3.8 Hazards and Hazardous Materials

This section evaluates the potential impacts related to hazards and hazardous materials during construction, invasive plant management, and maintenance of the Project. Construction activities include the earthwork involved in the estuarine restoration and infrastructure improvement portions of the Project. Invasive plant management activities include the removal of dense-flowered cordgrass (*Spartina densiflora*), European beachgrass (*Ammophila arenaria*), and dwarf eelgrass (*Zostera japonica)* using any one or a combination of the methods described in Section 2.5 (Proposed Invasive Plant Management). Maintenance activities include periodic repairs and improvements to the non-motorized boat put-in, trails, parking lots and road within the Project Area, and also include monitoring activities. The study area for this section includes the Project Area and adjoining properties/waterbodies that may be impacted by the use of hazardous materials under the Project.

3.8.1 Setting

Site Description

Historical Use of the Project Area

Historical use information on the Project Area was determined using U.S. Geological Survey (USGS) topographic maps, zoning records, and aerial photos from the Humboldt County Department of Public Works Natural Resources in Eureka, California. Aerial photographs from 1939, 1948, 1954, 1958, 1965, 1970, 1981, 1988, 1993, 2005, 2012, and 2016 were reviewed to visually evaluate the historical use of the Project Area. Review of the aerial photographs indicated that the site has remained largely undeveloped open ranch land. All structures currently in the Project Area are evident in the reviewed aerial photographs. Existing roads are evident in the aerial photographs and the roads do not appear to have historically deviated from their current alignments.

Historical Use of Adjacent Property

Historical land use on adjoining properties was determined using the aerial photographs described above. Properties to the north and east have been used for agriculture, specifically cattle ranching, for decades. These properties remain in agricultural use today and only a handful of structures (such as barns and farmhouses) are visible east of the Project Area. Land to the west is undeveloped beachfront and dune habitat. There is no evidence in the reviewed historical aerial photographs of industrial, manufacturing or large-scale residential use of any kind at the Project Area, or on contiguous lands.

Definition of Hazardous Materials

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. Factors that influence the health effects of exposure to hazardous materials include the dose to which the person is exposed, the frequency of exposure, the exposure pathway, and individual susceptibility.

The California Code of Regulations (CCR) defines a hazardous material as a substance that, because of physical or chemical properties, quantity, concentration, or other characteristics, may either: (1) cause an increase in mortality or an increase in serious, irreversible, or incapacitating illness; or (2) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed (CCR, Title 22, Division 4.5, Chapter 10, Article 2, Section 66260.10). Hazardous materials are classified according to four properties: toxicity, ignitability, corrosivity, and reactivity (CCR, Title 22, Chapter 11, Article 3), which are defined in the CCR, Title 22, Sections 66261.20-66261.24.

Hazardous Materials in the Study Area

Federal, state, tribal and local regulatory agency databases were searched by Environmental Data Resources, Inc (EDR), an independent database search service for identifying known hazardous materials locations, in October 2018. An area-wide EDR database query was conducted with a search distance extending approximately one mile beyond the Project Area boundary. Results of the records search indicated that the Project Area is not listed among any of the government records examined (EDR 2018). A supplemental Cortese List record search was conducted on October 3, 2018 by GHD. Results of the Cortese List records search also determined that the Project Area is not listed among the government records examined.

Potential Receptors/Exposure

The sensitivity of potential receptors in the areas of known or potential hazardous materials contamination is dependent on several factors, the primary factor being an individual's potential pathway for exposure. Exposure pathways include dermal absorption, inhalation, and ingestion of tainted air, water, or food. Depending on the magnitude, frequency, and duration, human exposure to hazardous materials can cause a variety of health affects ranging from short-term acute symptoms to long term chronic effects. The principal elements of exposure assessments typically include:

- Evaluation of the fate and transport processes for hazardous materials at a given site
- Identification of potential exposure pathways
- Identification of potential exposure scenarios
- Calculation of representative chemical concentrations
- Estimation of potential chemical uptake

Schools and residences are examples of sensitive receptors that could be susceptible to significant effects from exposure to hazardous materials. The closest school to the Project Area is Loleta Elementary School which is approximately 3.6 miles southeast of the Project Area eastern boundary. There are approximately six residential structures along Indianola Reservation Road, located northeast of the Project Area, the nearest located approximately 350 feet (107 meters) northeast of the Area D boundary and approximately 3,600 feet (1,097 meters) east of the Area A boundary. The next closest occupied residential structures to the Project Area

are associated with the Wiyot Table Bluff Reservation, which is located approximately 0.6 mile northeast of the Project Area. The third closest residential area is the community of Loleta, located approximately 3.5 miles southeast of the Project Area.

