3.8 Hazards and Hazardous Materials

This Section evaluates the potential impacts related to hazards and hazardous materials resulting from construction and operation of the Project against significance thresholds derived from applicable local, state or federal policies, or from Appendix G of the CEQA Guidelines.

3.8.1 Study Area

The Study Area is confined to the Project Site and immediately adjacent properties that would have the potential to leach hazardous materials into the Project Site or expose the Project Site to wildfire hazards.

3.8.2 Setting

Hazardous materials are a wide-ranging category of substances that include toxic substances, flammable or explosive materials, corrosive substances such as acids, and radioactive substances. 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. Facts that influence the health effects of exposure to hazardous material include the dose to which the person is exposed, the frequency of the 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 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 wastes refer to hazardous materials that are no longer used and have been disposed of or are awaiting disposal.

Emergencies involving hazardous materials often occur due to mechanical failure or human error. These types of emergencies also sometimes occur as a secondary impact of another emergency, such as an earthquake or flood. Hazardous material releases can occur from buildings such as factories and processing facilities, as well as from vehicles that transport chemicals or other hazardous substances. Road vehicles, trains, and (more rarely) aircraft can all suffer accidents that cause a release of hazardous materials.

The Project Site is located on a former pulp mill site, historically referred to as the Evergreen Pulp Mill, the footprint of the old facility occupies approximately 70 acres of Assessor's parcel number 401-112-021 at One TCF Drive, in Samoa, California. The Project Site is an active Brownfield site (NCRWQCB case no. 1NHU892), which includes Geotracker Field Points as shown in the EnviroStor and Geotracker online databases. The Project Site is located on the Samoa Peninsula, a narrow divide between the Pacific Ocean to the west and Humboldt Bay to the east. Land use of the Project Site and surrounding properties is industrial/commercial. The Samoa landfill (a closed ash disposal site) is located to the west of the facility. The former mill has not been used for commercial purposes since 2008 and is in a current state of disrepair as partial demolition has occurred at various areas of the mill. This inactive pulp mill is owned by the Humboldt Bay Development Association, Inc. and is leased to the Harbor District. The facility is currently referred to as Redwood Marine Terminal II (RMT-II).

Site History

The site was developed in 1964 as a bleached Kraft pulp mill by Georgia-Pacific manufacturing company. The pulp mill in its original configuration was in operation between 1965 and 1994, when it was converted into a chlorine-free operation by Louisiana Pacific Corporation. Process chemical recovery was comprised of removing organic matter accumulated in the pulp bleaching process through combustion in recovery boilers 1, 2, and 3; the recovered chemicals were then available for reuse in the bleaching process. The bleaching process was performed to remove tannins and lignins from wood chips prior to being introduced to the pulping process.

Evergreen Pulp was the last company to operate the mill until it was shut down in October 2008. Freshwater Tissue Company purchased the site in 2009 and planned on reopening the mill; however, they abandoned these plans and began decommissioning equipment, demolishing various buildings, and liquidating assets. In August 2013, Freshwater Tissue Company transferred ownership of the site to Humboldt Bay Development Association (HBDA) and leased to the Harbor District. The Harbor District is currently leasing northeastern portions of the property for use by commercial businesses.

Historical buildings and land use at the site included offices, pulp warehouses, a machine building, a sand blasting shop, petroleum products distribution and storage, a hazardous waste storage area, diesel aboveground storage tanks (ASTs), a chemical storage tank farm, a water treatment plant, a “black liquor” processing area, a bleach plant, three process chemical recovery boilers, and an electrical generation station. To date, the petroleum products distribution and storage infrastructure, diesel ASTs, the chemical storage tank farm, the black liquor processing area, the bleach plant, and two of three process chemical recovery boilers have been demolished.

The RMT I area is a former lumber mill/shipping facility located directly adjacent to Humboldt Bay and other identified brownfield sites. The bay shore lands were filled to create space for mills, piers, shipyards, railroads, tanneries, fuel depots, residential development and croplands to serve the growing population. The resources that supported this growth eventually dwindled, and facilities around the bay began to close.

Interim Measures Work Plan

An Interim Measures Work Plan (IMWP), included as Appendix G, was prepared for the redevelopment of the Terrestrial Development Site by SHN Consulting Engineers & Geologists (SHN 2020b) and will also be followed for trenching associated with the water intake and fire suppression piping. The IMWP outlines, Terrestrial Development Site history, current conditions, and planned methods to address material handling from demolition and construction activities for the redevelopment.

Numerous investigations of soil, groundwater, soil gas, and building materials have been conducted by consultants on behalf of past and current owners and stakeholders starting from the late 1990s. This commercial property associated with the Terrestrial Development is a Brownfield site that has received funding grants from the U.S. Environmental Protection Agency (EPA) for cleanup and assessment activities. The North Coast Regional Water Quality Control Board (RWQCB) is the lead agency for the investigation and cleanup of environmental impacts associated from mill operations and oversees the current groundwater monitoring program in place for the Project Site.

A total of 11 areas of interest (AOI) have been identified at the Terrestrial Development Site based on historic operation and potential contaminants at each area. The AOIs include:

– Black Liquor Process and Recovery Area (AOI-1)
– Bleach Plant (AOI-2)
– Causticizing Area (AOI-3)
– Hot Water Heater and Former Diesel Tank (AOI-4)
– Process Chemical Storage (AOI-5)
– Leachfield (AOI-6)
– Boneyard (AOI-7)
– VOC Area southeast (AOI-8)
– Off Loading Area (AOI-9)
– Petroleum Hydrocarbon Storage Area (AOI-10)
– Chip Blower (AOI-11)

Aspects of significance for AOIs at the former pulp mill site include the following:

– AOI-1, identified as the Black Liquor Process and Recovery Area, encompasses the portion of the mill site formerly occupied by the chemical recovery boilers, electrical generating station, multiple aboveground storage

tanks (ASTs) for chemical storage and management, and the reclaimed liquor pond. Only recovery boiler #3 and portions of the associated infrastructure, smokestack, portions of the electrical generating infrastructure, the reclaimed liquor pond, concrete floors and foundations, and fluid conveyance structures (such as sanitary sewers, storm sewers, and concrete-lined trenches related to the spill recovery system) remain in AOI-1.

– AOI-2, identified as Bleach Plant, encompasses the portion of the site formerly occupied by the wood chip digester, bleach plant, and associated infrastructure. Most of the AOI-2 structures have been demolished; however, five ASTs, portions of two electrical substations, remnants of concrete floors and foundations, and fluid conveyance structures like those noted in AOI-1 remain in AOI-2.
– AOI-3, AOI-4 and AOI-5 make up the southern portion of the pulp processing area. These AOIs are where chemicals were stored for making the pulping liquors to breakdown the woodchips. Storage tanks for caustic and acidic chemicals, and diesel were located in this area. AOI-7 (Boneyard) was used as a storage area for miscellaneous mill equipment that was discarded or saved for potential future use. This area additionally contains a pipeline used for chemicals delivered to the dock by barge that were transferred to the chemical storage area.

On September 3, 2003, the Humboldt County Division of Environmental Health issued a remedial action completion certificate for AOI-11. The RWQCB provided a notice of no further assessment for AOI-6 in December 2014. Active remediation of chlorinated solvent impacts to soil and groundwater is being performed in AOI-8 and AOI-9 and is expected to be complete prior to NAFC operations. The planned area of redevelopment for this Recirculating Aquaculture System (RAS) project does not extend to AOI-9, -10, and -11 and only includes a small westerly portion of AOI-8.

The conceptual site model (CSM) prepared for the site in 2011 is located on Geotracker and provides a comprehensive summary that contained historical plans and data for a 14-year period (SHN 2020b). To assess contamination associated with historical use at this property, SHN completed a review of the 2011 CSM and subsequent update in 2013 (SHN 2020b), and all data collected since that time prior to submitting this IMWP.

