

San Francisco Bay Conservation and Development Commission

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May 21, 2026

Staff Recommendation

Trans Bay Cable Maintenance

(For Commission consideration on May 21, 2026)

Permit Application Number:	2006.005.04md
Applicants:	Trans Bay Cable LLC
Project Description:	Repairs and maintenance to an existing submarine electric cable.
Location:	In the Bay, along a 3,000-foot-long segment of cable in East San Pablo Bay and a 1,000-foot-long segment of cable in Carquinez Strait.
Application Filed Complete:	May 11, 2026
Deadline for Commission Action:	August 9, 2026
Staff Contact:	Sam Fielding (415-352-3665; sam.fielding@bcdc.ca.gov)
Staff Recommendation:	APPROVAL WITH CONDITIONS

Basis for Staff Recommendation

The staff recommends approval of the application as conditioned in the recommended resolution, below. The project will consist of the placement of approximately 2,700 cubic yards of new fill over approximately 0.5 acres of subtidal area to repair exposed sections of electric cable between the City of Pittsburg in Contra Costa County and the City and County of San Francisco. The proposed use is not in conflict with any Priority Use Areas established by the San Francisco Bay Plan. Additionally, the recommended resolution includes special conditions to:

- Ensure adverse environmental impacts are avoided and minimized
- Require monitoring of site conditions
- Require compensatory mitigation for unavoidable environmental impacts

Recommended Resolutions and Findings

The staff recommends the Commission adopt the following resolution:



On August 16, 2007, the San Francisco Bay Conservation and Development Commission, by a vote of 19 affirmative and 0 negative, approved the resolution pursuant to which the original permit was issued. Moreover, on October 21, 2015, and September 1, 2020, the Executive Director approved Amendment Nos. One and Two, and Three, respectively.

I. Authorization

A. Authorized Project

Subject to the conditions stated below, the permittee, Trans Bay Cable, LLC (Trans Bay Cable), is hereby granted permission to install and use an approximately 52-mile-long section of a submarine high voltage direct current (HVDC) transmission cable and place concrete mattresses, rock bags, and/or grout bags at select locations along the cable route, in the Central Bay, San Pablo Bay, Carquinez Strait, and Suisun Bay, between the City and County of San Francisco and the City of Pittsburg in Contra Costa County, within Marin County, and also within Solano County, where the project is located in the Commission's primary management area of the Suisun Marsh. Authorized work includes the following:

In the Bay and Suisun Marsh

1. Install and use an approximately 52-mile-long section of a 10-inch-diameter submarine HVDC transmission cable constituting 5,237 cubic yards of material into a 3- to 6-foot-deep, or deeper where necessary, trench along the bottom of the Bay excavated through the use of a jet plow at an area totaling 216,040 square feet (complete);
2. Place approximately 500 cubic yards of concrete mattresses and/or grout bags at select locations totaling approximately 20,230 square feet along the HVDC cable route, as needed, to protect shallow utilities and pipelines (complete);
3. Install (after-the-fact) concrete mattresses covering a total of approximately 7,370 square feet of the Bay floor near the Bay Area Rapid Transit tube in the City and County of San Francisco (Amendment No. One) (complete);
4. Repair (after-the-fact) a section of the cable damaged by a vessel anchor by splicing in an approximately 440-foot section of new cable and burying the repaired cable under the Bay floor in the Carquinez Strait (Amendment No. Two) (complete);
5. Rebury approximately 16,410 linear feet (49,220 square feet) of the HVDC cable to a depth of 3-6 feet below the mudline on the Bay floor using a water jetting vehicle (hydro plow, burial sled, or similar device) or using diver-assisted methods over a five-year period (Amendment No. Three);

6. Place and maintain up to approximately 290 cubic yards of concrete mattresses and rock bags in various locations over areas totaling approximately 4,000 square feet (0.10 acres) along approximately 1,920 linear feet of the HVDC cable over a five-year period (Amendment No. Three);
7. Repair a 3,000-foot-long segment of cable in East San Pablo Bay through the following activities (Amendment No. Four):
 - a) Install approximately 300 linear feet of less than 1-inch-thick polyurethane protective covering; and
 - b) Install approximately 0.4 acres (up to 2,200 cubic yards) of 8-foot by 20-foot and 9-inch-thick, or 11-foot by 20-foot and one-foot-thick, concrete mattresses; and
8. Repair a 1,000-foot-long segment of cable in Carquinez Strait (north of Martinez) through the following activities (Amendment No. Four):
 - a) Install approximately 1,000 linear feet of less than 1-inch-thick polyurethane protective covering; and
 - b) Install approximately 0.1 acre (up to 500 cubic yards) of 8-foot by 20-foot and 9-inch-thick, or 11-foot by 20-foot and one-foot-thick, concrete mattresses.

B. Permit Application Date

This amended authority is generally pursuant to and limited by the original application dated November 17, 2006, the application for Amendment No. One dated November 15, 2012, the application for Amendment No. Two dated August 11, 2015, the application for Amendment No. Three dated June 14, 2017, and the application for Amendment No. Four, dated August 6, 2025, including all accompanying and subsequent correspondence and exhibits, but subject to the modifications required by conditions hereto.

C. Deadlines for Commencing and Completing Authorized Work

Construction work authorized in the original permit was to commence prior to October 1, 2010, or the original permit was to lapse and become null and void. All construction work originally authorized herein associated with the transmission cable and any necessary protective mattresses was to be diligently pursued to completion and completed by October 1, 2012, unless an extension of time was granted by amendment of the permit. Use of the cable authorized herein will be allowed for a period of approximately 24 years or until December 14, 2031—the earliest expiration date of the three individual leases and/or licenses issued to the permittee for the project authorized herein—at which point this amended permit will lapse and become null and void, unless

an extension of time is granted by amendment of the amended permit, which will be contingent, in part, on renewed or extended leases and/or licenses obtained by the permittee from each of the three lessors of interest. Amendments No. One and No. Two were both authorized after-the-fact and were completed prior to being authorized. Work authorized in Amendment No. Three, including adding fill to protect the cable and the reburial of sections that have become exposed, was to be diligently pursued to completion by December 31, 2024, unless an extension of time was granted by further amendment of this amended permit (Amendment No. Three).

Work authorized in Amendment No. Four must commence prior to November 30, 2027, or this permit will lapse and become null and void. All work authorized herein must be completed by November 30, 2028, unless an extension of time is granted by amendment of this amended permit.

D. Project Summary

The original project involved the placement of a transmission cable and protective mattresses totaling approximately 5,737 cubic yards of material covering an approximately 236,270-square-foot (5.4 acres) area of the Bay bottom (Exhibit A). With the exception of 500 cubic yards of protective mattresses at locations totaling approximately 20,230 square feet, the majority of the fill will be placed and buried in a trench at the bottom of the Bay and, consequently, will not result in a loss of surface area of the Bay. The transmission cable is designed to have a minimum life span of 40 years. When decommissioned, it is envisioned that the transmission cable will be abandoned in place. The amended permit (Amendment No. One) involved the placement of an additional 7,370 square feet of concrete mattress material (132 cubic yards of solid fill) in the Bay. The work authorized in Amendment No. Two was not to result in a change to Bay volume or floor coverage. The work authorized in Amendment No. Three resulted in up to 290 cubic yards of new solid fill covering approximately 4,000 square feet of the Bay floor (Amendment No. Three).

The work authorized in Amendment No. Four will result in the placement of approximately 2,700 cubic yards of new fill over approximately 0.5 acres (21,780 square feet) of subtidal areas to repair exposed sections of the existing submarine electric cable (Exhibit B).

II. Special Conditions

The amended authorization made herein shall be subject to the following special conditions, in addition to the standard conditions in Part IV:

A. Project Plans and Plan Review

1. Originally-Permitted Construction

The original project constructed pursuant to this amended permit was to generally conform with the plans described in the Final Environmental Impact Report (FEIR) for the original project authorized herein certified by the City of Pittsburg on November 6, 2006, and the Addendum to the FEIR issued by the City of Pittsburg. Final plans for the originally-permitted protective mattresses were to be prepared and submitted for BCDC review as described below. No substantive changes to the design of the original project were to be made without the prior written approval of the BCDC staff.

2. Plan Review

None of the originally-permitted work authorized by Section I.A.2, or work authorized by Amendment No. Four, is to commence pursuant to this amended authorization until final precise site plans for the protective mattresses or other protective materials (e.g., grout bags) authorized herein are submitted to, reviewed, and approved in writing by or on behalf of the Commission. The specific drawings and information required are to be determined by the staff. To save time, preliminary drawings are to be submitted and approved prior to final drawings.

Plans illustrating the originally-permitted protective mattresses or other materials (e.g., grout bags) authorized herein shall include and clearly label the shoreline (Mean High Water Line or the inland edge of marsh vegetation up to 5 feet above Mean Sea Level if tidal marsh is present), property or lease lines, details showing the location, types, dimensions, and materials to be used for all mattresses or other materials used for such purposes.

Plans submitted shall be accompanied by a letter requesting plan approval, identifying the type of plans submitted, the portion of the project involved, and indicating whether the plans are final or preliminary. Approval or disapproval shall be based upon:

- a. Completeness and accuracy of the plans in showing the features required above, particularly the shoreline (Mean High Water Line or the inland edge of marsh vegetation up to 5 feet above Mean Sea Level if tidal marsh is present), property or lease lines, and any other criteria required by this amended authorization.
- b. Consistency of the plans with the terms and conditions of this amended authorization;
- c. Assurance that any fill in the Bay does not exceed this amended authorization;
and

- d. Assuring that appropriate provisions have been incorporated for safety in case of seismic event.

Plan review shall be completed by or on behalf of the Commission within 45 days after receipt of the plans to be reviewed. No additional plan review is required for the activities authorized in Amendment Nos. One, and Two.

3. Conformity with Final Approved Plans

All work and improvements approved and completed pursuant to this condition, and uses shall conform to the final approved plans. Prior to any use of the submarine transmission cable authorized herein, the appropriate design professional(s) of record shall certify in writing that, through personal knowledge, the work covered by the amended authorization has been performed in accordance with the approved design criteria and in substantial conformance with the approved plans. No noticeable changes shall be made thereafter to any final plans or to the constructed structure without first obtaining written approval of the change(s) by or on behalf of the Commission.

4. Discrepancies Between Approved Plans and Special Conditions

In case of any discrepancy between final approved plans and special conditions of this amended authorization, the Special Condition shall prevail. The permittee is responsible for assuring that all plans accurately and fully reflect the special conditions of this amended authorization.

5. Construction Plans

The improvements authorized after-the-fact in Amendment No. One shall remain in place in general conformance with the plan entitled "Trans Bay Cable Project, As-Built," prepared by Prysmian, and revised through December 1, 2010. The improvements authorized after-the-fact in Amendment No. Two shall remain in place generally in conformance with the activities described in permit application materials submitted on August 12, 2015, and all subsequently-submitted materials related to the project. No substantial changes were to be made to these plans or any as-built project without prior review and written approval by the staff on behalf of the Commission.

