazard. It can ban the manufacture and import of chemicals that pose an unreasonable risk. Also, the U.S. EPA has mechanisms in place to track the thousands of new chemicals that industry develops each year with either unknown or dangerous characteristics. It can control these chemicals as necessary to protect human health and the environment. The Act supplements other federal statutes, including the CAA and the Toxic Release Inventory (TRI) under the EPCRA.

Federal Insecticide, Fungicide, and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (7 USC § 136 and 40 CFR Parts 152 to 171) regulates the manufacturing, distribution, sale, and use of pesticides.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act of 1975 (Federal Hazmat Law) (49 USC § 5101 et seq. and 49 CFR Parts 101, 106, 107, and 171-180) regulates the transport of HMW by motor vehicles, railcars, marine vessels, and aircraft. Enforcement authority is shared by the Pipeline and Hazardous Materials Safety Administration, Federal Motor Carrier Safety Administration, Federal Railroad Administration, Federal Aviation Administration, and the U.S. Coast Guard. Each of these federal agencies has authority to enforce the Hazardous Materials Regulations (49 CFR Parts 171-180) against any person subject to them, but each has a particular emphasis to its enforcement activities. The federal agencies which would enforce the Hazardous Materials Regulations relevant to the Project include:

- Pipeline and Hazardous Materials Safety Administration, which enforces the shipment of hazardous materials and the manufacture, fabrication, marking, maintenance, reconditioning,

repair, or testing of multi-modal containers that are represented, marked, certified, or sold for use in the transportation of hazardous materials.

- Federal Motor Carrier Safety Administration, which enforces the transportation or shipment of hazardous materials by highway, and the Federal Motor Carrier Safety Regulations (49 CFR Parts 350-399), issued under various motor carrier safety acts codified at 49 USC § 501 et seq., § 30101 et seq., § 30301 et seq., and § 31501 et seq.
- Federal Railroad Administration, which enforces the transportation or shipment of hazardous materials by railroad, and the safety regulations (49 CFR 200-268) issued under the Federal Rail Safety Act (49 USC § 20101 et seq.).

Within California, the State agencies with primary responsibility for enforcing federal and State laws and for responding to transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). Together, federal and State agencies designate materials or a group or class of material as hazardous and issue regulations for the safe transportation, including security, of hazardous material in intrastate, interstate, and foreign commerce. Although special requirements apply to transporting hazardous materials, requirements for transporting hazardous waste are more stringent, and hazardous waste haulers must be licensed to transport hazardous waste on public roads. Title 49 CFR reflects laws passed by Congress as of January 2, 2006.

Spill Prevention, Control, and Countermeasure Rule

As part of the CWA, the U.S. EPA oversees and enforces the Oil Pollution Prevention regulation contained in Title 40 of the CFR, Part 112 (Title 40 CFR, Part 112), which is often referred to as the “SPCC rule” because the regulations describe the requirements for facilities to prepare, amend, and implement Spill Prevention, Control, and Countermeasures (SPCC) Plans. A facility is subject to SPCC regulations if a single oil (or gasoline, or diesel fuel) storage tank has a capacity greater than 660 gallons, the total above ground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the “Navigable Waters” of the U.S.

Pollution Prevention Act of 1990

The Pollution Prevention Act of 1990 (42 USC § 13101 et seq.) established source reduction and pollution prevention techniques as a national objective. Source reduction refers to the practices that reduce hazardous substances from being released into the environment prior to recycling, treatment, or disposal. The Pollution Prevention Act required the U.S. EPA to develop and implement various strategies to promote source reduction, which included the creation of a Source Reduction Clearinghouse, currently referred to as the P2 Resources Search, to allow the exchange of information regarding source reduction techniques; established state matching grants; established an advisory panel of technical experts to provide technical assistance to businesses; created a training program on source reduction opportunities; and created an annual award program to recognize a company or companies which operate outstanding or innovative source reduction programs (U.S. EPA, 2025a).

Hazardous Materials Transportation Uniform Safety Act of 1990

The Hazardous Materials Transportation Uniform Safety Act (Public Law 101-615) regulates the safe transport of HMW in intrastate, interstate, and foreign commerce. The law includes provisions to encourage uniformity among different state and local highway routing regulations, to develop criteria for the issuance of federal permits to motor carriers of HMW, and to regulate the transport of radioactive materials.

Occupational Safety and Health Administration Act

Congress passed the Occupation Safety and Health Administration Act (OSHA) to ensure worker and workplace safety. Their goal was to make sure employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions. To establish standards for workplace health and safety, OSHA also created the National Institute for Occupational Safety and Health as the research institution for OSHA. The Administration is a division of the U.S. Department of Labor that oversees the Administration of OSHA and enforces standards in all states. OSHA standards are listed in Title 29 CFR Part 1910.

OSHA's Hazardous Waste Operations and Emergency Response Standards apply to five groups of employers and their employees. This includes any employees who are exposed or potentially exposed to hazardous substances (including hazardous waste) and who are engaged in clean-up operations; corrective actions; voluntary clean-up operations; operations involving hazardous wastes at treatment, storage, and disposal facilities; and emergency response operations.

Federal Compliance with Pollution Control (Executive Order 12088)

U.S. Presidential Executive Order 12088 requires federal agencies to take necessary actions to prevent control and abate environmental pollution from federal facilities and activities under control by federal agencies.

Disaster Mitigation Act of 2000

The Disaster Mitigation Act (42 USC § 5121) amends the Robert T. Stafford Disaster Relief Act of 1988 (42 USC § 5121-5207). Among other things, this legislation reinforces the importance of pre-disaster infrastructure mitigation planning to reduce disaster losses nationwide and is aimed primarily at the control and streamlining of the administration of federal disaster relief and programs to promote mitigation activities. Some of the major provisions of this Act include:

- Funding pre-disaster mitigation activities;
- Developing experimental multi-hazard maps to better understand risk;
- Establishing state and local government infrastructure mitigation planning requirements;
- Defining how states can assume more responsibility in managing the hazard mitigation grant program; and
- Adjusting ways in which management costs for projects are funded.

The mitigation planning provisions outlined in § 322 of this Act and the corresponding 42 USC § 5121-5207 establish performance-based standards for mitigation plans and require state and local governments to prepare multi-hazard mitigation plans as a precondition for receiving FEMA mitigation funds for Hazard Mitigation Grant Programs, Pre-Disaster Mitigation, and Flood Mitigation Assistance.

International Fire Code

The International Fire Code establishes minimum requirements for fire prevention and fire protection systems using prescriptive and performance-related provisions. This code regulates minimum fire safety requirements for new and existing buildings, facilities, storage, and processes. The International Fire Code includes general and specialized technical fire and life safety regulations addressing fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire, and explosion hazards safety, use and storage of hazardous materials, protection of emergency responders, industrial processes, and many other topics. The International Fire Code is issued by the International Code Council, an international organization of building officials. The International Fire Code is the basis for the California Fire Code (CFC), discussed below.

Federal Emergency Management Agency

The Federal Emergency Management Agency's (FEMA) mission is to lead the effort to prepare the nation for all hazards and effectively manage federal response and recovery efforts following any natural disaster, including earthquakes, flooding, and wildfires. FEMA also initiates proactive mitigation activities, trains first responders, and manages the National Flood Insurance Program and the U.S. Fire Administration. FEMA created and maintains the National Risk Index, which is a dataset and online tool to help illustrate the U.S. communities most at risk for 18 natural hazards including avalanches, coastal flooding, cold waves, drought, earthquakes, hail, heat wave, hurricanes, ice storms, landslides, lightning, riverine flooding, strong wind, tornados, tsunamis, volcanic activity, wildfire, and winter weather. It was designed and built by FEMA in close collaboration with various stakeholders and partners in academia; local, state, and federal government; and private industry. Data is provided by federal agencies, state agencies, and academic and research institutions and risk ratings are determined by census tract and county.

Federal Response Plan of 1999

The Federal Response Plan of 1999 is a signed agreement among 27 federal departments and agencies and the American Red Cross that:

- Provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of state and local government overwhelmed by a major disaster or emergency.
- Supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and
- Supplements other federal emergency operations plans developed to address specific hazards.

The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a presidential declaration of a major disaster or emergency.

Federal Aviation Administration

The basic responsibilities of the Federal Aviation Administration, under the U.S. Department of Transportation (USDOT), are the regulation of civil aviation to promote safety, airspace and air traffic management, and the regulation of commercial space transportation. The CFR contains standards for aircraft noise emission levels.

National Fire Protection Association Standards

National Fire Protection Association Standards (NFPA) codes, standards, recommended practices, and guides are developed through a consensus standards development process approved by the American National Standards Institute. NFPA standards are recommended (advisory) guidelines in fire protection but are not laws or “codes” unless adopted or referenced as such by the CFC or local fire agency. Specific standards applicable to wildland fire hazards include, but are not limited to:

- **NFPA 1141**, Fire Protection Infrastructure for Land Development in Wildlands
- **NFPA 1142**, Water Supplies for Suburban and Rural Fire Fighting
- **NFPA 1143**, Wildland Fire Management
- **NFPA 1144**, Reducing Structure Ignition Hazards from Wildland Fire
- **NFPA 1710**, Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations

5.9.2.2 State

Gas Monitoring and Control at Active and Closed Landfills

Regulations from the California Code of Regulations (CCR), Title 27, § 20917 et seq., set forth the performance standards and the minimum substantive requirements for landfill gas monitoring and control as it relates to active landfills and to proper closure, post closure maintenance, and ultimate reuse of landfills to ensure that public health and safety and the environment are protected from pollution due to the disposal of solid waste.

Asbestos, PCBs, and Lead Exposure Regulation

Regulations from the CCR, Title 8, § 1529 regulates asbestos exposure and CCR, Title 8, § 1532.1 regulates construction work where an employee may be occupationally exposed to lead in all construction work including but not limited to:

- Demolition or salvage of structures where asbestos is present;
- Removal or encapsulation of materials containing asbestos;
- Construction, alteration, repair, maintenance, or renovation of structures, substrates, or portions thereof, that contain asbestos;
- Installation of products containing asbestos;
- Asbestos spill/emergency cleanup;

- Transportation, disposal, storage, containment of and housekeeping activities involving asbestos or products containing asbestos, on the site or location at which construction activities are performed;
- Excavation which may involve exposure to asbestos as a natural constituent which is not related to asbestos mining and milling activities;
- Routine facility maintenance; and
- Erection of new electric transmission and distribution lines and equipment, and alteration, conversion and improvement of the existing transmission and distribution lines and equipment.

Additionally, these regulations require preparation of and compliance with asbestos abatement plans before disturbing asbestos.

Closure and Post Closure Maintenance of Landfills

Regulations from CCR, Title 27, Subchapter 5, provide post closure maintenance guidelines, including requirements for an emergency response plan and site security for landfills. They regulate post closure land use, requiring protection of public health and safety and the built environment, as well as the prevention of gas explosions. Construction on the site must maintain the integrity of the final cover, drainage and erosion control systems, and gas monitoring and control systems. All post-closure land use within 1,000 feet of a landfill site must be approved by the local enforcement agency.

Well Safety Devices for Critical Wells

Regulations from CCR, Title 14 § 1724.3, requires “critical wells” have both surface and subsurface safety devices and established requirements for safety devices. CCR, Title 14 § 1720 defines a “critical well” as a well within:

- 300 feet of any building intended for human occupancy that is not necessary to the operation of the well or any airport runway.
- 100 feet of any dedicated public street, highway, or nearest rail of an operating railway that is in general use; any navigable body of water or watercourse perennially covered by water; any public recreational facility such as a golf course, amusement park, picnic ground, campground, or any other area of periodic high-density population; or any officially recognized wildlife preserve.

California Environmental Quality Act (CEQA)

California (PRC) § 21151.4 requires the CEQA lead agency to consult with any school district with jurisdiction over a school within 0.25 mile of the project about potential impacts on the school if the project might reasonably be anticipated to emit hazardous air emissions or handle an extremely hazardous substance or a mixture containing an extremely hazardous substance.

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Control Act (California Water Code § 13000 et seq.) regulates water quality through the SWRCB and RWQCBs authority to protect the quality of all the state's surface and groundwater, including regulating activities that can affect water quality, requires permits for discharges, and allows for enforcement.

Hazardous Materials Release Response Plans and Inventory Law

The provisions of the California Health and Safety Code (CHSC) § 25500 et seq., requires facilities using HMW to prepare Hazardous Materials Business Plans.

Safe Drinking Water and Toxic Enforcement Act

The Safe Drinking Water and Toxic Enforcement Act (Proposition 65, CHSC, § 25249.5 et seq.) is similar to the federal Safe Drinking Water Act and CWA on the federal level in regulating the discharge of contaminants to groundwater.

Hazardous Waste Control Act

The Hazardous Waste Control Act (Proposition 65, CHSC § 25249.5 et seq.) is similar to the federal RCRA in regulating the identification, generation, transportation, storage, and disposal of materials deemed hazardous by the State of California.

Cortese List Statute

Hazardous Waste and Substances Sites (Cortese) List is a planning document to comply with the requirements in providing information about the location of hazardous materials release sites. CGC § 65962.5 requires the California Environmental Protection Agency (CalEPA) to develop a list that includes information from five databases including the RWQCB Leaking Underground storage Tank Sites, and list of hazardous waste and substance sites from the DTSC, list of solid waste disposal sites identified by Water Board, List of “active” Cease and Desist Order (CDO) and Corrective Action Order (CAO) from Water Board, and list of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC of potentially contaminated sites located throughout the State.

California Code of Regulations, Title 5, Division 1, Chapter 13, Subchapter 1, School Facilities Construction

This code regulates where school facilities can be sited and constructed. Title 5, § 14010(d), requires a safety study for new school sites within 1,500 feet (approximately 0.25 mile) of an existing railroad track. The site cannot be located near an aboveground water or fuel storage tank or within 1,500 feet of the easement of an aboveground or underground pipeline. In addition, if the proposed site is on or within 2,000 feet of a significant disposal of hazardous waste, the school district shall contact the DTSC for a determination of whether the property should be considered a Hazardous Waste Property or Border Zone Property. Schools cannot be sited near formerly or acutely HMW unless it can be proven that the site would not pose a health risk.

California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) provides fire assessment and firefighting services for lands within State Responsibility Areas (SRAs), conducts educational and training programs, provides fire planning guidance and mapping, and reviews general plan safety elements to ensure compliance with State fire safety requirements. CAL FIRE also manages the State forest system and has responsibility to enforce the forest practice regulations, which govern forestry practices on private and other non-federal lands.

The Office of the State Fire Marshal supports CAL FIRE's mission by focusing on fire prevention. It provides support through a variety of fire safety responsibilities including regulating buildings in which people live, congregate, or are confined; controlling substances and products that may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire; providing statewide direction for fire prevention in wildland areas; regulating hazardous liquid pipelines; reviewing regulations and building standards; and providing training and education in fire protection methods and responsibilities.

The Board of Forestry and Fire Protection is a government-appointed approval body within CAL FIRE. It is responsible for developing the general forest policy of the State, for determining the guidance policies of CAL FIRE, and for representing the State's interest in federal forestland in California. The Board of Forestry and Fire Protection also promulgates regulations and approves General Plan Safety Elements that are adopted by local governments for compliance with State statutes.

The California Office of the State Fire Marshal supports the mission of CAL FIRE by focusing on fire prevention. These responsibilities include regulating buildings in which people live, congregate, or are confined; controlling substances and products which may, in and of themselves, or by their misuse, cause injuries, death, and destruction by fire; providing statewide direction for fire prevention within wildland areas; regulating hazardous liquid pipelines; developing and renewing regulations and building standards; and providing training and education in fire protection methods and responsibilities. These are accomplished through major programs, including engineering, education, enforcement, and support from the Board of Forestry and Fire Protection. For jurisdictions within SRAs or Very High FHSZs, the Land Use Planning Program division of the Office of State Fire Marshal reviews Safety Elements during the update process to ensure consistency with California Government Code, § 65302(g)(3).

Together, the Board of Forestry and Fire Protection, Office of State Fire Marshal, and CAL FIRE protect and enhance the forest resources of all wildland areas of California that are not under federal jurisdiction.

Public Resources Code (PRC) §§ 4201-4204 and CGC §§ 51175-51189 mandate CAL FIRE to map areas of substantial fire hazards or FHSZs, statewide. FHSZs are classified based on fuel loading, slope, fire weather, and other relevant factors present, including when winds have been identified as major cause of wildfire spread. FHSZs classify wildlands as moderate, high, or VHFHZs. Additionally, CAL FIRE designates areas by jurisdictional responsibility. Areas where the State has the primary financial responsibility for wildfire prevention and suppression are classified as SRAs and areas where a local fire protection agency has the primary responsibility are classified as Local Responsibility Areas (LRAs) (USDA, 2018). Areas administered or controlled by the federal government for which the federal agencies have administrative, and protection responsibility are identified on the CAL FIRE maps as Federal Responsibility Areas (FRAs). These classifications influence where development occurs and how an agency will respond to future wildfire emergencies. CAL FIRE designates three Wildland-Urban Interface (WUI) areas, which are areas where dense housing is adjacent to vegetation that can burn in a wildfire (NIST, 2025). The Wildland Urban Interface area is characterized as a high-density residential area in a moderate, high, or very high FHSZ which is not dominated by wildland vegetation (i.e., lifeform not herbaceous, hardwood, conifer, or shrub) but has spatially contiguous groups of 30m cells (i.e., 30-meter-by-30-meter area of ground) that are 10 acres and larger. The Wildland Urban Intermix area is characterized as a housing development which is

interspersed in an area dominated by wildland vegetation that is subject to wildfires and within a Moderate, High or Very High FHSZ, but has spatially contiguous groups of 30m cells 25 acres and larger. Wildland Urban Intermix only applies to improved parcels. The Wildfire Influence Zone is characterized as wildfire susceptible vegetation located up to 1.5 miles from a Wildland Urban Interface or Wildland Urban Intermix area. CAL FIRE applies these designations based on FHSZ, housing density, and vegetation data, among other factors.

CAL FIRE, through its Fire and Resources Assessment Program (FRAP), has mapped very high FHSZs based on consistent statewide criteria and the severity of fire hazard that is expected to prevail in those areas. The FRAP classifies land based on these fuel loading, slope, fire weather, and other relevant factors into one of three severity zones: Moderate FHSZ; High FHSZ; and Very High FHSZ. All other areas are labeled “Non-Very High FHSZ.” In LRAs, CGC § 51178 requires identification of Moderate, High, and Very High FHSZs. In LRAs, Government Code 51178 requires identification of Moderate, High, and Very High FHSZs.

2024 CAL FIRE Strategic Plan

CAL FIRE’s multi-year strategic plan is a guiding document for operations and decision-making to ensure that efforts align with the agency’s mission of protecting people, property, and State natural resources. It outlines the agency’s goals, objectives, and strategies for addressing fire prevention within the next five years and provides information to the agency that helps effectively allocate resources, coordinate efforts, and implement initiatives that will reduce impact of wildfires, improve response capabilities, and promote resilient and fire-safe communities. The latest version of the Strategic Plan was published in July 2024.

SRA 2023 Fire Safe Regulations

CCR Title 14, § 12700 et seq., constitutes CAL FIRE’s basic building wildfire protection standards within SRAs and LRA Very High FHSZs such as emergency access, signing and building numbering, emergency water reserves for fire use, and fuel modification.

California Code of Regulations Title 24 (California Building Standards and Fire Code)

CCR Title 24, also known as the California Building Standards Code (CBSC), includes regulations for how buildings are designed and constructed, and are intended to ensure the maximum structural integrity and safety of private and public buildings. The CBSC, which applies to all applications for building permits, consists of 12 parts that contain CBSC administrative regulations for all State agencies that implement or enforce building standards. Local agencies must ensure the development complies with the CBSC standards. Cities and counties can adopt additional standards beyond the CBSC including CBSC Part 2, named the California Building Code (CBC), which is based upon the 2020 International Building Code, and CBSC Part 11, named the California Green Building Standards Code, also known as the CALGreen Code.

Title 24 Part 2: California Building Code. The CBC contains general building design and construction requirements relating to fire and life safety, structural safety, and access compliance. CBC provisions provide minimum standards to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location and maintenance of all buildings and structures and certain equipment.

CBC Chapter 7A, (CCR, Title 24, Part 2) primarily focuses on preventing ember penetration into homes, a leading cause of structure loss from wildfires. These codes have been developed through decades of after fire structure “save” and “loss” evaluations to determine what causes buildings to ignite or avoid ignition during wildfires. The resulting fire codes now focus on mitigating former structural vulnerabilities through construction techniques and materials so that the buildings are resistant to ignitions from direct flames, heat, and embers, as indicated in CBC Chapter 7A § 701A: Scope, Purpose, and Application.

CBC Chapter 9, (CCR, Title 24, Part 2) requires the installation and maintenance of smoke alarms in residential dwelling units. CBC Chapter 9 § 907.2.11.2 requires smoke alarms to be installed and maintained on the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms, in each room used for sleeping purposes, and in each story within a dwelling unit. The smoke alarms shall be interconnected.

Title 24 Part 9: CFC. The CFC contains regulations consistent with nationally recognized accepted practices for safeguarding, to a reasonable degree, life, and property from various hazards, including fire and explosion, among others. The CFC also contains provisions to assist emergency response personnel. The CFC contains fire safety-related building standards that are referenced in other parts of CCR Title 24. Specifically, CFC Chapter 33 prescribes minimum fire safety requirements during construction, alteration, or demolition operations which correlates with CBC Chapter 33. Additionally, CFC Chapter 49 sets further standards for construction and development within LRA and SRA Very High FHSZs and includes many provisions found in CCR Titles 14 and 19. The chapter also includes mitigation strategies to reduce hazards originating within a structure spreading to wildland and vice versa. The CFC is updated once every three years; the 2022 CFC took effect on January 1, 2022. The CFC sets forth regulations regarding building standards, fire protection and notification systems, fire protection devices such as fire extinguishers and smoke alarms, high-rise building standards, and fire suppression training. The CFC provides minimum standards to increase the ability of a building or structure to resist the intrusion of flame or burning embers being projected by a vegetation fire and contributes to a systematic reduction in fire losses through the use of performance and prescriptive requirements. The CFC is based on the 2018 adoption of the International Fire Code (discussed above) and integrates State amendments.

Transportation of Hazardous Materials and Wastes

Transportation of HMW is regulated by CCR Title 26 with the USDOT as the primary regulatory authority for the interstate transport of HMW. The USDOT establishes regulations for safe handling procedures (i.e., packaging, marking, labeling, and routing). The CHP and Caltrans enforce federal and State laws and respond to HMW transportation emergencies. Emergency responses are coordinated as necessary between federal, State, and local governmental authorities and private persons through a state-mandated Emergency Management Plan.

California Government Code § 66474.02

This law states that before a city can approve a tentative map, or a parcel map for which a tentative map was not required, for an area (development) located in an SRA or a Very High FHSZ, the following findings must be made:

- A finding supported by substantial evidence in the record that the subdivision is consistent with regulations adopted by the State Board of Forestry and Fire Protection (a governor-appointed body within CAL FIRE) pursuant to PRC § 4290 and § 4291 or consistent with local ordinances certified by the State Board of Forestry and Fire Protection as meeting or exceeding the State regulations.
- A finding supported by substantial evidence in the record that structural fire protection and suppression services will be available for the subdivision through any of the following entities:
 - A county, city, special district, political subdivision of the State, or another entity organized solely to provide fire protection services that is monitored and funded by a county or other public entity.
 - The CAL FIRE by contract entered into pursuant to PRC § 4133 (with the approval of the Department of General Services, for periods not to exceed three years, enter into a contract with any county which enacts an ordinance), § 4142 (with the approval of the Department of General Services, may enter into a cooperative agreement upon the terms and under the conditions as it deems wise, for the purpose of preventing and suppressing forest fires or other fires in any lands within a county, city, or district that makes an appropriation for that purpose), or § 4144 (the director, with the approval of the Department of General Services, may enter into a cooperative agreement for the purpose of preventing and suppressing fires with a city, county, special district, or other political subdivision of State or person, association, or corporation that requests an agreement).

Upon approving a tentative map, or a parcel map for which a tentative map was not required, for an area (development) in an SRA or Very High FHSZ, the City must then transmit a copy of the findings and accompanying maps to the State Board of Forestry and Fire Protection.

Fires and Fire Protection

State fire laws are established in CHSC Division 12 Part 1 and include provisions for structural standards (similar to those identified in the CBC), fire protection and public notification systems, fire protection devices such as extinguishers and smoke alarms, standards for high-rise structures and childcare facilities, and fire suppression training. The State Fire Marshal is responsible for enforcement of these provisions and building standards for all state-owned buildings, state-occupied buildings, and State institutions.

Hazardous Substances Account Act

The Hazardous Substances Account Act, also known as the “California Superfund” (California Health and Safety Code § 25300, et seq.), is the State’s Superfund program which authorizes CalEPA to clean up contaminated sites and hazardous substance releases into the environment that do not qualify for cleanup under the federal CERCLA. The Hazardous Substances Account Act establishes regulations and incentives to ensure that generators of hazardous waste use technology and BMPs for the safe handling, treatment, recycling, and destruction of their hazardous waste prior to disposal.

Unified Program

Senate Bill (SB) 1082, passed in 1993, created the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The Unified Program consolidates, coordinates, and

makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs, which include the:

1. Hazardous Materials Business Plan Program;
2. California Accidental Release Prevention (CalARP) Program;
3. Hazardous Waste Generator Program;
4. Aboveground Petroleum Storage Act Program;
5. Leaking Underground Storage Tank (LUST) Program; and the
6. Hazardous Materials Inventory Statements Program which implements requirements from two sections of the CFC.

The CalEPA and other State agencies sets standards for the above-mentioned programs, while local Certified Unified Program Agencies (CUPAs) implement the standards. For each jurisdiction, the CUPA regulates/oversees the:

- Hazardous Materials Business Plan Program's Hazardous materials business plans (HM Business Plans) (discussed separately below);
- CalARP Program's Federal accidental release prevention plans or California risk management plans;
- The operation of USTs and aboveground storage tanks (ASTs), as well as the Aboveground Petroleum Storage Act Program's required SPCC plans (discussed further below) (EPA, 2023);
- Universal waste and hazardous waste generators/handlers;
- On-site hazardous waste treatment;
- Inspections, permitting, and enforcement;
- Proposition 65 (i.e., the Safe Drinking Water and Toxic Enforcement Act) reporting; and
- Emergency response

The City of Barstow's CUPA is the San Bernardino County Fire Department (SBCFD), which is responsible for regulating hazardous waste and tiered permitting, USTs, ASTs, and risk management.

Hazardous Materials Business Plan

Both the federal government (CFR) and the State (CHSC) require all businesses that handle more than a specified amount—or "reporting quantity"—of hazardous or extremely hazardous materials to submit a HM Business Plan to the proper County CUPA or Participating Agency administrator. The CUPA for the City of Barstow is SBC Fire. According to SBC Fire's guidelines, any business subject to any of the CUPA permits in San Bernardino County is required to file a HM Business Plan (SBC Fire, 2023a).

HM Business Plans must include an inventory of the hazardous materials at the facility. Businesses must update their HM Business Plan annually. Also, HM Business Plans must include emergency response plans and procedures to be used in the event of a significant or threatened significant release of a hazardous

material. The emergency response plans are required to identify the procedures for immediate notification of all appropriate agencies and personnel, identification of first responder medical assistance appropriate for potential accident scenarios, contact information for all company emergency coordinators, a listing and location of emergency equipment at the business, an evacuation plan, and a training program for business personnel.

California Accidental Release Prevention Program

The California Accidental Release Prevention (CalARP) Program became effective on January 1, 1997, in response to SB 1889. The CalARP Program provides for consistency with federal laws (i.e., the Emergency Preparedness and Community Right-to-Know Act and the CAA) regarding accidental chemical releases and allows local oversight of both federal and State programs. Federal and State laws are similar in their requirements; however, the California threshold planning quantities for regulated substances are lower than the federal quantities. Local agencies may set lower reporting thresholds or add additional chemicals to the program.

The CalARP Program, implemented by the local CUPAs, aims to be proactive and therefore requires any business, where the maximum quantity of a regulated substance exceeds the specified threshold quantity, register with the responsible CUPA as a manager of regulated substances and prepare risk management plans, which are detailed engineering analyses of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential. The risk management plans must identify the type of business, location, emergency contacts, emergency procedures, mitigation plans, and chemical inventory at each location. This requirement is coupled with the requirements for preparation of hazardous materials business plans under the Unified Program, which is also implemented by the CUPA. The local CUPA shares these plans with emergency response personnel.

Hazardous Waste Generator Program

CCR Title 22, Division 4.5, sets forth the regulation administered by DTSC for hazardous waste generators; transporters; and owners or operators of treatment, storage, or disposal facilities. These regulations include requirements for packaging, storage, labeling, reporting, and general management of hazardous waste prior to shipment. These regulations also identify standards applicable to transporters of hazardous waste which specify the requirements for transporting shipments of hazardous waste, including manifesting, vehicle registration, and emergency accidental discharges during transportation.

Aboveground Petroleum Storage Act

Facilities that have cumulative aboveground storage capacities of petroleum products at or exceeding 1,320 gallons or store petroleum products in a tank in an underground area are subject to the Aboveground Petroleum Storage Act (APSA). Facilities that are subject to APSA must prepare and implement a SPCC Plan in accordance with the oil pollution prevention guidelines in 40 CFR 112.

The purpose of the APSA program is to protect public health and the environment from potential contamination or adverse effects associated with unintentional releases from the aboveground storage of petroleum based HMWs.

Leaking Underground Storage Tanks

Leaking Underground Storage Tanks (LUSTs) have been recognized since the early 1980s as the primary cause of groundwater contamination from gasoline compounds and solvents. In California, regulations aimed at protecting against LUSTs have been in place since 1983 (CHSC, § 25280 *et seq.*). This occurred one year before RCRA was amended to add Subtitle I, which created a leak prevention, detection, and cleanup program to address a nationwide water pollution problem caused by LUSTs and provided a comprehensive regulatory program requiring USTs to be installed in accordance with standards that address the prevention of future leaks. The SWRCB has been designated the lead California regulatory agency in the development of UST regulations and policy.

Older USTs are typically single-walled steel tanks. USTs may leak as a result of corrosion, punctures, and detached fittings. As a result, California required the replacement of older tanks with new double-walled fiberglass tanks with flexible connections and monitoring systems (CHSC, § 25292 *et seq.*). USTs owners were given 10 years to comply with the new requirements—deadline was December 22, 1998. However, many UST owners did not act by the deadline, so the State granted an extension for their replacement ending January 1, 2002. The California RWQCBs, in cooperation with the Office of Emergency Services, maintain an inventory of LUSTs in a statewide database: GeoTracker.

Emergency Mutual Aid Agreements

The Emergency Mutual Aid Agreements system is a collaborative effort between City and County emergency managers in the Office of Emergency Services in the coastal, southern, and inland regions of the State. The Emergency Mutual Aid Agreements system provides service in the emergency response and recovery efforts at the Southern Regional Emergency Operations Center, the local Emergency Operations Centers, the Disaster Field Office, and community service centers. The Emergency Mutual Aid Agreements system's purpose is to support disaster operations in affected jurisdictions by providing professional emergency management personnel. In accordance with the Emergency Mutual Aid Agreements system, State and local emergency managers have responded in support of each other under a variety of plans and procedures.

California Governor's Office of Emergency Services

In 2009, the State passed legislation creating the California Governor's Office of Emergency and authorizing it to prepare a Standardized Emergency Management System program (Title 19 CCR § 2400 *et seq.*), that sets forth measures by which a jurisdiction should handle emergency disasters. In 2013, Governor Edmund G. Brown Jr.'s Reorganization Plan #2 eliminated Cal EMA and restored it to the Governor's Office, renaming it the California Governor's Office of Emergency Services (Cal-OES), and merging it with the Office of Public Safety Communications. Non-compliance with the Standardized Emergency Management System could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster. The Standardized Emergency Management System provides the mechanism by which the local government requests assistance.

Cal-OES serves as the lead agency for emergency management, mobilizing the State's resources, and obtaining federal resources in the State. Cal-OES coordinates the State response to major emergencies in

support of local government. The primary responsibility for emergency management resides with the local government. Local jurisdictions first use their own resources and, as these are exhausted, obtain more from neighboring cities and special districts, the county in which they are located, and other counties throughout the State through the statewide mutual aid system. Cal-OES also maintains oversight of the State's mutual aid system.

California Environmental Protection Agency

CalEPA was created in 1991 by Governor's Executive Order. Six boards, departments, and offices were placed under the CalEPA umbrella to create a cabinet-level voice for the protection of human health and the environment and to ensure the coordinated deployment of State resources. CalEPA oversees hazardous materials and hazardous waste compliance throughout California. Among those responsible for HMW are DTSC, Department of Pesticide Regulation, and Office of Environmental Health Hazard Assessment. CalEPA also oversees the unified hazardous waste and hazardous materials management regulatory program (Unified Program), which consolidates and coordinates:

- Hazardous Materials Release Response Plans and Inventories (Business Plans)
- UST Program
- Aboveground Petroleum Storage Tank Act
- Hazardous Waste Generator and On-site Hazardous Waste Treatment Programs
- California Uniform Fire Code: Hazardous Material Management Plans and Inventory Statements
- California Accidental Release Prevention Program

Hazardous Materials Release Emergency Notification

The following State statutes require emergency notification of a hazardous chemical release:

- CHSC § 25270.8 and § 25507, requires owners or operators of underground or aboveground tanks to notify the Office of Emergency Services of any spill or release.
- Vehicle Code § 23112.5, requires any vehicle owner who dumps, spills, or causes the release of HMW to notify the Office of Emergency Services.
- Public Utilities Code § 7673, General Orders #22-B, 161, requires railroads that transports hazardous materials to provide a system map showing mileposts, stations, terminals, junction points, road crossings, and location of pipelines in its rights of way.
- CGC § 51018, 8670.25.5 (a), requires notification for any explosion or fire involving pipelines.
- Water Codes § § 13271, 13272, requires notification for any discharge of hazardous materials or substance to waters of the State.
- California Labor Code § 6409.1 (b): requires an employer to immediately notify OSHA of any serious injury, illness, or death, including from hazardous materials exposure or spill.

Requirements for immediate notification of all significant spills or threatened releases cover owners, operators, persons in charge, and employers. Notification is required regarding significant releases from facilities, vehicles, vessels, pipelines, and railroads. In addition, all releases that result in injuries or harmful

exposure to workers must be immediately reported to Cal/OSHA pursuant to the California Labor Code § 6409.1(b).

State and Regional Water Resources Control Board

GeoTracker is the SWRCB and RWQCB's data management system for sites that impact groundwater or have the potential to impact groundwater. The SWRCB identifies sites that require groundwater cleanup (LUSTs), Department of Defense, and Site Cleanup Program) as well as permitted facilities that could impact groundwater (Irrigated Lands, Oil and Gas Production, Operating USTs, and Land Disposal sites).

Hazardous Materials Disclosure Programs

The Unified Program administered by the State of California consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities for environmental and emergency management programs, which include Hazardous Materials Release Response Plans and Inventories (Business Plans), the CalARP Program, and the UST Program. The Unified Program is implemented at the local government level by CUPAs.

The CUPA for the City is SBC Fire, which is responsible for regulating hazardous waste and tiered permitting, USTs; ASTs; and risk management.

Department of Toxic Substances Control Hazardous Waste Management Plan

In July 2021, SB 158 introduced programmatic reforms to the DTSC. Approval of SB 158 changed CHSC § 25135, which requires the development of Hazardous Waste Management Reports and Plans (HWPlan). In response to the passage of SB 158, DTSC formed the Hazardous Waste Management Plan Unit to prepare HWPlans. These plans are based on hazardous waste management reports and serve as the following:

- Comprehensive planning documents for the management of hazardous waste in the State;
- Sources of useful information to guide State and local hazardous waste management efforts; and
- Guides for implementation of DTSC's hazardous waste management program.

Since passage of SB 158, the Hazardous Waste Management Plan Unit (HWPlan Unit) has published a draft hazardous waste report on July 2023 and as of September 17, 2023, ended the feedback period for the draft report. The initial report is the starting point to determine the types of information and additional research needed to generate the first hazardous waste management plan. As such, the main objectives of the first report are the following:

- Establish a baseline understanding of the management of hazardous waste in the State of California;
- Identify data gaps and items that require additional research; and
- Develop plans to fill data gaps and complete additional research.

To help achieve these objectives, the first report includes available information regarding items such as hazardous waste streams produced in the State (waste generation, transportation, treatment, and disposal) and hazardous waste facilities that operate in the State.

State Aeronautics Act

The Caltrans Division of Aeronautics implements the State Aeronautics Act (Public Utilities Code §§ 21001 et seq.). Key purposes of the act, as relevant here, include to ensure that persons residing within the vicinity of airports are protected against intrusions by unreasonable levels of aircraft noise. The Division of Aeronautics issues permit for and annually inspects hospital heliports and public-use airports, makes recommendations regarding proposed school sites within two miles of an airport runway, and authorizes helicopter landing sites at or near schools.

The State Aeronautics Act also establishes statewide requirements for airport land use compatibility plans (ALUCP). These plans are intended to provide for the orderly growth of a public airport and the area surrounding the airport while safeguarding the general welfare of inhabitants near the airport and the public in general. Caltrans's *California Airport Land Use Planning Handbook* provides guidelines for preparing ALUCPs that establish policies applicable to a range of issues, including the influence areas of airports, aircraft noise standards and criteria, accident potential zones, and building height zones near airports. The San Bernardino County Airport Land Use Commission (ALUC) is responsible for implementing this legislation.

California Health and Safety Code and Code of Regulations

CHSC Chapter 6.95 and CCR, Title 19, § 2652 describe the minimum requirements for business emergency plans and chemical inventory reporting. These regulations require businesses to provide emergency response plans and procedures; training program information; and a hazardous materials inventory disclosing materials stored, used, or handled on a site. A business that uses hazardous materials, or mixtures containing them, in certain quantities must establish and implement a business emergency plan.

The Tanner Act

Although numerous State policies deal with hazardous waste, the most comprehensive is the Tanner Act, adopted in 1986 (Assembly Bill [AB] 2948 (CHSC § 25135)), which governs the preparation of hazardous waste management plans and the siting of hazardous waste facilities in the State. To comply with the Tanner Act, local or regional hazardous waste management plans need to include provisions that define the:

- 1) Planning process for waste management;
- 2) Permit process for new and expanded facilities; and
- 3) Appeals process to the State available for certain local decisions.

Evacuation Routes

CGC § 65302 requires general plan safety elements to address evacuation routes, and SB 99 requires a safety element to identify residential developments in hazardous areas that do not have at least two emergency evacuation routes upon a City's next revision of the Housing Element on or after January 1, 2020. AB 747 added, and AB 1409 amended CGC § 65302.15 to require that, starting January 1, 2022, or upon the next revision of a local hazard mitigation plan in accordance with federal guidelines, Safety Elements must be reviewed and updated to identify evacuation routes, assess their capacity, safety,

viability, and designate evacuation locations under various emergency scenarios. Additionally, counties or cities with existing local hazard mitigation plans, emergency operations plans, or similar documents can utilize this information in their safety element, provided that they summarize and incorporate relevant details from these sources.

California Fire Code

The CFC is a series of building, property, and lifeline codes in the CCR, Title 24, Chapter 9. The CFC contains fire-safety related building standards, such as construction standards, vehicular and emergency access, fire hydrants and fire flow, and sprinkler requirements. Specific chapters relevant to wildfire include Chapter 49, Requirements for Wildland-Urban Interface, and Chapter 7A of the California Building Code, Materials and Construction Methods for Exterior Wildfire Exposure.

California Public Resources Code

The Board of Forestry and Fire Protection is authorized in PRC §§ 4290 and 4291 to adopt minimum fire safety standards for new construction in Very High FHSZs in SRAs. The Board publishes its fire safety regulations in the California Code of Regulations, Title 14 (these standards may differ from those in Appendix D of the California Fire Code). Fire safe regulations currently address:

- Article 1: Administration of ordinance and defensible space measures (Chapter 49)
- Article 2: Emergency access and egress standards (roadways) (California Fire Code Appendix D)
- Article 3: Standards for signs identifying streets, roads, and buildings (Chapter 5)
- Article 4: Emergency water standards for fire use (Appendix B, BB)
- Article 5: Fuel modification standards (Chapter 49)

Local ordinances adopted by local governments cannot be less restrictive than the provisions in State law. These regulations would be applied in the SRAs outside of a city's boundaries, such as a sphere of influence (SOI) and surrounding unincorporated lands.

California Penal Code § 374.3

California Penal Code § 374.3 criminalizes the act of illegal dumping, which involves the unauthorized disposal of waste materials onto public or private property without the consent of the owner. This includes dumping garbage, hazardous waste, and other types of refuse. The statute prescribes fines for violations, which increase with the severity and repetition of the offense.