Fire Hazards

The study area is within the Loleta Fire Protection District. In responding to emergencies, local fire departments work closely with law enforcement, public utilities, the County Office of Emergency Services, and ambulance companies. The California Department of Forestry and Fire Protection (CAL FIRE) identifies fire hazard severity zones and Local Responsibility Areas (LRA) throughout California. The study area is designated as an unincorporated LRA. The primary fire hazard severity zone applied to the study area is LRA Unzoned, with segments of the north and central portions of the Project Area designated as LRA Moderate (CAL FIRE 2008).

Airports

The closest public airport to the study area is Samoa Field, located on the Samoa Peninsula approximately 6.5 aerial miles north-northeast from the northern boundary of the Project Area. The second closest airport is Rohnerville Airport, located south of the City of Fortuna, approximately 11 aerial miles southeast of the Project Area. There are no private airfields in the Project vicinity.

3.8.2 Regulatory Framework

Hazardous materials and hazardous wastes are subject to federal, state, and local laws and regulations intended to protect public health and safety and the environment. The U.S. Environmental Protection Agency (EPA), U.S. Department of Transportation (DOT), California Environmental Protection Agency (Cal/EPA), and Department of Toxic Substances Control (DTSC) are the primary agencies that enforce these regulations. The main focus of the federal Occupational Safety and Health Administration (OSHA) and California Occupational Safety and Health Administration (Cal/OSHA) are to prevent work-related injuries and illnesses, including those from exposures to hazardous materials. CAL FIRE implements fire safety regulations. In accordance with Chapter 6.11 of the California Health and Safety Code (CHSC, Section 25404, et seq.), local regulatory agencies enforce many federal and state regulatory programs through the Certified Unified Program Agency (CUPA) program, including:

- State Uniform Fire Code requirements (Section 80.103 of the Uniform Fire Code as adopted by the State Fire Marshal pursuant to Health and Safety Code Section 13143.9);
- Underground storage tanks (Chapter 6.7 of the Health and Safety Code, Sections 25280 et seq.).

The CUPA for Humboldt County and the study area is the Humboldt County Division of Environmental Health.

Federal

The primary federal agencies with responsibility for hazardous materials management are the EPA, OSHA, and the DOT. Federal laws, regulations, and responsible agencies relevant to the Project are summarized in Table 3.8-1.

Table 3.8-1 Federal Regulations Related to Hazardous Materials Management

Classification	Law or Responsible Federal Agency	Description
Hazardous Materials Management and Soil and Groundwater Contamination	Community Right-to-Know Act of 1986 (also known as Title III of the Superfund Amendments and Reauthorization Act [SARA])	Imposes requirements to ensure that hazardous materials are properly handled, used, stored, and disposed of and to prevent or mitigate injury to human health, or the environment, in the event that such materials are accidentally released.
	Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) (amended by SARA 1986 and Brownfields Amendments 2002)	Regulates the clean-up of sites contaminated by releases of hazardous substances.
Hazardous Materials Transportation and Handling	U.S. Department of Transportation	Regulates the safe transportation of hazardous materials. The DOT regulations govern all means of transportation except packages shipped by mail (49 CFR).
Occupational Safety	Occupational Safety and Health Act of 1970	OSHA sets standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries (29 CFR).

State and local agencies often have either parallel or more stringent regulations than federal agencies. In most cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of the law and its enforcement are discussed under either the state or local regulatory section.

State

Soil and Groundwater Contamination

The clean-up of sites contaminated by releases of hazardous substances is regulated primarily by the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), which was amended by the Superfund

Amendment and Reauthorization Act of 1986 (SARA), the Brownfields Amendments (2002) and by similar state laws. Under CERCLA, the EPA has authority to seek the parties responsible for releasing hazardous substances and to ensure their cooperation in site remediation.

