

**INITIAL STUDY AND
PROPOSED MITIGATED NEGATIVE DECLARATION**

**ARAMBURU ISLAND SHORELINE PROTECTION AND
ECOLOGICAL ENHANCEMENT PROJECT**

ISSUES SUMMARY

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ISSUES SUMMARY

Introduction

The proposed project consists of shoreline protection and habitat enhancement of Aramburu Island in Richardson Bay. The Island was originally constructed to provide mitigation for residential development. However, habitat on the Island has been degraded, significantly limiting the capacity for the Island to fully serve its intended purpose as a wildlife preserve.

This Issues Summary provides a concise summary of the Initial Study and proposed Mitigated Negative Declaration, which have been prepared pursuant to the California Environmental Quality Act of 1970 (CEQA) and State CEQA Guidelines. The Lead Agency for the project, as defined by CEQA, is the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board). The property owner is the Marin County Department of Parks and Open Space, a CEQA responsible agency for this project. The Richardson Bay Audubon Center is the project Applicant.

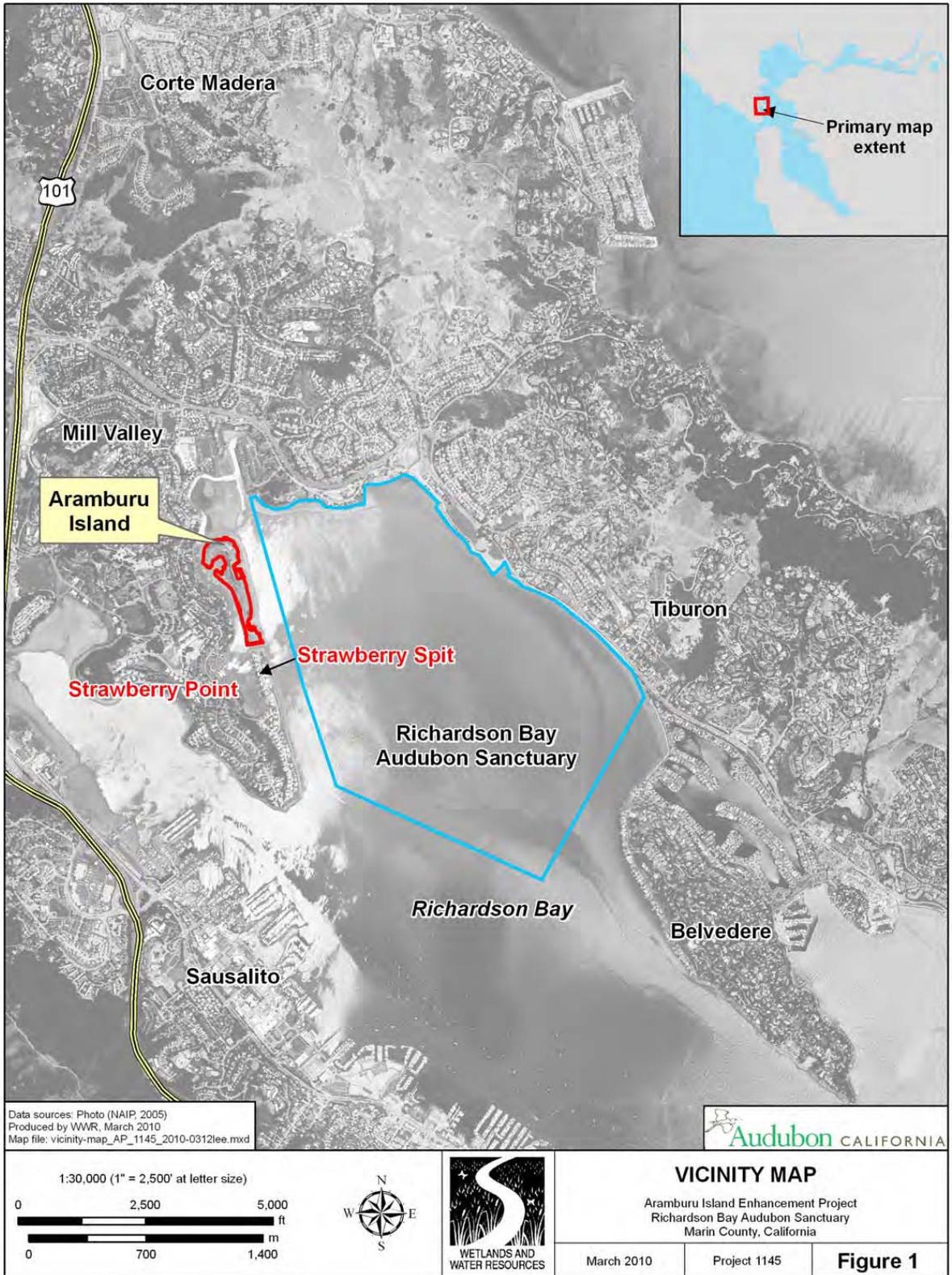
The complete Initial Study and proposed Mitigated Negative Declaration can be reviewed at the Regional Water Board's internet website at <http://www.waterboards.ca.gov/sanfranciscobay/> or at the Richardson Bay Audubon Center's internet website at <http://www.tiburonaudubon.org/>