The improvements authorized in Amendment No. Four shall remain in place in general conformance with the plans submitted as part of the application package, dated August 6, 2025, and all subsequently-submitted materials related to the project. The permittee is responsible for assuring that the Construction Documents accurately and fully reflect the terms and conditions of this permit and any legal instruments submitted pursuant to this authorization. No substantial changes shall be made to these documents without prior review and written approval by or on

behalf of the Commission through plan review or a permit amendment. Final construction plans shall be submitted to the Commission for approval through plan review, per II.A.2, before authorized maintenance activities may commence (Amendment No. Four).

B. Certification of Contractor Review

Prior to commencing any construction, (with the exception of the after-the-fact activities authorized in Amendment Nos. One and Two), the general contractor or contractors in charge of such work within the Commission's jurisdiction shall submit written certification that they have reviewed and understand the requirements of the amended permit and any final plans subject to BCDC approval, particularly as they pertain to any environmentally sensitive areas.

C. Vessel Traffic Safety

During the construction phase of the cable, and all maintenance activities, authorized herein, the permittee shall: (1) employ measures necessary to ensure that cable construction crews maintain a close watch for recreational users of the Bay during periods of high activity, e.g., weekends, or when weather hazards exist, and coordinate cable-laying activities with the U. S. Coast Guard to reduce the risk of potential incidents; (2) comply with rules regarding notification of their vessels' transit routes and locations in the Bay to other mariners and vessels, and with regulations regarding the installation of the cable; (3) ensure safe entrance into the Bay of any vessels under foreign registry by obtaining the assistance of the San Francisco Bar Pilots; and (4) establish a precautionary area around construction vessels.

D. Repair, Maintenance and Upgrades of Cable and/or Protective Mattresses

The permittee shall adhere to the conditions below when conducting any fill placement or reburial activities necessary as part of the five-year maintenance program to protect the HVDC submarine cable, and any subsequent maintenance activities authorized under Amendments No. Three and Four.

1. Reburial

All reburial activities using water jetting methods shall be conducted within the existing right-of-way and be conducted in a manner to minimize environmental impacts, such as turbidity and benthic impacts (Amendment No. Three).

2. Equipment Restrictions and Monitoring

The permittee shall install California Department of Fish and Wildlife (CDFW)-approved fish screens on all intakes for any water jetting equipment that is to be used during the maintenance program. The permittee shall monitor the fish screen performance in a manner approved by CDFW and provide the monitoring report of the fish screen performance conducted during the first year of maintenance work to

- the Commission within 30 days of completing the report, or by January 31st of the year following the monitoring of such use. The report shall include, at a minimum, a summary of the amount of time the hydro plow, or other water jetting equipment, pump is operated, the cleaning schedule, any instances of screen blockage, and flow rates (Amendment No. Three).
3. **Environmental Work Windows**
All work, including water jetting and placing of fill, shall be conducted from June 1 to November 30 of any year in Central San Francisco Bay and San Pablo Bay, and from August 1 to November 30 of any year at locations east of Carquinez Strait (Amendments No. Three and Four).
 4. **Species Protection During Maintenance Activities**
This permit does not authorize the take of any federally or state-listed special status species. The permittee shall take all precautions to avoid adverse impacts to the winter-run Chinook salmon, spring-run Chinook salmon, steelhead, green sturgeon, and delta smelt in the project area, and their critical habitat. The permittee shall abide by the non-discretionary measures contained in the National Marine Fisheries Service (NMFS) Letter of Concurrence dated June 22, 2018, and the U.S. Fish and Wildlife Service (USFWS) Letter of Concurrence dated May 22, 2013 (Amendments No. Three and Four).
 5. **Water Quality**
 - a. **Amendment No. Three.** The permittee shall ensure that the activities and operations follow the requirements, such as best management practices for spill prevention and response to control pollution sources, of the Regional Water Quality Control Board's (Water Board's) Water Quality Certification dated July 10, 2019, or as amended by the Water Board. If amended, the Water Quality Certification shall be submitted for review and approval by or on behalf of the Commission for consistency with this authorization.
 - b. **Amendment No. Four.** The permittee shall comply with all conditions of the "Clean Water Act Section 401 Water Quality Certification and Order for: Trans Bay Cable 2026 Maintenance Project," issued by the San Francisco Bay Regional Water Quality Control Board on May 11, 2026.
 6. **Reporting**
 - a. **Pre-Maintenance Report.** The permittee shall submit a pre-maintenance report to the Commission for review and approval at least 45 days prior to the scheduled work. The report shall list the anticipated work on the cable for that year and include at a minimum: (1) quantities and locations of fill to be placed, (2) justifications for the amount of fill and proposed maintenance, and (3)

locations and quantities for cable reburial. The Commission staff will review the submittal within 30 days and provide written approval or modifications for the proposed maintenance activities to the permittee. If the Commission does not respond within 30 days, the permittee shall be allowed to proceed as specified in the pre-maintenance report and approved herein (Amendment No. Three).

- b. **Post-Maintenance Report.** By January 31 of each year following maintenance activities, the permittee shall submit an annual post-maintenance report to the Commission summarizing the results of the work performed the prior year. The report shall include, at a minimum, any changes in bathymetry, the fill volume, area, and locations of the work and also provide quantities and locations of any bay floor stabilization or cable reburial activities. The Commission shall review the report within 45 days and provide the permittee with any questions, comments, and clarification, or the report shall be deemed complete (Amendments No. Three and Four).
- c. **Monitoring.** The permittee shall submit annual bathymetric survey monitoring results for any sections of the cable where fill is placed for a minimum of three years following the fill placement in that area. If the fill is not staying in place, then additional monitoring, remedial actions, and/or removal may be required. The results shall be submitted as part of the post-maintenance report required above, or by January 31 of each year in which monitoring was conducted (Amendments No. Three and Four).

7. Compensatory Mitigation

Amendment No. Three. The permittee shall deposit \$21,780 into the Coastal Trust Fund held by the California State Coastal Conservancy, to be used for the Richmond Terminal 4 Warehouse and Pile Removal project as 1:1 mitigation for the placement of fill over the Trans Bay cable over the five-year maintenance period. These funds shall be deposited prior to placing any fill in the Bay. If the funding cannot be used for the Richmond Terminal 4 project, then it can be disbursed appropriately for another Bay-related project at the discretion of the California State Coastal Conservancy, preferably for fill removal. The permittee shall provide proof of payment within 30 days of depositing the mitigation funds into the Coastal Trust Fund (Amendment No. Three).

Amendment No. Four. To compensate for the unavoidable adverse impacts associated with the placement of 0.5 acres of fill in the Bay, the permittee shall purchase 0.5 Estuarine Wetland Enhancement Mitigation Credits from the San Francisco Bay In-Lieu Fee Program, representing mitigation at a 1:1 ratio, no later than November 30 of the year in which maintenance activities were completed.

Upon purchasing the credits, the permittee shall provide documentation of the transaction to the Commission.

E. Limitations of the Term of Cable Use

If the permittee intends to use the cable authorized herein beyond December 14, 2031, the permittee shall obtain renewed or extended leases and/or licenses from each of the three lessors of interest in property(ies) through which the cable will be located—the City of San Rafael, the California State Lands Commission, and the Port of San Francisco—and provide proof of the renewed or extended leases and/or licenses to the Commission prior to December 14, 2031. Further, prior to December 14, 2031, the permittee shall apply for approval of an extension to this amended permit to allow for continued use of the cable beyond that period of time and for a period of time reflective of the dates contained in the renewed or extended leases and/or licenses. Use of the cable beyond December 14, 2031, shall be allowed only upon the granting of an extension of time to the amended permit by or on behalf of the Commission.

F. Cable Operation Safety and Monitoring

Following installation, the permittee shall monitor the cable by computer and conduct periodic inspections of the cable for signs of internal damage, and shall document the as-built location of the cable along its entire length, and provide Geographical Positioning System (GPS) coordinates for critical waypoints of its alignment, as required by the U.S. Army Corps of Engineers (Army Corps), to the National Oceanic and Atmospheric Administration (NOAA) for inclusion in navigational charts for the Bay and to the U.S. Coast Guard for inclusion in applicable documents.

G. Seasonal Limitations and Consultation on Initial Construction

The permittee shall install the cable authorized herein anywhere in the Bay or Suisun Marsh only between June 1 and November 30 of any calendar year, when NMFS states that sensitive life stages of Endangered Species Act (ESA)-listed salmonids (Chinook salmon and steelhead) and green sturgeon are not likely to be present in the project area. In the area of construction where Coho salmon are present in the waters of Marin County from the Golden Gate Bridge to the Richmond-San Rafael Bridge, the permittee shall only install the cable between June 1 and November 1 of any calendar year. Further, in the area of construction where Delta smelt are present in waters measuring deeper than 10 feet Mean Lower Low Water (MLLW) between the Carquinez Bridge and Collinsville (in Solano County), the permittee shall install the cable between August 1 and December 1 of any calendar year. No work outside of the work windows may be conducted without the approval of the Executive Director, provided that such approval may only be issued after: (1) further consultation between the Army Corps and the USFWS and/or NMFS has occurred; and (2) the Executive Director has determined that work outside of the window will be consistent with the Commission's laws and policies.

To protect the herring fishery, no work shall occur in the Central Bay between December 1 and February 28 of any year without the written approval of the Executive Director, provided that such approval may only be issued: (1) after the permittee requests from the CDFW that it be allowed to work outside of the window, discussions between the permittee and CDFW have occurred and the outcome of those discussions have been provided to the Commission staff; and (2) the Executive Director has determined that work outside of the window will be consistent with the Commission's laws and policies.

The permittee shall undergo any additional necessary consultation with NMFS and other relevant resource agencies regarding the construction activities authorized herein in the event: (1) new information becomes available indicating that listed species may be adversely affected by the project authorized herein; (2) project plans as authorized herein change during the construction and use phases; or (3) a new species is listed or critical habitat designated that may be affected by the project authorized herein (Original Authorization).

H. Horizontal Directional Drilling Operations

Prior to the commencement of Horizontal Directional Drilling (HDD) in the Bay offshore of the area in the vicinity of the converter site located in the City of San Francisco, the permittee shall perform sediment sampling at the HDD location and take any necessary precautionary measures to avoid contaminated areas and the potential release of contamination into the Bay. Further, the permittee shall complete said HDD operations as far offshore as feasible from the area where the cable will exit the Bay the City and County of San Francisco converter site in order to avoid sediment containing elevated levels of polycyclic aromatic hydrocarbons (PAHs) or other known or detected contaminants.