California General Plan Law, Office of Planning General Plan Guidelines

CGC § 65302(g) requires that safety elements be revised periodically to address wildfire risks in accordance with regulations and guidance promulgated by the Board of Forestry and Fire Protection. In addition, cities must submit a revised safety element to the Board for consideration and comments no later than 90 days prior to its adoption. Local governments must also respond to how they plan to address the Board's comments or make findings to the contrary prior to adoption of the safety element.

To meet the intent of State law, CGC § 65302(g)(2) requires the safety element to:

- Identify wildfire hazards with the latest State prepared, Very High FHSZ maps from the Board of Forestry and Fire Protection, US Geological Survey, and other sources.
- Consider guidance given by the OPR Fire Hazard Planning document.
- Demonstrate that the City or contract agency and associated codes satisfactorily address adequate water supply, egress requirements, vegetation management, street signage, land use policies, and other criteria to protect from wildfires.
- Establish in the safety element (and other elements that must be consistent with it) a set of comprehensive goals, policies, and feasible implementation measures for protection of the community from unreasonable risks of wildfire.

5.9.2.3 Regional

Mojave Desert Air Quality Management District

The Mojave Desert Air Quality Management District (MDAQMD) is delegated to enforce the Asbestos National Emission Standard for Hazardous Air Pollutants, as specified under 40 CFR Part 61, Subpart M per District Rule 1000 as it applies to asbestos removal and demolitions (MDAQMD, 2023). The National Emission Standard for Hazardous Air Pollutants requires delegated districts be notified for certain projects containing Regulated Asbestos Containing Material. Regulated Asbestos Containing Material means:

- Friable asbestos material
- Category I nonfriable Asbestos Containing Material (ACM) that has become friable,
- Category I nonfriable ACM that will be or has been subject to sanding, grinding, cutting, or abrading, or
- Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

Regional Water Quality Control Board Environmental Screening Levels

The Lahontan Regional Water Quality Control Board, which encompasses the City of Barstow, has adopted certain standards developed by the San Francisco Regional Water Quality Control Board. Specifically, the San Francisco Regional Water Quality Control Board (SFRWQCB) has developed Environmental Screening Levels (ESLs) to assist in assessing the potential threats to human health and the environment and evaluation of potential environmental concerns at contaminated sites. Concentrations of constituents collected at a site in either soil, groundwater, or vapor samples can be directly compared to ESLs, to aid in determining the need for additional sampling efforts or assess level of potential contamination. ESLs have been developed for more than 100 commonly detected constituents. They address a full range of concerns encountered at contamination sites and are protective of human health, water quality, and the environment. The ESLs do not constitute policy or regulation, and their use is optional.

While the ESLs developed by the SFRWQCB are primarily designed for and utilized by that agency, other agencies may also adopt these levels. Since 2019, ESLs have been widely used across California. In addition

to SFRWQCB ESLs, other screening levels are used in the State, such as the U.S. EPA's Regional Screening Levels and DTSC-modified Screening Levels. The conceptual site model applied to determine the ESLs applies to many sites throughout California. Generally, ESLs can be used at any site with the agreement of all stakeholders. The Lahontan Regional Water Quality Control Board, which encompasses Barstow, has adopted the SFRWQCB ESLs (LRWQCB, 2022).

5.9.2.4 Local

County of San Bernardino Office of Emergency Services

The Office of Emergency Services is a division of the County Fire Protection District and is responsible for countywide emergency planning, mitigation, response, and recovery activities. The Office of Emergency Services works with all County departments and 24 cities, as well as many non-governmental organizations. In the event of an emergency, within both incorporated and unincorporated areas, the Office of Emergency Services manages the County's Emergency Operations Center and coordinates with the County's disaster response resources for recovery from State and federal requirements.

County of San Bernardino Local Enforcement Agency for Landfill

The County Solid Waste Management Division is responsible for operation and management of the County's landfill system. The system consists of five regional landfills and nine transfer stations. Additionally, the Solid Waste Management Division administers the Landfill Franchise Program and the refuse collection permit program, which authorizes and regulates trash collection by private haulers in the County's unincorporated portions.

County of San Bernardino Environmental Health Services

The County Public Health Department's Environmental Health Services Division responds to emergencies and disasters. The Division's focus is prevention of illness and injury, and includes solid waste, wastewater, sewage holding tanks, and sewage pumper trucks.

San Bernardino County Fire Hazard Abatement Program

To reduce the threat of wildfires, the San Bernardino County Fire Hazard Abatement (FHA) Program enforces the fire hazard requirements outlined in the Codified Ordinances of the County of San Bernardino (County Code) §§ 23.0301-23.0319. The FHA Program's primary function is to reduce the risk of fires within communities by proactively establishing defensible space and reduction/removal of flammable materials on properties.

The FHA Program conducts surveys to identify fire hazards throughout the year. Fire hazards are identified and notices to abate the hazard(s) are mailed to property owners. Property owners are given 30 days to abate the hazards. Failure to abate may result in citations, penalties, and/or fees for abatement by the County. The FHA Program responds to complaints year-round in the unincorporated areas and contracting cities and fire districts.

San Bernardino County Fire Protection District (SBC Fire)

SBC Fire is a community-based, all hazard emergency services provider. SBC Fire core services include the following:

- Fire Stations: 48 Stations with 1,064 County Fire Personnel (SBC Fire, 2023a)
- Emergency Medical Services (EMS), Special Operations, and Training
- CONFIRE Dispatch: The joint powers authority known as CONFIRE is the communications and dispatch hub for numerous County fire agencies, including SBC Fire. (CONFIRE, 2025)

The SBC Fire's Hazardous Materials Division is the CUPA responsible for administering the County's hazardous materials program. The CUPA program is designed to consolidate, coordinate, and uniformly and consistently administer permits, inspection activities, and enforcement activities throughout the County. This approach strives to reduce overlapping and sometimes conflicting requirements of different governmental agencies independently managing these programs. The CUPA's responsibilities include controlling the use, disposal, and transport of flammable chemicals and liquids.

In the General Plan area, the SBC Fire is responsible for all components of the CUPA program described above, including approving Hazardous Materials Business Plans and hazardous materials inventories. As a CUPA, SBC Fire manages six hazardous material and hazardous waste programs. These programs are:

- Hazardous materials business plan, established in 1986, intends to prevent, or minimize the damage to public health and safety and the environment, from a release or threatened release of hazardous materials. Businesses that handle hazardous materials (including hazardous waste) or extremely hazardous substances are required to submit a Hazardous Materials Business Plan via the California Environmental Reporting System (CERS), if using, handling, or storing hazardous materials in quantities equal to or greater than:
 - 55 gallons of a liquid,
 - 500 pounds of a solid,
 - 200 cubic feet of compressed gas,
 - Extremely hazardous substances above the threshold planning quantity,
 - Facilities in the County must also report any amount of hazardous waste via CERS (SBC Fire, 2023a).
- Hazardous waste and on-site treatment
- Aboveground Petroleum Storage Act (APSA)
- UST program
- CalARP Program
- CFC-Hazardous Materials Management Plan (HMMP) & Hazardous Material Inventory Statements (HMIS)

The CUPA program is designed to consolidate and uniformly administer permits, inspection activities, and enforcement activities throughout San Bernardino County. The CUPA is charged with the responsibility of conducting compliance inspections for regulated facilities in San Bernardino County (SBC Fire, 2023b).

San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan

Prepared to comply with the Federal Disaster Mitigation Act of 2000 (42 USC § 5121), the San Bernardino County Multi-Jurisdictional Hazard Mitigation Plan (HMP) identifies hazards, both natural and human-caused, within the county. The types of hazards assessed include fire, drought, earthquakes, terrorism, and floods.

The intent of the HMP is to reduce and/or eliminate loss of life and property as a result of natural hazards through appropriate hazard mitigations. Hazard mitigation is defined by FEMA as “any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards.” FEMA also defines a “hazard” as “any event or condition with the potential to cause fatalities, injuries, property damage, infrastructure damage, agricultural loss, environmental damage, business interruption, or other loss.”

The HMP’s purpose is to demonstrate the plan for reducing and/or eliminating risk in the unincorporated area of the County and within areas overseen or managed by the County Flood Control District, Fire District and Special Districts Department. The HMP is a living document that is reviewed, monitored, and updated to reflect changing conditions and new information. As required by law, the HMP is updated every five years to remain in compliance with regulations and federal mitigation grant conditions. FEMA approved the current HMP in December 2022.

San Bernardino County Hazardous Materials Release Response Plans and Inventory Program

In San Bernardino County, the Business Emergency/Contingency Plan (Business Plan) is also used to satisfy the contingency plan requirement for hazardous waste generators. Any business subject to any of the CUPA permits is required in San Bernardino County to file a Business Emergency/Contingency Plan using the California Environmental Reporting System. This submission is used as the basis for the permit application. A new business going through the process of obtaining County planning or building approval is required to comply with the Business Emergency/Contingency Plan requirement prior to obtaining final certificate of occupancy and prior to bringing hazardous materials onto the property.

The quantities that trigger disclosure are based on the maximum quantity on a site at any time excluding materials under active shipping papers or for direct retail sale to the public. The basic quantities are hazardous materials at or exceeding 55 gallons, 500 pounds, or 200 cubic feet at any time over a year; specified amounts of radioactive, and extremely hazardous substances above the threshold planning quantity.

County of San Bernardino Department of Airports

The County of San Bernardino Department of Airports manages, maintains, and operates six county-owned airports. They also assist the County’s private and municipal airport operators with planning, interpretation, and implementation of Federal Aviation Administration general aviation requirements.

San Bernardino County Emergency Operations Plan

The San Bernardino County Emergency Operations Plan (County Emergency Operations Plan) addresses the County's response to emergencies associated with natural disasters or human-caused emergencies. The County Emergency Operations Plan identifies existing conditions, infrastructure, threats, and hazards, and then describes the process and roles for the response and recovery actions.

The County Emergency Operations Plan provides a comprehensive, single source of guidance and procedures for the County to prepare for and respond to significant or catastrophic natural, environmental, or conflict-related risks that produce situations requiring coordinated response. It further provides guidance regarding management concepts relating to response and abatement of various emergencies, identifies organizational structures and relationships, and describes responsibilities and functions necessary to protect life and property.

San Bernardino Countywide Integrated Waste Management Plan

In April 2018, the County of San Bernardino Solid Waste Management Division revised the Countywide Integrated Waste Management Plan (CIWMP), which the City of Barstow adopted through Chapter 6.34, Hazardous Waste Ordinance, of the Code of the City of Barstow (Barstow Code). The purpose of the plan is to reduce dependence on landfilling solid waste to ensure adequate disposal capacity (San Bernardino, 2018). The CIWMP consists of four elements and a Summary Plan:

- **Source Reduction and Recycling Element (SRRE).** This element analyzes local waste streams to determine where to focus diversion efforts and develop diversion programs and funding.
- **Household Hazardous Waste Element (HHWE).** This element provides a framework for recycling, treatment, and disposal practices.
- **Nondisposal Facility Element (NDFE).** This element lists planned and existing facilities such as material recovery facilities and composting facilities that recover waste from the waste stream.
- **Countywide Siting Element.** This element is intended to demonstrate that there is at least 15 years of remaining disposal capacity to serve all the jurisdictions within the County. If there is not adequate capacity, a discussion of alternative disposal sites and additional diversion programs must be included in the Countywide Siting Element.

Countywide Summary Plan

This plan contains goals and policies as well as a summary of integrated waste management issues faced by the County. It summarizes waste management programs, and the steps needed to cooperatively implement programs among the County's jurisdictions continue to meet the statewide diversion mandates.

County of San Bernardino Countywide Plan

The County adopted the Countywide Plan (CWP) in October 2020. The CWP Policy Plan addresses the physical, social, and economic issues facing the County's unincorporated portions. **Table 5.9-1: Countywide Plan Policy Plan – Relevant Hazards, Hazardous Materials and Wildfire Goals and Policies**

identifies goals and policies related to hazards, hazardous materials, and wildfire. For applicability of the CWP goals and policies to the Project, see **Section 5.0: Environmental Analysis**.

Table 5.9-1: Countywide Plan Policy Plan – Relevant Hazards, Hazardous Materials and Wildfire Goals and Policies	
Goal or Policy	
HAZARDS ELEMENT	
Goal HZ-1	Natural Environmental Hazards. Minimized risk of injury, loss of life, property damage, and economic and social disruption caused by natural environmental hazards and adaptation to potential changes in climate.
Policy HZ-1.2	New development in environmental hazard areas. We require all new development to be located outside of the environmental hazard areas listed below. For any lot or parcel that does not have sufficient buildable area outside of such hazard areas, we require adequate mitigation, including designs that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters. ▪ Flood: 100-year flood zone, dam/basin inundation area ▪ Geologic: Alquist-Priolo earthquake fault zone; County-identified fault zone; rockfall/debris-flow hazard area, medium or high liquefaction area (low to high and localized), existing and County-identified landslide area, moderate to high landslide susceptibility area) ▪ Fire: high or very high fire hazard severity zone
Policy HZ-1.5	Existing properties in environmental hazard areas. We encourage owners of existing properties in hazard areas to add design features that allow occupants to shelter in place and to have sufficient time to evacuate during times of extreme weather and natural disasters.
Policy HZ-1.6	Critical and essential facility location. We require new critical and essential facilities to be located outside of hazard areas, whenever feasible.
Policy HZ-1.7	Underground utilities. We require that underground utilities be designed to withstand seismic forces, accommodate ground settlement, and hardened to fire risk.
Policy HZ-1.8	Wind erosion hazards. We require new development in medium-high or high wind erosion hazard areas to minimize the effects of wind-blown soil through building and site design features such as fencing, surface treatment or pavement, attenuation or wind barriers, architectural features, building materials, and drought resistant landscaping.
Policy HZ-1.9	Hazard areas maintained as open space. We minimize risk associated with flood, geologic, and fire hazard zones or areas by encouraging such areas to be preserved and maintained as open space.
Policy HZ-1.12	Local hazard mitigation plan implementation. We require adherence to the goals, objectives and actions in the Multi-jurisdictional Hazard Mitigation Plan and subsequent amendments to reduce and mitigate damages from hazards in the county.
Policy HZ-1.14	Long-term fire hazard reduction and abatement. We require proactive vegetation management/hazard abatement to reduce fire hazards on existing private properties, along roadsides of evacuation routes out of wildfire prone areas, and other private/public land where applicable, and we require new development to enter into a long-term maintenance agreement for vegetation management in defensible space, fuel modification, and roadside fuel reduction in the Fire Safety Overlay and/or Very High Fire Hazard Severity Zones.
Goal HZ-2	Human-Generated Hazards. People and the natural environment protected from exposure to hazardous materials, excessive noise, and other human-generated hazards.

Table 5.9-1: Countywide Plan Policy Plan – Relevant Hazards, Hazardous Materials and Wildfire Goals and Policies	
Goal or Policy	
HAZARDS ELEMENT	
Policy HZ-2.3	Safer alternatives. We minimize the use of hazardous materials by choosing and by encouraging others to use non-toxic alternatives that do not pose a threat to the environment.
Policy HZ-2.4	Truck routes for hazardous materials. We designate truck routes for the transportation of hazardous materials through unincorporated areas and prohibit routes that pass through residential neighborhoods to the maximum extent feasible.
Policy HZ-2.10	Agricultural operations. We require new development adjacent to existing conforming agricultural operations to provide adequate buffers to reduce the exposure of new development to operational noise, odor, and the storage or application of pesticides or other hazardous materials.
Source: San Bernardino. 2020. <i>Countywide Plan, Hazards Element</i> . https://countywideplan.sbcounty.gov/policy-plan/hazards/ .	

The CWP Policy Plan includes the following Policy Maps that address hazards, hazardous materials, and wildfire:

- Policy Map HZ-5 Fire Hazard Severity Zones: Depicts the County’s fire safety overlay zones and fire hazard severity zones (2016).
- Policy Map HZ-6 Fire Responsibility Areas: Depicts the County’s local, State, and federal fire responsibility areas.
- Policy Map HZ-9 Airport Safety and Planning: Depicts the County’s Airport Runway Protection Zones, airport noise contours, airport safety review areas, and low-altitude high speed military airspace.
- Policy Map PP-2 Evacuation Routes: Depicts the County’s evacuation routes.

See **Section 5.9.4: Environmental Setting** for further discussion concerning the above conditions and their potential presence in the Project area.

Codified Ordinances of the County of San Bernardino

The County Code regulations addressing hazards, hazardous materials and wildfire are provided below.

County Code Title 2 Division 3: Fire Protection and Explosives and Hazardous Materials. The County’s Uniform Fire Code, which is based on the 2000 Uniform Fire Code and 2000 Uniform Fire Code Standards, as amended, is found in Chapter 1 of this division. Chapter 2 includes the County’s fire regulations and Chapter 3 includes the County’s regulations concerning abatement of fire hazards. County Code § 23.0301 requires every owner or person in control of any land or interest in the unincorporated area of the County to abate all fire hazards and hazardous trees from such land and from all sidewalks, parkways, road easements and all other easements on such land. County Code § 23.0301 also includes the firebreak and fuel break standards that every owner and person in control of any buildings or structures in, upon, or adjoining any mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or any land that is covered with flammable material within the unincorporated area of the County of San

Bernardino are required to implement at all times. The San Bernardino County FHA Program enforces the fire hazard requirements outlined in County Code § 23.0301 to reduce the threat of wildfires.

Chapter 4 authorizes the Fire Chief and Investigative Officers of SBCFD, Division of Hazardous Materials to enforce and administer all federal, State, and local laws pertaining to HMW in San Bernardino County. Chapter 5 authorizes the Chief and Investigative Officers of the Hazardous Materials Division of the SBCFD to enforce the provisions of this Public Nuisance Abatement Chapter. These authorities include the right to enter land, with consent or a warrant if required, for investigation, posting or serving notice or to cause abatement as herein provided. Chapter 6 outlines the permits, inspections, and hearing procedures for HMW and Chapter 7 outlines CUPA permit elements for HMW within San Bernardino County.

County Code Title 3 Division 3, Environmental Health. Pursuant to Health and Safety Code § 120125 et seq., § 101025 et seq., § 101375 et seq., § 101450 et seq., § 101275 et seq., PRC § 21050 et seq., and other relevant State authority, this jurisdiction has found that the public's interest will be best served by all Environmental Health Services and related Consumer Protection Programs within the borders of San Bernardino County being enforced and administered through the Department of Environmental Health Services ("DEHS") of the County of San Bernardino.

County Code § 33.0643, Well Abandonment. If after 30 days of abandonment, the owner of an abandoned well has not declared to Department of Environmental Health Services the well for proposed reuse, then the well shall be destroyed per § 33.0631, Permits, of the County Code, which requires obtaining a permit from the Department of Environmental Health Services prior to reconstructing or removing the well.

County Code § 33.0879, Abandonment of Sewage Holding Tanks. If the Department of Environmental Health Services or any agency orders the abandonment of the sewage holding tank, or if the connection is made to sanitary sewers, the permittee operating the sewage holding tank shall abandon the sewage holding tank.

County Code Chapter 82.15: Geologic Hazard (GH) Overlay. This chapter was created to provide greater public safety by establishing investigative requirements for areas that are subject to potential geologic problems, including active faulting and sliding, debris flow/mud flow, rockfall, liquefaction, seiche, and adverse soil conditions. County Code Title 8, Chapter 82.15.040 (a), seeks to prevent construction or major rehabilitation of structures used for human occupancy within 50 feet of an active fault. County Code Chapter 82.15.040(b) requires that structures used for critical facilities be at least 150 feet from any active fault trace.

County Code Title 8 Division 2: Land Use Zoning Districts and Allowed Land Uses. This division establishes the primary and overlay land use zoning districts applied to County property. The Fire Safety Overlay (County Code Chapter 82.13), which is mapped on the County General Plan Hazards Maps, corresponds to distinct geographic areas and the associated wildland fire hazard, and was created to provide greater public safety in areas prone to wildland brush fires, by establishing additional development standards for these areas. There are no Fire Safety Overlays within the BIG footprint.

County Code Title 8 Division 4: Standards for Specific Land Uses and Activities. Chapter 84.11, Hazardous Waste Facilities, provides guidelines for the regulation of hazardous materials for the protection of health, safety, and welfare of persons, resources, and property.

For applicability of the above County Code standards to the Project, see **Section 5.0: Environmental Analysis**.

City of Barstow 2015-2020 General Plan

The City adopted the City of Barstow 2015-2020 General Plan (2015 General Plan) in February 2015. The 2015 General Plan is the overarching guide for implementation of the Development Code, which defines development regulations and establishes zoning districts throughout the City. **Table 5.9-2: 2015 General Plan Relevant Goals and Policies – Hazards, Hazardous Materials, and Wildfire** includes the hazards, hazardous materials and wildfire-related goals and policies relevant to the Project.

Table 5.9-2: 2015 General Plan Relevant Goals and Policies – Hazards, Hazardous Materials, and Wildfire	
Goal or Policy	
SAFETY ELEMENT	
Goal 1	Public Safety Goals, Policies and Strategies. Maintain optimal levels of service and quality for fire and police protection, thereby ensuring the preservation and protection of health, well-being, and property for all types of development and all residents of the community.
Policy 1A	Increase police and fire staffing levels at an equal or greater rate than the City's overall population, household, and employment growth.
Goal 2	Public Safety Goals, Policies and Strategies. Expand police and fire facilities as needed in conjunction with future planned development.
Policy 2A	Review all new development proposals, as well as significant remodeling projects to determine potential impacts to public safety and the provision of police and fire protection services.
Policy 2B	Ensure, through planning and assessment, the adequacy of police and fire staffing and facilities to accommodate planned residential, commercial, and industrial growth.
Goal 3	Public Safety Goals, Policies and Strategies. Expand police and fire facilities as needed in conjunction with future planned development.
Goal 3	Emergency Preparation Goals, Policies and Strategies. Ensure that all development occurring under the General Plan is designed and built in accordance with current standards for seismic safety, fire protection and defensible space.
Policy 3.1	Consider and assess vulnerability to natural and humanmade disasters or emergencies when reviewing proposals for the siting and development of public/quasi-public facilities such as schools, water towers and power and communication transmitters.
Source: City of Barstow. 2015. <i>2015-2020 Barstow General Plan</i> . https://www.barstowca.org/departments/community-development-department/planning/general-plan-and-master-environmental-impact-report .	

For applicability of the 2015 General Plan goals and policies to the Project, see **Section 5.0**. The 2015 General Plan includes the following exhibits that address hazards, hazardous materials, and wildfire:

- Exhibit RC-1: Flood Insurance Rating Map (FIRM)
- Exhibit S-1: Seismic Hazards Map
- Exhibit S-2: Emergency Evacuation Routes Map

See **Section 5.9.4: Environmental Setting** for further discussion concerning the above conditions and their potential presence in the Project.

Code of the City of Barstow

The Code of the City of Barstow (Barstow Code) regulations addressing hazards, hazardous materials and wildfire are provided below. **Barstow Code Chapter 6.22: Underground Storage of Hazardous Substances.** This Chapter outlines the permits required, application procedure, fees, and authority for underground storage of hazardous substances within the City.

Barstow Code Chapter 6.24 Environmental Health Code. This chapter designates the San Bernardino County Department of Environmental Health Services (DEHS) as the enforcement agency for the Environmental Health Code and all State law pertaining to environmental health. The Environmental Health Code also establishes remedies and penalties for violations.

Barstow Code Chapter 6.34 Hazardous Waste. This chapter adopts the San Bernardino County hazardous waste management plan. Furthermore, this Chapter establishes that all zoning, subdivision, conditional use permits, and variances will be consistent with the hazardous waste management plan.

Barstow Code § 6.34.010: Adoption of hazardous waste management plan. This code adopted the Counties hazardous waste management plan in its entirety.

Barstow Code § 10.40.230: Vehicles Transporting Hazardous Waste and Materials. This code regulates the parking and supervision of vehicles transporting hazardous materials requiring placards under federal law.

Barstow Code Chapter 15.16: Floodplain Management. The City has adopted floodplain management regulations, consistent with federal and State law, to reduce flood risk, protect public safety, and preserve natural floodplain functions. The ordinance applies to all Special Flood Hazard Areas as identified by FEMA and mapped in the City's Flood Insurance Study and Flood Insurance Rate Maps.

Barstow Code Chapter 16.04 Fire Code. The City has adopted the CFC which incorporates and amends the International Fire Code and is adopted by reference as the fire code of the City for the purpose of prescribing regulations governing conditions to life and property from fire hazardous materials or explosion.

Barstow Fire Protection District Ordinance 29-19. This ordinance adopts fire prevention in accordance with the latest CFC 2022 Edition (CCR Title 24 Part 9) for the purpose of prescribing regulations governing conditions to life and property from fire, hazardous materials, or explosion.

For applicability of the Barstow Code standards to the Project, see **Section 5.0**.

City of Barstow Fire Protection District Hazardous Materials Response Team

The Barstow Fire Protection District (BFPD) is an "all-hazard" response agency for the City. BFPD members are trained, equipped, and dedicated to providing outstanding emergency medical, fire, hazardous materials, technical rescue, natural, and manufactured disaster response. BFPD engages in activities intended to promote greater public awareness of fire and safety hazards and prevention techniques and

to prevent the occurrence of crime. The Fire Chief and engine companies conduct routine fire prevention inspections on local businesses to educate the business owners and to ensure code compliance.

City of Barstow Emergency Operations Plan

The Barstow Emergency Operations Plan, updated in April 2022, provides guidance for the City's response to extraordinary emergency situations associated with natural, human-made, and technological disasters. This plan is not intended to be used for normal day-to-day emergencies, or the established routine procedures used to cope with such incidents. Rather, this plan concentrates on operational concepts and response procedures relative to large-scale emergencies and disasters. The City's Emergency Operations Plan has been developed in accordance with the Standardized Emergency Management System and the National Incident Management System. City departments are responsible to assure the preparation and maintenance of the City's Standard Operating Procedures, resource lists and checklists that detail how assigned responsibilities are performed to support the implementation of the City's Emergency Operations Plan. The Standard Operating Procedures include the specific emergency authorities that designated officials, and their successors can assume during emergency situations.

2018 Barstow Hazard Mitigation Plan

Adopted in 2018, the Barstow Hazard Mitigation Plan (BHMP) identifies existing and potential hazards, assesses the risks associated with them, and outlines strategies and actions the City will take to minimize effects associated with those hazards. Hazards identified in the BHMP include flooding, wildfire, earthquakes, and climate change. Jurisdictions are required to update their local hazard mitigation plans every 5 years to be eligible for the projects funded under the HMA and other FEMA programs. The City is currently updating their BHMP.

5.9.3 METHODOLOGY FOR EVALUATING IMPACTS

This section describes the study area (i.e., affected environment) and summarizes the methodology used to analyze potential impacts concerning hazards, hazardous materials, and wildfire.

5.9.3.1 Terminology and Concepts

Hazardous Materials and Wastes

Hazardous Materials. Hazards Materials that no longer have practical use, such as materials that have been discarded, discharged, spilled, or contaminated, or are being stored until they can be disposed of properly (CCR Title 22, Chapter 11, Article 2, § 66261.10). Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific CCR Title 22 criteria.

Past industrial, agricultural, illegal dumping, 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 of older structures and released during building demolition activities. 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 from 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 or waste from previous spills or leaks.

Hazardous Materials and Wastes (HMW). For the purpose of the assessment, hazardous materials and wastes (HMW) are defined herein as any materials, wastes, and substances that, because of quantity, concentration, or physical or chemical characteristics, pose a significant, present, or potential hazard to human health and safety, or to the environment, if released. HMW include, but are not limited to, hazardous substances, hazardous wastes, and any material that a handler or the administering regulatory agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment (CHSC § 25501[o]). Although often treated separately from HMW, petroleum products (including crude oil and refined products such as fuels and lubricants) and natural gas are considered HMW in this analysis because they might also pose a potential hazard to human health and safety if released into the environment. Hazardous wastes include residues, discards, byproducts, contaminated products, or similar substances that exceed regulatory thresholds for properties of toxicity, ignitability, corrosivity, or reactivity. Federal and State regulations identify by name specific hazardous wastes that the U.S. EPA has determined are hazardous and has designated as “listed wastes.” A description of various HMW and relevant terms referred to in this analysis are defined below.

Hazardous Materials and Wastes Sites. HMW sites are properties containing or generating HMW, which is defined above. These sites have had materials which has been discarded, discharged, spilled, caused contamination, or are being stored either improperly or properly HMW sites can be defined by previous use, which could include previous industrial, agricultural, illegal dumping, or commercial activities, which 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 of older structures and released during building demolition activities.

Hazardous Waste Management. Hazardous waste management includes the treatment, storage, or disposal of hazardous waste. Treatment is any process that changes the physical, chemical, or biological character of the waste to reduce its potential as an environmental threat. Treatment can include neutralizing the waste, recovering energy or material resources from the waste, rendering the waste less hazardous, or making the waste safer to transport, dispose of, or store. Storage involves temporarily holding hazardous wastes until they are treated or disposed of properly. Hazardous waste is commonly stored in containers, tanks, containment buildings, drip pads, waste piles, or surface impoundments that comply with RCRA regulations. Disposal serves as a permanent way to contain hazardous wastes. The most common disposal method is at landfills, where hazardous wastes are disposed of in carefully constructed units designed to protect groundwater and surface water resources.

Environmental Concerns. This is a situation or condition that could potentially pose a risk to the environment, human health, or property, through the presence of HMW on a property, indicating an existing, past, or material threat of future release into the environment.

Environmental Safety Levels (ESLs). ESLs are levels of chemicals that indicate a potential for harm to humans, water life, and animal life. Additionally, they are used to help identify and evaluate potential environmental concerns at a site based on evaluation of over 100 commonly detected constituents. They address a full range of concerns potentially encountered at a site and are protective of human health, water quality, and the environment. The ESLs do not constitute policy or regulation, and their use is optional. As discussed above in **Section 5.9.2.3: Methodology**, the SFRWQCB ESLs are guidelines used to evaluate the potential risk associated with chemicals found in soil or groundwater where a release of hazardous materials has occurred. Although developed and maintained by the SFRWQCB, ESLs are used by regulatory agencies throughout California. Screening levels have been established for both residential and commercial/industrial land uses and for construction workers. Residential screening levels are the most restrictive; soil with chemical concentrations below these levels generally would not require remediation and would be suitable for unrestricted uses if disposed of off of a site. Commercial/industrial screening levels are generally less restrictive than residential screening levels because they are based on potential worker exposure to hazardous materials in the soil (and these are generally less than residential exposures). Screening levels for construction workers are also less restrictive than for commercial/industrial workers because construction workers are only exposed to the chemical of concern during the duration of construction, while industrial workers are assumed to be exposed over a working lifetime. Chemical concentrations below these screening levels generally would not require remediation and would be suitable for unrestricted uses. In addition, there are other more specific but similar screening levels used more narrowly focused human health or ecological risk assessment considerations.

Creosote. Creosote is derived from the distillation of tar from wood or coal and is used as a wood preservative. Pesticide products containing creosote as the active ingredient are used to protect wood used outdoors (such as railroad ties and utility poles) against termites, fungi, mites, and other pests.

Inorganic Contaminants (IOCs) or Metals. IOCs consist of salts and metals, which may be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming. Federal and State regulated IOCs include:

- **Arsenic.** Arsenic is a naturally occurring element that is found in combination with either inorganic or organic substances to form many different compounds. Inorganic arsenic compounds are found in soils, sediments, and groundwater. These compounds occur either naturally or as a result of mining, ore smelting, and industrial use of arsenic. It can enter drinking water supplies from natural deposits in the earth or from agricultural and industrial practices.
- **Asbestos.** Asbestos is a mineral fiber that occurs in rock and soil. Because of its fiber strength and heat resistance, asbestos has been used in a variety of building construction materials for insulation (roofing shingles, ceiling and floor tiles, paper products, and asbestos cement products), fire retardant, friction products (automobile clutch, brake, and transmission parts), heat-resistant fabrics, packaging, gaskets, and coatings. Exposure to asbestos occurs when fibers are released into the air by the disturbance of asbestos-containing material during product use, demolition work, building or home maintenance, repair, and remodeling. In general, exposure may occur only when the asbestos-containing material is disturbed or damaged in some way to release particles and fibers into the air.

- **Chromium.** Chromium is an odorless and tasteless metallic element. Chromium is found naturally in rocks, plants, soil and volcanic dust, and animals. The most common forms of chromium that occur in the natural environment are trivalent chromium (chromium-3) and hexavalent chromium (chromium-6). Chromium-3 is an essential human dietary element found in many vegetables, fruits, meats, grains, and yeast. Chromium-6 (see *Hexavalent Chromium* below) is the most toxic form of the metal which occurs both naturally from the erosion of natural chromium deposits and artificially from the release into the environment from leakage, poor storage, or inadequate industrial waste disposal practices at steel and pulp mills.
- **Hexavalent Chromium.** Hexavalent chromium is a known human carcinogen when inhaled and has been shown to cause tumors in mice and rats when ingested in drinking water, but there is little evidence indicating that ingesting trivalent chromium, a dietary supplement, poses any toxic or carcinogenic risk to humans.

Nitrate. Nitrate is a compound of nitrogen and oxygen naturally found in air, soil, water, and some food. Plants and animals require nitrates for their survival and growth, and the human body also produces this compound. Nitrates are also used as fertilizer for crops and lawns. Additionally, nitrates are used in food preservation, certain pharmaceutical medications, as well as the manufacture of munitions and explosives.

Heavy Metals. Heavy metal is a broad term used to describe a group of naturally occurring metallic elements such as arsenic, cadmium, lead, iron, zinc, copper, manganese, thallium, and mercury. Some heavy metals are essential for human nutrition and others serve no biological role. All metals can be toxic to the human body depending on the level of exposure.

Lead. Lead is a naturally occurring element found in small amounts in the earth's crust. While it has some beneficial uses, it can be toxic to humans and animals, causing health effects. Lead is often released into the environment from the use of fossil fuels (i.e., leaded gasoline, lead based paint, ceramics, pipes and plumbing materials, solders, batteries, ammunition, and cosmetics).

Herbicides. Herbicides are chemicals used to manipulate or control undesirable vegetation. Herbicide application occurs most frequently in row-crop farming, where they are applied before or during planting to maximize crop productivity by minimizing other vegetation.

Maximum Containment Level (MCL). MCLs identify the highest level of a contaminant that is allowed in drinking water. MCLs are enforceable standards which are set as close to Maximum Containment Level Goals (MCLGs) as feasible using the best available treatment technology and taking cost into consideration. MCLGs allow for a margin of safety and are non-enforceable public health goals. MCLs outline the U.S. EPA's desired level of a contaminant in drinking water below which there is no known or expected risk to health.

Pesticides. Pesticides include any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest. Pesticides are also intended for use as a plant regulator, defoliant, desiccant, or as a nitrogen stabilizer.

Secondary Contaminant. A secondary contaminant refers to substances that may be present in drinking water at higher levels than primary contaminants but typically do not pose significant health risks. Secondary contaminants can affect the taste, odor, color, and aesthetic quality of the water.

Secondary Maximum Containment Level (SMCL). SMCLs are U.S. EPA-developed non-mandatory water quality standards for secondary contaminants. The U.S. EPA does not enforce SMCLs, but they are established as guidelines to assist public water systems in managing their drinking water for aesthetic considerations, such as taste, color, and odor. These contaminants are not considered to present a risk to human health at the SMCL.

Semi-Volatile Organic Compounds (SVOCs). SVOCs are not as volatile as VOCs and thus are more likely to be liquids or solids at lower temperatures. SVOCs include products such as pesticides, oil-based products, and fire retardants. SVOCs can deposit on outdoor surfaces and are more likely to be dispersed in the air.

- **Naphthalene.** Naphthalene is used in the production of coal tar, wood preserving, tanning, or ink and dye production. Naphthalene can also be released to the air from the burning of coal and oil and from the use of mothballs. Short term exposure of humans to naphthalene by inhalation, ingestion, and dermal contact is associated with hemolytic anemia, damage to the liver, and neurological damage. Long-term exposure of workers and rodents to naphthalene has been reported to cause cataracts and damage to the retina. The EPA has classified naphthalene as a possible human carcinogen.
- **2-Methylnaphthalene.** 2-Methylnaphthalene is a natural component of crude oil and coal and is found as a byproduct from the combustion of tobacco, wood, petroleum-based fuels, and coal.

Synthetic Organic Contaminants (SOCs). SOC are carbon-based compounds of human-made origin that can get into water through runoff from croplands, discharge from factories, urban storm water runoff and septic systems.

Total Dissolved Solids. Total dissolved solids mean the total dissolved (filterable) solids present in a fluid.

Total Petroleum Hydrocarbons (TPH). TPH is a term used to describe a wide range of chemicals composed of carbon and hydrogen that are found in crude oils, petroleum products (such as gasoline, diesel, and other fuels, lubricating and hydraulic oils, and solvents), wastes, and process streams from refineries and other petroleum-related facilities. TPH is usually present in the environment as a result of accidental spills, waste disposal, leaks from storage tanks, or other types of releases. It may also be found as a result of oil seepages from naturally occurring underground reservoirs of oil. TPH are grouped into three ranges according to the number of carbons, these ranges include:

- Total Petroleum Hydrocarbons – Gasoline Range Organics (TPH-GRO)
- Total Petroleum Hydrocarbons – Diesel Range Organics (TPH-DRO)
- Total Petroleum Hydrocarbons – Oil Range Organics (TPH-ORO)

Volatile Organic Compounds (VOCs). VOCs are compounds that have a high vapor pressure⁴ and low water solubility.¹ VOCs are common ground-water contaminants. Many VOCs are human-made chemicals

¹ A property of a solute (substance) to dissolve in a solvent (a solution with another substance).

that are used and produced in the manufacture of paints, pharmaceuticals, and refrigerants and are often components of petroleum fuels, hydraulic fluids, paint thinners, and dry-cleaning agents. VOCs are emitted by a wide array of products which include fuels, paints and lacquers, paint strippers, cleaning supplies, pesticides, building materials and furnishings, office equipment such as copiers and printers, correction fluids and carbonless copy paper, graphics and craft materials including glues and adhesives, permanent markers, and photographic solutions.

- **Benzene.** Benzene or benzol, is a colorless liquid with a sweet odor which is categorized as a VOC contaminant. Since Benzene is categorized as a VOC, it has a high vapor pressure, medium water solubility, and is highly flammable. Benzene is found in air, water, and soil. Benzene comes from both industrial and natural sources. Benzene was first discovered and isolated from coal tar in the 1800s. Today, benzene is made mostly from petroleum. Various industries use benzene to make other chemicals, such as styrene (for Styrofoam® and other plastics), cumene (for various resins), and cyclohexane (for nylon and synthetic fibers). Benzene is also used in the manufacturing of some types of rubbers, lubricants, dyes, detergents, drugs, and pesticides. Natural sources of benzene, which include gas emissions from volcanoes and forest fires, also contribute to the presence of benzene in the environment.
- **Ethylbenzene.** Ethylbenzene is mainly used in the manufacture of styrene, which is widely used to make plastics and rubber to manufacture a variety of products, such as insulation, pipes, automobile parts, printing cartridges, food containers, and carpet backing. Occupational exposure to ethylbenzene occurs in factories that use ethylbenzene to produce other chemicals; for gas and oil workers; and for varnish workers, spray painters, and persons involved in gluing operations. Exposure to ethylbenzene also occurs from the use of consumer products, gasoline, pesticides, solvents, carpet glues, varnishes, paints, and tobacco smoke. Short term exposure in humans results in respiratory effects, such as throat irritation and chest constriction, irritation of the eyes, and neurological effects such as dizziness. Long term exposure by inhalation in humans has shown conflicting results regarding its effects on the blood.
- **Ethylene Dichloride (1,2-Dichloroethane).** Ethylene dichloride is primarily used in the production of vinyl chloride as well as other chemicals and is added to leaded gasoline as a lead scavenger. It is used in solvents as a dispersant in rubber and plastics, as a wetting and penetrating agent, and in closed systems for various extraction and cleaning purposes in organic synthesis. Ethylene dichloride has historically been used in ore flotation, as a grain fumigant, as a metal degreaser, and in textile and PVC cleaning. Exposure to low levels of ethylene dichloride can occur from breathing ambient or workplace air. Inhalation of concentrated ethylene dichloride vapor can induce effects on the human nervous system, liver, and kidneys, as well as respiratory distress, cardiac arrhythmia, nausea, and vomiting. Long-term inhalation exposure to ethylene dichloride can produce effects on the liver and kidneys in animals. The EPA has classified ethylene dichloride as a probable human carcinogen.
- **Toluene.** Toluene is an organic liquid with a sweet, benzene-like odor which is categorized as a VOC contaminant. The largest chemical use for toluene is to make benzene and urethane. Toluene is most commonly released into the atmosphere from the volatilization of petroleum fuels and toluene-based solvents and thinners and from motor vehicle exhaust. It is also released in wastewaters or by spills on land during the storage, transport and disposal of fuels and oils. It is

released into the atmosphere principally from the volatilization of petroleum fuels and toluene-based solvents and thinners and from motor vehicle exhaust.

