

Staff Report 40

LESSEE/APPLICANT:

Marin County Flood Control and Water Conservation District

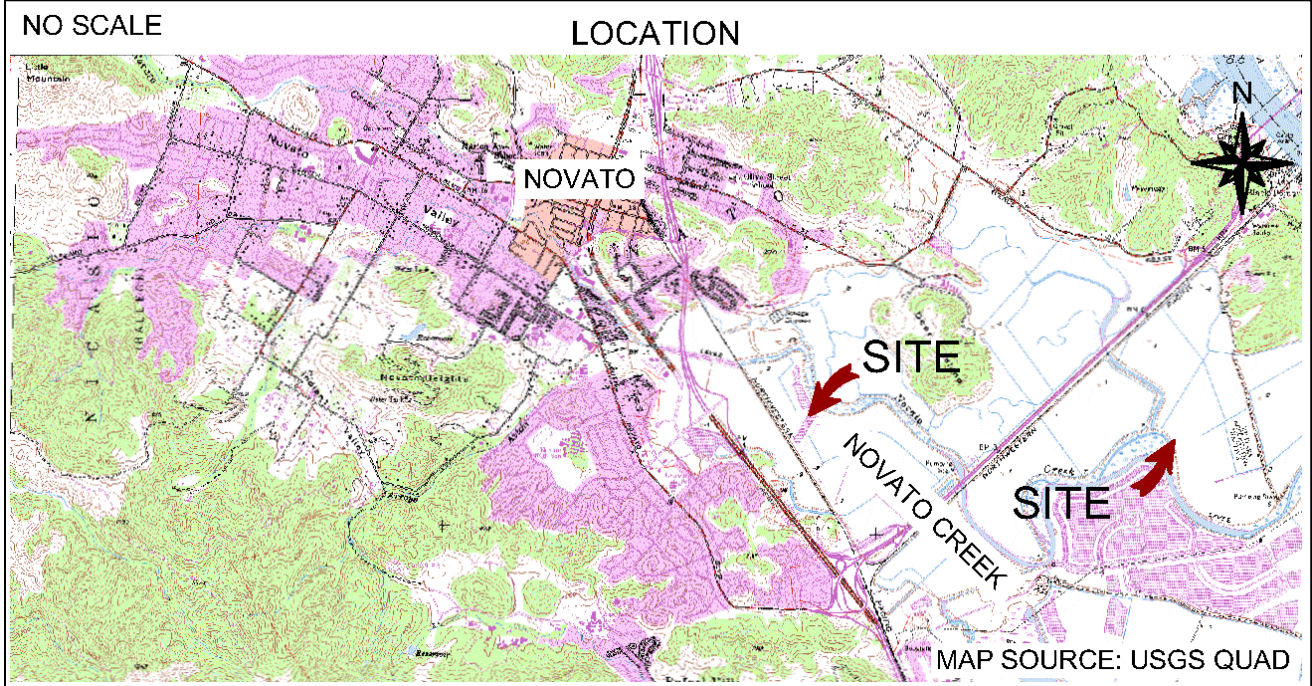
PROPOSED ACTION:

Amendment of a General Lease – Public Agency Use.

AREA, LAND TYPE, AND LOCATION:

Sovereign land located along the west bank of Novato Creek and Black Point Antenna Field, Marin County (as shown in Figure 1).

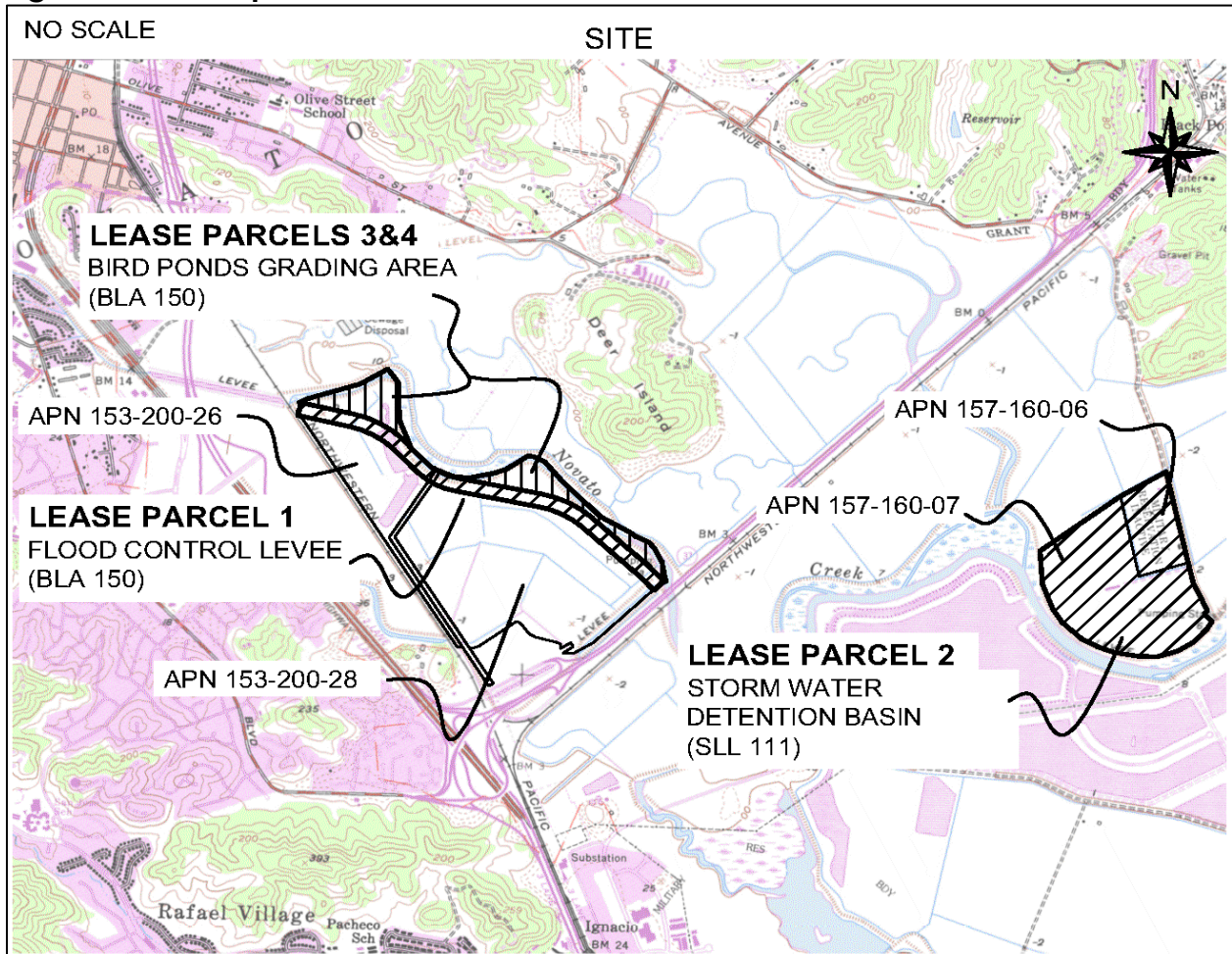
Figure 1. Location



AUTHORIZED USE:

Continued use and maintenance of an existing flood control levee and storm water detention basin and the placement of water velocity and surface level sensors (as shown in Figure 2).