Contaminants of Potential Concern

Site Soil

The primary Contaminants of Potential Concern (COPC) identified in Terrestrial Development Site soils are chlorinated hydrocarbons and pH (SHN 2021). Additional information and graphics related to soil contamination at the site is detailed in the Interim Measures Work Plan in Appendix G. Remaining soil impacted by petroleum hydrocarbons does not appear to be impacting groundwater. The dioxin concentrations detected in site soils are at levels below residential screening levels. Concentrations of metals, polychlorinated Biphenyl (PCBs), and Organochlorine Pesticides (OCPs) in soil samples collected from the site meet residential standards based on review of historical data and comparison to background metals concentrations for the area.

– **Chlorinated hydrocarbons.** These are present in soil and are primarily in AOI-8 and AOI-9. The extent of chlorinated hydrocarbons in soil generally has been defined (except beneath the warehouse in AOI-9). Low concentrations of certain chlorinated hydrocarbons have been detected in a few isolated borings in this area. The area of planned redevelopment does not extend to areas where soils are impacted by chlorinated hydrocarbons in AOI-8 and AOI-9.
– **pH.** A known release of high pH material (sodium hydroxide) occurred in the vicinity of well MW-15, and it was reported that hardened sodium hydroxide was present in boring BH-1. Elevated pH (> 8.5 pH units) in soil is present beneath the majority of the former process areas. The extent of elevated pH in soil was reported to have been adequately defined. Segregation and sampling of the soils from the impacted area will determine if it is suitable for reuse on the site or if offsite disposal is more appropriate.
– **Petroleum hydrocarbon.** Impacted soils were excavated in AOI-4 during decommissioning of the diesel fuel tank secondary containment. Only low concentrations of total petroleum hydrocarbons as diesel (TPHD) (<5 milligrams per kilogram [mg/kg]) were detected in soil from borings completed in the area. Excavated soils will be field screeded, segregated, and sampled as appropriate to determine suitable for reuse on the site or if offsite disposal is more appropriate. Residual soil petroleum contamination is expected to be minimal

- **Dioxins and Furans.** Soil impacts by dioxins and furans were recorded for samples collected near the former black liquor pond, and the central portion of AOI-2 in the vicinity of the former bleach plant in 2015. The site-wide investigation in 2019 additionally reported the presence of dioxins and furans in a majority of the 55 samples collected during the event. All dioxin testing results were reported at concentrations below DTSC residential soil screening levels for 2,3,7,8- tetrachlorobenzeno-p-dioxin (TCDD) at 4.8 picograms per gram (pg/g) and the World Health Order toxicity equivalence (WHO TEQ) for residential soils of 50 pg/g.
- **Metals.** Arsenic is the only metal at the site that was detected at a concentration above the residential soil Environmental Screening Level (ESL) of 0.11 mg/kg. However, the concentrations observed for arsenic in site soil is within the probable background range for this area of 5.6 mg/kg. Levels of lead, cadmium and copper in site soil additionally appear to be in the background range for natural soils for this area.

The RMT I area was previously occupied by mill, port and rail operations that are known to have impacted soil with hazardous substances and petroleum hydrocarbons. Documentation reviewed for the priority Brownfields site showed most of the known impacts from historical operations have been investigated and properly closed under regulatory oversight. A total of three petroleum sites identified in the planned redevelopment area (RMT I) were determined to require no further action and are not considered of significance. The identified contamination within the RMT I area is to the east of the proposed water and fire line alignment (HBHD 2020).

Groundwater

Site wide, COPCs in groundwater include chlorinated hydrocarbons (chlorinated ethanes and ethenes), dissolved arsenic (As), dissolved chromium (Cr), and dissolved manganese (Mn). Additional parameters of concern include dioxins, pH, color impact from black liquor release, total dissolved solids (TDS), dissolved nickel and dissolved chromium VI (Cr VI). Petroleum hydrocarbons have generally been nondetectable or below the water quality objectives (WQOs) in groundwater samples from site monitoring wells, and are, therefore, not considered COPC of significance at this site (SHN 2021). Additional information and graphics related to groundwater contamination at the site is detailed in the Interim Measures Work Plan in Appendix G. COPCs identified in groundwater at the site include the following:

- **Chlorinated hydrocarbons** have been detected in groundwater samples from site monitoring wells in AOI-7, AOI-8, and AOI-9. Active remediation is occurring in this area and a recent groundwater monitoring event was conducted in June 2020. Based on the post-injection data, it appears the injection of sodium permanganate had some effect on reducing chlorinated solvent concentrations, although post-injection concentration trendlines show variable results. Some indicate decreasing trendlines through time, while others do not.
- **Dissolved Metals.** Elevated concentrations of dissolved arsenic, manganese and chromium are most prevalent within the process areas (AOI-1, AOI-2, AOI-3, AOI-4, and AOI-5). The source of dissolved metals in groundwater beneath the process areas is unknown but may be related to the changes in geochemistry from the known release of high pH material and organic acids from the release of black liquor. An isolated area of elevated dissolved chromium is present in the vicinity of well MW-18, and dissolved arsenic has been detected above the WQO in well MW-13. Dissolved arsenic was detected in samples of Humboldt Bay water and may be a contributing source of dissolved arsenic in shallow groundwater near the bay margin.
- **Parameters of Concern.** The extent of high pH (>8.5 pH units) and high EC (> 900 uS/cm) impacted shallow groundwater is in the area surrounding well MW-15 that includes AOI-4 and AOI-5. Color slightly exceeds the WQO in almost all shallow site wells in the former process areas. Color greatly exceeds the WQO in the vicinity of wells MW5/5D, likely related to releases of black liquor in AOI-1.
- **Dioxins and Furans**. Groundwater samples collected in 2014, 2015, and 2017 from monitoring wells and well points located in the vicinity of AOI-1 and AOI-2, and at manhole 5 (MH-5) were analyzed for the presence of dioxin and furan congeners. Laboratory analytical reports showed TEQ results for 2,3,7,8- TCDD in most samples were below the California maximum contaminant level (MCL) in drinking water of 30 picograms per liter (pg/L). Groundwater samples collected from monitoring wells MW-5 and MW-8, and the manhole exceeded the California public health goal (PHG) for drinking water of 0.05 pg/L. The peak concentrations for 2,3,7,8-TCDD and TEQ in groundwater were recorded from the field composited well point sample in AOI-2 at concentrations of 8.24

pg/L and 231.56 pg/L, respectively. The lateral distribution of dioxin impacts to groundwater below the WQO is defined by laboratory analytical results recorded for samples collected from monitoring wells MW-1, MW-2, MW-4, MW-6, MW-7, MW-14, MW-15, and MW-17.

The upland area near RMT I, was previously occupied by a mill, port and rail operations that are known to have impacted groundwater with hazardous substances and petroleum hydrocarbons (HBHD 2020). The area of contamination is located east of the Sea Chest and fire suppression line alignment.

3.8.3 Regulatory Framework

Federal

The primary federal agencies with responsibility for hazardous materials management are the U.S. Environmental Protection Agency (USEPA), Occupational Safety and Hazard Association (OSHA), and the Department of Transportation (DOT). Federal laws, regulations, and responsible agencies relevant to the Project are summarized in Table 3.8-1 Federal Regulations Related to Hazardous Materials Management.

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 (amended by SARA 1986 and Brownfields Amendments 2002)	Regulates the cleanup 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 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 California Department of Toxic Substances Control (DTSC) 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 Caltrans.