Section 30232 (Oil and hazardous substance spills) of the California Coastal Act of 1976 (Coastal Act) provides for the protection against the spillage of crude oil, gas, petroleum products, or hazardous substances in relation to any development or transportation of such materials. Effective containment and clean-up facilities and procedures shall be provided for accidental spills that do occur.

The DTSC's Hazardous Waste and Substances Sites List (Cortese List, Government Code Section 65962.5) identifies sites with leaking underground fuel tanks, hazardous waste facilities subject to corrective actions, solid waste disposal facilities from which there is a known migration of hazardous waste, and other sites where environmental releases have occurred. Before a local agency accepts an application as complete for any development project, the applicant must certify whether or not the project site is in the Cortese List. Databases that provide information regarding the facilities or sites identified as meeting Cortese List requirements are managed by the DTSC and State Water Resources Control Board (SWRCB).

Hazardous Materials Transportation

The State of California has adopted DOT regulations for the intrastate movement of hazardous materials. State regulations are contained in Title 26 of the CCR. In addition, the State of California regulates the transportation of hazardous waste originating in the state and passing through the state. Both regulatory programs apply in California. The two state agencies that have primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and California Department of Transportation (Caltrans).

Occupational Safety

Worker health and safety is regulated at the federal level by OSHA. Under this jurisdiction, workers at hazardous waste sites (or workers coming into contact with hazardous wastes that might be encountered during excavation of contaminated soils) must receive specialized training and medical supervision according to the Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations. Worker health and safety in California is regulated by Cal/OSHA. California standards for workers dealing with hazardous materials (including hazardous wastes) are contained in CCR Title 8. The DTSC and Cal/OSHA are the agencies that are responsible for overseeing that appropriate measures are taken to protect workers from exposure to potential soil or groundwater contaminants.

Emergency Response

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local government agencies. Responding to hazardous materials incidents is a part of this plan. The plan is administered by the State Office of Emergency Services , which coordinates the responses of other

agencies such as local fire and police agencies, emergency medical providers, CHP, CDFW and Caltrans.

Humboldt County has an adopted Humboldt County Operational Area Hazard Mitigation Plan as identified below. FEMA approved the Humboldt Operational Area Hazard Mitigation Plan on March 20, 2014.

Fire Regulation

State fire safety regulations that apply to activities proposed under the Project include the following:

- Earthmoving and portable equipment with internal combustion engines must be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (PRC Section 4442).
- Appropriate fire suppression equipment must be maintained during the highest fire danger period – from April 1 to December 1 (PRC Section 4428).
- On days when a burning permit is required, flammable materials must be removed to a distance of 10 feet (3 meters) from any equipment that could produce a spark, fire, or flame, and the construction contractor must maintain the appropriate fire suppression equipment (PRC Section 4427).
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines must not be used within 25 feet (7 meters) of any flammable materials (PRC Section 4431).

CAL FIRE also provides oversight for all prescribed burning in the study area.

Water Quality

The Porter Cologne Water Quality Control Act (Porter-Cologne) is the primary state statute for protection of water quality in California. Under Porter-Cologne, the nine Regional Water Quality Control Boards (RWQCBs), with oversight from the SWRCB, regulate discharges to waters of the State based on the regulatory standards and objectives set forth in Water Quality Control Plans (also referred to as Basin Plans) prepared for each region. The North Coast RWQCB has regulatory oversight of the study area, with standards and objectives provided in the Water Quality Control Plan for the North Coast Region (NCRWQCB 2018).

Responsibility for implementation of Section 402 of the Clean Water Act has also been delegated to the SWRCB/RWQCBs, where they implement and enforce permits that fall under the National Pollutant Discharge Elimination System (NPDES). The General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) (Order No. 2009-0009, as amended by Order No. 2010-0014) applies to discharges from construction sites that include one or more acre of soil disturbance. Construction activities include clearing, grading, grubbing, excavation, stockpiling, and reconstruction of existing facilities involving removal or replacement. The Statewide General NPDES Permit for Residual Aquatic Pesticide Discharges to Waters of the United States from Algae and Aquatic Weed Control Applications (Order No. 2013-0002-DWQ) applies to any pesticide applications at aquatic sites that will result in discharges to Waters of the U.S, including the use of imazapyr.