I. Spill Avoidance and Response

Prior to the construction and use of the original project authorized herein, the permittee shall: (1) provide the Commission with a Spill Prevention and Control Plan (SPCC) and conduct HDD operations in accordance with the SPCC; (2) ensure that all vessel operators associated with the project authorized herein update and expand their spill contingency plans partly based on NOAA's Environmental Sensitivity Index (ESI) and continue to use emergency response services for potential pollution incidents; and (3) ensure that review of updates and modifications to spill contingency plans be done under the U.S. Coast Guard's oversight of oil spill contingency plans (Original Authorization).

J. Cable Route Alterations in the Suisun Marsh

In the event that any changes in the cable route authorized for construction and use in the Suisun Marsh area are deemed necessary, prior to project construction, the permittee shall consult with the Commission and other relevant regulatory and resource agencies to identify the alternative route and any related potential impacts to resources in the Suisun Marsh. No changes in the route authorized herein shall be made without first obtaining written authorization from the Commission or, if necessary, an amendment to the amended permit (Original Authorization).

K. Debris Removal

All construction debris shall be removed to an authorized location outside the jurisdiction of the Commission. In the event that any such material is placed in any area within the Commission's jurisdiction, the permittee, its assignees, or successors in interest, or the owner of the improvements, shall remove such material, at its expense, within ten days after it has been notified by the Executive Director of such placement.

L. Notice of Assignment

1. Notice to Buyers

Prior to entering into any agreement to transfer any interest in any property subject to this amended permit, the permittee, or any assignee(s) of this amended permit or any part of it, shall provide the third party with a copy of this amended permit and shall call his or her attention to any provisions regarding public access or open space or the need to obtain approval of construction plans prior to the commencement of any construction.

2. Assignment of Permit

No more than ten days after transferring any interest in any property subject to this amended permit to another party, the transferor(s) shall:

- a. Notify the Commission of the nature of the transfer, the name, address, and telephone number of the transferee, and the effective date of the transfer; and
- b. Submit an assignment of this amended permit for the area transferred that has been executed by the transferor and the transferee and that indicates that the transferor has transferred the amended permit as it applies to the property that was transferred and that the transferee has read, understood, and has agreed to be bound by the terms and conditions of this amended permit.

M. Compliance Table

Reporting Frequency	Reporting Deliverable	Due	Permit Condition
Annually	Post-Maintenance Work Report	January 31 following maintenance work season	II.D.6.b
Annually, for 3 years following fill placement	Bathymetric Survey Results	January 31	II.D.6.c
Once	Proof of Mitigation Credit Purchase	November 30 following completion of maintenance activities.	II.D.7

III. Findings

This amended authorization is given on the basis of the Commission’s findings and declarations that the work authorized herein is consistent with the McAteer-Petris Act, the San Francisco Bay Plan (Bay Plan), the Suisun Marsh Preservation Act (Marsh Act), the Suisun Marsh Protection Plan (Marsh Plan), the California Environmental Quality Act (CEQA), and the Commission’s amended management program for the San Francisco Bay segment of the California coastal zone for the following reasons:

A. Use

The project area does not fall within designated priority use locations. The Commission, therefore, finds that the project is consistent with the maps in the Bay Plan.

B. Bay Fill (Original Authorization)

The Commission may allow fill only when it meets the fill requirements identified in Section 66605 of the McAteer-Petris Act, which states, in part: (a) the public benefits from fill must clearly exceed the public detriment from the loss of water areas, and fill should be limited to water-oriented uses; (b) no alternative upland location exists for the fill; (c) the fill should be the minimum amount necessary; (d) the fill should minimize harmful effects to the Bay including fish and wildlife resources, marsh fertility, and water quality; (e) the fill should be constructed in accordance with sound safety standards; and (f) the fill should be authorized when the applicant has valid title to the affected property.

1. **Public Benefit.** The primary goal of the project authorized herein is to deliver electricity to San Francisco to meet the demand projected beginning in 2012 and beyond (i.e., at least for 40 years). In 2005, the California Independent System Operator (CAISO), a non-profit entity that acts as an impartial operator of the state’s wholesale power grid, determined that the alternative involving the placement of a

high voltage, direct current (HVDC) transmission cable in the Bay would meet its objectives concerning converter station and cable route locations and the overall transmission system reliability. According to the permittee, the HVDC will provide "...a dedicated [electrical power] connection between the East Bay [which has excess electricity-generation capacity] and San Francisco. This electrical power delivered to San Francisco would help meet the [City's] electrical demand projected for 2012 and beyond. The project is designed to be a cost-effective, energy efficient solution addressing San Francisco's need for additional transmission capacity, while improving transmission reliability and load-serving capability."

The Final Environmental Impact Report (FEIR) for the project authorized herein issued in October 2006 stated that increased vessel traffic associated with the construction of the transmission cable could result in a temporary, yet potentially significant, impact to recreational users of the Bay, e.g., windsurfers. To mitigate this impact and, as required in Special Condition II.C.1, the permittee will ensure that construction crews maintain a close watch for recreational users during periods of high activity, e.g., weekends, or when weather hazards exist. Further, to mitigate the risk of incidents involving recreational users during the construction phase of the project authorized herein, Special Condition II.C.1 also requires the permittee to coordinate cable-laying activities with the U.S. Coast Guard Safety Branch, including issuing a Local Notice to Mariners. Additionally, each affected harbor district will be made aware of project construction activities. By requiring the permittee to comply with Special Condition II.C of the amended permit, the risk of incidents involving recreational users of the Bay during the construction phase of the project authorized herein will be reduced.

The FEIR also stated that, for the duration of construction, the vessels laying the cable will present a potential navigation hazard in part because vessels will be limited in terms of their capacity to maneuver quickly and avoid collisions and, most certainly, if such vessels failed to comply with navigation rules defining the responsibilities of these types of vessels. Special Condition II.C.2, II.C.3, and II.C.4 also requires the permittee to: (a) comply with rules regarding notification of their vessels' transit routes and locations in the Bay to other mariners and vessels, and with regulations regarding the installation of the cable; (b) ensure safe entrance into the Bay of any vessels under foreign registry by obtaining the assistance of the San Francisco Bar Pilots; and (c) establish a precautionary area around construction vessels. Compliance with Special Condition II.C will reduce the potential navigation hazard associated with vessels involved with construction of the project authorized herein.

The Commission finds that the public benefits of the project authorized herein exceed the detriments particularly as conditioned to offset any potential adverse impacts on navigation safety and recreational uses associated with the construction activities.

2. **Water-Oriented Use.** The originally-authorized project involved the placement of 5,737 cubic yards of material in the Bay, covering approximately 236,270 square feet. The majority of the fill was for the HVDC transmission cable—approximately 5,237 cubic yards of material over an area measuring in total 216,040 square feet—while the remaining 500 cubic yards at locations totaling approximately 20,230 square feet will be for the protective mattresses required where shallow utilities exist.

Section 66605 of the McAteer-Petris Act identifies examples of water-oriented uses that can be authorized in the Bay by the Commission, including “water intake and discharge lines for desalinization plants and power generating plants requiring large amounts for cooling purposes.” Although similar in nature to the intake and discharge lines at utility stations, HVDC transmission cables and associated protective mattresses are not specifically identified in Section 66605. However, the Bay Plan Fills in Accord with the Bay Plan notes that Commission approval of fill in the Bay is contingent, in part, on whether a project meets its policies “as to purposes for which some fill may be needed...(i.e.,...utility routes),” and, further, if such projects have no upland alternative and involve the minimum fill necessary (discussed further below). The Bay Plan’s Other Uses of the Bay and Shoreline Policy No. 5 further states, in part, that “[h]igh voltage transmission lines should be placed in the Bay only where there is no reasonable alternative.”

The Commission has previously found utility lines to be water-oriented and, thus, consistent with Section 66605 of the McAteer-Petris Act. Similarly, the Commission finds that the project authorized herein is a water-oriented use and, thus, is consistent with the McAteer-Petris Act.

3. **Alternative Upland Location.** The FEIR for the project contained an analysis of alternative routes for electricity transmission. Three primary screening criteria were used in evaluating the alternatives: (a) whether the alternative would achieve a set of transmission system reliability objectives; (b) whether the alternative would be feasible in terms of legal, regulatory, and technical boundaries; and (c) whether the alternative would avoid or minimize potential environmental impacts.

One alternative for transmitting electricity between Pittsburg and San Francisco involved the development of a primarily land-based corridor along a new transmission route and another within existing utility and transportation corridors (e.g., the Bay Bridge, roadways, private rail crossings, within the BART system, or electricity, gas pipeline, or telecommunications corridors). These alternatives,

however, were eliminated from consideration due to a variety of reasons, including the difficulty of obtaining regulatory approvals in a timely manner, the complex nature of obtaining a Right-of-Way (ROW) from the California Department of Transportation (Caltrans) for the use of certain roadways, the need to reserve corridors (e.g., railways) to meet expanding demands of their own systems, and engineering complications involved with transmission line installation through, for instance, BART's Transbay Tube. Other alternatives involved the installation of transmission lines between existing substations and the City and County of San Francisco, which were eliminated partly because of the difficulty in obtaining regulatory approvals and, thereby, meeting project start-up dates, and also due to technical feasibility concerns. Another alternative involved the development of an underground cable in San Mateo County, which was eliminated in part due to public opposition and, thus, the potential difficulty in obtaining regulatory approvals in a timely manner. Other land-based concepts involved solar and wind energy sources, but these were eliminated partly because of potential regulatory approval constraints and environmental impacts related to construction and operation. The FEIR concluded that in light of the alternatives analysis "...the only alternative that is considered to be capable of meeting all of the screening criteria..." is the Trans Bay Cable Project, which includes the submarine cable and protective mattresses authorized herein.

The Commission finds that, based on the information provided by the permittee, no upland alternative exists to the project authorized herein.

- 4. Minimum Amount of Fill.** The installation of a 52-mile-long, 10-inch-diameter section of the HVDC transmission cable in the Bay will result in the placement of approximately 5,237 cubic yards of fill in the Bay over an area of the Bay bottom totaling 216,040 square feet. Further, the placement of the originally-permitted protective mattresses at various locations along the cable will result in approximately 500 cubic yards of new fill covering an area of the Bay bottom totaling approximately 20,230 square feet. Although several of the project alternatives involving power facilities in the East Bay involved transmission cables in or above the Bay to access stations in San Francisco, these alternatives were found infeasible by the permittee and, thus, associated fill volumes were not calculated nor compared to the fill volumes authorized herein. However, the HVDC cable, which makes up the majority of the fill authorized herein, will be installed in a trench at the bottom of the Bay and buried, resulting in no loss of Bay surface or area. The mattresses, which will result in approximately 500 cubic yards of new fill covering an area of the Bay bottom totaling approximately 20,230 square feet, are necessary to ensure protection of existing utilities intersecting the cable. Special Condition II.A requires the permittee to provide project plans for the protective mattresses,

including associated fill volumes, to the Commission and obtain approval of such plans prior to commencement of construction. This special condition ensures that the volume of fill associated with the protective coverings over the submarine transmission cable will not exceed that authorized herein.