Occupational Safety

Worker health and safety is regulated at the federal level by the U.S. Department of Labor 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 OES, which coordinates the responses of other agencies such as local fire and police agencies, emergency medical providers, CHP, the California Department of Fish and Wildlife (CDFW) and Caltrans.

Humboldt County has an adopted Humboldt County Operational Area Hazard Mitigation Plan as identified below. Federal Emergency Management Agency (FEMA) approved the Humboldt Operational Area Hazard Mitigation Plan on March 20, 2014.

Fire Regulation

The California Public Resources Code (PRC) sets forth fire safety regulations for applicable projects that 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 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 of any flammable materials (PRC Section 4431).

Water Quality

The Porter Cologne Water Quality Control Act is the primary state statute for protection of water quality in California. Under the Act, the nine 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 the National Pollutant Discharge Elimination System (NPDES) 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). The Order 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.

Local

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) Humboldt Operation 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 (EOC) activities, and the recovery process.

Humboldt Bay Area Plan – Local Coastal Program

3.14 Industrial – Protection Against Spillage – 30232

Protection 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 cleanup facilities and procedures shall be provided for accidental spills that do occur.

a. *Industrial uses shall include mitigation and design features for compatibility with adjacent land uses; in particular, screening and/or landscaping to buffer adjacent residential and recreational uses.*

New industrial development adjacent to areas planned for public recreation, natural resources, or residential use on the North Spit shall include mitigation measures, including at a minimum, setbacks, landscaping, and design controls to minimize significant conflicts with adjacent land uses.

3.17 Hazards – New Development – 30253

(1) Minimize risks to life and property in areas of high geologic, flood and fire hazard.

(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding areas or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

3.8.4 Evaluation Criteria and Thresholds of Significance

Evaluation Criteria	Significance Thresholds	Sources
Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Potential for improper transport, use, disposal, or accidental release of hazardous materials or wastes due to non-compliance with State and federal hazardous materials or waste regulations	CEQA Guidelines Appendix G, Checklist Item IX (a) Hazardous Materials Transportation Act of 1975 Resource Conservation and Recovery Act of 1978 (RCRA)
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?	Potential for improper transport, use, disposal, or accidental release of hazardous materials or wastes due to non-compliance with State and federal hazardous materials or waste regulations	CEQA Guidelines Appendix G, Checklist Item IX (b) Hazardous Materials Transportation Act of 1975 Resource Conservation and Recovery Act of 1978 (RCRA)
Would the Project emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Use, storage, or emission, of acutely hazardous materials or waste within 0.25 mile of a school	CEQA Guidelines Appendix G, Checklist Item IX (c)
Would the Project be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment (State CEQA Guidelines Section 15186)?	Location of Project on or adjacent to a site with presence or likely presence of hazardous substances or petroleum products	CEQA Guidelines Appendix G, Checklist Item IX (d)
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, result in a safety hazard or excessive noise for the people residing or working in the area?	Location of Project within an airport land use plan or within two miles of an airport and introduction of new or increased safety hazard	CEQA Guidelines Appendix G, Checklist Item IX (e)
Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Location of Project in areas that impair or interfere with an adopted emergency plan, including emergency access routes	CEQA Guidelines Appendix G, Checklist Item IX (f)
Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	Non-conformance with State Responsibility Area fire safe regulations	CEQA Guidelines Appendix G, Checklist Item IX (g)

3.8.5 Methodology

This impact analysis focuses on the transport, use, and disposal of hazardous materials during construction, the potential to encounter hazardous substances in soil and groundwater, and the potential to discharge hazardous materials during Project operations. The evaluation was performed taking into consideration current conditions at the Project site, information in the Cortese List, and applicable regulations and guidelines. The analysis also addresses the potential for the Project to encounter hazardous materials during demolition activities; result in a release of hazardous materials from construction equipment; interfere with an adopted emergency response plan or emergency evacuation plan; conflict with a land use compatibility restriction within an airport safety zone; create fire hazards; or result in a release of hazardous materials during operation. The impact analysis in this this section relies in part on the Interim Measures Work Plan developed for the Project, which addresses issues related to potential soil and groundwater hazards as they relate to Project construction of all project components that disturb soil (SHN 2020b). Each potential impact is assessed in terms of the applicable regulatory requirements, and mitigation measures are identified as appropriate.

3.8.6 Impacts and Mitigation Measures

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

Terrestrial Development

Construction of the Terrestrial Development would include the transport and use of common hazardous materials inherent to the construction process, including petroleum products for construction equipment and vehicles, paints, concrete curing compounds, and solvents for construction of the proposed Terrestrial Development improvements. These materials are commonly used during construction, are not acutely hazardous, and would be used in relatively small quantities.

Construction and demolition may result in the requirement for off-site transport of contaminated soil and/or groundwater, and asbestos and lead contaminated materials to an appropriate waste disposal facility. The Caltrans and the 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. The 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.

Project construction would be required to implement stormwater best management practices (BMPs) during construction in accordance with the SWRCB General Construction Stormwater Permit. Best management practices addressing materials management would be required, including proper material delivery and storage, spill prevention and control, and management of concrete and other wastes. In addition, the Interim Measures Work Plan would be implemented during construction.

Because NAFC and its contractors would be required to comply with existing and future hazardous materials laws and regulations and applicable best management practices addressing the transport, storage, use, and disposal of hazardous materials, the potential to create a significant hazard to the public or the environment during demolition and construction of the Project would be less than significant.

Following construction, operation of the Project would require use of chemicals and other hazardous materials for on-site wastewater treatment, fish processing, and aquaculture operations. A specific Spill, Prevention, Control, and Countermeasure (SPCC) plan would be developed and implemented for the Project operations, in addition to inventory logging, storage, and containment inspections. A Hazardous Materials Business Plan would also be developed and implemented to ensure the emergency response personnel that would respond to emergencies at the facility have the necessary information to respond appropriately, including, but not limited to activities, owner/operator

identification, hazardous material inventory, and emergency response and training plans. Delivery trucks to and from the facility also present the potential for accidental release of petroleum, diesel, and related hazardous materials. Operational impacts would otherwise not occur. In the event of an accidental spill of hazardous materials, the potential impact would be less than significant with the implementation of the specific SPCC plan and preventative measures previously discussed.

Mitigation Measures: No mitigation is necessary

Level of Significance: Less than Significant

Ocean Discharge

The Project would utilize the existing Ocean Discharge outfall infrastructure. As such, no construction would occur and therefore, no use of chemicals or hazardous materials would be used during this phase. During operation, the existing infrastructure would be used to discharge wastewater generated from the facility. All cleaning and chemical agents used in the facility will be used in compliance with the intended use and label instructions. Cleaning agents will be used that interact with organic material. As they interact with organic material they are consumed and are no longer chemically active. All floor drains and pipes outside of the sanitary sewer system (sinks for hand washing, toilets, and showers), lead to the Projects onsite waste water treatment facility. There they are comingled with other organic waste streams from the facility. Any cleaning agent not fully consumed in its use would interact with organics in the wastewater and would be fully consumed through that interaction within the facility before discharge. No impact would result.

Mitigation Measures: No mitigation is necessary

Level of Significance: No Impact

Humboldt Bay Water Intakes

Construction of the Humboldt Bay Water Intake component would include the transport and use of common hazardous materials inherent to the construction process, including petroleum products for construction equipment and vehicles, paints, concrete curing compounds, and solvents for construction of the proposed seawater intake improvements. These materials are commonly used during construction, are not acutely hazardous, and would be used in relatively small quantities.

Construction may result in the requirement for off-site transport of contaminated soil and/or groundwater to an appropriate waste disposal facility. The Caltrans and the 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. The 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.

Project construction would be required to implement stormwater BMPs during construction in accordance with the SWRCB General Construction Stormwater Permit. Best management practices addressing materials management would be required, including proper material delivery and storage, spill prevention and control, and management of concrete and other wastes. In addition, the Interim Measures Work Plan would be implemented during construction for this project component.