The Coastal Act set policies related to management of resources in California's coastal zone. The policies of the Coastal Act constitute the statutory standards applied to planning and regulatory decisions made by the California Coastal Commission (CCC), pursuant to the Coastal Act. Hazardous substances are addressed in Chapter 3, Section 30232 (Oil and hazardous substance spills) of the Coastal Act. Per Section 30232 of the Coastal Act, "(p)rotection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and clean-up facilities and procedures shall be provided for accidental spills that do occur" (CCC 1976).

Regional and Local

Lands within the Project Area are owned by CDFW or are under the jurisdiction of the State Lands Commission, and therefore are not subject to local permitting requirements (i.e., Conditional Use Permit) from Humboldt County nor adherence to the Humboldt County General Plan or the Local Coastal Program Eel River Area Plan. The portions of the study area that extend beyond the Project Area boundary, including adjacent properties, would be subject to local regulation, including the following Humboldt County plans.

Humboldt County Operational Area Hazard Mitigation Plan

The 2014 Humboldt County Operational Area Hazard Mitigation Plan Update is the county's plan to identify and reduce hazards before any type of hazard event occurs (Humboldt County 2014). The Hazard Mitigation Plan aims to reduce losses from future disasters such as dam failure, drought, earthquake, fish losses, flooding, landslide, severe weather, tsunami, and wildfire. The Hazard Mitigation Plan also includes a vulnerability analysis and proposed initiatives designed to minimize future hazard-related damage.

Humboldt County Emergency Operations Plan

The 2015 Humboldt County Emergency Operations Plan (EOP) for the Humboldt Operational Area addresses the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies in or affecting Humboldt County (Humboldt County 2015). The EOP addresses integration and coordination with other governmental levels when required. The EOP accomplishes the following:

- Establishes the emergency management organization required to mitigate any significant emergency or disaster affecting Humboldt County.
- Identifies the policies, responsibilities, and procedures required to protect the health and safety of Humboldt County communities, public and private property, and the environmental effects of natural and technological emergencies and disasters.
- Establishes the operational concepts and procedures associated with field response to emergencies, County Emergency Operations Center activities, and the recovery process.

3.8.3 Evaluation Criteria and Significance Thresholds

Based on Appendix G of the CEQA Guidelines, a hazards or hazardous materials impact is considered significant if implementation of the proposed Project would do any of the following:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- Be 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, where the Project could result in a safety hazard or excessive noise for people residing or working in the Project Area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Areas of No Project Impact

As explained below, construction, invasive plant management, and maintenance activities under the Project would not result in impacts related to several of the significance criteria identified in Appendix G of the current CEQA Guidelines. The following significance criteria are not discussed further in the impact analysis, for the following reasons:

- 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? The closest school to the study area is Loleta Elementary School which is located approximately 3.5 miles southeast of the Project Area's eastern boundary. As there are no schools located within 0.25 mile of the study area, this significance criterion is not applicable and is not evaluated further in this Draft EIR.
- Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment? The EDR Area/Corridor Report prepared for this Project does not identify any hazardous materials sites within the Project Area, or within a search area buffer of 1-mile (EDR 2018). A supplemental Cortese List record search was conducted on October 3, 2018 by GHD. Results of the Cortese List records

search determined that the Project Area is not listed among the government records examined. As the Project Area is not located on a hazardous materials site listed per Section 65962.5, this significance criterion is not applicable and is not discussed further in this Draft EIR.

- Would the Project be 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, or would the Project result in a safety hazard for people residing or working in the Project Area? The study area is not located within an airport land use plan or within two miles of a public airport. Therefore, this significance criterion is not applicable and is not discussed further in this Draft EIR.
- Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? The proposed Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The study area is located within a Tsunami Evacuation Zone and within a 100 year FEMA Flood Zone. Portions of the Project Area, specifically along McNulty Slough, are currently subject to regular inundation during high tides. Tsunami warning signage is present along Table Bluff Road, north and east of the Project Area entrance. The Wiyot Tribe has developed an Emergency Operations Plan which is intended to aid the Wiyot Table Bluff Reservation, located northeast of the Project Area, outside the Tsunami Evacuation Zone and Table Bluff community in the event of a disaster. Implementation of the Project would not impair implementation of or physically interfere with the existing tsunami evacuation route.

