

EXHIBIT 2

HUMBOLDT COUNTY PLANNING & BUILDING DEPARTMENT MITIGATION MONITORING & REPORT PROGRAM

For the Nordic Aquafarms California, LLC Coastal Development Permit and Special Permit

Assessor Parcel Number: 401-112-021; Record Number: PLN-2020-16698

Mitigation measures were incorporated into conditions of project approval for the above referenced project. The following is a list of these measures and a verification form that the conditions have been met. For conditions that require on-going monitoring, attach the Monitoring Form for Continuing Requirements for subsequent verifications.

Agency Acronyms:

HCP&BD -Humboldt County Planning and Building Department

CDFW -California Department of Fish and Wildlife

CCC -California Coastal Commission

RWQCB -Regional Water Quality Control Board

NCUAQMD -North Coast Unified Air Quality Management District

USFWS -United States Fish and Wildlife Service

NMFS -National Marine Fisheries Service

Mitigation Number	Mitigation Measure	Implementation Responsibility	Timing	Monitoring Responsibility	Monitoring Action	Verification of Compliance		
						Initials	Date	Comments
	SECTION 3.2 - AIR QUALITY							
AQ-1	<u>Best Management Practices to Reduce Air Pollution:</u> The contractor shall implement the following BMPs during construction; the BMPs shall be included as notes on final construction plans: - Equipment and activity must not emit dust that is visible crossing the property line, except for short-term activities related to explosive demolition of the boiler building and smokestack. - All exposed surfaces (e.g., parking areas, staging areas, soil piles, active graded areas, excavations, and unpaved access roads) shall be watered two times per day in areas of active construction or as necessary in conjecture with other dust suppression methods (such as gravel application) to appropriately control dust. The County or NCUAQMD may require additional treatment in periods of high wind or other circumstances causing visible dust to be generated by the construction site. - All vehicle speeds on unpaved roads shall be limited to 15 mph, unless the unpaved road surface has been treated for dust suppression with water, rock, wood chip mulch, or other dust prevention measures. - All haul trucks transporting soil, sand, or other loose material off-site shall clean all side boards and headboards of material and be adequately wetted and covered. - Use of mud rumbler mats will be required to reduce off-site tracking of mud and dirt. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day, as necessary. The use of dry power sweeping is prohibited. - All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. - Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes. Clear signage shall be provided for construction workers at all access points. - All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. - Materials screening, transfer points on a belt conveyor, and crushers must have dust control measures such that: • No screening operation, or transfer point on a belt conveyor discharge into the air any visible emissions other than uncombined water vapor, for a period aggregating more than three minutes in any one hour which are 50% as dark or darker in shade as that designated as number one on the Ringelmann Chart, or 10% opacity. • No crusher discharges into the air any visible emissions other than uncombined water vapor, for a period aggregating more than three minutes in any one hour which are 75% as dark or darker in shade as that designated as number one on the Ringelmann Chart, or 15% opacity. • Control measures may include installation and operation of spray bars on all conveyors; installation of shrouds at all drop points; or any other measure(s) deemed as effective as the prior listed measures.	Project Contractor	During Project construction	HCP&BD and NCUAQMD	A note detailing the BMPs shall be placed on all improvement plans. On-site construction manager shall ensure staff is trained and use of BMPs is documented daily.			
AQ-2	<u>Best Management Practices to Reduce Asbestos Emissions During Demolition:</u> The contractor shall implement the following BMPs during abatement and demolition; the BMPs shall be included as notes on final demolition plans:	Project Contractor	During abatement	HCP&BD and NCUAQMD	A note shall be placed on all demolition and/or			

	- Work impacting material containing less than 1% asbestos (unclassified work) shall be performed in accordance with Class II asbestos work protocols as outlined in 8 CCR 1529. - All interior asbestos abatement work impacting asbestos, including Class II and unclassified work, shall be performed within sealed negative-pressure containments. - Negative-pressure containments established at the interior of a structure shall be constructed and vented to the exterior in accordance with 8 CCR 1529. If additional suspect asbestos material is discovered during site work, then work in that area shall stop, the material wetted, and access to the area restricted until an appropriate asbestos characterization can be made.		and demolition		improvement plans. Adherence to BMPs shall be documented on a daily basis			
SECTION 3.3 – BIOLOGICAL RESOURCES								
BIO-1	<u>Implementation of Compensatory Mitigation for Loss of Dark-eyed Gilia:</u> Loss of dark-eyed gilia habitat shall be mitigated through compensatory mitigation at a ratio of no less than 3:1 (area). Prior to issuance of any construction related permits, a Restoration and Monitoring Plan (RMP) shall be submitted for review and approval by the Planning and Building Department after consultation with CDFW. The RMP shall be in substantial conformance with the RMP dated August 4, 2021, prepared by GHD. Both on-site and off-site methods, success criteria, monitoring requirements, and reporting requirements for mitigation shall be conducted as followed: - Pre-construction (non-native removal) surveys for rare plants, including dark-eyed gilia, shall occur at both on-site and off-site mitigation areas identified in the RMP. - Sensitive dark-eyed gilia habitats will be marked with flagging and signage prior to replanting designated on-site restoration areas to avoid disturbing the rare plant population. - The location of the off-site mitigation shall be identified, and all proposed work shall be specific to that location(s). - The established dark-eyed gilia population to be preserved on-site and translocation macroplots shall be searched for dark-eyed gilia during the blooming period. Macroplots measuring approximately 100 square meters (m2) are to be established at the time of translocation in the best available habitat and these will be marked by GPS in the field. - Successful mitigation of impacts to dark-eyed gilia is defined by protecting the remaining rare plant habitat along the southern boundary and translocating the population from the project footprint to suitable restored off-site habitat. - Annual success is defined by a total population estimate for dark-eyed gilia at restoration sites equivalent to the baseline population estimate within the project footprint, to be established by pre-project surveys in May 2022, as detailed in the RMP. - Monitoring shall be implemented for a minimum 5-year period with annual reports provided to the Planning and Building Department. Each report shall identify the expected success criteria, whether the criteria has been	Project Applicant/ Qualified Biologist	Pre-construction surveys prior to construction. Monitoring shall be implemented for a minimum of 5 years	HCP&BD and CDFW	Prior to issuance of any construction related permits			