- **Total Xylenes.** The term ‘total xylenes’ refers to all three isomers of xylene (*m*-, *o*-, and *p*-xylene). Total xylenes are primarily used as a solvent (a liquid that can dissolve other substances) in the printing, rubber, and leather industries. Along with other solvents, xylene is also widely used as a cleaning agent, a thinner for paint, in varnishes, and from a variety of consumer products, including gasoline, paint, varnish, shellac, rust preventives, and cigarette smoke. Short-term exposure of people to high levels of xylene can cause irritation of the skin, eyes, nose, and throat; difficulty in breathing; impaired function of the lungs; delayed response to a visual stimulus; impaired memory; stomach discomfort; and possible changes in the liver and kidneys. Both short- and long-term exposure to high concentrations of xylene can also cause a number of effects on the nervous system, such as headaches, lack of muscle coordination, dizziness, confusion, and changes in one's sense of balance.

Wildfire

As used in this assessment, and as defined by CAL FIRE and PRC § 4103, a wildfire or wildland fire is a fire burning uncontrolled on lands covered wholly or in part by timber, brush, grass, grain, or other flammable vegetation. Wildfires have differing causes such as lightning strikes and wind-blown embers but are mostly caused by human activities. For additional information refer to **Section 5.9.4.2: Wildfire Causes**. The terms wildfire or wildland fire are used interchangeably in this EIR.

5.9.3.2 Definition of Study Areas

The study area is the geographic boundary in which the environmental investigations were conducted specific to each resource topic.

Proposed General Plan

The analysis considers resources within the study areas defined in **Table 5.9-3: Study Areas – Proposed General Plan** and depicted in **Figure 5.9-1: Hazardous Materials, Wastes, and Wildfire Study Areas – BIG** through **Figure 5.9-9: Emergency Evacuation Routes - BIG** to determine impacts concerning hazards, hazardous materials, and wildfire.

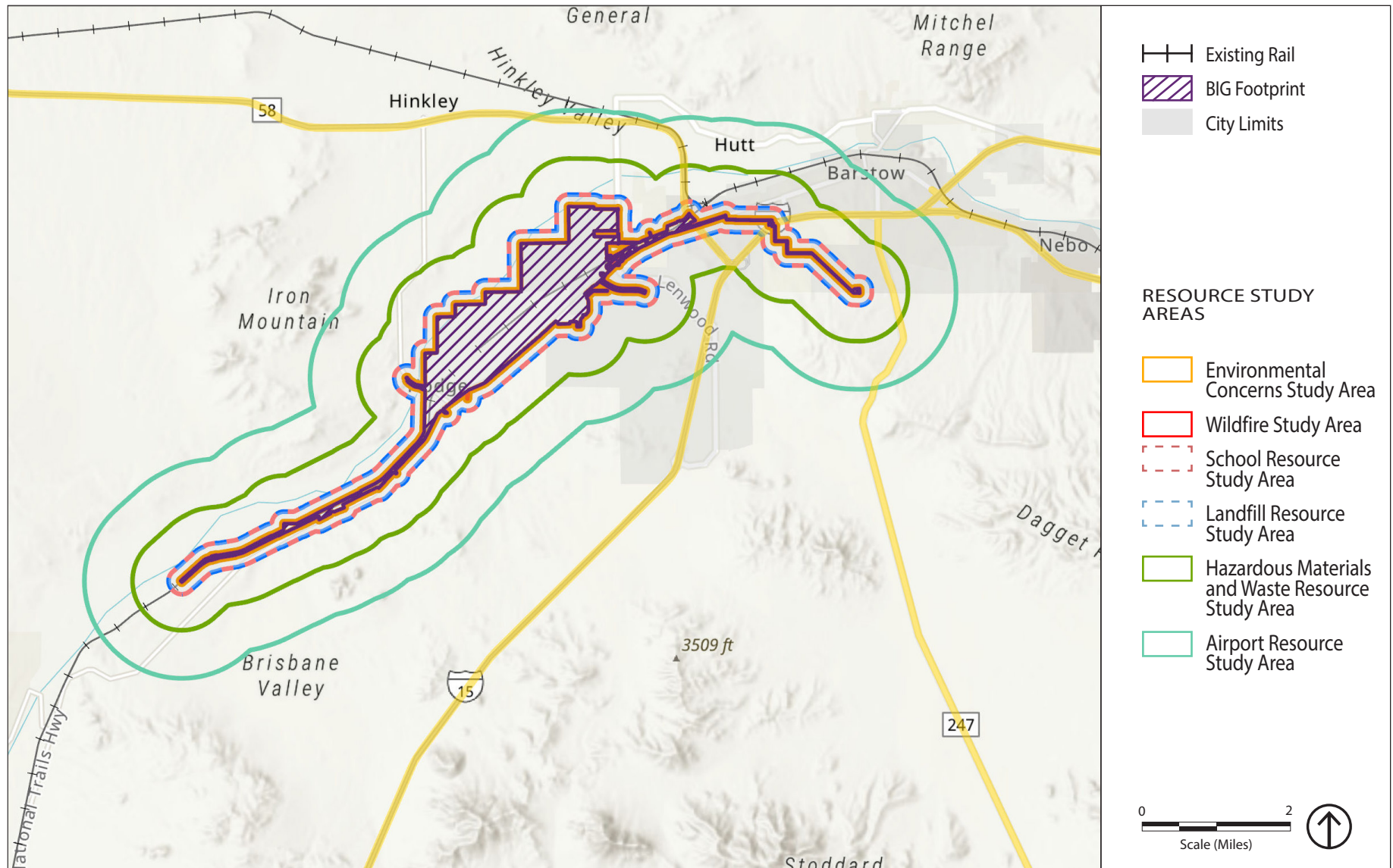
Table 5.9-3: Study Areas – Proposed General Plan	
Topic	Study Area
Environmental Concerns	City of Barstow and its SOI (General Plan area)
Wildfire	General Plan area
School	General Plan area
Landfill	General Plan area
HMW Sites	General Plan area
Airport	General Plan area plus 2.0-mile radius
Evacuation	General Plan area

Barstow International Gateway

The study areas used for BIG are measured from the BIG footprint (approximately 5,000 acres, including the rail yard with an intermodal facility and block swap yard, a transload warehouse center, and off-site rail and non-rail improvements). As a general matter, the study area refers to the areas in which potential effects on environmental resources are described and quantified and is defined differently based on the affected resource. The study area is the area that would be physically affected by BIG construction, operation, and maintenance (including temporary disturbance) activities and the location of permanent infrastructure.

The analysis considers the resources and conditions within the study areas depicted in **Figure 5.9-1: Hazardous Materials, Wastes, and Wildfire Study Areas – BIG** to determine impacts concerning hazards, hazardous materials, and wildfire. The specific study areas applied to each topic are summarized in **Table 5.9-4: Study Areas – BIG**.

Table 5.9-4: Study Areas – BIG	
Topic	Study Area
Environmental Concerns	BIG footprint
Wildfire	BIG footprint
School ¹	BIG footprint plus 0.25-mile radius
Landfill ²	BIG footprint plus 0.25-mile radius
HMW Sites ³	BIG footprint plus up to 1.0-mile radius
Airport ⁴	BIG footprint plus 2.0-mile radius
Evacuation	BIG footprint
Notes: ¹ CCR, Title 5, § 14010(d), requires a safety study for new school sites within 1,500 feet (approximately 0.25 mile) of an existing railroad track. Also, schools study area includes 0.25-mile radius for consistency with State CEQA Guidelines Appendix G threshold. ² The Landfills study area allows for an analysis of the potential for a change in land use adjacent to landfills, pursuant to CCR, Title 27, Subchapter 5, which requires assessment of landfill potential to release methane gas, which may present an explosion risk. ³ HMW sites study area was evaluated to establish context in the vicinity of the BIG footprint. Any Environmental Concerns outside the BIG footprint are not evaluated, as discussed further in Appendix 5.9 BIG-1: Hazardous Materials and Wastes Technical Report . ⁴ Airport study area includes 2.0-mile radius for consistency with State CEQA Guidelines Appendix G threshold.	



Sources:
ESRI, *World Street Map* [Basemap], 2024.; County of San Bernardino, *Cities and Towns* [Data set], 2022.; Kimley-Horn, 2025.

Figure 5.9-1
Hazardous Materials, Wastes, and Wildfire Study Areas - BIG

5.9.3.3 Methodology

Proposed General Plan

HMW Methodology

CGC § 65962.5 requires DTSC to compile, maintain, and update lists of specified hazardous material release sites, commonly referred to as the “Cortese List.” CEQA requires the lead agency for a project to consult these lists to determine whether the project site and any alternatives are identified on the Cortese list. Today, the Cortese list refers to many databases that record hazardous materials, including DTSC’s EnviroStor and SWRCB’s GeoTracker. These databases were used to identify active and closed HMW sites within the General Plan area (see **Table 5.9-7: Sites Identified by EnviroStor or GeoTracker – General Plan Area** later in this section). As previously addressed, HMW sites are properties containing or generating hazardous materials or wastes which have been discarded, discharged, spilled, caused contamination, or are being stored either improperly or properly. HMW sites have the potential to create a significant hazard to the public or environment.

The proposed General Plan would not result in direct development but would facilitate future development. Therefore, future development would conduct project-level review of potential hazards and hazardous materials issues in light of this DEIR and other relevant federal, State, and local regulations in order to determine whether potentially significant impacts would occur, and identify mitigation measures such as soil management plans, treatment for asbestos or lead-based paint, and other potential hazards.

Emergency Evacuation Methodology

Neither the City nor County have adopted significance criteria for the emergency evacuation analyses under CEQA, nor is there a standardized methodology for evaluation. Therefore, to determine if the proposed General Plan would impair implementation of or physically interfere within an adopted emergency response plan or emergency evacuation plan, CWP Policy Map PP-2: Evacuation Routes and the proposed General Plan Safety Element were reviewed.

Wildfire Methodology

The CAL FIRE mapping system and the BHMP were used to identify the wildfire risks within the General Plan area.

Barstow International Gateway

HMW Methodology

The analysis is based on a regulatory agency database search of the study areas (i.e., EnviroStor and GeoTracker); applicable federal, State, and local regulations related to HMW; review of available Phase I Environmental Site Assessments (ESAs) and Phase II ESAs (see **Appendix 5.9 BIG-1**), and a visual evaluation of site conditions (i.e., baseline conditions).

Due to the size of BIG's footprint, the methodology to identify sites as environmental concerns utilized a three-step process:

1. Classification of sites in the Environmental Concerns Study Area
2. Limited Environmental Due Diligence
3. Review of Phase I/II ESAs

These steps are described further in **Appendix 5.9 BIG-1**. This analysis applies similar reference numbers for each of the 443 parcels within the BIG footprint as were given in **Appendix 5.9 BIG-1**, see Figures 3 through 11.

In summary, limited environmental due diligence involved identification of Potential Environmental Concern (PEC) parcels within the BIG footprint. A PEC is defined as the possible presence of any chemicals of concern on a subject property under conditions that indicate the possibility of an existing release, a past release, or a threat of a future release of any chemicals of concern into structures on the subject property or into the ground, groundwater, or surface water of the subject property as defined. Based on the limited Environmental Due Diligence within the BIG footprint, properties were screened as either a PEC or no further evaluation warranted following ASTM E1528-22, Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (**Appendix 5.9 BIG-1**). Where a site was determined to possibly contain hazardous conditions but there was insufficient data to confirm presence or absence, the site was labeled a PEC. See **Appendix 5.9 BIG-1**, Figures 3 through 11, for a full list of parcels within the BIG footprint and a summary of their individual evaluations.

Prior to and concurrently with Step 2, Phase I and II ESAs were completed for the BIG footprint as part of acquisition following both the ASTM E1527-13 and E1527-21, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (**Appendix 5.9 BIG-1**). It should be noted that while parcels were evaluated on an individual basis within the BIG footprint for environmental concerns, Phase I ESAs were completed for parcels sharing common ownership (thus, a single Phase I ESA may cover multiple parcels).

The objective of the Phase I ESAs was to evaluate whether current or historical activities on or adjacent to the BIG footprint have potentially resulted in significant contamination by hazardous substances or petroleum products, which is subsequently referred to in this report as a "Recognized Environmental Condition" (REC), a "Historical Recognized Environmental Condition" (HREC), or a "Controlled Recognized Environmental Condition" (CREC) as defined below based on the ASTM standards:

- **Recognized Environmental Conditions (RECs).** A REC is the presence or likely presence of any HMW on a property under conditions that indicate an existing release, past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. A site was determined to be a REC if it met at least one of the following criteria:

- The site has active cases on either EnviroStor or GeoTracker (consistent with ASTM E1527-21).
- Visual inspection indicates likely leaking oil tanks, improperly stored chemicals, illegal dumping, or other signs of potential HMW concerns.
- The use of the site is typically associated with HMW impacts.
- The nature of the environmental concern site's environmental history indicates a likelihood of subsurface release by an HMW.
- The groundwater flow direction in the site's vicinity indicates a likelihood that potential subsurface off-site HMW conditions could migrate toward the study area.
- Review of the Phase I or Phase II ESA determines the site has HMW. Alternatively, if other criteria determine a property may contain HMW, the Phase I or Phase II ESA may confirm the property does not contain HMW.
- Other relevant information indicates a present or potential risk from HMW to construction, operations, and maintenance personnel.

Historical Recognized Environmental Conditions (HRECs). an HREC is considered to be a past release of any HMW that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (e.g., property use restrictions, activities and use limitations, institutional controls, or engineering controls).

Controlled Recognized Environmental Conditions (CRECs). A CREC is a recognized environmental condition resulting from a past release of HMW that has been addressed to the satisfaction of the applicable regulatory authority (e.g., as evidenced by the issuance of a no further action letter or equivalent or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (e.g., property use restrictions, activity and use limitations, institutional controls, or engineering controls).

Additionally, "orphan sites" are those properties with potential HMW releases without financially viable responsible parties. Orphan site information is limited and often does not include enough information on location or the reason for its listing as an orphan site to analyze. Therefore, orphan sites cannot be evaluated to the same degree as non-orphan sites.

If a Phase I ESA reported a REC, additional Phase II ESA limited site investigations were completed where warranted within the BIG footprint. The objective of Phase II ESAs was to assist in determining any sources of environmental impacts through a subsurface investigation of soil, soil gas and/or groundwater. Evaluation of the Phase I and II ESAs included the following:

1. If during review of a Phase I ESA, a REC, CREC, HREC was identified and a Phase II ESA was not completed, the reference number(s) parcel was deemed a REC, CREC or HREC, as appropriate.
2. If during review of a Phase I ESA a REC, CREC, or HREC was identified and Phase II ESA was completed with data quantifying that the RECs, CRECs or HRECs were satisfied based on State

regulatory criteria, the reference number(s) parcel was screened out and not considered an REC, CREC or HREC, as appropriate.

3. If a Phase II ESA reported data above a State regulatory criterion, the reference number (s) parcel was deemed a REC.

The review of Phase I and II ESAs was conducted to confirm environmental concern areas within the BIG footprint. See **Appendix 5.9 BIG-1**, Attachment A, for a full list of parcels within the BIG footprint and a summary of their individual evaluations and **Table 5.9-8: REC Sites within the Environmental Concern Study Area – BIG** later in this section for parcels with reported RECs, HRECs, or CRECs. REC, HREC, CREC and PEC sites have a greater potential for upset or accident conditions during construction, and are therefore considered an indicator for upset or accident conditions in the impact analysis.

General Environmental Concerns

To determine if general environmental concerns (i.e., schools, landfills, airports, and oil, gas, or geothermal wells) are currently located or planned within or near BIG's study areas, the following documents were reviewed:

- The Barstow Unified School District School Site Locator was reviewed to determine if any existing or proposed schools are located within the School Study Area (BIG footprint plus 0.25-mile radius).
- CWP Policy Map IU-5: Waste Disposal and Landfills was reviewed to determine if any existing or proposed landfills are located within the Landfill Study Area (BIG footprint plus 0.25-mile radius).
- CWP Policy Map HZ-9: Airport Safety and Planning was reviewed to determine if any existing or proposed public or public use airports are located within the Airport Study Area (BIG footprint plus 2.0-mile radius).
- The State of California Geologic Energy Management Division (CalGEM) reports were reviewed to determine if any oil, gas, or geothermal wells are located within the HMW Sites Study Area (BIG Footprint plus 1.0-mile radius).

Emergency Response Plans/Emergency Evacuation Plans

To determine if BIG would impair implementation of or physically interfere with the County's Emergency Operations Plan, CWP Policy Map PP-2: Evacuation Routes was reviewed. To determine if BIG would impair implementation of or physically interfere with the City's Emergency Operations Plan and emergency evacuation plans, the proposed General Plan Safety Element was reviewed.

Wildfire

BIG is evaluated against the significance criteria/thresholds, as the basis for determining the impact's level of significance concerning wildfire. This analysis considers the existing regulatory framework (i.e., laws, ordinances, regulations, and standards) that avoid or reduce the potentially significant environmental impact. Where significant impacts remain, despite compliance with the regulatory framework, feasible mitigation measures are recommended to avoid or reduce BIG's potentially significant environmental impacts.

This analysis of potential wildfire-related impacts considers BIG's temporary (i.e., construction) and permanent (i.e., operational) effects based on significance criteria/thresholds. For each criterion, the analyses are generally divided into two main categories: (1) construction impacts and (2) operational impacts. The impact conclusions consider the potential for changes in environmental conditions, as well as compliance with the regulatory framework enacted to protect the environment.

The environmental setting is based on review of aerial and ground-level photographs, and various public State and local data and relevant local planning documents, including CAL FIRE's Fire and Resource Assessment Program's publicly available FHSZ GIS map. The determination that a project would or would not result in potential significant impacts first considers if BIG is in or near an SRA or lands classified as Very High FHSZs. If a project site is on such lands, then further analysis is warranted. In accordance with State CEQA Guidelines Appendix G, because BIG is not within or near an SRA or lands classified as Very High FHSZs, analysis of potential impacts concerning the following factors is not warranted, thus, was not conducted:

- An adopted emergency response or evacuation plan
- Potential exacerbation of wildfire risks due to slope, prevailing winds, and other factors.
- Potential exacerbation of wildfire risks due to required installation or maintenance of infrastructure associated with the Project.
- Potential exposure of people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes.

5.9.4 ENVIRONMENTAL SETTING

Proposed General Plan

5.9.4.1 Hazardous Materials and Wastes

Historical and Existing Land Uses within the City

As described in **Section 4.0: Project Context**, the Barstow area became a mining center in the late 1800s after silver was discovered in the Calico Mountains. After the discovery of silver in 1882, BNSF's predecessor (Atchison, Topeka, and Santa Fe Railway [ATSF]) constructed the railroad, with the mainline tracks running east-west in tandem with the later constructed historic U.S. Route 66, known as an original highway and gateway for travelers and immigrants entering the State. At the end of the 19th century, Barstow was selected to create a connection from the Midwest to San Francisco, Los Angeles, and San Diego. Accordingly, Barstow was developed as a common rest stop for travelers, creating sufficient jobs to sustain the population. As such, land uses have and still include various types of commercial, industrial, municipal, and residential uses. As discussed below, there are a number of locations within the General Plan area listed by regulatory agencies as HMW sites. Additionally, some buildings and structures within the study area may include potentially hazardous building materials and HMW.

Hazardous Materials Storage, Use, and Generation Facilities

Hazardous materials storage and use facilities are those active sites that are currently permitted to use, handle, and/or store hazardous materials (CalRecycle sites). CalRecycle sites are regulated by the local CUPA, which for the City is the SBC Fire's Hazardous Materials Division. **Table 5.9-5: CalRecycle Sites – Proposed General Plan Area** and **Table 5.9-7: Sites Identified by EnviroStor or GeoTracker – General Plan Area** (provided later in this EIR section) identify the CalRecycle sites in the City which are known to generate, store, transport, or dispose of hazardous wastes. Given the nature of the databases, there may be some overlap between categories (one site may be listed on more than one database).

Table 5.9-5: CalRecycle Sites – Proposed General Plan Area				
SWIS ID	Site Name	Address	Classification	Status
36-AA-0046	Barstow Sanitary Landfill	32553 Barstow Road, 3 miles south of Barstow Barstow	Solid Waste Facility	Active
36-AA-0488	Barstow Transfer Station	250 Elks Lane Barstow	Solid Waste Facility	Planned
36-AA-0469	Caltrans Barstow Maintenance Station	1800 Dill Road Barstow	Solid Waste Operation	Active
36-AA-0040	Daggett Refuse Disposal Site	Camp Rock Road, 2 miles south of Highway 40 Daggett	Solid Waste Disposal Site	Closed
36-AA-0061	Lenwood-Hinkley Refuse Disposal Site	37751 Lenwood Road Lenwood	Solid Waste Facility	Closed
36-CR-0080	MCLB Barstow CAOC 23	U.S. Marine Corps Logistic Base (Yermo Annex) Barstow	Solid Waste Disposal Site	Closed
36-CR-0081	MCLB Barstow CAOC 7	U.S. Marine Corps Logistical Base Nebo Main B Barstow	Solid Waste Disposal Site	Closed
36-AA-0047	Yermo Disposal Site	40950 Minneola Road Yermo	Solid Waste Facility	Closed
Source: CalRecycle, 2025.				

CalRecycle sites are required to submit a Hazardous Materials Business Plan via the California Environmental Reporting System (CERS) if using, handling, or storing hazardous materials in quantities equal to or greater than:

- 55 gallons of a liquid
- 500 pounds of a solid
- 200 cubic feet of compressed gas
- Extremely hazardous substances above the threshold planning quantity

CalRecycle sites must also report any amount of hazardous waste to the CUPA via CERS.

General Environmental Concerns within the City

Potentially Hazardous Building Materials. Some buildings in the City were built prior to the 1970s; based on the ages of these buildings, there is a potential for building materials to contain asbestos-containing materials (ACM) or lead-based paint (LBP). A potential release of hazardous materials could occur when ACMs or LBP are disturbed during renovation or demolition activities. This disturbance could be harmful to human health. Typical hazardous materials of concern for existing older structures in the City include the following:

Asbestos is a mineral fiber that is carcinogenic and harmful to respiratory health. Because of its fiber strength and heat resistance, it was widely used in a variety of building construction materials for insulation and as a fire-retardant, as well as in friction and heat-resistant products. Use of asbestos in the manufacturing of these products was common throughout California, until 1977, when it was banned. Older buildings constructed prior to 1978 could contain ACMs. Asbestos can be released when ACMs are disturbed by cutting, sanding, drilling, or other remodeling activities. Improper attempts to remove these materials can release asbestos fibers into the air, increasing asbestos levels and affecting indoor air quality.

ACM contains one percent or more asbestos, as determined by a testing method called Polarized Light Microscopy. When dry, ACM is considered friable if it can be crumbled, pulverized, or reduced to powder by hand pressure. Friable asbestos-containing waste must be handled as a hazardous waste as required in the CHSC and CCR Title 22. It is possible for non-friable ACM to become friable when subjected to unusual conditions, such as demolishing a building or removing an ACM that has been glued into place (San Bernardino, 2023a).

All burnt structures, regardless of age, and all pre-1984 demolished structures require certification prior to being accepted at any of the County's landfills and/or transfer stations. All post-1984 structures are assumed to be asbestos-free and are accepted without certification (San Bernardino, 2023a).

Lead is a recognized harmful environmental pollutant that can pose a hazard when exposed through air, drinking water, food contaminated soil, deteriorating paint, and dust. Lead was widely used in paint, gasoline, water pipes, and many other products prior to documentation of its health hazards. The use of LBP was banned in California in 1978, and therefore, buildings constructed prior to 1978 could contain LBP. If LBP is improperly removed from surfaces by dry scraping or sanding, LBP can be absorbed into the body and could pose a potential public health risk.

Mold can impair indoor air quality. The presence of visible water damage, damp materials, visible mold, or mold odor in buildings increases the potential risks of respiratory disease of occupants. According to the California Department of Public Health, known health risks include the development of asthma, allergies, and respiratory infections, the triggering of asthma attacks, and increased wheezing, coughing, difficulty breathing, and other symptoms.

Illegal Dumping. Illegal dumping refers to the unauthorized or improper disposal of waste materials, including solid, liquid, or hazardous substances, in areas not designated for waste disposal, such as public or private lands, roadways, water bodies, or other environmentally sensitive areas. The City's

unincorporated SOI primarily consists of vacant undeveloped desert land. Intentional or unintentional illegal dumping may introduce HMW, leading to soil and groundwater contamination.

Oil and Gas Wells. According to the State of California Geologic Energy Management Division (CalGEM) (formerly, Division of Oil, Gas and Geothermal Resources) online mapping application Well Finder, there are no oil and gas wells within the proposed General Plan area (DOC, 2025).

Pesticides. Agricultural activities are commonly associated with the storage, handling, and application of pesticides (and herbicides) on row crops or orchards. The routine application of such compounds may not accumulate to soil concentrations requiring regulatory oversight. The proposed General Plan area has agricultural uses. Therefore, the use of agricultural chemicals, such as pesticides, is likely to have occurred within the proposed General Plan area.

Polychlorinated Biphenyls (PCBs) are synthetic chemicals that were manufactured for use in various industrial and commercial applications—including oil in electrical and hydraulic equipment, and plasticizers in paints, plastics, and rubber products—because of their non-flammability, chemical stability, high boiling point, and electrical insulation properties. When released into the environment, PCBs persist for many years and bioaccumulate in organisms. The U.S. EPA has classified PCBs as probably human carcinogens. In 1979, the U.S. EPA banned the use of PCBs in most new electrical equipment and began a program to phase out certain existing PCB-containing equipment.

Radon is a naturally occurring odorless, tasteless, and invisible gas produced from the decay of uranium in soil and water. Structures placed on native soil with elevated levels of radon can be impacted by the intrusion of radon gas into breathing spaces of the overlying structures, which can cause lung cancer. The U.S. EPA recommends remedial action for areas with levels above 4 pCi/L.

Landfills and Solid Waste Transfer Facilities

CalRecycle sites within the proposed General Plan area are sites that have been identified by CalRecycle as being or have been a landfill or solid waste facility (**Table 5.9-5: CalRecycle Sites – Proposed General Plan Area**). The current status of each site is also provided.

The City operates a household hazardous waste collection facility at the City of Barstow Corporation Yard, located at 900 South Avenue H. This facility accepts a range of household hazardous waste materials, including antifreeze, auto and household batteries, chemical cleaners, cooking oil, fertilizers, motor oil, and oil filters, paint products, personal medications (excluding controlled substances), pesticides, pool chemicals, and sharps (Barstow, 2025).

Airports, Airstrips, and Helicopters

Public and Public-Use Airports. The proposed General Plan area is not within any airport land use plan, nor are there any public or public-use airports within the boundaries of the proposed General Plan area. The nearest public or public-use airport is the Barstow-Daggett Airport, located approximately 6 miles east of the proposed General Plan area. The airport can support military training at the Fort Irwin National Training Center (San Bernardino, 2025).

Public and Military Airports. The Barstow Marine Corps Logistics Base (BMCLB) is adjacent to the City's northeastern boundary and operates helicopters as part of its military operations.

Fort Irwin, approximately 30 miles north and east of the proposed General Plan area includes the Fort Irwin Airfield which is operated by the Army. The Fort Irwin Airfield is also adjacent to the Bicycle Lake Army Airfield. There are no public or military airports within the General Plan area; the use of helicopters by the BMCLB are required as part of the base's military operations.

Private Airports. There is a private airstrip, Depue Airport, within the BIG footprint, in the General Plan area. See **Section 5.9.4.4 Environmental Setting – BIG** for further discussion.

Underground Storage Tanks (USTs)

Table 5.9-6: Sites Identified by UST Finder – General Plan Area lists sites within the General Plan area that have been identified by UST Finder as being or have been USTs and provides the status of each site. All 47 sites found within the General Plan area are open.

ID	Site Name	Address	Status
CA10036108	Crossroads Fuel & Food	913 Barstow Road	Active UST(s)
CA10036114	Barstow Shell	2870 Lenwood Road	Active UST(s)
CA10036117	Saint George Mobil	1390 E Main Street	Active UST(s)
CA10036537	Brownie's Liquor & Market	29291 W Highway 58	Active UST(s)
CA10045729	Action Petro Inc.	2191 W Main Street	Active UST(s)
CA10045894	Lenwood Oil Co.	2795 Lenwood Road	Active UST(s)
CA10037098	Chevron Station #99752/1490	2890 Lenwood Road	Active UST(s)
CA10046191	Mohsen Oil, Inc.	35680 Daggett Yermo Road	Active UST(s)
CA10046518	Walmart #1879	621 Montara Road	Active UST(s)
CA10037536	Circle K #1096	500 Rimrock Road	Active UST(s)
CA10035586	Tesoro (Speedway XP) 63332	1400 E Main Street	Active UST(s)
CA10037638	Circle K Store #2705731	1501 E Main Street	Active UST(s)
CA10037755	Daggett Aviation, Inc.	39500 National Trails Highway	Active UST(s)
CA10047727	Terrible Herbst #374	1700 E Main Street	Active UST(s)
CA10038184	Abandoned UST - Mohsen	33830 Outer Highway 15	Active UST(s)
CA10038394	Daggett Oil	35487 National Trails Highway	Active UST(s)
CA10038511	Yermo AM/PM	35474 Yermo Road	Active UST(s)
CA10035493	Tesoro (USA) 63333	2181 W Main Street	Active UST(s)
CA10124728	First Student, Inc. #20833	320 W Mountain View Street	Active UST(s)
CA10124782	7-Eleven Inc. Store# 37950	491 Armory Road	Active UST(s)
CA10039162	Mclb/Mcx	Bldg. 319-Nebo	Open UST(s)
CA10039165	Mclb-Nebo Gov. Fuel Station	Nebo-Ust(324a-C)	Active UST(s)
CA10051999	Famlee Petroleum, Inc., DbA Lenwood Arco	2800 Lenwood Road	Active UST(s)

Table 5.9-6: Sites Identified by UST Finder – General Plan Area			
ID	Site Name	Address	Status
CA10052332	Abandoned UST - Barstow-Dagget Airport	39500 National Trials Highway	Active UST(s)
CA10052761	Love's Travel Stop #374	2974 Lenwood Road	Active UST(s)
CA10039288	Flying J Travel Plaza - 614 Barstow	2611 Fisher Boulevard	Active UST(s)
CA10039396	Food 4 Less Fuel Center #312	500 E Virginia Way	Active UST(s)
CA10042195	Sukhtera, Inc. (Arco Montara AM-PM #6349)	100 Montara Road	Active UST(s)
CA10039516	Barstow Fuel	1600 E Main Street	Active UST(s)
CA10039726	Yermo Shell & Truck Stop	35858 Ghost Town Road	Active UST(s)
CA10040320	Route 66 Fuel	1401 E Main Street	Active UST(s)
CA10042021	Yermo Petroleum Inc.	35555 Ghost Town Road	Active UST(s)
CA10042057	Express Gas and Food	40873 Sunrise Canyon Road	Active UST(s)
CA10045075	California Army National Guard	1601 Armory Road	Active UST(s)
CA10045249	Abandoned USTs - Stop 'N' Save	1501 Irwin Road	Active UST(s)
CA10141019	Frontier California, Inc.: Barstow Co.	135 Cozy Lane	Active UST(s)
CA10045465	Terrible Herbst's Chevron	2100 W Main Street	Active UST(s)
CA10043116	Pilot Oil #282	2591 Commerce Parkway	Active UST(s)
CA10043479	Flyers #4404	2370 W Main Street	Active UST(s)
CA10043485	Barstow Travel Center	2930 Lenwood Road	Active UST(s)
CA10044016	Abandoned Ust – Rustler	40895 Sunrise Canyon Road	Active UST(s)
CA10044415	Silver Valley USD	35320 Daggett-Yermo Road	Active UST(s)
CA10147277	PG&E - Hinkley Compressor Station	35863 Fairview Road	Active UST(s)
CA10791682	Terrible Herbst #380	2596 Commerce Parkway	Active UST(s)
CA10828411	Abandoned UST - Hinkley Road	SE Corner Hinkley Road & Blue Star Memorial Highway	Active UST(s)
CA10745044	Eddie World	36017 Calico Road	Active UST(s)
CA10707688	Abandoned UST - Loomis	38883 Yermo Road	Active UST(s)
Notes: UST = underground storage tank			
Source: U.S. EPA, 2025b.			

Educational Facilities

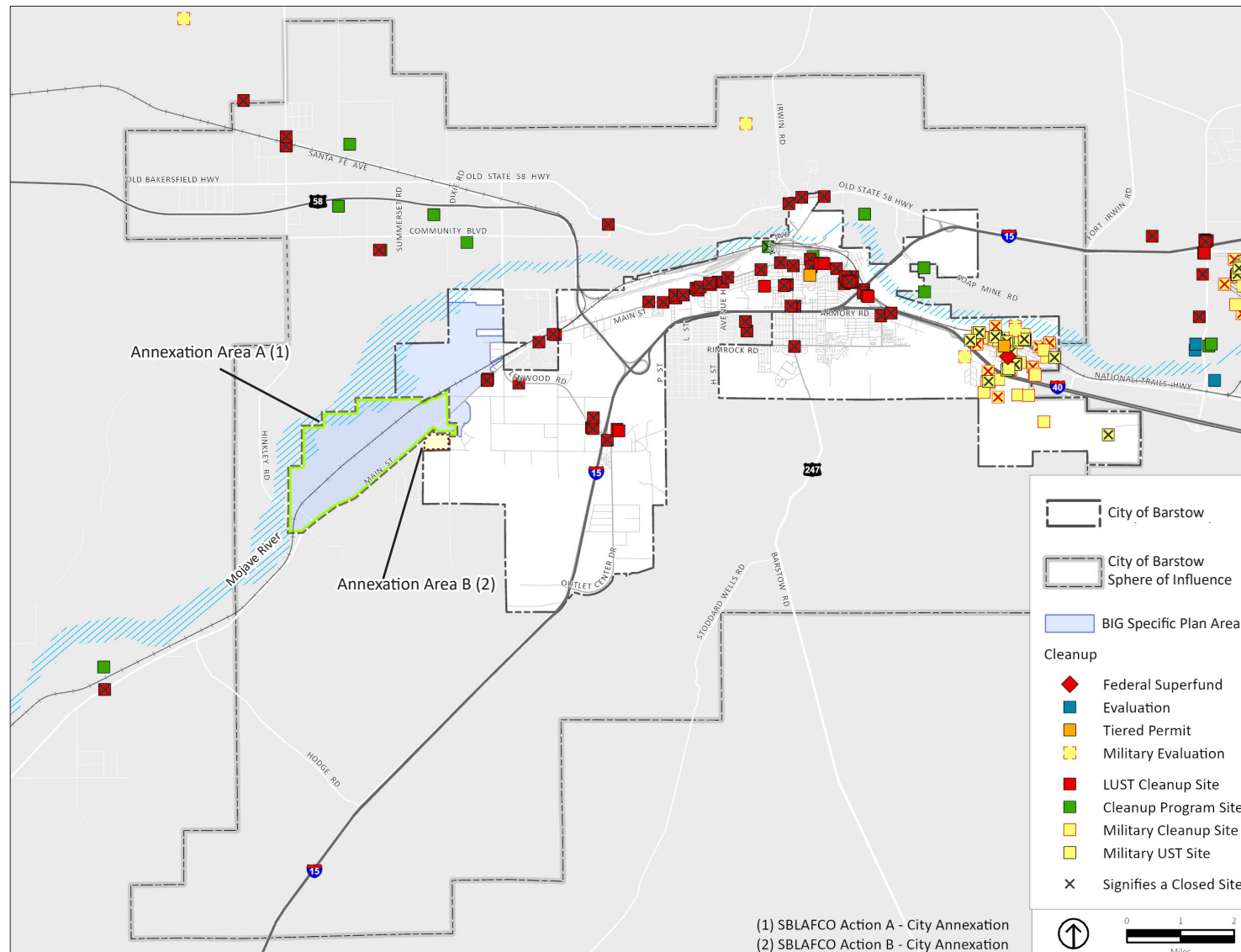
Public education services are provided by the Barstow Unified School District (BUSD), which has 12 schools (including one adult education school). **Figure 5.14-2: Barstow Unified School District Facilities – Proposed General Plan** (see **Section 5.14: Public Services and Recreation**) depicts the location of these schools throughout the General Plan area (BUSD, 2025). Schools located within the proposed General Plan area are identified in **Table 5.14-9**. The proposed General Plan's potential to emit hazardous emissions within 0.25-mile of a school is evaluated in **Section 5.3: Air Quality**.

HMW Sites

Figure 5.9-2: Hazardous Waste Sites - Proposed General Plan shows the locations of the sites within the General Plan area. **Table 5.9-7: Sites Identified by EnviroStor or GeoTracker – General Plan Area** lists sites identified by EnviroStor or GeoTracker within the proposed General Plan area that were or currently area HMW sites and provides the status of each.

The following is a list of definitions of the site types found in the General Plan area based on RWQCB case type:

- **Formerly Used Defense Sites (FUDS):** Properties formerly owned, leased, possessed, or used by the military at the time of actions leading to contamination by hazardous materials.
- **Tiered Permit:** A State of California authorized hazardous waste treatment and storage program that matches each permitted tier with the degree of risk associated with the waste generators treatment or storage activities. There are five tiers:
 - **Conditional Authorization:** Allows for on-site treatment of non-RCRA and RCRA exempt hazardous wastes. This tier is generally for single hazard waste streams and has some treatment volume limits.
 - **Conditionally Exempt:** Allows for on-site treatment of non-RCRA and RCRA exempt hazardous wastes. This tier is for less risky hazardous waste treatment in smaller volumes.
 - **Full Permit:** Allows for treatment and storage of RCRA and non-RCRA hazardous waste.
 - **Permit by Rule:** Allows for on-site treatment of non-RCRA and RCRA exempt hazardous wastes. This tier is for treating waste streams that exhibit more than one hazardous characteristic and higher volume waste streams.
 - **Standardized Permit:** Allows for off-site treatment and storage of non-RCRA and RCRA exempt hazardous wastes.
- **Protective Filer:** A facility that filed a RCRA application for the treatment, disposal, or storage of hazardous waste as a protective measure only.
- **Open Base:** Open military facilities with confirmed or unconfirmed releases and where DTSC is involved in investigation and/or remediation, either in a lead or support capacity.
- **LUST Cleanup Site:** Includes all UST sites that have had an unauthorized release (i.e., leak or spill) of hazardous substance, usually fuel hydrocarbons, and are being (or have been) cleaned up.
- **Cleanup Program Site:** Includes all non-federally owned sites that are regulated under SWRCB's Site Cleanup Program and/or similar programs conducted by each of the nine RWQCBs.
- **Military Cleanup Site:** Includes all cleanup sites on existing military bases (or those to be transferred).
- **Military UST Site:** Includes all petroleum-related LUST cleanup sites on existing military bases (or those to be transferred) and regulated by SWRCB and/or one of the nine RWQCBs.