NAFC and its contractors would be required to comply with hazardous materials laws and regulations and applicable best management practices addressing the transport, storage, use, and disposal of hazardous materials. The potential to create a significant hazard to the public or the environment during demolition and construction of the Project would be less than significant.

Following construction, operation and maintenance of the Humboldt Bay Intake components would not require use of any chemicals or other hazardous materials. Therefore, no operational impact would occur.

Mitigation Measures: No mitigation is necessary

Level of Significance: Less than Significant

Compensatory Off-Site Restoration

The Compensatory Off-Site Restoration component would include the transport and use of common hazardous materials inherent to the construction process, including petroleum products for construction equipment in order to remove the creosote piles at Kramer Dock and mechanical equipment utilized for the removal of Spartina. These materials are commonly used during construction, are not acutely hazardous, and would be used in relatively small quantities.

Project construction would be required to implement stormwater BMPs during construction in accordance with the SWRCB General Construction Stormwater Permit. Best management practices addressing materials management would be required, including proper material delivery and storage, spill prevention and control, and management of concrete and other wastes. NAFC and its contractors would be required to comply with hazardous materials laws and regulations and applicable best management practices addressing the transport, storage, use, and disposal of hazardous materials. The potential to create a significant hazard to the public or the environment during demolition and construction of the Project would be less than significant.

Following construction, the restoration component would not require use of any chemicals or other hazardous materials. Therefore, no operational impact would occur.

Mitigation Measures: No mitigation is necessary

Level of Significance: Less than Significant

Impact HAZ-b: 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? (Less than Significant with Mitigation)

Terrestrial Development

The Terrestrial Development component would utilize heavy machinery to perform construction-related tasks including demolition, grading, building construction, excavation, ground densification, and transportation of materials. There is always the possibility that an accident could occur when equipment is operating, and petroleum products could be released onto the soil. Equipment on-site during construction would be required to have emergency spill cleanup kits immediately accessible in the case of any petroleum product spills. Equipment would not be refueled near the one-parameter wetlands nor Humboldt Bay. If equipment must be washed, it would be washed off-site at an appropriate facility. Adherence to Mitigation Measure GEO-2, HWQ-1 (See Sections 3.6 and 3.9), and HAZ-1, which include Construction BMPs, implementation of a Stormwater Pollution Prevention Plan (SWPPP), and implementation of recommendations from the Interim Measures Work Plan, would further negate the potential for accidental releases of hazardous materials during construction. A less than significant impact would result.

The Terrestrial Development Site is located in close proximity to the closed Samoa Solid Waste Disposal Site. SHN completed an investigation to determine if landfill gas (methane) was present in adjacent soil, and to assess the potential to encounter soils with methane during construction and operation. Three landfill gas monitoring wells were installed for monitoring purposes. Results of the soil gas sampling analysis indicated levels of methane were below the reporting limits of 0.50 percent volume per volume (% v/V) in each sample, therefore it is not considered hazardous. A less than significant impact related to encountering soils with methane would occur if further testing confirms no methane. The landfill gas wells would continue to be monitored for a period of 1 year, per Title 27 guidelines. Monthly field measurements for landfill gas will occur at each well, and soil gas samples will be collected on a quarterly basis for laboratory analysis to ensure the potential hazard continues to be negligible (SHN 2021).

All refueling during operations would occur on the east side of building 5 near the proposed backup generators and diesel storage tanks. These are located approximately 521 feet from the wetland (offsite) west of Vance Avenue; 695 feet from the wetland (onsite) to the southwest; and 1,297 feet from the edge of the Humboldt Bay.

Furthermore, as discussed in Section 3.3 – Air Quality, the Terrestrial Development Site is known to contain asbestos, universal waste (UW), and lead based paint. Demolition activities have the potential to result in the accidental release of asbestos-containing materials (ACMs) and lead into the atmosphere. As such, demolition activities may potentially result in significant impacts. With adherence to Mitigation Measure AIR-2, the potential impact from asbestos during demolition would be less the significant. With adherence to the recommendations identified in the IMWP prepared by SHH (SHN 2020b), the potential construction-related impact would be less than significant.

Operationally, back-up power generators would require two new 25,000 gallon underground storage tanks. Installation of the new USTs would adhere to required specifications and procedures as regulated by the North Coast Regional Water Quality Control Board. Implementation of the SPCC plan would further avoid operational hazard-related accidents. The potential operational impact would be less than significant.

Mitigation

Mitigation Measure HAZ-1: Implement Recommendations of Interim Measures Work Plan

To address historic soil and groundwater contaminants remaining at the Project Site from historic use, the Project will implement recommendations included in the Interim Measures Work Plan developed by SHN (2020b). Interim measures in the plan include the following required actions to be implemented before and or during demolition and construction activities:

- **Monitoring and Reporting Program (MRP):** Site redevelopment has the potential to affect 18 existing monitoring wells at the site. Modifications to the existing MRP will be required to address proper closure and replacement of wells. Prior to ground disturbance, a request for modifications to the MRP shall be submitted to the RWQCB that includes a work plan for well destruction and replacement for implementation prior to initiation of site demolition work. Justification for wells to be completely removed from the MRP shall be provided in the request with supporting documentation.
- **Construction Storm Water Pollution Prevention Plan (SWPPP):** The SWPPP shall be required to be implemented during the demolition and construction phases of the project. The SWPPP shall be submitted to the SWRCB Stormwater Multiple Application and Report Tracking System website (SMARTS) and contain the following components: best management practices to address erosion and sediment control, monitoring and testing for site runoff, an inspection program, and site maps. The SWPPP shall be updated and documented in the annual reporting to the RWQCB during the project to reflect changes in conditions (Mitigation Measure HWQ-1).
- **Sampling and Analysis Plan (SAP):** Prior to demolition and ground disturbance, the project SAP shall be submitted to the RWQCB for approval. The SAP shall describe protocols and procedures that shall be implemented for characterization of chemical impacts associated with past operations at the site. The SAP shall address characterization of excavated soils, assessment of final in-place conditions, and testing of materials for reuse or offsite disposal. The SAP shall be the primary guide used to determine suitability of material for reuse. The use of Incremental Sampling Methodology (ISM) for characterization of soils is the preferred approach to assess suitability of reuse. The SAP shall contain the ISM program to evaluate the chemical quality of the material. The approved SAP shall be submitted to the Planning and Building Department prior to demolition and ground disturbance.
- **Dewatering and Discharge Plan (DDP):** It is not anticipated that groundwater will be encountered during demolition or construction, but in the event that it is encountered, development of a plan for water management that includes handling, storage, testing, treatment, monitoring, and discharge shall be prepared for the project and submitted to the RWQCB for

approval to complete the project. The plan shall use available groundwater testing results to identify appropriate treatment and include a monitoring program to ensure discharge parameters contained in the permit are met. The approved plan shall be submitted to the Planning and Building Department prior to water management activities.