Figure 2. Site Map



NOTE: This depiction of the lease premises is based on unverified information provided by the Applicant or other parties and is not a waiver or limitation of any State interest in the subject or any other property.

TERM:

25 years, beginning September 1, 2011.

CONSIDERATION:

The public use and benefit, with the State reserving the right at any time to set a monetary rent if the Commission finds such action to be in the State's best interest.

PROPOSED AMENDMENT:

- Authorize tidal wetland habitat restoration.
- Replace the existing Exhibit A, Land Description, and Exhibit B, Site and Location Map, with a new Exhibit A, Land Description, and Exhibit B, Site and Location Map (for reference purposes only), in the lease.
- Add Exhibit C, Mitigation Monitoring Program

All other terms and conditions of the lease shall remain in effect without amendment.

STAFF ANALYSIS AND RECOMMENDATION:

AUTHORITY:

Public Resources Code sections 6005, 6216, 6301, 6501.1, and 6503; California Code of Regulations, title 2, sections 2000 and 2003.

PUBLIC TRUST AND STATE'S BEST INTERESTS:

On December 5, 2012, the Commission authorized issuance of a General Lease – Public Agency Use (Lease Number PRC 7008) for a term of 25 years to the Marin County Flood Control and Water Conservation District (Lessee or District) for the continued use and maintenance of an existing flood control levee and a storm water detention basin and placement of water velocity and surface level sensors ([Item 31, December 5, 2012](#)). The lease will expire on August 31, 2036.

The Lessee now proposes to restore tidal wetlands. The project is known as the Deer Island Basin Complex Tidal Wetland Restoration Design Project (project). The project includes locations along Novato Creek, Deer Island Basin north of the creek, and Bird Ponds south of the creek. The project would be implemented in phases, starting first with the Bird Ponds (ponds) location and followed by the Deer Island Basin. The Deer Island Basin is outside of the Commission's jurisdiction.

The ponds provide habitat for wildlife. Tidal wetland and upland habitats would be improved in and around the ponds, including improving the levees adjacent to the ponds. Portions of the flood control levee would be improved for flood protection by raising low areas of the levee. Grading in the ponds would generate material for the on-site flood control levee improvement. The levees along Novato Creek would be breached and lowered to provide tidal connectivity to the ponds. Levee

lowering would include excavating sections of the existing levee and placing a layer of topsoil on the lowered levee sections to help support native marsh plantings.

Tidal connection between the ponds and Novato Creek would be achieved through a combination of primary upstream and secondary downstream breaches in each pond. Upstream breaches would be sized to convey the fully restored tidal prism for each pond and would help facilitate sediment accretion within the ponds. The smaller, secondary downstream breaches would be overflow connections to Novato Creek to allow flood flows to reconnect with the main Novato Creek channel and would limit flow-through at low tides to help improve sediment capture within the ponds. Construction is anticipated to occur over two construction seasons.

Levee lowering and breaching would allow for enhanced wildlife habitat, including tidal marsh vegetation that would provide nesting and foraging opportunities. The project would increase tidal wetlands that, over time, are anticipated to evolve into a mosaic of wetland habitat.

The proposed project is expected to improve tidal wetland habitat and enhance Public Trust resources. Staff therefore believes the proposed lease amendment for the proposed project will not substantially interfere with Public Trust needs and values at this location, at this time, and for the term of the lease.

CLIMATE CHANGE:

Climate change impacts, including sea level rise, more frequent and intense storm events, and increased flooding and erosion, affect both open coastal areas and inland waterways in California. The facilities are located on Novato Creek, in a tidally influenced site vulnerable to flooding at current sea levels and at a higher risk of flood exposure given projected scenarios of sea level rise.

The California Ocean Protection Council updated the *State of California Sea-Level Rise Guidance* in 2018 to provide a synthesis of the best available science on sea level rise projections and rates. Commission staff evaluated the “high emissions,” “medium-high risk aversion” scenario to apply a conservative approach based on both current emission trajectories and the lease location and structures. The San Francisco tide gauge was used for the projected sea level rise scenario for the lease area as listed in Table 1, below.

Table 1. Projected Sea Level Rise for San Francisco

Year	Projection (feet)
2030	0.8
2040	1.3
2050	1.9
2100	6.9

Source: Table 13, [State of California Sea-Level Rise Guidance: 2018 Update](#)

Note: Projections are with respect to a 1991 to 2009 baseline.

This effect could increase Novato Creek's inundation levels within the lease area. In addition, as stated in the [Safeguarding California Plan: 2018 Update](#) (California Natural Resources Agency 2018), climate change is projected to increase the frequency and severity of natural disasters related to flooding, fire, drought, extreme heat, and storms (especially when coupled with sea level rise). In rivers and tidally influenced waterways, more frequent and powerful storms can result in increased flooding conditions and damage from storm-created debris as well as decreased bank stability and structure. Conversely, climate change induced droughts could decrease river levels and flow for extended periods of time. Climate change and sea level rise will further influence riverine areas by changing erosion and sedimentation rates. Flooding and storm flow, as well as runoff, will likely increase scour and decrease bank stability at a faster rate.

Channel and floodplain restoration within the project area has been designed in consideration of future projections for extreme flood and weather events. Further, an objective of the project was to design site components to support natural geomorphic response to climate change related impacts on riverine processes. The project allows flooding to newly restored wetland and floodplain lands to support riverine, estuarine, and ecosystem processes. Collectively, the improvements to hydrologic function and expansion and connectivity of floodplain area and processes will serve to offset the impacts of future flooding and climate change related impacts on Novato Creek and associated waterways.

