ATTACHMENT 1

MITIGATION MONITORING AND REPORTING PROGRAM

Vista Grande Drainage Basin Improvement Project

Introduction

The California Environmental Quality Act (CEQA) requires that when a public agency makes findings pursuant to Public Resource Code Section 21081 before approving a project that would result in one or more significant impacts on the environment, the agency must adopt a reporting or monitoring program for mitigation measures incorporated into a project or imposed as conditions of approval. The program must be designed to ensure compliance during project implementation (Public Resource Code Section 21081.6).

The Council on Environmental Quality has established regulations for implementing the National Environmental Policy Act (NEPA; 40 CFR 1500-1508). NEPA requires mitigation monitoring in 40 CFR 1505.2(c), and the National Park Service (NPS) NEPA Handbook requires that the Record of Decision "state any mitigation measures that are not inherently integral to the selected action's implementation and a summary of any monitoring or enforcement programs associated with the mitigation" (Section 4.7.B).

This Mitigation Monitoring and Reporting Plan (MMRP) for the Vista Grande Drainage Basin Improvement Project (project) will be in place through all phases of the project, including design and construction, and will help ensure that project objectives are achieved. As the CEQA Lead Agency, the City of Daly City (Daly City) is responsible for verifying that the provisions of the MMRP as a whole are carried out, pursuant to Section 15097(a) of the CEQA Guidelines. The NPS, as NEPA Lead Agency and as the administrator of Fort Funston and the use authorizations for construction and operation of a portion of the Vista Grande Tunnel and the Ocean Outlet structure, also will be responsible for administering the mitigation measure compliance and monitoring program and ensuring that all parties comply with their provisions. The NPS also served as the lead federal agency for Section 106 consultation under the National Historic Preservation Act (NHPA) for the project. Daly City may delegate reporting or monitoring responsibilities to a subsidiary public agency or to a private entity such as a project contractor who accepts the delegation; however, until mitigation measures have been completed, Daly City remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program. Daly City will ensure that monitoring is documented through periodic reports and that deficiencies are promptly corrected, and will coordinate with NPS to ensure that reporting meets the needs of both agencies.

The following table identifies the mitigation measures by resource area. The table also provides the specific mitigation monitoring requirements, including implementation documentation, monitoring activity, timing, and responsible monitoring party. Verification of compliance with each measure is to be indicated by signature of the mitigation monitor, together with date and verification. Daly City and its contractor(s) shall be responsible for implementation of all mitigation measures, unless otherwise noted in the table.

The table that follows presents a compilation of mitigation measures adopted for the project by Daly City, NPS, or both lead agencies. Some mitigation measures apply only to project components outside of the jurisdiction of NPS that are solely the responsibility of Daly City and related to Daly City's CEQA compliance requirements. There are also measures that are not required under CEQA to reduce an impact to a less-than-significant level, but have been required and adopted by NPS as the NEPA lead agency; nonetheless, as project proponent, Daly City is responsible for carrying out these measures per NPS requirements. The purpose of the table is to provide a single comprehensive list of the measures that will be implemented to avoid or reduce impacts of the project on the environment, the timing for their implementation, and related monitoring and reporting requirements.

The following abbreviations are used in the table:

DC	Daly City
CCC	California Coastal Commission
CDFW	California Department of Fish and Wildlife
CSLC	California State Lands Commission
NPS	National Park Service
RWQCB	San Francisco Bay Regional Water Quality Control Board
SamTrans	San Mateo County Transit District
SFDPW	San Francisco Department of Public Works
SFMTA	San Francisco Municipal Transportation Agency
SFRPD	San Francisco Recreation and Parks Department
SFPD	San Francisco Planning Department
SFPUC	San Francisco Public Utilities Commission
USACE	United States Army Corps of Engineers
USFWS	United Stated Fish and Wildlife Service

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			Implementation and Reporting		Monitoring and Reporting Actions	Implementation Schedule
			Responsible Party	Reviewing and Approval Party		
Aesthetics						
AES-3	Project construction could result in a new source of substantial light or glare that would adversely affect day or nighttime views in the area.	**Implement Mitigation Measure 3.4-9: Night Lighting Minimization (see details under Biological Resources, below)**				
NEPA Impact	The Project could generate visual resource impacts to Fort Funston that would contribute to visual change in landscape.	**3.2-1:** The contractor shall ensure that construction-related activity at the Fort Funston staging area is as clean and inconspicuous as practical by storing materials and equipment within the proposed construction staging areas or in areas that are generally away from public view and by removing construction debris promptly at regular intervals. An 8-foot-high green screening fence shall be installed around the perimeter of the staging area. Stockpiled materials shall not exceed 8 feet in height.	1. DC/NPS 2. DC (Construction Contractor) 3. DC/NPS	1. DC/NPS 2. DC/NPS 3. DC/NPS	1. Ensure that the construction contract for work at Fort Funston includes the requirements for minimizing visual impacts. 2. Maintain clean and inconspicuous staging areas and work areas. Install 8-foot-high green screening fence around staging areas and do not stockpile materials higher than 8 feet. 3. Monitor to ensure that contractor(s) implements measures in contract documents. Report non-compliance, and ensure corrective action.	1. Design 2. Preconstruction/ Construction 3. Construction
Air Quality						
AIR-1	The Project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.	**3.3-1: Dust Control Plan Implementation.** All elements of the Dust Control Plan required for work within San Francisco shall also be implemented for work occurring at Fort Funston. At a minimum this Plan shall include watering of exposed surfaces, covering of haul trucks, and sweeping of visible mud or dirt on adjacent public roads.	1. DC 2. DC	1. DC 2. DC/NPS	1. Ensure that the construction contract for Fort Funston includes the same Dust Control Plan that is used for San Francisco. 2. Monitor to ensure that contractor(s) implements measures in contract documents. Report non-compliance, and ensure corrective action.	1. Preconstruction 2. Construction
AIR-2	The Project could result in a cumulatively considerable net increase of ozone, PM10, or PM2.5 (for which the SFBAAB is in non-attainment), including releasing emissions which exceed quantitative thresholds for ozone precursors.	**Implement Mitigation Measure 3.3-1: Dust Control Plan Implementation (see details above)**				
Biological Resources						
BIO-1	Construction of the Project could have a substantial adverse effect either directly or through habitat Modifications, on plant species identified as sensitive or special-status in local or regional plans, policies, or regulations, or by the CDFW or USFWS.	**3.4-1: Avoidance, minimization, and compensation for impacts to special-status plants.** A qualified botanist shall conduct appropriately timed floristic preconstruction surveys for special-status plant species with a moderate or high potential to occur in the study area, and for species known to be present in the study area, in all suitable habitat that would be potentially disturbed by the Project within the year of initiation of ground disturbance (e.g., spring/summer 2017 surveys prior to fall 2017 start of construction). Surveys on NPS managed land shall be coordinated with NPS. Surveys shall be conducted following the current CDFW protocol (CDFG, 2009). If no special-status plants are found during focused surveys, the botanist shall document the findings in a letter to CDFW and the Project proponent, and no further mitigation will be required. If special-status plants are found during focused surveys, the following measures shall be implemented:	1. DC (Botanist) 2. DC (Botanist) 3. DC (Botanist) 4. DC (Botanist)	1. DC/NPS/CDFW 2. DC/CDFW/ USFWS/NPS 3. DC/NPS 4. CDFW/USFWS/ NPS	1. Obtain and review résumé or other documentation of consulting botanist's qualifications. Conduct preconstruction surveys for special status plants in accordance with NPS and/or CDFW protocols and reporting requirements. If special status plants are found, implement appropriate measures. 2. Develop relocation plan and/or compensation plan if relocation is not feasible.	1. Preconstruction 2. Preconstruction 3. Preconstruction 4. Post-construction

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Biological Resources (cont.)						
BIO-1 (cont.)		a) Information regarding the special-status plant populations shall be reported to the CNDDB, mapped, and documented in a technical memorandum provided to Daly City. b) No federal- or state-listed plants have been observed or are expected to occur within the Project areas of disturbance; however, if federal- or state-listed species are identified during floristic preconstruction surveys Daly City shall mark these plants for avoidance and comply with the federal and state Endangered Species Acts through consultation with USFWS and CDFW, respectively, as described in items c and d, below. c) If other special-status plant population(s) (i.e., California Rare Plant Ranked or locally significant plants) are identified during floristic preconstruction surveys and can be avoided during Project implementation, it shall be clearly marked in the field by a qualified botanist and avoided during construction activities. Before ground clearing or ground disturbance, all on-site construction personnel shall be instructed as to the species' presence and the importance of avoiding impacts to this species and its habitat. d) If special-status plant populations cannot be avoided, Daly City shall consult with CDFW and/or USFWS as appropriate (and NPS on populations within NPS-managed lands) to coordinate relocation of special-status plants or compensation if relocation is not determined to be a feasible or successful option by a qualified biologist: i. To the extent feasible, special-status plants that would be impacted by the Project shall be relocated within local suitable habitat. This can be done either through salvage and transplanting or by collection and propagation of seeds or other vegetative material. Any plant relocation shall be done under the supervision of a qualified biologist. ii. Compensation for temporary or permanent loss of special-status plant occurrences, in the form of land purchase or restoration, shall be provided to the level acceptable to the resource agencies. Compensatory measures shall be determined on a case-by-case basis in consultation with the resource agencies. Compensation for loss of special-status plant populations typically involves the purchase and permanent stewardship of known occupied habitat or the restoration and reintroduction of populations in degraded, unoccupied habitat. Restoration or reintroduction may be located on- or offsite. In either case the City of Daly City shall prepare a Mitigation and Monitoring Plan for relocated special-status plants or to compensate for the loss of special-status plant species. The plan shall detail relocation methods or appropriate replacement ratios and methods for implementation, success criteria, monitoring and reporting protocols, and contingency measures that shall be implemented if the initial mitigation fails. The plan shall be developed in consultation with the appropriate agencies prior to the start of local construction activities. For special-status plants displaced on NPS-managed lands, the Mitigation and Monitoring Plan shall be coordinated with and approved by NPS. At a minimum, success criteria shall require any mitigation to provide equal or better habitat and populations than the impacted area. e) If more than 2 years elapses between the focused, floristic preconstruction surveys of the Project site and commencement of ground disturbance activities, a final set of appropriately timed focused, floristic preconstruction botanical surveys shall be conducted and populations mapped. The results of these final surveys shall be combined with previous survey results to produce habitat maps showing habitat where the special-status plants have been observed during either of the focused floristic surveys conducted for the Project. Copies of all surveys shall be submitted to NPS for NPS-managed lands and communications with the appropriate agencies shall be coordinated with NPS for NPS-managed lands.			3. Ensure that floristic preconstruction surveys are conducted again if more than 2 years elapses between initial preconstruction survey and commencement of ground disturbance. 4. Maintain and monitor relocation and/or restored areas for 5 years following construction and restoration activities. Submit monitoring reports to appropriate resource agencies according to protocol.	