According to the permittee, the cable authorized herein could ultimately remain in place for as long as 40 years and, if no longer used beyond that time, be abandoned in-place. If, however, continued use is anticipated beyond a 40-year period, the overall power system, including the transbay cable and protective mattresses, will likely require upgrades that are not authorized as a part of the subject amended Commission permit. Special Condition II.D originally required the permittee to obtain an amendment to the subject permit and/or a new authorization from the Commission for any upgrade activities to the cable and/or protective mattresses. This special condition ensured that any potential increase in the volume of fill associated with upgrades will be considered by the Commission prior to project implementation, thereby allowing it to evaluate whether such upgrades would result in the minimum necessary to upgrade to the overall system. Special Condition II.D was updated as part of Amendment No. Three to authorize the permittee to conduct up to five years of maintenance on the cable, which includes placing additional protective mattresses and supporting rock bags and reburying portions of the cable that have become exposed. Reburying is the preferred method to cover and protect the cable and fill will only be placed in areas where reburying is not feasible (Amendment No. Three).

The Commission finds that, as conditioned, the amount of Bay fill is the minimum necessary to achieve the project purpose.

5. **Fish and Wildlife Resources.** According to the Draft EIR (DEIR) for the project issued in May 2006, “[t]he plow used to install the transmission cable] works by fluidizing the seabed material in a narrow path, at a predetermined depth, without displacing the majority of the material, and minimizing the suspension of sediment in the surrounding water. In this case, the [plow] would cut a trench approximately 1 foot wide and would lay the cable at a typical target burial depth of approximately 3 to 6 feet...The [plow] straddles the cable, creates a trench below the cable, and guides the cable into the trench. The trench then partially collapses after the passage of the burial machine and the remaining part of the trench is generally filled by natural sediment deposition. The operation would move along the route at approximately 1 to 2 miles per day, so time of construction disturbance in any given area would be limited. Potential impacts from the [plow]...would include temporary disturbance of the seabed at the trench site and a localized increase in turbidity due to suspended sediment in the water column from the fluidization of the seabed, which would not be considered significant impacts.” The DEIR stated that bottom dwelling fish species in the immediate vicinity of cable installation could be

temporarily displaced. Benthic organisms in or near the cable installation area will likely be lost, but “be mostly recovered in terms of biomass and abundance a few months to a year” following cable installation. The cable ship used for installation will be moored to deployed anchors where damage to organisms and habitat will result, but disturbance will be temporary and minor.

Maintenance of the cable itself was not expected to be necessary and, thus, is not authorized herein. However, while in operation, the cable will be monitored by a computer and inspected periodically for signs of internal damage. According to the permittee, the cable alignment was discussed in detail with the U.S. Coast Guard and the San Francisco Bar Pilots and moved outside of designated large vessel shipping lanes to the greatest extent possible. The alignment passes under shipping lanes in Central San Francisco Bay at three channel crossing locations near Pinole Point, the Benicia-Martinez Bridge, and near Pittsburg. The cable alignment passes under the ship channels as near perpendicular as possible, and is located in the deepest water possible—greater than 45 feet—to minimize the risk from emergency or accidental anchor drops.

Further, “[t]he cable route was selected to avoid shipping channels, anchorages, dredge [material] disposal areas, Regional Water Quality Control Board-listed toxic hotspot areas, and other known obstacles.” To prevent and, thus, mitigate potential damage to the cable and potential impacts to Bay resources and as required by Special Condition II.F of this amended permit, following installation, the permittee will monitor and periodically inspect the cable for signs of damage and document the as-built location of the cable for its entire length and provide Geographical Positioning System (GPS) coordinates for critical waypoints of its alignment, as required by the Army Corps, to NOAA and to the Coast Guard for inclusion on navigational charts and other applicable documents. Special Condition II.F ensures that the permittee will take precautionary measures to inspect the integrity of the cable structure and document and publish its location and depths to identify and prevent damage that, if left undetected could potentially impact Bay resources.

According to the FEIR, the cable “would be heavily armored and expected to be buried at a typical target depth of 3 to 6 feet. In the unlikely event of damage to the cable, the electrical current would be automatically shutoff within milliseconds with no anticipated environmental impacts with the exception of a temporary loss of a portion of the power supply in the San Francisco Area....In the unlikely event that the cable was damaged at some location, it would be necessary to excavate the damaged portion and repair [it] via a splice which would occur on a surface vessel. Once the splice was completed, the cable would be reburied and/or covered with protective mattresses...at approximately the same location as the original installation.” Repair operations will require spare cable to be stowed on a boat or barge moored at a nearshore location from where the damaged cable could be easily accessed. According to the applicant, “[c]ontractual arrangements would be in place for specialized services that may be required,” and, further, any resource

impacts associated with repair activities will be similar to those associated with cable installation, as described above.

As originally-authorized, routine repair and maintenance operations were not authorized herein. Therefore, Special Condition II.D required the permittee to obtain an amendment to the permit or a separate Commission authorization prior to undertaking such activities. The inclusion of this special condition in the permit allowed the Commission to evaluate any potential adverse impacts to Bay resources associated with maintenance and off-setting measures prior to its authorization of such activities. Special Condition II.D was updated as part of Amendment No. Three to authorize five years of maintenance necessary to reduce the risk of damage to exposed sections of the cable by reburying portions of the cable and adding cover/protection in the form of concrete mattresses and rock bags over the portion of exposed cable that cannot be reburied (Amendment No. Three).

In addition to the provisions of Section 66605 of the McAteer-Petris Act regarding potential impacts of fill on fish and wildlife resources, the Bay Plan policies on fish, other aquatic organisms, and wildlife state, in part, that in evaluating Bay projects for authorization, the Commission must find that marshes, mudflats, and subtidal habitat would be “conserved, restored, and increased.” Furthermore, in making this determination, the Commission must consult with and give appropriate consideration to the state and federal resource agencies, and not authorize any project resulting in a “taking” of a listed species unless found appropriate by the resource agencies. The Bay Plan policies on tidal marshes and tidal flats, and subtidal areas, further state that all projects subject to Commission consideration should also be sited and designed to minimize or avoid adverse resource impacts at these areas.

The FEIR stated that the cable would be “...located in deeper water and avoids tidal flats, mudflats, and intertidal areas. In addition, the proposed cable installation method using a Hydroplow is minimally invasive and designed to limit disturbance of Bay floor habitat and limit sediment disturbance/suspension. In addition to minimal construction impacts, no adverse long-term impacts during the operation phase of the [p]roject would be expected to occur.”

In May 2007, at the Army Corps’ request, NMFS completed its consultation regarding potential adverse impacts—including increased turbidity, benthic losses, temperature elevation, and replacement of soft bottom substrate where concrete mattresses will be placed—of the project on listed species or designated critical habitat. In considering the potential impacts of the project on threatened and endangered salmonids (e.g., winter-run and spring run Chinook salmon, steelhead) and the threatened green sturgeon, NOAA Fisheries found that listed adult and juvenile salmonids “are not likely to be present” in the project area due to the construction timing of the project. Further, because the majority of the cable line

will be installed in deep water (greater than 50 feet) and a majority of salmonids are found in the upper portion of the water column, adverse impacts will not be expected. Moreover, turbidity associated with the project will be localized and short-term and, thus, not result in significant impacts on species of concern. In conclusion, NMFS stated: “Based on the best available scientific information, NMFS concurs with the Corps’ determination that the project is not likely to adversely affect the endangered and threatened species....Regarding designated critical habitat, NMFS has determined the proposed project is not likely to adversely affect essential physical or biological features associated with anadromous salmonid critical habitat....[However,] [f]urther consultation...may be required: (1) if new information becomes available indicating that listed species may be adversely affected by the project..., (2) current projects plans change..., or (3) a new species is listed or critical habitat designated that may be affected by the [project].”

Special Condition II.G requires the permittee to conduct construction operations in accordance with specific work windows and to undergo further consultation with the resource agencies if work is expected outside of these windows. As conditioned, the permittee will install the cable in the Bay between June 1 and November 30, when NMFS states that sensitive life stages of Endangered Species Act (ESA)-listed salmonids (Chinook salmon and steelhead) and green sturgeon are unlikely to be present. This work window captures portions of certain periods of the year when work is allowed for other species of concern, e.g., Pacific herring, Coho salmon, and Delta smelt. Further, it is unlikely that the work authorized herein will affect Delta smelt, which generally populate the shallower depths of the Bay where the cable is not planned for installation. Special Condition II.G also requires the permittee to conduct additional consultation if new information becomes available indicating that listed species may be adversely affected by the project, projects plans change, or a new species is listed or critical habitat is designated that may be affected by the project. This special condition ensures that listed species and critical habitat will be adequately protected throughout the course of project construction.

The Commission finds that, pursuant to Special Condition II.D, as amended, regarding repair and maintenance activities, Special Condition II.F regarding cable safety and on-going monitoring, and Special Condition II.G regarding seasonal work limitations and further consultations, the project authorized herein will minimize harmful effects to fish and wildlife resources.

6. **Water Quality.** The deep-water cable route was selected in part because of its location away from sources of contamination, e.g., industrial outfalls and facilities. The cable installation is expected to “fluidize” about 70,000 cubic yards of sediment of which approximately 10 to 20 percent (i.e., 7,000 to 14,000 cubic yards) is

expected to be ejected from the trench, creating a localized plume that will dissipate. According to the FEIR, the “[i]nstallation of the offshore submarine cable system could significantly impact water quality in the Bay associated with the proposed use of the Hydroplow or equivalent technology...if the construction zones contain contaminated sediments.”

The site where the cable will enter the Bay from the new converter site in Pittsburg will be located outside of the Commission’s jurisdiction. The location where the cable will initiate its exit from the Bay en route to the converter site in the City and County of San Francisco is located in the Commission’s Bay jurisdiction, and the sediment in this area contains elevated levels of polycyclic aromatic hydrocarbons (PAHs) which, if disturbed, could result in “substantial” water quality impacts. However, according to the FEIR, these potential significant impacts will be reduced and, thus, mitigated to less-than-significant levels by using Horizontal Directional Drilling (HDD) to bore a route for the cable from which it would ultimately leave the Bay and “as far offshore as is feasible,” approximately 800 feet from the shoreline. Further, the FEIR stated that the “[h]ydroplow or equivalent technology activities shall also avoid known contamination....Confirmation sediment sampling shall be performed at the location where the HDD emerges into the Bay and the results would be considered and addressed prior to commencement of construction near this location.” Special Condition II.H requires the permittee to complete HDD as far offshore as feasible from the area where PAH contamination is a concern, and also to conduct sediment sampling at this location in the Bay and take necessary measures to avoid contaminated areas and the potential release of contamination into the Bay prior to commencement of construction. The inclusion of this special condition in the amended permit ensures that construction of the cable will not result in water quality impacts to the Bay.