- **Soil Gas Monitoring Program**: The planned project development will occur within 1,000 feet of the Samoa Solid Waste Disposal Site (SWDS). An evaluation of soil pore gas from the SWDS will be required, per Title 27 California Code of Regulations Section 20925. A work plan to address soil gas conditions shall be submitted to the Humboldt County Department of Environmental Health and CalRecycle for approval and implementation. The workplan shall contain installation of soil gas probes and a monitoring program to evaluate subsurface conditions and potential impacts to site development. One year of site monitoring for soil gas is anticipated to be completed as part of this assessment program.
- **Health and Safety Plan (HASP):** Preparation of a site-specific health and safety plan shall be required for workers that may come in contact with contaminated materials. The HASP shall outline procedures, training requirements, and contain applicable monitoring programs to limit worker exposure. A hazard analysis must be performed in accordance with industry standards to determine the appropriate level of personnel protection required for completing the work. The HASP shall be submitted to Planning and Building Department for approval prior to demolition activities.
- **Demolition Plan**: Standard demolition and excavation equipment will be used to remove structures and to segregate the material for sorting and processing. A demolition plan shall be prepared for the project that describes the approach and processes to be implemented by the selected contractor. The plan shall be an overview that evaluates all structures designated for removal and shall require augmentation as it relates to specific engineering or onsite activities requiring additional planning. Special handling and disposal of building materials identified to be impacted during the site-wide hazardous materials survey will be conducted (GHD, 2020). Separate plans provided by specialized contractors to address the removal and disposal of lead, asbestos-containing material, and universal waste shall be prepared as part of the demolition permit for National Emission Standards for Hazardous Air Pollutants compliance and submitted to the North Coast Air Quality Management District. Approval of these plans will be required prior to initiation of site wide demolition activities. As structures are demolished, the material shall be segregated and stockpiled. Non-hazardous debris will be transported offsite for disposal as municipal solid waste (MSW) and metals shall be recycled. Much of the concrete, brick, and tile is considered usable material and machines will sort and downsize the material for preparation as onsite reuse or recycling. A Demolition Plan shall be submitted to the Planning and Building Department prior to issuance of a demolition permit.
- **Excavation of Soils**: Soils excavated during demolition and construction at the site shall be screened in the field according to methods described in Section 4.3 of the IMWP and stockpiled appropriately. To evaluate whether excess soil can be reused onsite or disposed of offsite, samples of the soil shall be collected and tested, and the results compared to established screening levels. Excavated soils identified to have impacts from mill operations that require off-site disposal shall be moved for temporary stockpiling to a secure area of the site that is away from routine traffic and is high enough that water will not pond on or around the soil. The contaminated soil shall be placed on, and covered with, plastic (Visqueen®) in such a way that the soil pile is protected from water runon and runoff. Soils that are not hazardous shall be considered for site reuse if analytical results are below the published regulatory thresholds for residential or industrial soils. See Table 1 in the Interim Measures Work Plan (Appendix G) for Regulatory Screening Thresholds for Site Reuse.
- **Field Screening**: Field screening of debris and excavated soils shall occur through visual observation and hand-held tools that shall be outlined in the project SAP. All debris and

excavated soils shall be assessed for visible discoloration or staining, and if noticeable odors are present. Use of a hand-held Niton XLp 702A x-ray fluorescence (XRF) meter for metals and a portable photoionization detector (PID) for VOCs shall be used to assist in field screening activities. The use of a pH meter for extracted water and pH strips on soil mixed with deionized water shall additionally be implemented in the field to assess levels present. Construction materials such as concrete and brick shall be tested in the field for metals using the XRF prior to being processed (crushed) for reuse onsite. Exterior surfaces of materials selected for field screening shall be analyzed using the device's "standard bulk" mode, which includes analysis for 15 elements. Records of concentrations of cadmium, chromium, lead, nickel, and zinc shall be maintained through the field screening program. Frequency of testing with the XRF and for quality control shall be developed based on the volume of material and the Area of Interest (AOI) of generation for RWQCB approval and implementation in the project SAP. All meter readings for soil samples screened in the field for metals and VOCs will be recorded on logs or daily field record sheets and kept on file.

– **Quality Assurance and Quality Control and Reporting:** The project SAP shall outline quality assurance and control quality (QA/QC) for the field program and laboratory testing. Standard Operating Procedures shall be provided for field activities and the designated testing laboratory quality assurance manual shall be included. A frequency according to industry standards for the number of samples to be analyzed, duplicate requirements, and testing limits for COPCs shall be determined based on the volumes of material generated. Following the completion of the field and testing program, a summary of findings shall be prepared and submitted on behalf of NAFC to the RWQCB. The report shall include a description of the work performed, a summary of field screening and laboratory testing results, analytical laboratory reports, maps depicting the analytical results, and recommendations for additional work, if necessary. The report and supporting documentation shall be provided to the Planning and Building Department at the same time of submittal to the RWQCB.

Mitigation Measure AIR-2: Best Management Practices to Reduce Asbestos Emissions During Demolition

Refer to Section 3.2 (Air Quality), Impact (d), for the full text of Mitigation Measure AIR-2: Best Management Practices to Reduce Asbestos Emissions During Demolition.

Mitigation Measure GEO-2: Construction Best Management Practices

Refer to Section 3.2 (Geology and Soils), Impact (b), for the full text of Mitigation Measure GEO-2: Construction Best Management Practices.

Mitigation Measure HWQ-1: Implement Stormwater Pollution Prevention Plan (SWPPP)

Refer to Section 3.9 (Hydrology and Water Quality), Impact (a), for the full text of Mitigation Measure HWQ-1: Implement SWPPP.

With implementation of Mitigation Measure HAZ-1, AIR-1, GEO-2, and HWQ-1 the Project would reduce potential hazards to the public as a result of reasonably foreseeable upset and accident conditions to a less-than-significant level.

Level of Significance: Less than Significant with Mitigation Incorporated

Ocean Discharge

The Ocean Discharge component would utilize the existing infrastructure to dispose of aquaculture-related wastewater generated at the Terrestrial Development Site. No construction or use of heavy machinery would be required.

Therefore, no upset or accident conditions would result in the release of hazardous materials into the environment during the construction phase.

During operation, the discharge would be regulated under a NPDES order No. R1-2021-0026 administered by the NCRWQCB, which would require ongoing operational monitoring and reporting to ensure compliance. Under the draft NPDES order, sampling of effluent flow and temperature would occur at the point where the treated effluent enters the ocean outfall pipe. Parameters to be sampled at the point of entry into the ocean outfall pipe at least weekly would include: biochemical oxygen demand (BOD), oil and grease, pH, TSS, settleable solids, and turbidity. Parameters to be sampled monthly at the point of entry into the ocean outfall pipe include: total ammonia nitrogen, unionized ammonia as N, total organic nitrogen as N, and total nitrate nitrogen as N. Chronic toxicity would be sampled annually. A biological survey would be required once per five-year permit term, with prior review and approval of the biological survey work plan by the NCRWQCB. Therefore, with annual monitoring, required biological surveys every 5 years, and adherence to the requirements of the NPDES Order, the Ocean Discharge component would ensure a less than significant potential impact related to upset or accident conditions during the operational phase. Please refer to Section 3.9 (Hydrology and Water Quality) for a comprehensive discussion of the requirement of the NPDES Order and the adaptive sampling measures to be adhered to.

Mitigation Measures: No mitigation is necessary

Level of Significance: Less than Significant

Humboldt Bay Water Intakes

The Humboldt Bay Water Intakes component would modernize the operation of the two intake structures, as well as install sea water and industrial freshwater distribution pipelines. During construction, this component would require the use of heavy machinery to perform construction-related tasks including grading, excavation, trenching, compaction, and transportation of materials. There is always the possibility when equipment is operating that an accident could occur and petroleum products could be accidentally released onto the soil. Equipment on-site during construction would be required to have emergency spill cleanup kits immediately accessible in the case of any petroleum product spills. Equipment would not be refueled near any one-parameter wetlands nor Humboldt Bay. If equipment must be washed, it would be washed off-site at an appropriate facility. This component would also partially overlap with the AOIs listed in the Interim Work Plan document, therefore there is potential for the construction phase to encounter hazardous substances. Adherence to Mitigation Measure AIR-2, GEO-2, HWQ-1 (See Section 3.2, 3.6 and 3.9), and HAZ-1, which include Construction BMPs, implementation of a SWPPP, and implementation of recommendations from the Interim Measures Work Plan, would further negate the potential for accidental releases of hazardous materials during construction.