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Biological Resources (cont.)						
BIO-1 (cont.)		f) If special-status plants are relocated from the Project or compensatory restoration or reintroduction of plants or seed is implemented, Daly City shall maintain and monitor the relocation sites and/or restored areas for 5 years following the completion of construction and restoration activities. Daly City shall submit monitoring reports to the resource agencies at the completion of restoration and for 5 years following restoration implementation. Monitoring reports shall include photo-documentation, planting specifications, a site layout map, descriptions of materials used, and justification for any deviations from the mitigation plan. Success criteria for restored areas after 5 years will be determined by the appropriate agencies that will approve the plans. For mitigation on NPS-managed lands, restoration plans shall be coordinated with and approved by NPS and all plants shall be propagated from material collected and grown according to NPS protocols.				
BIO-2	Construction of the Project could have a substantial adverse effect either directly or through habitat modifications, on reptile species identified as special-status in local or regional plans, policies, or Regulations, or by the CDFW or USFWS.	**3.4-2a: Worker Environmental Awareness Program Training.** A project-specific Worker Environmental Awareness Program (WEAP) training shall be developed and implemented by a qualified biologist and attended by all Project personnel prior to beginning work onsite. The WEAP training shall generally include but not be limited to education about the following: a) Applicable State and federal laws, environmental regulations, Project permit conditions, and penalties for non-compliance; b) Special-status plant and animal species with potential to occur at or in the vicinity of the Project site, avoidance measures, and a protocol for encountering such species including a communication chain; c) Preconstruction surveys and biological monitoring requirements associated with each phase of work and at each Project site as biological resources and protection measures will vary depending on the land managers (see f, below); d) Known sensitive resource areas in the Project vicinity that are to be avoided and/or protected as well as approved Project work areas, access roads, and staging areas; e) Best management practices (BMPs) and their location at various Project sites for erosion control, species exclusion, in addition to general housekeeping requirements; and f) Specific requirements sanctioned by NPS that the Project must comply with while working on NPS-managed lands, including but not limited to: i. Preconstruction surveys for and relocation of terrestrial wildlife prior to grading or vegetation removal at Fort Funston; ii. Biological monitoring during Project initiation at each NPS-managed Project location (e.g., Ocean Outlet work area) to identify nearby sensitive biological resources and implement avoidance or protection measures approved by NPS staff; iii. Seasonal work restrictions during wildlife breeding, nesting, or migration periods; and iv. Work area exclusion methods, communication and relocation protocols if wildlife enters a work area(s) while a biological monitor is not onsite.	1. DC 2. DC (Biologist) 3. DC (Biologist) 4. DC	1. DC 2. DC/NPS 3. DC 4. DC	1. Ensure that contract documents include provisions that all project personnel to attend WEAP training prior to the start of onsite work. 2. Ensure that training program complies with NPS requirements, where applicable. 3. Obtain and review résumé or other documentation of consulting biologist's qualifications. Develop worker training program and ensure that all construction personnel participate in the environmental training prior to beginning work at the job site(s). Conduct additional trainings as new workers start project work. Require workers to sign the training program sign-in sheet. Maintain file of training sign-in sheets. 4. Compare list of WEAP attendees with list of contracted workers. Ensure that all workers have attended the WEAP training prior to starting work.	1. Preconstruction 2. Preconstruction 3. Preconstruction/ Construction 4. Preconstruction/ Construction

Impact No.	Impact Summary	Mitigation Measure	Monitoring and Reporting Program			
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Biological Resources (cont.)						
BIO-2 (cont.)		**3.4-2b: Avoidance and Minimization Measures for Western Pond Turtle.** During construction at the Lake Merced overflow structure in South Lake, construction at the outlet structure on the bank and within waters of Impound Lake, and during installation of the in-lake treatment infrastructure a qualified biological monitor shall be present during vegetation removal and the installation of exclusion fencing and cofferdam at Impound Lake. Also, the following measures shall be implemented: a) Within one week before construction commences at these locations, a qualified biologist shall supervise the installation of exclusion fencing along the terrestrial boundaries of the work area, as the biologist deems necessary. This is to prevent western pond turtles and incidental common wildlife from entering the work area from the adjacent riparian and upland grassland habitats. The construction contractor shall install CDFW-approved species exclusion fencing, with a minimum height of 3 feet above ground surface and with an additional 4 to 6 inches of fence material buried such that species cannot crawl under the fence. Any vegetation removal in advance of exclusion fence installation shall be performed under the supervision of a qualified biologist. b) A qualified biologist shall supervise the installation of a cofferdam around the inwater work area which shall be in place throughout the duration of construction on the Lake Merced overflow structure in South Lake and the Lake Merced outlet into Impound Lake (should lake water levels at the time of construction require in-water work to execute construction of either the overflow or the outlet structure). The following measures will be taken to prevent entrapment of western pond turtle and common, resident fish21 within the cofferdam: i. The qualified biologist shall visually survey the area for wildlife where the cofferdam is to be installed and monitor affected waters during installation. ii. As the final cofferdam piece is installed, resulting in isolation of the work zone and potential trapping of turtles and fish, the qualified biologist shall oversee initial dewatering of the area and conduct rescue-relocation effort of potentially isolated turtles and fish. Once a zero catch is recorded for three successive passes of nets, the work area can be declared free of wildlife. iii. The biologist shall monitor final dewatering of the work area and rescue-relocate any final fish that are revealed by drawing water levels all the way down. iv. The isolated work area can now be considered a construction zone and can be managed as such. Memo of rescue-relocation results involving western pond turtles shall be submitted to CDFW, as required by CDFW, and kept on file at construction site (in case of inspections). c) The biological monitor shall monitor the exclusion fencing and inspect the cofferdam weekly to confirm proper maintenance and inspect for turtles. If turtles are found, the contractor shall halt construction in the immediate area and contact the CDFW for instructions on how to proceed. Construction may resume after approval from the CDFW. d) During construction and/or maintenance activities at work sites around Lake Merced, excavations deeper than 6 inches shall have an escape ramp of earth or a wooden plank installed at a 3:1 rise, be completely covered with plywood/metal plates at the end of each day to prevent entrapment, or be surrounded by species exclusion fencing to prevent species entry; openings, such as the ends of pipes, where western pond turtles might seek refuge shall be covered when not in use; and all trash that may attract predators or hide western pond turtles shall be properly contained each day, removed from the worksite, and disposed of regularly. Following site remediation, the construction contractor shall remove all trash and construction debris from the work areas.	1. DC 2. DC (Biologist) 3. DC (Biologist) 4. DC	1. DC 2. DC/CDFW/ USFWS 3. DC 4. DC	1. Ensure that contract documents include applicable avoidance and minimization measures for western pond turtles and incidental, common wildlife, including requirement for exclusion fencings. 2. Obtain and review résumé or other documentation of consulting biologist's qualifications. Conduct preconstruction surveys, species relocation (if appropriate and approved by CDFW and/or USFWS), and monitoring, including weekly fence inspection. Document activities in monitoring logs. 3. Develop worker training program and ensure that all construction personnel participate in the environmental training prior to beginning work at the job site(s). Require workers to sign the training program sign-in sheet. Maintain file of training sign-in sheets. 4. Monitor to ensure that contractor(s) implements measures in contract documents. Report noncompliance, and ensure corrective action.	1. Design 2. Preconstruction/ Construction 3. Preconstruction/ Construction 4. Construction

Impact No.	Impact Summary	Mitigation Measure	Monitoring and Reporting Program			
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Biological Resources (cont.)						
BIO-3	Construction of the Project could have a substantial adverse effect either directly or through habitat modifications, on migratory birds and/or on bird species identified as special-status in local or regional plans, policies, or regulations, or by the CDFW or USFWS.	**3.4-3: Nesting Bird Protection Measures** Nesting birds and their nests shall be protected during construction through the implementation of the following measures: a) To the extent feasible, conduct initial ground disturbance and site grading, vegetation removal, tree removal, pile driving, and other construction activities that may compromise breeding birds or the success of their nests outside of nesting season (i.e., from January 1 – August 15). Timing of pile driving on NPS-managed lands shall be coordinated with NPS biologists. b) If construction activities cannot be fully avoided during bird nesting season (i.e., from January 1 to August 15), a qualified wildlife biologist shall conduct preconstruction nesting surveys within 7 days prior to the start of construction or prior to reinitiating construction after any construction breaks of 14 days or more. Lead agencies and/or responsible agencies may, at their discretion, require shorter preconstruction survey periods as a condition of Project approval (e.g., NPS previously has required that surveys occur within less than 7 days prior to the start or re-initiation of construction in other GGNRA locations). Surveys shall be performed for the Project sites and for suitable habitat within 250 feet of the Project sites in order to locate any active passerine (perching bird) nests and within 500 feet of the Project sites to locate any active raptor (birds of prey) nests or double-crested cormorant or heron rookeries. c) If active nests are located during the preconstruction bird nesting surveys, a qualified biologist shall evaluate if the schedule of construction activities could affect the active nests and if so, the following measures shall apply: i. 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. ii. If construction may affect the active nest, the qualified biologist shall establish a no-disturbance buffer around the nest(s) and all Project work shall halt within the buffer until it is determined no longer in use by a qualified biologist. Typically, these buffer distances are 250 feet for passerines and 500 feet for raptors; however, they may be adjusted if 1) determined to not sufficiently avoid or minimize adverse project effects in which case the buffer would be expanded, or 2) an obstruction, such as a building, is within line-of-sight between the nest and construction in which case the buffer could be reduced, if approved by CDFW. Modifying nest buffer distances, allowing certain construction activities within the buffer, modifying construction, and removing or relocating active nests shall be coordinated with the CDFW as appropriate given the nests that are found on the site. Protective measures surrounding nests found on NPS-managed lands shall be coordinated with NPS. iii. Any work that must occur within established no-disturbance buffers (e.g., vegetation removal, grading, work with hand tools, etc.) around active nests shall be monitored by a qualified biologist. If adverse effects in response to Project work within the buffer are observed and could compromise the nest, work shall halt until the nest fledges. d) Any birds that begin nesting within the Project area and survey buffers amid construction activities are assumed to be habituated to construction-related or similar noise and disturbance levels so exclusion zones around nests may be reduced or eliminated in these cases as determined by the qualified biologist in coordination with respective land managers. Work may proceed around these active nests as long as they and their occupants are not directly impacted. Protective buffers may be established around such nests at any time if Project-related adverse effects to bird, nests, or nestlings are observed.	1. DC 2. DC (Biologist) 3. DC (Biologist) 4. DC	1. DC/NPS 2. DC/NPS 3. DC/CDFW/NPS 4. DC/NPS	1. Ensure that construction contract includes provisions to avoid construction disturbance during the nesting season. 2. Obtain and review résumé or other documentation of consulting biologist's qualifications. Conduct preconstruction nesting surveys within 7 days or less prior to start of construction or reinitiation of construction activities. 3. Create construction mitigation and monitoring plan if active nests are located within disturbance range of project area. 4. Monitor to ensure contractor(s) implements measures in contact documents. Report non-compliance and ensure corrective action.	1. Design 2. Preconstruction 3. Preconstruction/ Construction 4. Construction
		Implement Mitigation Measure 3.11-1 (see details under Noise and Vibration, below)				