History and Location of Project Site

Aramburu Island is located in the northwest region of Richardson Bay on the east side of Strawberry Point (Figure 1). The island is bordered to the east by the 911-acre Richardson Bay Audubon Sanctuary, to the north by two smaller islands supporting tidal marsh habitat, and to the south and west by a deep-water navigation channel that serves local boaters and private docks along Strawberry Spit and Strawberry Point. The Harbor Cove apartment complex marina also uses the navigation channel.

Aramburu Island was originally part of Strawberry Spit, an artificial peninsula off of Strawberry Point created by placement of fill material. Once created, the Spit provided important habitat for harbor seals in the 1960s and 70s. In 1987, the northern half of Strawberry Spit was converted into an island as wildlife habitat mitigation for residential development on the southern half of the Spit, thus creating Aramburu Island. However, harbor seals never returned to the Island after its creation, and habitat on the island has been degraded over the years due to non-native plant colonization and erosion, significantly limiting the capacity of the Island to fully serve its intended purpose as a wildlife preserve. The site is designated as Open Space in the Marin County General Plan.

Currently, the 36-acre project site consists of a 17-acre island terrace (all habitats from the shoreline upward, including tidal marsh and seasonal wetland habitats, gravel pits and rip-rap) and 19 acres of surrounding "Bay" habitats, which include intertidal coves and mudflats, subtidal waterways, and an intertidal cobble-boulder "lag" field.



Project Objectives

The goals of the proposed project are to:

- Reduce erosion along the eastern shoreline of the Island
- Enhance resilience of the Island to sea-level rise
- Enhance shorebird, waterfowl, and wading bird habitat
- Enhance suitability of haul-out habitat for harbor seals
- Enhance habitat for rare salt marsh plants
- Establish native vegetation on the Island terrace

Project Description

The proposed project is described in detail in the Aramburu Island Draft Enhancement Plan, which outlines three options for Island habitat enhancement and shoreline stabilization. For the purposes of the CEQA project description, this Initial Study considers an “environmentally reasonable worst-case scenario,” which is the combination of restoration techniques that would result in the greatest construction-related impacts. The CEQA project description combines the maximum amounts of imported materials, grading/excavation, and saline irrigation that would occur under any combination of optional restoration techniques. As such, the full range of habitat types and acreage extents are considered for evaluation in this Initial Study.

The project design has taken into consideration concerns from nearby residents to maintain existing viewsheds, limit equipment noise, and ensure stability of the island during storm events, as discussed below.

Shoreline Enhancement

The project includes shoreline enhancement activities to reduce erosion of the eastern shoreline and to enhance foreshore and beach habitat. The proposed project includes the following components:

- Beach stabilization features of sand, gravel, and shell;
- Beach retention features (micro-groins /spits);
- Large woody debris;
- Oyster habitat (subtidal reefs);
- Habitat features for harbor seals (subtidal channel immediately offshore of the southeastern corner of the island)

Proposed shoreline enhancement actions would occur only on the eastern shoreline of the island. Various shoreline enhancement features will result in a variety of shoreline and intertidal habitats, as identified in Table S-1.