Source: Geotracker, 2025; EnviroStor, 2025; City of Barstow, 2025

Figure 5.9-2
Hazardous Waste Sites - Proposed General Plan

Table 5.9-7: Sites Identified by EnviroStor or GeoTracker – General Plan Area				
ID	Site Name	Address	Site Type	Status According to Database (see below for definitions related to status)
SITES LISTED ON ENVIROSTOR				
80000968	Barstow Disposal Site	San Bernardino County	FUDS	Inactive – Needs Evaluation
71003611	U.S. Marine Corps, Logistics Base, Nebo Facility	Nebo Facility, Barstow	Tiered Permit	Refer: Other Agency
71003612	U.S. Marine Corps, Logistics Base	Yermo Annex Building 573, Barstow	Tiered Permit	Refer: Other Agency
80000741	Marine Corps Base	Barstow	FUDS	Inactive – Needs Evaluation
80000883	Naval Supply Depot	Barstow	FUDS	Inactive – Needs Evaluation
CA81700246261	USMC Barstow Logistics Base Nebo	Barstow	Protective Filer	–
36970001	Barstow Marine Corps Logistics Base (BMCLB)	Barstow	Open Base	Active
80000044	NSC Barstow-Daugette	Barstow	FUDS	Inactive – Needs Evaluation
SITES LISTED ON GEOTRACKER				
T0607100939	Hinkley School	37600 Hinkley Road, Hinkley	LUST Cleanup Site	Completed – Case Closed
T10000007347	Hinkley Market and Gas	37466 Hinkley Road, Hinkley	LUST Cleanup Site	Completed – Case Closed
T0607100940	Hinkley Market	37466 Hinkley Road, Hinkley	LUST Cleanup Site	Completed – Case Closed
SL0607171020	Desert View Dairy CAO	37501 Mountain View Road, Hinkley	Cleanup Program Site	Open – Site Assessment
SL0607132060	PG&E Interim Plume Containment and Hexavalent Chromium Treatment	37501 Mountain View Road, Hinkley	Cleanup Program Site	Open – Inactive
T0607100781	Hinkley Compressor Station	35863 Fairview Road, Hinkley	LUST Cleanup Site	Completed – Case Closed
SL0607111288	Pacific Gas and Electric Company Hinkley	35863 Fairview Road, Hinkley	Cleanup Program Site	Open – Remediation
T10000012148	Hinkley Dairy CAO	24333 Community Boulevard, Hinkley	Cleanup Program Site	Open – Site Assessment
T10000012145	Harmsen Dairy CAO	23920 Community Boulevard, Hinkley	Cleanup Program Site	Open – Site Assessment
T0607100768	Whiting Brothers Service Station	26487 Highway 58, Hinkley	LUST Cleanup Site	Completed – Case Closed

Table 5.9-7: Sites Identified by EnviroStor or GeoTracker – General Plan Area

ID	Site Name	Address	Site Type	Status According to Database (see below for definitions related to status)
T10000002830	Mojave River Pyrotechnics – Barstow Perchlorate	30433 Poplar Street, Barstow	Cleanup Program Site	Open – Assessment and Interim Remedial Action
T10000012149	Barstow Replacement Water CAO	1 Soapmine Road, Barstow	Cleanup Program Site	Open – Site Assessment
T10000006028	Barstow Nitrate Groundwater Cleanup	2200 East Riverside Drive, Barstow	Cleanup Program Site	Open – Assessment and Interim Remedial
T0607100930	Beacon	3070 Highway 58, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100770	Chevron	29874 Highway 58, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100661	Arthur C and Betty Whiting	26465 Highway 58, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607199275	Wilde Horse Gas and Diesel	30061 Highway 58, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100834	Chevron Service Station	2890 Lenwood Road, Barstow	LUST Cleanup Site	Completed – Case Closed
T10000012496	Flying J Travel Center	2611 Fisher Boulevard, Barstow	LUST Cleanup Site	Open – Site Assessment
T10000001668	Flying J Inc.	2611 Fisher Boulevard, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607135521	Webster Oil	2880 Lenwood Road, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100753	RIP Griffin Truck Service Center	2930 Lenwood Road, Barstow	LUST Cleanup Site	Completed – Case Closed
T060710638	Yellow Freight System Inc.	2951 Lenwood Road, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100948	Yellow Freight System	2951 Lenwood Road, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607173699	RIP Griffin Travel Center	2930 Lenwood Road, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100647	Whiting Brothers Lenwood	24645 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100797	Budget Automotive	24879 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100640	Unknown	25513 Main Street, Lenwood	LUST Cleanup Site	Completed – Case Closed
T0607100927	Shirley Morgan	25644 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100853	James Soutar Property	1230 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100691	Streamlight West	2521 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100743	H & E Home Builders	2420 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100947	Freeway Fuel Stop	2351 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed

Table 5.9-7: Sites Identified by EnviroStor or GeoTracker – General Plan Area

ID	Site Name	Address	Site Type	Status According to Database (see below for definitions related to status)
T0607100758	Desert Disposal	2340 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607127838	Private Residence	Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100785	Former Heartland Truck Stop	2250 West Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100799	Yellow Freight System Inc.	Lenwood Avenue, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100708	Barstow City Corporate Yard	900 H Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100772	Barstow Wastewater Reclamation	2200 Riverside Road, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100863	Calnev Pipeline	34277 Daggett-Yermo, Daggett	LUST Cleanup Site	Completed – Case Closed
T0607140225	Arco Station	2181 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100960	American Travel Center	2191 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100943	Terrible Herbst	2100 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100694	Unocal	2081 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100669	Shell Oil	1390 Main Street E, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100727	Whiting Brothers	1841 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100697	Chevron	1900 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100874	Bodine Oil	1500 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100682	Sparkle Auto Laundry	1421 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100701	Circle K	500 Rimrock, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100833	Chevron	913 Barstow Road, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100877	Top Deck Texaco	904 Barstow Road, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100679	Sheriff's Station	225 Mountain View, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100961	Barstow Unified School District (BUSD)	320 Mountain View, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100784	Circle K	600 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100641	Continental Telephone Company	135 Cozy Lane, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100711	Arco	500 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed

Table 5.9-7: Sites Identified by EnviroStor or GeoTracker – General Plan Area

ID	Site Name	Address	Site Type	Status According to Database (see below for definitions related to status)
SL206013819	BNSF Railway – Barstow Classification Yard	200 North Avenue H, Barstow	Cleanup Program Site	Completed – Case Closed
SL206033821	BNSF Railway – Former Barstow Diesel Shops	200 North Avenue H, Barstow	Cleanup Program Site	Open – Assessment and Interim Remedial Action
T10000015429	BNSF Railway – Former Barstow Diesel Shop	200 North Avenue H, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100876	U Haul of San Bernardino	800 Main Street, Barstow	LUST Cleanup Site	Completed – Case
T0607100777	EZ Serve Texaco	931 Main Street, Barstow	LUST Cleanup Site	Open – Site Assessment
T0607102460	Former Gas Service Station	1001 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100695	Transmission World	1101 Main Street, Barstow	LUST Cleanup Site	Open – Site Assessment
T0607100714	Arco	1251 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100692	Mobile/Gas King Station	1401 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100748	Desert Van and Storage	170 Eastgate Road, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100660	Chevron	1451 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100741	Barstow Station Unocal	1501 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100944	Shell Service Station	1390 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100669	Shell Oil Barstow	1390 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100659	Thrifty Oil	1400 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100767	Unocal	1440 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100836	Former Exxon	1500 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0000011936	Barstow Probation Building	1300 Mountain View Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100933	Dry Gulch Shell	1601 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100938	Mobil Station	1600 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100670	E-Z Serve	1700 Main Street, Barstow	LUST Cleanup Site	Open – Assessment and Interim Remedial Action

Table 5.9-7: Sites Identified by EnviroStor or GeoTracker – General Plan Area

ID	Site Name	Address	Site Type	Status According to Database (see below for definitions related to status)
T0607100946	Terrible Herbst Station	1710 Main Street, Barstow	LUST Cleanup Site	Open – Assessment and Interim Remedial Action
T0607100755	Montara Texaco	200 Montara Road, Barstow	LUST Cleanup Site	Completed – Case Closed
T0607100878	W A Thompson	25538 Main Street, Barstow	LUST Cleanup Site	Completed – Case Closed
DOD100020800	Landfill North of Golf Course	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Completed – Case Closed
DOD100022600	UST T-27A, B, C	MCLB Bldg. #146 Boll Avenue, Barstow	Military UST Site	Open – Long Term Management
DOD100023000	Former Preservation & Packaging Shop	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Open – Site Assessment
T0607100871	T213A, B, and C	USMC LB, Barstow	Military UST Site	Completed – Case Closed
DOD100021200	Drainage Channels and Mojave River Outfalls	MCLB Bldg. # 146, Boll Avenue, Barstow	Military Cleanup Site	Completed – Case Closed
T10000006584	Barstow MCLB, Nebo and Yermo – Barstow MCLB	PO Box 110570 Building 197 Barstow	Military Cleanup Site	Open – Assessment and Interim Remedial Action
DOD100024100	Barstow MCLB	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Open – Inactive
DOD100027700	Barstow MCLB	MCLB Bldg. # 146 Boll Avenue, Barstow	Military Cleanup Site	Open – Inactive
DOD100027800	Barstow MCLB	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Open – Inactive
DOD100023400	Nebo North Groundwater	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Open – Remediation
DOD100022500	UST T-354	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Open – Site Assessment
T10000000716	Barstow MCLB	MCLB Bldg. #146 Boll Avenue, Barstow	Military UST Site	Completed – Case Closed

Table 5.9-7: Sites Identified by EnviroStor or GeoTracker – General Plan Area

ID	Site Name	Address	Site Type	Status According to Database (see below for definitions related to status)
DOD100022700	Warehouse	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Open – Site Assessment
DOD100022800	Warehouse 3	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Open – Site Assessment
T0607100911	T22D	Nebo Annex MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100912	T22C	Nebo Annex MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100916	T22A	Nebo Annex MCLB Barstow	Military UST Site	Open – Long Term Management
T0607100917	T22B	Nebo Annex MCLB Barstow	Military UST Site	Open – Long Management
DOD100022900	Warehouse 4	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Open – Site Assessment
T0607100913	T20	Nebo Annex MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100864	T43B	USMC LB MCLB, Barstow	Military UST Site	Completed – Case Closed
T0607100901	T10	Nebo Annex MCLB Barstow	Military UST Site	Completed – Case Closed
DOD100022000	Old Nebo Domestic Wastewater Treatment Plant	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Open – Site Assessment
DOD1000014700	Nebo North Groundwater	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Open – Remediation
DOD100018800	Pesticide Storage and Washout Area	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Completed – Case Closed
T0607100776	T325	B325 T325 USMC LB MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100811	T227	MCLB Barstow	Military UST Site	Completed – Case Closed
DOD100021300	Wastewater Disposal Area	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Completed – Case Closed
DOD100021500	Old Trap and Skeet Range Areas	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Completed – Case Closed

Table 5.9-7: Sites Identified by EnviroStor or GeoTracker – General Plan Area

ID	Site Name	Address	Site Type	Status According to Database (see below for definitions related to status)
DOD100022100	Industrial Wastewater Treatment Plant	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Open – Site Assessment
DOD100021900	Old Fire Fighting Training	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Open – Site Assessment
DOD100022200	Domestic and Industrial Wastewater Collection Systems	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Open – Site Assessment
T0607100809	T225A	USMC LB MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100810	T225B	USMC LB MCLB Barstow	Military UST	Completed – Case Closed
T0607100808	T197	USMC LB MCLB Barstow	Military UST Site	Open – Long Term Management
T0607100807	T196	USMC LB MCLB Barstow	Military UST Site	Completed – Case Closed
DOD100021800	Building 197 Wastewater Disposal Areas	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Completed – Case Closed
DOD100018900	Chemical Storage Area	MCLB Bldg. #146 Boll Avenue Barstow	Military Cleanup Site	Completed – Case Closed
DOD100021600	Original Trash Landfill	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Completed – Case Closed
DOD100027100	Nebo South Groundwater	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Open – Remediation
DOD100021100	Preservation and Packaging Storage Area	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Completed – Case Closed
T10000007027	NPZ-14	Kwajalean Street, MCLB Barstow	Military Cleanup Site	Open – Assessment and Interim Remedial Action
DOD100021000	Radiator Cleaning Chemical Disposal Area	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Completed – Case Closed
T0607100903	T189A	Nebo Annex MCLB Barstow	Military UST Site	Completed – Case Closed
DOD100018700	Fuel Burn Area	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Completed – Case Closed

Table 5.9-7: Sites Identified by EnviroStor or GeoTracker – General Plan Area

ID	Site Name	Address	Site Type	Status According to Database (see below for definitions related to status)
DOD100020900	Sodium Valve Burial Area	MCLB Bldg. #146 Boll Avenue Barstow	Military Cleanup Site	Open – Site Assessment
DOD100019000	Fuel Disposal Area	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Completed – Case Closed
DOD100022400	Former Storage Area	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Open – Site Assessment
DOD100021700	Drum Storage and Landfill Areas	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Open – Verification Monitoring
DOD100021400	Rifle Range	MCLB Bldg. #146 Boll Avenue, Barstow	Military Cleanup Site	Open – Site Assessment
T0607100910	T101	Nebo Annex MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100917	T103	Nebo Annex MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100907	T15	Nebo Annex MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100805	T155	USMC MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100806	T157	USMC LB MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100918	T17A	Nebo Annex MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100867	T181A & B	USMC LB, MCLB, Barstow	Military UST Site	Completed – Case Closed
T0607100866	T19A & B	USMC LB MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100804	T19C	USMC LB MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100868	T203	USMC LB MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100870	T218	USMC LB Barstow	Military UST Site	Completed – Case Closed
T0607100700	T251C	USMC LB MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100812	T251D	USMC LB MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100902	T271B	Nebo Annex MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100869	T2A	USMC LB MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100826	T2B	USMC LB MCLB Barstow	Military UST Site	Completed – Case Closed

Table 5.9-7: Sites Identified by EnviroStor or GeoTracker – General Plan Area				
ID	Site Name	Address	Site Type	Status According to Database (see below for definitions related to status)
T0607100803	T2C1	USMC LB MCLB, Barstow	Military UST Site	Completed – Case Closed
T0607100915	T30	Nebo Annex MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100813	T322A	USMC LB MCLB Barstow	Military UST Site	Completed – Case Closed
T06070100814	T322B	USMC LB MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100855	T443	USMC LB MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100906	T484B	Yermo Annex MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100905	T558	Yermo Annex, MCLB Barstow	Military UST Site	Completed – Case Closed
T0607100865	T71A & B	USMC LB MCLB Barstow	Military UST Site	Completed – Case Closed
FUDS = Formerly Used Defense Sites; CAO = Corrective Action Orders				
Source: DTSC 2023, SWRCB 2023.				

The following is a list of definitions for a cleanup sites' status found in the General Plan area based on DTSC case type:

- Inactive – Needs Evaluation: Identifies inactive sites where DTSC has determined a Preliminary Endangerment Assessment (PEA) or other evaluation is required. The PEA process determines if there has been a release of a hazardous substance that presents a risk to human health or the environment (DTSC, 2025).
- Refer - Other Agency: Identifies sites that, based on limited information available to DTSC, appear to be more appropriately addressed by another State or local environmental regulatory agency.
- Active: Identifies that an investigation and/or remediation is currently in progress and that DTSC is actively involved, within a lead or support capacity.
- Completed – Case Closed: A closure letter or other formal closure decision document has been issued for the site.
- Open – Site Assessment: Site characterization, investigation, risk evaluation, and/or site conceptual model development are occurring at the site.
- Open – Inactive: No regulatory oversight activities are being conducted by the lead agency.
- Open – Remediation: An approved remedy or remedies has/have been selected and the responsible party is implementing one or more remedy under an approved cleanup plan for the site.
- Open – Assessment and Interim Remedial Action: An “interim” remedial action is occurring at the site and additional activities such as site characterization, investigation, risk evaluation, and/or site conceptual model development are occurring.
- Open – Long Term Management: Remediation phases are complete, all current risks to receptors are mitigated, and risk management measures are in place.
- Open – Verification Monitoring: Remediation phases are essentially completed, and a monitoring/sampling program is occurring to confirm successful completion of cleanup at the site.

Superfund National Priority List

The National Priority Lists (NPL), also known as the Superfund list, is a list of sites in the United States that are potentially contaminated with hazardous substances and are eligible for funding under the CERCLA. One NPL site is located within the General Plan area: the Barstow Marine Corps Logistics Base.

Barstow Marine Corps Logistics Base Superfund Site. The approximately 1,568-acre Barstow Marine Corps Logistics Base (BMCLB) Superfund Site is located approximately one mile east of the City, within the City's unincorporated General Plan area. This site is also listed under the RWQCB for Open Base and Military Clean Up Sites. According to the U.S. EPA, BMCLB was established at the Nebo location in 1942, when the U.S. Navy transferred command to the U.S. Marine Corps. In 1946, the Yermo area was annexed by the Marines from the U.S. Army. The Rifle Range was acquired in 1955 and was developed as a facility for the Marines to improve their marksmanship. The site has been used for maintenance, repair, and

rebuilding of supplies and equipment since 1942. This site was listed on the National Priority List in 1989. The groundwater contains volatile organic compounds (VOCs) and solvents such as trichloroethylene (TCE) and perchloroethylene. Soil is contaminated with VOCs, pesticides, polynuclear aromatic hydrocarbons, heavy metals, and polychlorinated biphenyls (PCBs).

The BMCLB is participating in the Installation Restoration Program (IRP), established in 1978. Under this program, the Department of Defense seeks to identify, investigate, and clean up contamination from hazardous materials. To organize the CERCLA site characterization and cleanup process, BMCLB was divided into seven operable units (OUs). Each OU is subdivided into IRP sites identified at BMCLB as CERCLA Areas of Concern (CAOCs). There are currently 54 identified CAOCs at BMCLB, 33 of which are under investigation or in the process of remedial action, and 21 of which received a determination of no further action (NFA) and are closed.

PG&E Hinkley Chromium Cleanup (PG&E Hinkley) Site. While not on the NPL site list, PG&E Hinkley Chromium Cleanup (PG&E Hinkley) Site (the “Erin Brockovich Site”), is a well-known and high-profile site involving contamination of groundwater by hexavalent chromium is located within the northwest portion of the General Plan area in the unincorporated community of Hinkley. The PG&E Hinkley site is listed as an active case and is under order from the RWQCB to stop plume expansion and clean up the chromium plume. Generally, the chromium contamination from the PG&E site has impacted groundwater in the area and PG&E provides drinking water to residents in the area surrounding the site. There are ongoing remediation and groundwater monitoring programs and an extensive amount of information publicly available online. Review of the latest plume maps indicates that the groundwater flow direction in the PG&E site area is northerly (away from the City). Recent plume maps and information can be reviewed at <http://www.hinkleygroundwater.com/site-information/groundwater-monitoring-and-plume-maps/>.

5.9.4.2 Wildfire

Wildfire Background

The term “wildfire” refers to fires that usually result from the ignition of dry grass, brush, or timber. Historically, wildfires commonly occurred in areas that are characterized by steep or heavily vegetated areas, which make suppression of the fire difficult. More recently, wildfires have been encroaching into more urban areas within the wildland-urban interface (WUI), threatening homes, businesses, and essential infrastructure. While wildfires play an important role in the ecology of many natural habitats, as urban development moves into areas susceptible to wildfire hazards, risks to human safety and property increase.

Wildfire Causes. Although the term “wildfire” suggests natural origins, a 2017 study that evaluated 1.5 million wildfires in the United States between 1992 and 2012 found that humans were responsible for igniting 84 percent of wildfires, accounting for 44 percent of acreage burned (Balch et al., 2017). The three most common initiators of human-caused wildfires are debris burning (logging slash, farm fields, trash, etc.), arson, and equipment use (PBI, 2007). Power lines can also ignite wildfires through downed lines, vegetation contact, conductors that collide, and equipment failures (TWMP, 2014).

An analysis of U.S. Forest Service wildfire data from 1986 to 1996 determined that 95 percent of human-caused wildfires and 90 percent of all wildfires were within 0.5 mile of a road, and that about 61 percent of all wildfires and 55 percent of human-caused wildfires were within approximately 650 feet (200 meters) of a road. The study concluded that the increase in human-caused ignition greatly outweighs the benefits of increased access for firefighters (PBI, 2007).

There are three primary methods of wildfire spread:

- **Embers.** Embers are the most prolific cause of home ignition, at a rate of two out of every three homes destroyed. Embers are glowing or burning pieces of vegetation or construction debris that are lofted during a wildfire and can move up to a mile ahead of a wildfire, especially during high winds. These small embers or sparks may fall on the vegetation near a home (on dry leaves, needles, or twigs on the roof) and subsequently ignite the home. Embers can travel several miles during high wind events, posing a potential risk to all structures without fire-resistant landscaping and construction within a mile of the fire.
- **Direct Flame Contact.** Direct flame contact refers to the transfer of heat by direct flame exposure. Direct contact will heat the building materials of the home, and if the time and intensity of exposure is severe enough, windows will break, and materials will ignite.
- **Radiant Heat.** A house can catch fire from the heat that is transferred to it from nearby burning objects, even in the absence of direct flames or embers. By creating defensible space around homes, the risk from radiant heat is significantly reduced.

Secondary Effects. Secondary effects of wildfire include additional hazards such as poor air quality, landslides, and power outages.

- **Air Pollution.** Smoke is made up of a complex mixture of gases and fine particles produced when wood and other organic materials burn. The biggest health threat from smoke is from fine particles that can penetrate the lungs and cause a range of health problems, from burning eyes and a runny nose to aggravated chronic heart and lung diseases. Exposure to particulate pollution is even linked to premature death. Some populations are more sensitive than others to smoke, including people with heart or lung diseases, seniors, children, people with chronic illnesses, and pregnant women (U.S. EPA, 2021).
- **Landslides and Debris Flows.** After a high intensity wildfire is suppressed, the burn scar is typically bare of its vegetative cover, which had supported the hillsides and steeper slopes. When supporting vegetation is burned away, hillsides become prone to destabilization and erosion, increasing the risk of landslides. Post-fire landslide hazards include fast-moving, highly destructive debris flows that can occur in the period immediately following wildfires in response to high intensity rainfall events and flows that are generated over longer time periods that are accompanied by root decay and loss of soil strength. Fires increase the potential for debris flows by increasing the imperviousness of soil so that it repels water, and by destroying vegetation that would slow and absorb rainfall and whose roots would help stabilize soil (USGS, 2018). The burning of vegetation and soil on slopes more than doubles the rate that water will run off into watercourses (CGS, 2018). Post-fire debris flows are particularly hazardous because they can happen with little warning, exert great impulsive loads on objects in their paths, strip vegetation, block drainage ways, damage structures, and endanger human life. Post-fire debris flows are

most common in the two years after a fire and are usually triggered by heavy rainfall. It takes much less rainfall to trigger debris flows from burned basins than from unburned areas.

5.9.4.3 Wildfire in the General Plan Area

Wildfire Classifications

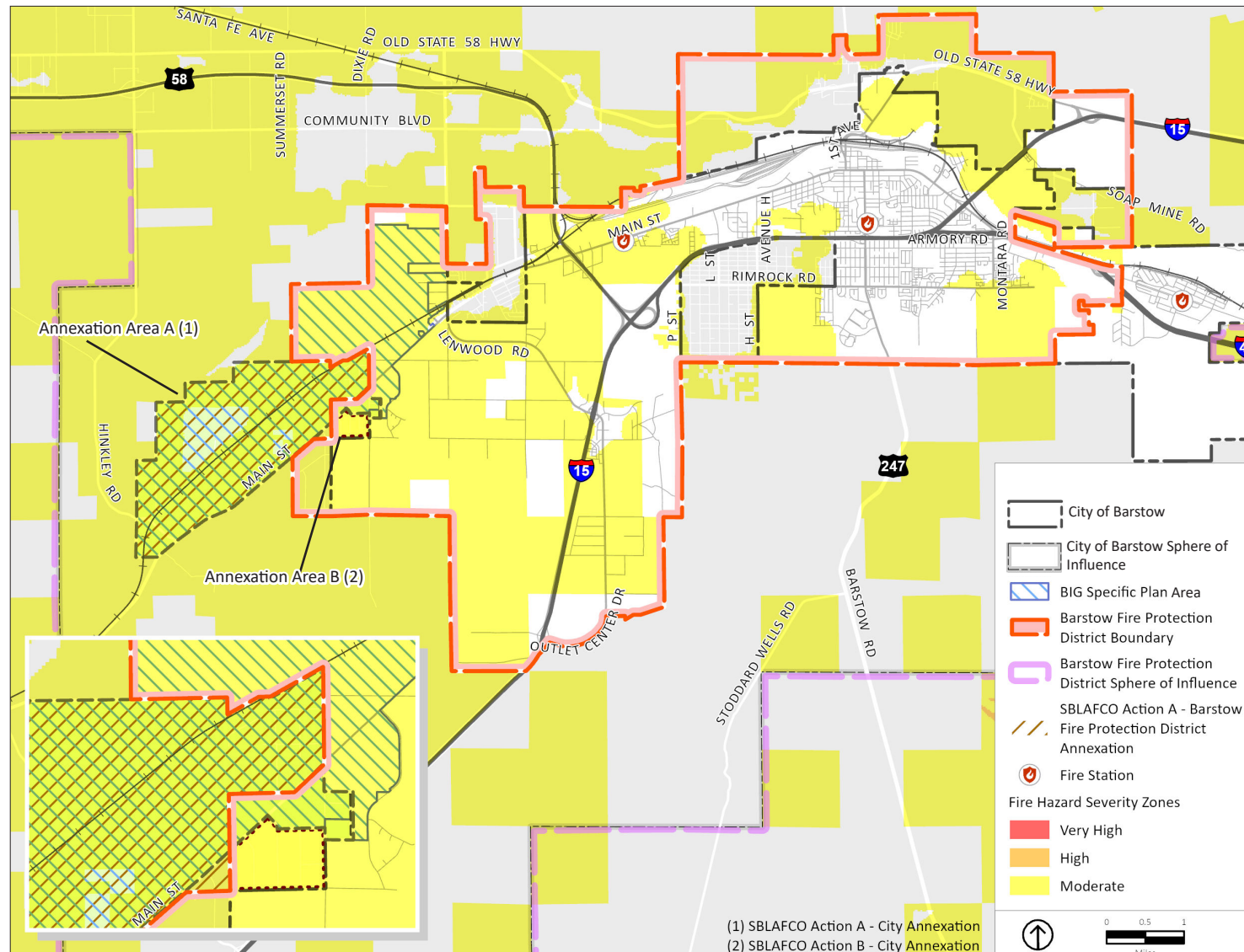
The General Plan area contains lands within the LRA and federally managed lands but does not contain land within the SRA. Federally managed lands are not classified by CAL FIRE and fire hazard severity zone classifications are not available. In LRAs, CGC § 51178 requires identification of Moderate, High, and Very High FHSZs. As shown in **Figure 5.9-3: Fire Hazard Severity Zones – Proposed General Plan**, the General Plan area is not within a Very High FHSZ in an LRA or SRA (CAL FIRE, 2025). However, significant portions of the City and proposed annexation areas are in a LRA Moderate FHSZ. Most of the General Plan area is within a LRA moderate fire hazard severity zone and Non-Wildland/Non-Urban areas (CAL FIRE, 2025). The City's BHMP identifies the following areas within or near the proposed General Plan area which are considered fire hazard areas (Barstow, 2019), which include:

- The Lenwood community, located in the western area of the General Plan area, is identified as a fire hazard area due to the abundance of brush and blow sand, which makes it difficult to gain access to fight fire. Under existing conditions, this area is primarily in the City's SOI with homes scattered throughout the vegetation.
- The Mojave Riverbed, located along the City's northern boundary, is identified as a fire hazard area due to its significant slope to the bottom of the riverbed and the soft soil, which makes it difficult to gain access to when firefighting.

Wildfire History

Since 2013, there have been six significant wildland fires in the County's high desert area. However, noteworthy wildfires within the City are uncommon. The following wildfires have occurred within or near the proposed General Plan area:

- River Bottom Fire: On March 31, 2015, a fire started within Mojave Narrows Regional Park and quickly spread towards homes in Apple Valley, north of the Town of Apple Valley. A few outbuildings and vehicles were lost but no homes were destroyed. The fire was contained by the next day (Barstow, 2019).
- Pilot Fire: The Pilot Fire started August 7, 2016, near the Miller Canyon off-highway vehicle area off of Highway 138. The Pilot Fire burned 8,110 acres and was declared controlled on August 16, 2016, as a result of significant rainfall (Barstow, 2019).
- Blue Cut Fire: The Blue Cut Fire started on August 16, 2016, in the Cajon Pass along Old Cajon Boulevard north of Kenwood Avenue west of I-15. The fire quickly grew across Cajon Creek and grew into a large wildland fire. The Blue Cut Fire burned 36,274 acres, destroying an estimated 105 single family residences and 216 outbuildings. In addition, 3 single family residences and 5 other structures were damaged (Barstow, 2019).
- Clay River Fire: This 2005 fire was triggered by lightning and burned approximately 75 acres approximately 3 miles to the east of Barstow (CAL FIRE, 2025).



Sources:
CAL FIRE, 2025; City of Barstow, 2025

Figure 5.9-3
Fire Hazard Severity Zones - Proposed General Plan

- Solar Energy Generation Systems (SEGS) Fire: This fire was triggered by lightning and burned approximately 192 acres. It occurred in 2005 between the cities of Gale and Yermo approximately 11 miles from Barstow (CAL FIRE, 2025).
- Irwin Fire: This fire occurred in 2017 and burned approximately 10 acres north of the Mitchel Range, about seven miles to the north of Barstow (CAL FIRE, 2025).
- Heritage Fire: This fire burned 500 acres in March 2022. It ignited north of Oro Grande near National Trails Highway and caused air quality impacts for Barstow (VVNG, 2022).

Factors Influencing Wildfire

Several factors influence wildfire conditions and facilitate the spread of wildfires, including topography, fuels, and weather conditions. Human actions are the leading cause of wildfires in California, increasing the risk of wildfire devastating natural lands and communities.

Fuel. Fuel is the material that feeds a fire and is a key factor in wildfire behavior. Fuel is generally classified by type and volume. Fuel sources are diverse and include everything from dead tree leaves, twigs, and branches to dead standing trees, live trees, brush, and cured grasses. Human-made structures are also considered a fuel source, such as homes and other associated combustibles. The type of prevalent fuel directly influences the behavior of wildfire. As described in **Section 5.4: Biological Resources** of this EIR, primary vegetation within the General Plan area consists of desert scrub, woodlands, and non-native grasslands. Historically, fires have been relatively rare in these ecosystems; however, the frequency and extent of fires have increased significantly during the past 40 years as non-native annual grasses and human ignition sources have become more common (Steers and Allen, 2010). Other potential sources of fire in Barstow include buildings and other human infrastructure.

Topography. An area's terrain and slope affect its susceptibility to wildfire spread. Both fire intensity and rate of spread increase as slope increases due to the tendency of heat to rise. The arrangement of vegetation throughout a hillside can also contribute to increased fire activity on slopes. Barstow is surrounded by areas of moderate slopes and contains several points of elevation change, including near the Marine Corps Logistics Base, hills along the Mojave River, and scattered hilly regions within the southwest and northeast corners of the City.

Weather and Wind. Weather components such as temperature, relative humidity, wind, and lightning also affect the potential for wildfire. High temperatures and low relative humidity dry out fuels that feed wildfires, creating fuel that will ignite more readily and burn more intensely. Wind is the most significant weather factor for the movement of wildfire. The greater the wind, the faster a fire can spread and the more intense it can be. Wind shifts, in addition to wind speed, can occur suddenly due to temperature changes or the interaction of wind with topographical features such as slopes or steep hillsides. As part of a weather system, lightning can ignite wildfires, sometimes in difficult to reach terrain for firefighters.

Evacuation and Access

Evacuation routes are designated roadways that allow many people to quickly leave an area due to a potential or imminent disaster. These routes should have sufficient capacity to accommodate the needs of the community, be safely and easily accessible, and allow people to travel far enough away to be safe

from emergency conditions **Figure 5.9-4: Evacuation Routes – Proposed General Plan** identifies the emergency evacuation routes within the City. Major routes include State Route 58 (SR-58) to the northwest, I-15 and I-40 to the east and west, and SR-247 to the south. Additional routes include collectors and arterials that would be used to access these major routes.

Fire Protection Services

The Barstow Fire Protection District provides fire protection and prevention, emergency medical, rescue, and hazardous materials response services, and participates in automatic aid agreements with the San Bernardino County Fire District and Marine Corp Logistics Base Fire Department, as well as mutual aid agreements with Fort Irwin Fire Department.

The SBC Fire provides fire protection services for areas outside the BFPD. As a CUPA, the San Bernardino County Fire Department manages six hazardous material and hazardous waste programs.

Barstow International Gateway

The Hazardous Materials and Wastes Technical Report (see **Appendix 5.9 BIG-1: Section 5.0: Environmental Setting**) prepared for BIG addresses the existing potentially HMW conditions within the environmental concerns and HMW sites study areas, as summarized below.

5.9.4.4 Hazards Materials and Wastes (HMW) Setting

Historical and Existing Land Uses

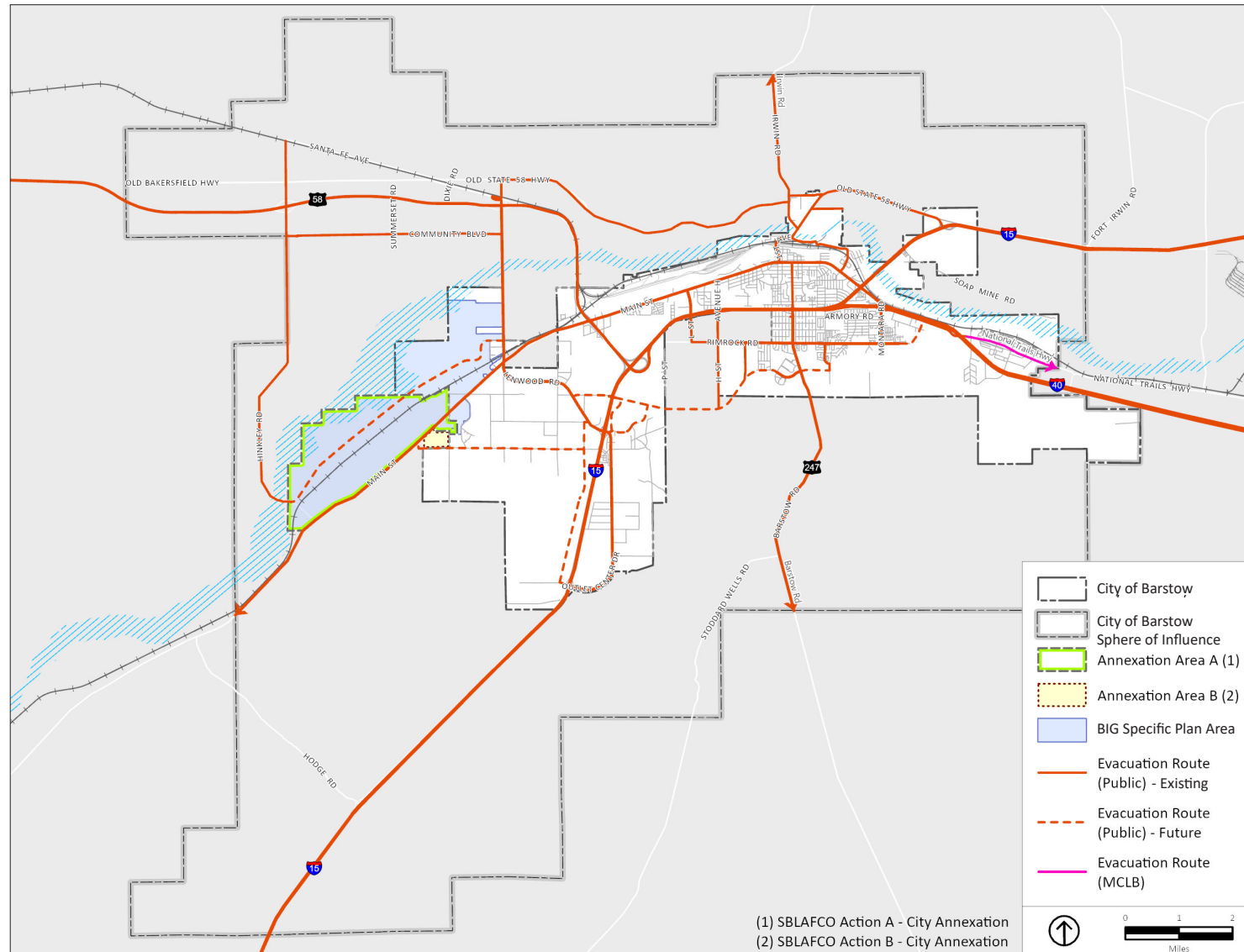
The HMW study area generally contains the following existing uses within a 1-mile radius around the BIG footprint.

Land Uses in the HWM Study Area

The HMW study area generally contains the following uses within a 1-mile radius around the BIG footprint:

Agricultural Areas. Portions of the BIG footprint were used for agricultural and dairy purposes from at least the 1950s and may have had pesticide and herbicide applications. Additionally, residual pesticides and herbicides may be persistent in soil elsewhere within the HMW study area due to migration of airborne pesticides and herbicides.

There are no current agricultural uses within the HMW study area outside the BIG footprint. No specific RECs such as structures or mixing areas were identified in the HMW study area in any available aerial historical record. Per the ASTM standard, the standard application of herbicides, pesticides, and fertilizers does not constitute a release or material threat of release. Historical dairy operations within Properties 2, 3, 5 and 6 (APNs 0466-101-06, 0466-101-07, 0466-111-02, and 0466-041-23) have ongoing Corrective Action Orders (CAO) with regulatory oversight.



Source:
City of Barstow, 2025

Figure 5.9-4
Evacuation Routes - Proposed General Plan

Commercial Uses. An assortment of small businesses, commercial retail, fast food establishments, automotive repair and vacant and abandoned service stations are scattered along Main Street. In Lenwood, several storage warehouses, automobile parts businesses, could be found among boarded-up buildings and overgrown lots. Multiple commercial uses located within the HMW study area use, store, or report use of HMW with the potential for improper storing and handling. No known commercial HMW storage and dumping sites are identified in available historical records with violations except for Properties however, based on historical aerial imagery and site reconnaissance, Properties 48, 49, 50, 217, 373, 380, 381 and 382 include dumping of unknown material.

Potential Material Dumping. Most of the HMW study area is vacant desert and abandoned structures with the potential for dumping of unknown materials or stockpiles of soil. One dumping site was listed within Properties 47, 48, 49, and 50 (APN: 0421-041-33, 0421-041-38, 0421-041-40, and 0421-041-41) is listed in EDR as an illegal drug lab. Additional minor dumping was reported; however, no other known dumping sites were identified in any available aerial historical record.

Railroad and Utility Corridors, and Roads. The study area includes the existing BNSF railroad corridor and Main Street, as well as utility corridors. HMW potentially associated with railroad and utility corridors include heavy metals in ballast rock, lead (from wood preservatives), herbicides, PCBs, asbestos (from train disc brake pads), creosote (from railroad ties), arsenic (from railroad ties and some herbicides), and petroleum hydrocarbons. HMW potentially associated with roads include diesel, gasoline, motor oil, oil and grease, road base materials, ADL, HMW accidentally released during transport, and lead from the wood preservatives in utility poles and pre-1979 lead-based lane-striping paint. Road base materials can potentially contain HMW if they originate from the excavation of contaminated sites. Caltrans has found ADL is typically present along major roadways resulting from tailpipe emissions during the years in which lead was added as an additive in gasoline. Caltrans prepared a policy and guidance to evaluate the concentrations of lead adjacent to roadways prior to construction to protect workers and nearby residents.

Rural Neighborhoods. The HMW study area includes rural neighborhoods in Barstow and unincorporated San Bernardino County, as well as the Lenwood community, a Census-designated place. The HMW study area has been sparsely populated by scattered residential uses for decades as shown by the historical records review. Some residential uses showed evidence of illegal dumping and HMW storage as determined through site reconnaissance. Storage of HMW or poor housekeeping practices at these residential locations may have affected the study area's soil and groundwater.

Many of the residential uses within the HMW study area use septic systems for sanitary disposal and water wells for potable water. Based on the historic and rural nature of the residential properties, burned structures, abandoned uses, unknown uses, and residential uses associated with agricultural operations, there is potential for HMW storage and dumping. No known HMW storage and dumping sites are identified in any historical record; however, based on historical aerial imagery and site reconnaissance, Property 31 (APN: 0421-051-15), Properties 47 - 51 (APNs: 0421-041-40, 0421-041-38, 0421-041-33, 0421-041-41, 0421-041-43), and Property 291 (APN: 0421-171-33) include dumping of unknown material.

Service Stations and Automotive Repair. West Main Street operated as a major byway prior to completion of Interstate 15 (I-15) in 1973. Between the 1940s and 1970s, Main Street included multiple service stations with potential for HMW storage. Multiple UST or LUST sites were reviewed through EDR with regulatory cases closed in association with former service stations and automobile repair.

Land Uses in the Environmental Concern Study Area

The environmental concern study area (i.e., the BIG footprint) is primarily vacant except for the eastern portion, which is within the City and unincorporated Lenwood community, and contains residential and commercial uses. There are no existing land uses in the area where the transload warehouse center is proposed except for industrial uses on the far eastern portion. The environmental concern study area's existing land uses include 108 dwelling units and approximately 93,724 square feet of non-residential land uses (i.e., commercial, and industrial) within the BIG footprint (see **Table 3-3: Existing Land Uses – BIG** in **Section 3.0: Project Description**). A private airstrip (Depue Airport) is within BIG's proposed solar farm footprint.

General Environmental Concerns

General environmental concerns within the HMW study area include illegal dumping, improper storage of HMW, LBP, ACM, herbicides, pesticides, fertilizers, PCBs, ADL, naturally occurring asbestos (NOA), heavy metals, creosote, and petroleum hydrocarbons. Other general environmental concerns related to HMW are landfills, oil and gas wells, airports, airstrips, helicopters, and the location of schools.

Illegal Dumping. Most of the HMW study area is vacant undeveloped desert land. Residents may have uses portions of the area to illegally dump HMW, leading to soil and groundwater contamination.