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Biological Resources (cont.)						
BIO-4	Project construction could have a substantial adverse effect either directly or through habitat modifications, on bats identified as special-status in local or regional plans, policies, or regulations, or by the CDFW or USFWS.	**3.4-4: Avoidance and Minimization Measures for Special-Status Bats.** A preconstruction survey for special-status bats shall be conducted by a qualified biologist in advance of tree and structure removal within the project site to characterize potential bat habitat and identify active roost sites. Should the preconstruction survey find no bat habitat or bat roosting sites then no further action is required. Should potential roosting habitat or active bat roosts be found in trees and/or structures to be removed under the project, Daly City shall implement avoidance and minimization measures. These measures include, but are not limited to, the following, subject to modification by the terms of applicable permits issued by the CDFW: a) Removal of trees and structures shall occur when bats are active, approximately between the periods of March 1 to April 15 and August 15 to October 15; outside of bat maternity roosting season (approximately April 15 – August 31) and outside of months of winter torpor (approximately October 15 – February 28), to the extent feasible. b) If removal of trees and structures during the periods when bats are active is not feasible and active bat roosts being used for maternity or hibernation purposes are found on or in the immediate vicinity of the project site where tree and structure removal is planned, a no disturbance buffer of 100 feet shall be established around these roost sites until they are determined to be no longer active by the qualified biologist. A 100-foot no disturbance buffer is a typical protective buffer distance however may be modified by the qualified biologist depending on existing screening around the roost site (such as dense vegetation or a building) as well as the type of construction activity which would occur around the roost site. c) The qualified biologist shall be present during tree and structure removal if potential bat roosting habitat or active bat roosts are present. Trees and structures with active roosts shall be removed only when no rain is occurring or is forecast to occur for 3 days and when daytime temperatures are at least 50°F. d) Removal of trees with potential bat roosting habitat or active bat roost sites shall follow a two-step removal process: i. On the first day of tree removal and under supervision of the qualified biologist, branches and limbs not containing cavities or fissures in which bats could roost, shall be cut only using chainsaws. ii. On the following day and under the supervision of the qualified biologist, the remainder of the tree may be removed, either using chainsaws or other equipment (e.g., excavator or backhoe). e) Removal of structures containing or suspected to contain potential bat roosting habitat or active bat roosts shall be dismantled under the supervision of the qualified biologist in the evening and after bats have emerged from the roost to forage. Structures shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost.	1. DC 2. DC (Biologist) 3. DC (Biologist)	1. DC/CDFW 2. DC 3. DC/NPS	1. Ensure that contract documents include applicable avoidance and minimization measures for special status bats. 2. Obtain and review resume or other documentation of consulting biologist's qualifications. Conduct pre-construction survey. If roosts are found, implement appropriate measures. Document activities in monitoring logs. 3. Monitor to ensure that contractor(s) implements measures in contract documents. Report noncompliance, and ensure corrective action.	1. Design 2. Preconstruction 3. Construction
BIO-5	Project construction could have a substantial adverse effect on central dune scrub, a sensitive natural community identified by the CDFW.	**3.4-5: Avoidance, minimization, and compensation for impacts to central dune scrub.** a) Concurrent with focused botanical surveys, prior to establishing staging areas or beginning construction activities, areas of central dune scrub vegetation within the Project footprint and within a 50-foot buffer adjacent to the Project footprint shall be mapped by a qualified botanist using a Global Positioning System (GPS) unit with 3-meter accuracy. b) To the extent feasible, Project elements shall be designed to avoid and minimize impacts to central dune scrub. This includes minimizing the Project footprint within central dune scrub or siting Project elements outside of this sensitive community. Where central dune scrub can be avoided, protective fencing shall be installed along the edge of construction areas including temporary and permanent	1. DC 2. DC (Botanist) 3. DC (Ecologist) 4. DC (Botanist) 5. DC (Ecologist)	1. DC 2. DC 3. DC/NPS/ CDFW/CCC 4. DC 5. DC/NPS	1. Ensure that contract documents include applicable avoidance and minimization measures for central dune scrub. 2. Obtain and review resume or other documentation of consulting botanist qualifications. Conduct pre-construction survey and map areas that contain central dune scrub within project area and within a 50-foot buffer adjacent to project footprint.	1. Design 2. Preconstruction 3. Preconstruction 4. Construction 5. Post-construction

Impact No.	Impact Summary	Mitigation Measure	Monitoring and Reporting Program			
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Biological Resources (cont.)						
BIO-5 (cont.)		access roads where construction will occur within 50 feet of the edge of central dune scrub (as determined by a qualified botanist). The location of fencing shall be marked in the field with stakes and flagging and shown on the construction drawings. The construction specifications shall contain clear language that prohibits construction-related activities, vehicle operation, material and equipment storage, trenching, grading, or other surface-disturbing activities outside of the designated construction area. Signs shall be erected along the protective fencing at a maximum spacing of one sign per 25 feet of fencing. The signs shall state: "This area is environmentally sensitive; no construction or other operations may occur beyond this fencing. Violators may be subject to prosecution, fines, and imprisonment." The signs shall be clearly readable at a distance of 20 feet, and shall be maintained for the duration of construction activities in the area. c) In areas where impacts to central dune scrub cannot be avoided, the Project proponent shall prepare and implement an onsite Revegetation and Restoration Plan for Central Dune Scrub, to be submitted to CDFW and CCC for review and approval. For impacts to central dune scrub on NPS-managed lands, the plan shall also be coordinated with and approved by NPS. Restoration and revegetation shall take place onsite following Project completion and will directly restore those areas temporarily impacted. If grading has occurred in these locations to facilitate Project construction, re-contouring of the disturbed areas to pre-project conditions or similar shall be performed prior to restoration. If permanent impacts to central dune scrub occur within the Project footprint, central dune scrub adjacent to the restored areas could be enhanced through (1) removal of invasive plants, (2) planting of local central dune scrub species, and (3) continued monitoring and maintenance to compensate for permanent losses. The revegetation and restoration plan shall be prepared by a qualified restoration ecologist and shall include specifications for seed and propagule26 collection prior to the commencement of construction and at the appropriate phonological stage to capture reproductive structures of target central dune scrub plants. The restoration ecologist shall coordinate with a local native plant restoration nursery and NPS for restoration of central dune scrub on NPS-managed lands to either store the propagules until planting or grow the plants so that they are ready to plant once construction is complete. Restoration areas shall be monitored to assess reestablishment for 5 years or until the sites meet the success criteria determined in the plan. At a minimum, total native vegetation cover, composition, and species richness in the restored areas should be monitored and maintained until comparable with suitable reference sites.			3. Obtain and review resume or other documentation of consulting restoration ecologist qualifications. Prepare and implement onsite Revegetation and Restoration Plan in areas where impacts to Central Dune Scrub cannot be avoided. 4. Monitor to ensure that contractor(s) implements measures in contract documents. Report noncompliance, and ensure corrective action. 5. Monitor restoration areas for 5 years or until the sites meet criteria in restoration plan.	
BIO-6	Project construction would not have a substantial adverse effect on upland vegetation communities identified in local or regional plans, policies, regulations, or by the CDFW or USFWS.	**3.4-6: Implement Tree Protection Measures and Plant Replacement Trees.** 1. A certified arborist shall perform a tree survey of the Project prior to construction to identify trees to be removed, trimmed, or retained and that shall need to be protected during construction. 2. Trees to be trimmed or retained under the Project shall be protected during construction by measures determined by the certified arborist that may include but are not limited to the following: a. Establishing a Tree Protection Zone (TPZ) around any tree or group of trees to be retained. The formula typically used is defined as 1.5 times the radius of the dripline or 5 feet from the edge of any grading, whichever is greater. The TPZ may be adjusted on a case-by-case basis after consultation with a certified arborist. b. Marking the TPZ of any trees to be retained with permanent fencing (e.g., post and wire or equivalent), which shall remain in place for the duration of construction activities in the area. "Keep Out" signs shall be posted on all sides of fencing.	1. DC 2. DC (Arborist) 3. DC 4. DC	1. DC/SFDPW 2. DC 3. SFDPW 4. DC	1. Ensure that contract documents include tree protection and replacement measures. 2. Obtain and review resume or other documentation of certified arborist's qualifications. Conduct preconstruction tree survey to identify trees to be removed, trimmed, retained, and/or protected during construction. 3. Ensure that the contractor implements tree removal and replacement measures in accordance with SFDPW requirements. 4. Monitor to ensure that contractor implements measures in contract documents. Report noncompliance, and ensure corrective action.	1. Design 2. Preconstruction 3. Preconstruction/ Construction 4. Construction

Impact No.	Impact Summary	Mitigation Measure	Monitoring and Reporting Program			
			Implementation and Reporting		Monitoring and Reporting Actions	Implementation Schedule
			Responsible Party	Reviewing and Approval Party		
Biological Resources (cont.)						
BIO-6 (cont.)		c. Prohibiting construction-related activities, including grading, trenching, construction, demolition, or other work within the TPZ; or, if work within the TPZ is necessary, performing the work in a manner that will adequately protect the tree. No heavy equipment or machinery shall be operated within the TPZ. No construction materials, equipment, machinery, or other supplies shall be stored within a TPZ. No wires or signs shall be attached to any tree. Any modifications shall be approved and monitored by a certified arborist. d. Pruning selected trees to provide necessary clearance during construction and to remove any defective limbs or other parts that may pose a failure risk. All pruning shall be completed by a certified arborist or tree worker and adhere to the Tree Pruning Guidelines of the International Society of Arboriculture. 3. Trees to be removed under the Project shall follow the SFDPW tree removal permit process and be replaced on the property from which trees are removed at a 1:1 ratio. Non-native trees removed shall be replaced with native tree species determined suitable for the site by a qualified biologist, horticulturist, landscape architect, or biologist in coordination with the SFDPW. a. Trees shall be replaced within the first year after completion of construction, or as soon as possible in areas where construction has been completed, during a favorable time period for replanting, as determined by a qualified arborist, horticulturist, or landscape architect. b. Selection of replacement sites and installation of replacement plantings shall be supervised by a qualified arborist, horticulturist, landscape architect, or landscape contractor. Irrigation of trees during the initial establishment period (generally for two to four growing seasons) shall be provided as deemed necessary by a qualified arborist, horticulturist, landscape architect, or landscape contractor. c. Trees shall be planted at or in close proximity to removal sites, in locations suitable for the replacement species. The specialist shall work with the SFDPW to determine appropriate nearby off-site locations that are within the same jurisdiction from which the trees are removed if replanting within the well facility sites is precluded. d. A qualified arborist, horticulturist, landscape architect, or landscape contractor shall monitor newly planted trees at least twice a year for five years. Each year, any trees that do not survive shall be replaced and monitored at least twice a year for five years thereafter.				
BIO-7	Construction of the Project would have a substantial adverse effect on sensitive communities identified in local or regional plans, policies, regulations, or by CDFW or USFWS through the introduction or spread of invasive plants.	**3.4-7a: Control Measures for Spread of Invasive Plants.** Construction best management practices shall be implemented in all construction areas to prevent the spread of invasive plants, seed, propagules, and pathogens through the following actions: 1) Avoid driving in or operating equipment in weed-infested areas outside of fenced work areas and restrict travel to established roads and trails whenever possible. 2) Avoid leaving piles of exposed soil or construction materials in areas with the potential for invasive plants (e.g., Fort Funston staging area). Non-active stockpiles shall be covered with plastic or a comparable material. 3) Clean tools, equipment, and vehicles before transporting materials and before entering and leaving worksites (e.g., wheel washing stations at Project site access points). Inspect vehicles and equipment for weed seeds and/or propagules stuck in tire treads or mud on the vehicle to minimize the risk of carrying them to unaffected areas. Designate areas within active construction sites for cleaning and inspections.	1. DC/NPS 2. DC/NPS	1. DC/NPS 2. DC/NPS	1. Ensure that construction contract includes best management practices and control measures for the spread of invasive plants, at all project locations, with additional actions to be implemented at Fort Funston. 2. Monitor to ensure that contractor implements measures in contract documents. Report noncompliance, and ensure corrective action.	1. Design 2. Construction