	satisfied, and remedial actions needed to achieve the success criteria. Monitoring, reporting and corrective actions shall continue until the success criteria has been achieved for two consecutive years starting in year 4. Year 1: After density-based population sampling to obtain baseline population estimates, dark-eyed gilia seeds will be collected from the Project footprint and broadcast at designated restoration macroplots. The remaining population outside of the footprint will be preserved. Year 2-5: Dark-eyed gilia shall be counted and/or systematically sampled at restoration sites. Establishment of total population numbers equal to or greater than the 90 percent confidence interval for the baseline population estimate shall indicate success. Annual monitoring will begin by navigating by GPS to the established macroplots. Transects spaced every 3m will be carefully walked to search for and count dark-eyed gilia plants where they are sparse. If plants become too numerous to reliably count, a systematic sampling scheme comparable to baseline monitoring may be implemented to obtain a good population estimate. The assessment of population health and adaptive management recommendations for additional reseedling shall be included in annual reports submitted to the Planning and Building Department for approval.							
BIO-2	<u>Protect Special Status Terrestrial Mammals:</u> The construction plans will specify that steep-sided excavations capable of trapping mammals shall be ramped or covered if left overnight. No pets (i.e., dogs) shall be allowed on the Project Site during construction. Trash receptacles shall be covered and removed from site at least weekly. Trash shall be managed so that it is not a nuisance, fire hazard, or attract animals. No poisons (including anticoagulant rodenticides) or other potentially injurious materials attractive to mammals shall be utilized or left unattended during construction or operation activities	Project Applicant	During Project construction and operation	HCP&BD	A Note to be placed on all construction plans			
BIO-3	<u>Protect Special Status Bats:</u> Buildings on-site will be demolished in the following two-phase sequence. - The following buildings will be removed as part of the first phase of demolition during daylight hours only (following naming in Appendix C2; WRA 2021a, Table 2, page 4-5). Phase 1 buildings listed below may be removed in any order. - Machine Building - Warehouse - Existing Offices - Brick Silos (all) - Structure (concrete) - Structure 2 (concrete) 3-Story Boiler Building 2-Story Building Near Smokestack - Elevated Water Tanks - Smokestack 12-Story Boiler Building and Attached Structure - Foundations & Structures, Footings	Project Contractor	During demolition	HCP&BD	Prior to issuance of demolition permit, building removal phasing, including proposed times and dates of removal shall be submitted to HCP&BD			

	2. Following removal of the Phase 1 buildings listed above, Phase 2 buildings will be removed in any order and include the Pump House, Sub Fl. 2, and Filter/Softener Tank Building during daylight hours only.							
BIO-4	<u>Protect Special Status Amphibians:</u> - No more than one week prior to commencement of ground disturbance within 50 feet of the anthropogenic rectangular concrete pool, a qualified biologist shall perform a pre-construction survey for NRLF and shall relocate any individuals or egg masses that occur within the work-impact zone to nearby suitable habitat. - If any NRLF are observed during the pre-construction survey, CDFW shall be consulted to determine the best way to avoid impacts to NRLF. Ground-disturbing activities should be conducted during the dry season (May 15-October 15) to minimize take of NRLF. If construction activities are conducted within the dry season (May 15-October 15), exclusion fencing shall be installed around the work area prior to October 15 to prevent NRLF from migrating into work areas. The fencing material and design shall be reviewed and approved by the Planning and Building Department in consultation with CDFW before installation. - In the event a NRLF is encountered on-site during construction, all construction activities will cease until the animal has left the Project area on its own and is no longer in danger of harm. The project construction manager or project biologist will report the sighting to CDFW within 24 hours. No one other than a CDFW-approved biologist is permitted to handle or capture NRLF, and NRLF will not be taken or harassed. - An Environmental Awareness Training will be provided to the construction crew prior to commencement of construction activities. This "tailgate" training is intended to enable the construction crew to be able to identify NRLF and to safely relocate them outside of the Project Site.	Project Applicant/ Qualified Biologist	Prior to Project construction	HCP&BD and CDFW	7 days prior to ground disturbance. Results of Survey shall be provided to HCP&BD. Surveys shall be approved by staff prior to issuance of permit authorizing ground disturbance within designated area.			
BIO-5	<u>Protect Special Status, Migratory, and Nesting Birds:</u> In order to mitigate potential impacts to special status migratory and nesting birds, one of the following measures shall be implemented: 1. If ground disturbance (i.e., ground densification and building demolition) or vegetation clearing is conducted outside the avian nesting season (March 15 – August 15) the applicant, contractor or responsible individual for the construction shall submit a construction timeline indicating dates of work to be implemented to the Planning and Building Department prior to construction or demolition permits and/or commencing of densification, ground disturbance, and/or vegetation clearing. Any deviation from this approved timeline shall require prior approval from the Planning and Building Department. Or 2. If ground disturbance occurs during the nesting season, a qualified ornithologist shall conduct preconstruction surveys within the vicinity of the Project Site to check for nesting activity of native birds and to evaluate the site for presence of raptors and special status bird species in the buildings subject for demolition. The ornithologist shall conduct at minimum a one-day preconstruction survey within the 7-day period prior to vegetation removal, demolition, and ground-disturbing activities. If	Project Applicant/ Qualified Biologist/ Qualified Ornithologist	Prior to and during Project construction	HCP&BD, CDFW, and USFWS	Construction timeline to be submitted prior to any permits issued related to ground disturbance. Surveys shall be completed no more than 7 days prior to ground disturbance according to submitted schedule. Surveys must be approved by staff prior to the issuance of any permits related to			

	ground disturbance, demolition, or vegetation removal work lapses for seven days or longer during the breeding season, a qualified ornithologist shall conduct a supplemental avian pre-construction survey before Project work is reinitiated. The report from the ornithologist shall be submitted to the Planning and Building Department prior to issuance of a Notice to Proceed before commencing demolition or construction activity. If active nests are detected within the construction footprint or up to 500 feet from construction activities, the ornithologist shall flag a buffer around each nest (assuming property access). A plan showing the buffer shall be submitted to the Planning and Building Department prior to commencement of construction activities. Construction activities shall avoid nest sites until the ornithologist determines that the young have fledged, or nesting activity has ceased. If nests are documented outside of the construction (disturbance) footprint, but within 500 feet of the construction area, buffers will be implemented as needed (buffer size dependent on species). Buffer sizes for common species would be determined on a case-by-case basis in consultation with CDFW and, if applicable, with USFWS. Buffer sizes will take into account factors such as (1) noise and human disturbance levels at the construction site at the time of the survey and the noise and disturbance expected during the construction activity; (2) distance and amount of vegetation or other screening between the construction site and the nest; and (3) sensitivity of individual nesting species and behaviors of the nesting birds. If active nests are detected during the survey, the qualified ornithologist shall monitor all nests at least once per week to determine whether birds are being disturbed. Activities that might, in the opinion of the qualified ornithologist, disturb nesting activities (e.g., excessive noise), shall be prohibited within the buffer zone until such a determination is made. If signs of disturbance or distress are observed, the qualified ornithologist shall immediately implement adaptive measures to reduce disturbance. These measures may include, but are not limited to, increasing buffer size, halting disruptive construction activities in the vicinity of the nest until fledging is confirmed or nesting activity has ceased, placement of visual screens or sound dampening structures between the nest and construction activity, reducing speed limits, replacing and updating noisy equipment, separating trucks in queue to distribute idling noise, locating vehicle access points and loading and shipping facilities away from noise-sensitive receptors, reducing the number of noisy construction activities occurring simultaneously, and/or reorienting and/or relocating construction equipment to minimize noise at noise-sensitive receptors. Upon completion of the survey, a memo will be provided to the Planning and Building Department that will describe the methods and results of the survey and any related recommendations. All requirements and recommendations of the ornithologist shall be conditions of the Coastal Development Permit and shall be incorporated into the construction plans.				ground disturbance.			
BIO-5a	<u>Protection of Osprey:</u> Any new Osprey nests established within the Project Site that require relocation will be removed (after nesting has occurred) and replaced at a 1:1 ratio in consultation with CDFW. The Harbor District shall develop an Osprey	Project Applicant/	Prior to and during Project	HCP&BD and CDFW	Prior to ground disturbance, if identified by			