Mitigation:

Mitigation Measure AIR-2: Best Management Practices to Reduce Asbestos Emissions During Demolition

Refer to Section 3.2 (Air Quality), Impact (d), for the full text of Mitigation Measure AIR-2: Best Management Practices to Reduce Asbestos Emissions During Demolition.

Mitigation Measure GEO-2: Construction Best Management Practices

Refer to Section 3.6 (Geology and Soils), Impact (b), for the full text of Mitigation Measure GEO-2: Construction Best Management Practices.

Mitigation Measure HWQ-1: Implement Stormwater Pollution Prevention Plan (SWPPP)

Refer to Section 3.9 (Hydrology and Water Quality), Impact (a), for the full text of Mitigation Measure HWQ-1: Implement Stormwater Pollution Protection Plan (SWPPP).

Mitigation Measure HAZ-1: Implement Recommendations of Interim Measures Work Plan

Refer to the above text under Terrestrial Development for the full text of Mitigation Measure HAZ-1: Implement Recommendations of Interim Measures Work Plan

With implementation of Mitigation Measure HAZ-1, AIR-1, GEO-2, and HWQ-1 the Project would reduce potential hazards to the public as a result of reasonably foreseeable upset and accident conditions to a less-than-significant level.

Level of Significance: Less than Significant with Mitigation Incorporated

Compensatory Off-Site Restoration

The Compensatory Off-Site Restoration component would include the transport and use of common hazardous materials inherent to the construction process, including petroleum products for construction equipment in order to remove the creosote piles at Kramer Dock and mechanical equipment utilized for the removal of Spartina. These materials are commonly used during construction, are not acutely hazardous, and would be used in relatively small quantities.

Project construction would be required to implement stormwater BMPs during construction in accordance with the SWRCB General Construction Stormwater Permit. Best management practices addressing materials management would be required, including proper material delivery and storage, spill prevention and control, and management of concrete and other wastes. NAFC and its contractors would be required to comply with hazardous materials laws and regulations and applicable best management practices addressing the transport, storage, use, and disposal of hazardous materials. However, as the removal of the piles and Spartina would occur in and near wetted environments in tidal settings, the potential exists for this component to result in accidental fuel or petroleum spills. Absent mitigation, these impacts would be potentially significant.

Following construction, the restoration component would not require use of any chemicals or other hazardous materials. Therefore, no operational impact would occur.

Mitigation

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 Mitigation Measure Spartina PEIR WQ-3 and HHM-2, as defined in the 2013 Spartina PEIR (H.T. Harvey and GHD 2013), to minimize fuel and petroleum spills and release of chemicals and motor fuel.

Mitigation Measure HWQ-1: Implement Stormwater Pollution Prevention Plan (SWPPP)

Refer to Section 3.9 (Hydrology and Water Quality), Impact (a), for the full text of Mitigation Measure HWQ-1: Implement Stormwater Pollution Protection Plan (SWPPP).

Mitigation Measure HWQ-3: Protection of Water Quality During Pile Removal

Refer to Section 3.9 (Hydrology and Water Quality), Impact (a), for the full text of Mitigation Measure HWQ-1: Implement Stormwater Pollution Protection Plan (SWPPP).

Mitigation Measure Spartina PEIR WQ-3: Minimize Fuel and Petroleum Spill Risks

Refer to Section 3.9 (Hydrology and Water Quality), Impact (a), for the full text of Mitigation Measure HWQ-1: Implement Stormwater Pollution Protection Plan (SWPPP).

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

Refer to Section 3.9 (Hydrology and Water Quality), Impact (a), for the full text of Mitigation Measure HWQ-1: Implement Stormwater Pollution Protection Plan (SWPPP).

Implementation of Mitigation Measure HWQ-1, HWQ-3 and Spartina EIR Mitigation Measure WQ-3, and Spartina EIR Mitigation Measure HHM-2 would reduce potential hazards to the public as a result of reasonably foreseeable upset and accident conditions to a less-than-significant level.

Level of Significance: Less than Significant

Impact HAZ-c: 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? (No Impact)

Terrestrial Development

There are no existing or proposed schools within one-quarter mile of the Terrestrial Development Site. The nearest school, Peninsula Union, is located approximately 1.25 miles away in the town of Samoa. No impact would result.

Mitigation Measures: No mitigation is necessary

Level of Significance: No Impact

Ocean Discharge

There are no existing or proposed schools within one-quarter mile of the Ocean Discharge component. The nearest school, Peninsula Union, is located approximately 1.25 miles away in the town of Samoa. No impact would result.

Mitigation Measures: No mitigation is necessary

Level of Significance: No Impact

Humboldt Bay Water Intakes

There are no existing or proposed schools within one-quarter mile of the Humboldt Bay Water Intakes component. The nearest school, Peninsula Union, is located approximately 0.67 miles away from the proposed northern extent of the Humboldt Water Intakes pipeline the Town of Samoa. Therefore, no impact would result.

Mitigation Measures: No mitigation is necessary.

Level of Significance: No Impact

Compensatory Off-Site Restoration

There are no existing or proposed schools within one-quarter mile of the Kramer Dock aspect of the Compensatory Off-Site Restoration component. The nearest school, South Bay Elementary and Middle School, is located approximately one mile away from the Kramer Dock. Therefore, no impact would result. The Spartina removal would utilize mechanical equipment and be located within Humboldt Bay, more than one-quarter mile from a school. Although petroleum products are used to fuel the mechanical equipment, these materials are commonly used during construction, are not acutely hazardous, and would be used in relatively small quantities. No other hazardous materials would be utilized.. No impact would occur.

Mitigation Measures: No mitigation is necessary

Level of Significance: No Impact

Impact HAZ-d: 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 it create a significant hazard to the public or the environment? (Less than Significant with Mitigation)

Terrestrial Development

The Terrestrial Development component is located on a former pulp mill site that remains an active Brownfield site (NCRWQCB case no. 1NHU892), which includes Geotracker Field Points as shown in the EnviroStor and Geotracker online databases.

This Terrestrial Development Site is a Brownfield site that has received funding grants from the U.S. EPA for cleanup and assessment activities. Numerous investigations of soil, groundwater, soil gas, and construction materials have been completed pertaining to historic contamination, starting from the late 1990s. The NCRWQCB is the lead agency for the investigation and cleanup of environmental impacts associated from former pulp mill operations and oversees the current groundwater monitoring program in place for the site (SHN 2021b). Documents related to site work and regulatory correspondence are publicly available on the California SWRCB Geotracker website.

Remediation activities commenced in 1994 and have continued as recently as 2020. Past remediation activities were implemented by former Project Site owners, such as Louisiana Pacific Corporation and the Harbor District.

COPC identified in site soils were summarized in the Interim Measures Work Plan (SHN 2020b) and the Setting (Section 3.8.2) above, and are summarized below:

– Primary COPCs remaining at the Project Site are chlorinated hydrocarbons, petroleum hydrocarbons and pH (>8.5 pH units). The terrestrial development lease area does not extend to areas where soils are impacted by chlorinated hydrocarbons (SHN 2020b). The area of concern for pH is approximately located in the center of the Project Site and would include portions of Buildings 3 and 4.
– Remaining soil impacted by petroleum hydrocarbons was not determined to be impacting groundwater. Dioxin detections in soils are at levels below residential screening levels (SHN 2020b). Additionally, concentrations of metals, polychlorinated biphenyls (PCBs), and organochlorine pesticides (OCPs) in soil samples collected are not elevated based on review of historical data and comparison to background values for the area (SHN 2021b).
– Arsenic is the only metal at the site that was detected at a concentration above the residential soil Environmental Screening Level (ESL) of 0.11 mg/kg (SHN 2021b). However, the concentrations observed for arsenic in site soil is within the background range for this area of 5.6 mg/kg (Kearney 1996 cited in SHN 2020b). Levels of lead, cadmium and copper in site soil are within the background range for natural soils in this area (SHN 2020b).