In addition to the provisions of Section 66605 of the McAteer-Petris Act regarding potential impacts of fill on water quality, the Bay Plan Navigational Safety and Oil Spill Prevention Policy No. 2 states: “The Commission should ensure that marine facility projects are in compliance with oil spill contingency plan requirements of the Oil Spill Prevention and Response, the U.S. Coast Guard, and other appropriate organizations.” The HDD operation could significantly impact water quality in the Bay due to the potential release of drilling fluids (e.g., bentonite clay and inert, non-toxic polymers). However, according to the FEIR, these potential significant impacts will be reduced and, thus, mitigated to less-than-significant levels by conducting drilling operations in accordance with a Spill Prevention and Control Plan (SPCC) that contains spill response measures. Special Condition II.I requires the permittee to conduct HDD operations in accordance with an SPCC that will contain potential spill response measures and which will be provided to the Commission prior to

commencement of construction operations. The FEIR also stated that cable installation would likely involve the use of marine vessels, which could result in an accidental fuel spill and, further, while the likelihood of this occurring is “low...a potentially significant spill with associated [potentially significant] water quality impacts could occur...” To mitigate this impact and as required by Special Condition II.I of this amended permit, all vessel operators associated with the project authorized herein will “update their contingency plans and continue to use emergency response services for pollution incidents. Review of updates and modifications to plans shall be done under the [Coast Guard’s] regular oversight of oil spill contingency plans. The work of updating and expanding the spill response plans shall be based on NOAA’s Environmental Sensitivity Index (ESI), which involves the systematic compilation in a standardized format of information related to coastal shoreline sensitivity, biological resources, and human uses.” The inclusion of Special Condition II.I in the amended permit ensures that the HDD operations and potential spills related to that aspect of project and also potential spills from vessels associated with the project would not adversely impact the Bay’s water quality and, moreover, ensure that spill response plans will be available, if needed.

The Commission finds that, pursuant to Special Condition II.H regarding HDD operations in the Bay and II.I regarding spill avoidance and response, the project authorized herein will minimize harmful effects to water quality.

7. **Valid Title of Project Site.** The transmission cable will be located on property that the permittee does not own, but for which it has obtained the following leases and/or license agreements: (a) a lease from the City of San Rafael for an 11-foot-wide, 2.29-mile-long section of the proposed HVDC cable route; and (b) a lease from the California State Lands Commission for an 11-foot-wide, 40.25-mile-long section of the proposed cable route. In addition, on August 7, 2007, the permittee obtained a license from the Port of San Francisco for a 9.4-mile-long section of the cable route. The leases from the City of San Rafael and the State Lands Commission, and the license from the Port of San Francisco are valid for approximately 25 years from the date of issuance with options for extending these leases or licenses beyond that period of time. The permit authorizes the cable to be used for up to 25 years—the earliest expiration date of the three individual leases and/or licenses issued to the permittee for the project authorized herein—unless an extension of time is granted to the permittee by the Commission. Special Condition II.E requires the permittee to obtain renewed or extended leases and/or licenses from each of the three lessors of interest in property(ies) at which the cable will be located, provide such leases and/or licenses to the Commission, and apply for and receive an extension to this permit to allow for continued use of the cable beyond December 14, 2031. The inclusion of this special condition in the amended permit will ensure that the

permittee has valid title of the property in the Bay in the event use of the cable is extended beyond the permit's current expiration date.

The Commission finds that Special Condition II.E ensures that the permittee will have valid title to the affected property throughout the life of the project and, thus, that the project authorized herein is consistent with Section 66605 of the McAteer-Petris Act regarding fill.

For all of these reasons, the Commission finds that, as conditioned, the fill is consistent with its law and policies regarding fill, including whether any off-setting fill is necessary and whether the cable should ultimately be abandoned in place when no longer operable, fish and wildlife resources including marshes, mudflats, and subtidal habitat, navigational safety and oil spill prevention, and water quality.

C. Suisun Marsh Primary Management Area

A portion of the cable and protective mattresses will be installed within the Commission's primary management jurisdiction of the Suisun Marsh. The Suisun Marsh Preservation Act (Marsh Act) states, in part, that "...in order to preserve the integrity and assure continued wildlife use of the Suisun Marsh...there is a need for...[d]evelopment and implementation of plans and policies to protect the marsh from degradation by excessive human use...." Further, the Marsh Act states, in part, that "[t]he Commission shall issue a marsh development permit...if it finds that the proposed development is consistent with either the provisions of [the Marsh Act] and the policies of the [*Suisun Marsh Protection Plan*] or the certified local protection program...." According to the Marsh Plan policies regarding environment, various habitats of the marsh "...are critical...for marsh-related wildlife and are essential to the integrity of the Suisun Marsh." Further, the Marsh Plan policies on utilities, facilities and transportation state, in part, that underground cables in the marsh should be permitted by the Commission only if no alternative route is feasible and the design meets certain standards, including, that: (1) trenches should be "only slightly wider" than the utility line of which they house to minimize wetland disturbance; (2) any vegetation disturbed by cutting a trench in marsh areas should be reseeded within one growing season if revegetation does not occur naturally; and (3) cable installation in the Bay should be scheduled to avoid major fish migrations. Included in these latter policies is guidance that all construction plans affecting the Suisun Marsh should be reviewed by the State Department of Fish and Game to assure minimal resource impact.

Finding B-3 above addresses the feasibility of alternative routes for the cable. According to the permittee, "[t]he trench width associated with the [plow installation] operation is expected to be only slightly wider (e.g., 4 to 6 inches on average) than the cable bundle width of approximately 10 inches." Further, the permittee states that any potential changes in the route of the cable in the Suisun Marsh area will be developed in

consultation with the Commission staff and other relevant regulatory agencies. Special Condition II.J requires the permittee to undergo such consultation with and authorization by the Commission prior to commencement of the project if a route change is necessary. This special condition will ensure that any change in the cable route will not have adverse effects within the Suisun Marsh. The permittee also states that the use of a plow towed behind a ship to “fluidize” the bottom sediments of the Bay and thereby create a trench where the cable will be placed and buried by natural processes beneath the Bay floor will be “minimally invasive” and thus “not result in any potentially significant impacts” to the resources in Suisun Bay. As previously stated, and as conditioned in this permit, cable installation in the Suisun Bay will occur during a period of the NMFS-recommended work window, June 1 through November 30, for anadromous fish. In areas where Delta smelt are present, the work window described in Special Condition II.G will also apply. Lastly, CDFW has reviewed and concurred that the project will not result in resource impacts.

The Commission finds that, as conditioned, the project authorized herein in its primary management jurisdiction of the Suisun Marsh will be consistent with relevant sections of the Marsh Act and also policies of the Marsh Plan regarding environment, and utilities, facilities and transportation.

D. Permit History

1. **Amendments No. One and Two.** During installation of the originally authorized project, an additional 7,370 square feet of concrete mattresses were placed in the vicinity of the BART tube to enhance protection of BART’s submerged transit infrastructure. Further, in 2014, a vessel anchor accidentally damaged a section of the originally authorized cable necessitating immediate cable repair. Prior to implementation of the cable repair, the Commission issued an emergency authorization for the activity. Subsequent to beginning the activities not authorized in the original permit, the permittee requested through the formal application process “after-the-fact” permission through Amendment Nos. One and Two of the original permit.

The placement of additional protective mattresses over the cable is a similar activity with no greater adverse impact to the Bay, as defined by Commission Regulation Section 10601(e)(3), to the installation of “new protective works” with a horizontal projection not exceeding 10,000 square feet, as defined by Commission Regulation Section 10601(a)(2), and repairing a section of cable damaged by a dragged anchor involves the routine repairs, reconstruction, replacement and removal of a structure in the Bay that does not involve an enlargement or change in use, as defined by Commission Regulation Section 10601(a)(6) and, thus, is a “minor repair or improvement” for which, the Commission’s Executive Director issued an amendment to a major permit pursuant to Regulation Section 10822.

2. **Amendment No. Three.** When the HVDC cable authorized by the Original Permit was placed, it was expected that there would be no maintenance necessary on the cable. While the permittee reports that the cable seems to be in good condition and does not require repair, there has been sediment scour that has occurred along portions of the cable. The scour has exposed once buried sections of the cable to risk of damage from anchor strikes and could create stress on sections that are not supported by sediment. The permittee requested an amendment to the amended permit to allow for a five-year cable maintenance program to stabilize the cable through reburial of the cable in exposed areas and/or the place up to 290 cubic yards of concrete mattresses and rock bags covering approximately 4,000 square feet (0.10 acres) of the Bay floor to protect sections that cannot be reburied.

The Commission may allow fill only when it meets the fill requirements identified in Section 66605 of the McAteer-Petris Act, which states, in part: (a) the public benefits from fill must clearly exceed the public detriment from the loss of water areas, and fill should be limited to water-oriented uses; (b) no alternative upland location exists for the fill; (c) the fill should be the minimum amount necessary; (d) the fill should minimize harmful effects to the Bay including fish and wildlife resources, marsh fertility, and water quality; (e) the fill should be constructed in accordance with sound safety standards; and (f) the fill should be authorized when the applicant has valid title to the affected property.

- a. **Public Benefits vs. Public Detriment.** The fill placed as part of this amended permit would be placed to cover and protect the HVDC cable that transmits and supplies approximately 40 percent of the power to the City and County of San Francisco. If concrete mattresses were not placed around the cable, this could expose the cable to damage and result in loss of power to portions of San Francisco and may require additional fill and time to repair the damaged cable. The public benefit of stabilizing the cable outweighs the public detriments from the temporary disturbance of benthic habitats and potential change in approximately 4,000 square feet (0.10 acres) of benthic habitat from soft-bottom substrate to hard structures. Additionally, the fill is necessary to protect the underwater utility cable, which is a water-oriented use.
- b. **Alternative Upland Location.** The HVDC cable is already laid along the Bay floor and there is no alternative upland location for the fill associated with this amended permit to stabilize portions of the cable that are exposed on the Bay floor.
- c. **Minimum Fill Necessary.** The permittee identified about four locations where sidescan surveys identified that the cable was exposed or not supported. In some areas reburial of the cable using water jetting methods previously approved in the prior amendment could rebury the cable and not require that additional fill be placed. However, in some areas where the cable has been

exposed as a result of strong currents or moving sediment, the permittee has requested to place concrete articulated mattresses and rock backs to protect the cable. Over the 5-year maintenance program, the permittee anticipates there may be other locations where reburial or protection with concrete mattresses could be necessary. The permittee anticipates that no more than 290 cubic yards of solid fill over approximately 4,000 square feet of the Bay floor would be required to cover and protect exposed portions of the cable.