Lead-Based Paint. Historically, lead was used as a pigment and drying agent in oil-based paint. In 1978, the federal government banned the consumer use of lead-containing paint (**Appendix 5.9 BIG-1**). As noted above, approximately 93,724 square feet of non-residential land uses (i.e., commercial, and industrial) exist within the BIG footprint. If built before 1978, these buildings may contain LBP on both interior and exterior architectural surfaces. Additionally, LBP may have been used in commercial/industrial buildings subsequent to 1978, as well as in residential structures (paint purchased prior to 1978 but stored and used in subsequent years). The existing land uses within the BIG footprint include approximately 108 residential dwelling units, 85,887 square feet of commercial uses, and 7,837 square feet of industrial uses (see **Table 3-3: Existing Land Uses – BIG**). As addressed in **Section 3.0: Project Description**, BIG proposes to demolish and replace or modify several structures within the BIG footprint (i.e., railroad bridges and Lenwood Channel), which would contain LBP. Additionally, weathering and maintenance of paint (primarily exterior surfaces) at buildings within or near the BIG footprint may have contaminated the soils with lead. Some structures within the HMW study area were constructed prior to 1970 and, therefore, would likely contain LBP.

The baseline assessment conducted as part of the Hazardous Waste and Materials Technical Report did not include a survey for the potential presence of lead, see **Appendix 5.9 BIG-1**. However, industrial, commercial, and residential structures within the HMW study area were evaluated through historical aerial photographs and site visits to determine the potential for building material hazardous substances

in the HMW study area. General types of activity and land use can often be discerned from the type and layout of structures visible in aerial photographs and site visits, although specific elements of a site operation sometimes cannot readily be determined from these sources. The HMW study area has varying types of land use, including existing transportation corridors, industrial uses, residential uses, and commercial uses. Because access to private property is limited, the assessors observed from public rights-of-way only; see Section 4.5 of **Appendix 5.9 BIG-1** for further information about this analysis.

Asbestos-Containing Materials. Asbestos is a mineral fiber that was most commonly used prior to 1980 in various building construction materials (e.g., floor tiles, roofing materials, thermal system insulation, mastics) for insulation, strength, and fire-retardant purposes. Such materials may have been used in construction well into the 1980s and 1990s and, because of the possible storage of surplus materials/supplies, could still be used at present day construction sites. Some non-friable modern building materials, such as roofing felt, vinyl asbestos floor tile, ceiling tiles, and transited building materials still contain asbestos. Asbestos has also been used in manufactured items such as automobile brakes, heat-resistant fabrics, gaskets, and coatings. When repair, remodeling, or demolition activities damage or disturb ACM, microscopic fibers become airborne and can be inhaled into the lungs. Asbestos is linked to lung cancers and the lining of internal organs, as well as to asbestosis and other diseases that inhibit lung function (**Appendix 5.9 BIG-1**).

The baseline assessment did not include a survey for the potential presence of asbestos, given the number of buildings and lack of access. However, industrial, commercial, and residential structures within the HMW study area were evaluated through historical aerial photographs and site visits to determine the potential for building material hazardous substances in the HMW study area. General types of activity and land use can often be discerned from the type and layout of structures visible in aerial photographs and site visits, although specific elements of a site operation sometimes cannot readily be determined from these sources. The HMW study area has varying types of land use, including existing transportation corridors, industrial uses, residential uses, and commercial uses. Because access to private property is limited, the assessors observed from public rights-of-way only.

Pesticides. Agricultural activities are commonly associated with the storage, handling, and application of pesticides (and herbicides) on row crops or orchards. The routine application of such compounds may not accumulate to soil concentrations requiring regulatory oversight. Historical aerial photographs document agricultural uses within the HMW study area dating back to at least 1932. Therefore, the use of agricultural chemicals, such as pesticides, is likely to have occurred within the HMW study area.

Polychlorinated Biphenyls. BIG's HMW study area includes public utilities (electric, natural gas, etc.) throughout and approximately 85,887 square feet of non-residential land uses (i.e., commercial, and industrial). Hazardous substances common in utility corridors include PCBs, classified as chlorinated hydrocarbons, which were manufactured from 1929 until their production was banned in 1979. PCBs were also used in hundreds of industrial and commercial applications because of their non-flammability, chemical stability, high boiling point, and electrical insulating properties. Equipment that might contain PCBs includes electrical transformers and capacitors, motor oil and hydraulic fluid, and thermal insulation material (e.g., fiberglass, felt) (**Appendix 5.9 BIG-1**). The site reconnaissance discussed in **Appendix 5.9**

BIG-1; Section 4.5 observed the presence of equipment with potential to contain PCBs that were likely manufactured before 1976. Therefore, PCBs may be present within the HMW study area.

Aerially Deposited Lead. Various roadways (e.g., Lenwood Road, Hinkley Road, and Main Street) traverse and/or are located near the BIG footprint. Yellow paint and tape used for pavement marking before 1997 likely contain lead that could exceed the hazardous waste criteria for lead under CCR, Title 22. In addition, ACM may be found in roadway materials, such as materials used before the 1980s for expansion joints in pavement.

Leaded gasoline was used nationally as a vehicle fuel through the 1980s. Lead emitted from vehicles during this time has adversely affected soils along roadways. The lead resulting from vehicle and industrial activities is termed ADL. Surface and near-surface soils along heavily used roadways within and near BIG's HMW study area have the potential to contain elevated lead concentrations.

Certain hazardous materials and contaminants are common within railroad corridors and facilities associated with, or adjoining, railroad corridors. These materials can be found in ballast rock and underlying soil, surface water and groundwater, air, or structures.

Naturally Occurring Asbestos. NOA is found in serpentine rock and is a potential contamination issue. NOA is a fibrous mineral that often takes the form of long, thin strands; however, NOA can degrade from weathering or excavation activities into microscopic fibers and become airborne. If NOA does not become airborne, it does not pose a threat, but when suspended in the air and inhaled, the thin fibers can irritate tissues and resist the body's natural defenses.

Maps obtained from the U.S. Forest Service show three County NOA areas (i.e., Angeles National Forest, Big Bear Lake, and San Bernardino National Forest) approximately 33 miles southwest of the BIG footprint (**Appendix 5.9 BIG-1**). Because these three NOA areas are outside of the HMW study area, NOA is not considered a substantial concern for BIG.

Naturally Occurring Arsenic. Arsenic occurs naturally in the soil and small amounts may enter the air, water, and land from windblown dust, which may eventually settle out in the sediment and soil. Elementally, arsenic is widely distributed in the Earth's crust. The natural background concentration can vary substantially between sites based on soil type, and geochemical conditions. A study conducted of regional background concentrations of arsenic in undifferentiated urbanized flatland soils and proposed an upper estimate for background arsenic of 11 milligrams per kilogram (mg/kg) (Duvergé, 2011). This value can be used, as appropriate based on the study parameters as arsenic concentrations in California soils typically exceed risk-based screening levels by one or more orders of magnitude due to naturally occurring background concentrations. However, based on soil data collected within the HMW study area, no exceedances of arsenic in soil were detected above 11 mg/kg and is not considered a substantial concern for BIG.

Landfills. There are no landfills within BIG's landfill study area. The landfill nearest the BIG footprint is the Barstow Landfill, an active landfill located approximately 5.2 miles to the southeast, at 32553 Barstow Road, Barstow.

Oil and Gas Wells. The State of California Geologic Energy Management Division (CalGEM) (formerly the Division of Oil, Gas and Geothermal Resources) reports California’s oil and gas industry information from the geographic perspective including location of oil and gas wells and other types of related facilities throughout the State. Reporting is included through an online mapping application: Well Finder. There are no oil and gas wells reporting within the BIG Footprint or within 10 miles. Based on the proximity to any oil and gas wells, the wells are not considered a concern for BIG.

Airports, Airstrips, and Helicopters. As previously noted, CWP Policy Map HZ-9 Airport Safety and Planning depicts the County’s Airport Runway Protection Zones, airport noise contours, and airport safety review areas associated with airport land use plans. As shown in CWP Policy Map HZ-9, no portion of the BIG footprint is within an airport land use plan or low-altitude high speed military airspace. Additionally, there are no public airports or public use airports within BIG’s airport study area (i.e., within two miles of the BIG footprint). The nearest public airport to the BIG footprint is Barstow-Daggett Airport, which is approximately 17 miles from the BIG footprint. However, a private airstrip (“Depue Airport”) is located within BIG’s proposed solar farm footprint. According to Federal Aviation Administration accident reports and registration records, the airport has existed near the existing BNSF tracks without incident since it was first registered in 1979 (NTSB, 2022). The landing strip is southwest of the Main Street at Delaney Road intersection. BNSF has acquired and will be closing the private Depue Airport as part of the development of the solar farm.

Educational Facilities. The only school within the school study area is Lenwood Elementary School, which is approximately 1,000 feet (0.19-mile) south of the BIG footprint’s eastern extent. Hazards to Lenwood Elementary School were analyzed similar to hazards to residential uses, given both land uses are sensitive land uses which could be impacted by spills and contamination. BIG’s potential to emit hazardous emissions within one-quarter mile of a school is evaluated in **Section 5.3: Air Quality**.

5.9.4.5 Environmental Concern Sites

Table 5.9-8: REC Sites within the Environmental Concern Study Area – BIG summarizes the properties within the BIG footprint which are considered RECs after Phase I ESA/Phase II ESA were conducted. Properties that were identified as HRECs or CRECs are further discussed in **Appendix 5.9 BIG-1**.² Additionally, orphan site information was reviewed and determined not to represent a REC; see **Appendix 5.9 BIG-1**, Attachment A: EDR Radius Map Report (EDR Report). As outlined in the table, 73 properties within the BIG footprint are determined to be a REC. As noted in **Appendix 5.9 BIG-1**, four properties were identified as PECs, four properties were identified as a HREC, and no properties were identified as CRECs.

² See Table 6 in Appendix 5.9 BIG-1 for additional information on the PEC, HREC, and CREC properties such as their reference number, locations, rationale for designating them as environmental concern sites, and their environmental concern category.

Table 5.9-8: REC Sites within the Environmental Concern Study Area – BIG

Environmental Concern	ESL/MCL	Maximum Detections	Affected Properties (Reference Numbers)
SOILS			
Arsenic	Arsenic ESL for Commercial/Industrial soil: 0.31 mg/kg. However, according to California DTSC HERO, the typical southern California background level is 11 mg/kg.	Given the railroad corridor's historical use, the corridor is considered a REC. Additionally, arsenic was identified at background level across the site.	RR 1-28
		One detection above the background of 11 mg/kg was reported at 13.6 mg/kg at 2-feet bgs.	219 (APN 0421-082-13)
Heavy Metals in ballast rock	Given the railroad corridor's historical use, the corridor is considered a REC.		RR 1-28
Lead			RR 1-28
Herbicides			RR 1-28
Asbestos			RR 1-28
Creosote			RR 1-28
TPH (GRO/DRO/ORO)	TPH-GRO -2,000 mg/kg TPH-DRO – 1,200 mg/kg TPH-ORO -180,000 mg/kg	Given the railroad corridor's historical use, the corridor is considered a REC.	RR 1-28
		Remaining on-site drums and minor undefined staining within property is considered an REC site	146 (APN 0412-032-10)
TPH-DRO	TPH-DRO ESL for commercial/industrial: Direct Exposure Risk Level: 1,200 mg/kg.	TPH-DRO concentrations ranged from 85.4 at 1-foot bgs to 2,150 mg/kg at 8-feet bgs.	66 (APN 0421-032-42)
		1,760 mg/kg	140 (APN 0421-032-38)
TPH-ORO	180,000 mg/kg	"The TPH results indicate the oily surface staining observed in the drum storage areas, the AST/fueling area and surrounding the irrigation wells is generally heavy non-volatile TPH-ORO (i.e., motor oil range), however, soil borings (SB1 – SB3) indicated that staining is limited to less than 10 feet bgs." While residual TPH remains within the soil, it is below ESL. TPH-ORO concentrations were 2,500 mg/kg.	110 (APN 0421-021-03)
		12,800 mg/kg	140

Table 5.9-8: REC Sites within the Environmental Concern Study Area – BIG

Environmental Concern	ESL/MCL	Maximum Detections	Affected Properties (Reference Numbers)
		1,640 mg/kg	144 (APN 0421-021-03)
SOIL VAPOR			
Chloroform	15 µg/m³	110 & 150 ug/m³	373 (APN 0422-131-22)
Bromodichloromethane	11 µg/m³	13 ug/m³	
WATER SAMPLES			
TPH-GRO	0.76 mg/L	Soil Boring (SB)-Groundwater (GW) Sample: 8.11 mg/L	373 (APN 0422-131-22)
TPH-DRO	0.2 mg/L	Monitoring Well (MW) Sample: 0.716 mg/L SB-GW Sample: 1.16 mg/L	
Arsenic	0.01 mg/L	WM: 1.58 mg/L; 0.141 mg/L; 1.02 mg/L SB-GW: 0.612 mg/L; 0.502 mg/L	
Cobalt	0.006 mg/L	WM: 0.00984 mg/L; 0.0088 mg/L SB-GW: 0.00643 mg/L	
Molybdenum	0.1 mg/L	WM: 0.541 mg/L; 1.72 mg/L; 0.88 mg/L SB-GW: 0.195 mg/L; 0.444 mg/L	
Selenium	0.05 mg/L	WM: 0.0813 mg/L SB-GW: 0.171 mg/L	
Benzene	0.001 mg/L	SB-GW: 0.0063 mg/L	
Ethylbenzene	0.03 mg/L	SB-GW: 0.909 mg/L	
Napthalene	0.00017 mg/L	SB-GW: 0.0741 mg/L	
Toluene	0.04 mg/L	SB-GW: 0.0592 mg/L	
Total xylenes	0.02 mg/L	SB-GW: 1.16 mg/L	
1,2-Dichloroethane	0.0005 mg/L	WM: 0.0443 mg/L; 0.0074 mg/L; 0.00157 mg/L SB-GW: 0.00755 mg/L	
Naphthalene	0.000165 mg/L	SB-GW: 0.0467 mg/L	

Table 5.9-8: REC Sites within the Environmental Concern Study Area – BIG

Environmental Concern	ESL/MCL	Maximum Detections	Affected Properties (Reference Numbers)
Nitrate	Nitrate in drinking water MCL: 10 mg/L	These properties were previously used as a dairy with agricultural fields and have an active Corrective Action Order (CAO) in place for an exceedance of nitrate MCLs for drinking water. However, a recent groundwater monitoring report from 2022 identified that nitrate levels no longer exceed the MCL and have not for the past 9 years. However, the CAO requires that when nitrates are detected above 7 mg/L, bottled water must be provided to neighboring residences. Since dairy operations are no longer in service and nitrate and Total Dissolved Solids (TDS) levels are at or below their respective regulatory thresholds, there is a current request for termination of the order and permits to continue groundwater monitoring is under consideration. At which time the CAO is terminated, the property would be considered an HREC rather than a REC.	2, 3, 5, 6 (APNs 0466-101-06, 0466-101-07, 0466-111-03 and 0466-041-23)
		These properties were identified as a REC in connection with the N&M Dairy (listed as Reference numbers 2, 3, 5 and 6) for nitrates and TDS exceedances above their respective MCL within the groundwater. As discussed above, since dairy operations are no longer in service and nitrate and TDS levels are at or below their respective regulatory thresholds, there is a current request for termination of the order and permits to continue groundwater monitoring is under consideration. At which time the CAO is terminated, these properties would not be considered a REC.	4, 7 – 29, 60
		53 mg/L	67 (APN 0421-032-27)
Arsenic	Arsenic in water MCL: 0.010 mg/L	0.0135 mg/L	31 (APN 0421-051-15)
		0.0137mg/L	110 (APN 0421-032-38)

Table 5.9-8: REC Sites within the Environmental Concern Study Area – BIG

Environmental Concern	ESL/MCL	Maximum Detections	Affected Properties (Reference Numbers)
Nitrate	Nitrate in water MCL: 10 mg/L	20 mg/L	79 (APN 0421-032-20)
Specific Conductance	Specific Conductance in water MCL: 1,600 umhos/cm. Specific Conductance is classified by the U.S. EPA as a secondary contaminant.	1,800 umhos/cm	79 (APN 0421-032-20)
TDS	Filtrable residue/TDS MCL: 1,000 mg/L Total Dissolved Solids is classified by the U.S. EPA as a secondary contaminant.	1,100 mg/L	79 (APN 0421-032-20)
ASTs and USTs			
ASTs		One partially buried, rusted, unlabeled, 55-gallon drum was observed containing concrete debris and scrap metal in an illegal dumping near the northwestern subject property boundary. The drum appeared to be empty and there was no evidence of spills, leaks, or staining in the surrounding surfaces, however it should be noted that stressed vegetation was observed in the in the area adjacent to the buried drum. Based on the unknown content of the partially buried drum and stressed vegetation, this has been identified as a REC.	11 (APN 0420-161-34)
USTs		EDR reported a historical UST associated with this property.	211
Total Number of Affected Properties Identified as RECs			73

Properties 47 – 50. A Phase I ESA prepared for the properties identified three RECs associated with its historical uses including a former orchard operations from 1978 to 2005 with potential pesticide impacts, a listing from the Clandestine Drug Lab database due to hazardous chemicals and contaminated soil with no confirmation sampling, and extensive site deterioration with debris, burned structures, a buried drum, and stressed vegetation suggesting possible hazardous materials impacts.

Properties 380 – 382. This property is listed within the EDR database report as a part of the Wilkson Richard N & M MRS R and Chucks Machine Works listing, which is currently listed under two databases within the EDR Radius Report including the HWTS and EDR Historical Auto Facility. Records for the auto facility are dated 1969, 1970, 1971, 1972, and 1973 as a Gasoline Service Station. The HWTS record was initiated in 1989 and inactive since 1996. A Phase I ESA identified three RECs in association with the property including illegally dumped waste oil, history of automotive and machine repairs, and contaminated soil identified during sewer line excavation.

As noted in **Appendix 5.9 BIG-1**, the following four properties were identified as PECs.

Properties 17 and 18. These properties were not listed in the EDR Report, or the EnviroStor or GeoTracker databases. However, these properties have operated as a residence since at least 1953 and an agricultural field was observed since at least 2005 based on aerial imagery. During site reconnaissance, cattle, horses, and multiple ASTs were observed which were likely used for on-site farming operations. No Phase I ESA has been conducted, but based on current operations, there is a potential for fertilizers or pesticides in surface soil due to historical agricultural uses of this property, which represents a PEC. Additionally, as noted above in **Table 5.9-8: REC Sites within the Environmental Concern Study Area – BIG**, these properties were identified as a REC in connection with the N&M Dairy (listed as Reference numbers 2, 3, 5, and 6) for nitrates and TDS exceedances above their respective MCL within the groundwater.

Property 214. This property is not listed on the EnviroStor or GeoTracker database or EDR. Based on aerial review, this property includes a portion of a private airstrip (“Depue Airport”). Airports can emit chemicals such as nitrogen oxides, volatile organic compounds, carbon monoxide, and particulate matter and airstrips adjacent to agricultural areas can commonly carry pesticides and herbicides. Therefore, this property is identified as a PEC site.

Property 338. While this property is not listed in the EDR Report, or the EnviroStor or GeoTracker databases, a Phase I ESA identified that this property has been utilized for residential and commercial uses as a services station since at least 1929. Records indicated USTs on-site were abandoned with sand in 1979, and potential dumping within the septic system and staining within automotive repair facility occurred. Based on the above, a Phase II ESA was completed in 2022, which found:

- Metals, VOCs, SVOCs, TPH, Pesticides, and PCBs were not detected in the soil samples above background levels.
- Samples were not analyzed in the upper 5-feet bgs and “some staining or contaminants may be present in the upper 5-feet of the Site, the results of this investigation indicate that contaminants, if present, do not extend to 5 feet or below in the areas that were investigated.”

Given the property's former use and that the Phase II did not conclusively delineate the extent of potential TPH impacts at the property, this property is considered a PEC site. Based on the historical record and lack of additional subsequent documentation, this property is considered a PEC site.

Cortese Sites

Table 5.9-9: Cortese Sites – BIG lists sites identified by EnviroStor or GeoTracker within the environmental concerns study area that were or currently are HMW sites and provides the status of each. Target property (TP) is defined by EDR Radius Map Report as georeferenced within the BIG footprint.

Table 5.9-9: Cortese Sites – BIG				
Site Name	Address¹	Distance from BIG Footprint (miles)		Geotracker Case Status
		EDR Distance	GeoTracker Site Confirmation	
N & M Dairy	30061 Lords Road	TP	Within BIG Footprint	Active
Shirley Morgan	25644 Main Street W	TP	Within BIG footprint.	Closed - 2000
Whiting Brothers Lenwood	24645 Main Street W	TP	Within BIG footprint.	Closed - 2014
W A Thompson Co.	25538 Main Street W	TP	Within BIG footprint.	Closed - 1997
Budget Automotive	24879 Main Street W	TP	Within BIG footprint.	Closed - 1995
Unknown	25513 Main Street W	TP	Within BIG footprint, georeferenced to Main Street right-of-way.	Closed - 1988
James Soutar Property	1230 Main St W	0.01	Georeferenced within 0.25-miles of BIG footprint in EDR report; however, is associated with a property 3.5 miles outside of BIG footprint.	Closed - 2013
W A Murphy Inc.	16511 National Trails Hwy	0.17	Georeferenced within 0.25-mile of BIG footprint; however, associated with a property outside of BIG footprint.	Closed - 2000
Streamlight West	2521 Main St W	0.26	Georeferenced within 0.5-mile of BIG footprint; however, associated with a property outside of BIG footprint.	Closed - 1997
Freeway Fuel Stop	2351 Main Street W	0.28	Georeferenced within 0.5-mile of BIG footprint; however, associated with a property outside of BIG footprint.	Closed - 2011
Former Heartland Truck Stop/JB Hunt	2250 West Main Street	0.32	Georeferenced within 0.5-mile of BIG footprint; however, associated with a property outside of BIG footprint.	Closed - 2015
Private Residence	Private Residence	0.32	Georeferenced within 0.5-mile of BIG footprint; however, associated with a property outside of BIG footprint. Associated with Former Heartland Truck Stop/JB Hunt Facility at 2250 Main Street (see above).	Closed-2015

Table 5.9-9: Cortese Sites – BIG

Site Name	Address ¹	Distance from BIG Footprint (miles)		Geotracker Case Status
		EDR Distance	GeoTracker Site Confirmation	
Unocal #5370	2081 Main Street W	0.39	Incorrectly georeferenced within 0.5-mile of BIG footprint; associated with a property outside of BIG footprint.	Closed - 2002
Chevron #2376	1900 Main Street W	0.47	Georeferenced to Main Street ROW within 0.5-mile of BIG footprint; however, associated with a property outside of BIG footprint.	Closed -1992
Desert Disposal	2340 Main St W	0.36	Georeferenced within 0.5-mile of BIG footprint; however, associated with a property outside of BIG footprint.	Closed - 1998
H & E Home Builders	2420 Main St W	0.28	Georeferenced within 0.5-mile of BIG footprint; however, associated with a property outside of BIG footprint.	Closed - 1992
Source: Appendix 5.9 BIG-1: Hazardous Materials and Wastes Technical Report , Attachment A. Note: ¹ Only some addresses included directional prefixes within the street names, as such, the address column reports addresses as documented within Appendix 5.9-1 , Attachment A.				

5.9.4.6 Wildland Fires

Wildfires can potentially occur where developments are adjacent to open space or near wildland fuels such as grass, leaf litter, trees, or shrubs that can ignite when exposed to a natural occurrence (e.g., lightning) or by a human-caused activity. Wildfire hazards are also based on factors such as topography and climatic conditions (e.g., winds, humidity, droughts, and extreme temperatures). Wildfires can originate in undeveloped areas and spread to developed or urban areas where landscape and structures are not designed and maintained to be fire-resistant (National Park Service, 2018).

The potential for wildfires to affect an area is largely dependent on vegetation patterns within a given area and the density of the vegetative growth. The vegetation is typically defined as having low, moderate, or high fuel loads. Light fuels typically consist of flammable grasses and annual herbs; medium fuels are brush and shrubs less than six feet in height, and heavy fuels are heavier brush and timber over six feet high. Topography also influences fire risk by affecting fire spread rates. Steep terrain can result in faster fire spread upslope and terrain that create funneling effects, such as canyons. These landscapes can result in especially intense fire behavior. Conversely, flat terrain or those with slight elevation changes tend to have little effect on fire spread. In these instances, the fire spread is largely driven by vegetation and weather conditions such as humidity and wind.

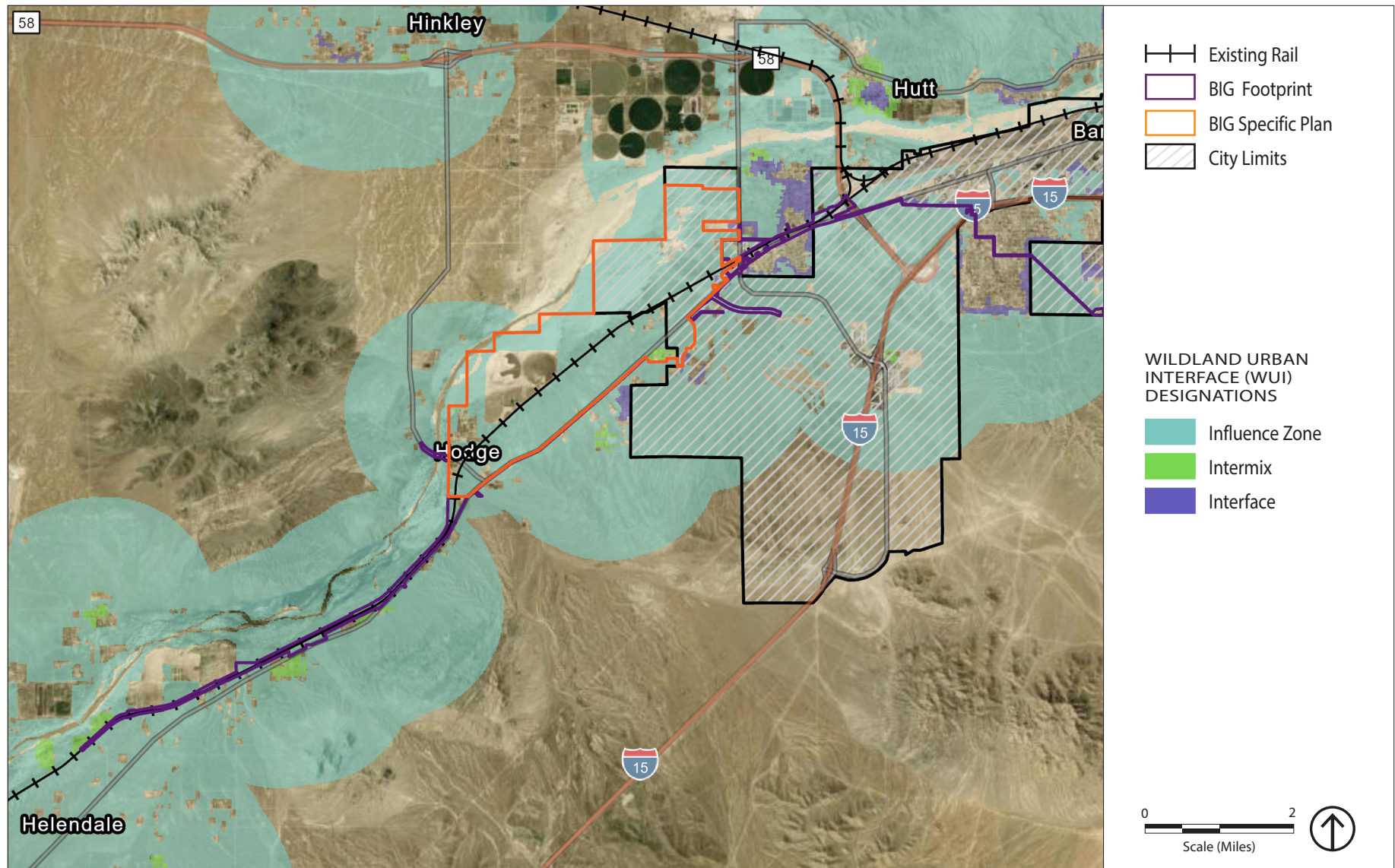
The approximately 5,000-acre BIG footprint is in the western part of the City and southwestern part of the County. The BIG footprint is bordered by the Mojave River to the north, Main Street to the south, Lenwood Road on the east, and Hinkley Road to the west. Except for approximately 108 dwelling units, approximately 93,724 square feet of non-residential land uses, and approximately 700 acres of former farmland, the BIG footprint is vacant with little to no improvements. The BIG footprint can be characterized as scrub-like desert landscape (e.g., all scale scrub, creosote bush scrub, desert dunes, and

disturbed habitat) with sparse rural residential development. The BIG footprint is mostly devoid of tall vegetation and trees, with structures and other elements of the built environment scattered throughout. The BIG footprint also includes BNSF's existing mainline corridor, which traverses the area in an east/west orientation. The BIG footprint is generally flat and gradually slopes north to the Mojave River. In the western half of the BIG footprint, the topography is relatively level between the existing main lines and Mojave River with low, uneven terrain at some locations, especially near the southwesterly end near Hinkley Road. There are no hillsides, ridgelines, or dominant landforms within the BIG footprint.

The area surrounding the BIG footprint is primarily vacant undeveloped land with sparse rural residential uses to the south, east, and west.

Wildland Urban Interface

As depicted in **Figure 5.9-5: Wildland-Urban Interface and Influence Zone – BIG**, small portions throughout the BIG footprint (approximately 50 acres in total) located near the Main Street at Lenwood Road intersection, along the Lenwood portion of the Mainline, southwestern portion of Barstow, and within the proposed solar area are designated Interface (i.e., WUI). As discussed above, a WUI is defined as an area where homes are built near or among lands prone to wildland fire. Because homes have been built within the BIG footprint, this area is considered WUI. Because the BIG footprint includes sparse desert vegetation and is relatively flat, it is considered as having light fuel with a topography that would have little effect on fire spread. However, most of the BIG footprint is designated: Not-WUI or Influence Zone (approximately 1,000 acres and 3,848 acres, respectively); WUI Intermix areas (approximately 40 acres) where housing intermingles with wildland; Wildland/Non-Urban (approximately 1,095 acres); or Urban Unzoned (approximately 97 acres) (CAL FIRE, 2020).



Sources:
County of San Bernardino, *Y2023_PUA_Cache* [aerial imagery], 2023.;
County of San Bernardino, *Cities and Towns* [Data set], 2022.; CalFire,
Wildland Urban Interface 2024 [Data set], 2024.

Figure 5.9-5
Wildand-Urban Interface and Influence Zone - BIG

Wildfire Responsibility Areas

As depicted in **Figure 5.9-6: California State Responsibility Zones - BIG**, CAL FIRE classifies most of the BIG footprint as a LRA (approximately 4,906 acres) with only a small portion on federally managed land (CAL FIRE, 2025). The wildfire study area is located within an LRA, as designated by CAL FIRE, and is primarily classified as a Moderate FHSZ. The nearest SRA to the BIG footprint is approximately 21 miles to the south. The nearest Very High FHSZ to the BIG footprint is approximately 25 miles to the south (CAL FIRE, 2025). As depicted in **Figure 5.9-7: Fire Hazard Severity Zones in Federal Responsibility Areas - BIG**, the majority of the footprint is not classified in FEMA's wildfire risk rating, with the portions that are designated being shown as Relatively Low.

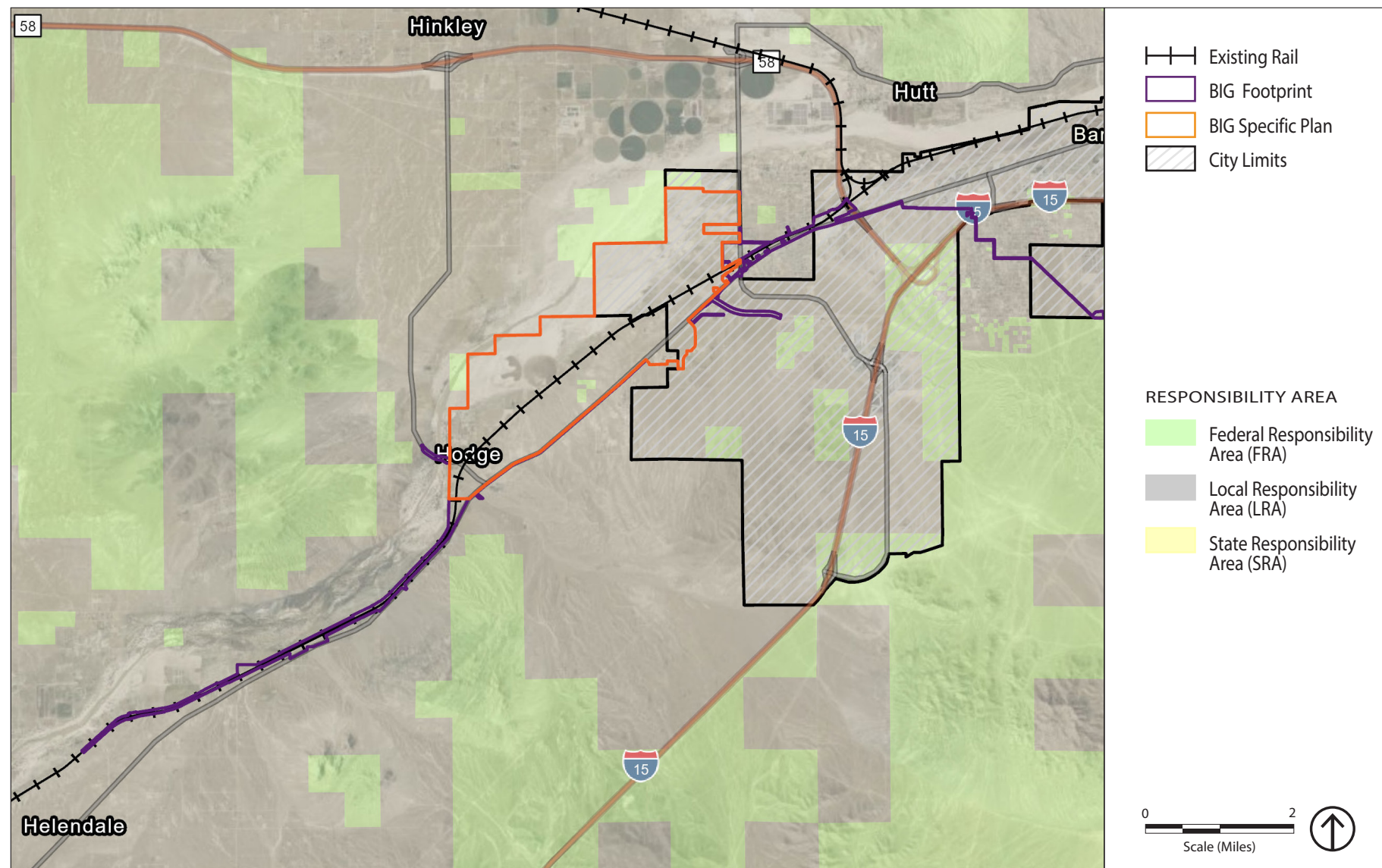
The County's Multi-Jurisdictional Hazard Mitigation Plan includes a list of notable wildfires in the County from 2019 to 2022. None of the fires occurred in the wildfire study area (San Bernardino, 2023c). However, as depicted in **Figure 5.9-8: Fire Hazard Severity Zones in Local Responsibility Areas - BIG** the CWP and BHMP identifies most of BIG's footprint is within a moderate fire hazard severity zone and Non-Wildland/Non-Urban areas (San Bernardino, 2020). The City's BHMP also identifies the BIG Footprint as located near two key areas within or near the City. These two areas are considered fire hazard areas, which include:

- The Lenwood community, located near the BIG footprint's eastern boundary. This area is identified as a fire hazard area due to the abundance of brush and blow sand, which makes it difficult to gain access to fight fire.
- The Mojave Riverbed, located along BIG's northern boundary. This area is identified as a fire hazard area because of its significant slope to the bottom of the riverbed and the soft soil, which is difficult to gain access to when firefighting.

Neither Barstow's General Plan Safety Element nor the Barstow Fire Protection District Strategic Operations Plan 2019 address wildfire risk, mitigation, history, or areas of concern. Both are focused on the organizational structure and needs of the Barstow Fire Protection District and developing goals and policies rather than outlining areas of wildfire concern.

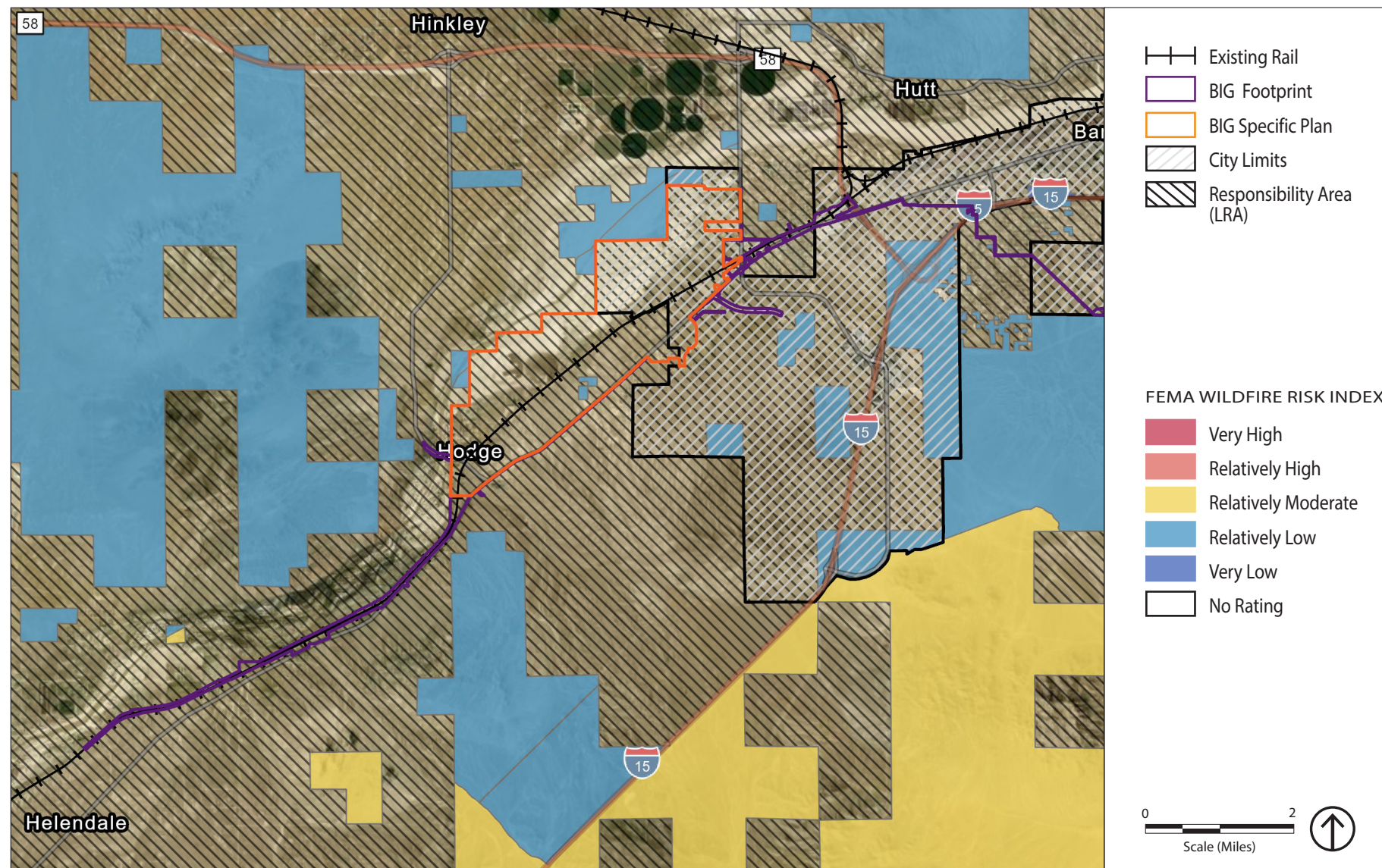
Fire Protection

San Bernardino County Fire Protection District (SBC Fire). Most of the BIG's footprint (approximately 63 percent or 3,070 acres) is within unincorporated County lands, while the remainder (approximately 37 percent or 1,808 acres) is within City limits; see **Figure 3-2: Local Vicinity Map**. Most of the BIG footprint is currently within SBC Fire jurisdiction as it is outside of the City's boundaries see **Figure 5.14-1: Fire Protection Service Boundaries – Proposed General Plan** in **Section 5.14: Public Services and Recreation**. SBC Fire is a community-based, all hazard emergency services provider (San Bernardino, 2014). SBC Fire core services include the following: fire stations; Emergency Medical Services (EMS), special operations, and training; and CONFIRE Dispatch, which is a joint powers authority that serves as the communications and dispatch hub for numerous County fire agencies, including SBC Fire (CONFIRE, 2019).