CONCLUSION:

For all the reasons above, staff believe approval of the proposed amendment of lease is consistent with the common law Public Trust Doctrine and is in the best interests of the State.

OTHER PERTINENT INFORMATION:

1. Approval or denial of the proposed amendment is a discretionary action by the Commission. Each time the Commission approves or rejects a use of sovereign land, it exercises legislatively delegated authority and responsibility as trustee of the State's Public Trust lands as authorized by law. The lessee has no right to a new lease or to renewal of any previous lease.
2. This action is consistent with the "Leading Climate Activism" and "Meeting Evolving Public Trust Needs" Strategic Focus Area of the Commission's 2021-2025 Strategic Plan.
3. A Mitigated Negative Declaration, State Clearinghouse No. 2023030749, and a Mitigation Monitoring and Reporting Program were prepared by the District and adopted on June 6, 2023, for this project. Staff reviewed these documents and prepared an independent Mitigation Monitoring Program (attached, Exhibit A) incorporating the District's document and recommends adoption by the Commission.
4. This activity involves lands identified as possessing significant environmental values pursuant to Public Resources Code section 6370 et seq., but the activity will not affect those significant lands. Based upon participation from the agency nominating such lands through the California Environmental Quality Act (CEQA) review and permitting process, it is staff's opinion that the project, as proposed, is consistent with its use classification.

APPROVALS REQUIRED:

- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- California Department of Fish and Wildlife
- San Francisco Bay Regional Water Quality Control Board

EXHIBIT:

- A. Mitigation Monitoring Program

RECOMMENDED ACTION:

It is recommended that the Commission:

CEQA FINDING:

Find that a Mitigated Negative Declaration, State Clearinghouse No. 2023030749, and a Mitigation Monitoring and Reporting Program were prepared by the District and adopted on June 6, 2023, for this project and that the Commission has reviewed and considered the information contained therein; that in the Commission's independent judgment, the activities to be carried out under the lease to be issued by this authorization have been adequately analyzed; that none of the events specified in Public Resources Code section 21166 or the State CEQA Guidelines section 15162 resulting in any new or substantially more severe significant impact has occurred; and, therefore no additional CEQA analysis is required.

Adopt the Mitigation Monitoring Program, as contained in the attached Exhibit A.

PUBLIC TRUST AND STATE'S BEST INTERESTS:

Find that the proposed amendment of the lease is consistent with the common law Public Trust Doctrine and is in the best interests of the State.

SIGNIFICANT LANDS INVENTORY FINDING:

Find that this activity is consistent with the use classification designated by the Commission for the land pursuant to Public Resources Code section 6370 et seq.

AUTHORIZATION:

Authorize amendment of the lease, effective June 7, 2024; to allow for tidal wetland habitat restoration; replace the existing Exhibit A, Land Description, and Exhibit B, Site and Location Map, with a new Exhibit A, Land Description, and Exhibit B, Site and Location Map (for reference purposes only), in the lease; and include the Mitigation Monitoring Program as Exhibit C to the lease; all other terms and conditions of the lease will remain in effect without amendment.

EXHIBIT A
CALIFORNIA STATE LANDS COMMISSION
MITIGATION MONITORING PROGRAM
DEER ISLAND BASIN COMPLEX TIDAL WETLAND RESTORATION PROJECT
(A3039, State Clearinghouse No. 2023030749)

The California State Lands Commission (Commission or CSLC) is a responsible agency under the California Environmental Quality Act (CEQA) for the Deer Island Basin Complex Tidal Wetland Restoration (Project). The CEQA lead agency for the Project is the Marin County Flood Control and Water Conservation District.

In conjunction with approval of this Project, the Commission adopts this Mitigation Monitoring Program (MMP) for the implementation of mitigation measures for the portion(s) of the Project located on State lands. The purpose of an MMP is to impose feasible measures to avoid or substantially reduce the significant environmental impacts from a project identified in an Environmental Impact Report (EIR) or a Mitigated Negative Declaration (MND). [State CEQA Guidelines section 15097, subdivision \(a\)](#), states in part:

In order to ensure that the mitigation measures and project revisions identified in the EIR or negative declaration are implemented, the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program.

The lead agency adopted an MND, State Clearinghouse No. 2023030749, adopted a Mitigation Monitoring and Reporting Program (MMRP) for the whole of the Project (see Exhibit A, Attachment A-1), and remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with its program. The Commission's action and authority as a responsible agency apply only to the mitigation measures listed in Table A-1 below. The full text of each mitigation measure, as set forth in the MMRP prepared by the CEQA lead agency and provided in Attachment A-1, is incorporated by reference in this Exhibit A.

Table A-1. Project Impacts and Applicable Mitigation Measures

Potential Impact	Mitigation Measure (MM)¹
Impacts from criteria pollutant, fugitive dust, and greenhouse gas emissions	AQ-1
Impacts to special status plant species	BIO-1, BIO-2
Impacts to salt marsh harvest mouse	BIO-2, BIO-3
Impacts to special status bird species	BIO-2, BIO-4, BIO-5
Impacts to western pond turtle	BIO-6
Impacts to Central California Coast steelhead	BIO-7, BIO-8
Impacts to bats	BIO-9
Impacts to Valley oak woodland and forest	BIO-10
Impacts to wetlands and waters	BIO-11
Impacts to unanticipated archaeological and cultural resources	CUL-1, CUL-2, TRI-1

¹ See Attachment A-1 for the full text of each MM taken from the MMRP prepared by the CEQA lead agency.

ATTACHMENT A-1

**MITIGATION MONITORING AND REPORTING PROGRAM ADOPTED BY THE
MARIN COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT**

CHAPTER 2

Mitigation Monitoring and Reporting Program

The following Mitigation Monitoring and Reporting Program (MMRP) identifies the Mitigation Measures that will be implemented as part of the Deer Island Basin Complex Tidal Wetland Restoration Project (Project). The Marin County Flood Control and Water Conservation District (District) or its Contractors under the supervision of the District will be responsible for implementing the following measures. The District will be responsible for monitoring to ensure the following measures are effectively implemented to reduce impacts to less-than-significant levels.