Each individual mattress is composed of concrete blocks connected with high-tensile, polypropylene fiber rope. Each mattress measures about 8 feet by 20 feet and is about 9 inches tall for a total fill volume of approximately 2.86 cubic yards per mattress. The permittee anticipates up to about 80 cubic yards of concrete mattresses would be necessary. Additionally, in some areas where sediment has eroded and caused scour around and below the cable, rock bags may be necessary to backfill under the cable to support for the cable and concrete mattresses. Approximately three rock bags would be used in each location to stabilize the cable. The permittee anticipates no more than 210 cubic yards of rock bags being placed in the Bay. The total 290 cubic yards of fill would cover approximately 4,000 square feet (0.10 acres) of the Bay floor and occur over approximately 1,920 linear feet of the cable, which amounts to about 0.7% of the cable.

The fill added as part of this amendment was not originally envisioned as part of the original project and was not included in the project or the EIR for the project. The cumulative impacts of the fill to have not been fully evaluated. It may be necessary to do such an analysis the next time that there is a request for reauthorization of the 5-year maintenance program and if additional fill is proposed to be placed. However, to offset permanent bathymetric changes and water volume displacement from the placing of additional fill in the Bay, the permittee is required to provide mitigation to offset the volume of fill added to the Bay floor.

The Commission's San Francisco Bay Plan (Bay Plan) Mitigation Policy 1 states that, "[p]rojects should be designed to avoid adverse environmental impacts to Bay natural resources such as to water surface area, volume, or circulation and to plants, fish, other aquatic organisms and wildlife habitat, subtidal areas, or tidal marshes or tidal flats. Whenever adverse impacts cannot be avoided, they should be minimized to the greatest extent practicable. Finally, measures to compensate for unavoidable adverse impacts to the natural resources of the Bay should be required. Mitigation is not a substitute for meeting the other requirements of the McAteer-Petris Act." The Commission's Mitigation Policies state that when considering compensatory mitigation, a mitigation plan should

be prepared, and fee-based mitigation should only be allowed when other compensatory mitigation measures are infeasible.

Mitigation Policy 12 states in part, “[f]ee-based mitigation agreements should include: (a) identification of a specific project that the fees will be used for within a specified time frame; (b) provisions for accurate tracking of the use of funds; (c) assignment of responsibility for the ecological success of the mitigation project; (d) determination of fair and adequate fee rates that account for all financial aspects of the mitigation project, including costs of securing sites, construction costs, maintenance costs, and administrative costs; (e) compensation for time lags between the adverse impact and the mitigation; and (f) provisions for long-term maintenance, management and protection of the mitigation site.” Additionally, these policies state that mitigation should be provided prior to or concurrently with those portions of the project causing the adverse impacts.

The permittee provided a Mitigation Plan dated January 30, 2020, that was acceptable to the Commission staff. In this plan, the permittee evaluated various mitigation alternatives including removing marine debris or fill to restore subtidal soft-bottom or sandy habitats near the project site or other areas of the Bay, but concluded this was not feasible because these activities would need to be permitted by all agencies that had already issued approvals for the maintenance program and that these activities could also involve additional habitat impacts. The permittee also noted that the costs for performing such mitigation work were significant and may be out of proportion with the project impacts from the new fill required for the maintenance program. However, the permittee determined that it would be feasible to provide funding for a project already proposing to remove fill from the Bay.

In the Mitigation Plan, the permittee proposed to contribute funding to the California State Coastal Conservancy for the Richmond Terminal 4 Warehouse, Wharf, and Pile Removal project. The permittee proposed two methods for calculating the amount of mitigation that was reasonable for the project. The permittee based these calculations upon the amount of mitigation required by the Commission for the Mission Bay Ferry Terminal (BCDC Permit No. 2017.008.00), which used an approximately 1:1 mitigation ratio for calculating mitigation for placing a concrete mattress cap over an area that was dredged to deepen a portion of the San Francisco Waterfront for ferry access and transit.

The first method was based upon an estimated mitigation amount required for temporary impacts from new dredging over a certain acreage and multiplying this value by the acreage for the maintenance work authorized here. This estimate came out to \$1,392. The second method used the estimated construction cost for the Mission Bay Ferry Terminal to remove an equivalent volume of fill from Piers 64-66 in San Francisco to mitigate for placing concrete mattresses and divided this cost by the square footage of the mattress to get a cost per square foot, which was estimated to be about \$5 per square foot. The permittee then used this value and multiplied it by the estimate 4,356 square feet of impacts from the potential fill associated with the maintenance program to get an estimate of \$21,780 in mitigation funds.

This Commission staff agreed with the second method of calculating the mitigation required and approved the Mitigation Plan. Special Condition II.D.7 requires the permittee to contribute funds to California State Coastal Conservancy prior to placing any fill approved as part of this project. Additionally, the Commission staff agreed that the permittee is allowed to carry over mitigation credit for fill up to the square footage (4,000 square feet) in the approved maintenance program that is unused in this permit amendment and apply the mitigation towards future fill placement for maintenance actions under a subsequent permit amendment.

The California State Coastal Conservancy agreed via email on June 16, 2020, to accept the mitigation funds from the Trans Bay Cable maintenance program. The permittee is required by Special Condition II.D.7 to provide \$21,780 to the Coastal Trust Fund managed by the California State Coastal Conservancy and provide proof that they have contributed the funds to the California Coastal Conservancy prior to placing any fill authorized in this permit. These funds will support pilings and other fill removal at Terminal 4 in Richmond to improve the overall health of the Bay and subtidal habitat, which is consistent with the San Francisco Subtidal Habitat Goals Project.

- d. **Impacts to Fish, Other Aquatic Organisms and Wildlife and Water Quality.** The Bay contains many native and protected species in the areas where maintenance would occur along the 52-mile-long submarine transmission cable. The maintenance program to protect the cable involves the reburial of portions of the cable and placing some fill to support and cover the cable over a five-year period. The water jetting techniques used to rebury the cable have the potential to increase turbidity around the cable as the jet creates a 3- to 6-foot-deep trench for the cable to be placed. The total length of water jetting and reburial is anticipated to be about 16,410 linear feet (1.13 acres) of the cable or 6% of the

cable. As required in Special Condition II.D.3, the permittee is required to conduct all work in Central San Francisco Bay and San Pablo Bay within the environmental work windows to protect winter-run Chinook salmon, spring-run Chinook salmon, steelhead, green sturgeon, and Delta smelt.

The Commission's Fish, Other Aquatic Organisms and Wildlife policies require that the Commission consult with the NMFS, USFWS, and CDFW and consider the recommendations of these agencies. Special Condition II.D.4 requires the permittee to comply with the NMFS Letter of Concurrence dated June 22, 2018, and the USFWS Letter of Concurrence dated May 22, 2013. NMFS evaluated the project and issued a Letter of Concurrence dated June 22, 2018, that concluded the project is not likely to adversely affect special status species or critical habitat in the project area and that any potential effects would be discountable for listed salmonids and insignificant for green sturgeon. NMFS also determined that the project would adversely impact essential fish habitat as a result of disturbance to benthic habitat and conversion of soft bottom habitat to hardscape, but that these impacts would be minor based on the small areas affected. NMFS did not provide any additional conservation recommendations related to essential fish habitat beyond measures already included in the project to minimize, avoid, mitigate, and offset adverse effects. USFWS provided an email regarding this project that indicated that the USFWS consultation (08FBTD00-2013-I-0024) for Delta smelt still applied to this project and no further reinitiation of the consultation was necessary for activities covered in Amendment No. Three. CDFW did not issue an incidental take permit for this project. The permittee discussed potential take of fish species with CDFW staff and determined that with placement of the fish screens on the intakes for all water jetting equipment as required in Special Condition II.D.2, the potential for entrainment during water jetting activities was fairly low. Monitoring of the fish screens is also required during the first year of maintenance work to provide evidence of the effectiveness of the fish screens or identify if entrainment is occurring.

On July 10, 2019, the Water Board issued a 5-year Water Quality Certification (WQC) for the maintenance work. The equipment used for the work authorized in this amendment is the same as the equipment used for prior amendments and has the potential to have similar temporary, localized increases in turbidity that are anticipated to dissipate relatively quickly with tidal circulation and that would be at concentrations less than the thresholds that cause behavioral or physical impacts to fish species. The Water Board determined that implementation of the minimization measures, such as using maintenance methods that require the minimum amount of fill to be placed, slowly lowering

any fill into place to reduce sediment disturbance, perform water jetting at low pressure, fueling all equipment offsite, inspecting equipment daily for leaks or spills, and other required best management practices in the WQC would control pollution sources from impacting water quality in the Bay. Special Condition II.D.5 requires the permittee to comply with the requirements of the Water Board's WQC during maintenance activities.

- e. **Sound Safety Standards.** Much of the proposed fill will be placed over soft Bay mud in areas where the cable has been exposed. At the time of issuing this amended permit, the permittee did not know all potential locations where fill would need to be placed along the cable during the five-year maintenance program for the Commission staff to fully evaluate placing fill in these locations. To ensure that the work at any one location during the maintenance complies with the requirements of this permit and would not impact Bay resources beyond the impacts analyzed herein and beyond the required mitigation, the permittee is required in Special Condition II.D.6 to submit a pre-maintenance report to the Commission for review and approval. To ensure the fill placed on the cable is staying in place, the permittee shall submit the annual monitoring surveys conducted over the portions of the cable where fill is placed as required in Special Condition II.D.6 with the post-maintenance report.
- f. **Valid Title.** The permittee has separate lease agreements with the City of San Rafael, the California State Lands Commission, and the City and County of San Francisco. Each of these leases covers a period of at least 25 years and allows for maintenance activities or requires that notification be given to the lessors regarding maintenance activities. As mentioned in the original permit, the permittee has valid title until December 14, 2031, and is required by the original permit to submit any renewals when they are received and to request reauthorization at that time for continued use of the cable beyond December 14, 2031.

As conditioned, the project authorized by Amendment No. Three is consistent with the McAteer-Petris Act and the San Francisco Bay Plan. Additionally, as described in Findings Section III.C above, the Suisun Marsh Protection Act authorizes the Commission to issue a marsh development permit for any development, including the placing of solid fill in and under the water, if the Commission finds that the proposed development is consistent with the provisions of the Act and the policies of the Suisun Marsh Protection Plan. The staff finds on behalf of the Commission that the proposed fill and reburial activities to protect the cable, as conditioned, are consistent with the Marsh Plan policies on the environment, water quality and supply, and utilities, facilities and infrastructure.

The work authorized by Amendment No. Three involves the placement of fill (additional concrete mattresses and rock bags) over an area less than 10,000 square feet and reburial of the cable to protect and maintain the cable. The project is consistent with Commission Regulation Section 10601(e)(3) as similar to Regulation Section 10601(a)(2) and 10601(a)(6), and thus is a “minor repair or improvement” for which the Commission’s Executive Director may issue a non-material amendment to a major permit pursuant to Regulation Section 10822 (Amendment No. Three).