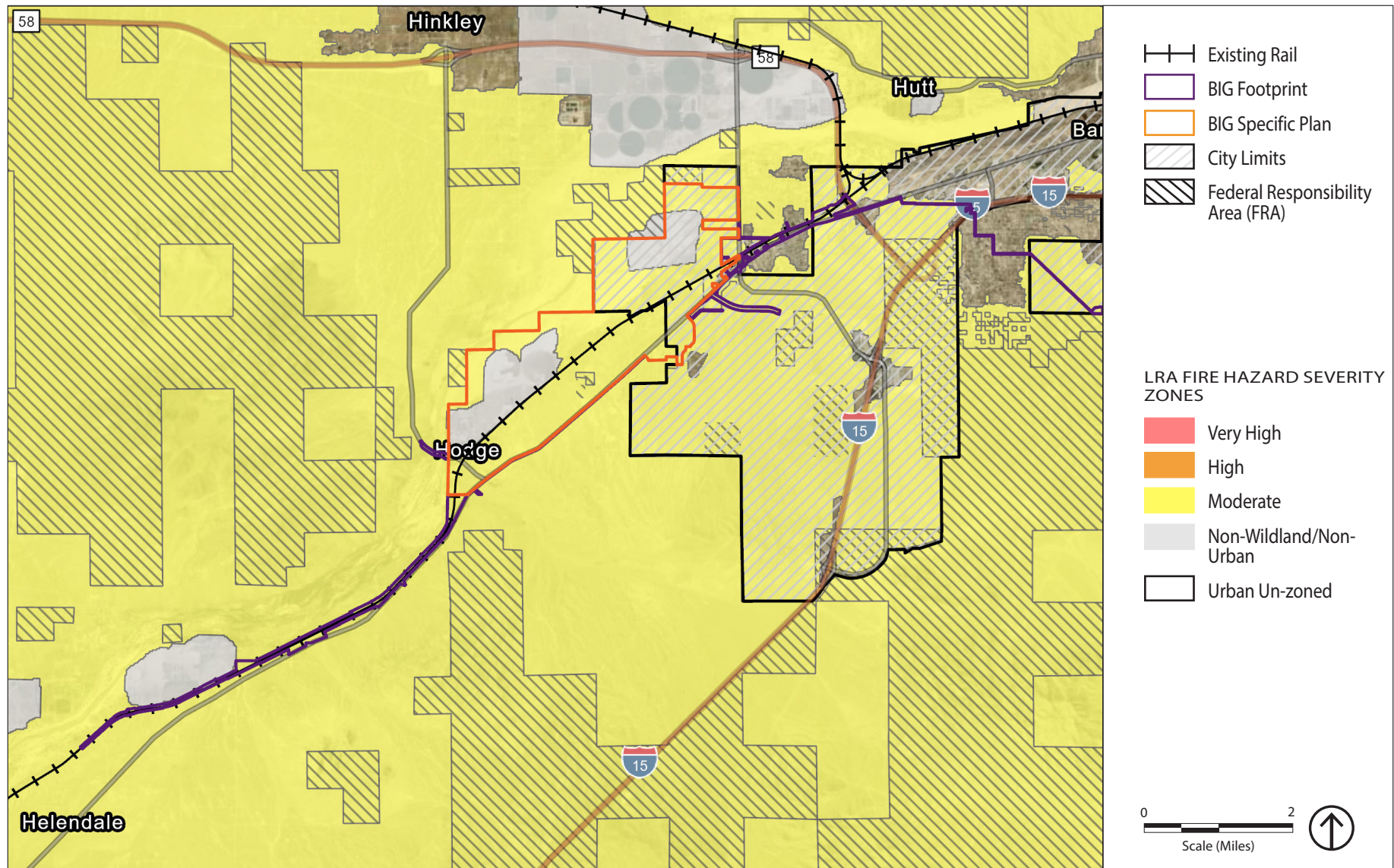
Sources:
County of San Bernardino, Y2023_PUA_Cache [aerial imagery], 2023.; County of San Bernardino, Cities and Towns [Data set], 2022CalFire, California State Responsibility Area [Data set], 2025.

Figure 5.9-6
California State Responsibility Zones - BIG



Sources:
County of San Bernardino, Y2023_PUA_Cache [aerial imagery], 2023.;
County of San Bernardino, Cities and Towns [Data set], 2022.; FEMA,
National Risk Index [Data set], 2024.

Figure 5.9-7
Fire Hazard Severity Zones in Federal Responsibility Areas - BIG



Sources:
County of San Bernardino, Y2023_PUA_Cache [aerial imagery], 2023.; County of San Bernardino, Cities and Towns [Data set], 2022.; CalFire, Fire Hazard Severity Zones [Data set], 2025.

Figure 5.9-8
Fire Hazard Severity Zones in Local Responsibility Areas - BIG

SBC Fire's Fire Station 4, located at 27089 Helendale Road in the community of Helendale, approximately 3.4 miles southwest of BIG, serves the BIG footprint. SBC Fire strives for a response time of less than five minutes once a call for service is received (Lester Kaita, personal communication, October 12, 2021). However, SBC Fire response times vary depending on the area served. SBC Fire's goal is to be enroute to an incident within one 1 minute 30 seconds, with an overall time of a few seconds near the stations to over 9 minutes to the most remote areas.

The SBC Fire Hazardous Materials Division is the CUPA responsible for administering the County's hazardous materials program. The CUPA's responsibility includes controlling the use, disposal, and transport of flammable chemicals and liquids.

City of Barstow Fire Protection District. As noted above, approximately 38 percent (approximately 1,900 acres) of the BIG footprint is currently within the Barstow City limits; and all of the BIG Specific Plan area will be within the Barstow Fire Protection District's boundaries once the proposed annexations are completed (see **Figure 3-16: SBLAFCO Action Area A: Barstow Fire Protection District Annexation**). Therefore, all of the BIG footprint will be within BFPD jurisdiction (see **Figure 5.14-1: Fire Protection Service Boundaries – Proposed General Plan**). The BFPD is an "all-hazard" response agency for the City. BFPD members are trained, equipped, and dedicated to providing emergency medical, fire, hazardous materials, technical rescue, natural, and manufactured disaster response. BFPD engages in activities intended to promote greater public awareness of fire and safety hazards and prevention techniques. The Fire Chief and engine companies conduct routine fire prevention inspections on local businesses to educate the business owners and ensure code compliance.

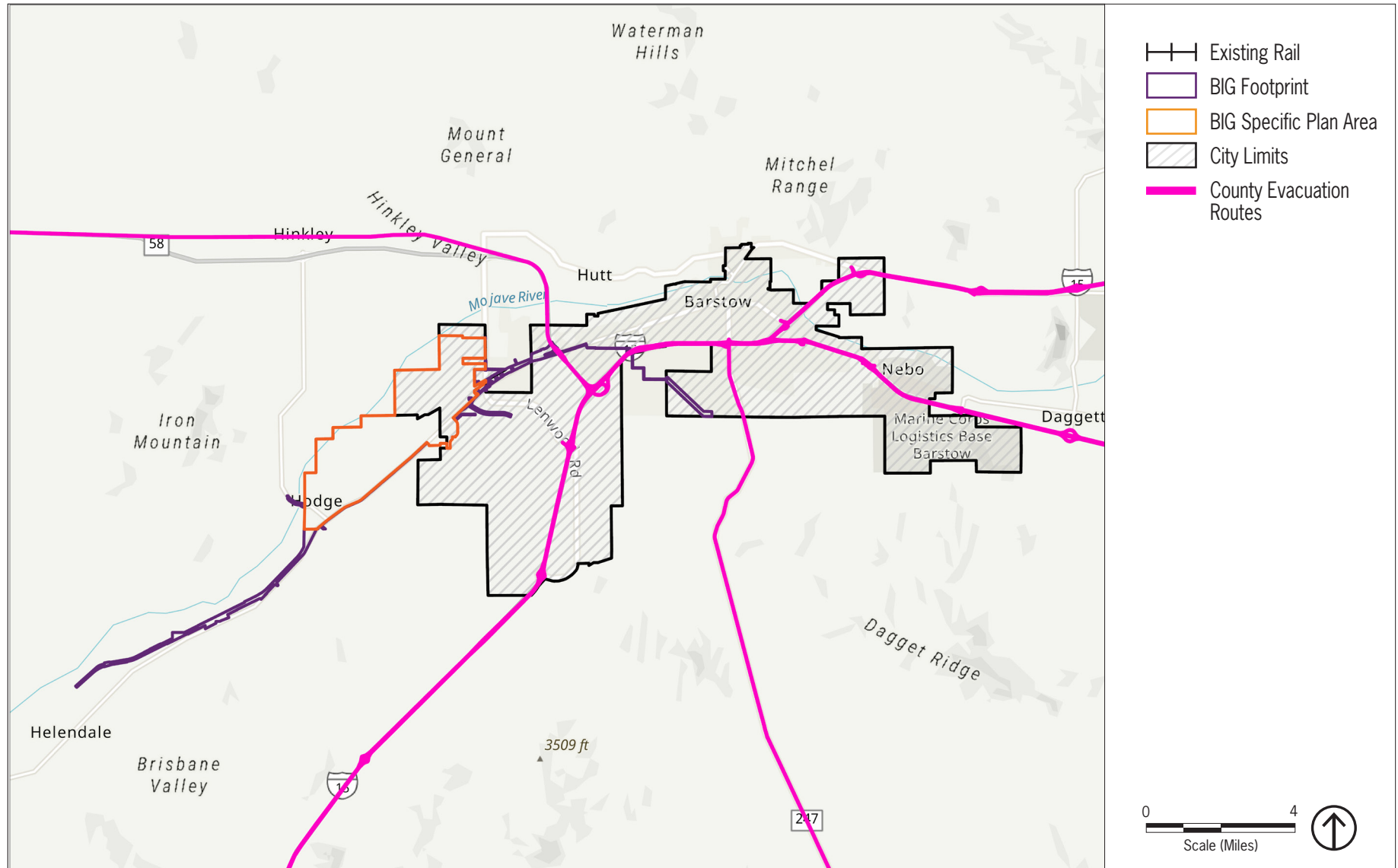
The BIG footprint is within the BFPD service area and its SOI, and is primarily served by BFPD Station 366, located at 2600 Main Street approximately 0.68-mile east of the BIG footprint. The BFPD is a full-service department consisting of full-time firefighters and administrative staff. Currently, BFPD has 30 full time personnel: 1 Fire Chief, 3 Battalion Chiefs, 6 Captains, 6 Engineers, 12 Firefighters [of whom some also are paramedics or emergency medical technicians], and 2 administrative staff (non-sworn). BFPD operates two full-time paramedic engine companies and one paramedic squad.

5.9.4.7 Emergency Response

Emergency Response Plans/Emergency Evacuation Plan

As previously noted, CWP Policy Map PP-2: Evacuation Routes depicts the County's evacuation routes and indicates SR-58 to the northeast and I-15 to the southeast are emergency evacuation routes. County evacuation routes are shown in **Figure 5.9-9: Emergency Evacuation Routes - BIG**.

The Safety Element of the proposed General Plan establishes the emergency evacuation routes for the City. Major routes within proximity to the BIG footprint include SR-58 to the north and east and I-15 to the east. Minor routes within proximity to the BIG footprint include Lenwood Road to the east and West Main Street to the south.



Sources:
County of San Bernardino, Y2023_PUA_Cache [aerial imagery], 2023.; County of San Bernardino, Cities and Towns [Data set], 2022.; County of San Bernardino, Countywide Plan Policy Map PP-2 Evacuation Routes [Data set], 2020.

Figure 5.9-9
Emergency Evacuation Routes - BIG

BNSF Emergency Response Plan

BNSF has prepared a System Emergency Response Plan (Response Plan) to respond to emergencies (BNSF, 2025b). The Response Plan describes procedures for responding to hazardous release emergencies, persons, and agencies to contact, locations for personnel to evacuate to, and prevention practices to limit the potential of these emergencies. BNSF has also established a website (www.BNSFhazmat.com) to communicate with first responders (BNSF, 2024).

BNSF integrates (by contract) additional Incident Management Team experts in areas such as incident management, wildlife management, water and air dispersion modeling, toxicology, chemistry, firefighting, communications, and railroad and commodity salvage. Contracted incident management experts can support the BNSF Incident Management team to manage large-scale incidents. Additionally, BNSF provides free railroad hazmat response training to an average of 8,000 first responders per year in communities across their network. In 2020, BNSF provided hazmat response training to more than 9,000 first responders across its network (BNSF, 2025b).

BNSF has strategically deployed hazmat equipment across the national network of railways, including fire foam application trailers and wildland trailers. A BNSF-owned fire-fighting foam trailer is located at the existing BNSF rail yard in the City (BNSF, 2016). Fire-fighting foam trailers are mobile units designed to deliver large quantities of firefighting foam, primarily for flammable liquid fires. They are used to create a foam blanket that smothers the fire by depriving it of oxygen, suppresses flammable vapors, and cools the fuel source, preventing reignition. Trailers are mobilized to the location of an incident, such as oil fires resulting from train derailment, and contract industrial firefighters are deployed to operate the equipment (BNSF, 2021). Additionally, these fire-fighting foam trailers are available as an asset to other railroads and local communities within an approximately 150-mile radius.

The BNSF Response Plan contains policies in the event of an unanticipated accident, collision, or train derailment that could release HMW into the environment (BNSF, 2025a). In the event of a trail derailment, appropriate BNSF hazmat personnel are mobilized along with hazardous materials contractors, environmental response contractors, and shippers are notified immediately.

Training Local Emergency Responders

BNSF coordinates and works closely with CAL FIRE for wildfire response in the State. The BNSF environmental team trains local responders on hazmat awareness and emergency response to ensure that BNSF can work effectively with communities and respond quickly in the unlikely event that a hazmat emergency occurs.

BNSF provides free railroad hazmat response training to an average of 8,000 local emergency responders per year in communities across our network. BNSF has provided training for more than 125,000 emergency responders since 1996. In 2020, BNSF provided hazmat response training to more than 9,000 first responders across its network (BNSF, 2024).

5.9.1 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

State CEQA Guidelines **Appendix G: Environmental Checklist Form** includes questions concerning hazards and hazardous materials and wildfires. The questions presented in the Environmental Checklist Form have been utilized as significance criteria in this section. Accordingly, the Project would have a significant effect on the environment if it would:

- **Impact 5.9-1:** Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- **Impact 5.9-2:** 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.
- **Impact 5.9-3:** Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- **Impact 5.9-4:** Be located on a site which is included on a list of hazardous materials sites compiled pursuant to CGC § 65962.5 and, as a result, would it create a significant hazard to the public or the environment.
- **Impact 5.9-5:** For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area.
- **Impact 5.9-6:** Impair implementation of or physically interfere within an adopted emergency response plan or emergency evacuation plan.
- **Impact 5.9-7:** Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.
- **Impact 5.9-8:** If located in or near State responsibility areas (SRAs) or lands classified as Very High FHSZs, the Project would have a significant effect on the environment if it would:
 - Substantially impair an adopted emergency response plan or emergency evacuation plan.
 - Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire.
 - Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.
 - Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

5.9.2 PROJECT IMPACTS AND MITIGATION MEASURES

Applicable Proposed General Plan Policies

The proposed General Plan goals and policies relevant to hazards, hazardous materials, and wildfire are listed below.

Safety Element

- **Policy S-1.1 Hazard planning.** Regularly update and incorporate by reference into the General Plan a Local Hazard Mitigation Plan and participate in regional and statewide emergency preparation efforts.
- **Policy S-1.2 Mutual aid.** Maintain mutual aid agreements with the County, MCLB, and Ft. Irwin fire departments to maximize the ability to respond to emergencies in Barstow and surrounding communities.
- **Policy S-1.3 Building design and location.** Require new development to design and build in accordance with current standards for seismic, landslide, fire, and flood safety. Encourage building designs and locations that reduce exposure of structures and occupants to natural hazards, including windblown sand, and enable occupants to shelter in place during disasters.
- **Policy S-1.4 Utility hardening.** Coordinate with service providers to ensure that new utilities are designed to accommodate ground settlement and to be resilient to risks associated with flood, high wind, blow sand, seismic, and fire events. Encourage retrofitting of existing utilities to improve resilience and ensure that utilities remain operational during emergencies.
- **Policy S-1.5 Water for fire protection.** Coordinate with water suppliers and fire protection agencies to ensure adequate provision of water supplies for structural fire suppression.
- **Policy S-1.6 Critical facilities in flood and earthquake zones.** Prohibit the construction of new public critical facilities and hazardous materials uses within mapped 100- or 200-year flood zones and Alquist-Priolo Fault Zones unless a proposed location is otherwise necessary. If new critical facilities must be constructed in these areas, require that they be designed to include appropriate construction materials and structural and site design elements that go beyond current building code requirements that further harden the facilities/uses against flooding and seismic events.
- **Policy S-1.7 New development in flood zones.** Discourage new development in mapped 100-flood zones unless proposed development incorporates floodproofing construction materials, techniques, and/or site designs. Encourage new development to employ site designs that elevate buildings out of mapped 200-year flood zones.
- **Policy S-1.8 Existing development in flood zones.** Encourage existing development in mapped 100-, 200-, and 500-year flood zones to implement retrofits that harden structures against flood damage through appropriate construction materials, techniques, and/or site designs.
- **Policy S-1.9. Flood zone mapping.** Require new development projects that are within 500 feet of a mapped 100-year flood zone and involve the subdivision of land to confirm or map new 100-year and 200-year flood zones for the proposed project area and surrounding 500 feet. This requirement shall also apply to new development east of Higgins Road and south of Rimrock Road.

- **Policy S-1.10 New development in seismic and geologic hazard zones.** Discourage new development in Alquist-Priolo Fault Zones, and liquefaction, subsidence, and landslide hazard zones to the extent feasible. For development that does occur in these areas, require submittal of a geotechnical report and ensure that measures are incorporated into the project design to reduce risks to an acceptable level. Prohibit the construction of new critical facilities in these areas.
- **Policy S-1.11 Seismic safety retrofits.** Encourage efforts to seismically retrofit existing structures, prioritizing structures constructed prior to 1980, structures in the Alquist-Priolo Fault Zone, and homes of low-income households.
- **Policy S-1.12 Wind and blown sand.** Require the incorporation of wind barriers, architectural features, and/or drought-resistant ground coverage in new development site designs to substantively reduce dust, erosion, and structural damage from windblown sand.
- **Policy S-2.1 Resilient public facilities.** Require new critical and public facilities to be located and designed to operate during, minimize their exposure to, and susceptibility to damage from flooding, seismic and geological effects, and urban fires. Retrofit existing City facilities to be retrofitted to remain operational during an emergency.
- **Policy S-2.2 Emergency response operations plan.** Maintain and implement a comprehensive Emergency Operations Plan to ensure quick and effective response to natural and human-caused disasters and hazards, disasters, and other emergency situations.
- **Policy S-2.3 Cooperative hazard management and recovery.** Coordinate with community organizations and local, State, and federal agencies to reduce, manage, and respond to natural and human-generated hazards in order to reestablish and expedite public services, assist affected residents and businesses, and accelerate the short- and long-term recovery process after hazard events or emergency conditions.
- **Policy S-2.4 Community emergency preparation.** Engage the community in emergency planning through working with local community-based organizations, health care providers, and contractors to expand education about natural hazard preparation, emergency response, and recovery resources. Provide educational materials that reflect Barstow's language diversity and in formats that are accessible to all community members.
- **Policy S-2.5 Emergency access and evacuation.** Require that new development have at least two ingress and egress routes that are designed to provide unencumbered access for emergency vehicles and remain accessible and functional in the event of a natural hazard event or emergency.
- **Policy S-2.6 Hazards and evacuation planning.** Incorporate information about flood, landslide, subsidence, and liquefaction hazard areas, and risks associated with cargo spills into local evacuation planning and identify potential alternative routes should key evacuation routes be blocked or damaged by these hazards.
- **Policy S-2.7 Community resilience centers.** Partner with other public entities and new development to retrofit existing and design new public community facilities that can serve as resilience centers, especially during extreme heat and poor air quality conditions. Ensure such centers are equitably distributed throughout Barstow and have air-conditioned indoor space, clean indoor air, permanent shaded areas, proper hydration supplies, and resilient power supply.

- **Policy S-2.8 Healthy, resilient, and efficient buildings.** Encourage and pursue funding for improvements to existing residential and nonresidential buildings consistent with the latest State building code requirements for indoor air quality; energy efficiency; energy storage; disaster and severe weather resilience; and solar power. As funding is obtained, prioritize improvements for buildings that are both within 500 feet of a freeway or railroad and intended for use by residents or employees for at least eight hours a day.
- **Policy S-2.9 Urban heat reduction.** Encourage the use of shade-producing trees and structures that reduce ambient air temperatures and heat radiance from buildings, parking lots, and other impermeable surfaces.
- **Policy S-3.1 Hazardous materials siting.** Prohibit the development of new hazardous waste facilities within the mapped 100-, 200-, and 500-year flood hazard areas and Alquist-Priolo Fault Zones. Require uses within mapped 100- and 200-year floodplains that produce, contain, or store hazardous materials to employ building and site design features that go beyond current building code requirements that further harden the facilities/uses against flooding and seismic events.
- **Policy S-3.2. Pipelines and electrical transmission lines.** Require new development to incorporate appropriate site designs that are consistent with easements for major natural gas transmission or hazardous liquid pipelines. Prohibit the development of new hazardous waste facilities within such easements. For new development within 500 feet of such easements, require hazardous materials storage areas to be located as far from these pipelines and electrical transmission lines as possible.
- **Policy S-3.3 Community use of hazardous materials.** Educate residents about how to reduce their personal hazardous materials use and exposure and how to safely dispose of hazardous materials.
- **Policy S-3.4 Hazardous material disposal.** Work with local waste handlers to ensure the safe disposal of hazardous materials and limit the exposure of hazardous materials to the community.
- **Policy S-3.5 Hazardous materials transport.** Encourage the transport of hazardous materials via the safest available method for each material, avoiding populated areas and areas subject to natural hazards whenever appropriate.
- **Policy S-4.1 Land use compatibility.** Approve development in a manner that ensures existing and future land use compatibility, taking into consideration periodic, and impulsive noise and vibration impacts of business operations.
- **Policy S-4.2 New residential.** When new residential development is proposed adjacent to land designated for industrial or commercial uses, require the proposed project to assess the potential noise and vibration impacts and implement feasible and appropriate measures.
- **Policy S-4.3 New nonresidential.** When new nonresidential development is proposed adjacent to land designated for residential uses, require the proposed project to assess the potential noise and vibration impacts and implement feasible and appropriate measures.
- **Policy S-4.4 Control sound at the source.** Prioritize feasible and appropriate noise measures that control sound and vibration at the source before buffers, soundwalls, and other perimeter measures.

- **Policy S-4.5 Transportation noise.** Minimize potential transportation noise through proper roadway design, coordination of commercial vehicle routing, and other feasible and appropriate traffic control or abatement measures.
- **Policy S-4.6 Industrial proximity.** Discourage new residential or other uses sensitive to noise and/or vibration within 200 feet of existing or planned railroad, mining, or industrial processing operations. Require new development of vibration-sensitive uses in areas within 200 feet of railroad operations to evaluate for indoor vibration levels and mitigate any exceedances of the Federal Transit Administration vibration-annoyance and damage criteria.

As the proposed General Plan area is not situated within any airport land use plan, nor are there any public or public-use airports within the boundaries of the proposed General Plan area, no airport policies are proposed.

Impact 5.9-1 *Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Proposed General Plan

The proposed General Plan includes land uses that require the routine use, transport, and disposal of HMW. Examples of HMW include oil, fuels, paints, thinners, cleaning solvents, compressed gases, radioactive materials, insecticides, and pesticides.

HMW are used for various land uses, such as manufacturing, agriculture, landscaping, household maintenance, etc. As identified in **Table 3-4: Existing Land Use Designations**, the proposed General Plan would increase industrial development within the City by approximately 26 percent. Further, annexation of land consistent with the proposed General Plan would result in an intensification of land uses within the City with a corresponding increase in the amount of HMW stored, transported, and disposed of when compared to existing conditions compared to the generally less intensive development pattern allowed in the County General Plan. Although households often use and store HMW, commercial and industrial land uses are expected to be the largest users of HMW. Additionally, HMW are used during the construction and operation of most projects. As described in the following sections, existing regulatory frameworks and local programs would adequately manage this increase. The analysis considers both construction and operational phases, available waste disposal infrastructure, and local emergency response capacity, and concludes that HMW use and management under the proposed General Plan would not result in a significant impact.

Construction

During construction, demolition of existing structure and site grading can result in the discovery of HMW such as solvents, asbestos, lead paint, old fuel tanks, and septic systems (refer to **Section 5.7: Geology, Soils, and Mineral Resources**). Construction can involve the use of HMW such as fuels, oils, paints, concrete, asphalt, solvents, etc. While the use and storage of these materials during construction is regulated through federal, State, and local regulations, there is always potential for accidental spill of the materials. There are several State regulations that address these concerns such as Title 29, CFR § 1926.62

for lead, and Title 40, CFR Part 61 Subpart M for asbestos removal, and construction waste diversion from landfills pursuant to California's Integrated Waste Management Act of 1989 (AB 939). Additionally, local regulations address hazardous waste concerns, such as Barstow Code Chapter 6.22: Underground Storage of Hazardous Substances which outlines the permit and application requirements for the installation, operation, and abandonment of USTs; and Barstow Code Chapter 6.34: Hazardous Waste which establishes that all zoning, subdivision, conditional use permits, and variances will be consistent with the County's Hazardous Waste Management Plan. County Code § 33.0643, Well Abandonment, requires a permit prior to destroying an abandoned well, and County Code § 33.0879, Abandonment of Sewage Holding Tanks, requires the permittee of a sewage holding tank to abandon the tank if the Department of Environmental Health Services or another agency orders the tank to be abandoned.

The City is co-permittee under the Waste Discharge Requirements for Small Municipal Separate Storm Sewer System (MS4) Discharges within the Mohave River Watershed (Order No. 2013-0001 DWQ), NPDES Permit No. CAS000004, effective July 1, 2013, issued by the California Regional Water Quality Control Board and any successor permit to that permit (the "Municipal NPDES Permit"). As a co-permittee under the Municipal NPDES Permit, the City is required to implement and enforce the requirements contained in the Municipal NPDES Permit, to control discharges to and from those portions of the MS4 over which it has jurisdiction, and to hold dischargers to the MS4 accountable for their contributions of pollutants and flows. During construction, the Stormwater Pollution Prevention Plan (SWPPP) required by Barstow Code Chapter 15.14 requires project-specific BMPs that would prevent discharge of HMW from a project site.

To prevent hazardous conditions, existing local, State, and federal laws will be enforced at the construction sites. For example, as part of the SWPPP, all spills or leakage of petroleum products during construction activities are required to be immediately contained, the hazardous material identified, and the material remediated in compliance with applicable State and local regulations for the cleanup and disposal of that contaminant. All contaminated waste encountered would be required to be collected and disposed of at an appropriately licensed disposal or treatment facility. Furthermore, strict adherence to all emergency response plan requirements set forth by the Barstow Fire Protection District would be required throughout the duration of project construction.

Operations

For operations, HMW could be used for cleaning and maintenance purposes in almost all developed land uses: cleaners, solvents, paints, pesticides, insecticides, and fertilizers. The amounts of HMW used would vary by land use type with the amounts relatively small for residential and small office uses. Amounts would be larger for industrial uses larger office buildings, schools; businesses selling HMW, such as gasoline stations; and service businesses using HMW in their operations, such as construction contractors, painters, cleaners, and printers. Specialty land uses such as hospitals, laboratories, and clinics routinely use HMW for x rays, testing, and therapy. These land uses are typically licensed by the State or federal government and have HMW storage plans and requirements stemming from licensure.

The City of Barstow Corporation Yard, located at 900 South Avenue H, accepts household hazardous waste materials, such as antifreeze, auto and household batteries, chemical cleaners, cooking oil, fertilizers,

household generated motor oil and oil filters, paint products, personal medications (excluding controlled substances), pesticides, pool supplies, and sharps (SBC Fire, 2025). The County prohibits the transport of more than 15 gallons or 125 pounds of household hazardous waste items. The fee-based conditionally exempt small quantity generator (CESQG) program is available for small businesses that generate a maximum of 27 gallons or 220 pounds of hazard waste or 2.2 pounds of extremely hazardous waste per month (SBC Fire, 2025). The program is a mobile hazardous waste pick-up disposal service for eligible businesses in the county (SBC Fire, 2023b). Electronic waste disposal services are provided by Burrtec Waste (SBC Fire, 2023c).

The Barstow Sanitary Landfill, located at 32553 Barstow Road, accepts sludge (biosolids), mixed municipal, industrial, construction/demolition, and agricultural waste (CalRecycle, 2019). Friable asbestos is only accepted at the following locations: Antelope Valley Landfill (Los Angeles County), and Lassen County/Bass Hill Landfill (Lassen County) (San Bernardino, 2023a).

The County's Medical Waste Program regulates generators of medical waste based on the Medical Waste Management Act. If a facility generates 200 pounds or more of medical waste in any one month of a 12-month period, then it is considered a large quantity generator and must be registered with the County's Environmental Health Services (EHS) (San Bernardino, 2023b). If a facility treats medical waste on a site, then it must obtain a permit from EHS. The California Department of Public Health maintains a list of permitted medical waste transfer stations and treatment facilities; the Advanced Chemical Transport facility, a medical waste transfer station located at 600 Iowa Street in the City of Redlands, and the Veolia ES Technical Solutions facility, a medical waste transfer station and treatment facility located at 241 West Laurel Street in the City of Colton, both approximately 50 miles south of the General Plan area, are the closest facilities to the General Plan area (CDPH, 2023).

Development consistent with the proposed General Plan is expected to result in an increase in the number of hazardous waste generators, due to the increase in industrial and commercial land uses as compared to the 2015 General Plan. Refer to discussion regarding BIG under **Impact 5.9-1: BIG** and **Impact 5.9-2: BIG** incorporated herein. Hazardous wastes would be required to be stored, transported, and disposed of in conformance with existing regulations of the U.S. EPA, USDOT, CalRecycle, and other agencies, such as the Toxic Substances Control Act and the Hazardous Materials Transportation Act. The U.S. EPA's regulations, found in 40 Code of Federal Regulation Parts 263, Standards Applicable to Transporters of Hazardous Waste, regulate the transportation of hazardous waste, including requirements for shipping papers, labeling, and handling. Similarly, Department of Transportation Title 49 Code of Federal Regulations Part 177, Carriage by Public Highway, addresses the regulations of transporting HMW by road including vehicle requirements and safety measures. These regulations ensure that hazardous waste is managed safely and effectively from its generation through its final disposal, adhering to both federal and State requirements.

The City of Barstow maintains an Emergency Operations Plan that is regularly updated and aligned with the Standardized Emergency Management System and the National Incident Management System. The Emergency Operations Plan outlines the structure and operation of the City's Emergency Operations Center, assigns roles under the Incident Command System, and establishes protocols for mutual aid

coordination during all-hazard events, including HMW incidents. The Emergency Operations Plan also includes notification procedures, evacuation protocols, and public-warning systems that are integrated with County and Cal OES alert networks. By pre-designating evacuation routes, shelter locations, and public communication responsibilities, the Emergency Operations Plan enables rapid containment of HMW releases, whether occurring during project construction or long-term operations, and ensures timely protective actions for potentially affected receptors.

The HMP and BHMP identifies HMW releases as a local threat and outlines targeted mitigation strategies, such as annual Community Emergency Response Team (CERT) training with hazmat awareness modules; regular audits of Hazardous Materials Business Plans to verify compliance with secondary containment and employee safety training requirements; capital improvements to enhance spill-response capabilities at municipal facilities; and public outreach campaigns promoting proper disposal of household HMW. Together, the Emergency Operations Plan, HMP, and BHMP provide a comprehensive framework for managing HMW risks through preparedness, response, and recovery and mitigation. Because these plans are already in effect and new development under the proposed General Plan must comply with their provisions, the City maintains the framework to manage any increase in HMW use, storage, or transport.

Therefore, implementation of the proposed General Plan would not result in substantial hazards to the public due to the transport, use, and/or disposal of HMW. Impacts would be less than significant. With the implementation of existing federal, State, regional, and local regulations, as well as the proposed General Plan policies such as Policy S-3.4, which calls for the City and local waste handlers to work together to ensure safe disposal of HMW, and Policy S-3.5, which encourages the transportation of HMW via the safest available method, impacts would be less than significant.

Impact 5.9-1: General Plan: Level of Significance Before Mitigation: Less than Significant Impact.

Impact 5.9-1: General Plan: Mitigation Measures: No mitigation required.

Impact 5.9-1: General Plan: Level of Significance After Mitigation: No significant impact would occur.

Barstow International Gateway

Construction

BIG construction activities would require temporary transport (e.g., waste oils), use (e.g., cleaning solvents), and disposal of HMW. The potentially HMW associated with BIG construction activities could include the following among others:

- Acids and caustics
- Compressed gases
- Caulking
- Adhesives and glues
- Degreasers
- Refrigerants
- Oils and lubricants
- Batteries and battery acid
- Fuels and additives
- Herbicides and pesticides
- Wood preservatives
- Paints, varnishes, and shellacs
- Paint strippers
- Solvents and thinners
- Mineral spirits

During BIG construction, potential HMW would be used and stored within the BIG footprint. Although BIG's use and storage of these materials would be temporary, construction would result in a temporary increase in the transport, use, and storage of HMW due to the scale of construction, which could in turn result in an incremental increase in hazardous waste disposal. As described in **Section 5: Environmental Setting of Appendix 5.9 BIG-1**, the BIG footprint contains residential and commercial uses which could contain ACM (both friable and nonfriable), LBP, or PCBs based on their initial construction date. The EDR Report and available Phase I and Phase II ESAs did not indicate any historic asbestos violations or PCB spills within the HMW study area. However, it is assumed that some existing on-site structures (i.e., commercial, or residential structures built prior to the 1980s and electrical transformers, hydraulic equipment, capacitors, and similar equipment manufactured prior to 1976) could contain ACM, LBP, or PCBs. Therefore, demolition of these existing structures could result in the removal of ACM, LBP, or PCBs, which would likely require the transportation of these HWM from the construction site to appropriate disposal sites. Additionally, disposal of hazardous waste from potential implementation of **MM BIG HAZ-1**, which involves management and handling of impacted soil, would involve transporting hazardous waste to appropriate offsite disposal facilities; see below. Construction activities could also result in other hazardous wastes including soil or groundwater formerly contaminated by ADL, petroleum hydrocarbons, pesticides, herbicides, asbestos, heavy metals (i.e., lead and arsenic), PCBs, creosote, or VOCs, etc.

Additionally, there is potential for discovery and disturbance of undocumented HMW along with the few exceedances identified within the northwestern and eastern lead track portion of BIG. **MM BIG HAZ-1** would be created during the final construction design and would include provisions for responding to the completion of lateral and vertical delineation of known impacts and potential disturbance of undocumented contamination. Responsibility for responding to the discovery of undocumented contamination would be delegated to the CUPA, the Hazardous Materials Division of the County Fire Protection District. If soil, groundwater, or other environmental media with suspected contamination is encountered unexpectedly during construction (i.e., identified by odor or visual staining, or by unearthing any USTs, abandoned drums, etc.), work would immediately cease in the vicinity of the suspect materials. The area would then be secured as necessary, and appropriate measures would be taken to protect human health and the environment as defined in the SMP. Appropriate measures include notifying regulatory agencies and complying with the various agencies' laws, regulations, and policies. BNSF and its contractors would work with these agencies should undocumented HMW be encountered during construction. **MM BIG HAZ-1** would decrease the potential for significant hazard to the public or the environment through the routine transport, use, or disposal of HMW during construction.

Additionally, BIG construction would not require transporting, storing, or disposing of HMW in quantities greater than needed to support construction activities, thereby minimizing potential exposure of the public, workers, and the environment. However, inadvertent releases or spills could occur from the improper storage HMW, improper handling of HMW, accidents, seismic activity, or inclement weather and have the potential to result in direct and temporary effects.

Off-site accidents during HMW transport to or from the construction site could expose individuals and the environment to risks at some distance from the construction site. Although transportation accidents are infrequent, accidents could occur during shipment of hazardous commodities (such as gasoline, diesel, or compressed gases) for construction. Accidents could also occur during cleanup of existing contaminated sites before the construction phase or during the transportation of HMW generated during construction.

Although BIG construction would involve the temporary handling of HMW, when HMW are properly used, transported, stored, and disposed of according to the manufacturers' guidelines and regulatory agency regulations, they present no substantial hazard to the community. Per § 402 of the CWA, BIG construction would be required to develop and implement a SWPPP which would specify BMPs for proper transport, use, and disposal of any HMW and prevent all construction pollutants from contacting stormwater and erosion from moving off the site into receiving waters. Therefore, through compliance with guidelines and regulations regarding the transport, use, or disposal of HMW and implementation of construction BMPs (e.g., proper handling, transportation, and storage), BIG would not create a significant hazard to the public or the environment.

Following compliance with the regulatory framework and with implementation of **MM BIG HAZ-1**, BIG construction activities would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of HMW. A less than significant impact would occur with mitigation incorporated.

Operations

BIG operations would involve the routine transport, use, and disposal of HMW, and thus could create a significant hazard to the public or the environment through the routine transport, use, and disposal of HMW.

Transport of HMW via Rail. Within the lead tracks and rail yard, BIG operations would involve transport of HMW to/from BIG, almost entirely via rail. HMW could include explosives, gases, flammable liquids, flammable solids and reactive solids/liquids, oxidizers, and organic peroxides, poisonous (toxic) materials and infectious substances, radioactive materials, corrosive materials, and other miscellaneous HMW, as defined by the Association of American Railroads. However, BIG's routine transport of HMW via rail would be regulated by numerous federal, State, and local regulations. HMW being transported to/from BIG via rail would be regulated at the federal level by the Pipeline and Hazardous Materials Safety Administration, and Federal Railroad Administration, who regulate transport of HMW via rail through Federal Hazmat Law and Federal Rail Safety Act (49 USC § 20101 et seq.). Federal Hazmat Law regulates HMW transport and the design of containers they are transported in and Federal Rail Safety Act regulates HMW transport by railroad and enforces safety regulations (49 CFR 200-268). Additionally, BIG operations would comply with the federal RCRA (42 USC § 6901 et seq.) requirements for HMW transport. At the State level, HMW transport to/from BIG via rail would be regulated through the Hazardous Waste Control Act (Proposition 65, CHSC § 25249.5 et seq.), which regulates the transport of HMW deemed hazardous by the State, and CCR Title 22, Division 4.5 which regulates HMW transport and includes requirements for packaging, storage, labeling, reporting, and general management of HMW

prior to shipment. Additionally, HMW transport to/from BIG via rail would be required to comply with CFC (CCR Title 24 Part 9), which contains regulations for safeguarding life and property from various hazards, including fire and explosion, among others. Locally, the SBC Fire's Hazardous Materials Division (CUPA) administers the County's HMW program, which regulates the transport of flammable chemicals and liquids. The transportation of HMW would comply with all federal, State, and local laws and regulations regarding the safe transport of HMW, which would be effective in preventing a hazard to the public. Further, BIG includes safe haven canopies, which are designated facilities where damaged, leaking, or shifted containers or trailers would be placed to contain spills until they are loaded into an alternative container or trailer, or resecured, as necessary. Through compliance with federal, State, and local laws and regulations regarding the safe transport of HMW and design elements, BIG would not create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials.

Transport of HMW via Heavy-Duty Truck. BIG's operations could also include transport of HMW to/from BIG via traditional heavy-duty truck. HMW being transported to/from BIG via traditional heavy-duty trucks would be regulated federally by the Pipeline and Hazardous Materials Safety Administration, and Federal Motor Carrier Safety Administration through the Federal Hazmat Law and the Federal Motor Carrier Safety Regulations (49 CFR Parts 350-399), which regulates HMW transport by highway and enforces other various motor carrier safety acts codified at 49 USC § 501 et seq., § 30101 et seq., § 30301 et seq., and § 31501 et seq. At the State level, HMW transport to/from BIG via traditional heavy-duty truck would also be regulated through the Hazardous Waste Control Act (Proposition 65, CHSC § 25249.5 et seq.), CCR Title 22, Division 4.5, and CFC (CCR Title 24 Part 9). Additionally, HMW haulers would be required to comply with CHP and Caltrans Federal Hazmat Law requirements, which include regulations for the safe transport, including security, of HMW in intrastate, interstate, and foreign commerce, and require a HMW vehicle hauler to be licensed to transport HMW on public roads. The transportation of HMW via heavy-duty truck would comply with all federal, State, and local laws and regulations regarding the safe transport of HMW, which would be effective in preventing a hazard to the public. Further, BIG includes safe haven canopies where damaged, leaking, or shifted containers or trailers would be placed to contain spills until they are loaded into an alternative container or trailer, or resecured, as necessary. Through compliance with federal and State laws and regulations regarding the safe transport of HMW and design elements, BIG would not create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials.