  The Project Area is undeveloped, with the exception of an unpaved road. Immediately adjacent to the Project Area boundary near the unpaved access road are a vacant wooden barn, and associated remnant corrals, and pens. The Project Area is uninhabited, and the Project does not propose to construct habitable structures. The proposed road, parking area, and trail establishment could aid in emergency response access and evacuation from the Project Area. The Project would not impair access to the Project Area during or after construction and would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, this significance criterion is not applicable and is not discussed further in this Draft EIR.

3.8.4 Methodology

As described above, the study area for the impact analysis includes the Project Area, as well as the adjoining properties/waterbodies that may be impacted by the use of hazardous materials or herbicide under the Project. The roadway alignments that provide access to the Project Area are Table Bluff Road from the Project Area east to the intersection with Hookton Road, and Hookton Road from Table Bluff Road intersection east to U.S. Highway 101.

This analysis considers the range and nature of foreseeable hazardous materials use, storage, disposal and fire treatment methods resulting from the proposed Project and identifies the primary ways that hazardous materials and fire treatment

methods could expose the environment or individuals to health and safety risks. Local and state agencies would be expected to continue to enforce applicable regulations to the extent that they currently do.

The following reports were used in the analysis of hazardous conditions at the Project Area:

- Area/Corridor Report for the Project Area (EDR 2018);
- Supplemental Cortese List record search (GHD 2018);
- Available literature, including documents published by county, state and federal agencies; and
- Prior EIRs for the area (i.e., Eel River Ecosystem Restoration Project, Final Programmatic EIR for the Humboldt Bay Regional Spartina Eradication Plan (2013 Spartina PEIR)).

The information obtained from these sources was reviewed and summarized to establish existing conditions and to identify potential environmental effects, based on the significance thresholds in this Section. In determining the level of significance, the analysis assumes that construction, invasive plant management and maintenance activities to be completed under the Project would be required to comply with federal, state, and local ordinances and regulations.

3.8.5 Impacts and Mitigation Measures

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

General Construction Materials

Construction of the Project includes the transport and use of common hazardous materials inherent to the construction process, including petroleum products and solvents for construction equipment and vehicles. These materials are commonly used during construction, are not acutely hazardous, and would be used in relatively small quantities. Contractor(s) would be required to comply with all applicable hazardous materials laws and regulations covering the transport, use, and disposal of hazardous materials. Therefore, the impacts associated with the potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials would be less than significant.

Herbicide Application for Invasive Plant Management

Invasive plant management activities would include the use of herbicide (imazapyr) during discrete periods to treat areas of dense-flowered cordgrass and/or European beachgrass. Use of herbicide would be a secondary treatment method and would be applied in conjunction with a primary treatment method, such as burning, mowing or grinding (see Chapter 2, Project Description).

Herbicide Application for Dense-Flowered Cordgrass Management

Proposed treatment methods for dense-flowered cordgrass, including the use of herbicide , would be consistent with those outlined in the Humboldt Bay Regional

Spartina Eradication Plan (H.T. Harvey 2013). A summary of the potential risk posed by imazapyr to humans and the environment, including what is described in the Humboldt Bay Regional Spartina Eradication Plan EIR (H.T. Harvey and GHD 2013), is provided below.

Imazapyr is an herbicide active ingredient approved for aquatic use, and which has been used to control non-native Spartina in the San Francisco Bay since 2006. Fate and transport studies have determined that imazapyr poses no significant risk to aquatic environments, as it is rapidly degraded by photolysis with a half-life averaging 2 days (Nufarm Americas Inc. 2020).

Imazapyr is a slow-acting, systemic, broad-spectrum, pre- and post-emergent herbicide that effectively controls grasses and many broadleaf species. As such, this herbicide will affect most terrestrial vegetation it is in contact with at sufficient concentrations, including non-target vegetation. Overspray, drift, accidental spills or off-target discharge that may occur as a result of herbicide treatments could, therefore, result in impacts to desirable vegetation in the Project Area.