3. **Amendment No. Four.** In 2024, an inspection of the cable found several lengths exposed due to erosion and thus at risk of damage. The inspection further found that this length of cable in East San Pablo Bay was at high tension and did not have the “slack” necessary for reburial. Given the observed decrease in sediment cover and priority need for additional protection to the cable, the permittee submitted a request to repair these two sections by installing concrete mattresses and polyurethane protective covering to the cable.

In East San Pablo Bay, the permittee will place approximately 300 linear feet of polyurethane covering and 0.4 acres (up to 2,200 cubic yards) of concrete mattresses along a 3,000-foot-long segment of cable (between kilometer point [KP] 38.0 and KP 38.9). A portion of the mattresses (approximately 0.1 acre over a distance of 700 linear feet) may be placed on top of existing mattresses installed in 2024 to provide additional depth of coverage. The water depth at this maintenance location is approximately 60 to 70 feet. A portion of the cable alignment in this area lies within the federal navigation channel, however, the cable and mattresses are at a depth 15 feet below the required 38-foot design depth of the navigation channel. The cable would therefore not interfere with the operation and maintenance of the federal channel.

In the Carquinez Strait, north of Martinez, the permittee will install approximately 1,000 linear feet of polyurethane covering and place 0.1 acres (up to 500 cubic yards) of concrete mattresses along a 1,000-foot-long segment of cable (between KP 22.8 and KP 23.2). Water depths at this maintenance location in the Carquinez Strait are between 30 and 50 feet and are not within the federal navigation channel.

The cables at both sites will be enclosed by a polyurethane protective covering (“Uraduct,” or similar) less than-one-inch-thick sleeve that stiffens and protects the system from external impacts. Installation of this covering will be conducted by divers in 2-meter segments. The protective mattresses are made of blocks of concrete connected with high-tensile polypropylene fiber rope, and are either 8 feet by 20 feet and 9 inches thick (with a volume of 2.86 cubic yards) or, depending on site conditions, 11 feet by 20 feet and 1 foot thick (with a volume of approximately 5 cubic yards). The concrete mattresses would be installed from a barge and positioned by divers.

The work authorized under Amendment No. Four would be conducted in a single season, during a planned outage of the cable from June 1, 2026, through August 31, 2026. If the work has not been completed during this outage period, mattress placement would continue through November 30 during the remainder of the 2026 in-water work window, or during the 2027 in-water work windows (June 1 through November 30).

Authorized Fill. The project involves the placement of approximately 2,700 cubic yards of new fill over approximately 0.5 acres of subtidal Bay (with approximately 0.1 acres in the San Pablo Bay placed on top of existing mattresses installed in 2024). The purpose of the fill is to provide protective covering to exposed sections of the existing submarine electric cable that were originally buried underneath the Bay floor.

- a. **Public Benefit vs Public Detriments.** Although the original authorization for the placement of the Trans Bay cable in 2009 did not foresee continued, required maintenance, observed erosion and exposure puts the cable at risk of damage. The public benefit of stabilizing the cable (which supplies 40% of the power to San Francisco) are therefore weighed against the public detriments from the permanent disturbance of benthic habitats and potential change in approximately 0.40 acres of benthic habitat from soft-bottom substrate to hard structures. As the permittee is required to compensate for the unavoidable adverse environmental impacts of the proposed fill by purchasing estuarine credits at a 1:1 ratio, per Special Condition II.D.7, the public benefits of the proposed Bay fill are found to outweigh the public detriments.
- b. **Water-oriented Use and Alternative Upland Location.** The purpose of the fill is to cover exposed sections of the existing submarine cable to ensure its integrity and to avoid adverse impacts that could result from damage to the cable, permitted under the original authorization as a water-oriented use pursuant to the Bay Plan's Other Uses of the Bay and Shoreline Policy No. 5 ("[h]igh voltage transmission lines should be placed in the Bay only where there is no reasonable alternative"), and consistent with Section 66605 of the McAteer-Petris Act (see Findings Section III.B.2 above).

The HVDC cable is already placed along the Bay floor, described above in the original permit authorization, and there is no alternative upland location for the fill associated with this amended permit to stabilize portions of the cable that are exposed on the Bay floor.

- c. **Minimum Amount of Fill Necessary.** In total, approximately 2,700 cubic yards of new fill will be placed over an approximately 0.5-acre area (21,780 square feet) of Bay floor. Although this permit states that "[r]eburying is the preferred method to

cover and protect the cable and fill will only be placed in areas where reburial is not feasible” (Findings Section III.B.4, language added in Amendment No. Three), the segments of cable identified as being exposed due to erosive forces were found to be under high tension such that reburial was not feasible. Therefore, to protect the approximately 4,000 linear feet of cable identified as being at risk, installation of protective covering and placement of concrete mattresses were proposed as a feasible alternative, a method previously used and approved under the original authorization, Amendment No. One, and Amendment No. Three of this permit.

As described in the previous Amendment No. Three Findings, maintenance of the cable was not anticipated as being necessary in the original project, and subsequent maintenance work, including through this amendment, has been the result of unanticipated erosive forces exposing segments of the cable. In contrast to the prior amendment’s multi-year maintenance program, the authorized fill for Amendment No. Four is expected to be placed in a single season to discrete lengths of cable identified as being in particular risk of damage due to exposure. Given the two after-the-fact amendments for repairs and two amendments (to-date) for further protective maintenance, any further requests for amendments authorizing new fill should be expected to include both an assessment of cumulative impacts and a long-term maintenance plan to account for continued erosion and that evaluates maintenance options without fill.

To offset the permanent bathymetric and benthic substrate changes and water volume displacement from the placement of additional fill in the Bay, the permittee is required to provide mitigation to offset the volume of fill added to the Bay floor, in accordance with Bay Plan Mitigation Policy 1. Potential mitigation measures assessed included the removal of derelict vessels or the use of potentially ecologically-beneficial concrete material, however, these options were found to be infeasible due to the amount of fill removal not amounting to a volume to offset at a sufficient ration, and the potential ecological benefits being uncertain and incomplete in impact mitigation, respectively. Therefore, a fee-based mitigation option was agreed upon by the permittee, BCDC, and the San Francisco Regional Water Quality Control Board. This plan was formalized in a letter prepared by AECOM and dated February 12, 2026 (“Trans Bay Cable 2026 Maintenance Project Mitigation Plan”), in which the permittee committed to purchase 0.5 Estuarine Wetland Mitigation Advance Credits from the San Francisco Bay In-Lieu Fee Program, representing mitigation at a 1:1 ratio. The availability of these 0.50 credits, at a price of \$764,507.00, was confirmed by a letter from Ducks Unlimited, dated February 3, 2026. Upon completion of the credit purchase, the permittee will provide documentation to BCDC that the transaction is complete.

d. Public Access

The Commission finds that the project, as conditioned, is consistent with the McAteer-Petris Act, and Bay Plan policies related to public access for the following reasons:

Applicable Policies

Section 66602 of the McAteer-Petris Act states, in part, that *“maximum feasible public access, consistent with a proposed project, should be provided.”*

Bay Plan policies on Public Access state, in part, that *“[a] proposed fill project should increase public access to the Bay to the maximum extent feasible”* (Policy No. 1), and *“maximum feasible access to and along the waterfront and on any permitted fills should be provided in and through every new development in the Bay or on the shoreline”* (Policy No. 2).

Public access improvements are not required as a condition of this permit. Though the project involves significant quantities of new Bay fill, that fill comprises repairs to an existing submarine electric cable, and is not a new development. Additionally, the project does not increase use of the permitted cable, change its use, or impact existing or future Bay public access. Further, given the location and scope of the project activities, it will not generate any new or increased demand for public access. Therefore, public access is not required as a condition of the project.

e. Effects on Bay Resources

Section 66605(d) of the McAteer-Petris Act states, in part, *“[t]hat the nature, location, and extent of any fill should be such that it will minimize harmful effects to the Bay Area, such as, the reduction or impairment of the volume surface area or circulation of water, water quality, fertility of marshes or fish or wildlife resources, or other conditions impacting the environment, as defined in Section 21060.5 of the Public Resources Code.”*

Applicable Subtidal Areas Policies

Bay Plan Subtidal Areas policies state, in part:

“Any proposed filling or dredging project in a subtidal area should be thoroughly evaluated to determine the local and Bay-wide effects of the project on: (a) the possible introduction or spread of invasive species; (b) tidal hydrology and sediment movement; (c) fish, other aquatic organisms and wildlife; (d) aquatic plants; and (e) the Bay's bathymetry. Projects in subtidal areas should be designed to minimize and, if feasible, avoid any harmful effects” (Policy No. 1).

“Subtidal areas that are scarce in the Bay or have an abundance and diversity of fish, other aquatic organisms and wildlife (e.g., eelgrass beds, sandy deep water or underwater pinnacles) should be conserved. Filling, changes in use, and dredging projects in these areas should therefore be allowed only if: (a) there is no feasible alternative; and (b) the project provides substantial public benefits” (Policy No. 2).

Applicable Fish, Other Aquatic Organisms and Wildlife Policies

Bay Plan Fish, Other Aquatic Organisms and Wildlife policies state, in part:

“To assure the benefits of fish, other aquatic organisms and wildlife for future generations, to the greatest extent feasible, the Bay's tidal marshes, tidal flats, and subtidal habitat should be conserved, restored and increased” (Policy No. 1).

“The Commission should: (a) Consult with the California Department of Fish and Wildlife, and the U.S. Fish and Wildlife Service or the National Marine Fisheries Service, whenever a proposed project may adversely affect an endangered or threatened plant, fish, other aquatic organism or wildlife species; (b) Not authorize projects that would result in the "taking" of any plant, fish, other aquatic organism or wildlife species listed as endangered or threatened pursuant to the state or federal Endangered Species Acts, or the federal Marine Mammal Protection Act, or species that are candidates for listing under these acts, unless the project applicant has obtained the appropriate "take" authorization from the U.S. Fish and Wildlife Service, National Marine Fisheries Service or the California Department of Fish and Wildlife; and (c) Give appropriate consideration to the recommendations of the California Department of Fish and Wildlife, the National Marine Fisheries Service or the U.S. Fish and Wildlife Service in order to avoid possible adverse effects of a proposed project on fish, other aquatic organisms and wildlife habitat” (Policy No. 4).

The Bay contains many native and protected species in the areas where maintenance would occur, including the green sturgeon, Chinook salmon, steelhead, delta smelt, and longfin smelt. A biological assessment was prepared by AECOM for NMFS and USFWS in August 2025 to assess the potential impacts of the project on those listed species. This biological assessment found that the proposed maintenance activities may affect, but are not likely to adversely affect, the survival and recovery of listed fish species with potential to occur in the work areas, and may affect, but is not likely to adversely modify proposed and designated critical habitat.