Use/Generation of HMW During Maintenance. Additionally, occasional track maintenance would be required. Maintenance activities could involve the use or generation of HMW including the following among others:

- Cleaners
- Solvents
- Grease
- Oil
- Excavation and replacement of ballast
- Herbicides
- Rail ties

Maintenance activities would be temporary and intermittent. The use and handling of these materials would be regulated federally by OSHA's Hazardous Waste Operations and Emergency Response Standards, which sets safety and health standards for any employees who are exposed or potentially exposed to HMW and who are engaged in clean-up operations; corrective actions; voluntary clean-up operations; operations involving HMW at treatment, storage, and disposal facilities; and emergency response operations, and through Title 29, CFR § 1926.62, which includes requirements addressing exposure assessment, methods of compliance, respiratory protection, protective clothing and equipment, hygiene facilities and practices, medical surveillance, medical removal protection, employee information and training, signs, recordkeeping, and observation and monitoring. At the State level, HMW use, and handling is regulated by the USDOT through CCR Title 26, which establishes regulations for safe handling procedures (i.e., packaging, marking, labeling, and routing). Additionally, the Hazardous Substances Account Act (California Health & Safety Code § 25300, et seq.) establishes regulations and incentives which require that generators of HMW use technology and BMPs for the safe handling, treatment, recycling, and destruction of their hazardous waste prior to disposal. The use and handling of HMW would comply with federal and State laws regulating HMW, which would be effective in protecting workers and the public. BNSF also maintains and regularly updates policies regarding HMW transport, storage, and use during maintenance activities which would further minimize potential for hazard to the public and environment, as discussed below.

HMW Disposal. Proper hazardous waste disposal, regardless of the method selected, often affects the environment. Waste management strategies that seek to prevent pollution by reducing waste generation at its source are considered the most desirable approach. The Pollution Prevention Act of 1990 (42 USC § 13101 et seq.) established pollution prevention as a national objective. This priority would be reflected in rail operations through BNSF's Corporate Rule Environmental Operations protocols, which include procedures for handling and reporting certain types of HMW (BNSF, 2019), thereby reducing the quantity of hazardous wastes that needs to be transported.

Within the lead tracks, BIG operations could generate heavy metals in ballast rock, lead (from wood preservatives), asbestos (from train disc brake pads), and creosote and arsenic (from railroad ties). The potential for impacts as a result of BIG rail operations at the lead tracks would be similar to potential contamination within the existing BNSF corridor. The BIG footprint slopes north and there are no immediate or adjoining residential uses to the north, thus, transload warehouse center, intermodal facility, and block swap yard operations would not create a significant hazard to the public through disposal of HMW within the BIG footprint. Dwelling units within the BIG footprint would be removed prior to construction, thus, none would be at risk from contamination as a result of HMW disposal from BIG rail yard or transload warehouse center operations.

Long-term HMW storage and use (e.g., routine use and disposal of HMW during BIG operations and maintenance) would be governed by above-mentioned federal, State, and local regulations that prescribe the proper use, storage, and disposal of such materials. BIG would be required to prepare a California HMW business plan, which would specify requirements for material inventory management, inspections, training, recordkeeping, and reporting. BNSF would also provide hazmat commodity flow reports to first responders and elected- or emergency-management officials and provide free training to emergency

service personnel regarding spills or accidents involving HMW (BNSF 2022c). Priorities outlined in the Pollution Prevention Act of 1990 (42 USC § 13101 et seq.) would be reflected in rail operations through BNSF's Corporate Risk Environmental Operations protocols, which includes procedures for handling and reporting certain types of HMW (BNSF, 2019), thereby reducing the quantity of hazardous wastes that needs to be transported. Waste management strategies that seek to prevent pollution by reducing waste generation at its source are considered the most desirable approach.

BNSF Response Plan. BNSF regularly inspects all the components of the network, including locomotives, track, rail, and bridges. These comprehensive inspections meet all federal requirements. Trained BNSF inspectors utilize advanced equipment such as instrument-equipped rail cars, bridge inspection vehicles and unmanned aerial vehicles (UAVs) and deploy technology such as Machine Vision Systems (MVS), autonomous track measurement systems, ultrasound, ground-penetrating radar and high-definition cameras and accelerometers. These efforts, coupled with the use of specialized rail cars to carry HMW, mobile apps to equip first responders with critical safety information, and a software system to determine the safest rail routes all help ensure that more than 99.99 percent of all HMW moved by all rail carriers reach its destination without a release caused by a train accident (AAR, 2023).

BNSF has prepared a System Emergency Response Plan (Response Plan) to respond to emergencies within their rail network. The Response Plan describes procedures for responding to hazardous release emergencies, persons, and agencies to contact, locations for personnel to evacuate to, and prevention practices to limit the potential of these emergencies. BNSF has also established a website to communicate with first responders (BNSF, 2025a). BNSF integrates (by contract) additional Incident Management Team experts in areas such as incident management, wildlife management, water and air dispersion modeling, toxicology, chemistry, firefighting, communications, and railroad and commodity salvage. Contracted incident management experts are capable of supporting the BNSF Incident Management team to manage large-scale incidents. BNSF would work with first responders in the unlikely event that an incident was to occur. BNSF has a network of over 160 hazardous materials responders and advisors who are trained to deal with HMW releases (BNSF, 2016). BNSF has also strategically positioned emergency response equipment, including fire foam application trailers and wildland trailers, at more than 100 locations across the BNSF network. A BNSF-owned fire-fighting foam trailer is located at the existing BNSF rail yard in the City (BNSF, 2016). Trailers are mobilized to the location of an incident, such as oil fires resulting from train derailment, and contract industrial firefighters are deployed to operate the equipment (BNSF, 2021). Additionally, these fire-fighting foam trailers are available as an asset to other railroads and local communities within an approximately 150-mile radius of the existing BNSF Barstow rail yard.

Additionally, BNSF provides free training to first responders through the Transportation Community Awareness and Emergency Response (TRANSCAER) program. Additionally, BNSF provides information to first responders on commodities traveling through communities (BNSF, 2023).

Further, BNSF would be required to prepare a HMW business plan for BIG's rail yard, transload warehouse center, and solar farm pursuant to CHSC, § 25500 et seq., which would specify requirements for HMW inventory management, inspections, training, recordkeeping, and reporting. State agencies, including Caltrans, would also impose regulations on the identification, generation, transportation, storage, and

disposal of materials the State deems hazardous through the Hazardous Waste Control Act (CHSC, § 25100 et seq.). BNSF also provides hazmat commodity flow reports to local first responders and elected- or emergency-management officials upon request to assist with emergency response planning and provides free training to emergency service personnel regarding spills or accidents involving HMW (BNSF, 2025c).

Further, the City's Emergency Operations Plan would provide guidance and outlines operational concepts and response procedures for the City's response to extraordinary emergency situations associated with large-scale emergencies and disasters, including hazardous materials incidents and releases.

Solar Farm and Battery Energy Storage Systems. BIG's proposed solar farm would consist of solar modules, transformers, and battery storage in a battery energy storage system (BESS). Solar modules made with cadmium telluride and crystalline silicon and batteries do not result in emissions during their normal operations and accidental breakage is unlikely. All proposed mineral oil filled transformers would be equipped with spill containment areas to prevent HMW contamination as required by regulation. Battery storage in BESS would be in accordance with OSHA requirements, and would include ventilation, acid resistant materials, and spill response supplies. All hazardous materials associated with BIG's proposed solar farm would be disposed of in accordance with RCRA and State Hazardous Waste Management Program requirements. Although BIG's proposed renewable energy facility would result in an increased use of commercially available potentially HMW, the use of these substances would be subject to applicable federal, State, and local health and safety laws and regulations that are intended to minimize health risk to the public associated with HMW. Further, BIG's proposed solar farm operations would not use substantial quantities of HMW or generate substantial quantities of HMW requiring transport during operations. Solar farm operations would only be expected to use limited hazardous materials and substances such as herbicides and pesticides to control vegetation within the solar farm. Large quantities of these materials are not expected to be stored on-site. Storage of hazardous materials would be regulated by applicable federal, State, and local regulations. Compliance with these requirements would serve to minimize health and safety risks to people or structures associated with routine use, transport, and disposal as well as accidental release of or exposure to hazardous materials.

Therefore, following compliance with the established regulatory framework and existing BNSF policies and procedures, BIG operations (including maintenance activities) would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. A less than significant impact would occur, and no mitigation is required.

Impact 5.9-1: BIG: Level of Significance Before Mitigation: Potentially Significant Impact.

Mitigation Measures

BIG HAZ -1 Limited Soil Management Plan. Prior to construction commencement, the implementing entity shall retain a qualified environmental consultant to prepare a Limited Soil Management Plan (SMP) for only areas considered as RECs within the BIG footprint. The SMP shall establish procedures for identification and management of impacted and clean soil, segregation, and management of impacted soil in accordance with regulatory requirements, transportation of impacted soil to an off-site disposal facility licensed to accept such soil, and identification and management of construction

debris during excavation, grading, and construction activities to be completed within the BIG footprint. The SMP shall be submitted to the City of Barstow Building and Safety Division for review and approval. The SMP shall include the following:

- Procedures for identification, handling, reporting, and removal of the known or unknown ASTs/USTs, piping, dispensers, or other storage tank components that may be encountered (see MM BIG HAZ-3).
- Health and safety measures for when performing demolition, grading, or other construction activities, which may include but are not limited to, personal protective equipment and periodic work breathing zone monitoring for volatile organic compounds using a handheld organic vapor analyzer in the event impacted soils are encountered during excavation activities. This will be documented through a health and safety plan as it pertains to on-site workers that may encounter contaminated soil.
- The limited SMP shall be prepared and executed for point source areas based on the Phase I and II ESA reports, which define soil, soil vapor, and groundwater impacts throughout the BIG footprint. The limited SMP shall require the timely testing and sampling of soils so that contaminated soils can be separated from inert soils for proper disposal versus reused on the site. The limited SMP shall specify the testing parameters and sampling frequency as well as transportation and disposal requirements. If groundwater is anticipated to be encountered within collocated areas of the limited SMP, then provisions for groundwater management shall be considered within the limited SMP.
- During the BIG's construction, the implementing entity's contractor shall remove and properly dispose of impacted materials in accordance with the provisions of the limited SMP. If material is stockpiled prior to disposal, it will be managed in accordance with the SMP and BIG's Storm Water Pollution Prevention Plan, prior to its transfer for treatment and/or disposal.

Impact 5.9-1: BIG: Level of Significance After Mitigation: Less than Significant with Mitigation Incorporated.

Impact 5.9-2 ***Would the Project 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?***

Proposed General Plan

Implementation of the proposed General Plan would result in an intensification of land uses compared to existing conditions, which would require the use, transportation, and storage of HMW during construction and operation of projects. Personal injury, property damage, environmental degradation, or death could result from the release of HMW caused by upset or accident conditions.

The use, storage, and transport of HMW during construction and operations in compliance with the various laws, regulations, and programs in place would minimize the potential for upset and accident conditions involving the release of HMW that could pose substantial hazards to the public or the environment and would entail prompt containment and cleanup of spills during construction activities. For example, Title 40 of the Code of Federal Regulation Parts 263, Standards Applicable to Transporters of Hazardous Waste, regulates the transportation of HMW, including requirements for shipping papers, labeling, and handling. Title 49 of the Code of Federal Regulations Part 177, Carriage by Public Highway, addresses the regulations of transporting HMW by road including vehicle requirements and safety measures. All federal, State, and local laws regarding HMW would be followed.

In the event of a potential release and cleanup of a HMW during construction, SBC Fire would provide oversight of environmental investigations and cleanup of contaminated sites. Project construction workers would be trained in safe handling, and HMW use pursuant to Cal/OSHA requirements. To prevent hazardous conditions, existing local, State, and federal laws—such as those listed under **Section 5.9.2: Regulatory Setting**—are to be enforced at construction sites, as well as during the transport and disposal of HMW. For example, compliance with existing regulations would ensure that construction workers and the public are not exposed to any risks related to HMW during construction activities. Cal/OSHA has regulations concerning the use of HMW, including requirements for safety training, exposure warnings, availability of safety equipment, and preparation of emergency action/prevention plans. For example, all spills or leakage of petroleum products during construction activities are required to be immediately contained, the HMW identified, and the material remediated in compliance with applicable State and local regulations for the cleanup and disposal of that contaminant. All contaminated waste encountered would be required to be collected and disposed of at an appropriately licensed disposal or treatment facility. Furthermore, strict adherence to all emergency response plan requirements set forth by the BFPD would be required throughout the duration of project construction.

During construction, the SWPPP and BMPs intended to protect the watershed, and soils would ensure that inadvertent spills of hazardous construction materials would be addressed. Such BMPs may include but are not limited to maintaining supplies on a site to contain and clean up spills, using contaminant berms, storing hazardous materials away from storm drains, automatic shut-off of fuel nozzles, etc. Impacts regarding potential to emit hazardous emissions are evaluated in **Section 5.3: Air Quality**.

Residential and some civic and commercial land uses involve the use of HMW for cleaning and maintenance in smaller amounts than commercial or industrial land uses. These materials are used in accordance with manufacturers recommendation in or around the buildings by the owners themselves with the excess stored in sheds, closets, garages, etc. Over time, the leftover HMW may result in larger amounts that may be comfortable for the homeowner to store safely. It is illegal to put these materials in the landfill or ‘flush’ them into the sewer system. The City, in coordination with the County, operates a HHW collection program at the City of Barstow Corporation Yard, located at 900 South Avenue H. Residents are responsible for transporting their HHW to the facility during designated drop-off events.

Businesses handling larger quantities of hazardous or extremely hazardous materials (55 gallons of liquid, 500 pounds of solid, 200 cubic feet of compressed gas) would maintain hazardous materials business plans

including: procedures in the event of a HMW release, procedures for immediate notification of all appropriate agencies and personnel, identification of local emergency medical assistance, contact information for company emergency coordinators, a listing and location of emergency equipment at the business, an evacuation plan, and a training program for business personnel. Barstow Code Chapter 6.34, Hazardous Waste, adopts the San Bernardino County hazardous waste management plan; facilities that use, store, or handle large quantities of HMW are required to submit their hazardous materials business plans via the California Environmental Reporting System (CERS). The San Bernardino County Fire Protect District is the CUPA for the County and is responsible for all components of the CUPA program, including managing HMW programs.

With the implementation of existing federal, State, regional, and local regulations, as well as the proposed General Plan policies such as Policy S-3.4, which calls for the City and local waste handlers to work together to ensure safe disposal of hazardous materials, and Policy S-3.5, which encourages the transportation of hazardous materials via the safest available method, impacts would be less than significant. Therefore, implementation of the proposed General Plan would not result in significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of HMW into the environment. Impacts would be less than significant.

Impact 5.9-2: General Plan: Level of Significance Before Mitigation: Less than Significant Impact.

Impact 5.9-2: General Plan: Mitigation Measures: No mitigation required.

Impact 5.9-2: General Plan: Level of Significance After Mitigation: No significant impact would occur.

Barstow International Gateway

Construction

Construction would involve the demolition, dismantling, and removal of all on-site existing land uses and associated structures and infrastructure which could expose workers to HMW, as discussed further below. Additionally, construction activities would include grading. With respect to the potential for groundwater contamination, groundwater is not expected to be encountered during construction because the proposed grading cuts are not anticipated to reach the existing groundwater table levels, see **Section 5.10: Hydrology and Water Quality** for further discussion.

There are 73 properties within the environmental concerns study area that were identified as RECs; see **Table 5.9-8: REC Sites within the Environmental Concern Study Area – BIG**. As summarized in **Appendix 5.9 BIG-1**, four properties were identified as PECs and four were identified as an HREC.

Railroad Properties 1 through 28. Of the 73 properties, 28 properties within the BIG footprint have historically been occupied by the BNSF railroad corridor and likely contain heavy metals, lead, herbicides, PCBs, asbestos, creosote, and arsenic which exceed their respective ESLs. However, this existing railroad right-of-way would remain in place. Therefore, because no disturbance which would result in the accidental release of these contaminants into the environment, BIG construction would not 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 associated with the 28 properties within the existing railroad corridor.

An additional 45 properties (outside of the existing railroad corridor) with environmental concerns were identified within BIG's environmental concern study areas; see **Table 5.9-8: REC Sites within the Environmental Concern Study Area – BIG**. These sites are included as environmental concern sites primarily due to land use (i.e., industrial), USTs, or historical or field observations without sufficient reporting to confirm absence of an environmental concern. A summary of all contaminants detected which exceed ESLs and MCLs in **Table 5.9-8**. The known RECs could 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. Impacts regarding the potential disturbance or release of hazardous materials into groundwater are analyzed in **Section 5.10: Hydrology and Water Quality**.

Arsenic in Soil. Arsenic concentrations which exceeded the commercial/industrial SFRWQCB arsenic ESL (0.31 mg/kg) but were below the typical Southern California background level of 11 mg/kg per DTSC HERO, were detected in soil samples on properties 45, 46, 51, 52, 59, 63, 64, 66, 80, 94, 110, 190, 350 and 373. A study of regional background concentrations of arsenic in undifferentiated urbanized flatland soils was conducted and proposed an upper estimate for background arsenic (99th percentile) of 11 mg/kg (Duverge, 2011). This value can be used and is appropriate based on the study parameters, as arsenic concentrations in California soils typically exceed risk-based screening levels by one or more orders of magnitude due to naturally occurring background concentrations.

BIG construction would include extensive earthwork which could result in reasonably foreseeable upset conditions resulting in the release of arsenic as fugitive dust. Although construction BMPs would be designed and implemented to prevent the release of hazardous materials into the environment, release of fugitive dust is still likely. Therefore, BIG would implement **MM BIG AQ-1** which requires daily watering of exposed soil and roads to further prevent the release of fugitive dust containing arsenic during construction. Therefore, with incorporation of **MM BIG AQ-1**, BIG construction would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials, including arsenic, into the environment.

TPH in Soil. TPH-DRO concentrations which exceeded the commercial/industrial SFRWQCB ESL were detected in soil samples on properties 66 and 140. TPH concentrations do not exceed the SFRWQCB ESL; however, elevated concentrations were detected in soil samples on properties 31, 110, 140, and 144. Additionally, on property 146, remaining on-site drums and minor undefined staining was identified within the property, which could potentially have residual impacts. A Phase I ESA for properties 380 – 382 also identified three RECs in association with the property including illegally dumped waste oil, history of automotive and machine repairs, and contaminated soil identified during sewer line excavation, which could potentially have residual impacts. Therefore, these properties are considered RECs. Although construction BMPs would be designed and implemented to prevent the release of hazardous materials into the environment, lateral and horizontal delineation and removal of the RECs would still be required. Therefore, BIG would implement **MM BIG HAZ-1** which requires implementation of a Soil Management Plan (SMP) to properly delineate any residual TPH or oil in soil prior to and during grading activities. With

incorporation of **MM BIG HAZ-1**, BIG construction would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials, including TPH or oil, into the environment.

Soil Vapor. A Phase I ESA for property 380 – 382 identified three RECs in association with the property including illegally dumped waste oil, history of automotive and machine repairs, and contaminated soil identified during sewer line excavation, which could potentially have residual impacts. On property 373, chloroform concentrations at sub-slab soil vapor probes were detected above the commercial/industrial ESL and bromodichloromethane concentrations in sub-slab soil vapor were above the ESL. The Phase II ESA conducted for the property concluded concentrations encountered do not appear to require vapor mitigation. However, to minimize potential impacts during construction, BIG would implement **MM BIG HAZ-1** which requires implementation of a limited SMP to properly delineate any soil vapor in soil prior to and during grading activities. With incorporation of **MM BIG HAZ-1**, BIG construction would not 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.

Other Soil Contamination. Properties 47 through 50 are identified to have three RECs associated with historical uses including a former orchard operations from 1978 to 2005 with potential pesticide impacts, a listing from the Clandestine Drug Lab database due to hazardous chemicals and contaminated soil with no confirmation sampling, and extensive site deterioration with debris, burned structures, a buried drum, and stressed vegetation suggesting possible hazardous materials impacts. To minimize potential impacts during construction, BIG would implement **MM BIG HAZ-1** which requires implementation of a limited SMP to properly delineate any soil vapor in soil prior to and during grading activities. With incorporation of **MM BIG HAZ-1**, BIG construction would not 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.

Arsenic in Groundwater. Arsenic concentrations which exceeded the SFRWQCB MCL were detected in drinking water samples at properties 31, 110, and 219 and well water at property 31. Therefore, these properties are considered RECs. Construction within this property would include soil disturbance which could involve the release of hazardous materials into the environment. **MM BIG HAZ-2** requires adherence to State RWQCB and regional CUPA guidelines for well abandonment if not used for future development or additional sampling and well head treatment prior to any reuse associated with BIG. Therefore, with compliance with established regulatory framework and incorporation of **MM BIG HAZ-2**, BIG construction would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials, including arsenic, into the environment.

Nitrate in Groundwater. Nitrate concentrations which exceed the SFRWQCB ESL were detected in groundwater samples on properties 2 through 29, 60 67, and 79. Therefore, these properties are considered REC's. Properties 2, 3, 5, and 6 currently have an active Corrective Action Order (CAO) in place for an exceedance of Nitrate MCLs for drinking water. However, a recent groundwater monitoring report from 2022 identified that Nitrate levels no longer exceed the MCL and have not for the past nine years.

Since dairy operations are no longer in service and nitrate levels are at or below their respective regulatory thresholds, there is a current request for termination of the order and permits to continue groundwater monitoring is under consideration. When the CAO is terminated, the property would be considered an HREC rather than a REC, and the potential for a release of hazardous materials into the environment which would create a significant hazard to the public or environment would be less than significant.

Properties 4, 7 through 29, and 60 are identified as RECs in connection with the N&M Dairy (listed as Reference numbers 2, 3, 5 and 6) for nitrates and Total Dissolved Solids (TDS) exceedances above their respective MCL within the groundwater. As depicted in **Appendix 5.9 BIG-1** Figure 12, groundwater within these areas ranges from 8 to 15 feet bgs. However, as described above, groundwater is not anticipated to be encountered during grading and construction activities for BIG, and the presence of nitrates and TDS below their respective MCL is not likely to have an adverse risk to construction workers. Health risk for these secondary contaminants is based on ingestion not a dermal exposure, which is not likely as groundwater is not expected to be encountered during grading activities. Additionally, groundwater extracted from construction or operational well from these areas is not planned to be used as a potable water source. Given these factors and N&M Dairy's current request for termination of CAO, and that contaminants of concerns are below their respective MCL, the property is likely not an environmental concern requiring mitigation; however, the open CAO in association with N&M Dairy is an environmental concern and is considered a REC. Once the CAO is terminated the property would not be considered an HREC.

Additionally, nitrate concentrations which exceeded the SFRWQCB MCL were detected in drinking water samples at properties 67 and 79. Sampling at property 73 was completed from the kitchen sink, which was provided from an on-site potable water well, while property 86 was collected from the nearest hose bib which provided water from on-site potable water wells. Therefore, this analysis assumed that these samples are representative of the potable water in the on-site well. Construction within this property would include soil disturbance which could involve the release of hazardous materials into the environment. However, based on evaluation of depth to groundwater and proposed grading, water is not anticipated. Additionally, nitrate is only a concern for ingestion. **MM BIG HAZ-2** requires adherence to State RWQCB and regional CUPA guidelines for well abandonment if not used for future development or additional sampling and treatment prior to any reuse associated with BIG. Therefore, with incorporation of **MM BIG HAZ-2**, BIG construction would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials, including nitrate, into the environment.

Implementation of **MM BIG HAZ-2** requires adherence to State RWQCB and regional CUPA guidelines for well abandonment or additional sampling and well head treatment prior to any reuse associated with BIG. Additionally, based on evaluation of proposed grading to groundwater elevation, groundwater is not anticipated to be encountered during construction. Nitrate exceedance risk is through ingestion exposure pathway, not a dermal exposure pathway. Thus, for nitrates to cause adverse effects, it would need to be ingested. Therefore, with incorporation of **MM BIG HAZ-2**, BIG construction would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials, including nitrate, into the environment.

Specific Conductance in Groundwater. Specific Conductance as a water quality measurement provides an understanding of the amount of dissolved material in water and is considered a secondary MCL (SMCL). Higher detections of Specific Conductance concentrations could indicate the suitability of the water for end users. Concentrations which exceeded the SFRWQCB MCL were detected in drinking water samples from a well source on property 79. **MM BIG HAZ-2** requires adherence to State RWQCB and regional CUPA guidelines for well abandonment if not used for future development or additional sampling and treatment prior to any reuse associated with BIG. Therefore, through compliance with the established regulatory framework and incorporation of **MM BIG HAZ-2**, BIG construction would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials, including specific conductance, into the environment.

TDS in Groundwater. TDS concentrations which exceeded the SFRWQCB MCL were detected in drinking water samples on property 79. High levels of TDS are caused by the presence of potassium, chlorides, and sodium. As an SMCL, TDS measurements are considered guidelines to assist water systems in managing their drinking water for aesthetic considerations including taste, color, and odor. **MM BIG HAZ-2** requires adherence to State RWQCB and regional CUPA guidelines for well abandonment if not used for future development or additional sampling and treatment prior to any reuse associated with BIG. Therefore, through compliance with the established regulatory framework and incorporation of **MM BIG HAZ-2**, BIG construction would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials, including TDS, into the environment.

TPH/Metals/VOCs in Groundwater. At property 373, a Phase II ESA identified total petroleum fuel (GDO, DRO, and ORO) impacts were indicated in groundwater laboratory results above the MCL; dissolved phase TPH-G in groundwater above the MCL; dissolved-phase benzene was encountered above the MCL; and an increased dissolved phase TPH-D exceeding the MCL in groundwater was encountered. The Phase II ESA conducted for the property identified depth to groundwater was at 23 feet. Given the depth to groundwater, it is not anticipated that groundwater would be encountered during site grading. However, to minimize potential impacts during construction, BIG would implement **MM BIG HAZ-1** which requires implementation of a limited SMP to properly delineate any soil vapor in soil prior to and during grading activities. With incorporation of **MM BIG HAZ-1**, BIG construction would not 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.

Groundwater Quality. Impacts to groundwater resources from construction watering are analyzed in **Section 5.10: Hydrology and Water Quality**. As discussed in **Section 5.10**, through compliance with established regulatory framework and permit conditions, BIG's impacts to groundwater quality would be less than significant.

USTs. EDR reported a historical UST(s) associated with property 211. **MM BIG HAZ-3** includes sampling, cleaning, permitting, and handling of potential on-site hazardous materials storage if USTs are discovered during construction. Additionally, demolition permits include measures for the safe dismantling and removal of building components and debris, and prevents the accidental release of lead and asbestos,

thereby protecting workers and the public from potential exposure to HMW during demolition. Further, construction BMPs would be designed and implemented for site specific conditions to further prevent the release of hazardous materials into the environment. Therefore, compliance with demolition permit procedures and BMPs would ensure BIG construction would not 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. Additionally, **MM BIG HAZ-3** would stop work within a 30-foot radius of the UST, and then proper permitting, cleaning, and sampling as described above would be completed. Therefore, through compliance with the established regulatory framework and incorporation of **MM BIG HAZ-3**, BIG construction would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials, including USTs, into the environment.

ASTs. Upon inspection of property 11, one partially buried, rusted, unlabeled, 55-gallon drum was observed in an illegal dumping containing concrete debris and scrap metal near the northwestern property 11 boundary. The drum appeared to be empty and there was no evidence of spills, leaks, or staining in the surrounding surfaces; however, it should be noted that stressed vegetation was observed in the area adjacent to the buried drum. Based on the unknown content of the partially buried drum and stressed vegetation, this finding has been identified as a REC. Additionally, upon inspection of properties 17 and 18, multiple ASTs of unknown size and sorted material were observed in association with farming operations. Based on the potential improper management of roofing materials and the de minimus surface staining, there is a potential of spills or releases within soil.

PECs. As discussed above in **Section 5.9.4.5: Environmental Concern Sites**, properties 17, 18, 214, and 338 were identified as PEC sites. **MM BIG HAZ-4** requires the Applicant to conduct assessment of any PEC sites in accordance with ASTM standards to address PEC's. Through incorporation of **MM BIG HAZ-4**, BIG construction would not 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. BNSF would obtain demolition permits for removing debris and structures within the footprint. Demolition permits include measures for the safe dismantling and removal of building components and debris, thereby protecting workers and the public from potential exposure to HMW during demolition. Further, construction BMPs would be designed and implemented for site specific conditions to further prevent the release of hazardous materials into the environment. Additionally, BIG would include **MM BIG HAZ-3**, which includes sampling, cleaning, permitting, and handling of potential on-site hazardous materials storage if ASTs are discovered during construction. Additionally, **MM BIG HAZ-3** would stop work within a 30-foot radius of the AST, and then proper permitting, cleaning, and sampling as described above would be completed. Therefore, through compliance with the established regulatory framework and incorporation of **MM BIG HAZ-3**, BIG construction would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials, including ASTs, into the environment.

The concentrations of contaminants summarized above exceeded their respective ESL's or MCL's; therefore, construction would present a risk to construction workers. BIG would require approximately 26 million total cubic yards of earthwork throughout the footprint, thus, BIG construction (i.e., earthwork)

could result in reasonably foreseeable upset condition resulting in release of contaminants in soil. Although BNSF would obtain demolition permits, which require measures for the safe dismantling and removal of building components and debris, and implement site specific construction BMP's, BIG construction could still result in the release of hazardous materials which exist within the identified REC sites. Therefore, the most effective way to minimize these contaminants from being released as fugitive dust during construction activities is through enhanced construction watering. BNSF would implement **MM BIG AQ-1**, which is described below and requires daily watering of exposed soil and haul roads to be watered at least three times per day. **MM BIG AQ-1** would ensure exposed soil and haul roads remain saturated to minimize the amount of soil picked up and dispersed by construction activities or wind. BIG would reduce potential impacts from disturbing contaminated soil (i.e., soil contaminated by heavy metals, lead, herbicides, PCBs, asbestos, creosote, and arsenic) by reducing soil dispersed in the air during construction. Impacts concerning air quality during construction are analyzed in **Section 5.3: Air Quality**.

Building and rail construction would not require transporting, storing, or disposing of HMW in quantities greater than needed to support construction activities, thereby minimizing potential exposure of the public, workers, and the environment. However, inadvertent releases or spills could occur from the improper storage HMW, improper handling of HMW, accidents, seismic activity, or inclement weather and have the potential to result in direct and temporary effects.

Potential HMW releases along rail corridors can also include valve leakage or safety valve releases, which carry the potential of releasing HMW in the form of liquids or gases. The degree of effect from an HMW-related release or spill is dependent on the proximity of the release to population densities, concentrated development, and environmentally sensitive areas.

Off-site accidents during HMW transport to or from the construction site could expose individuals and the environment to risks at some distance from the construction site. Although transportation accidents are infrequent, accidents could occur during shipment of hazardous commodities (such as gasoline, diesel, or compressed gases) for construction. Accidents could also occur during cleanup of existing contaminated sites before the construction phase or during the transportation of HMW generated during construction.

An on-site or off-site accident, collision, or derailment may release HMW into the environment. For some chemicals, toxic fumes may be airborne and blown beyond the accident site. Fire and explosion are also a possibility. Although the State enforces standard accident and HMW recovery training and procedures, which are followed by private state-licensed, certified, and bonded transportation companies and contractors, BIG's location along interstate rail and highway corridors creates a risk of exposure.

Direct and temporary effects from the inadvertent release of HMW could occur. The pathways through which the community or the environment (e.g., local air quality, biota) could be exposed to HMW include skin contact, ingestion from air emissions, and dust. Other exposures could result from release of HMW caused by improper containment or decontamination procedures and lack of containment during inclement weather, which could result in stormwater runoff and contamination percolation into the soil substrate.

Pursuant to OSHA regulations (29 CFR, Part 1910.120), standard accident training for cleaning up small spills would be provided to all individuals prior to their work with hazardous substances, and the appropriate types and amounts of spill cleanup materials and personal protective equipment would be immediately available. BNSF would prepare and implement a written hazard communication program that would require labeling all containers and provide employees with access to material safety data sheets. HMW users could consult the material safety data sheet for the specific material they plan to work with and consider response options beforehand in case of a spill or release.

BNSF would obtain demolition permits to remove structures within the footprint. Demolition permits include measures for the safe dismantling and removal of building components and debris, and prevents the accidental release of lead and asbestos, thereby protecting workers and the public from potential exposure to HMW during demolition.

Further, as discussed above, BNSF would implement **MM BIG HAZ-1**, which includes provisions for responding to the disturbance of undocumented contamination. If soil, groundwater, or other environmental media with suspected contamination is encountered unexpectedly during construction (i.e., identified by odor or visual staining, or by unearthing any USTs, or abandoned drums), work would immediately cease in the vicinity of the suspect materials. The area would then be secured as necessary, and all appropriate measures would be taken to protect human health and the environment. Appropriate measures include notifying regulatory agencies and complying with the various agencies' laws, regulations, and policies. Therefore, impacts would be less than significant with incorporation of mitigation.

Operations

BIG would modify the existing rail transportation system and develop a new transload warehouse center and rail yard that includes an intermodal facility and block swap yard which would transport containers, some of which could contain HMW. BIG also proposes a solar farm, which would consist of solar modules, transformers, and battery storage in a BESS.

Within BIG's proposed intermodal facility, some containers containing HMW would be transferred between trains and heavy-duty trucks, and these would depart by train or heavy-duty truck. Within BIG's proposed block swap yard, entire blocks of railcars, which could involve containers containing HMW, would be moved en masse to another train. The potential effects would vary according to the HMW's chemical and physical properties and potential hazard (e.g., fire, explosion, vapor cloud). No long-term HMW storage would occur at the rail yard, as no structure for HMW storage (or other use) is proposed. Additionally, no long-term HMW storage would occur at the transload warehouse center because items would be repackaged and loaded into larger containers. BIG would also include elements that have a potential risk of explosion, fire, and other environmental hazards such as freight trains transporting HMW. These elements have electrical equipment and/or combustible materials and thus represent a fire and explosion risk. The use, storage, transport, and disposal of hazardous materials would be governed by existing regulations of several agencies, including the U.S. EPA, USDOT, California Division of Occupational Safety and Health, and the Barstow Fire Protection District, et al., as discussed in **Section 5.9.2: Regulatory Setting**. Additionally, BIG would be subject to the CUPA permits required in San Bernardino County which

require a Business Emergency/Contingency Plan to be filed and would comply with the Business Emergency/ Contingency Plan requirement prior to obtaining final certificate of occupancy and prior to bringing hazardous materials onto the property. Under current conditions, only HMW shipments that conform to DOT regulations would be accepted or transported by rail.

BIG would also remove existing at-grade crossings to reduce potential vehicular movement conflicts with within the proposed rail yard. The existing Hinkley Road at-grade crossing would be removed and vehicular traffic from Hinkley Road to Main Street would instead use the internal roadway that connects to Lenwood Road at the eastern extent of BIG. Thus, potential vehicular movement conflicts with trains transporting HMW would be avoided, minimizing the potential for upset and accident conditions involving the release of hazardous materials into the environment.

BNSF regularly inspects all the components of the network, including locomotives, track, rail, and bridges. These comprehensive inspections meet all federal requirements. Trained BNSF inspectors utilize advanced equipment such as instrument-equipped rail cars, bridge inspection vehicles and UAVs and deploy technology such as MVS, autonomous track measurement systems, ultrasound, ground-penetrating radar and high-definition cameras and accelerometers. These efforts, coupled with the use of specialized rail cars to carry HMW, mobile apps to equip first responders with critical safety information, and a software system to determine the safest rail routes all help ensure that more than 99.99 percent of all HMW moved by rail reaches its destination without a release caused by a train accident (see **Appendix 5.9 BIG-1**).

Additionally, BNSF has prepared a System Emergency Response Plan (Response Plan) to respond to emergencies. The Response Plan describes procedures for responding to hazardous release emergencies, persons, and agencies to contact, locations for personnel to evacuate to, and prevention practices to limit the potential of these emergencies. BNSF integrates (by contract) additional Incident Management Team expertise in areas such as incident management, wildlife management, water and air dispersion modeling, toxicology, chemistry, firefighting, communications, and railroad and commodity salvage. Contracted incident management experts are capable of supporting the BNSF Incident Management team to manage large-scale incidents. BNSF has also established a website to communicate with first responders. Through the website, first responders can schedule and participate in online BNSF HMW training, obtain a summary of BNSF's Response Plan, and request a HMW traffic flow report. In the unlikely event that an incident was to occur, BNSF would coordinate with first responders. BNSF has a network of over 150 hazardous materials responders and advisors who are trained to deal with HMW releases (BNSF 2023). BNSF has also strategically positioned emergency response equipment at more than 100 locations across the BNSF network. Additionally, BNSF provides free training to first responders through the Transportation Community Awareness and Emergency Response (TRANSCAER) program. Additionally, BNSF provides information to first responders on commodities traveling through communities (BNSF 2016). Regarding emergency evacuation, see discussion under **Impact 5.9-6: BIG**. Additionally, the City's Emergency Operations Plan would provide guidance and outlines operational concepts and response procedures for the City's response to extraordinary emergency situations associated with large-scale emergencies and disasters, including hazardous materials incidents and releases.

It is noted that any amount of material that leaks from any container is counted as a release; therefore, a single train accident can result in a report of multiple releases. In 2020, BNSF handled over 1.4 million HMW shipments and only 0.0005 percent of these shipments were involved in an accident that resulted in a HMW release to the environment (BNSF, 2025b).

Despite compliance with the U.S. EPA, USDOT, California Division of Occupational Safety and Health, BFPD, and BNSF policies, there is risk of a passenger or freight train derailling on the trackway, releasing hazardous materials into the environment and creating a significant hazard to the public or the environment. Refer to **Section 5.15: Transportation** for a discussion concerning BIG's potential to increase hazards due to an incompatible use (i.e., trackway traversing communities). Train derailments in the U.S. occur for several reasons, although generally they occur because of track and special trackwork not being adequately maintained for the trains' operational speed, mechanical and equipment failures, train handling, and human error. One location where these causes often accumulate and the risk of derailment is often greatest is where there is special trackwork, such as turnouts and crossovers. As discussed in **Section 3.0: Project Description**, BIG would use turnouts and crossovers at the connections to the BNSF mainline, and while risk of derailments cannot be entirely eliminated, the use of robust railway signal system that includes power operated switches is one way to minimize those risks. The signal system and the power switches included on all BIG turnouts serves to enhance safety for railroad personnel and the general public by:

- Allowing for the remote operation of switches, enabling train crews to remain on the train without having to get on and off the locomotives or having to stop the train on the mainline to close switches behind them.
- Notifying the trainmen of switches not properly lined for their desired train movements.
- Warning train crews of broken rails or when switches are not properly closed, and in some systems, may even stop the trains if these events occur.
- Slowing down trains if they are operating too fast for the specific track or turnout if positive train control is included.
- Placing dragging equipment detectors at strategic locations to detect dragging equipment or lading (i.e., freight or cargo) before the trains occupy the mainline and increase speed.
- Warning the trainmen when rail cars are occupying the track ahead of them, helping to avoid potential collisions.
- Detecting trains' locations giving train dispatches a clear understanding of where trains are located.
- Keeping trains off specific tracks when track crews are performing maintenance.
- Warning the traveling public of approaching trains (although BIG does not propose at-grade crossings).

Although the railway signal systems alone would not entirely avoid derailments or address other safety concerns inherent to the railroad environment, they are essential components intended to make the rail corridor as safe as possible. Inclusion of a railway signal system that includes power operated switches

would minimize potential hazards to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of HMW into the environment. A less than significant impact would occur, with mitigation incorporated.