COPCs in groundwater include chlorinated hydrocarbons (chlorinated ethanes and ethenes), dissolved arsenic (As), dissolved chromium (Cr), and dissolved manganese (Mn). Additional parameters of concern include dioxins, pH, color impact from black liquor release, total dissolved solids (TDS), dissolved nickel (Ni), and dissolved chromium VI (Cr VI) (SHN 2020b). Petroleum hydrocarbons have generally been nondetectable or below the water quality objectives (WQOs) in groundwater samples from existing monitoring wells at the Project Site and are therefore not considered COPC of significance (SHN 2020b).

To ensure remaining COPCs in soil and groundwater would not detrimentally impact human health or the environment during construction, including demolition, soil excavation, and dewatering, and full compliance with cleanup requirements at the Terrestrial Development Site, interim measures have been developed by SHN (2020b) and are incorporated into Mitigation Measure HAZ-1. Interim measures included in the plan include documentation of modifications to the existing Monitoring and Reporting Program administered by the NCRWQCB, compliance with the SWPPP program, implement a Sampling and Analysis Plan requiring approval by the NCRWQCB, and preparation of a Health and Safety Plan. Interim measures also include recommendations for structure demolition, excavation of soils, dewatering, soil testing, field screening, laboratory testing, quality assurance/quality control, and reporting that will be implemented as part of the Project. These interim measures are included as Mitigation Measure HAZ-1 and would be implemented as part of the Project to ensure historic soil and groundwater contamination would not result in a significant impact to the environment during construction.

Operationally, soil and groundwater disturbance would not occur. The Project's stormwater system would route stormwater infiltration away from any sources of remaining COPCs. Additionally, any remaining COPCs at the Terrestrial Development Site would be below applicable regulatory screening thresholds, ensuring any potential risk of operational exposure would not occur. The Sampling and Analysis Plan required under Mitigation Measure HAZ-1 would include an assessment of final in-place conditions, which would specify any monitoring that may remain warranted to further assure operational exposure would not occur.

Mitigation

Mitigation Measure HAZ-1: Implement Recommendations of Interim Measures Work Plan

Refer to Impact (b) above for the full text of Mitigation Measure HAZ-1: Implement Recommendations of Interim Measures Work Plan

With the implementation of Mitigation Measure HAZ-1, the resulting impact, both to construction and operations, would be less than significant.

Level of Significance: Less than Significant with Mitigation Incorporated

Ocean Discharge

The Ocean Discharge component of the Project is not located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, no impact would occur.

Mitigation Measures: No mitigation is necessary

Level of Significance: No Impact

Humboldt Bay Water Intakes

A review of both the GeoTracker and Envirostor databases did not identify any hazardous material sites within the Humboldt Bay Water Intakes component footprint (SRWQCB 2021, DTSC 2021). Therefore, implementation of this component would not 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 not create a significant hazard to the public or the environment. No Impact would occur.

Mitigation Measures: No mitigation is necessary

Level of Significance: Less than Significant

Compensatory Off-Site Restoration

The Off-Site Restoration component consists of two aspects, the removal of creosote piles at Kramer Dock and removal of Spartina in a location that has yet to be determined. A review of both the GeoTracker and Envirostor databases did not identify any hazardous material sites within the Kramer Dock pile removal site (SRWQCB 2021, DTSC 2021). Therefore, implementation of this aspect would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Additionally, the Spartina removal would be surface-level and would not require deep excavations or significant soil disturbance. If it is located within an area that is listed on a site listed on Government Code Section 65962.5 it is unlikely to create a significant hazard to the public or environment. A less than significant impact would occur

Mitigation Measures: No mitigation is necessary

Level of Significance: Less than Significant

Impact HAZ-e: Would the Project 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? (No Impact)

Terrestrial Development

Samoa Field Airport is located approximately 1.5 miles from the Terrestrial Development Site (AirNav 2020). The unattended airstrip is publicly owned by the City of Eureka. The airstrip is infrequently used by small craft airplanes (AirNav 2020). The Terrestrial Development is not located in a designated Airport Land Use Compatibility Zone as identified by the County's Airport Land Use Compatibility Plan (ALUCP). However, it is located within Airport Protected Airspace (CC 333/FAR 77), specifically within the conical sphere. The Terrestrial Development has also been identified within Review Area 2 of the 2021 ALUCP, which represents the area in which airspace protection and overflight notification policies are applicable. Furthermore, according to the ALUCP, which was adopted in April of 2021, the Terrestrial Development Site is located outside of the noise compatibility zones and the Safety Compatibility Zones (Humboldt 2021). Noise from these infrequent small craft airplanes would not affect workers at the Terrestrial Development, or vice versa. Additionally, the Terrestrial Development component would demolish the existing 270-foot high smokestack, which would remove a hazard to aircrafts. Therefore, the Terrestrial Development would not result in a safety hazard or excessive noise for people residing or working in the area. No impact would result.

Mitigation Measures: No mitigation is necessary

Level of Significance: No Impact

Ocean Discharge

The Ocean Discharge component is located underground and terminates approximately 1.5 miles offshore within the Pacific Ocean. No people are present in this location, therefore, safety hazards due to proximity to an airstrip or inclusion in an Airport Land Use plan do not apply. No impact would occur.

Mitigation Measures: No mitigation is necessary

Level of Significance: No Impact

Humboldt Bay Water Intakes

Samoa Field Airport is located approximately 1.5 miles from the most southern portion of the Humboldt Bay Water Intakes component (AirNav 2020). The unattended airstrip is publicly owned by the City of Eureka. The airstrip is infrequently used by small craft airplanes (AirNav 2020). The Humboldt Bay Water Intakes component is not located in a designated Airport Land Use Compatibility Zone as identified by the County's ALUCP. However, it is located within Airport Protected Airspace (CC 333/FAR 77), specifically within the conical sphere. The Humboldt Bay Intakes component has also been identified within Review Area 2 of the 2020 Draft ALUCP, which represents the area in which airspace protection and overflight notification policies are applicable. However, the ALUCP update has not yet been adopted. Noise from these infrequent small craft airplanes would not affect workers maintaining the Humboldt Bay Water Intakes component, or vice versa. No impact would result.

Mitigation Measures: No mitigation is necessary

Level of Significance: No Impact

Compensatory Off-Site Restoration

The Off-Site Restoration component would temporarily require the presence of workers in order to remove the creosote piles from Kramer Dock and remove invasive Spartina at a yet to be determined location. The Kramer Dock restoration site is not located within an ALUP, and is not within two miles of an airport. The nearest airport to the Kramer Dock restoration site is approximately 3.8 miles to the north. Therefore, no impact is anticipated to occur.

Regarding the Spartina removal, although the site is yet to be determined, the vegetation removal would be temporary. Additionally, the majority of airports within the Humboldt Bay area are utilized by small craft airplanes. Noise from these infrequent small craft planes are not anticipated to affect workers clearing the Spartina. Therefore, no impact is anticipated to occur.