Impact No.	Impact Summary	Mitigation Measure	Monitoring and Reporting Program			
			Implementation and Reporting		Monitoring and Reporting Actions	Implementation Schedule
			Responsible Party	Reviewing and Approval Party		
Biological Resources (cont.)						
BIO-7 (cont.)		The following additional actions shall be implemented at Fort Funston: 4) An NPS representative shall inspect vehicles and equipment prior to project initiation at any Fort Funston work area work for weed seeds and plant fragments that could colonize within the site. At Project initiation, all construction vehicles must be cleaned to remove soil and plant fragments at the Fort Funston main parking area (or other agreed to location) and vehicles or equipment that are not clean shall be rejected until clear of weed seed and plant fragments. Wheel washing stations or other methods to remove and contain seeds or other plant fragments from vehicles, equipment, boots, and tools shall be performed in designated areas. 5) All equipment and tools involved in soil disturbance at Fort Funston shall be disinfected using a 10% bleach or 70% isopropyl alcohol solution prior to initial use within Fort Funston or prior to returning to Fort Funston if used on another project site. 6) Only certified, weed-free, plastic-free imported erosion control materials (or rice straw in upland areas) shall be used at Fort Funston.				
		3.4-7b: Post-Construction Treatment of Upland Areas. Upon completion of final grading, and in order to prevent the establishment and spread of invasive plant species in upland areas temporarily disturbed by construction activities, hydroseed or broadcast seed of a native plant seed mix shall be applied to upland areas disturbed during construction. This does not include areas of central dune scrub which will be restored according to Mitigation Measure 3.4-5, Avoidance, minimization, and compensation for impacts to central dune scrub. Native plant seed mix composition shall vary between sites and depend on the surrounding vegetation community of each area. Post-construction treatment of upland areas on NPS-managed lands (i.e., disturbed dune scrub) shall be coordinated with and approved by NPS and all seeds and propagules shall be collected and grown according to NPS protocols. Fertilizers shall not be used at Fort Funston post construction as they may favor invasive plant species over native perennial species. Following post construction treatment of these upland areas disturbed during construction (i.e., hydroseeding, broadcast seeding, or planting), monitoring of these areas shall occur quarterly for a minimum of 2 years. If more than 50 percent of the relative plant cover of these areas is composed of invasive plant species, management actions shall be carried out to reduce the invasive plant cover and promote the native species**.**	1. DC/NPS 2. DC	1. DC/NPS 2. DC/NPS	1. Ensure that construction contract includes post-construction treatment of upland areas to prevent spread of invasive plant species. 2. Conduct monitoring program quarterly for a minimum of 2 years following post construction treatment of upland areas.	1. Design 2. Post-construction
BIO-8	Project construction could have a substantial adverse effect on wetlands and other jurisdictional waters.	**3.4-8a: Wetland Avoidance and Protection.** Access roads, work areas, and infrastructure shall be sited to avoid and minimize direct and indirect impacts to wetlands and waters to the extent feasible. Where work will occur on the Project adjacent to state and federal jurisdictional wetlands and waters, protection measures shall be applied to protect these features. These measures shall include the following: 1) A protective barrier (such as silt fencing) shall be erected around adjacent wetland or water features to isolate them from Project activities and reduce the potential for incidental fill, erosion, or other disturbance; 2) Signage shall be installed on the fencing to identify sensitive habitat areas and restrict construction activities beyond fenced limits; 3) No equipment mobilization, grading, clearing, storage of equipment or machinery, or similar activity shall occur at the Project site until a representative of Daly City has inspected and approved the wetland protection fencing; 4) Daly City shall ensure that the temporary fencing is continuously maintained until all remediation is completed;	1. DC 2. DC	1. DC 2. DC	1. Ensure that construction contract includes avoidance and protection measures for wetlands and waters where work occurs adjacent to such locations. 2. Monitor to ensure that contractor(s) implements measures in contract documents. Report noncompliance, and ensure corrective action.	1. Design 2. Construction

Impact No.	Impact Summary	Mitigation Measure	Monitoring and Reporting Program			
			Implementation and Reporting		Monitoring and Reporting Actions	Implementation Schedule
			Responsible Party	Reviewing and Approval Party		
Biological Resources (cont.)						
BIO-8 (cont.)		5) Equipment maintenance and refueling in support of Project implementation shall be performed in designated upland staging areas and work areas, and spill kits shall be available onsite. Maintenance activity and fueling must occur at least 50 feet from jurisdictional wetlands and other waters or farther as specified in the Project permits and authorizations; and 6) Installation of the cofferdam around the existing outfall structure on the beach below Fort Funston and all subsequent work outside of the cofferdam once installed shall be conducted during periods of low tide, out of the Pacific Ocean, and when beach conditions provide accessible areas for equipment mobilization and storage beyond the reach of tides. Drip pans and/or liners shall be stationed beneath all equipment staged on the beach to minimize spill of deleterious materials into jurisdictional waters and spill kits shall be available within the cofferdam for easy accessibility during beach work. A fencing material meeting the requirements of both water quality protection and wildlife exclusion may be used.				
		3.4-8b: Compensation for Impacts to Wetlands and Riparian Habitat. To offset temporary impacts, restoration to pre-project conditions (typically including contours, topsoil, and vegetation) shall be conducted, as required by regulatory permits (e.g., those issued by the Corps, RWQCB, CDFW, and/or CCC). To offset unavoidable permanent impacts to jurisdictional wetlands, waters, and to riparian habitat, compensatory mitigation shall be provided as required by regulatory permits. Compensation may include on-site or off-site creation, restoration, or enhancement of jurisdictional resources, or payment into an approved mitigation bank for in-kind habitat credits, as determined by the permitting agencies. Mitigation bank credits, if available, shall be obtained prior to the start of construction. On-site or off-site creation/restoration/enhancement plans must be prepared by a qualified biologist prior to construction and approved by the permitting agencies. Implementation of creation/restoration/enhancement activities by the permittee shall occur prior to Project impacts, whenever possible, to avoid temporal loss. On- or off-site creation/restoration/enhancement sites shall be monitored by Daly City for at least five (5) years to ensure their success.	1. DC (Biologist) 2. DC (Biologist; Construction) 3. DC	1. DC 2. DC/USACE/ RWQCB/ CDFW/CCC 3. DC	1. Obtain and review résumé or other documentation of consulting biologist's qualifications. Prepare on-site and off-site creation/restoration/enhancement plans. 2. Restore wetlands, waters, and riparian habitat to pre-construction conditions. Ensure that compensatory mitigation measures for unavoidable permanent impacts comply with applicable regulatory permits. 3. Monitor on- or off-site restoration sites for at least 5 years.	1. Design/ Preconstruction 2. Post-construction 3. Post-construction
BIO-9	Construction of the Project could impede movement of native resident fish species.	**Implement Mitigation Measure 3.4-2b: Avoidance and Minimization Measures for Western Pond Turtle (see details above)**				
BIO-10	Construction of the Project could interfere substantially with the movement of native resident or migratory species or with established native resident or migratory corridors, or impede the use of nursery sites.	**3.4-9: Night Lighting Minimization** At construction areas set up for nighttime activity and requiring nighttime lighting, the construction contractor shall implement the following measures as long as the safety of workers is not compromised: a) To the extent feasible, night construction near suitable habitat for nesting and migratory birds and roosting bats (e.g., scrub vegetation, dense wooded areas, unoccupied buildings) shall be avoided during bird nesting season (January 1 – August 15), bat maternity roosting season (approximately April 15 – August 31), and periods of winter torpor (approximately October 15 – February 28). b) All construction-related lighting shall be fully shielded and focused downward to the maximum extent feasible to ensure no significant illumination passes beyond the immediate work area into surrounding habitat (e.g., central dune scrub, bluffs or the Pacific Ocean), or vertically into the sky. Lighting should be positioned around the perimeter of the work area and oriented toward construction activity rather than toward surrounding habitat. A qualified biologist shall be present at the start of nighttime activities when lights are placed to facilitate appropriate light placement and ensure surrounding wildlife habitat is not unnecessarily illuminated. Maps or other information indicating the location(s) of active nests or nesting habitat nearby nighttime work shall be available at the construction site. c) Yellow, orange, or other "warm colored" light shall be used where feasible (e.g., unless required by safety regulations, pre-installed in construction equipment, etc.).	1. DC 2. DC (Biologist) 3. DC (Biologist) 4. DC (Biologist) 5. DC	1. DC 2. DC 3. DC 4. DC/CDFW/ USFWS/NPS 5. DC/NPS	1. Ensure that construction contract documents include requirements for nighttime lighting minimization. 2. Obtain and review résumé or other documentation of consulting biologist's qualifications. Conduct pre-construction surveys for nesting birds and roosting bats within 7 days or less prior to start of construction or reinitiation of construction activities. 3. Ensure that a qualified biologist is present at the start of nighttime activities to ensure that lighting avoids any wildlife habitat. 4. If active nests or roosts are present near nighttime construction areas, monitor for disturbance during night work to determine species tolerance. Create construction mitigation and monitoring plan.	1. Design 2. Preconstruction 3. Construction 4. Construction 5. Construction