Table S-1: Pre- and Post- Project Shoreline Habitat Types and Enhancement Features

Enhancement Features	Existing Habitat (acres)	Proposed Habitat (acres)
Coves	1.98	1.98
Beaches/spits	0.0	1.70
Sand Foreshore	0.0	1.22
Groins	0.0	0.39
Intertidal Boulder Field	10.28	7.86
Intertidal Mudflat	2.57	2.37
Subtidal Habitat	3.92	4.12

Island Terrace Enhancement

Enhancement activities on the island terrace would involve creating a mix of habitats once-common around San Francisco Bay, including high tidal marsh, seasonal wetlands (vernal pool, vernal marsh, and saline flats/pans), terrestrial grasslands (perennial lowland grass/sedge meadow, and salt grass meadow), and backshore sand flats. The characteristics of these native habitats are described below. Table S-2 shows the existing and proposed extent of each habitat type.

- **High tidal marsh** - Pickle weed and habitat for marsh bird's-beak and associated regionally rare salt marsh annuals such as salt marsh owl's-clover and smooth goldfields.
- **Vernal pools** - Support a characteristic suite of mostly annual wildflowers and grass-like plants that grow only in winter and spring wet months.
- **Vernal marsh** - Seasonal wet meadows with perennial, creeping native vegetation.
- **Saline flats/pans** - Poorly drained soils and with high soil salinities that exclude all but relatively salt tolerant vegetation.
- **Terrestrial grasslands (grass/sedge meadow)** - Dominated by perennial creeping native grasses and grass-like plant species.
- **Salt grass meadow** – Occur as a transition with lowland perennial grasslands and salt flats, or as extensive communities - high salinity soils that favor salt-tolerant species.
- **Backshore sand flats** - Soft-substrate, sparsely vegetated platform within easy reach of deep-water escape areas to attract harbor seals for use as haul-out habitat.

Table S-2: Pre- and Post-Project Island Terrace Habitat Types and Enhancement Features

Enhancement Features	Existing Habitat (acres)	Proposed Habitat (acres)
Tidal Marsh	6.11	6.64 – 7.81
Seasonal Wetland	2.37	2.75 – 6.34
Oak Grove	0.57	0.73
Gravel Spit	0.12	0.0
Terrestrial Grasslands	7.70	2.43 – 4.74
Backshore Sand Flat	0.0	0.0 – 0.11
Rip-Rap	0.19	0.19

Construction Activities

Creating shoreline protection and habitat enhancement features at the project site would involve equipment mobilization, grading and excavation, materials import and placement, saline irrigation, and revegetation, as described below.

- **Equipment mobilization** – equipment would include low-ground-pressure (LGP) tracked bulldozer, an excavator, a LGP or amphibious excavator, a wheel loader, LGP track dump trucks, a tracked skid steer and a compactor.
- **Grading and excavation** – Slopes of the central shoreline would be graded to create a gentle beach profile, and shallow excavation would be required to key-in shoreline stabilization features. All earthmoving within shoreline areas would be accomplished at low tides when no water is present. High tidal marsh and seasonal wetland enhancement and expansion areas on the Island terrace would be graded to slightly improve their hydrology. The project would involve an estimated total excavation and grading of 15,430 cubic yards (CY) of onsite material (3,575 CY along the shoreline and 11,855 CY on the terrace).
- **Material import and placement** – Shoreline enhancement would require the import and placement of up to 5,815 CY of beach materials (sand, shell, gravel), as well as rock for shoreline stabilization features. Up to 100 logs and or tree trunks may also be imported to create beach micro-habitats. In addition, up to 8,020 square feet of geofabric may be used as matting for shoreline stabilization features constructed from rock. Island terrace enhancements would require the import of up to 12,870 CY of silty clay, sand, and/or shell material to create a mix of habitats in these areas.
- **Saline irrigation** – Certain Island terrace enhancement areas would require short-term irrigation with sprinklers using saline Bay water to prevent germination of undesirable invasive vegetation.
- **Revegetation** - Following initial grading of habitat enhancement areas and substrate reconditioning, all areas, with the exception of high tidal marsh, would be revegetated with native species. Some irrigation of newly installed vegetation may be necessary.