Mitigation Measures: No mitigation is necessary

Level of Significance: No Impact

Impact HAZ-f: Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? (No Impact)

Terrestrial Development

The Terrestrial Development component would not conflict with the Humboldt County Operational Area Hazard Mitigation Plan or the Humboldt County Emergency Operations Plan. The Terrestrial Development component would not interfere with the established tsunami evacuation route The Project would provide an on-site tsunami shelter area for the workforce, as well as personnel of adjacent businesses and people in the area, in the event of a tsunami. An area within the first phase of the Project will be designed as the Tsunami Vertical Evacuation Refuge Structure (TVERS). In the event of a large seismic event, all facility staff would move to the designated Tsunami TVERS and wait for an all clear to be issued by County officials. Per American Society of Civil Engineers (ASCE) 7-16, TVERS buildings are to be designed in accordance with ASCE 7 Section 6.14 to achieve tsunami resilience and reliability for occupancy. The entire facility will be designed to meet all applicable tsunami design standards including the effects of sea level rise and potential land subsidence in a seismic event (GHD 2021). In excess of the standard design requirements, the TVERS area and fish containment infrastructure will utilize the Maximum Considered Tsunami (MCT) with a 2% probability of being exceeded in a 50-year period, the equivalent to a return period of approximately 2,500 years (Martin & Chock 2020) to ensure the safety of staff and ensure fish containment. The TVERS area will be located not less than the greater of 10 feet or one-story height above 1.3 times the MCT inundation elevation in the most appropriate structure.

Currently there are not any occupied structures in the area of the RMT II facility that would meet the design requirements ASCE 7 Section 6.14 for a TVERS. Due to a lack of TVERS areas on the peninsula and the limited time to evacuate the tsunami hazard zone following an event, the TVERS area would be open to anyone in the area following a large seismic event or tsunami warning, thus decreasing the risk to human life in the area. Appropriate emergency supplies will be maintained for peak occupancy in the TVERS. No impact would result.

Mitigation Measures: No mitigation is necessary

Level of Significance: No Impact

Ocean Discharge

The Ocean Discharge component of the Project would not conflict with the Humboldt County Operational Area Hazard Mitigation Plan or the Humboldt County Emergency Operations Plan, as the Ocean Discharge outfall and associated infrastructure is currently existing, located within the Pacific Ocean and therefore, and will not obstruct implementation of either plan. No impact would result.

Mitigation Measures: No mitigation is necessary

Level of Significance: No Impact

Humboldt Bay Water Intakes

The Humboldt Bay Water Intakes component of the Project would not conflict with the Humboldt County Operational Area Hazard Mitigation Plan or the Humboldt County Emergency Operations Plan. Construction of the Humboldt Bay

Water Intake structures and associated pipelines would be implemented outside of existing roadways and established evacuation routes. Therefore, no impact during the construction phase would occur.

During the operational phase, the majority of the Humboldt Bay Water Intake component would be located underground or under water except for piping on Red Tank dock and RMT II dock. No roadways or established evacuation routes would be impaired or blocked that would interfere with adopted emergency response or evacuation plans. Therefore, no impact would occur.

Mitigation Measures: No mitigation is necessary

Level of Significance: No Impact

Compensatory Off-Site Restoration

The Off-Site Restoration component would not conflict with the Humboldt County Operational Area Hazard Mitigation Plan or the Humboldt County Emergency Operations Plan. Removal of the creosote piles and the Spartina would be located outside of existing roadways and established evacuation routes. Therefore, no impact is anticipated to occur.

Mitigation Measures: No mitigation is necessary

Level of Significance: No Impact

Impact HAZ-g: Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires? (Less than Significant)

Terrestrial Development

As discussed in Section 3.13 – Wildfire, a portion of the Terrestrial Development Site is classified as having a "Moderate" fire hazard severity, which is the lowest category of fire hazard severity; the balance of the Project Site has no fire hazard ranking categorization (Humboldt County 2020). Please see Section 3.13 (d) for impact analysis related to the exposure of people or structures to loss, injury, or death involving wildland fires. In addition, dune restoration would result in removal of European beach grass and other biomass for mitigation purposes, reducing the risk of grassland dune fires in restored dune environments. As concluded in Section 3.13 (d), any potential impact would be less than significant.

Mitigation Measures: No mitigation is necessary

Level of Significance: Less than Significant

Ocean Discharge

As discussed in Section 3.13-Wildfire, the Ocean Discharge component of the Project is located underground or within the Pacific Ocean. Therefore, this component of the Project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. No impact would occur.

Mitigation Measures: No mitigation is necessary

Level of Significance: No Impact

Humboldt Bay Water Intakes

As discussed in Section 3.13-Wildfire, the Humboldt Bay Water Intakes component of the Project is partially located within a "Moderate" fire hazard severity. As the Humboldt Bay Water Intakes component would mostly be located underground or underwater during the operational phase and would not provide any structures meant for human occupancy, the Humboldt Bay Water Intakes component of the Project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. Additionally, once operational, this component of the

Project would improve fire suppression capabilities by extending water lines directly to the Project Site which would be utilized by NAFC and future RMT II Site users. No impact would occur.

Mitigation Measures: No mitigation is necessary

Level of Significance: No Impact

Compensatory Off-Site Restoration

As discussed in Section 3.13 Wildfire, the removal of creosote piles would be located entirely within the Humboldt Bay waters. Therefore, the restoration at Kramer Dock would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. Similarly, the Spartina removal would reduce the amount of fuel present ultimately reducing fire risk. No impact is anticipated to occur.

Mitigation Measures: No mitigation is necessary

Level of Significance: No Impact

3.8.7 Cumulative Impacts

Impact HAZ-C-1: Would the Project contribute to a cumulatively significant impact to hazards and hazardous resources? (Less than Significant)

If Project impacts were to overlap with those from the projects listed in Table 3-1, the cumulative effect of the Project plus cumulative projects could be significant. The Project would be subject to existing and future laws and regulations governing hazardous materials, which would minimize Project-related impacts related to upset or accident conditions and routine transport of hazardous materials to a less-than-significant level. Implementation of the cumulative projects listed in Table 3-1 (Projects Considered for Cumulative Impacts) may also result in the use, transport, and disposal of hazardous materials during construction. Each of the cumulative projects would also be required to comply with existing and future laws and regulations governing hazardous materials, similar to the proposed Project. For this reason, the potential cumulative impact from the use, transport, and disposal of hazardous materials during construction would be less than significant.

Impacts related to potential on-site contamination is a site-specific issue. The Terrestrial Development component is located on an active brownfield site. As discussed in Section 3.6, Section 3.9 and above, the Project would adhere to Mitigation Measures GEO-2, HAZ-1, and HWQ-1, which include construction BMPs and implementation of recommendations from the Interim Measures Work Plan, and implementation of a SWPPP. Therefore, the existing soil and groundwater contamination would be managed and therefore the impact would be reduced to a less than significant level. This potential impact on the Project Site is site-specific and would not combine with another project to result in a cumulative impact.

The projects listed in Table 3-1 (Projects Considered for Cumulative Impacts) are not anticipated to require construction activities within roadways near the Project Site, with the potential exception of the Peninsula community Services District Samoa Peninsula Wastewater Treatment Facility Project. However, the Project itself would not obstruct any emergency or evacuation plans. Therefore, the cumulative impact related to emergency access would be less than significant.

Some of the cumulative projects may be located in areas mapped as moderate or high severity zone for wildland fires. None of the cumulative projects would be located on land designated as very high fire hazard severity zones. Each of the cumulative projects would be required to provide adequate fire protection and the cumulative projects would not combine to create a significant cumulative effect related to risk from fire. Therefore, the cumulative impact related to wildfire would be less than significant.

Additionally, the Project would have a less than significant impact related to a safety hazard due to proximity to an air strip. Exposure to a safety hazard due to proximity to an air strip is site specific and therefore would not combine with another project to result in a cumulative impact.

With implementation of required mitigation measures, the Project's contribution to this cumulative impact would not be cumulatively considerable and therefore less than significant.

Mitigation Measures: No mitigation is necessary

Level of Significance: Less than Significant

3.8.8 References

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