BIG's proposed solar farm would consist of solar modules, transformers and battery storage in a BESS which would involve the use of limited hazardous materials during operation. As previously discussed under **Impact 5.9-1: BIG**, any routine transport, use, and disposal of these materials during BIG operations must adhere to federal, State, and local regulations for transport, handling, storage, and disposal of hazardous substances. Furthermore, hazardous materials/chemicals such as herbicides and pesticides in low quantities do not pose a significant threat related to the release of hazardous materials into the environment. Under normal operations, BESS facilities do not store or generate hazardous materials in quantities that would represent a risk to off-site receptors. Further, operations of BIG's solar farm would include preventative measures, such as energy management systems and building management systems to reduce the potential for accidents to occur. Nevertheless, because lithium-ion BESS facilities do store energy, a battery thermal runaway can occur if a cell, or area within a cell, achieves elevated temperatures due to thermal failure, mechanical failure, internal/external short circuiting, and electrochemical abuse. In this event, state-of-the-art fire, and safety systems, such as a sounding alarm and flashing strobes, would alert employees of the thermal runaway event. Components of an integrated fire and safety system within a BESS enclosure include module-level monitoring, control of the system 24/7, and an internal cooling/HVAC system. The fire and safety system may include, as required by the design, fire panels, aspirating hazard detection system, smoke/heat detectors, gas ventilation and deflagrations systems and suppression or thermal runaway systems. The BESS containers would have a fire rating in conformance with NFPA and County standards and specialized fire suppression systems. BIG would utilize pre-engineered battery storage systems listed under UL 9540 or BESS tested in compliance with UL 9540A. UL 9540 contains safety standards for the system's construction (e.g., frame and enclosure, including mounting, supporting materials, barriers and more); the insulation, wiring, switches, transformers, spacing and grounding; safety standards for performance of over 20 different elements, such as tests for temperature, volatility, impact, overload of switches, and an impact drop test; and standards for manufacturing, ratings, markings, and instruction manuals. In addition to the many individual standards referenced, CFC compliance requires a Failure Mode and Effects Analysis be performed and requires a test to ensure safe compatibility of the system's parts. This includes the UL 1973 standard, in which a battery manufacturer must prove that a failed cell inside will not cause a fire outside the system. BIG's compliance with the CFC, UL 9540/9540A requirements, and industry standards for adequate separations, cascading protections, and suppression systems to limit failure to a single cell or module would minimize potential impacts from a lithium-ion fire. In the unlikely event of thermal runaway, BIG's preventative measures and fire and safety systems, as described above, are designed to limit the event to a single battery module as well as reduce the duration and intensity of an event, if it occurs. BIG would also be subject to the requirements of Chapter 12 of the CFC which requires that all BESS use an Energy Management System for monitoring and balancing cell voltages, currents, and temperatures. The system must transmit an alarm signal if potentially hazardous temperatures or other conditions such as short circuits, over voltage or under voltage, are detected. The CFC also requires the use of appropriate fire detection and suppression systems, which would be incorporated into each of BIG's BESS enclosures. As

required by CFC Chapter 12, BNSF would prepare and implement preparation and submittal of a Fire Protection and Emergency Response Plan to the SBCFD for review and approval. The purpose of the Fire Protection and Emergency Response Plan would be to eliminate causes of fire, prevent loss of life and property by fire, to comply with County and SBCFD standards for solar facilities, and to comply with the OSHA standard of fire prevention, 29 CFR 1910.39. The Fire Protection and Emergency Response Plan would address fire hazards of the different BIG components, including the BESS.

As discussed above, BNSF would be required to prepare a hazardous material business plan for BIG's rail yard, transload warehouse center, and solar farm pursuant to CHSC, § 25500 et seq., which would be required to also include an emergency response plan designed to minimize hazards to humans and the environment from a sudden release of hazardous waste, fires, or explosions. The emergency response plan would require immediate action to take place if an event were to occur. The hazardous materials business plan would also include emergency response training for local first responders. Further, BNSF provides hazmat commodity flow reports to local first responders and elected- or emergency-management officials upon request to assist with emergency response planning and provides free training to emergency service personnel regarding spills or accidents involving HMW (BNSF, 2025c). Adherence to regulations and standard protocols during BIG's solar farm operation would minimize and reduce the potential for HMW impacts from the BESS.

In summary, BIG's operations would not create a potentially significant hazard to the public or the environment through reasonably foreseeable upset and accidental conditions involving the release of hazardous materials into the environment, and impacts would be less than significant with mitigation incorporated.

Impact 5.9-2: BIG: Level of Significance Before Mitigation: Potentially Significant Impact.

Impact 5.9-2: BIG: Mitigation Measures: MM BIG AQ-1, MM BIG HAZ-1, MM BIG HAZ-2, MM BIG HAZ-3, and MM BIG HAZ-4 and the following measures are applicable.

MM BIG HAZ-2 Water Well Abandonment. The intent for water well abandonment is to ensure that wells associated with the former residential operations within BIG are properly sealed and abandoned.

Well abandonment or reuse treatment will require adherence to State RWQCB and regional Certified Unified Program Agency (CUPA) guidelines for well abandonment if wells are not planned to be used for future development. If existing or new water wells are planned to support BIG, additional sampling will be required. Based upon the results of the sampling in comparison to regulatory thresholds, water can be reused for BIG construction or need treatment prior to any reuse associated with BIG.

MM BIG HAZ-3 AST or UST Removal. AST and UST removal is intended to provide specific sampling and removal procedures for AST/USTs known or unknown at the start of construction. Prior to demolition permit issuance, the implementing entity shall demonstrate to the Barstow Department of Building and Safety and SBC Fire Hazardous Materials Division (CUPA) that a licensed contractor authorized to remove the above ground/USTs has been retained. The ASTs/USTs shall include the required permitting, soil sampling

testing, and reporting the CUPA. If soil contamination exists, then impacted soils shall be removed and handled properly according to the Limited Soil Management Plan (see **MM BIG HAZ-1**). If previously unidentified USTs and/or ASTs are discovered during demolition or any ground disturbing activities, all construction within a 30-foot radius exclusion zone of the unidentified USTs and/or ASTs shall stop work. Implementation of proper permitting, cleaning, sampling, and reporting as described above shall be completed.

MM BIG HAZ-4 Data Gaps Requiring Further Environmental Site Assessment. Prior to the issuance of a grading permit, the Applicant shall conduct assessment in accordance with ASTM standards to address potential environmental concerns identified at PEC sites identified within the BIG footprint. Documentation shall include clearance or other forms of approval from responsible regulatory agencies, as warranted, confirming that the site conditions are suitable for the intended use and that any potential risks have been mitigated to a level that is safe for construction and future occupancy.

Impact 5.9-2: BIG: Level of Significance After Mitigation: Less than Significant with Mitigation Incorporated.

Impact 5.9-3 *Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

Proposed General Plan

The implementation of the proposed General Plan would allow land uses that could be reasonably expected to handle hazardous materials or generate hazardous emissions. It is possible that such uses could occur within one-quarter mile of existing or proposed schools.

On December 7, 2022, and April 15, 2024, as part of the preparation of the proposed General Plan, the City consulted with the BUSD concerning both the proposed General Plan and BIG, thus complying PRC § 21151.4. In addition, the BUSD was included on the distribution list for the Notice of Preparation (NOP) for this EIR. The NOP was issued on February 15, 2024, which constitutes written notification of the Project more than 30 days prior to certification of the EIR. This satisfies the written notice requirement under PRC § 21151.4, subdivision (a)(2).

The use, storage, and disposal of hazardous materials during construction activities would be required to comply with regulations enforced by OSHA, U.S. EPA, USDOT, CalRecycle, and other agencies. Additionally, the use, storage, and transport of hazardous materials and hazardous wastes in compliance with the various laws, regulations, and programs in place (Hazardous Materials Release Response Plans and Inventories, California Accidental Release Prevention Program, etc.) would minimize the potential for releases of hazardous materials. Further, the City's Emergency Operations Plan would provide guidance and outlines operational concepts and response procedures for the City's response to extraordinary

emergency situations associated with large-scale emergencies and disasters, including hazardous materials incidents and releases.

Further, as concluded in **Section 5.3: Air Quality**, the proposed General Plan could result in new sources of TACs near existing or planned sensitive receptors. Review of development projects by MDAQMD for permitted sources of air toxics (e.g., industrial facilities, dry cleaners, and gasoline dispensing facilities) would ensure that health risks are minimized. Individual development projects would be required to achieve the incremental risk thresholds established by MDAQMD.

Therefore, implementation of the proposed General Plan would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Impacts would be less than significant. With the implementation of existing federal, State, regional, and local regulations, as well as the proposed General Plan policies, such as Policy S-1.1, which calls for regularly updating and adopting a Local Hazard Mitigation Plan, and Policy S-2.2, which calls for maintaining a comprehensive Emergency Operations Plan to ensure quick and effective response to natural and human-caused disasters and hazards, impacts would be less than significant.

Impact 5.9-3: General Plan: Level of Significance Before Mitigation: Less than Significant Impact.

Impact 5.9-3: General Plan: Mitigation Measures: No mitigation required.

Impact 5.9-3: General Plan: Level of Significance After Mitigation: No significant impact would occur.

Barstow International Gateway

Construction

As noted in **Section 3.0: Project Description**, hazardous air pollutant emissions from BIG construction are analyzed in **Appendix 5.3 BIG-1** and thus are not analyzed here. Additionally, refer to **Impact 5.9-1: BIG** and **Impact 5.9-2: BIG** above.

Materials potentially containing HMW commonly used in construction (e.g., compressed gases, oils and lubricants, fuels and additives, paints and varnishes, adhesives, and glues) would be used during BIG construction activities. Additionally, demolition of existing structures and earthwork within the BIG footprint could result in the release of contaminants (i.e., soil contaminated by heavy metals, lead, herbicides, PCBs, asbestos, creosote, and arsenic). As such, construction activities may result in direct and temporary effects.

The only school within 0.25-mile of the BIG footprint is Lenwood Elementary School, which is approximately 0.15-mile from BIG the east lead track. East lead track construction would include clearing and grubbing, bridge crossing construction, ballast placement, track laying, and connection to the mainline. Lead track construction would parallel the existing BNSF mainline and primarily be within BNSF right-of-way. As such, BIG construction activities could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25-miles of an existing school. Any HMW use within the BIG footprint would comply with federal, State, and local regulations, including but not limited to the RCRA, Comprehensive Environmental Response, Compensation and Liability Act, Hazardous

Materials Release Response Plans and Inventory Law, Hazardous Materials Transportation Uniform Safety Act of 1990, and the Hazardous Waste Control Act; see **Section 5.9.2: Environmental Setting**. These regulations would apply equally near school sites and require monitoring the generation, transportation, treatment, storage, and disposal of hazardous waste.

The effect of HMW released to the environment in the event of a leak or spill because of an accident or collision during construction would be minimal given the small quantities of materials transported or used at any given time and given the precautions required by regulations. Compliance with federal, State, and local regulations, as well as regular inspections in accordance with CUPA and BNSF protocols, would minimize potential effects.

Further, PRC § 21151.4 states that “an environmental impact report shall not be certified or a negative declaration shall not be approved for any project involving the construction or alteration of a facility within 0.25 mile of a school that might reasonably be anticipated to emit hazardous air emissions, or that would handle an extremely hazardous substance or a mixture containing extremely hazardous substances in a quantity equal to or greater than the State threshold quantity specified pursuant to CHSC § 25532 subdivision (j), that may pose a health or safety hazard to persons who would attend or would be employed at the school, unless both of the following occur: (1) The lead agency preparing the environmental impact report or negative declaration has consulted with the school district having jurisdiction regarding the potential impact of the project on the school, and (2) The school district has been given written notification of the project not less than 30 days prior to the proposed certification of the environmental impact report or approval of the negative declaration.” On December 7, 2022, and April 15, 2024, and as part of the preparation of the proposed General Plan, the City consulted with the BUSD concerning both the proposed General Plan and BIG, thus complying with Criterion (1). Also, the BUSD was included in the City’s distribution list for this EIR’s Notice of Preparation (NOP) (February 15, 2024); therefore, the BUSD has been given written notification of the Project (i.e., both the proposed General Plan and BIG) more than 30 days prior to EIR certification, thus complying with Criterion (2).

BIG construction activities would occur within 0.25-mile of a school and is reasonably anticipated to handle an extremely hazardous substance, or a mixture containing extremely hazardous substances in a quantity equal to or greater than the State threshold quantity specified pursuant to CHSC § 25532 subdivision (j), that may pose a health or safety hazard to persons who would attend or would be employed at the school. Accordingly, BNSF would consult with and give the affected school district opportunity to comment on BIG. A less than significant impact would occur, and no mitigation is required.

Operations

As noted in **Section 3.0: Project Description**, hazardous air emissions from BIG operations are analyzed in **Appendix 5.3 BIG-1**, and are therefore not analyzed here.

BIG operations would not involve the storage or handling of acutely HMW within 0.25-mile of a school. BIG’s proposed solar farm would not be located within 0.25-mile of Lenwood Elementary School. Freight trains carrying HMW would utilize BIG’s tracks. These trains would travel immediately adjacent to the existing BNSF track position but would be 90 feet closer to Lenwood Elementary compared to the existing BNSF tracks, thus, would incrementally increase the risk of HMW transport and use.

BIG operations would involve rail transport approximately 900 feet from Lenwood Elementary School and would be buffered by a commercial use and Main Street. Any handling of hazardous substances would be conducted in compliance with existing regulations of several agencies, including the U.S. EPA, USDOT, Cal/OSHA, and the SBC Fire, as listed in **Section 2.0: Introduction**. As previously mentioned, existing BNSF rail safety precautions and requirements minimize potential derailments and spills of HMW. BNSF regularly inspects all the components of its network, ensuring locomotives, track, rail, and bridges meet all federal requirements. BNSF conducts timely maintenance, repair, and replacement whenever issues or potential issues are detected. Trained BNSF inspectors utilize advanced equipment such as instrument-equipped rail cars, bridge inspection vehicles and UAVs and deploy technology such as MVS, autonomous track measurement systems, ultrasound, ground-penetrating radar and high-definition cameras and accelerometers. These efforts, coupled with the use of specialized rail cars to carry hazmat, mobile apps to equip first responders with critical safety information, and a software system to determine the safest rail routes, all help minimize potential hazardous emissions or substances within 0.25-mile of a school. Transportation would occur on tracks in nearly the same location as occurs under existing conditions. Thus, though BIG would handle hazardous or acutely hazardous materials, substances, or waste within 0.25-mile of an existing or proposed school, there would be no increase in risk over existing conditions. Impacts would be less than significant with incorporation of **MM BIG HAZ-1**, **BIG HAZ-2**, and **BIG HAZ-3**.

Impact 5.9-3: BIG: Level of Significance Before Mitigation: Potentially Significant Impact.

Impact 5.9-3: BIG: Mitigation Measures: **MM BIG HAZ-1**, **MM BIG HAZ-2**, and **MM BIG HAZ-3**.

Impact 5.9-3: BIG: Level of Significance After Mitigation: Less than Significant with Mitigation Incorporated.

Impact 5.9-4 *Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to CGC § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

Table 5.9-10: Cortese List Information Requirements outlines the sections of the Cortese List provisions contain requirements for information to be compiled and submitted by DTSC to the Secretary for Environmental Protection. Sites listed pursuant to CGC 65962.5 are considered a REC site because they are documented instances of contamination.

Table 5.9-10: Cortese List Information Requirements	
Section	Information Required
65962.5(a)	Hazardous waste facilities subject to corrective action pursuant to Health and Safety Code § 25187.5.
65962.5(a)(3)	Information received by the California DTSC pursuant to Health and Safety Code § 25242 on hazardous waste disposals on public land.
65962.5(a)(4)	Sites listed pursuant to Health and Safety Code § 25356.
65962.5(a)(5)	Sites included in the Abandoned Site Assessment Program (formerly identified in the CalSites database, now part of the EnviroStor database).

Proposed General Plan

There are 31 open and inactive sites in the General Plan area that are included on a list of hazardous material sites compiled pursuant to CGC § 65962.5 (see **Table 5.9-7: Sites Identified by EnviroStor or GeoTracker – General Plan Area**). However, this list is dynamic and can change over time as open cases get resolved, and new cases are opened. These sites have a history of contamination with hazardous materials and are subject to various State and federal laws and regulators, including CERCLA, U.S. EPA, DTSC, and the RWQCB.

Development of projects in accordance with the proposed General Plan could create a hazard to the public or the environment through soil disturbance in which soil, soil vapor, and/or groundwater may be contaminated with hazardous materials exceeding ESLs for the proposed land uses, if the development occurs on contaminated sites.

However, environmental site assessments by a qualified professional would be required for development applications in accordance with the CEQA, the Phase I Environmental Site Assessment (ESA) standards, and may also require coordination with DTSC or RWQCB to determine the need for further investigation, remediation, or risk management measures prior to development. When developing a site with potentially hazardous materials, Phase I and Phase II ESAs are conducted to identify and mitigating risks. The Phase I ESA could involve reviewing historical records and conducting visual inspections to identify potential environmental concerns (Fleis and Vandenbrink, 2025). If potential contamination is identified, a Phase II ESA follows, which could involve further investigation and testing such as sampling and laboratory analysis to confirm the presence and extent of contamination (Rahman 2020). Based on findings of a Phase II ESA assessment, mitigation measures can be implemented, such as developing a site-specific health and safety plan, managing contaminated soil through excavation or treatment, and designing groundwater treatment systems. All activities must comply with local, State, and federal regulations, and an ongoing monitoring program ensures the effectiveness of the mitigation strategies. These steps ensure the safe removal of hazardous materials and the site's safe transition to new use while protecting human health and the environment. Development would be conducted in accordance with the proposed General Plan, such as Policy S-3.4 which calls for the City and local waste handlers to work together to ensure safe disposal of hazardous materials, and Policy S-3.5, which encourages the transportation of hazardous materials via the safest available method, the Barstow Code, Phase I and/or II ESA findings, and the regulations and policies of the agency assigned to the site (i.e., DTSC, Water Quality Control Board, CUPA, or U.S. EPA).

Properties contaminated by hazardous substances are also regulated at the local, State, and federal levels and are subject to compliance with stringent laws and regulations for investigation and remediation. For example, compliance with the CERCLA, RCRA, CCR Title 22, and related requirements would remedy all potential impacts caused by hazardous substance contamination. Projects identified on the Cortese List as being located on a hazardous materials site would be ineligible for CEQA categorical exemptions as set forth in CEQA Guidelines § 15300.2.(e), and therefore, would be subject to further review under CEQA to determine impacts.

Given that Barstow has several hazardous materials sites, impacts may occur from development in accordance with the proposed General Plan. However, properties contaminated by hazardous substances are regulated at the local, State, and federal level and are subject to compliance with stringent laws and regulations for investigations and remediations. For example, compliance with CERCLA, RCRA, CCR, Title 22, and related requirements would remedy all potential impacts caused by hazardous substances contamination.

Therefore, implementation of the proposed General Plan on sites included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 would not create a significant hazard to the public or the environment. With the implementation of existing federal, State, regional, and local regulations, as well as the proposed General Plan policies such as Policy S-3.4 and Policy S-3.5, impacts would be less than significant.

Impact 5.9-4: General Plan: Level of Significance Before Mitigation: Less than Significant Impact.

Impact 5.9-4: General Plan: Mitigation Measures: No mitigation required.

Impact 5.9-4: General Plan: Level of Significance After Mitigation: No significant impact would occur.

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As addressed in **Table 5.9-9: Cortese Sites – BIG**, 1 open and 24 closed Cortese sites are georeferenced in the environmental concerns study area. Active Cortese sites are sites with known or potentially HMW releases that are not yet considered resolved or closed. Closed Cortese sites are sites with a prior HMW release which has been sufficiently remediated to the satisfaction of the relevant regulatory agencies. Closed Cortese sites are typically not considered an environmental issue given the HMW contamination has been removed. Of the 25 Cortese sites, 21 closed Cortese sites are georeferenced within the environmental concerns study area but are associated with properties outside of the BIG footprint. Therefore, given these sites have been sufficiently remediated to the satisfaction of the relevant regulatory agencies and are not located within the BIG footprint, construction and operation of BIG in proximity to these sites would not create a significant hazard to the public or the environment.

Of the 25 Cortese sites identified, 1 open and 3 closed sites are located within the BIG footprint. Construction and operation of BIG in proximity to the 3 closed Cortese sites would not create a significant hazard to the public or the environment given these sites have been sufficiently remediated to the satisfaction of the relevant regulatory agencies.

The open Cortese site located within the BIG footprint is listed as N&M Dairy, which is located north of BIG's west lead track improvements. As discussed above under **Impact 5.9-2: BIG**, properties 2 through 29 and 60 are identified as RECs in connection with N&M Dairy for nitrates and TDS exceedances above their respective MCL within the groundwater. As depicted in **Appendix 5.9 BIG-1** Figure 12, groundwater within these areas ranges from 8 to 15 feet bgs. However, as described above, groundwater is not anticipated to be encountered during grading and construction activities for BIG, and the presence of nitrates and TDS below their respective MCL is not likely to have an adverse risk to construction workers. Health risk for these secondary contaminants is based on ingestion not a dermal exposure, which is not

likely as groundwater is not expected to be encountered during grading activities. Additionally, groundwater extracted from construction or operational wells from these areas is not planned to be used as a potable water source during construction and operations. Given these factors and N&M Dairy's current request for termination of CAO, and that contaminants of concerns are below their respective MCL, the property is likely not an environmental concern requiring mitigation; however, the open CAO in association with N&M Dairy is an environmental concern and is considered a REC. Once the CAO is terminated and considered closed, the property would not be considered a HREC. Further, with incorporation of **MM BIG HAZ-2**, which requires adherence to State RWQCB and regional CUPA guidelines for well abandonment or additional sampling and well head treatment prior to any reuse associated with BIG, BIG construction and operations would not create a significant hazard to the public or the environment.

Impact 5.9-4: BIG: Level of Significance Before Mitigation: Potentially Significant Impact.

Impact 5.9-4: BIG: Mitigation Measures: MM BIG HAZ-2 is applicable.

Impact 5.9-4: BIG: Level of Significance After Mitigation: Less than Significant with Mitigation Incorporated.

Impact 5.9-5 *For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard or excessive noise for people residing or working in the project area?*

Proposed General Plan

The proposed General Plan is not 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. Therefore, no impact would occur.

Impact 5.9-5: General Plan: Level of Significance Before Mitigation: No Impact.

Impact 5.9-5: General Plan: Mitigation Measures: No mitigation required.

Impact 5.9-5: General Plan: Level of Significance After Mitigation: No Impact would occur.

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As shown in CWP Policy Map HZ-9, there are no airport land use plans for properties within the airport study area; therefore, BIG would not conflict with an airport land use plan. The nearest public airport to BIG is Barstow-Daggett Airport, which is approximately 17 miles from the BIG footprint. No aspect of BIG would be of sufficient height to interfere with Barstow-Daggett Airport airspace. A private airstrip ("Depue Airport") is currently located within the BIG footprint; however, BIG would remove the airstrip and replace it with the proposed solar farm. Therefore, given the private airstrip would be removed and BIG is located more than two miles from a public airport, BIG would not result in a safety hazard or excessive noise from

proximity to a public airport for people working within BIG. Given this distance, BIG would not result in a safety hazard or excessive noise from proximity to a public airport for people working within BIG. No impact would occur, and no mitigation is required.

Impact 5.9-5: BIG: Level of Significance Before Mitigation: No Impact.

Impact 5.9-5: BIG: Mitigation Measures: No mitigation required.

Impact 5.9-5: BIG: Level of Significance After Mitigation: No Impact would occur.

Impact 5.9-6 *Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Proposed General Plan

Construction

Figure 5.9-4: Evacuation Routes – Proposed General Plan depicts the adopted HMP and BHMP identified evacuation routes within the General Plan area. Major routes include SR-58 to the north, I-15 and I-40 to the east, SR-247 to the south, and I-15 and SR-58 to the west. Additional minor routes include stretches of Rimrock Road, North 1st Avenue, Jasper Road, Riverside Drive, Joseph L. Boll Avenue, and West Main Street. The County and City Emergency Operations Plans provide guidance for responses to extraordinary emergency situations associated with natural, human-made, and technological disasters.

Construction of potential future development projects implemented by the proposed General Plan could impact emergency operations and evacuation if they were to result in temporary road closures and potentially alter evacuation routes.

All requested plans for development would undergo a review process by the City Engineer, Planning, Police, and Fire Departments, to ensure adequate emergency access. If future projects require temporary road closures during construction activities (e.g., to install new utility lines), compliance with Barstow Municipal Code § 12.08.020(a) requires approval by the City Engineer. As part of the review process the City Engineer both consults with and informs public works to ensure consistency with the City's *Work Area Traffic Control Handbook* ("Handbook") that contains provisions for signage, flagging, and placement of traffic control devices to be observed by all who perform work in or near a public street to ensure that access is maintained or that detour(s) are clearly marked. The Public Works Department would also coordinate with Barstow Fire Protection District, Barstow Police Department, SBC Fire, and San Bernardino County Sheriff's Department on when and where construction would occur as well as if road closures are needed for the construction. The City also uses social media to announce road closures to the public. During an emergency, standard response procedures of these departments would work together to ensure adequate emergency response.

Further, any road closures during construction of development facilitated by the proposed General Plan would be temporary and would cease upon completion. Therefore, implementation of the proposed

General Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan and a less than significant impact would occur.

Operations

The General Plan area is not located within a LRA or SRA Very High FHSZ. However, portions of the General Plan area are within the wildland-urban interface and are subject to moderate wildfire hazard risks that could necessitate evacuation. Evacuation could also be triggered by other hazard events, such as a HMW spill or fire resulting from a vehicle or train accident along one of the major transportation corridors near or within the City. The General Plan area is situated at the confluence of I-15 and I-40, and SR-58 and SR-47. In the event of an incident on one of these routes, alternate routes are available to support evacuation efforts. The analysis indicates that most areas within the City have at least two points of ingress and egress, supporting redundancy in emergency access.

Evacuation planning is addressed in the City's HMP and is the responsibility of the City's Public Safety Department, which coordinates with local and regional emergency response partners. The Public Works Department oversees construction activities within the public right-of-way and requires that all such activities obtain an encroachment permit. All construction must comply with the *Work Area Traffic Control Handbook* (WATCH), which prescribes standards for signage, flagging, and traffic control device placement to ensure safe and efficient movement of vehicles and pedestrians during construction.

The City Public Works Department coordinates with the Police and Fire Departments to plan construction schedules, assess potential road closures, and minimize disruptions to emergency response routes. While temporary roadway impacts may occur during construction, the proposed General Plan would not alter existing access patterns or result in impediments to emergency response that could increase response times. Additionally, future development would be required to comply with applicable fire and building codes which have requirements for maximum lengths of single-access roads, minimum widths of roadways, and vegetation fuel management around roadways. To ensure emergency services in the General Plan area are not impaired by future development, the Planning and Engineering section of SBC Fire provides comprehensive plan check and inspection services for San Bernardino County; plan checks are required for all new buildings and changes to existing buildings, and plans are reviewed for compliance with the applicable fire and life safety regulations, codes, and ordinances (SBC Fire, 2023c).

Therefore, implementation of the proposed General Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant. With the implementation of existing federal, State, and local regulations, as well as the proposed General Plan policies, such as Policy S-1.1 Hazard planning, Policy S-1.2 Mutual aid, Policy S-2.2 Emergency response operations plan, S-2.1 Resilient public facilities and S-2.4 Community emergency preparedness, S-2.5 Emergency access and evacuation, and S-2.6 Hazards and evacuation planning, impacts would be less than significant.

Impact 5.9-6: General Plan: Level of Significance Before Mitigation: Less than Significant Impact.

Impact 5.9-6: General Plan: Mitigation Measures: No mitigation required.

Impact 5.9-6: General Plan: Level of Significance After Mitigation: No significant impact would occur.

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Construction

BIG construction would result in temporary road closures, detours, and increased traffic in the BIG footprint. As previously shown in **Figure 5.9-4: Evacuation Routes – Proposed General Plan**, the two major evacuation routes nearest the BIG footprint are SR-58 to the north and east and I-15 to the east. Minor routes within proximity to the BIG footprint include Lenwood Road to the east and West Main Street to the south. No major designated evacuation routes would be temporarily or permanently modified as part of BIG construction activities. One minor designated evacuation route, West Main Street, would be temporarily modified as part of BIG construction activities. BIG's proposed Lenwood Channel Bridge reconstruction along West Main Street would require closure of West Main Street for an approximately 18-month bridge reconstruction period, which would impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. In addition, the proposed Hinkley Road extension through the BIG Specific Plan area would enable BIG employees to access SR-58 directly exiting west, or via Lenwood Road exiting east, thus, BIG provides additional emergency access for BIG employees, reducing potential congestion on other emergency evacuation routes. Detours and additional construction traffic could still impair implementation of or physically interfere with the adopted HMP and BHMP identified evacuation routes or County or City Emergency Operations Plans. Thus, prior to construction, BNSF would prepare a detailed Traffic Control Plan (TCP) pursuant to City of Barstow Standard Plan 138 requirements to minimize the impact of construction activities and construction traffic on adjoining and nearby roadways and land uses. A TCP is required for any work in the public right-of-way and would show how to safely manage vehicles, bicyclists, and pedestrians through or around construction zones.

The TCP would be prepared in close consultation with the City, local law enforcement, and fire department officials. The City would review and approve the TCP before commencement of any construction activities. The County would review and approve the TCP portions relevant to work within County right-of-way before commencement of construction activities within County rights-of-way. The TCP must adhere to the California Manual on Uniform Traffic Control Devices (Caltrans, 2025), which outline standards for temporary traffic control devices, equipment placement, and personnel, with specific requirements set by the City or County. Key elements of the TCP include maps of the work area, placement of signs, temporary traffic control devices (cones, barricades, channelizers), equipment, and personnel like flaggers. In instances of long-term lane closures, additional elements (e.g., temporary striping, contra-flow, or crash cushions) would be required. Therefore, a less than significant impact would occur.

Operations

Major routes proximate to the BIG footprint are SR-58 to the north and east and I-15 to the east; see **Figure 5.9-4: Evacuation Routes – Proposed General Plan**. Minor routes proximate to the BIG footprint include Lenwood Road to the east and West Main Street to the south. BIG operations and maintenance would not interfere with adopted emergency plans. Except for BIG's proposed Lenwood Channel Bridge reconstruction along West Main Street which would temporarily impair implementation of or physically interfere with an adopted emergency evacuation plan during construction, BIG does not propose any

permanent improvements that would involve or significantly alter evacuation routes. Rather, BIG proposes off-site improvements to improve traffic flow, emergency access, and flooding conditions of evacuation routes as compared to existing conditions.

In addition, BIG proposes removal of existing at-grade rail crossing, and construction of a grade-separated crossing from the rail yard to the transload warehouse center. To improve flooding conditions, BIG proposes to widen the Lenwood Channel by 60 to 100 feet for approximately 1.25 miles total to improve flooding compared to existing conditions. Through compliance with local laws and regulations requiring preparation of a TCP, no temporary or permanent street improvements associated with BIG would impact emergency evacuation routes, and no properties would experience reduced emergency access as a result of BIG operations or maintenance activities.

Therefore, BIG operations would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts would be less than significant, and no mitigation is required.

Impact 5.9-6: BIG: Level of Significance Before Mitigation: Less than Significant Impact.

Impact 5.9-6: BIG: Mitigation Measures: No mitigation required.

Impact 5.9-6: BIG: Level of Significance After Mitigation: No significant impact would occur.

Impact 5.9-7 ***Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?***

Proposed General Plan

The General Plan area is not located within an SRA Very High FHSZ (CAL FIRE, 2025). However, the BHMP identifies most of the City is within a LRA moderate fire hazard severity zone and Non-Wildland/Non-Urban areas (CAL FIRE, 2024). Future development would be required to adhere to local and State codes, such as the California Fire Code, Chapter 1, Uniform Fire Code, of the San Bernardino County Code, and Chapter 16.04 Fire Code, of the Barstow Municipal Code.

Although wildfire risks are present in the City, adherence to applicable building practices and the proposed General Plan Safety Element policies would reduce impacts, such as Policy S-1.3 Building design and location, which requires new development to design and build in accordance with current standards for fire safety; Policy S-1.4 Utility hardening, which requires coordination with service providers to ensure that new utilities are designed to be resilient to risks associated with fire events; and Policy S-1.5 Water for fire protection, which requires coordination with water suppliers and fire protection agencies to ensure adequate provision of water supplies for structural fire suppression. Additionally, development under the proposed General Plan would be subject to compliance with the most recent California Building Code and CFC. The CFC (Part 9 of Title 24 of the California Code of Regulations) includes § 4905.2, Construction Methods and Requirements within Established Limits. The CFC Chapter 49 cites specific requirements for

wildland-urban interface areas that include, but are not limited to, providing defensible space and hazardous vegetation and fuel management.

Implementation of the proposed General Plan would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. The proposed General Plan, in combination with existing federal, State, regional, and local regulations, as well as the proposed General Plan policies such as Policy S-1.1 Hazard planning, S-1.2 Mutual aid, S-1.3 Building design and location, S-1.4 Utility hardening, S-1.5 Water for fire protection, S-2.1 Resilient public facilities, S-2.2 Emergency response operations plan, S-2.3 Cooperative hazard management and recovery, and S-2.4 Community emergency preparation, would reduce hazards regarding fire risks to a less than significant level.

Impact 5.9-7: General Plan: Level of Significance Before Mitigation: Less than Significant Impact.

Impact 5.9-7: General Plan: Mitigation Measures: No mitigation required.

Impact 5.9-7: General Plan: Level of Significance After Mitigation: No significant impact would occur.

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There are no SRA Responsibility Areas or lands classified as Very High FHSZs within the wildfire study area.

The CWP and BHMP identifies most of BIG's footprint is within a moderate fire hazard severity zone and Non-Wildland/Non-Urban areas (San Bernardino, 2020); see **Figure 5.9-8: Fire Hazard Severity Zones in Local Responsibility Areas - BIG**. The City's BHMP also identifies the BIG footprint is located near two key areas within or near the City which are considered fire hazard areas, which include:

- The Lenwood community, located near the BIG footprint's eastern boundary. This area is identified as a fire hazard area due to the abundance of brush and blow sand, which makes it difficult to gain access to fight fire.
- The Mojave Riverbed, located along BIG's northern boundary. This area is identified as a fire hazard area because of its significant slope to the bottom of the riverbed and the soft soil, which is difficult to gain access to when firefighting.

Construction

During typical construction, wildland fire hazards inherently associated with building operations are continuously being generated at construction sites. Clearing and grubbing would remove potential fuel for fires which could occur during construction. The potential for emergency response incidents related to hazardous construction operations would be minimized through compliance with the established regulatory framework, including CAL-OSHA, which ensures that employers provide their workers a place of employment free from recognized hazards to safety and health, included risk of fire. Additionally, the City's Emergency Operations Plan would provide guidance and outlines operational concepts and response procedures for the City's response to extraordinary emergency situations associated with large-scale emergencies and disasters, including hazardous materials incidents and releases. Further, given brush and other potential for fuel within the BIG would be cleared during the clearing and grubbing of the

site, the risk of wildland fires during construction would be less than significant, and no mitigation is required.

Operations

BIG includes a fuel facility and freight trains transporting fuel and other volatile materials. These elements have electrical equipment and combustible materials and thus represent a fire and explosion risk. Freight trains transporting fuel would adhere to federal and State regulations for the safe transport of combustible materials. The wildfire study area is primarily vacant, undeveloped land in the Mojave Desert. Transport of flammable and combustible materials on BIG tracks may pose a risk for wildland fires in the event of accidental release. However, according to accident reports obtained from the Federal Railroad Association for rail accidents within the County, the existing BNSF track has not experienced a derailment causing a wildland fire or fire that would pose a risk to people or structures (FRA, 2022). See also **Impact 5.9-2: BIG**. Additionally, as discussed in **Impact 5.9-1: BIG**, train signals and power switches would minimize the risk of derailment which could cause wildfires. BNSF safety protocols minimize the potential for a spill which could cause a fire. BNSF maintains fire suppression equipment in Barstow which would further minimize the risk of a wildfire as a result of spill (BNSF, 2016).

BIG's proposed solar farm would consist of solar modules, transformers, and battery storage in a BESS within the vicinity of the Lenwood community. Given continuing rapid technological change in the battery industry, the proposed BESS component manufacturer has not been determined at this time but could include any commercially available and proven large-scale battery technology, including but not limited to lithium ion, sodium sulfur, and sodium or nickel hydride. The batteries would be contained within enclosures or in individual containers, housed in open-air-style racking within its enclosed container. The containers would also have heating, ventilation, and air conditioning (HVAC) cooling to maintain energy efficiency and to protect the batteries. The CFC and associated standards require rigorous large-scale fire testing, such as UL 9540A requiring the systems to pass performance-based criteria. This means that enclosures of battery storage systems may not pose a fire or explosion risk to adjacent exposures. To achieve these results, some BESS employ various types of active thermal runaway mitigation systems within the integrated design of utility scale, lithium-ion based battery storage enclosures. Regardless of the design basis, these thermal runaway mitigation systems are required to be tested to UL 9540A large scale fire testing in order to manage fire and exposure risks. Some BESS comply with these performance-based requirements without the use of active fire suppression systems, rather, they use passive design features or thermal management features that prevent or limit thermal runaway. Either design-based or active thermal runaway mitigation approaches to achieve the UL 9540A criteria, again, all systems must demonstrate that they pose no explosion or fire risk to adjacent exposures. BIG's proposed BESS would be designed, constructed, operated, and maintained in accordance with applicable best practices and regulatory requirements, including fire safety standards. Batteries would be housed in an enclosure that contains an integrated fire safety system and controls. If smoke, heat, or flammable gas were detected, an alarm would sound, strobes would flash, and any thermal runaway mitigation systems present would be activated. The BESS containers would have a fire rating, if required based on large-scale fire test results. Final fire safety design would follow applicable codes and referenced standards and would be specific to the battery technology that is ultimately implemented. The BESS containers would have a fire rating in

conformance with NFPA and County standards and specialized fire suppression systems. Final fire safety design would follow applicable standards and would be specific to the battery technology that is ultimately implemented.

Over the long term, BIG's solar farm operation and maintenance could introduce potential ignition sources such as maintenance vehicles used for solar farm maintenance activities, however maintenance vehicles would travel on roads that have been cleared of vegetation. BIG's proposed inverters and solar panels may represent a potential ignition source; however, the potential for fire risk for these components is considered low through compliance with SBCFD's vegetation clearance requirements. As such, vegetation-related fires would be unlikely to occur within the solar farm. As described above, all BESS battery components would include the integrated fire and safety systems within each enclosure and be installed within non-walk, outdoor enclosures on electrically grounded concrete pads or foundations to minimize the potential for sparks or ignition to occur. As discussed above, BNSF would prepare and implement preparation and submittal of a Fire Protection and Emergency Response Plan to the SBCFD for review and approval in accordance with CFC Chapter 12. The Fire Protection and Emergency Response Plan would address fire hazards of the different BIG components, including the BESS. BIG's proposed solar farm area would be cleared during construction and would comply with the CFC and SBCFD vegetation clearance requirements during operations. Further, BIG's proposed solar farm design would be required to conform to conditions established by the SBCFD to ensure potential hazards relative to exposure of people or structures to significant risk of loss, injury, or death involving wildland fires would be reduced to the extent feasible. Following compliance with federal, State, and local worker safety and fire protection codes and regulations, fire occurrences during construction and for the life of BIG's solar farm would be minimized. Coupled with the implementation of fire suppression technology and adherence with applicable industry best practices and regulatory fire standards, BIG's proposed solar farm operations would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires and impacts would be less than significant.

Therefore, in summary, BIG construction and operations would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. A less than significant impact would occur, and no mitigation is required.

Impact 5.9-7: BIG: Level of Significance Before Mitigation: Less than Significant Impact.

Impact 5.9-7: BIG: Mitigation Measures: No mitigation required.

Impact 5.9-7: BIG: Level of Significance After Mitigation: No significant impact would occur.

- | | |
|---------------------|---|
| Impact 5.9-8 | <i>If located in or near state responsibility areas (SRAs) or lands classified as Very High FHSZs, would the Project:</i> |
| | <i>a. substantially impair an adopted emergency response plan or emergency evacuation plan?</i> |
| | <i>b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?</i> |

- c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*
- d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

Proposed General Plan

The General Plan area is not located in or near SRAs or lands classified as Very High FHSZs. The nearest SRA to the General Plan area is approximately 15 miles to the south. Therefore, the proposed General Plan would not substantially impair an adopted emergency response plan or emergency evacuation plan; exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. No impact would occur, and no mitigation is required.

Impact 5.9-8: General Plan: Level of Significance Before Mitigation: No Impact.

Impact 5.9-8: General Plan: Mitigation Measures: No mitigation required.

Impact 5.9-8: General Plan: Level of Significance After Mitigation: No Impact would occur.

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Construction and Operation

CAL FIRE classifies most of the BIG footprint as a LRA and outside of a Very High FHSZ; see **Figure 5.9-6: California State Responsibility Zones - BIG**. The nearest SRA to the BIG footprint is approximately 21 miles to the south. The Very High FHSZ nearest to the BIG footprint is approximately 25 miles to the south. Therefore, because the BIG footprint is not located in or near an SRA or lands classified as Very High FHSZs, no impact would occur.

Impact 5.9-8: BIG: Level of Significance Before Mitigation: No Impact.

Impact 5.9-8: BIG: Mitigation Measures: No mitigation required.

Impact 5.9-8: BIG: Level of Significance After Mitigation: No Impact would occur.

5.9.3 SIGNIFICANT UNAVOIDABLE IMPACTS

Proposed General Plan

No significant unavoidable impacts concerning hazards, hazardous materials and wildfire would occur as a result of the proposed General Plan Project.

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No significant unavoidable impacts concerning hazards, hazardous materials and wildfire would occur as a result of the proposed General Plan Project.

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Persons Contacted

Personal communication via telephone with Captain Lester Kaita of the San Bernardino County Fire Department on October 12, 2021.

Personal communication via email with Genesis Crank of the City of Barstow Planning Department on October 15, 2025.