	Management Plan for current and future osprey nests. The Osprey Management Plan shall include performance criteria such as no-net-loss of osprey breeding territories with sufficient alternative nest sites within the Project area, and that any created nest sites are of equal or higher quality than nests removed.	Qualified Biologist	construction and operation		Ornithologist within 7 days of construction schedule pursuant to MM 5.			
BIO-6	<u>Limits on Soil Densification Construction to Avoid Impacts to Marine Mammals:</u> When soil densification construction occurs within the Phase 2 Grow-Out Module footprint as shown in Image 4-7 above (Appendix J, Illingworth and Rodkin 2021), soil densification shall only occur when the tidal surface water elevation is below the 330-foot (100 meter) radius where Level B injury could occur. Final construction plans shall show the tidal elevation that corresponds with the 330-foot radius shown in Figure 2 of the Project's Hydroacoustic, Noise, and Vibration Assessment (Appendix J, Illingworth and Rodkin 2021). In addition, final construction plans shall also show the explicit portion of the Phase 2 Grow-Out Module required to adhere to soil densification construction during low tide conditions.	Project Applicant/ Project Contractor	Prior to construction of Phase 2 Grow-Out Module	HCP&BD	A note shall be placed on Final Construction Plans.			
BIO-6a	<u>Protection of Longfin Smelt:</u> The Humboldt Bay Harbor District shall mitigate for the potential loss of Longfin Smelt larvae due to entrainment by the intakes. The number of larvae that could potentially be entrained by the intakes is currently estimated to be approximately 24,000. A more precise number will be confirmed when monthly larval surveys are completed in December 2022 followed by entrainment modeling. Mitigation shall consist of the following: 1. Habitat creation or enhancement to provide Longfin Smelt spawning, rearing, or nursery habitat capable of producing the number of Longfin Smelt larvae lost to entrainment. Habitat creation or enhancement shall be within tributaries of Humboldt Bay in areas of fresh and/or brackish water and shall create habitat suitable for spawning and may include debris (e.g., pile) removal. 2. The area of habitat to be provided will be based on the area needed to support the number of spawning female Longfin Smelt needed to provide the target number of larvae. The mitigation will be based on an estimate that a single female Longfin Smelt requires 43 square feet (4 square meters) for spawning. 3. For this mitigation measure, the number of larvae produced per female is 1,000. 4. The total mitigation area will be calculated on a 1:1 basis. The equation to determine mitigation area will be: ([larvae entrained]/[1,000 larvae per female])*(43 square feet). Based on current sampling and calculations the mitigation area would be (24,000/1,000)*43 = 1,032 square feet of habitat replacement area. Habitat restoration to mitigate for Longfin Smelt entrainment shall be completed prior to operation of Phase 1 of the facility.	Project Applicant/ Qualified Biologist	Prior to operation of Phase 1 of the facility	HCP&BD and CDFW	Prior to occupancy of Phase 1 and prior to the issuance of any construction permits related to ocean water intake upgrades.			
BIO-7a	<u>Implement Compensatory Mitigation for Sensitive Natural Communities:</u> Loss of Sensitive Natural Communities shall be mitigated through compensatory mitigation based on the ratios (acreages) stated below. Mitigation shall include removal of	Project Applicant/		HCP&BD and CDFW	Prior to occupancy of Phase 1			

	invasive European beachgrass, yellow bush lupine scrub, and other non-natives on- and off-site in locations where restoration planting is being conducted. On-site restoration is preferred by jurisdictional permitting resource agencies. - Coastal Brambles: No less than 3:1, on-site only - Dune Mat: No less than 2:1, on-site and off-site (BIO-1 can be combined with this requirement in which case the mitigation ratio is 3:1) - Pre-construction surveys for rare plants shall occur at both on-site and off-site mitigation areas, as identified in the RMP - Annual success criteria shall be defined as follows in Table 3.3-3: Table 3.3-3 Annual Success Criteria <table><tr><td rowspan="5">Invasive Vegetation</td><td>1</td><td>≥50% Reduction in target invasive plant cover (absolute) at dune restoration sites.</td></tr><tr><td>2</td><td>≥65% Reduction in target invasive plant cover at dune restoration sites.</td></tr><tr><td>3</td><td>≥80% Reduction in target invasive plant cover at dune restoration sites.</td></tr><tr><td>4</td><td>≥90% Reduction in target invasive plant cover at dune restoration sites.</td></tr><tr><td>5</td><td>≥95% Reduction in target invasive plant cover at dune restoration sites.</td></tr><tr><td>Native Dune Mat</td><td>5</td><td>Dune restoration areas (at all sites) are dominated by native dune mat species (≥50% relative percent cover).</td></tr><tr><td>Native Coastal Brambles</td><td>5</td><td>Coastal brambles restoration areas are dominated by native species associated with the community (≥50% relative percent cover).</td></tr><tr><td>Maintenance</td><td>All Years</td><td>The restoration crew completed invasive plant removal on schedule.</td></tr></table>	Invasive Vegetation	1	≥50% Reduction in target invasive plant cover (absolute) at dune restoration sites.	2	≥65% Reduction in target invasive plant cover at dune restoration sites.	3	≥80% Reduction in target invasive plant cover at dune restoration sites.	4	≥90% Reduction in target invasive plant cover at dune restoration sites.	5	≥95% Reduction in target invasive plant cover at dune restoration sites.	Native Dune Mat	5	Dune restoration areas (at all sites) are dominated by native dune mat species (≥50% relative percent cover).	Native Coastal Brambles	5	Coastal brambles restoration areas are dominated by native species associated with the community (≥50% relative percent cover).	Maintenance	All Years	The restoration crew completed invasive plant removal on schedule.	Qualified Biologist						
Invasive Vegetation	1		≥50% Reduction in target invasive plant cover (absolute) at dune restoration sites.																									
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Maintenance	All Years	The restoration crew completed invasive plant removal on schedule.																										
BIO-7b	<u>Construction Protocol for Protection of ESHA</u> : Prior to issuance of any permits, orange net or other appropriate fencing shall be placed around the 35-foot ESHA setback or at the limit of the Fire Road encroachment. The fencing shall remain in place throughout the construction period to prevent vehicles, equipment, or materials from entering the ESHA. The grading plans for the project site shall design finished pad grades to not result in grade changes at the edge of the buffer or fire road within the ESHA buffer.	Project Contractor/ Project Engineer	Prior to issuance of any permits	HCP&BD	Prior to issuance of any permits; AQ																							
HWG-1	<u>Implement Stormwater Pollution Plan (SWPPP)</u> : Refer to Chapter 3.9 (Hydrology and Water Quality), Impact (a), for the full text of Mitigation Measure HWQ-1: Implement Stormwater Pollution Prevention Plan (SWPPP).	Project Contractor	Prior to and during Project construction	HCP&BD	A Note shall be placed on all improvement plans																							
HWG-3	<u>Protection of Water Quality During Pile Removal</u> : Refer to Chapter 3.9 (Hydrology and Water Quality), Impact (a), for the full text of Mitigation Measure HWQ-3: Protection of Water Quality During Pile Removal.	Project Contractor/ Crane and Excavator Operators	During Project construction	HCP&BD, Harbor District, CCC and RWQCB	Applicant shall submit proof that HWQ-3 has been complied with prior to occupancy of Phase 1																							
GEO-2	<u>Construction Best Management Practices</u> : Refer to Chapter 3.2 (Geology and Soils), Impact (b), for the full text of Mitigation Measure GEO-2: Construction Best Management Practices.	Project Contractor	During Project construction	HCP&BD	A Note shall be placed on the plans																							
Spartina PEIR BIO-1	<u>Minimize Effects of Mechanical Spartina Removal Methods to Special Status Fish Species</u> : On a project specific basis, a habitat analysis shall be done to determine if special status fish species have the potential to occur. If they could occur, then	Qualified Biologist	Prior to Project construction	HCP&BD, CDFW,	Prior to occupancy of Phase 1 and prior																							