Impact No.	Impact Summary	Mitigation Measure	Monitoring and Reporting Program			
			Implementation and Reporting		Monitoring and Reporting Actions	Implementation Schedule
			Responsible Party	Reviewing and Approval Party		
Biological Resources (cont.)						
BIO-10 (cont.)		d) Construction personnel shall reduce the amount of lighting to the minimum necessary to safely accomplish the work. e) Construction areas set-up for nighttime activity are subject to all of the same preconstruction surveys for nesting birds and roosting bats listed in Mitigation Measures 3.4-3 through 3.4-4. f) If active bird nests or bat roosts are identified near nighttime construction areas, a qualified biologist shall monitor nests or roosts for disturbance during night work to determine species tolerance to nearby lights. Illumination methods or shielding shall be modified if disturbance is determined to have potential to compromise the nest or roost. Coordination with CDFW, USFWS, or NPS (on NPS-managed lands) shall occur as appropriate.			5. Monitor to ensure that contractor(s) implements measures in contract documents. Report non-compliance, and ensure corrective action.	
BIO-12	Project operation could adversely affect central dune scrub, thimbleberry, wax myrtle, and canyon live oak scrub, and Vancouver rye grassland associated with Lake Merced.	**3.4-10a: Lake Level Management.** The Lake Merced overflow weir in South Lake shall be set at no greater than 9 feet City Datum to prevent lake water surface elevation from exceeding 9 feet City Datum during normal operations to avoid significant effects on wax myrtle scrub, Vancouver rye grassland, and eucalyptus forest. Lake Merced water levels shall be maintained at no more than 9 feet City Datum during normal operations. Should an operating WSE above 9 feet City Datum be selected or an extreme storm event requires temporary storage in Lake Merced that would increase WSE above 9 feet City Datum for more than 14 days (at which time vegetation die-off could occur), Mitigation Measure 3.4-10b is required.	1. DC (Structural Engineer) 2. SFPUC 3. SFPUC 4.	1. DC 2. DC 3. DC	1. Establish and incorporate design criterion for the overflow weir such that excess flow above 9 feet City Datum within 14 days of an extreme storm event. 2. Ensure that Lake Merced overflow weir in South Lake is set at no greater than 9 feet City Datum during normal operations. 3. Create log for overflow weir that documents daily operational level of weir. Create automatic alert if water level is greater than 9 feet City Datum for more than 14 days, to trigger actions required in Mitigation Measure 3.4-10b.	1. Design 2. Design/ Post-construction 3. Post-construction
		3.4-10b: Compensation for Loss of Sensitive Communities at Lake Merced. a) If 9.5 feet City Datum is selected as the target maximum WSE and Lake Merced water levels are not maintained at or below 9 feet City Datum during normal operations, or a storm event requires storage in Lake Merced that would increase WSE above 9 feet City Datum for more than 14 days for wax myrtle scrub and Vancouver rye grassland or for more than one month for blue gum eucalyptus forest, a resurvey of these sensitive vegetation communities around the Lake Merced shoreline to which a significant impact is predicted to occur (i.e., more than 10 percent loss) shall be performed post-inundation to determine actual percent loss. i. The resurvey shall be performed by qualified botanists and document the postinundation conditions (extent) of the wax myrtle scrub, Vancouver rye grassland, and blue gum eucalyptus around Lake Merced between the new inundation limit (above 9 feet WSE) and 13 feet WSE City Datum. Information on the extent of these sensitive natural communities gathered during this exercise may be applied to subsequent storm events during which WSE exceeds 9 feet WSE or if an operating WSE maintains lake levels above 9 feet WSE, for use in quantifying loss of these sensitive communities at various inundation limits above 9 feet City Datum. ii. Surveyors may use a combination of on-the-ground vegetation community and habitat type mapping with an assessment of current aerial imagery for informing cover estimates, similar to the mapping exercise performed in 2012 that informed the vegetation change analysis for this EIR/EIS. iii. Once the updated vegetation mapping exercise is complete, the new vegetation polygons shall be compared with the 2012 vegetation polygons to quantify change. The polygon comparison shall also consider the new inundation line, to assess whether or not the change in vegetation communities is attributable to inundation or saturation.	1. DC/SFPUC (Botanist) 2. DC/SFPUC (Botanist)	1. DC 2. DC/CDFW/ CCC/SFRPD	1. Obtain and review résumé or other documentation of consulting botanist's qualifications. If water levels are above 9 feet City Datum for more than 14 days, conduct a post-inundation sensitive vegetation survey in communities around the lake shoreline. 2. Prepare restoration plan for any sensitive vegetation communities or loss of habitat as a result of inundation. Submit to CDFW and CCC for approval.	1. Preconstruction/ Post-construction 2. Preconstruction

Impact No.	Impact Summary	Mitigation Measure	Monitoring and Reporting Program			
			Implementation and Reporting		Monitoring and Reporting Actions	Implementation Schedule
			Responsible Party	Reviewing and Approval Party		
Biological Resources (cont.)						
BIO-12 (cont.)		iv. If the updated mapping exercise and comparison assessment determine impacts to wax myrtle scrub, Vancouver rye grassland, or blue gum eucalyptus are less than 10 percent following inundation above 9 feet WSE, no further mitigation is required. v. If the updated mapping exercise and comparison assessment determine impacts to wax myrtle scrub, Vancouver rye grassland, or blue gum eucalyptus vegetation communities are 10 percent or more, an onsite revegetation and restoration plan shall be developed for permanently impacted (inundated/lost) communities and habitat types, as detailed in part b), below. b) An onsite revegetation and restoration plan shall be prepared to compensate for the affected sensitive vegetation communities and habitat lost (in excess of 10 percent) with a maintained WSE above 9 feet City Datum for 14 days or more for wax myrtle scrub and Vancouver rye grassland and for one month or more for eucalyptus forest. The plan shall be submitted to CDFW and CCC for review and approval, as appropriate. Typical compensation ratios for these communities shall be between 1:1 and 3:1 with native plant replacement quantities that shall be determined by the appropriate permitting agencies. Restoration and revegetation shall take place onsite where possible, and occur above the maximum water surface elevation to be maintained at Lake Merced so that future inundation impacts are avoided, and be implemented in coordination with SFRPD. i. The revegetation and restoration plan shall be prepared by a qualified restoration ecologist and shall include specifications for seed and propagule collection prior to the commencement of construction and at the appropriate phonological stage to capture reproductive structures of target plants within each affected sensitive vegetation community or habitat type. The restoration ecologist shall coordinate with a local native plant restoration nursery to either store the propagules until planting or grow the plants so that they are ready to plant once construction is complete. Restoration areas shall be monitored to assess re-establishment for 5 years or until total native vegetation cover, composition, and species richness in the restored areas are similar to suitable reference sites. ii. Individual special-status plants within the affected wax myrtle scrub and Vancouver rye grassland communities shall be mitigated according to the guidelines established in Mitigation Measure 3.4-1, Avoidance, Minimization, and Compensation for Special-Status Plants, items d and f regarding additional compensation location and revegetation and restoration plan performance standard details. Eucalyptus forest communities shall be mitigated according to guidelines established in Mitigation Measure 3.4-6, Implement Tree Protection Measures and Plant Replacement Trees, item 3 regarding appropriate replacement tree types, techniques, and performance standards.				
BIO-15	Project operation could adversely affect native wildlife nursery sites associated with Lake Merced.	**Implement Mitigation Measure 3.4-10a: Lake Level Management and, if necessary, Mitigation Measure 3.4-10b: Compensation for Loss of Sensitive Communities at Lake Merced (see details above)**				
Cultural Resources						
CUL-1	The Project would cause a substantial adverse change in the significance of a historical resource because it would demolish the majority of the historic Vista Grande Canal and Tunnel.	**3.5-1: HABS/HAER Recordation.** Prior to initiation of Project construction or demolition, the City of Daly City, in consultation with the NPS, shall record the Vista Grande Canal and Tunnel in accordance with the NPS Historic American Building Survey/Historic American Engineering Record (HABS/HAER) program. This program entails: 1) documentation of the canal and tunnel through large-format black and white photographs (including the interior of the length of the tunnel), 2) preparation of a historic resources report, 3) preparation of measured drawings (or copies of original plans), and 4) archiving of the documentation package at the U.S. Library of Congress, the City of Daly City, Golden Gate park archives, and other local repositories such as public libraries. The specific HABS/HAER requirements of the Vista Canal and Tunnel will be further detailed in consultation with the NPS Pacific Western Region's HABS/HAER coordinator.	1. DC/NPS	1. NPS	1. Record Vista Grande Canal and Tunnel with the NPS Historic American Building Survey/Historic American Engineering Record (HABS/HAER) program.	1. Preconstruction

Impact No.	Impact Summary	Mitigation Measure	Monitoring and Reporting Program			
			Implementation and Reporting		Monitoring and Reporting Actions	Implementation Schedule
			Responsible Party	Reviewing and Approval Party		
Cultural Resources (cont.)						
CUL-1 (cont.)		**3.5-2: Public Interpretation.** Prior to the completion of the Project, the City of Daly City, in coordination with the NPS, shall prepare a public interpretation package that may entail interpretive materials, including but not limited to signage, brochures, videos, historical narrative, or other printed or web-based methods of explaining the historical and engineering significance of the Vista Grande Canal and Tunnel to the general public.	1. DC/NPS	1. NPS	1. Prepare a public interpretation package explaining the historical and engineering significance of the Vista Grande Canal and Tunnel.	1. Preconstruction/ Construction/ Post-construction
CUL-2	The Project would cause a substantial adverse change in the significance of an archaeological resource, including shipwrecks.	**3.5-3: Inadvertent Discovery of Archaeological Resources or Shipwrecks.** The following measures shall be implemented should construction activities result in the inadvertent discovery of an archaeological resource: a) Prior to construction, a training session on the recognition of the types of archaeological resources that could be encountered and the procedures to be followed if they are found shall be presented to Project construction personnel by a qualified professional archaeologist. If prehistoric or historic-period archaeological resources or shipwrecks are encountered, all construction activities within 50 feet shall halt. If the resource is located within San Francisco, the San Francisco Planning Department also shall be notified. b) If the resource is located on federally administered lands, NPS also shall be notified. Abandoned shipwrecks, archaeological sites, and historic resources in submerged lands of California are under the jurisdiction of the California State Lands Commission (CSLC). In the case of an inadvertent discovery of a submerged archaeological site, shipwreck, or related artifacts, the applicable jurisdictional agency shall also contact and initiate consultation with the CSLC staff within two business days of such discovery. c) The qualified archaeologist shall inspect the find within 24 hours of discovery and consult with the applicable jurisdictional agency and the culturally affiliated Native American group or groups. d) If the find is determined to be a historical resource according to CEQA Guidelines or a historic property that meets the National Register listing criteria at 36 CFR 60.4, the archaeologist, in consultation with the applicable jurisdictional agency and the culturally affiliated Native American group shall determine whether preservation in place is feasible. 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. e) If preservation in place is not feasible, Daly City and the qualified archaeologist shall prepare and implement an Archaeological Research Design and Treatment Plan (ARDTP). Daly City, the qualified archaeologist, agencies with jurisdiction in the location(s) of the discovered resource(s), and the culturally affiliated Native American group(s, if applicable) shall meet to determine the scope of the ARDTP. The ARDTP shall identify a program for the treatment and recovery of important scientific data contained within the portions of the archaeological resources located within the Project Area of Potential Effects (APE); preserve any significant historical information obtained; and identify the scientific/historic research questions applicable to the resources, the data classes the resource is expected to possess, and how the expected data classes shall address the applicable research questions. f) Treatment for most archaeological resources shall consist of (but is not 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(s) to be impacted by the Project. 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. The results of the investigation shall be documented in a technical report that provides a full artifact catalog, analysis of items collected, results of any special studies conducted, and interpretations of the resource(s) within a regional and local context. All technical documents shall be placed on file at the Northwest Information Center of the California Historical Resources Information System.	1. DC 2. DC (Archeologist) 3. DC (Archeologist) 4. DC (Archeologist)	1. DC 2. DC 3. SFPD/NPS/ CSLC/Native American Groups 4. DC/SFPD/NPS/ CSLC/Native American Groups	1. Ensure that the contract documents include measures related to archeological discoveries or shipwrecks. 2. Obtain and review resume of qualified archeologist. Conduct training session with construction crew regarding types of archeological resources that could be encountered and procedures to follow. 3. Inspect any find within 24 hours and notify appropriate jurisdictional authority if archeological resources are discovered. Determine whether find can be preserved in place. 4. Prepare ARDTP if preservation cannot be made in place. Conduct treatment of resource as necessary.	1. Design 2. Preconstruction 3. Construction 4. Construction