**TABLE 2-1
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
Air Quality					
<p>Criterion a): Conflict with or obstruct implementation of the applicable air quality plan</p>	<p>Mitigation Measure AQ-1: Implement BAAQMD Basic Construction Mitigation Measures</p> <p>The following applicable Bay Area Air Quality Management District (BAAQMD) Basic Construction Mitigation Measures shall be implemented by construction contractors to reduce emissions of fugitive dust and equipment exhaust:</p> <ul style="list-style-type: none"> • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material off site shall be covered. • 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. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 mph within the project area. • 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 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • Post a publicly visible sign with the telephone number and person to contact at the District (or its designee) regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations. 	<p>During construction</p>	<p>Marin County Flood Control and Water Conservation District (District); Construction Contractor</p>	<p>District and BAAQMD</p>	

TABLE 2-1 (CONTINUED)
MITIGATION MONITORING AND REPORTING PROGRAM

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
Air Quality (cont.)					
<p>Criterion b): Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard</p>	<p>See Mitigation Measure AQ-1: Implement BAAQMD Basic Construction Mitigation Measures, above.</p>	<p>During construction</p>	<p>District and Construction Contractor</p>	<p>District and BAAQMD</p>	
Biological Resources					
<p>Criterion a): Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service</p>	<p>Mitigation Measure BIO-1: Special Status Plant Protection</p> <p>A qualified botanist shall conduct appropriately timed floristic surveys for the special-status plant species identified as having a medium to high potential to occur within the construction disturbance area. The surveys shall be conducted in all suitable habitat within the potential disturbance area. Surveys and reporting shall be conducted following the current California Department of Fish and Wildlife protocol.</p> <p>If special-status plant species are identified within the Project construction disturbance area, then the biologist shall establish an appropriate buffer area for each plant population to exclude activities that directly remove or alter the habitat of, or result in indirect adverse impacts on, the special-status plant species. A qualified biologist shall oversee installation of a temporary, mesh-type construction fence (Tensor Polygrid or equivalent) at least 4 feet (1.2 meters) tall around any established buffer areas to prevent encroachment by construction vehicles and personnel. The qualified biologist shall determine the exact location of the fencing. The fencing shall be strung tightly on posts set at maximum intervals of 10 feet (3 meters) and shall be checked and maintained weekly until all construction is complete. The buffer zone established by the fencing shall be marked by a sign stating:</p> <p><i>“This is habitat of [list rare plant(s)], and must not be disturbed. This species is protected by [the ESA of 1973, as amended/CESA/ California Native Plant Protection Act].”</i></p> <p>If direct impacts cannot be avoided, the District shall prepare a plan for minimizing the impacts by one or more of the following methods: (1) salvage and replant plants at the same location following construction; (2) salvage and relocate the plants to a suitable off-site location with long-term assurance of site protection; (3) collect seeds or other propagules for reintroduction at the site or elsewhere; or (4) payment of fees in lieu of preservation of individual plants, to be used for conservation efforts elsewhere. The District shall review and approve the plan.</p>	<p>Prior to and during construction.</p>	<p>District, Construction Contractor, and Qualified Biologist</p>	<p>District, USFWS, and CDFW</p>	

**TABLE 2-1 (CONTINUED)
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
Biological Resources (cont.)					
<p>Criterion a (cont.)</p>	<p>The success criterion for any seeded, planted, and/or relocated plants shall be full replacement at a 1:1 ratio after 5 years. Monitoring surveys of the seeded, planted, or transplanted individuals shall be conducted for a minimum of 5 years, to ensure that the success criterion can be achieved at year 5. If it appears the success criterion would not be met after 5 years, contingency measures may be applied. Such measures shall include, but not be limited to: additional seeding and planting, altering or implementing weed management activities, or introducing or altering other management activities.</p> <p>Any special-status plant species observed during surveys shall be reported to the CDFW and submitted to the CNDDDB and reported to USFWS, if federally listed.</p>				
	<p>Mitigation Measure BIO-2: Best Management Practices for Biological Resources</p> <ul style="list-style-type: none"> • A qualified biologist (4-year college degree in biology or related field and demonstrated experience with the species of concern) shall provide Worker Environmental Awareness Training (WEAT) to field management and construction personnel. Communication efforts and training shall take place during pre-construction meetings so that construction personnel are aware of their responsibilities and the importance of compliance. WEAT shall identify the types of sensitive resources located in the project site and the measures required to avoid impacts on these resources. Materials covered in the training program shall include environmental rules and regulations for the specific Project, requirements for limiting activities to the construction right-of-way, avoiding demarcated sensitive resource areas, and appropriate steps to take if special-status species are encountered. • If new construction personnel are added to the Project, the contractor shall ensure the new personnel receive WEAT before starting work. A sign-in sheet of those contractor individuals who have received the training shall be maintained by the District. A representative shall be appointed during the WEAT to be the contact for any employee or contractor who might inadvertently kill or injure a listed species or who finds a dead, injured, or entrapped individual. • All vehicle operators shall limit speed to 15 miles per hour (mph) within the Project site. • No erosion control materials shall contain any plastic or monofilament netting and shall be wildlife-friendly (e.g., movable joints). It shall also be biodegradable and have certified weed-free straw if that is a component of the netting. 	<p>Prior to and during construction</p>	<p>District, Construction Contractor, and Qualified Biologist</p>	<p>District</p>	