	surveys may be done to establish that these species are absent, using protocols approved by USFWS or NMFS. If such surveys are not conducted, then the species will be assumed present. If special status fish species are present, then Spartina control methods will be selected that minimize potential impacts. To minimize erosion effects, control methods that are most likely to cause erosion (i.e., grinding, tilling, disking and digging/excavating) will not occur within 15 ft of any aquatic habitat containing special status fish species, but this distance could be increased depending on site specific conditions, such as soil stability and bank slopes. Additionally, amphibious vehicles will not contact the channel substrate where special status fish species are present, and the vehicles will be operated in such a manner that they avoid causing erosion into the channels. Furthermore, no flooding will be conducted in areas where special status fish species are present. Treatments that do not involve ground disturbance, such as top mowing, crushing, and covering will be the only methods used in close proximity (e.g., within 15 ft) to special status fish species. This mitigation measure is intended to avoid take as defined by the ESA and California ESA (H.T. Harvey & Associates and GHD 2013, page 62).			USFWS, and NMFS	to the issuance of any construction permits related to ocean water intake upgrades, documentation shall be provided to HCP&BD			
Spartina PEIR BIO-2	<u>Minimize Noise Effects:</u> Breeding special status birds could be present based on habitat and time of year. The breeding season is generally October through mid-August. On a project specific basis, a habitat analysis shall be done to determine if special status bird species have the potential to occur. If the habitat would support special status birds, and if eradication is planned to occur when these birds may be breeding, then surveys will be done to establish that these species are absent, using protocols approved by USFWS. If such surveys are not conducted, then the species will be assumed present. Response of birds to noise varies by species as well as site specific factors including ambient noise levels, topography and vegetation. A limit of 60 dB reaching breeding songbirds has recently been advocated for the by the California Department of Fish and Wildlife (see ICF Jones and Stokes 2009 as cited in H.T. Harvey and GHD 2013). For the purpose of this PEIR, if breeding birds are known or assumed present within close proximity to Spartina control activities than actions will be taken to ensure that ≤60 dB reaches the breeding area. Actions may include the use of sound measuring devices to determine the range of noise production and limit Spartina control methods accordingly (i.e., use quieter methods near breeding special-status birds) (From 2013 Spartina PEIR, H.T. Harvey & Associates and GHD 2013, page 63).	Qualified Biologist	Prior to Project construction	HCP&BD and CDFW	Prior to occupancy of Phase 1 and prior to the issuance of any construction permits related to ocean water intake upgrades, documentation shall be provided to HCP&BD			
Spartina PEIR BIO-3	<u>Minimize Impacts to Special Status Plant Species:</u> On a site specific basis, a habitat analysis shall be done to determine if special status plant species have the potential to occur. If they could occur, then surveys may be done to establish that these species are absent, using protocols approved by CDFW. If such surveys are not conducted, then the species will be assumed present. If special status plant species are present, then Spartina control methods will be selected that avoid or minimize potential impacts. Staked locations of special status plant populations or special status plant habitat shall be recorded, and field crews on foot or in vehicles shall be instructed to avoid and protect special status plant populations or plant habitat. Impact to the endangered dune plants beach layia and Humboldt Bay wallflower will be avoided by selecting access routes that do not contain these plants. For Humboldt Bay owl's clover and Point Reyes bird's beak, avoidance is determined	Qualified Biologist	Prior to Project construction	HCP&BD and CDFW	Prior to occupancy of Phase 1 and prior to the issuance of any construction permits related to ocean water intake upgrades, documentation shall be provided to HCP&BD			

	not to be necessary because temporary effects during Spartina control are mitigated by the explosive increase in population that has been demonstrated after Spartina control (Pickart 2012 as cited in H.T. Harvey and GHD 2013). For other annual special status plants such as Western sand spurrey, avoidance shall occur by using only treatment methods that are highly selective; for example heavy equipment will not be operated where these plants or their habitat occur. For perennial plants such as Lyngbye's sedge, a qualified botanist shall stake out locations of special status plants and provide training to control crews to ensure that they minimize impacts to these plants. If special status plant populations or habitat occur near the high tide line, wrack and large deposits of mown Spartina shall be removed during the growing season. To avoid trampling of special status plant species, in areas where frequent access will occur, paths shall be marked and used that avoid special status plant species to the maximum extent possible (H.T. Harvey & Associates and GHD 2013, page 64).							
Spartina PEIR BIO-3	<u>Avoid Northern Harrier and Short-Eared Owl Nests:</u> The breeding season is March-August for northern harriers (Loughman and McLandress 1994 cited in H.T. Harvey and GHD 2013) and March-July for short-eared owls (Gill 1977 cited in H.T. Harvey and GHD 2013). If Spartina control activities are planned to occur during these periods (i.e., between March-August) then a qualified biologist will assess whether there is potential nesting habitat for northern harrier or short-eared owls. If there is potential habitat, it will be avoided, or a qualified biologist will survey the potential habitat immediately prior to Spartina control work and if nests are found then a minimum 300 ft buffer zone will be delineated. The buffer zone will be avoided by Spartina control workers and equipment (From 2013 Spartina PEIR, H.T. Harvey & Associates and GHD 2013, page 63).	Qualified Biologist	Prior to Project construction	HCP&BD and CDFW	Prior to occupancy of Phase 1 and prior to the issuance of any construction permits related to ocean water intake upgrades, documentation shall be provided to HCP&BD			
Spartina PEIR BIO-5	<u>Avoid Impacts to Eelgrass:</u> - Workers removing Spartina in areas with the potential for eelgrass shall be trained to recognize eelgrass and the mudflats that are habitat for eelgrass. Training shall be conducted by a qualified biologist. Only methods that avoid physical disturbance to eelgrass plants shall be used in close proximity to eelgrass, such as top mowing and excavation. With this mitigation measure, there will be no impact to eelgrass (H.T. Harvey & Associates and GHD 2013, page 66-67). <u>Temporary Loss of Habitat to Northern Harrier and Short-Eared Owl:</u> - The northern harrier may experience temporary and limited loss of nesting and foraging habitat when Spartina infested areas are treated. Similarly, the short-eared owl may temporarily lose a limited amount of breeding habitat. Effects on these species will be short-term (up to two years but likely less). Based on the short-term nature of these impacts, effects are less than significant, and no mitigation is required (From 2013 Spartina PEIR, H.T. Harvey & Associates and GHD 2013, page 63).	Qualified Biologist	Prior to Project construction	HCP&BD and CDFW	Prior to occupancy of Phase 1 and prior to the issuance of any construction permits related to ocean water intake upgrades, documentation shall be provided to HCP&BD			
Spartina PEIR BIO-6	<u>Reduce Noise near Marine Mammals:</u> If marine mammals are present within 200 feet of Spartina control operations, then methods which cause relatively high levels of noise (i.e., brushcutters, the Marsh Master, and airboats) shall not be used. Other construction methods which do not generate a relatively high level of noise can be used (From 2013 Spartina PEIR, H.T. Harvey & Associates and GHD 2013, page 67).	Qualified Biologist	Prior to Project construction	HCP&BD, CDFW, and NMFS	Prior to occupancy of Phase 1 and prior to the issuance of any construction permits related to ocean water			