Construction Timing and Duration

Shoreline construction activities are limited to seasonal construction windows set by state and federal resource agencies for the purpose of protecting essential fish habitat and migratory species. Construction duration is expected to be 3 to 4 months during the summer construction season. Construction may be phased over a two year period, in which case the shoreline enhancements and the terrace enhancements would each require approximately 2 to 3 months to complete, with equipment mobilization and demobilization occurring twice. The actual schedule is dependent upon the specific conditions of each permitting agency. The total construction time would not exceed 6 months.

Community Participation

A project scoping meeting was held on April 27, 2010, at the Strawberry Recreation District Center in Mill Valley to seek early input from nearby residents, local agencies, and interested parties. The following key issues were identified during project scoping and are addressed in this Initial Study:

- Consideration of construction noise impacts;
- Construction air emissions;
- Potential visual impacts from construction;
- Measures to ensure successful revegetation;
- Potential for soil erosion to occur before plants are fully re-established;
- Risk of flooding and increased erosion due storm events;
- Increase erosion due to sea level rise;
- Impacts to common bird and wildlife species;
- Mosquito management and vector control; and
- Impacts on navigational channel and future dredging.

In May, 2010, an independent peer review of the Draft Enhancement Plan (WRR, 2010a) was conducted by Professor Mark Lorang, of the University of Montana, and lead to a number of modifications to the proposed project, including:

- Reduced need for gravel retention micro groins and an increase reliance on large woody debris to achieve the same level of shoreline protection;
- Addition of a curved spit that would be installed in the south shoreline area;
- Changes to the mix of beach material (ratio of sand and gravel) and configuration in the southern portion of the shoreline;
- Proposed installation of oyster “reefs” (that would be located in sheltered wave shadow areas behind sand flat retention micro-groins) to provide oyster habitat.

In addition, consultation with San Francisco Bay Conservation and Development Commission (BCDC) regarding public access resulted in minor changes to the project, including the addition of two flat landing rocks for kayakers near northern cove and installation of signs (near the landing site and the southern cove) describing the island as sensitive wildlife habitat and directing visitors to stay on the beach.

Permitting

The proposed project would require consultation with and permit review by several Federal, State, and local agencies including U.S. Army Corps of Engineers (USACE), San Francisco Bay Regional Water Quality Control Board (Regional Water Board), U. S. Fish and Wildlife Service (USFWS), National Atmospheric and Oceanic Administration/National Marine Fisheries Service (NMFS), California Department of Fish and Game (CDFG), and BDCC, as outlined in Table S-3.

Table S-3: Project Permitting Agencies

Agency	Regulatory Authority	Consultation Options
U.S. Army Corps of Engineers (USACE)	A Section 404 Clean Water Act (CWA) permit and/or a Section 10 Rivers and Harbors Act permit would be required for placement of dredge or fill material into waters of the U.S. and work within navigable waters, respectively.	The USACE may consult with USFWS and NMFS during permit review
San Francisco Bay Regional Water Quality Control Board	Water Quality Certification in accordance with Section 401 of the and/or Waste Discharge Requirements in accordance with the Porter-Cologne Water Quality Control Act	The Regional Water Board may consult with USFWS, NMFS, CDFG and BDCC during permit review
San Francisco Bay Conservation and Development Commission (BCDC)	A San Francisco Bay Permit would be required to implement enhancement activities on Aramburu Island.	BCDC will consult with USFWS, NMFS, and CDFG during permit review.

Summary of Impacts and Mitigation Measures

Table S-4 provides a summary of potentially significant impacts of the project. The Initial Study identifies several potentially significant impacts for which mitigation measures will be imposed by the Regional Water Board. Potentially significant impacts were identified in the areas of Air Quality, Biological Resources, Geology/Soils, Hydrology/Water Quality, and Noise. Less than significant impacts are not included in Table S-4 but are discussed in the Initial Study. The project applicant, the Richardson Bay Audubon Center, has agreed to implement all mitigation measures identified in this Initial Study as part of the proposed project. Implementation of all mitigation measures identified to reduce potentially significant impacts will be assured through Regional Water Board adoption of a mitigation monitoring program. The Regional Water Board may delegate mitigation monitoring or reporting to another public agency (such as Marin County) or a private entity (such as Audubon), however, the Regional Water Board will remain responsible for ensuring implementation of the required mitigation measures. The Mitigation Monitoring or Reporting Program would be adopted by the Regional Water Board when it considers adoption of this proposed Mitigated Negative Declaration (in accordance with the CEQA Guidelines Section 15097) and considers adoption of water quality certification and/or Waste Discharge Requirements.