**TABLE 2-1 (CONTINUED)
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
Biological Resources (cont.)					
<p>Criterion a (cont.)</p>	<ul style="list-style-type: none"> • To avoid attracting predators, all food-related trash items shall be bagged and removed daily. Other trash shall also be properly stored at the end of each day and properly disposed by the end of the project. <p>Mitigation Measure BIO-3: Salt Marsh Harvest Mouse Protection</p> <ul style="list-style-type: none"> • Ground disturbance to suitable salt marsh harvest mouse habitat (including, but not limited to pickleweed, and emergent salt marsh vegetation) shall be avoided to the extent feasible. Where salt marsh harvest mouse habitat cannot be avoided (such as for channel excavation, access routes and grading, or anywhere else that vegetation could be trampled or crushed by work activities), vegetation shall be removed to ground level from the ground disturbance work area plus a 5-foot buffer around the area, as well as any access routes within salt marsh harvest mouse habitat, utilizing mechanized hand tools or by another method approved by the USFWS and CDFW. Vegetation height shall be maintained at or below 5 inches above ground. Vegetation removal in salt marsh harvest mouse habitat shall be conducted under the supervision of the qualified biologist. • Salt marsh harvest mouse marsh habitat that must be accessed by mini-excavators or other vehicles to complete Project construction (e.g., excavating smaller channels) shall be protected through use of low ground pressure (LGP) equipment, wooden or PVC marsh mats, or other method approved by the USFWS and CDFW following vegetation removal. • Construction activities related to restoration and infrastructure shall be scheduled to avoid extreme high tides when there is potential for salt marsh harvest mouse to move to higher, drier grounds, such as ruderal and grassland habitats. No Project activities shall be conducted within 50 feet of suitable tidal marsh or other salt marsh harvest mouse habitat during an extreme high tide event (6.5 feet or higher measured at the Golden Gate Bridge and adjusted to the timing of local high tides) or when the adjacent marsh is flooded unless wildlife exclusion fencing has been installed around the work area. • All construction equipment and materials shall be staged on existing roadways and away from suitable salt marsh harvest mouse habitat when not in use. All construction equipment shall be visually inspected prior to work activities each day for signs of salt marsh harvest mouse or any other wildlife. • Vegetation shall be removed from all non-marsh areas of disturbance (driving roads, grading and stockpiling areas) to discourage the presence of salt marsh harvest mouse. 	<p>Prior to and during construction</p>	<p>District, Construction Contractor, and Qualified Biologist</p>	<p>District, USFWS, and CDFW</p>	

**TABLE 2-1 (CONTINUED)
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
Biological Resources (cont.)					
Criterion a (cont.)	<ul style="list-style-type: none"> A qualified biologist with previous salt marsh harvest mouse monitoring and/or surveying experience shall be on site during construction activities occurring in suitable habitat. The qualified biologist will have the authority to stop Project activities if any of the requirements associated with these measures are not being fulfilled. If a potential salt marsh harvest mouse is observed in the work area, construction activities shall cease in the immediate vicinity of the sighting. The individual shall be allowed to leave the area before work is resumed. If the individual does not move on its own volition, the qualified biologist would contact USFWS (and CDFW if appropriate) for further guidance on how to proceed. If the qualified biologist has requested work stoppage because of take of any of the listed species, or if a dead or injured salt marsh harvest mouse is observed, the USFWS and CDFW shall be notified within 1 day by email or telephone. 				
	<p>Mitigation Measure BIO-4: California Ridgway’s Rail and California Black Rain Protection</p> <ul style="list-style-type: none"> To minimize or avoid the loss of individual California Ridgway’s rail and California black rail, construction activities, including vegetation management activities requiring heavy equipment, adjacent to the tidal marsh areas (within 500 feet [150 meters] or a distance determined in coordination with the USFWS or CDFW, shall be avoided during the breeding season from February 1 through August 31. If areas within or adjacent to rail habitat cannot be avoided during the breeding season, protocol-level surveys shall be conducted to determine rail nesting locations. The surveys shall focus on potential habitat that could be disturbed by construction activities during the breeding season to ensure that rails are not breeding in these locations. <ul style="list-style-type: none"> If protocol surveys determine that breeding California black rail and/or California Ridgway’s rail are present in the project area, construction activities shall not occur within 500 feet of a detected Ridgway’s rail or black rail call center during their breeding season (February 1- August 31) or measures shall be taken to limit the impact of noise and/or visual to not impact any nest (in consultation with CDFW and USFWS). If no breeding California black rail or California Ridgway’s rail are detected during surveys, or if their breeding territories can be avoided by 500 feet (150 meters), then Project activities may proceed at that location. 	Prior to and during construction	District, Construction Contractor, and Qualified Biologist	District, USFWS, and CDFW	

**TABLE 2-1 (CONTINUED)
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
Biological Resources (cont.)					
<p>Criterion a (cont.)</p>	<p>Mitigation Measure BIO-5: Nesting Bird Protection</p> <ul style="list-style-type: none"> • Removal of trees and scrub vegetation shall occur outside the bird nesting season (February 1 to August 31), to the extent feasible. • If removal of trees and vegetation cannot be fully accomplished outside of the nesting season, a qualified biologist shall conduct pre-construction nesting surveys within seven (7) days prior to the start of such activities or after any construction breaks of 10 days or more. Surveys shall be performed for the Project site and suitable habitat within 330 feet of the Project site to locate any active raptor (birds of prey) nests or rookeries. • If active nests are located during the pre-construction bird nesting survey, the qualified biologist shall evaluate if the schedule of construction activities could affect the active nests and the following measures shall be implemented based on their determination <ul style="list-style-type: none"> – If construction is not likely to affect the active nest, it may proceed without restriction; however, a biologist shall regularly monitor the nest to confirm there is no adverse effect and may revise their determination at any time during the nesting season. In this case, the following measure would apply. – If construction may affect the active nest, the biologist shall establish a no-disturbance buffer in coordination with CDFW. Typically, these standard buffer distances will start at 30 feet for passerines and 330 feet for raptors. These distances may be adjusted depending on the level of surrounding ambient activity (e.g., if the Project site is adjacent to a road or active trail) and if an obstruction, such as a building, is within line-of-sight between the nest and construction. For bird species that are federally and/or state-listed sensitive species (i.e., fully protected, endangered, threatened, species of special concern), a lead agency representative or qualified biologist shall coordinate with the USFWS and/or CDFW regarding modifications to nest buffers, prohibiting construction within the buffer, modifying construction, or removing or relocating active nests that are found on the site. – Any birds that begin nesting within the Project site and survey buffers amid construction activities are assumed to be habituated to construction-related or similar noise and disturbance levels. A qualified biologist shall coordinate with the USFWS and/or CDFW and determine if no work exclusion zones shall be established around active nests in these cases. 	<p>Prior to and during construction</p>	<p>District, Construction Contractor, and Qualified Biologist</p>	<p>District, USFWS, and CDFW</p>	