					intake upgrades, documentation shall be provided to HCP&BD			
Spartina PEIR WQ-3	<u>Minimize Fuel and Petroleum Spill Risks</u> : Refer to Chapter 3.9 (Hydrology and Water Quality), Impact (a), for the full text of Mitigation Measure Spartina PEIR WQ-3: Minimize Fuel and Petroleum Spill Risks.	Project Contractor	During Project construction	HCP&BD and NCRWQCB	A note detailing the spill prevention plan criteria shall be placed on all improvement plans. On-site construction manager shall ensure staff is trained and use of BMPs is documented daily. Prior to occupancy of Phase 1 and prior to the issuance of any construction permits related to ocean water intake upgrades.			
Spartina PEIR WQ-6	<u>Designate Ingress/Egress Routes</u> : Refer to Chapter 3.9 (Hydrology and Water Quality), Impact (a), for the full text of Mitigation Measure Spartina PEIR WQ-6: Designate Ingress/Egress Routes.	Project Applicant/ Project Contractor	Prior to and during Project construction	HCP&BD	Prior to occupancy of Phase 1 and prior to the issuance of any construction permits related to ocean water intake upgrades, documentation shall be provided to HCP&BD			
Spartina PEIR WQ-7	<u>Removal of Wrack</u> : Refer to Chapter 3.9 (Hydrology and Water Quality), Impact (a), for the full text of Mitigation Measure Spartina PEIR WQ-7: Removal of Wrack.	Project Construction/ Qualified Biologist	Prior to Project construction	HCP&BD	Prior to occupancy of Phase 1 and prior to the issuance of any construction permits related to ocean water intake upgrades, documentation			

					shall be provided to HCP&BD			
Spartina PEIR HHM-2	<u>Accidents Associated with Release of Chemicals and Motor Fuel</u> : Refer to Chapter 3.9 (Hydrology and Water Quality), Impact (a), for the full text of Mitigation Measure Spartina PEIR HHM-2: Accidents Associated with Release of Chemicals and Motor Fuel.	Project Contractor/ Equipment Operators	Prior to and during Project construction and operation	HCP&BD and NCRWQCB	Prior to occupancy of Phase 1 and prior to the issuance of any construction permits related to ocean water intake upgrades, documentation shall be provided to HCP&BD			
SECTION 3.4 – CULTURAL RESOURCES								
CR-1	<u>Implementation of Protocols for Cultural Monitoring During Ground Disturbance</u> : NAFC shall retain a qualified cultural resource monitor who is approved by the Wiyot Tribe, Bear River Band of the Rohnerville Rancheria, and the Blue Lake Rancheria to monitor ground disturbing activities related to this Project in areas the Tribes deem culturally sensitive. The three Tribal Historic Preservation Officers or their functional equivalent shall be contacted to set up and implement a cultural monitoring contract when a construction schedule has been determined. Advanced coordination with the qualified cultural monitor is required. As landowner, the Humboldt Bay Harbor, Recreation, and Conservation District (landowner) shall be provided with written verification for compliance. NAFC shall adhere to the Standard Operating Procedures for Inadvertent Archaeological Discovery (General), as detailed in the Archaeological and Historical Resource Investigation Report prepared for the Project by Roscoe and Associates (2020).	Project Applicant/ Qualified Cultural Resource Monitor	During Project construction	HCP&BD, NAHC, and THPOs	Prior to issuance of a permit for ground-disturbing activities, agreement for cultural resource monitoring shall be provided to HCP&BD			
CR-2	<u>Implementation of Inadvertent Discovery Protocols</u> : If cultural or historic-era resources are encountered during construction activities, the contractor onsite shall cease all work in the immediate area and within a 50-foot buffer of the discovery location. A qualified archaeologist, as well as the Tribal Historic Preservation Officers for the Bear River Band Rohnerville Rancheria, Blue Lake Rancheria, and Wiyot Tribe shall be contacted to evaluate the discovery and, in consultation with the applicant and lead agency, develop a treatment plan in any instance where significant impacts cannot be avoided. The Humboldt Bay Harbor, Recreation, and Conservation District (landowner) shall also be notified. In the event of inadvertent discoveries, the Standard Operating Procedures as outlined by Roscoe and Associates (2020) shall be followed. NAFC shall adhere to the Standard Operating Procedures for Inadvertent Archaeological Discovery (General) and Standard Operating Procedures for Documenting Inadvertent Archaeological Discoveries, as detailed in the Archaeological and Historical Resource Investigation Report prepared for the Project by Roscoe and Associates (2020).	Project Contractor/ Qualified Archaeologist	During Project construction	HCP&BD, NAHC, and THPOs	A note shall be placed on all construction plans			
CR-3	<u>Minimize Impacts to Unknown Archaeological Resources or Human Remains if Encountered</u> : If human remains are discovered during Project implementation, all work shall be halted and the Humboldt Bay Harbor, Recreation, and Conservation District (landowner) and tribal representatives shall be contacted immediately. The Humboldt Bay Harbor, Recreation, and Conservation District shall contact the	Project Contractor	During Project construction	HCP&BD, County Coroner, NAHC, and THPOs	A note shall be placed on all construction plans			