Other general concerns with herbicide use focus on the risk to wildlife and human health. Imazapyr inhibits the enzyme acetolactate synthase in plants, blocking the production of three essential amino acids (valine, leucine, and isoleucine) (Washington DOE 2009). This enzyme is not present in animals. EPA has categorized imazapyr as “practically non-toxic” to birds and mammals (UEPA 2016). The prescribed application rate of imazapyr does not result in aquatic or terrestrial concentrations that exceed screening levels for toxicity to wildlife. Risk for bioaccumulation is low because it is highly soluble in water and has low solubility in lipids, meaning it does not concentrate in animal fat or organ tissue. Therefore, the application of this herbicide would not impact the study area environment through food web exposure.

Hazards to herbicide mixers, loaders, applicators or to the public include the potential for direct exposure to herbicide products. Direct exposure to herbicide formulations containing imazapyr may result in mild skin irritation or other biological symptoms (Nufarm Americas Inc. 2020; SePRO Corporation 2016). Mild eye irritation can also occur if imazapyr is accidentally splashed while it is being mixed, loaded, or applied.

If not properly managed or applied, the use of imazapyr for treatment of dense-flowered cordgrass could result in hazards to the environment, such as non-target vegetation, or the public, including the herbicide applicators or anyone that may come into direct contact with it. The impact is considered significant.

Herbicide Application for European Beachgrass Management

The application of herbicide to European beachgrass would generally follow the same protocol as those used to address dense-flowered cordgrass, as outlined in the 2013 Spartina PEIR (H.T. Harvey and GHD 2013). As described above, use of herbicide, if not properly managed or applied, could result in hazards to the environment (such as non-target vegetation) or the public (including the herbicide applicators or anyone that may come into direct contact with it). The potential impact is considered significant.

Mitigation Measures: Implement Mitigation Measures HHM-1, HHM-3, and HHM-4.

In accordance with CEQA Guidelines Section 15150, an EIR may incorporate by reference all or portions of another document which is a matter of public record or is generally available to the public. Where all or part of another document is incorporated by reference, the incorporated language shall be considered to be set forth in full as part of the text of the EIR. The Project would implement the following mitigation measures, as defined in the 2013 Spartina PEIR (H.T. Harvey and GHD 2013), for application of herbicide on dense-flowered cordgrass. The 2013 Spartina PEIR measures have been slightly adapted to reflect that their implementation would also apply to treatment of European beachgrass, and to other Project activities that would result in comparable potential impacts to health and safety (e.g., use of equipment to implement the tidal restoration component of the project).

Mitigation Measure HHM-1: Worker Injury from Accidents Associated with Use of Manual and Mechanical Equipment.

A health and safety plan shall be developed to identify and educate workers engaged in activities that involve heavy equipment associated with construction or invasive plant management activities under the Project. Appropriate safety procedures and equipment, including hearing, eye, hand and foot protection, and proper attire, shall be used by workers to minimize risks associated with use of heavy equipment. Workers shall receive safety training appropriate to their responsibilities prior to engaging in such work.

Mitigation Measure HHM-3: Worker Health Effects from Herbicide Application.

Appropriate health and safety procedures and equipment, as described on the herbicide or surfactant label, including personal protective equipment (PPE) as required, shall be used by workers to minimize risks associated with herbicide application methods. Mixing and applying herbicide will be done in accordance with label directions and shall be conducted or supervised by certified or licensed herbicide applicators.

Mitigation Measure HHM-4: Avoid Health Effects to the Public and Environment from Herbicide.

For areas targeted for application of herbicide that are within 500 feet (152 meters) of human sensitive receptors (i.e., houses, schools, hospitals), prepare and implement a herbicide drift management plan to reduce the possibility of chemical drift into populated areas. The Plan shall include the elements listed below. To minimize risks to the public, mitigation measures for herbicide application methods related to timing of herbicide use, area of treatment, and public notification, shall be implemented by entities engaging in treatment activities as identified below:

- Herbicide will be applied in accordance with the manufacturer’s label.
- CDFW will coordinate with the County Agricultural Commissioner to identify and avoid impacts to any nearby sensitive areas (e.g., schools, hospitals) that require notification prior to herbicide applications.