Impact No.	Impact Summary	Mitigation Measure	Monitoring and Reporting Program			
			Implementation and Reporting		Monitoring and Reporting Actions	Implementation Schedule
			Responsible Party	Reviewing and Approval Party		
Cultural Resources (cont.)						
CUL-3	Project construction would disturb human remains.	**3.5-4: Inadvertent Discovery of Human Remains.** The following measure shall be implemented should construction activities result in the inadvertent discovery of human remains: The treatment of any human remains and associated or unassociated funerary objects discovered during soil-disturbing activities shall comply with applicable state laws. Such treatment shall include stopping work within 50 feet of the discovery and immediate notification of the County Coroner. In the event of the coroner's determination that the human remains are Native American, the coroner shall notify the Native American Heritage Commission, which shall appoint a Most Likely Descendant (MLD) (Pub. Res. Code §5097.98). The qualified archaeologist, Daly City, the landowner of the property on which the discovery is made, and the MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of any human remains and associated or unassociated funerary objects (CEQA Guidelines §15064.5[d]). The agreement shall take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. Public Resources Code Section 5097.98 allows 48 hours to reach agreement on these matters. If the MLD and the other parties do not agree on the reburial method, the landowner of the property on which the discovery is made shall follow Public Resources Code Section 5097.98(b), which states that "the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."	1. DC 2. DC (Archeologist) 3. DC (Archeologist)	1. DC 2. County Coroner/ Native American Heritage Commission/ Most Likely Descendant 3. DC/NPS	1. Ensure that Contract Documents include measures related to discovery of human remains. 2. If potential human remains are encountered, mobilize an archaeologist to confirm existence of human remains. If human remains are confirmed, perform required coordination and notifications. 3. Monitor to ensure that the contractor implements measures in contract documents including insuring that all potential human remains are reported as required and that contractor suspends work in the vicinity. Report noncompliance and ensure corrective action.	1. Design 2. Construction 3. Construction
Geology and Soils						
GEO-1	Construction, operation, and maintenance of the Project could expose people or structures to potential substantial adverse effects involving strong seismic ground shaking and/or seismic-related ground failure.	**3.6-1a:** Prior to final Project design, a qualified engineer and/or geologist shall perform an inspection to map the size, location, orientation, and patterns of cracks and any crack offsets to provide additional insight into possible tunnel deformation related to faulting, and to help better assess the potential impact of the Serra Fault Zone during future seismic events on the San Andreas Fault, as recommended in the geotechnical investigation conducted by Treadwell & Rollo (2013).	1. DC (Engineer/ Geologist)	1. DC	1. Obtain and review a resume for a qualified engineer/geologist. Inspect tunnel to map details of any cracks or deformation related to faulting.	1. Design
		3.6-1b: Daly City and/or its contractor(s) shall retain inspectors working under the auspices of a California-licensed geotechnical engineer to be present on the Project site during excavation, grading, and general site preparation activities to monitor the implementation of the recommendations specified in this measure. • Project construction shall be in conformance with CBC seismic design requirements and the OSHA Excavation and Trenching standard (29 CFR 1926.650) for the Project area. • When and if needed, the geotechnical engineer shall provide structure-specific geologic and geotechnical recommendations prior to and during construction that shall be documented in a report to be appended to the Project's previous geotechnical reports and approved by the City of San Francisco Department of Building Inspection.	1. DC (Geotechnical engineer) 2. DC (Geotechnical engineer) 3. DC (Geotechnical engineer)	1. DC 2. DC 3. City of San Francisco Department of Building Inspection	1. Obtain and review resume for CA-licensed geotechnical engineer. Monitor excavation and grading and general site preparation activities for seismic requirement standards. 2. Ensure that project construction/project area conforms with CBC seismic design requirements and OSHA Excavation and Trenching standard (29 CFR 1926.650) 3. Prepare report outlining structure specific geologic and geotechnical recommendations made prior to and during construction, if needed.	1. Design/ Preconstruction 2. Construction 3. Post-construction
		3.6-1c: Project foundations in the vicinity of Boring B-3 shall be constructed using cast-in-place drilled piers, micropiles, or another equivalent deep foundation system such as auger-cast or displacement piles or a torqued-in piling system for deep foundations.	1. DC 2. DC	1. DC 2. DC	1. Ensure that construction contract includes the appropriate boring equipment for Boring B-3. 2. Monitor to ensure that contractor(s) implements measures in contract documents. Report non-compliance, and ensure corrective action.	1. Design 2. Construction

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			Implementation and Reporting		Monitoring and Reporting Actions	Implementation Schedule
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Geology and Soils (cont.)						
GEO-2	The Project could result in substantial soil erosion or the loss of topsoil.	**3.6-2:** Annual maintenance shall include the following: inspection and flushing to make sure that subdrain pipes are free of debris and are in good working order; and inspection of subdrain outfall locations to verify that introduced water flows freely through the discharge pipes and that no excessive erosion has occurred.	1. DC 2. DC (Construction Contractor) 3. DC	1. DC 2. DC 3. DC	1. Ensure that contract documents include requirements for annual maintenance of subdrain pipes and subdrain outfall locations. 2. Prepare annual maintenance logs that include measures to ensure that subdrain pipes are free of debris, are in good working order, that water can flow freely from discharge pipes, and that no excessive erosion has occurred. 3. Review annual maintenance logs and monitor maintenance to ensure that contractor(s) implements measures in contract documents. Report non-compliance, and ensure corrective action.	1. Design 2. Construction/ Post-construction 3. Post-construction
GEO-3	The Project may be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project.	**3.6-3a:** The following recommendations regarding site preparation, foundations, retaining walls, seismic design, and other geotechnical aspects provided in the geotechnical report shall be incorporated into this Project. • Areas that will include improvements, including new below-grade structures, concrete flatwork and slabs-on-grade, shall be cleared and grubbed of all vegetation, and the site shall be stripped of organic topsoil containing over three percent organic matter. Stripped materials shall be removed from the site or stockpiled for later use in landscaped areas, if approved by the architect. • After stripping the existing soil subgrade, areas to receive fill or other improvements shall be scarified, moisture-conditioned, and compacted. The subgrade shall provide a firm, non-yielding surface. The soil subgrade shall be kept moist until it is covered by improvements. If soft or loose soil is encountered after stripping, the unsuitable material shall be excavated and replaced with suitable fill material. • All materials to be used as general engineered fill or backfill, including on-site soil, shall be free of organic material, be non-hazardous and non-corrosive, contain no large rocks or lumps, and have low expansion potential, and be approved by the geotechnical engineer. • Fill shall be placed in horizontal lifts, moisture-conditioned to above the optimum moisture content and compacted. • Fill placed beneath exterior slabs-on-grade/flatwork and other below-grade structures shall also be moisture-conditioned. From a geotechnical standpoint, concrete flatwork/exterior slabs and other below-grade structures can be cast directly on soil subgrade. If Class 2 aggregate base is used beneath flatwork/slabs or structures it shall be compacted as necessary. • Backfill for utility trenches and other excavations is also considered fill, and shall be compacted according to the recommendations previously presented. Jetting of trench backfill shall not be permitted. Special care shall be taken when backfilling utility trenches in pavement areas. • Temporary slopes in loose to medium dense sand shall not be steeper than 2:1 (horizontal to vertical) for slopes up to 15 feet in height. Slopes higher than 15 feet shall be analyzed for stability. Temporary slopes in dense sand shall not be steeper than 1.5:1. If the sides of proposed excavations cannot be sloped back, then shoring shall be provided.	1. DC 2. DC (Construction Contractor) 3. DC (Construction Contractor) 4. DC (Geotechnical Engineer) 5. DC (Shoring Designer) 6. DC (Shoring Designer) 7. DC (Construction Contractor) 8. DC (Geotechnical Engineer) 9. DC (Construction Contractor) 10. DC	1. DC 2. DC 3. DC 4. DC 5. DC 6. DC 7. DC 8. DC 9. DC 10. DC	1. Ensure that contract documents include the recommendations provided in the geotechnical report. 2. Incorporate recommendations regarding site preparation, foundations, retaining walls, seismic design, and other geotechnical aspects from the geotechnical report into the Project. 3. Determine the length of tiebacks. 4. Observe and evaluate tieback testing and test results. 5. Evaluate required penetration depth of soldier piles to ensure they have sufficient axial capacity to support the vertical load acting on the piles. 6. Determine appropriate factor of safety to use an internally braced soil-cement shoring wall. 7. Select and design the dewatering system. 8. Check the design of the proposed dewatering system prior to installation. 9. Monitor for signs of subsidence while dewatering is in progress. 10. Monitor to ensure that contractor(s) implements measures in contract documents. Report non-compliance, and ensure corrective action.	1. Design 2. Design 3. Design/ Preconstruction 4. Preconstruction/ Construction 5. Design/ Preconstruction/ Construction 6. Design/ Preconstruction/ Construction 7. Construction 8. Preconstruction/ Construction 9. Construction 10. Construction

Impact No.	Impact Summary	Mitigation Measure	Monitoring and Reporting Program			
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Geology and Soils (cont.)						
GEO-3 (cont.)		• A flexible shoring system shall be designed to resist lateral earth pressures and other pressures as described in the geotechnical investigations. Traffic or surcharge loads shall be added to the active pressures. • The contractor shall be responsible for determining the actual length of tiebacks required to resist the lateral earth and water pressures imposed on the temporary retaining systems. • The geotechnical engineer shall observe tieback testing. • The geotechnical engineer shall evaluate the tieback test results and determine whether the tiebacks are acceptable. • The shoring designer shall evaluate the required penetration depth of the soldier piles. The soldier piles shall have sufficient axial capacity to support the vertical load acting on the piles, if any. • The geotechnical investigation anticipates an internally braced soil-cement shoring wall may be used for shoring in some areas where tiebacks aren't needed. The shoring designer shall determine the appropriate factor of safety to use. • During excavation, the groundwater shall be lowered and maintained at that level until sufficient structural weight or a foundation system is available to resist the hydrostatic uplift forces on the bottom of the foundation and/or slab-on-grade. The selection and design of the dewatering system shall be the responsibility of the contractor. The geotechnical engineer shall check the design of the proposed dewatering system prior to installation. • Adjacent improvements shall be monitored by the contractor for signs of subsidence including vertical movement and groundwater levels outside the excavation shall be monitored while dewatering is in progress.				
		3.6-3b: Prior to final Project design, additional slope stability studies, including updated geologic mapping and slope stability analysis, shall be performed by a California-licensed geotechnical engineer to evaluate potential for weakened blocks that could become loose during outlet construction or tunneling. Also, stability analyses shall be completed to evaluate the potential impacts of bluff failure on the new outlet structure to be constructed at the base of the cliff. If potential for weakened blocks to become loose or for bluff failure to occur during construction, the study shall include design specifications and construction methods, such as use of temporary structural supports, to avoid such effects. Recommendations from the studies shall be incorporated into the final Project design and construction methods, and implemented by Daly City and/or its contractors.	1. DC (Geotechnical engineer) 2. DC (Geotechnical engineer)	1. DC 2. DC	1. Obtain and review resume of CA-licensed geotechnical engineer. Conduct additional slope stability studies to evaluate potential stability issues during outlet construction and tunneling. 2. Incorporate recommendations from geotechnical slope studies into the final Project design and construction methods.	1. Design 2. Design
GEO-4	The proposed Project would not create substantial risks to life or property due to expansive or corrosive soils.	**3.6-4:** Daly City and/or its contractors shall ensure that all micropiles used for the Project are double-corrosion protected.	1. DC 2. DC (Construction Contractor) 3. DC	1. DC 2. DC 3. DC	1. Ensure that contract documents include provisions for contractors to double-corrosion protect micropiles. 2. Ensure that micropiles are double-corrosion protected. 3. Monitor to ensure that contractor(s) implements measures in contract documents. Report non-compliance, and ensure corrective action.	1. Design 2. Construction 3. Construction