	County Coroner immediately and the Coroner would evaluate the find to determine the subsequent course of action, including notification of tribal representatives. In the event of inadvertent discoveries, the Standard Operating Procedures as outlined by Roscoe and Associates (2020) shall be followed, including Standard Operating Procedures for Inadvertent Discovery of Native American Remains and Grave Goods.							
	SECTION 3.6 – GEOLOGY AND SOILS							
GEO-1	<u>Implement Geotechnical Recommendations:</u> As part of the Project design process, NAFC has engaged a California-registered Geotechnical Engineer to conduct a design-level geotechnical study for the Project. NAFC shall ensure that the Project is designed to comply with the site-specific recommendations identified in the Project's geotechnical report prepared for the Project by SHN (2020) and any subsequent geotechnical recommendations prepared as the Project's design advances. Geotechnical recommendations require designs in accordance with the seismic and foundation design criteria, as well as site preparation and grading recommendations included in the report. The geotechnical recommendations shall be incorporated into the final plans and specifications for the Project and shall be implemented during construction.	California-Registered Geotechnical Engineer/ Project Contractor	Prior to and during Project construction	HCP&BD	Adherence to geotechnical recommendations shall be placed on all construction plans			
GEO-2	<u>Construction Best Management Practices:</u> The contractor shall implement BMPs during construction, including the following BMPs from the current California Stormwater BMP Handbook for Construction: EC-1: Scheduling; EC-2: Preservation of Existing Vegetation; NS-2: Dewatering Operations; NS-9: Vehicle Equipment and Fueling; NS-10: Vehicle & Equipment Maintenance; WM-2: Material Use; WM-4: Spill Prevention and Control. Additionally, the following conditions shall be required during construction: - Silt fences shall be deployed as needed at onshore construction areas to prevent any sediment from flowing into Humboldt Bay. Required silt fence and erosion control locations and specifications for installation shall be included in the final construction plan set. If the silt fences are not adequately containing sediment, construction activity shall cease until remedial measures are implemented that prevents sediment from entering the waters east of the construction area; - Construction materials and debris shall not be placed or stored where it may be allowed to enter into or washed by rainfall into Humboldt Bay; - Best Management Practices (BMPs) shall be implemented to prevent: 1) entry of stormwater runoff into Humboldt Bay during construction, 2) the entrainment of excavated contaminated materials leaving the site, and 3) the entry of polluted stormwater runoff into coastal waters during the transportation and storage of excavated materials. These BMPs will be included in the Stormwater Pollution Prevention Program (SWPPP), which is required for the Project (see Section 3.9 – Hydrology and Water Quality); • 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	Project Contractor	During Project construction	HCP&BD	A note shall be placed on all construction plans. A note detailing the BMPs shall be placed on all improvement plans. On-site construction manager shall ensure staff is trained and use of BMPs is documented daily.			

	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). - Non-essential work vehicles and equipment shall be parked at least 100 feet away from the shoreline; - Sufficient erosion control supplies shall be maintained on-site at all times, available for prompt use in areas susceptible to erosion during rain events; - Disturbance of existing vegetation shall be minimized to only areas approved for development; - Dewatering operations shall be conducted in the event that groundwater is encountered at the work location and stored or disposed of appropriately. Any groundwater encountered during demolition and construction that requires removal would be pumped into appropriate containers, such as Baker tanks for characterization. Excavation depths for construction are not anticipated to extend to groundwater and the use of dewatering wells for the Project is not planned (SHN 2020b). Water sourced from dewatering shall not be discharged to on-site one-parameter wetlands or Humboldt Bay; - 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; - Vehicle and equipment maintenance shall not occur within 100 feet of Humboldt Bay or wetlands; - As required in the SWPPP, contractor shall ensure that the site is prepared with BMPs prior to the onset of any storm predicted to receive 0.5 inches or more of rain over 24 hours; - All erosion and sediment control measures shall be maintained in accordance to their respective BMP fact sheet until disturbed areas are stabilized. Erosion and sediment control measures shall be explicitly included in the final construction plan set and shall be conditions of the Coastal Development Permit; and - The Stormwater Pollution Prevention Plan (SWPPP) may not cover all the situations that arise during construction due to unanticipated field conditions. Variations may be made to the SWPPP in emergency circumstances in the field subject to the approval of or at the direction of The Regional Water Quality Control Board and NAFC Project Manager or Construction Manager.							
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GEO-3	<u>Inadvertent Discovery of Paleontological Resources</u> : In the event that fossils are encountered during construction (i.e., bones, teeth, or unusually abundant and well-preserved invertebrates or plants), construction activities shall be diverted away from the discovery within 50 feet of the find, and a professional paleontologist shall be notified to document the discovery as needed, to evaluate the potential resource, and to assess the nature and importance of the find. Based on the scientific value or uniqueness of the find, the paleontologist may record the find and allow work to continue, or recommend salvage and recovery of the material, if it is determined that the find cannot be avoided. The paleontologist shall make recommendations for any necessary treatment that is consistent with currently accepted scientific practices. Any fossils collected from the area shall then be deposited in an accredited and permanent scientific institution where they would be properly curated and preserved.	Project Contractor/ Qualified Paleontologist	During Project construction	HCP&BD	A note shall be placed on all construction plans			
HWQ-1	<u>Implement Stormwater Pollution Prevention Plan (SWPPP)</u> : Refer to Section 3.9 (Hydrology and Water Quality), for the full text of Mitigation Measure HWQ-1 Implement Stormwater Pollution Prevention Plan.	Project Contractor	Prior to and during Project construction	HCP&BD	A note shall be placed on all construction plans			
Spartina PEIR GS-1/ WQ-5	<u>Erosion Control</u> : Spartina control methods which directly impact the soil (i.e., grinding, tilling, disking, digging and excavation) shall not be conducted on salt marsh areas that are within 15 ft of a salt marsh edge that is directly exposed to wave action. Other control methods can be used in these areas. This mitigation measure only applies to salt marsh edges along Humboldt Bay proper where wave action is relatively high, not attached sloughs/channels nor the Eel River or Mad River estuaries.	Project Operator	Prior to and during Project construction and operation	HCP&BD	Prior to occupancy of Phase 1 and prior to the issuance of any construction permits related to ocean water intake upgrades, documentation shall be provided to HCP&BD			
SECTION 3.8 – HAZARDS AND HAZARDOUS MATERIALS								
HAZ-1	<u>Implement Recommendations of Interim Measures Work Plan</u> : 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	Project Applicant/ Project Contractor	Prior to and during Project demolition and construction	HCP&BD, NCRWQCB, DEH, CalRecycle, and NCUAQMD	<u>Recommendations of Interim Measures Work Plan</u> shall be placed on all construction plans			

	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							
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	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 offsite 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 runoff 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							
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	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.							
AQ-2	<u>Best Management Practices to Reduce Asbestos Emissions During Demolition:</u> 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.	Project Contractor	During abatement and demolition	HCP&BD and NCUAQMD	A note shall be placed on all construction plans with conformance verified on a monthly basis during the duration of development			
GEO-2	<u>Construction Best Management Practices:</u> Refer to Section 3.2 (Geology and Soils), Impact (b), for the full text of Mitigation Measure GEO-2: Construction Best Management Practices.	Project Contractor	During Project construction	HCP&BD	A note shall be placed on all construction plans			
HWQ-1	<u>Implement Stormwater Pollution Prevention Plan (SWPPP):</u> Refer to Section 3.9 (Hydrology and Water Quality), Impact (a), for the full text of Mitigation Measure HWQ-1: Implement SWPPP.	Project Contractor	Prior to and during Project construction	HCP&BD	A note shall be placed on all construction plans			

HWQ-3	<u>Protection of Water Quality During Pile Removal</u> : 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).	Project Contractor/ Crane and Excavator Operators	During Project construction	HCP&BD and Harbor District	A note shall be placed on all construction plans			
Spartina PEIR WQ-3	<u>Minimize Fuel and Petroleum Spill Risks</u> : 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).	Project Contractor	During Project construction	HCP&BD and NCRWQCB	A note detailing the spill prevention plan criteria shall be placed on all improvement plans. On-site construction manager shall ensure staff is trained and use of BMPs is documented daily. Prior to occupancy of Phase 1 and prior to the issuance of any construction permits related to ocean water intake upgrades.			
Spartina PEIR HHM-2	<u>Accidents Associated with Release of Chemicals and Motor Fuel</u> : 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)	Project Contractor/ Equipment Operators	Prior to and during Project construction and operation	HCP&BD and NCRWQCB	A note detailing the Hazardous Materials Spill Prevention Control and Countermeasures criteria shall be placed on all improvement plans. On-site construction manager shall ensure staff is trained and use of BMPs is documented daily. Proof of Approval by the NCRWQCB is required prior to			

permit issuance for construction activities.