TABLE 2-1 (CONTINUED)
MITIGATION MONITORING AND REPORTING PROGRAM

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
Biological Resources (cont.)					
Criterion a (cont.)	<p>Mitigation Measure BIO-6: Western Pond Turtle Relocation Plan A detailed western pond turtle relocation plan shall be prepared at least 3 weeks before the start of groundbreaking, and submitted to the California Department of Fish and Wildlife for review. The purpose of the plan is to standardize turtle relocation methods and relocation sites. A qualified biologist shall be present at the active work sites until western pond turtles have been removed or relocated, and habitat disturbance has been completed.</p>	Prior to and during construction	District, Construction Contractor, and Qualified Biologist	District and CDFW	
	<p>Mitigation Measure BIO-7: In-water Work Window All in-water construction shall be conducted within the established environmental work window between June 1 and November 30, designed to avoid potential impacts on fish species.</p>	Prior to and during construction	District, Construction Contractor, and Qualified Biologist	District	
	<p>Mitigation Measure BIO-8: Fish Protection during Construction Fish and other aquatic species shall be excluded from occupying the area to be impacted during construction by using silt curtains or blocking the stream channel above and below the area to be dewatered with fine-meshed block nets or screens while coffer dams and other diversion structures are being installed. Block net mesh shall be sized to ensure aquatic species upstream or downstream do not enter the areas proposed for dewatering. Mesh will be no greater than 3/32-inch diameter. The bottom of the net must be completely secured to the channel bed. Block nets or screens must be checked at least twice daily at the beginning and end of the workday and cleaned of debris to permit free flow of water. Block nets or screens shall be placed and maintained throughout the dewatering period at the upper and lower extent of the areas where aquatic species will be removed. Net placement is temporary and shall be removed once dewatering has been accomplished or construction work is complete for the day. Before commencement of dewatering the District shall develop a fish relocation plan, consistent with applicable federal and state permit requirements. Relocation shall be required for in-water work in the Novato Creek channel. The plan shall be prepared in coordination with the NMFS and CDFW. Implementation of the fish relocation plan shall be consistent with the following conditions:</p> <ul style="list-style-type: none"> • Before rescues of steelhead are attempted, any necessary authorization shall be obtained from the resource agencies (CDFW and/or NMFS). • Before dewatering may occur, a qualified biologist shall determine whether the extent of dewatering will result in immediate or foreseeable impacts on fish and aquatic wildlife. This shall include conducting a reconnaissance survey of the dewatering zone. 	Prior to and during construction	District, Construction Contractor, and Qualified Biologist	District, USFWS, CDFW, and NMFS	

**TABLE 2-1 (CONTINUED)
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
Biological Resources (cont.)					
<p>Criterion a (cont.)</p>	<ul style="list-style-type: none"> • Before dewatering can begin, the following elements of fish relocation shall be determined: <ul style="list-style-type: none"> – <i>Staging Area</i>: Staging areas in the dewatering zone shall be identified. Sites should be selected based on their proximity and access to the dewatering zone and ability to support safe operation of the equipment. – <i>Relocation Sites</i>: Relocation site(s) shall be identified. Priority shall be given to a site's close proximity to the dewatering zone in the same stream. If a qualified onsite biologist determines that no suitable site in the stream is available, then "second choice" locations within the watershed shall be selected. In all cases, the closest site that is likely to result in a successful rescue shall be used. – <i>Transportation Routes</i>: Transport routes for rescued fish species shall be determined in advance of dewatering. – <i>Disease Consideration</i>: To guard against disease transmission, fish shall not be moved upstream beyond substantial barriers or long distances. • If steelhead are encountered during relocation, they shall be moved upstream within the channel to a location of perennial running water or the best available habitat determined by a qualified biologist. Collection and transport methods shall be determined based on site conditions. Methods shall also be selected to maximize the efficiency of the collection effort while minimizing handling and transport time and stress. Creek water from the site shall be used in all containers. The local transport of fish may be completed using various methods, including: <ul style="list-style-type: none"> – <i>Net Transfer</i>: Appropriate for short distances (less than 50 feet) where rapid transfer is possible. – <i>Live Car</i>: Appropriate for temporary holding in the stream and for short distances. – <i>Bucket</i>: Appropriate for temporary holding and transport over short to medium distances. Holding time should be minimized if possible and aeration should be supplied. – <i>Aerated Cooler</i>: Appropriate for temporary holding and transport. Temperature shall be maintained to be similar to the temperature of the source creek water, and if necessary, fish shall be sorted by size to reduce risks of predation. • Species and collection/relocation sites shall be prioritized as follows: (1) Threatened species; and (2) other native fishes). 				

**TABLE 2-1 (CONTINUED)
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
Biological Resources (cont.)					
<p>Criterion a (cont.)</p>	<ul style="list-style-type: none"> • A Contact person as each of the appropriate resource agencies (CDFW, NMFS, and/or USFWS) shall be identified in the relocation plan. At least 24 hours before fish relocation begins, the appropriate resource agencies shall be notified to communicate the details of the fish relocation and to confirm disposition instructions. • Fish shall be relocated under the following conditions: <ul style="list-style-type: none"> – <i>Setup:</i> Upon arrival at the site, a qualified biologist shall review the operational sequence and logistics of the rescue and field assignments shall be designated. The fish relocation team shall review safety and operational methods. – <i>Live Well Operation:</i> <ul style="list-style-type: none"> ▪ If necessary, live wells shall be set up early in the operation to stabilize tank conditions. ▪ Local “native” water shall be used to fill live wells, if available and clean. ▪ To lessen stress on fish, the temperature in live wells shall be reduced or managed to be compatible with the water temperatures in which the fish were encountered. ▪ To ensure that sufficient oxygen is present during the adjustment period, the aeration system shall be started before fish are placed into the live well. When salmonids are placed in the live well, the live well shall be managed to the extent possible so that the dissolved oxygen concentration is greater than 6 milligrams per liter, but less than saturation. – <i>General Collection Guidelines:</i> <ul style="list-style-type: none"> ▪ Fish shall be collected in a manner to minimize handling time and stress, yet maintain the safety of personnel. ▪ Multiple buckets and /or live cars shall be used to reduce crowding during collection and transfer. ▪ Fish shall be pre-sorted as needed for transport. ▪ Buckets that hold steelhead shall be equipped with portable aerators until the fish are transferred to a live well. – <i>Transport:</i> <ul style="list-style-type: none"> ▪ Fish shall be transported to minimize holding time and alternatively sequenced in tandem with ongoing collection activities. ▪ Normal live well operations shall continue during transport. 				

**TABLE 2-1 (CONTINUED)
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
Biological Resources (cont.)					
Criterion a (cont.)	<p>– <i>Records and Data:</i></p> <ul style="list-style-type: none"> ▪ Fish shall be inventoried and pertinent data shall be recorded, including species, numbers of each species, disposition, and fork length. If conditions preclude a complete inventory, at a minimum, the species present and their disposition shall be documented and their abundance shall be estimated. ▪ Information on ambient site conditions (available habitat/water quality) shall be recorded as appropriate, including photo documentation at collection and release sites and other information on collection, handling, and transport. ▪ At completion, a qualified biologist shall conduct an assessment of the fish relocation to identify lessons learned, estimate the number of individual fish and fish species moved, and determine the mortality rate. The assessment report shall be forwarded to the appropriate resource agencies within a month of the completion of in-water work. 				
	<p>Mitigation Measure BIO-9: Bat Protection</p> <p>A day-time pre-construction survey shall be conducted by a Qualified Biologist within one (1) year of the tree coming down. Only trees with a diameter at breast height larger than 10-inches shall be treated at potential bat roosting habitat. The survey shall determine if the tree has suitable bat roosting habitat and look for signs of bat use. If no suitable bat roosting habitat is observed, the tree can come down without any other bat protections. If the tree has suitable bat roosting habitat, efforts shall be made to remove the tree outside of the maternity (April 15–August 31) and winter (October 15–March 1) roosting seasons after a night-time bat roosting survey. The night-time bat roosting survey shall take place within seven (7) days of the tree coming down and shall be conducted 30 minutes before and after sunset. If bats are found to be roosting in the tree during that time, a two-step method of removal shall be implemented.</p> <p>Trees with potential roosting bats that will be removed outside of the maternity and winter roosting seasons, can be removed using a two-step process over two consecutive days (e.g., Monday and Tuesday, or Thursday and Friday). Small branches or limbs that do NOT contain cavities, crevices, or exfoliating bark on the habitat trees, and are identified by a Qualified Biologist, are removed first on Day 1 using a chainsaw. A Qualified Biologist will remain on-site during the Day 1 process to ensure the people who are cutting the tree understand the process and avoid incorrectly cutting potential habitat features or trees. Once the people cutting the trees have had sufficient field supervision and training by the Qualified Biologist, the Qualified Biologist does not need to remain on site. On the following day, Day 2, the remainder of the</p>	Prior to and during construction	District, Construction Contractor, and Qualified Biologist	District	

TABLE 2-1 (CONTINUED)
MITIGATION MONITORING AND REPORTING PROGRAM

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
Biological Resources (cont.)					
Criterion a (cont.)	<p>tree is to be removed. The disturbance caused by chainsaw noise and vibration, coupled with the physical alteration, has the effect of causing colonial bat species to abandon the roost tree after nightly emergence for foraging. Removing the tree the next day prevents re-habituation and re-occupation of the altered tree.</p> <p>If the tree cannot be removed outside of the roosting seasons, exclusionary measures shall be put into place on any tree with potential bat roosting habitat, prior to any roosting seasons. The timing and other methods of exclusionary activities shall be developed by the Qualified Biologist in order to reduce the stress on the bats to the amount feasible while taking into account Project schedule. Exclusionary devices, such as plastic sheeting, plastic or wire mesh, may be used to allow for bats to exit but not re-enter any occupied roosts, if applicable. A Qualified Biologist shall also be notified and present during any tree removal or tree trimming.</p>				
Criterion b): Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.	<p>Mitigation Measure BIO-10: Tree Replacement Requirements</p> <p>Trees removed or that die due to project impacts, such as root compaction from construction or salinity intrusion, shall be replaced at a 5:1 ratio for native oak trees more than 12 inches in diameter at breast height (DBH) and 3:1 ratio for all other trees more than 12 inches DBH at an ecologically appropriate site identified by the District. Replacement trees shall be monitored for survival in Years 1, 3, and 5 post-construction. Trees should be sourced from the Novato Creek Watershed if feasible and obtained from a nursery that implements best management practices to reduce chances of pest and pathogen contamination, such as Phytophthora, within their nursery.</p>	During and post-construction	District and Qualified Biologist	District, USFWS, and CDFW	
Criterion c): Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	<p>Mitigation Measure BIO-11: Develop and Implement a Monitoring and Adaptive Management Plan</p> <p>The District shall develop and submit a Monitoring and Adaptive Management Plan to be implemented during the monitoring period to assure desired outcomes. The plan shall be submitted to the CDFW, the Regional Water Quality Control Board, and the U.S. Army Corps of Engineers prior to the start of construction. Elements of this plan shall be based upon final project design and construction documents. The plan shall include description of protocols for monitoring vegetation and geomorphology to evaluate project performance, monitoring schedule, performance criteria and thresholds that would trigger adaptive management actions, and reporting. Physical and biological monitoring would be conducted at the completion of the Project at years 1, 3, and 5 post-construction. Percent cover of vegetation will be monitored within the different habitat types at the project site including the tidal marsh. An annual report shall be prepared and provided to the above-listed regulatory agencies in each year that post-construction monitoring is conducted.</p>	Prior to, during, and post-construction	District and Construction Contractor	District, RWQCB, USACE, and CDFW	

**TABLE 2-1 (CONTINUED)
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
Biological Resources (cont.)					
Criterion e): Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	See Mitigation Measure BIO-10, above.	During and post-construction	District, USFWS- and CDFW- approved biologist	District, USFWS, and CDFW	
Cultural Resources					
Criterion b): Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5	<p>Mitigation Measure CUL-1: Cultural Resources Awareness Training</p> <p>Before any ground-disturbing and/or construction activities, an archaeologist meeting, or under the supervision of an archaeologist meeting, the Secretary of the Interior's Professional Qualifications Standards (SOI PQS) for Archeology, shall conduct a training program for all construction and field personnel involved in Project-related ground-disturbing activities. If a California Native American Tribe expresses interest, they shall be invited to participate in the training program. On-site personnel shall attend the training prior to commencement of any ground-disturbing activities. The training shall outline the general archaeological sensitivity of the Project site and the procedures to follow in the event an archaeological resource and/or human remains are inadvertently discovered. Documentation of the training attendance shall be maintained by the District.</p>	Prior to construction	District and Secretary of the Interior-qualified archaeologist	District	
	<p>Mitigation Measure CUL-2: Cultural Resources Construction Monitoring</p> <p>An archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards (SOI PQS) for Archeology, in coordination with California Native American Tribes traditionally and culturally affiliated with the Project site that have requested participation, shall prepare a Cultural Resources Monitoring Plan to describe the locations, methods (including inadvertent discovery protocol [i.e., City of Novato Municipal Code Sections 4-7.3(b), 4.7.5, and 4.7-6]), and reporting for cultural resources construction monitoring. The construction monitoring shall focus on Project-related ground-disturbing activities within existing levee prisms. The monitoring shall be conducted by an archaeologist meeting, or under the supervision of an archaeologist meeting, the SOI PQS for Archeology. Daily monitoring logs shall be prepared detailing the monitoring activities and findings. The District shall invite a California Native American Tribe to participate in the construction monitoring. A Cultural Resources Monitoring Results Report (CRMRR) summarizing the results of the monitoring shall be prepared by an archaeologist meeting the SOI PQS for Archeology. The CRMRR shall be submitted to</p>	During construction	District and Secretary of the Interior-qualified archaeologist	District	

**TABLE 2-1 (CONTINUED)
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
Cultural Resources (cont.)					
Criterion b (cont.)	<p>the NWIC upon District review and approval. If any archaeological resources are inadvertently discovered during Project-related construction activities not on or in the tide and submerged lands of California, the procedures outlined for inadvertent discovery protocol for archaeological resources and human remains (in the City of Novato Municipal Code Sections 4-7.3(b), 4.7.5, and 4.7-6, as well as those in Mitigation Measure TRI-1) shall be followed. If a shipwreck, and associated artifacts, or other cultural resource on or in the tide and submerged lands of California is encountered during Project construction or operation, the following measures shall also be implemented:</p> <ul style="list-style-type: none"> • The District shall initiate consultation with California State Lands Commission (CSLC) staff within two business days of the discovery. • Per PRC Section 6313(c), any submerged cultural resource remaining in State waters for more than 50 years shall be presumed to be archaeologically or historically significant. • If the find is a maritime archaeological resource, the qualified archaeologist assessing the find shall have expertise in maritime archaeology. • The District shall consult with the CSLC regarding assessment of the find and development of any treatment measures to minimize or mitigate potential impacts on the resource, pursuant to PRC Section 21083.2 and CCR Section 15126.4. Treatment measures would typically consist of (but would not necessarily be limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource to be affected by the proposed project. The District shall prepare a treatment plan to document the treatment measures and their implementation methods. The treatment plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and State repositories, libraries, and interested professionals. Any treatment measures implemented shall be documented in a professional-level technical report (e.g., archaeological testing results report, archaeological data recovery report, ethnographic report) authored by a qualified archaeologist, to be filed with the CHRIS. Project construction work at the location of the find may commence upon completion of the approved treatment and authorization by the District. Work may proceed in other parts of the Project site while the mitigation is being carried out. 				

TABLE 2-1 (CONTINUED)
MITIGATION MONITORING AND REPORTING PROGRAM

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
Cultural Resources (cont.)					
Criterion b (cont.)	<ul style="list-style-type: none"> The District shall submit to the CSLC any report prepared for the resource as part of the assessment of the find and implementation of treatment measures to minimize or mitigate potential impacts. The final disposition of archaeological, historical, and paleontological resources recovered on State land under the jurisdiction of the CSLC must be approved by the Commission. 				
Greenhouse Gas Emissions					
Criterion b): Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases	See Mitigation Measure AQ-1: Implement BAAQMD Basic Construction Mitigation Measures, above.	During construction	District and Construction Contractor	District and BAAQMD	
Tribal Cultural Resources					
Criterion a.i): Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)	<p>See Mitigation Measure CUL-1: Cultural Resources Awareness Training, above.</p> <p>See Mitigation Measure CUL-2: Cultural Resources Construction Monitoring, above.</p> <p>Mitigation Measure TRI-1: Inadvertent Discovery Protocol for Native American Resources</p> <p>If Native American archaeological resources are encountered during Project construction, all construction activities within 100 feet shall halt, and a qualified archaeologist, defined as an archaeologist meeting the SOI PQS for Archeology, and any California Native American Tribes participating in construction monitoring, shall inspect the find within 24 hours of discovery and notify the District of their initial assessment. Native American archaeological materials might include: obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (midden) containing heat-affected rocks, artifacts, or shellfish remains; stone milling equipment (e.g., mortars, pestles, handstones); and battered stone tools, such as hammerstones and pitted stones.</p> <p>If any Native American cultural resources are encountered on or in the tide and submerged lands of California during Project construction or operation, the measures related to unanticipated discoveries of cultural resources on or in the tide and submerged lands of California provided in Mitigation Measure CUL 2 shall also then be implemented.</p>	Prior to construction During construction	District, Secretary of the Interior-qualified archaeologist, Construction contractor, and Marin County Coroner	District, Marin County Coroner, and NAHC	

**TABLE 2-1 (CONTINUED)
MITIGATION MONITORING AND REPORTING PROGRAM**

Impact	Mitigation, Avoidance, and Minimization Measures	Implementation Timing	Implementation Responsibility	Verification Responsibility	Compliance Verification Date
Tribal Cultural Resources (cont.)					
Criterion a.i) (cont.)	For Native American cultural resources encountered in areas not on or in the tide and submerged lands of California during Project, if the District determines, based on recommendations from the qualified archaeologist and California Native American Tribes that are traditionally and culturally affiliated with the Project site, that the resource may qualify as a tribal cultural resource (as defined in PRC Section 21074), the resource shall be avoided, if feasible. Consistent with CEQA Guidelines Section 15126.4(b)(3), this may be accomplished through: planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If avoidance of the resource is not feasible, the District shall continue to consult with California Native American Tribes that are traditionally and culturally affiliated with the Project site to determine treatment measures to avoid, minimize, or mitigate any potential impacts to the resource pursuant to PRC Section 21083.2, and CEQA Guidelines Section 15126.4. This shall include documentation of the resource and may include data recovery (according to PRC Section 21083.2), if deemed appropriate, or other actions such as treating the resource with culturally appropriate dignity and protecting the cultural character and integrity of the resource (according to PRC Section 21084.3). Any technical report developed to document the implementation mitigation shall be submitted to the NWIC upon District approval, unless the document contains information that California Native American Tribes involved in the development of the mitigation deem should not be filed with the NWIC, in which case, the report shall be submitted to the NAHC.				
Criterion a.ii): A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	See Mitigation Measure CUL-1: Cultural Resources Awareness Training, above. See Mitigation Measure CUL-2: Cultural Resources Construction Monitoring, above. See Mitigation Measure TRI-1: Inadvertent Discovery Protocol for Native American Resources, above.	Prior to construction During construction	District, Secretary of the Interior-qualified archaeologist, Construction contractor, and Marin County Coroner	District, Marin County Coroner, and NAHC	