Table S-4: Summary of Potentially Significant Impacts and Required Mitigation Measures

Potentially Significant Impact	Mitigation Measure	Significance After Mitigation
<p><u>Air Quality Impact III (b)</u></p> <p><i>Construction Air Emissions</i></p> <p>During project construction, the project would generate dust from grading, and construction vehicles would also generate some emissions.</p>	<p><u>Mitigation Measure III-1</u></p> <p>a. Water all active construction areas at least twice daily;</p> <p>b. Enclose, cover, water twice daily or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.);</p> <p>c. Replant vegetation in disturbed areas as quickly as possible.</p>	<p>Less than significant</p>
<p><u>Air Quality Impact III (d)</u></p> <p><i>Exposure to Air Pollutant Emissions</i></p> <p>Nearby receptors could be exposed to construction emissions for a short period (approximately six months total).</p>	<p><u>Refer to Mitigation Measure III-1, above</u></p>	<p>Less than significant</p>
<p><u>Biological Resources Impact IV (a)</u></p> <p><i>Birds</i></p> <p>Project-related construction activities could disturb nesting birds protected under the MBTA and/or California Fish and Game Code and could lead to the loss or abandonment of an active nest.</p>	<p><u>Mitigation Measure IV-1</u></p> <p>The applicant shall have surveys conducted by a qualified biologist within two weeks of the commencement of construction activities. If nesting birds are detected during surveys, construction shall be halted until appropriate resource agencies (CDFG, USFWS) have been contacted and appropriate avoidance measures are taken, such as establishing disturbance buffers or halting construction until nests have been vacated. If ground disturbance activities are delayed, then additional pre-construction surveys shall be conducted such that no more than one week will have elapsed between the last survey and the commencement of ground disturbance activities.</p>	<p>Less than significant</p>

<p><u>Biological Resources Impact IV (a), cont.</u></p> <p><i>Marine Mammals and Fish</i></p> <p>The construction of the subtidal seal access channel could cause an impact to harbor seals and special status fish species through direct physical harm or disruption in feeding/movement behavior. Increased water column turbidity from construction activities could also cause a disturbance to these animals through a reduction in visibility that may inhibit feeding ability. In addition, fish and marine mammals could be impacted by the runoff of sediment and petroleum products from the Island terrace during construction</p>	<p><u>Mitigation Measure IV-2</u> Construction of the subtidal seal access channel shall be performed between June 1 and either October 31 or November 30, depending upon recommendations of the state and federal resource agencies, to conform with established work windows for special status fish species. All construction activities shall occur when no water is present to reduce impact.</p> <p><u>Refer to Mitigation Measure IX-1</u>, in the Hydrology and Water Quality Section, below.</p>	<p>Less than significant</p>
<p><u>Biological Resources Impact IV (c)</u></p> <p><i>Wetlands</i></p> <p>Contaminants and sediment from project construction could runoff into wetlands used by wildlife.</p>	<p><u>Refer to Mitigation Measure IX-1</u>, in the Hydrology and Water Quality Section, below.</p>	<p>Less than significant</p>
<p><u>Biological Resources Impact IV (d)</u></p> <p><i>Wildlife Movement</i></p> <p>The surrounding waters of Richardson Bay may serve as migration corridors for special status fish and marine mammals. Construction activities could impede these movements.</p>	<p><u>Refer to Mitigation Measure IX-1</u>, in the Hydrology and Water Quality Section, below for erosion control measures to reduce turbidity.</p> <p><u>Mitigation Measure IV-2</u>, above would also reduce impacts to migratory fish and marine mammals.</p>	<p>Less than significant</p>
<p><u>Geology/Soils Impact VI (b)</u></p> <p><i>Increased Soil Erosion</i></p> <p>During and shortly after construction, wave overwash could increase erosion potential from the Island. Large swaths of the Island terrace will be initially devoid of vegetation during construction and prior to vegetation cover establishment which could increase erosion.</p>	<p><u>Refer to Mitigation Measure IX-1</u>, in the Hydrology and Water Quality Section, below.</p>	<p>Less than significant</p>