Impact No.	Impact Summary	Mitigation Measure	Monitoring and Reporting Program			
			Implementation and Reporting		Monitoring and Reporting Actions	Implementation Schedule
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Greenhouse Gas Emissions and Climate Change						
GHG-1	Project construction and operation would generate GHG emissions.	**3.7-1: Greenhouse Gas Emission Reduction.** Daly City and/or its contractor(s) shall implement the following measures to reduce greenhouse gas emissions from construction: 1) On-road vehicle idling time shall be minimized and shall not exceed a 5-minute maximum. Additionally, off-road engines shall not idle for longer than 5 minutes, per Section 2449(d)(3) of Title 13, Article 4.10, Chapter 9 of the California Code of Regulations. Clear signage of this requirement shall be provided for construction workers at all access points to construction areas. 2) Utilize B20 biodiesel for generator fueling to reduce greenhouse gas emissions of generator operation by approximately 20 percent. 3) Following finalization of project design and construction phasing, but prior to the start of construction activities, Daly City and/or its contractors shall use best available modeling tools to estimate annual greenhouse gas emissions resulting from construction. After accounting for the use of B20 biodiesel as under Item 2, Daly City shall purchase carbon offsets in the amount that construction emissions would exceed the greenhouse gas emissions significance threshold of 1,100 MT/CO2-equivalent per year from an accredited source.	1. DC (Construction Contractor) 2. DC (Construction Contractor) 3. DC	1. DC 2. DC 3. DC	1. Ensure that contract documents include the requirements for reducing greenhouse gases. 2. Ensure that contract documents include the requirements for reducing greenhouse gases. 3. Ensure that the preparer(s) of estimates implement appropriate modeling tool. Ensure that carbon offsets are purchased prior to construction commencement.	1. Design 2. Design 3. Preconstruction
Hazards and Hazardous Materials						
HAZ-2	Project construction could result in a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	**3.8-1: Health and Safety Plan.** The construction contractor(s) shall prepare and implement a site-specific Health and Safety Plan in accordance with 29 CFR 1910.120 to protect construction workers and the public during all excavation, grading, and construction activities. The Health and Safety Plan shall include, but is not limited to, the following elements: • A summary of all potential risks to construction workers and maximum exposure limits for all known and reasonably foreseeable site chemicals; • Training for hazard recognition, including visual and olfactory cues; • Specified personal protective equipment and decontamination procedures, if needed; • Emergency procedures, including route to the nearest hospital; • Procedures to be followed in the event that evidence of potential soil or groundwater contamination (such as soil staining, noxious odors, debris or buried storage containers) is encountered. These procedures shall be in accordance with hazardous waste operations regulations and specifically include, but are not limited to, the following: immediately stopping work in the vicinity of the unknown hazardous materials release, and retaining a qualified environmental firm to perform sampling and remediation.	1. DC 2. DC (Construction Contractor) 3. DC	1. DC 2. DC 3. DC	1. Ensure that contract documents include the requirement for preparing a health and safety plan. 2. Prepare and submit a health and safety plan and verify that it includes information cited in contract documents. 3. Monitor to ensure that the contractor(s) implements measures in the contract documents and health and safety plan. Report noncompliance, and ensure corrective action.	1. Design 2. Preconstruction 3. Preconstruction/ Construction
HAZ-3	Project construction would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	**Implement Mitigation Measure 3.15-1: Construction Traffic Management Plan** (see details under Transportation and Traffic, below)				

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Hydrology and Water Quality						
HYD-1	Project construction could violate water quality standards and/or waste discharge requirements, provide substantial additional sources of polluted runoff, or otherwise substantially degrade water quality.	**3.9-1: Implement Cofferdam Dewatering BMPs for In-Water Work.** If dewatering discharge produced during construction of the Lake Merced outlet and overflow structures is not discharged to the sewer system, a requirement shall be included in construction specifications that requires the construction contractor(s) to implement standard BMPs developed and approved by Daly City for the treatment of sediment-laden water produced during cofferdam dewatering activities. BMPs could include discharging water through filtration media, such as filter bags or a similar filtration device, or allowing the cofferdam dewatering discharge to infiltrate into the soil. If infiltration is used, application of the dewatering discharge shall be conducted at a rate and location that does not allow runoff into Lake Merced or drainage conveyances, such as storm drains, and does not cause flooding or runoff to adjacent properties. The dewatering discharge shall also be conducted at a rate that does not allow ponding, unless the ponding is a result of implementing BMPs to reduce the velocity of the flow and occurs within constructed containment, such as an excavation or berm with no outlet. The discharge must also be applied at a sufficient distance from building foundations or other areas that could be damaged from ground settling or swelling. Alternatively, and if feasible, the filtered dewatering effluent could be used for construction dust suppression. Any BMPs developed and implemented shall remove sediment in a manner sufficient to meet the Water Quality Objective for turbidity as specified in the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). Specifically, receiving waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses and increases in turbidity related to dewatering discharges shall not be greater than 10 percent in areas where natural turbidity is greater than 50 Nephelometric Turbidity Units (NTU).	1. DC 2. DC 3. DC	1. DC 2. DC 3. DC	1. Ensure that contract documents include measures requiring the implementation of BMPs designed to treat sediment-laden water produced during cofferdam activities if dewatering discharge is not discharged to sewer system. 2. Review contractor's Dewatering Plan to ensure that it meets Water Quality Objectives for turbidity as specified in the Water Quality Control Plant for the Basin Plan. 3. Monitor to ensure that the contractor implements measures in Dewatering Plan, report noncompliance, and ensure corrective action within timelines specified in contract.	1. Design 2. Preconstruction 3. Construction
HYD-9	The Project could conflict with plans, policies, or regulations related to alteration of coastal landforms or processes adopted for the purpose of avoiding or mitigating an environmental effect.	**3.9-2: Avoidance and Minimization of Conflicts with California Coastal Act and NPS Management Policies.** The final design of the Ocean Outlet structures must minimize conflicts with the applicable Coastal Act requirements that new development: 1) be designed to eliminate or mitigate adverse effects on local shoreline sand supply (Section 30235); and 2) assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs (Section 30253). In order to minimize conflicts with these policies, Daly City shall undertake the following steps when developing final engineering designs of the Ocean Outlet structures: 1) A California licensed engineer shall prepare a study consistent with the methods for assessing sea level rise in Coastal Development Permits detailed in the California Coastal Commission's Sea Level Rise Policy Guidance (California Coastal Commission, 2015). The study shall identify Project design elements that may conflict with California Coastal Act Policies (Sections 30235 and 30253) and recommend revisions to bring the final design into conformity with these guidelines and policies (Study). At a minimum, the Study shall: a) Use the range of projections recommended by the CCC's 2015 Sea Level Rise Policy Guidance in evaluating potential sea level rise effects over the Project planning horizon. b) Incorporate, and update as necessary, information concerning baseline conditions at the Ocean Outlet, and future projections (both with and without sea level rise) concerning: i) Bluff erosion rates and patterns; ii) Sand supply sequestering as a result of Project design; iii) Storm effects relating to coastal hazards (e.g., scour, wave runup, flooding; iv) Potential for exposure of Project infrastructure over the Project lifetime, and v) Potential cumulative effects of the Project on the identified coastal process elements above with applicable existing or future projects.	1. DC/NPS 2. DC (Engineer) 3. DC (Engineer) 4. DC (Engineer) 5. DC/NPS	1. DC/NPS 2. DC/NPS/CCC 3. NPS/CCC 4. DC/NPS/CCC 5. DC/NPS	1. Ensure that contract and design documents for the Ocean Outlet minimize conflicts with applicable Coastal Act requirements. 2. Obtain and review resume or other documentation of a CA-licensed engineer's qualifications. Prepare a study that is consistent with the methods for assessing sea level rise in Coastal Development Permits and the CCC's Sea Level Rise Policy Guidance. 3. Prepare report of study's findings and submit final report and design to NPS and CCC for review. 4. Ensure that recommendations made by NPS and CCC are incorporated into design and specifications and implemented during construction, operation, and maintenance of project. 5. Monitor to ensure the contractor(s) implements measures in contract documents. Report noncompliance and ensure corrective action.	1. Design 2. Design 3. Design 4. Design/ Construction/ Post-Construction 5. Construction

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Hydrology and Water Quality (cont.)						
HYD-9 (cont.)		c) Include recommendations for final engineering design, construction methods and materials for all aspects of the Ocean Outlet development, including the site preparation, building foundations, and design, to remedy any identified coastal process or coastal resource related impacts. Also the Study shall identify final engineering design recommendations and alternatives to minimize identified risks relating to hazards, such as geologic instability. Design recommendations and alternatives shall be protective of coastal resources throughout the expected life of the Project and include recommendations to minimize hazard exposure where avoidance is infeasible, including steps to relocate or modify the development as needed to prevent risks to the Project structures or to coastal resources. Such alternatives could include, but would not be limited to, alteration of the proposed wing walls or other outlet structure components to ensure final Project design is consistent with the following California Coastal Act policies to the extent feasible: a. Section 30235 Consistency: Construction of Project features that alter natural shoreline processes shall be approved only if it is determined by the CCC that such a design is required to serve a coastal dependent use or to protect existing structures or public beaches in danger from erosion, and that final design minimizes adverse impacts on local shoreline sand supply as compared to current and future baseline conditions. b. Section 30253 Consistency: Final design shall be approved only if it is determined that such a design minimizes contribution to erosion, geologic instability, or destruction of the site or surrounding area, and if the Project's necessary protective devices minimize the alteration of natural landforms. 2) The Study's findings shall be presented in a report, which shall be reviewed, signed, and stamped by the professional engineer in charge. The report shall be subject to technical review by Daly City, the NPS, SFPUC, and the CCC staff. 3) The report and final design shall be submitted to the NPS and CCC for review and approval to ensure any inconsistencies with NPS and CCC policy requirements are resolved. Recommendations in the approved study shall be incorporated into the design and construction specifications and shall be implemented during construction and operation and maintenance of the Project as applicable.				
Land Use and Planning						
LU-1	The project could conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.	**Implement Mitigation Measure 3.9-2: Avoidance and Minimization of Conflicts with California Coastal Act and NPS Management Policies** (see details under Hydrology and Water Quality, above)				

Impact No.	Impact Summary	Mitigation Measure	Monitoring and Reporting Program			
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Noise and Vibration						
NOI-1	Project construction could temporarily expose persons to or generate noise levels in excess of local noise ordinances or create a substantial temporary increase in ambient noise levels.	**3.11-1:** The applicant shall require construction contractors to implement the following measures: • Equipment and trucks used for Project construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds, wherever feasible). • Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for Project construction shall be hydraulically or electrically powered where feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dBA. Quieter procedures, such as use of drills rather than impact tools, shall be used whenever feasible. • Stationary construction noise sources shall be located as far from adjacent residential receptors as possible. Stationary noise-generating construction equipment shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, and/or controlled using other measures to the extent this does not interfere with construction purposes. Specifically, any generator used on site shall be muffled using an acoustical enclosure.	1. DC 2. DC (Construction Contractor) 3. DC	1. DC 2. DC 3. DC	1. Ensure that contract documents include language requiring preparation of a noise control plan that includes best available noise control techniques. 2. Ensure that the noise control plan is prepared in accordance with the contract documents. 3. Monitor to ensure that the contractor(s) implements noise control requirements and ensure corrective action within timelines specified in contract.	1. Design 2. Preconstruction 3. Construction
		3.11-2: To further address potential nuisance impacts of Project construction, construction contractors shall implement the following: • Signs shall be posted at all construction site entrances to the property upon commencement of Project construction, for the purposes of informing all contractors/subcontractors, their employees, agents, material haulers, and all other persons at the applicable construction sites, of the basic requirements of Mitigation Measures 3.11-1. • Signs shall be posted at the construction sites that include permitted construction days and hours, a day and evening contact number for the job site, and a contact number in the event of problems. • An onsite complaint and enforcement manager shall respond to and track complaints and questions related to noise.	1. DC 2. DC (Construction Contractor) 3. DC	1. DC 2. DC 3. DC	1. Ensure that contract documents include requirements for the posting of signs that inform all construction personnel of the requirements of the noise control plan, permitted construction days/hours, and contact information. 2. Designate project liaison responsible for responding to noise complaints and enforcing noise control requirements. Ensure that liaison's name and phone number is included on posted notices. As necessary, develop a reporting program for tracking complaints received and for documenting their resolution. 3. Monitor to ensure that required signs are posted and that complaints are tracked and responded to in a timely manner. Report noncompliance and ensure corrective action.	1. Design 2. Preconstruction 3. Construction
NOI-2	Project construction could result in the exposure of persons to or generation of excessive groundborne Vibration or groundborne noise levels.	**3.11-3:** To address the vibration impact at the Missile Assembly Building located in Fort Funston, Daly City shall require construction contractors to implement the following vibration monitoring measures: 1) A pre-construction visual survey of the Missile Assembly Building shall be conducted and existing conditions shall be documented by use of photography or video. A qualified and licensed structural engineer and architectural historian shall be retained to assess whether the potentially affected structure(s) could withstand a vibration level above the "stop work" threshold of 0.12 in/sec PPV (90 VdB). If this assessment results in a higher threshold for potential damage than 0.12 in/sec PPV (90 VdB), that higher threshold shall be used in lieu of 0.12 in/sec PPV (90 VdB) for purposes of part 2. 2) The construction contractor shall monitor vibration levels during tunnel construction, especially during impact pile driving at the temporary construction shaft. If construction vibration levels measured at the Missile Assembly Building exceed 0.12 in/sec PPV (90 VdB) or the higher threshold determined in part 1 if applicable, construction shall be halted and other feasible construction methods shall be employed to reduce the vibration levels below the standard threshold. Alternative construction methods may include sonic or vibratory pile drivers.	1. DC 2. DC (Structural Engineer; Architectural Historian) 3. DC	1. DC 2. DC 3. DC	1. Ensure contract documents include vibration monitoring measures to address vibration impacts at the Missile Assembly Building located in Fort Funston. 2. Obtain and review resume or other documentation of consulting licensed structural engineer and architectural historian's qualifications. Assess whether vibrations would affect the structure. 3. Monitor to ensure that contractor(s) implements vibration monitoring measures in contract documents. Report noncompliance and ensure corrective action.	1. Design 2. Design 3. Construction

Impact No.	Impact Summary	Mitigation Measure	Monitoring and Reporting Program			
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Geologic and Paleontological Resources						
PAL-1	The Project would directly or indirectly destroy a unique paleontological resource or site or unique geological feature.	**3.12-1: Inadvertent Discovery of Paleontological Resources.** Prior to construction, a training session on the recognition of the types of paleontological resources that could be encountered and the procedures to be followed if they are found shall be presented to Project construction personnel by a qualified professional paleontologist. A qualified paleontologist shall be on call when excavations disturb the Merced and Colma Formations. In the event that potential vertebrate fossils are discovered, work shall cease at the location and a qualified paleontologist shall evaluate the discovery, as described below. For areas of excavation on federally managed lands that would disturb the Merced formation, NPS shall determine the NPS paleontologist or NPS-approved private paleontologist that will perform this monitoring. Consistent with NPS guidance, disturbance within other formations present in Fort Funston shall be monitored for fossils by trained Project construction personnel unless the NPS paleontologist determines that monitoring by a qualified paleontologist is necessary. If potential vertebrate fossils are discovered by construction crews or a paleontological monitor, all earthwork or other types of ground disturbance within 50 feet of the find shall stop immediately and the monitor shall notify Daly City, as well as the NPS if the potential fossil is found on federal lands. Work shall not resume until a qualified professional paleontologist can assess the nature and importance of the find. Based on the scientific value or uniqueness of the find, the qualified paleontologist may record the find and allow work to continue, or recommend salvage and recovery of the fossil. The qualified paleontologist may also propose modifications to the stop-work radius based on the nature of the find, site geology, and the activities occurring on the site. If treatment and salvage is required, recommendations shall be consistent with NPS guidelines (on federal land), SVP 1995 guidelines (on non-federal land), and currently accepted scientific practice, and shall be subject to review and approval by Daly City, and by NPS if the potential fossil is found on federal land. If required, treatment for fossil remains may include preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection [e.g., the University of California Museum of Paleontology (UCMP)], and may also include preparation of a report for publication describing the finds. Daly City shall ensure that information on the nature, location, and depth of all finds is readily available to the scientific community through university curation or other appropriate means.	1. DC/NPS 2. DC/NPS (Paleontologist) 3. DC/NPS (Paleontologist) 4. DC/NPS	1. DC/NPS 2. DC/NPS 3. DC/NPS 4. DC/NPS	1. Ensure that contract documents include measures related to paleontological discoveries. 2. Obtain and review resume of qualified paleontologist. Conduct training session with construction crew regarding types of paleontological resources that could be encountered and procedures to follow. 3. Evaluate potential discoveries according to jurisdictional requirements, and if confirmed, treat and prepare fossil materials appropriately. Prepare report of find, as necessary. 4. Monitor to ensure contractor(s) implements paleontological measures in contract documents if discovery occurs. Report noncompliance and ensure corrective action.	1. Design 2. Preconstruction 3. Construction 4. Construction
Transportation and Traffic						
TRA-1	Project construction would cause temporary increases in traffic volumes on area roadways, which could cause substantial conflicts with the performance of the circulation system, but would not conflict with applicable plans, ordinances, or policies pertaining to the performance of the circulation system.	**3.15-1: Construction Traffic Management Plan** Daly City and/or its contractor(s) shall prepare and implement a Construction Traffic Management Plan in accordance with professional traffic engineering standards to show methods for maintaining traffic flows on roadways and access to recreational resources directly affected by Project construction, which shall include, at a minimum, the following requirements: a) Develop circulation plans to minimize impacts on local street circulation; use flaggers and/or signage to guide vehicles through and/or around the construction zone (including, as needed, for trucks turning into and out of Fort Funston at the intersection of SR 35 and Fort Funston Road). Circulation plans may be modified during construction, based on observed conditions. b) Identify truck routes and, to the extent possible, use haul routes that minimize truck traffic on local roadways and residential streets. c) Schedule truck trips to minimize trips during the peak morning and evening commute hours, and the peak hours of arrivals and departure from Fort Funston, to the extent possible. d) Provide sufficient staging areas for trucks accessing construction zones to minimize disruption of access to adjacent land uses, particularly within residential neighborhoods. e) Maintain pedestrian and bicycle access and circulation during Project construction where safe to do so. If construction activities encroach on a bicycle lane, post warning signs that indicate bicycles and vehicles are sharing the lane.	1. DC 2. DC (Construction Contractor) 3. DC	1. DC 2. DC/SFMTA/ NPS/SamTrans 3. DC	1. Ensure that contract documents include requirements of Construction Traffic Management Plan. 2. Prepare and implement Construction Traffic Management Plan with requirements cited in contract documents. Coordinate with Caltrans regarding construction traffic use of SR 35. 3. Monitor to ensure the contractor(s) implements measures in the contract documents and Construction Traffic Management Plan. Report noncompliance, and ensure corrective action.	1. Design 2. Preconstruction/ Construction 3. Construction

Impact No.	Impact Summary	Mitigation Measure	Monitoring and Reporting Program			
			Implementation and Reporting		Monitoring and Reporting Actions	Implementation Schedule
			Responsible Party	Reviewing and Approval Party		
Transportation and Traffic (cont.)						
TRA-1 (cont.)		f) Maintain public safety and access on the beach by posting notices and maps at and around the project site and on Golden Gate National Recreation Area's website prior to and during construction, informing the public about when and where public access could be restricted and about alternative access points, if applicable; and incorporate measures on the beach to protect the public during construction activities. g) Store all equipment and materials in designated contractor staging areas on or adjacent to the worksite, in such a manner to minimize obstruction of traffic. h) Implement roadside safety protocols and provide advance "Road Work Ahead" warning signs and speed control (including signs informing drivers of state-legislated double fines for speed infractions in a construction zone) to achieve required speed reductions for safe traffic flow through the work zone. i) Coordinate construction with facility owners or administrators of sensitive land uses such as police and fire stations (including all fire protection agencies), transit stations, hospitals, and schools, as well as Fort Funston. Notify facility owners or operators in advance of the timing, location, and duration of construction activities. j) Provide residents adjacent to Project construction areas (e.g., on Avalon Drive and Westmoor Avenue) with information regarding Project construction in their area, including anticipated start and end of construction activities. k) Coordinate construction with local traffic agencies, SFMTA, NPS, and SamTrans, to minimize disruption and arrange for the temporary relocation of bus stops in work zones as necessary.				
TRA-5	Project construction would result in increased wear-and-tear on the designated haul routes.	**3.15-2:** Daly City, San Francisco, and the National Park Service shall enter into an agreement prior to construction that shall detail pre-construction conditions and the post-construction requirements of a roadway rehabilitation program. Daly City and/or its contractors shall repair roads damaged by construction to a structural condition equal to that which existed prior to construction activity.	1. DC/SF/NPS 2. DC (Construction Contractor) 3. DC/SF/NPS	1. DC/SF/NPS 2. DC 3. DC/SF/NPS	1. Ensure that contract documents include pre-construction conditions and post-construction requirements of a roadway rehabilitation program. 2. Repair roads damaged by construction to a structural quality equal to preconstruction activity. 3. Monitor to ensure the contractor(s) implements measures in the contract documents. Report noncompliance, and ensure corrective action.	1. Design 2. Post-construction 3. Post-construction