Prior to occupancy of Phase 1 and prior to the issuance of any construction permits related to ocean water intake upgrades.

SECTION 3.9 – HYDROLOGY AND WATER QUALITY

HWQ-1	<u>Implement BMPs as part of Construction Permitting and Stormwater Pollution Prevention Plan (SWPPP) for Terrestrial Development:</u> The Project will implement, at a minimum, the list of Best Management Practices identified below as part of approved construction permits and as part of compliance with State Water Resources Control Board (Water Board) Order No. 2009-0009-DWQ, Waste Discharge Requirements for Discharges of Stormwater Runoff Associated with Construction and Land Disturbance Activities. NAFC will include these requirements on all construction plans and submit permit registration documents (notice of intent, risk assessment, site maps, Stormwater Pollution Prevention Plan (SWPPP), annual fee, and certifications) to the Water Board. The SWPPP will address pollutant sources, BMPs, and other requirements specified in the Order. The following BMPs are the minimum necessary to reduce potential impacts to a less than significant level: <u>General Construction</u> a) Construction activities shall be scheduled and sequenced to minimize the areal extent and duration of site disturbance at any time. b) Drainage from outside the construction area shall be directed away from or around the site through use of berms, ditches, or other structures to divert surface runoff. c) Install weed-free fiber rolls, straw-wattles, coir logs, silt fences, or other effective devices along locations where water drain off the construction site. d) All graded slopes shall receive slope protection measures such as fiber rolls, drainage ditches, or erosion control fabrics to minimize the potential for concentrated surface runoff to cause erosion. e) Implement wind erosion or dust control procedures consisting of applying water or other dust palliatives as necessary to prevent or alleviate dust nuisance generated by construction activities. The contractor may choose to cover small stockpiles or areas as an alternative to applying water or other dust palliatives. f) Control water application rates to prevent runoff and ponding. Repair leaks from water trucks and equipment immediately. <u>Hazardous Materials</u>	Project Contractor	Prior to and during Project construction	HCP&BD	A note detailing the BMPs and SWPPP criteria shall be placed on all improvement plans. On-site construction manager shall ensure staff is trained and use of BMPs is documented daily.			
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	a) Hazardous materials shall be stored in areas protected from rain, provide secondary containment and must be a minimum of 100 feet from any wetland or Environmentally Sensitive Habitat Area. b) Implement the following hazardous materials handling, storage, and spill response practices to reduce the possibility of adverse impacts from use or accidental spills or releases of contaminants: i. Conduct all refueling and servicing of equipment more than 100 feet from any wetland or Environmentally Sensitive Habitat Area with absorbent material or drip pans underneath to contain spilled fuel. Collect any fluid drained from machinery during servicing in leak-proof containers and deliver to an appropriate disposal or recycling facility. ii. Prevent raw cement; concrete or concrete washings; asphalt, paint, or other coating material; oil or other petroleum products; or any other substances that could be hazardous to aquatic life from contaminating the soil or surface water. <u>Dewatering and Treatment Controls</u> In the event dewatering is determined to be necessary the following steps shall be taken: a) Prepare a dewatering plan prior to excavation. b) Impound dewatering discharges in sediment retention basins or other holding facilities to settle the solids and provide treatment prior to discharge to receiving waters as necessary to meet Basin Plan water quality objectives.							
HWQ-2	<u>Implement BMPs as part of Construction Permitting and Stormwater Pollution Prevention Plan (SWPPP) for the Water Intakes:</u> The Harbor District shall implement, at a minimum, the list of Best Management Practices identified below as part of approved construction permits and as part of compliance with State Water Resources Control Board (Water Board) Order No. 2009-0009-DWQ, Waste Discharge Requirements for Discharges of Stormwater Runoff Associated with Construction and Land Disturbance Activities. The Harbor District will include these requirements on all construction plans and submit permit registration documents (notice of intent, risk assessment, site maps, Stormwater Pollution Prevention Plan (SWPPP), annual fee, and certifications) to the Water Board. The SWPPP will address pollutant sources, BMPs, and other requirements specified in the Order. The following BMPs are the minimum necessary to reduce potential impacts to a less than significant level: <u>General Construction</u> a) Construction activities shall be scheduled and sequenced to minimize the areal extent and duration of site disturbance at any time. b) Drainage from outside the construction area shall be directed away from or around the site through use of berms, ditches, or other structures to divert surface runoff. c) Install weed-free fiber rolls, straw-wattles, coir logs, silt fences, or other effective devices along locations where water drain off the construction site.	Harbor District/ Project Contractor	Prior to and during Project construction	HCP&BD and SWRCB	A note detailing the BMPs and SWPPP criteria shall be placed on all improvement plans. On-site construction manager shall ensure staff is trained and use of BMPs is documented daily.			

	d) All graded slopes shall receive slope protection measures such as fiber rolls, drainage ditches, or erosion control fabrics to minimize the potential for concentrated surface runoff to cause erosion. e) Implement wind erosion or dust control procedures consisting of applying water or other dust palliatives as necessary to prevent or alleviate dust nuisance generated by construction activities. The contractor may choose to cover small stockpiles or areas as an alternative to applying water or other dust palliatives. f) Control water application rates to prevent runoff and ponding. Repair leaks from water trucks and equipment immediately. <u>Hazardous Materials</u> a) Hazardous materials shall be stored in areas protected from rain, provide secondary containment and must be a minimum of 100 feet from any wetland or Environmentally Sensitive Habitat Area. b) Implement the following hazardous materials handling, storage, and spill response practices to reduce the possibility of adverse impacts from use or accidental spills or releases of contaminants: i. Conduct all refueling and servicing of equipment more than 100 feet from any wetland or Environmentally Sensitive Habitat Area with absorbent material or drip pans underneath to contain spilled fuel. Collect any fluid drained from machinery during servicing in leakproof containers and deliver to an appropriate disposal or recycling facility. ii. Prevent raw cement; concrete or concrete washings; asphalt, paint, or other coating material; oil or other petroleum products; or any other substances that could be hazardous to aquatic life from contaminating the soil or surface water. <u>Dewatering and Treatment Controls</u> In the event dewatering is determined to be necessary the following steps shall be taken: a) Prepare a dewatering plan prior to excavation. b) Impound dewatering discharges in sediment retention basins or other holding facilities to settle the solids and provide treatment prior to discharge to receiving waters as necessary to meet Basin Plan water quality objectives.							
HWQ-3	<u>Protection of Water Quality During Pile Removal:</u> The following requirements shall be implemented during the removal of piles in and near the waters of Humboldt Bay. A Harbor District staff or representative will be present to ensure adherence to these requirements. - Neither the barge nor the tug will anchor during the project. The barge may attach to existing piles in order to maintain its position. - Piles will be removed during a tide of sufficient elevation to float the barge and tug boat adjacent to the piles being removed without scarring the mudflats or injuring eelgrass. - Grounding of the barge is not permitted.	Project Contractor/ Crane and Excavator Operators	During Project construction	HCP&BD and Harbor District	A note shall be placed on all plans related to pile removal. Prior to occupancy of Phase 1 and prior to the issuance of any construction permits related to ocean water intake upgrades,			