- CDFW will identify nearby sensitive habitat and, where feasible, establish buffer zones to avoid affecting sensitive receptors.
- Herbicide will be applied using the coarsest droplet size possible that maintains sufficient plant coverage while minimizing drift into adjacent areas.
- Herbicide shall not be applied when winds exceed 10 miles per hour or when inversion conditions exist (consistent with the herbicide labels); or when wind could carry spray drift into inhabited areas. Refer to Section 3.3 (Air Quality) for discussion on inversions.
- Public access to treatment sites will be restricted during treatment windows.
- No surfactants containing nonylphenol ethoxylate will be used.

Level of Significance: Less than significant with mitigation.

With implementation of Mitigation Measure HHM-1, HHM-3, and HHM-4, the risks to workers, the public and the environment would be minimized and mitigated to a less-than-significant level.

Impact HAZ-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?

Construction

There are two types of accidental releases that could occur during construction:

1. Accidental spills
2. Discovery of existing unknown contaminated soil or groundwater in the Project Area

The Project Area is undeveloped and does not appear on a list of hazardous materials sites. Therefore, the potential to encounter contaminated soil or groundwater at the site is considered low and the impact would be less than significant.

Accidental spills could occur during construction as hazardous materials would be used in varying amounts during construction of the Project. Construction activities would use common materials such as cleaning products, fuels (diesel and gasoline), lubricants and oils.

Caltrans and CHP regulate the transportation of hazardous materials and wastes, including container types and packaging requirements, as well as licensing and training for truck operators, chemical handlers, and hazardous waste haulers. Cal-OSHA also enforces hazard communication program regulations, which contain worker safety training and hazard information requirements, such as procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees.

Construction specifications would include the following requirements in compliance with applicable regulations and codes: all reserve fuel supplies and hazardous materials must be stored within the confines of a designated construction area; equipment refuelling and maintenance must take place only within a designated staging area; and construction vehicles shall be inspected daily for leaks. These regulations and codes must be implemented, as appropriate, and are monitored by the state and/or local jurisdictions, including the Loleta Fire Protection District.

Contractors would also be required to comply with Cal/EPA's Unified Program; regulated activities would be managed by Humboldt County Division of Environmental Health, the designated CUPA for Humboldt County, in accordance with the regulations included in the unified Program. Such compliance would reduce the potential for accidental release of hazardous materials during construction of the proposed Project. As a result, the risk of exposure of construction workers to accidental release of hazardous materials would be reduced, as would the demand for incident emergency response. However, if not properly managed, the use of hazardous materials during construction activities could result in hazards to the public or environment. The impact is considered potentially significant.

Invasive Plant Management and Maintenance

Invasive plant management activities would include the use of herbicide. It is unlikely that maintenance of infrastructure and Project amenities would utilize herbicide or other hazardous materials, however it may potentially occur. Project activities are required to be consistent with federal, state, and local laws and regulations addressing hazardous materials management and environmental protection, as described above. However, if not properly managed, the use of herbicide and other hazardous materials under the Project could result in hazards to the public or environment. The impact is considered potentially significant.

Mitigation Measures: Implement Mitigation Measures HHM-2, HHM-5 and WQ-2.

The Project would implement Mitigation Measures HHM-2, HHM-5 and WQ-2 from the 2013 Spartina PEIR (H.T. Harvey and GHD 2013) to reduce the potential for the public or environment to be exposed to accidental releases of hazardous materials. As above, the scope of the 2013 Spartina PEIR measures has been expanded to reflect that their implementation would also apply to herbicide application to European beachgrass, and to other Project activities that would result in comparable potential impacts to health and safety (i.e., estuarine tidal restoration construction work).

Mitigation Measure HHM-2: Accidents Associated with Release of Chemicals and Motor Fuel.

Contractors and equipment operators on site during Project activities will be required to have emergency spill cleanup kits immediately accessible. If fuel storage containers are utilized exceeding a single tank capacity of 660 gallons or cumulative storage greater than 1,320 gallons, a Hazardous Materials Spill Prevention Control and Countermeasure Plan (HMSPCCP) would be required and approved by the NCRWQCB. The HMSPCCP regulations are not applicable for chemicals other than petroleum products;

therefore, the contractor shall prepare a spill prevention and response plan for the specific chemicals utilized during Project activities. This mitigation is intended to be carried out in conjunction with Mitigation WQ-2.