At an Army Corps San Francisco District interagency meeting held on May 8, 2025, a representative from CDFW indicated that the proposed maintenance activities would not expect to result in take of state-listed fish species. The project was additionally provided with a provisional notification from the Army Corps, dated

November 4, 2025, that the project activities may be authorized under Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act—an expedited process per Executive Order 14156: Declaring a National Energy Emergency. NMFS and USFWS therefore did not provide updated ESA consultations for the project, beyond those issued previously by NMFS in 2017 for Amendment No. Three, and by USFWS in 2013 for the original project (USFWS did reinstate consultation for Amendment No. Three as the changes were determined to not result in new or additional effects).

In that prior consultation (for work activities similar to those authorized under Amendment No. Four), NMFS had determined the project would adversely impact essential fish habitat as a result of disturbance to benthic habitat and conversion of soft bottom habitat to hardscape, but that these impacts would be minor based on the small area affected. NMFS did not provide any additional conservation recommendations related to essential fish habitat beyond measures already included in the project to minimize, avoid, mitigate, and offset adverse effects. Therefore, no additional measures are included in this amendment beyond those already existing in this permit, including Special Condition II.D.3, requiring the permittee to conduct all work within the environmental work windows to protect winter-run Chinook salmon, spring-run Chinook salmon, steelhead, green sturgeon, and delta smelt.

On May 11, 2026, the San Francisco Regional Water Quality Control Board issued a WQC for the maintenance work. Special Condition II.D.5.b requires the permittee to adhere to all measures included within that document, including those concerning debris and waste management.

The addition of 0.4 acres of concrete mattresses over previously unprotected areas of cable will result in a change in benthic environment from a soft substrate dominated by Bay sand and Bay mud to a hardened one. The Biological Assessment determined that although the composition of benthic species that may recolonize the new substrate may be altered, the concrete mattresses may become buried over time with soft material, and the benthic community may return to a composition more like the pre-existing conditions. The requirement for compensatory mitigation at a 1:1 ratio, per Special Condition II.D.7, is included to offset this impact.

The addition of the authorized new fill is not expected to significantly alter the physical habitat or hydrodynamic regimes of East San Pablo Bay, Carquinez Strait, or other surrounding areas. However, Special Condition II.D.6 requires the permittee to submit annual bathymetric survey monitoring results for any sections of the cable where fill is placed for a minimum of three years following the fill placement in that area.

E. Engineering Criteria Review Board and the Design Review Board

The Commission's Engineering Criteria Review Board and the Design Review Board did not review the originally-permitted submarine cable project because, respectively, it did not raise issue regarding seismic or flooding issues, or public access or view issues.

F. Compliance with the California Environmental Act/CEQA Findings

On November 6, 2006, the Pittsburg City Council ("Pittsburg") certified an environmental impact report (EIR) for the original project and adopted CEQA findings as part of associated project approvals [Resolution No. 06-10661]. According to the permittee, the EIR also covered work authorized in Amendment No. One of the permit. After certification, the City of Pittsburg issued an Addendum to describe project changes due to the availability of new converter station technology. Because the changes would decrease the footprint and the height of the converter station and lead to further reductions in the projects already less-than-significant impacts to visual quality, noise and construction-related air quality, the City found that it was not necessary to prepare any supplemental or subsequent environmental review for the project.

The City of Pittsburg also adopted CEQA findings ("findings"), including the adoption of mitigation measures that address environmental topics pertaining to activities subject to the BCDC permit. Those include: air quality, water resources and quality, cultural resources, land use and recreation and marine transportation. In the City of Pittsburg adopted mitigation measures addressing these topics, implemented through the associated and approved mitigation monitoring program, and found that with these mitigation measures the project would avoid or substantially lessen each potentially significant effect as identified in the EIR.

In addition, the Commission has also adopted and incorporated into the Commission amended permit special conditions that would reduce to a level of insignificance all possible substantial adverse environmental impacts associated with the portions of the project that will be located within the Commission's jurisdiction, including impacts related to vessel navigation, water quality, and Bay resources. For these reasons, the Commission finds the project, as conditioned, will avoid all significant adverse environmental impacts. With respect to other significant impacts identified in the EIR, the changes or alternations necessary to avoid or substantially lessen the impacts have been adopted by the City of Pittsburg. Therefore, the Commission finds that the project as conditioned is consistent with the requirements of CEQA.

The City's findings also address project alternatives, including reasons for approving the HWC (Mitigated) Site for the project, and rejecting other project alternatives. The Commission concurs with the selection of the HWC (Mitigated) Site and rejection of the other sites for the reasons set forth in the City's findings.

Pursuant to Commission Regulation Section 11501 and Title 14 California Code of Regulations Section 15301, the project authorized in Amendment No. Two of this permit is categorically exempt from CEQA requirement to prepare an environmental impact

report. In addition, pursuant to Commission Regulation Section 10601, the project is defined as a “minor repair or improvement” for which an administrative amendment can be issued—typical for projects defined as categorically exempt. Therefore, the Executive Director finds the project authorized in Amendment No. Two to be categorically exempt.

The City of Pittsburg determined that the activities authorized in Amendment No. Three and Four are categorically exempt from the provisions of CEQA pursuant to Section 1530 (f) (Class 1 – Existing Facilities) and submitted a Notice of Exemption to the State Office of Planning and Research on March 27, 2018 (Amendment No. Three and Four).

G. Conclusion

For all the above reasons, the Commission finds, declares, and certifies that, subject to the Special Conditions stated herein, the project authorized herein is consistent with the San Francisco Bay Plan, the McAteer-Petris Act, Suisun Marsh Preservation Act, the Suisun Marsh Protection Plan, the California Environmental Quality Act, and the Commission’s amended management program for the San Francisco Bay segment of the California coastal zone.

IV. Standard Conditions

A. Permit Execution

This permit shall not take effect unless the permittees execute the original of this permit and return it to the Commission within ten days after the date of the issuance of the permit. No work shall be done until the acknowledgment is duly executed and returned to the Commission.

B. Notice of Completion

The attached Notice of Completion and Declaration of Compliance form shall be returned to the Commission within 30 days following completion of the work.

C. Permit Assignment

The rights, duties, and obligations contained in this permit are assignable. When the permittees transfer any interest in any property either on which the activity is authorized to occur or which is necessary to achieve full compliance of one or more conditions to this permit, the permittees/transferrors and the transferees shall execute and submit to the Commission a permit assignment form acceptable to the Executive Director. An assignment shall not be effective until the assignees execute and the Executive Director receives an acknowledgment that the assignees have read and understand the permit and agree to be bound by the terms and conditions of the permit, and the assignees are accepted by the Executive Director as being reasonably capable of complying with the terms and conditions of the permit.

D. Permit Runs with the Land

Unless otherwise provided in this permit, the terms and conditions of this permit shall bind all future owners and future possessors of any legal interest in the land and shall run with the land.

E. Other Government Approvals

All required permissions from governmental bodies must be obtained before the commencement of work; these bodies include, but are not limited to, the U. S. Army Corps of Engineers, the State Lands Commission, the Regional Water Quality Control Board, and the city or county in which the work is to be performed, whenever any of these may be required. This permit does not relieve the permittees of any obligations imposed by State or Federal law, either statutory or otherwise.

F. Built Project must be Consistent with Application

Work must be performed in the precise manner and at the precise locations indicated in your application, as such may have been modified by the terms of the permit and any plans approved in writing by or on behalf of the Commission.

G. Life of Authorization

Unless otherwise provided in this permit, all the terms and conditions of this permit shall remain effective for so long as the permit remains in effect or for so long as any use or construction authorized by this permit exists, whichever is longer.

H. Commission Jurisdiction

Any area subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission under either the McAteer-Petris Act or the Suisun Marsh Preservation Act at the time the permit is granted or thereafter shall remain subject to that jurisdiction notwithstanding the placement of any fill or the implementation of any substantial change in use authorized by this permit. Any area not subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission that becomes, as a result of any work or project authorized in this permit, subject to tidal action shall become subject to the Commission's "bay" jurisdiction.

I. Changes to the Commission's Jurisdiction as a Result of Natural Processes

This permit reflects the location of the shoreline of San Francisco Bay when the permit was issued. Over time, erosion, avulsion, accretion, subsidence, relative sea level change, and other factors may change the location of the shoreline, which may, in turn, change the extent of the Commission's regulatory jurisdiction. Therefore, the issuance of this permit does not guarantee that the Commission's jurisdiction will not change in the future.

J. Violation of Permit May Lead to Permit Revocation

Except as otherwise noted, violation of any of the terms of this permit shall be grounds for revocation of the permit. The Commission may revoke the permit for such violation after a public hearing held on reasonable notice to the permittees or their assignees if the permit has been effectively assigned. If the permit is revoked, the Commission may determine, if it deems appropriate, that all or part of any fill or structure placed pursuant to this permit shall be removed by the permittees or their assignees if the permit has been assigned.

K. Should Permit Conditions be Found to be Illegal or Unenforceable

Unless the Commission directs otherwise, this permit shall become null and void if any term, standard condition, or special condition of this permit shall be found illegal or unenforceable through the application of statute, administrative ruling, or court determination. If this permit becomes null and void, any fill or structures placed in reliance on this permit shall be subject to removal by the permittees or their assignees if the permit has been assigned to the extent that the Commission determines that such removal is appropriate. Any uses authorized shall be terminated to the extent that the Commission determines that such uses should be terminated.

L. Permission to Conduct Site Visit

The permittees shall grant permission to any member of the Commission's staff to conduct a site visit at the subject property during and after construction to verify that the project is being and has been constructed in compliance with the authorization and conditions contained herein. Site visits may occur during business hours without prior notice and after business hours with 24-hour notice.

M. Abandonment

If, at any time, the Commission determines that the improvements in the Bay authorized herein have been abandoned for a period of two years or more, or have deteriorated to the point that public health, safety or welfare is adversely affected, the Commission may require that the improvements be removed by the permittees, their assignees or successors in interest, or by the owner of the improvements, within 60 days or such other reasonable time as the Commission may direct.

N. Best Management Practices

1. Debris Removal

All construction debris shall be removed to an authorized location outside the jurisdiction of the Commission. In the event that any such material is placed in any area within the Commission's jurisdiction, the permittees, their assignees, or successors in interest, or the owner of the improvements, shall remove such

material, at their expense, within ten days after they have been notified by the Executive Director of such placement.

2. Construction Operations

All construction operations shall be performed to prevent construction materials from falling, washing or blowing into the Bay. In the event that such material escapes or is placed in an area subject to tidal action of the Bay, the permittees shall immediately retrieve and remove such material at their expense.

O. In-Kind Repairs and Maintenance

Any in-kind repair and maintenance work authorized herein shall not result in an enlargement of the authorized structural footprint and shall only involve construction materials approved for use in San Francisco Bay. Work shall occur during periods designated to avoid impacts to fish and wildlife. The permittees shall contact Commission staff to confirm current restricted periods for construction.