<p><u>Hydrology/Water quality Impact IX (a)</u></p> <p><i>Reduced Water Quality</i></p> <p>Earth-moving and material placement within the shoreline enhancement areas could cause increases in suspended sediment concentration and introduce petroleum contaminants (oil, grease, fuel, etc.) into the waters of the Bay, if performed at times when there is water on the work area. Construction activities on the Island terrace, including earth-moving and substrate placement, also could introduce sediment and petroleum contaminants into the Bay via rainfall runoff or storm wave overwash. During the period between the completion of earthmoving and vegetation reestablishment, bare graded areas could be subject to erosion from these forces as well.</p>	<p><u>Mitigation Measure IX-1</u></p> <p>In order to reduce the potential of erosion and/or degradation of water quality to a less than significant level, the following construction best management practices (BMPs) will be incorporated into the project:</p> <ul style="list-style-type: none"> • Install silt fences or straw wattles along the toes of slopes and designated staging areas, and erosion control netting on sloped areas, to minimize soil erosion and prevent sediment from entering adjacent waters of the fringing marsh, Bay, and navigational channel. • Install winterization features (mulch, planting of cover crop, or hydroseeding) on all bare soil and new plantings prior to the rainy season. • Stage construction equipment in upland areas when not in use and limit refueling or maintenance of equipment to upland areas, away from aquatic habitats to prevent the introduction of hazardous chemicals into the water. • Training for all contractors working on the site regarding the environmental sensitivity of the project site and surrounding area and the need to minimize impacts. • Training for all contractors in implementation of stormwater BMPs for protection of water quality. • Maintain all erosion control BMPs in place along the Island perimeter (above the high tide line) to prevent the introduction of sediments from bare, graded areas on the Island terrace into Richardson Bay due to rainfall runoff or wave overwash. 	<p>Less than significant</p>
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<p><u>Hydrology/Water quality Impact IX (c)</u></p> <p><i>Increased Erosion and Flooding</i></p> <p>Prior to vegetation establishment, rainfall and/or wave overtopping during storm events could cause erosion and soil loss during this initial construction and post-construction period.</p>	<p><u>Mitigation Measure IX-1, above.</u></p>	<p>Less than significant</p>
<p><u>Noise Impact XII (a)</u></p> <p><i>Construction Noise</i></p> <p>Construction activities associated with development of the project would result in a temporary increase in ambient noise levels in the vicinity of the site. The increase in noise could result in temporary annoyance to residents near the construction site.</p>	<p><u>Mitigation Measure XIII-1</u></p> <p>In order to reduce construction and ongoing maintenance noise and to comply with Marin County Noise Ordinance to a less-than-significant level, the following measures shall be implemented:</p> <ul style="list-style-type: none"> a. Generators or other stationary construction and maintenance equipment, that could affect residences if utilized, shall be located as far as practical from sensitive noise receptors and shielded to further reduce noise levels. b. Construction and maintenance equipment that is equipped, operated, and maintained with manufacturer recommended mufflers or the equivalent shall be utilized. c. Construction activities and post-construction maintenance (such as irrigation, vegetation management) shall be limited from 8 a.m. to 5 p.m. Monday through Friday and 9 a.m. and 5 p.m. Saturday. Loud-noise-generating construction related equipment (backhoes, generators, jackhammers) shall be limited from 8 a.m. to 5 p.m. Monday through Friday only. 	<p>Less than significant</p>
<p><u>Noise Impact XII (d)</u></p> <p><i>Increased Ambient Noise</i></p> <p>The project would result in an incremental increase in temporary or periodic noise levels in the area due to the short-term construction activities for the project.</p>	<p><u>Measure XIII-1, above.</u></p>	<p>Less than significant</p>