Mitigation Measure HHM-5: Health Effects to Workers, the Public and the Environment Due to Accidents Associated with Use of Hazardous Materials.

Appropriate health and safety procedures and equipment shall be used to minimize risks associated with use of hazardous materials under the Project, including exposure to or spills of fuels, petroleum products, and lubricants. These shall include the preparation of a health and safety plan, a spill contingency plan, and if threshold onsite storage values are exceeded, an HMSPCCP.

Mitigation Measure WQ-2: Minimize Herbicide Spill Risks.

Herbicides shall be applied by or under the direct supervision of trained, certified or licensed applicators. Herbicide mixtures shall be prepared by, or under the direct supervision of trained, certified or licensed applicators. Storage of herbicide and surfactants on or near the Project Area shall be allowed only in accordance with a Spill Prevention and Control Plan approved by the NCRWQCB; on-site mixing and filling operations shall be confined to areas appropriately bermed or otherwise protected to minimize spread or dispersion of spilled herbicide or surfactants into surface waters. This mitigation is intended to be carried out in conjunction with Mitigation Measure HMM-2.

Level of Significance: Less than significant with mitigation.

With implementation of the above-referenced mitigation measures, construction, invasive plant management and maintenance of the proposed Project would not create a significant hazard to the environment or general public involving the release of hazardous materials into the environment due to the requirements to have spill kits, a spill prevention and response plan, a health and safety plan and a spill contingency plan, and through the use of trained, certified of licensed applicators. With the implementation of Mitigation Measures HHM-2, HHM-5, and WQ-2, the potential for the Project to create a significant hazard to the public or the environment through the accidental release of hazardous materials into the environment would be reduced to a less-than-significant level.

Impact HAZ-3: Would the Project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The primary fire hazard severity zone applied to the Project Area is LRA Unzoned, with segments of the north and central portions of the Project Area designated as LRA Moderate (CAL FIRE 2008). The Project Area is not located in or near lands classified as a very high fire hazard severity zone, however it is located adjacent to a SRA.

The Project vicinity is rural and generally characterized by open pastures, scattered barns and residences. The Project Area consists of undeveloped land, a large portion of which is tidally-influenced and/or regularly inundated by water. The Project Area does not contain any residential structures and the Project does not include development of any structures for human occupancy. Adjacent land generally consists of open agricultural pasture and farmland. The nearest residential community to the Project Area is located on Indianola Reservation Road, approximately 350 feet (107 meters) northeast of the Project Area.

Invasive plant management activities would include use of prescribed burning. Although, the use of prescribed burns to control invasive plants represents a potential risk to people or structures if not properly controlled, the Project would implement prescribed burns in coordination with CAL FIRE and follow an approved Burn Plan. With implementation of the approved plan, the potential to expose people or structures to wildland fires would be less than significant. Prescribed burns are not proposed in construction or maintenance activities.

Please refer to Section 3.17 Wildfire for a more detailed discussion of wildfire risks and hazards.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than significant.

3.8.6 Cumulative Impacts

Impact HAZ-C-1: Would the Project result in a cumulatively significant impact from increased exposure of the public or environment to hazards or hazardous substances?

As described in Impact HAZ-1, HAZ-2, and HAZ-3, the Project would have less-than-significant impacts with implementation of mitigation relative to the use of hazardous substances during construction activities and use of herbicide for invasive plant management. Similar to the Project, construction and maintenance of other restoration based cumulative projects identified in Table 3-1 could potentially utilize similar construction activities and herbicide for invasive plant management. Cumulative projects would be subject to compliance with applicable hazardous materials regulations, including federal, state, and local regulations. Implementation of the mitigation measures required for the Project require a variety of preventative and protective measures throughout construction and maintenance. With implementation of mitigation measures, the Project's contribution to cumulative impacts related to use or release of hazardous substances during construction would not be cumulatively considerable, and therefore less than significant.

Mitigation Measures: No mitigation is necessary.

Level of Significance: Less than significant.

3.8.7 References

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