	- A floating containment boom shall be installed and maintained around each pile being removed to collect any debris Including debris floating below the surface but not sinking to the bottom, weighted plastic mesh (similar to orange construction fencing) will be attached to the boom and extended across the area surrounding the pile. If debris sinks to the bottom, then it shall be removed by a diver. - Any equipment used shall be without leaks of any coolant, hydraulic fluid, transmission fluid, or petroleum products. All equipment shall be checked before use in order certify that there are no fluid leaks. A spill response kit, including oil absorbent pads shall be on-site to collect any petroleum product accidently released. - Crane excavator and tug operators shall be experienced with vibratory pile removal. - The crane or excavator operator shall break the soil/pile bond prior to pulling in order to minimize pile breakage and sediment adhesion. - Piles shall be removed slowly to limit sediment disturbance. - Piles shall not be hosed off, scraped, or otherwise cleaned once they are removed from the sediment. - Piles shall be placed in a containment area on the barge to capture sediment attached to the piles. - The containment area shall include a structure around the perimeter which precludes sediment or contaminated water from reentering the bay. - Holes left in the sediment by the removed pilings will not be filled. They are expected to naturally fill. - Piles and debris shall be removed from the barge and moved to a designated site for disposal preparation in such a manner as to prevent <u>release of debris or contaminated material</u>. Prior to disposal, the piles and debris will be stored on paved areas, <u>in containers, or on impermeable material</u>. <u>Debris will be stored</u> covered with tarps and surrounded by a soil erosion boom in order to prevent potential leaching or discharge of debris or contaminated material. - All removed piles or portions of piles shall be disposed of at an authorized facility. Piles or portions of piles shall not be re-used in Humboldt Bay or along shoreline areas. - Land operations shall not be conducted in wetlands in proximity to the staging site.				documentation shall be provided to HCP&BD			
GEO-2	<u>Construction Best Management Practices</u> : Refer to Chapter 3.2 (Geology and Soils), Impact (b), for the full text of Mitigation Measure GEO-2: Construction Best Management Practices.	Project Contractor	During Project construction	HCP&BD	A note detailing the BMPs shall be placed on all improvement plans. On-site construction manager shall ensure staff is trained and use of BMPs is			

					documented daily.			
HAZ-1	<u>Implement Recommendations of Interim Measures Work Plan:</u> Refer to Chapter 3.8 (Hazards and Hazardous Conditions), Impact HAZ-b, for the full text of Mitigation Measure HAZ-1: Implement Recommendations of Interim Measures Work Plan.	Project Applicant/ Project Contractor	Prior to and during Project demolition and construction	HCP&BD, NCRWQCB, DEH, CalRecycle, and NCUAQMD	A note detailing the Interim Measures Work Plan criteria shall be placed on all improvement plans.			
Spartina PEIR WQ-3	<u>Minimize Fuel and Petroleum Spill Risks:</u> Fueling operations or storage of petroleum products shall be maintained off-site, and a spill prevention and management plan shall be developed and implemented to contain and clean up spills. Transport vessels and vehicles, and other equipment (e.g., mowers) shall not be serviced or fueled in the field except under emergency conditions; hand-held gas-powered equipment shall be fueled in the field using precautions to minimize or avoid fuel spills within the marsh. For example, gas cans will be placed on an oil drip pan with a PIG® Oil-Only Mat Pad placed on top to prevent oil/gas contamination. Only vegetable oil-based hydraulic fluid will be used in heavy equipment and vehicles during Spartina control efforts. When feasible, biodiesel will be used instead of petroleum diesel in heavy equipment and vehicles during Spartina control efforts. Other, specific BMPs shall be specified as appropriate to comply with the Basin Plan and the other applicable Water Quality Certifications and/or NPDES requirements. This mitigation is intended to be carried out in conjunction with Mitigation HMM-2 in order to reduce potential impacts to less than significant level (H.T. Harvey & Associates and GHD 2013, page 126).	Project Contractor	During Project construction	HCP&BD and NCRWQCB	A note detailing the spill prevention plan criteria shall be placed on all improvement plans. On-site construction manager shall ensure staff is trained and use of BMPs is documented daily. Prior to occupancy of Phase 1 and prior to the issuance of any construction permits related to ocean water intake upgrades.			
Spartina PEIR WQ-6	<u>Designate Ingress/Egress Routes:</u> Temporary ground disturbance associated with site ingress/egress, staging, stockpiling, and equipment storage areas could occur in areas outside and adjoining work areas. Where areas adjacent to staging and stockpile areas are erosion prone, the extent of staging and stockpile shall be minimized by flagging their boundaries. An erosion/sediment control plan shall be developed for erosion prone areas outside the work area where greater than 0.25 acre (0.1 hectare) of ground disturbance may occur as a result of ingress/egress, access roads, staging and stockpile areas. The erosion/sediment control plan shall be developed by a qualified professional and identify BMPs for controlling soil erosion and discharge for treatment-related contaminants. The erosion/sediment control plan shall be prepared prior to any ground disturbing activities and implemented during construction (H.T. Harvey & Associates and GHD 2013, page 128).	Project Applicant/ Project Contractor	Prior to and during Project construction	HCP&BD	A note detailing the sediment and erosion control criteria shall be placed on all improvement plans. On-site construction manager shall ensure staff is trained and use of BMPs is documented daily.			

					Prior to occupancy of Phase 1 and prior to the issuance of any construction permits related to ocean water intake upgrades.			
Spartina PEIR WQ-7	<u>Removal of Wrack:</u> During site specific planning, tidal circulation will be visually assessed. In areas with relatively low tidal circulation, it will either be assumed that dissolved oxygen levels are depressed, or monitoring will be conducted to determine if dissolved oxygen levels are depressed. In treatment areas located within or adjacent to waters known or expected to have depressed dissolved oxygen, if wrack is generated during the treatment process, the wrack shall be removed from the treatment area subject to tidal inundation or mulched finely and left in place (H.T. Harvey & Associates and GHD 2013, page 129).	Project Construction/ Qualified Biologist	Prior to Project construction	HCP&BD	A note shall be placed on all improvement plans, Prior to occupancy of Phase 1 and prior to the issuance of any construction permits related to ocean water intake upgrades.			
Spartina PEIR HHM-2	<u>Accidents Associated with Release of Chemicals and Motor Fuel:</u> 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 (H.T. Harvey & Associates and GHD 2013, page 85).	Project Contractor/ Equipment Operators	Prior to and during Project construction and operation	HCP&BD and NCRWQCB	A note detailing the Hazardous Materials Spill Prevention Control and Countermeasures criteria shall be placed on all improvement plans. On-site construction manager shall ensure staff is trained and use of BMPs is documented daily. Proof of Approval by the NCRWQCB is required prior to permit issuance for construction activities. Prior to occupancy of Phase 1 and prior to the issuance of			

					any construction permits related to ocean water intake upgrades.			
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Mitigation Measures and Applicant Proposed Operating Restrictions: