San Francisco Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600, San Francisco, California 94102 tel 415 352 3600 fax 415 352 3606

October 10, 2014

TO: Commissioners and Alternates

FROM: Lawrence J. Goldzband, Executive Director (415/352-3653; lgoldzband@bcdc.ca.gov)
Jaime Michaels, Coastal Program Analyst (415/352-3613; jaimem@bcdc.ca.gov)

SUBJECT: Staff Recommendation on BCDC Permit Application No. 2014.003.00, Transmission Cable in the City and County of San Francisco
(For Commission consideration on October 16, 2014)

Recommendation Summary

The staff recommends that the San Francisco Bay Conservation and Development Commission (BCDC) approve Pacific Gas and Electric Company's BCDC Permit Application No. 2014.003.00, which, as conditioned, will result in the following:

1. Installation, use, and in-kind maintenance of an approximately 2.5-mile-long transmission cable system made up of three individual lines totaling approximately 300 cubic yards of solid fill largely below the Bay floor within an approximately 19,000-square-foot area;

2. Installation, use, and in-kind maintenance of approximately 550 cubic yards of solid fill in the form of concrete "mattresses" needed to protect the transmission cable system where the substrate restricts burial, at an area totaling approximately 19,800 square feet;

3. Dredging 936 cubic yards (cy) of sediment to create directional drilling openings that allow the three transmission cable lines to enter/exit the open water, removal of approximately 2,900 cy of sandstone and 400 cy of associated sediment to facilitate cable installation, and disposal of excavated materials outside the Bay; and

4. Placement of 100-foot-long underground sections of the cable system at the northern and southern project boundaries and, over a 22-month period, use of an area for cable installation activities within the 100-foot shoreline band.

Staff Recommendation

The staff recommends that the Commission adopt the following resolution:

I. Authorization

A. Subject to the conditions stated below, the permittee, Pacific Gas and Electric Company (PG&E), is hereby granted permission to install, use, and maintain in-kind a transmission cable project located mainly in the Bay and partly within the 100-foot shoreline band by implementing the following activities:

In the Bay:

1. Install with hydroplow technology, use, and maintain in-kind approximately 2.5-mile-long sections of a transmission cable system comprised of three, six-inch-diameter lines, constituting a total of approximately 300 cubic yards of solid fill largely buried six to eight feet below the Bay floor within an approximately 19,000-square-foot area (0.44 acres);
2. Dredge approximately 936 cubic yards (cy) of sediment to create six, 200-square-foot, six-foot-deep holes at depths of -35 feet to -76 feet mean lower low water (MLLW) for the individual lines to enter/exit from the bores created by Horizontal Directional Drilling (HDD), and dispose the excavated material at the Port of Oakland's Berth 10 drying facility (authorized in Commission Permit No. M1992.014.00) or similar authorized upland facility;
3. Remove approximately 2,900 cy of sandstone rubble and dredge up to 400 cy of associated sediment along the cable alignment from areas totaling approximately 49,000 square feet, and dispose the excavated materials at an authorized upland location; and
4. Place, use, and maintain in-kind up to 550 cubic yards of concrete mattresses at an area measuring approximately 19,800 square feet (0.45-acre) over the transmission cable where substrate conditions restrict full burial of the cable.

Within the 100-foot shoreline band:

1. Install with HDD technology, use, and maintain in-kind a 200-foot-long (total) underground section of the transmission cable; and
2. Use a 4,000-square-foot area for transmission cable installation activities over a 22-month period.

B. This authority is generally pursuant to and limited by PG&E's application dated May 8, 2014, including all accompanying and subsequent correspondence and exhibits, but subject to the modifications required by conditions hereto.

C. Construction activities authorized herein must commence prior to November 1, 2015, or this permit will lapse and become null and void. All construction work authorized herein must be diligently pursued to completion within 22 months of project commencement, unless an extension of time is granted by amendment of the permit. Use and in-kind

maintenance of the cable and mattress system authorized herein is allowed through September 1, 2054—the expiration date of the license issued to the permittee by the Port of San Francisco—at which point this permit will lapse and become null and void, unless an extension of time is granted by amendment of the permit, which would be contingent, in part, on an extended license obtained by the permittee.

D. The project involves placing a transmission cable system constituting 300 cy of solid fill largely below the Bay floor and, thus, will result in a negligible change in Bay volume. In addition, the project will place up to 550 cubic yards of solid fill in the form of concrete mattresses to protect the transmission cable system where trenching and burial installation technique is restricted. The concrete mattresses will convert an area totaling 19,800 square feet from Bay mud, rock, and sand to a concrete surface expected to be covered with Bay sediment over time. Lastly, 2,900 cubic yards of sandstone and sedimentary rock rubble will be removed from an area totaling 49,000 square feet to facilitate cable installation. In light of the sandstone removal, the project will result in a net increase of approximately 2,350 cubic yards of Bay volume and the removal of rubble from a 49,000-square-foot area. On-going maintenance and repair of the facility will not result in additional fill volume or area of coverage.

Fill	**Volume (cy)**	**Area (sf)**
Transmission cable	+300 (buried)	N/A
Protective Mattress	+550	+19,800
Rock to be Removed	-2,900	-49,000
Net Increase in Exposed Bay (Floor)	+2,350	+29,200

II. Special Conditions

The 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. **Construction.** The project constructed pursuant to this permit shall generally conform with the plans provided in the application dated May 8, 2014 and all accompanying and subsequent correspondence and exhibits, including plans regarding the HDD alignment and sediment excavation prepared by Black & Veatch and dated June 18, June 23, and July 2, 2014. Final project plans shall be prepared and submitted for staff review and approval by or on behalf of the Commission, as described below. No substantive changes to the design of the project authorized herein shall be made without the prior review and written approval by or on behalf of the Commission.

2. **Plan Review**. No work authorized herein shall be commenced until final site plans for these activities, including in-kind maintenance work but excluding dredging and sediment excavation and work involving HDD technology, have

been submitted to, reviewed, and approved in writing by or on behalf of the Commission. 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 features authorized herein; (b) consistency of the plans with the terms and conditions of this permit; (c) assurance that any Bay fill does not exceed this authorization and any work in the 100-foot shoreline band does not permanently impact dedicated public access or Bay views; and (d) assurance that appropriate provisions have been incorporated for safety in case of a seismic event. All plans regarding the concrete mattresses authorized herein shall include property lines, locations of placement, and type and dimensions of material to be placed. Plan review shall be completed by or on behalf of the Commission within 30 days after receipt of such plans.

3. **Conformity with Final Approved Plans**. All work, improvements and uses approved and completed pursuant to this condition shall conform to the final approved plans. Prior to any use of the cable system authorized herein, the appropriate design professional(s) of record shall certify in writing that, through personal knowledge, the work covered by the authorization has been performed in accordance with the approved design criteria and in substantial conformance with the approved plans. No 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 authorization, the Special Condition shall prevail. The permittee is responsible for assuring that all plans accurately and fully reflect the special conditions of this authorization.

5. **Maintenance Work.** All maintenance activities to the facilities authorized herein shall constitute in-kind work only and shall not result in an expansion of the Bay volume or footprint of the project or fill authorized herein. In the event that any proposed maintenance work would result in an expansion of footprint and Bay fill volume authorized herein, PG&E shall seek and obtain authorization for such work from the Commission through an amendment to the subject permit.

B. **Seasonal Restrictions on In-Bay Construction Work.** All construction activities in the Bay authorized herein, including land-to-submarine HDD, operation of the hydroplow to install the transmission cable system, sandstone and sedimentary rock removal, concrete mattress placement, and maintenance, is restricted to the period of June 1 through November 30 of any calendar year to minimize disturbance to special-status species pursuant to the National Oceanic and Atmospheric Administration Fisheries

(NOAA Fisheries) Endangered Species Act (ESA) Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation Management Act Essential Fish Habitat Response for the project dated July 15, 2014. No work outside of this window may occur without prior approval of the Commission's Executive Director, provided that such approval is issued after: (1) additional consultation with NOAA Fisheries is complete and a waiver is issued to PG&E; (2) PG&E has provided evidence of such a waiver to the Executive Director at least fourteen working days prior to commencement of the subject work; and (3) the Executive Director determines that work outside of the window is consistent with the Commission's laws and policies in which case a written or verbal approval shall be granted to PG&E within that fourteen-day period.

C. **Fish Screen Use.** PG&E shall ensure that the hydroplow water intake is equipped with fish screens, as required by the California Department of Fish and Wildlife, to prevent entrainment and impingement of special-status species, including the North American green sturgeon.

D. **Water Quality Certification**. All construction activities in the Bay authorized herein, including land-to-submarine Horizontal Directional Drilling (HDD), operation of the hydroplow to install the transmission cable system, sandstone and sediment removal, and concrete mattress placement, shall comply with the requirements of the water quality certification dated August 29, 2014 issued by the California Regional Water Quality Control Board, San Francisco Bay Region, including, but not limited to: the implementation of Best Management Practices (BMP) to reduce erosion and sediment transport and control pollution sources; the preparation of a Storm Water Pollution Prevention Plan (SWPPP); and the incorporation of BMPs identified in the HDD Fluid Release Contingency Plan for the project (prepared by CH2M Hill dated February 2014) to monitor potential loss of HDD fluids, spill containment, and response measures.

E. **Sandstone Removal**. PG&E shall remove approximately 2,900 cubic yards of sandstone and sedimentary rock from areas in the Bay totaling 49,000 square feet (1.13 acres), which will offset the placement of up to 550 cubic yards of solid fill in the Bay over a 19,800-square-foot area (0.45 acres). The removed sandstone and sedimentary rock removal shall be disposed at an authorized upland location.

F. **Dredging/Sediment Excavation and Upland Disposal.**

1. **Pre- and Post-Activity Report and Notice.** At least twenty (20) days prior to removing 936 cy of sediment to create six HDD pits at depths of -35 feet to -76 MLLW and approximately 400 cy of sediment associated with removing the sandstone and sedimentary rock rubble, PG&E shall submit to the Commission's Executive Director: (a) a bathymetric map showing the location of all areas authorized to be dredged; (b) the authorized depth including over-dredge depth based on MLLW; (c) the volume of material to be dredged; and (d) the approximate date of project commencement.

Within thirty (30) days of completion of the dredging authorized herein, PG&E shall submit to the Commission's Executive Director: (a) a bathymetric map showing the actual areas and depths dredged including over-dredge depth based on MLLW; (b) a report about dredging occurring outside the area or below the depths authorized herein; and (c) a statement indicating the total volume of material dredged and disposal location(s).

2. **Authorization of Disposal.** All sediment excavated as authorized herein shall be disposed at an authorized upland site. All sediment placed at the Port of Oakland's Berth 10 facility within the Commission's jurisdiction shall be disposed in a manner consistent with the terms and conditions identified in BCDC Permit No. M1992.014.00.

3. **Work Window Limitations.** Except as provided below, all dredging activities shall be confined to the period of June 1 to November 30 to minimize disturbance to the following special status species:

Species of Concern	Work Window Period	Consulting Agency
Chinook salmon (*Oncorhynchus tshawytscha*)	June 1 to November 30	DFW, NMFS, and USFWS
Steelhead trout (*Oncorhynchus mykiss)*,	June 1 to November 30	DFW, NMFS, and USFWS
Pacific herring (Clupea pallasii)	March 1 to November 30	DFW

CDFW (California Department of Fish and Wildlife); NMFS (NOAA Fisheries), USFWS (U.S. Fish and Wildlife Service) This work window is consistent with Tables F-1 and F-2 of Appendix F, "In-Bay Disposal and Dredging" and Figures 3.2 and 3.3 of the *Long-Term Management Strategy (LTMS) Management Plan* (2001).

No work shall occur outside these windows without prior approval of the Commission's Executive Director and only after: (a) PG&E requests from the resource agencies that dredging be allowed outside the work window, and resource agency consultation and discussion has occurred; (b) the outcome of those consultations and discussions have been provided to Commission staff; and (c) the Executive Director determines and informs PG&E that dredging outside the work window will be consistent with the Commission's laws and policies.

G. **Vessel Traffic Safety.** Upon completion of the transmission cable system authorized herein, PG&E shall provide necessary information on project location to the U.S. Coast Guard and National Oceanic and Atmospheric Administration (NOAA) for vessel traffic notification advisories and maps, and implement an automatic identification system for the cable location to ensure safe vessel navigation in and around the project area.

H. **Abandonment**. PG&E, its assignees, successors in interest or owner of the cable system, including the concrete mattresses, authorized herein shall prepare and provide to the Commission the following assessment within one year of notification by the Commission after September 1, 2054 or earlier if: (a) the cable system authorized herein is no longer in use; (b) the Commission determines that the system has been abandoned for a period of over one year; or (c) the cable system has deteriorated to the point that public health, safety or welfare is adversely affected. Such an assessment shall include, at a minimum: (a) a description of the cable system's physical condition at the time of above-referenced Commission notification; (b) a description of the environment in the vicinity of the cable system and an analysis of the environmental effects—adverse and/or beneficial—of cable removal or abandonment in-place; (c) a description of alternatives for cable system removal and disposal, including an analysis of the relative benefits to the Bay of each approach; and (d) any recommendations or requirements from federal and state resource agencies and other regulatory bodies regarding facility removal or abandonment. Within 90 days of receipt and review of the assessment, the Commission may determine and inform PG&E, its assignees, successors in interest or owner of the cable system that the improvements authorized herein shall be removed within 180 days or such other reasonable time as the Commission may direct and, if necessary, authorize in an amended or new permit.

III. Findings and Declarations

This 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 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 is located entirely outside the boundaries of the Commission's *San Francisco Waterfront Special Area Plan.*

B. **Bay Fill.** The Commission may authorize fill when it meets the 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 area, including volume and circulation, water quality and fertility of fish and wildlife resources; (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 and Water-Oriented Use.** PG&E will install a single-circuit, 230kV transmission cable system comprised of three parallel lines and ancillary features, i.e., concrete mattresses, located between an existing and a proposed substation in the City and County of San Francisco. The transmission cable system will be approximately 3.5 miles long, including a 2.5-mile section comprised of three individual lines in the Bay. The project will provide

"a high likelihood of continued electric service to downtown San Francisco in the event of overlapping outages on both of two existing 230kV transmission cables that presently feed Embarcadero Substation." This substation, which is currently fed by two underground 230kV cables, is a "critical component" of the transmission system serving much of the downtown area, including Union Square, North Beach, Chinatown, Nob Hill, and South of Market. The project will provide a third power source into the Embarcadero Substation from the (proposed) Potrero Switchyard facility. The transmission cable system is designed to "continue operating following a reasonably foreseeable seismic event in the San Francisco area."

Section 66605 of the McAteer-Petris Act identifies water-oriented uses, including "water intake and discharge lines for desalinization plants and power generating plants." Although similar in nature to such utility lines, transmission cables and protective concrete mattresses are not specifically identified in Section 66605. However, the Commission's **Fills in Accord with the Bay Plan** policies state that approval of applications for "some fill", including "utility routes" is contingent, in part, on whether the proposal constitutes the minimum fill necessary and has no upland alternative. The Bay Plan **Other Uses of the Bay and Shoreline** Policy 5 states, in part, that "[h]igh voltage transmission cables should be placed in the Bay only where there is no reasonable alternative….[and, in that case] should avoid interfering with…wildlife, to the greatest extent possible."

In 2007, the Commission issued Permit No. 2006.005.00md to Transbay Cable, LLC, authorizing a 53-mile-long aquatic submarine transmission cable from Pittsburg to San Francisco with sections covered by a total of 20,000 square feet (0.46 acres) of concrete mattress material, which was defined as a "water-oriented use" and, hence, found consistent with Section 66605 of the McAteer-Petris Act.

The Commission finds that the project's public benefits outweigh its detriments and that the project serves a water-oriented use. As discussed below, the fill has no upland alternative and constitutes the minimum necessary to achieve the project purpose. The Commission finds that the project, as conditioned herein, is consistent with Section 66605(a) of the McAteer-Petris Act and also with Bay Plan policies regarding fills in accord with the Bay Plan and other uses of the Bay and shoreline.

2. **Upland Alternative.** PG&E analyzed potential upland routes for the transmission cable, including a 3.8-mile-long route located under City of San Francisco streets between the Embarcadero Substation and the Potrero Switchyard, and a 3.1-mile-long route located mostly on city streets except for a crossing under China Basin channel. The Mitigated Negative Declaration ("MND") (October 2013) for the project states that PG&E "concluded that the proposed project and [the 3.8-mile-long route] are feasible and are capable

of being implemented within the timeframe dictated by the area's electric needs; however, these alternatives differ according to reliability, environmental impacts, engineering feasibility, and cost." The MND further states that, when compared with potential alternative routes, the project will result in less disruption to residential and commercial activities at the street level, and will be considerably less susceptible to damage during a seismic event.

The Commission finds that no upland alternative exists for the project and, therefore, the activity is consistent with Section 66605(b) of the McAteer-Petris Act.

3. **Minimum Fill Necessary.** The transmission cable system will involve the placement of 300 cubic yards of solid fill for three individual lines installed by a hydroplow moving along the Bay floor. The hydroplow will "fluidize" and temporarily displace sediment to allow installation of the three cables approximately six to 10 feet below the bay bottom. As the plow moves, the three transmission lines will be installed in the fluidized sediment, after which sediment will resettle, burying the lines, and resulting in negligible changes to bathymetric conditions. During installation, a 19,000-square-foot area (0.44 acres) of the Bay floor will be temporarily disturbed. In this disturbed area, benthic organisms will be significantly disturbed.

   Approximately in the middle of the cable alignment, sandstone and sedimentary rock rubble would prevent hydroplow use unless the rubble is removed. Therefore, approximately 2,900 cubic yards of sandstone covering an area totaling 49,000 square feet (1.12 acres) will be removed.

   At the north end of the alignment within an area totaling 19,800 square feet (0.45 acres), compacted sediment restricts complete burial of the cable system. In this area, the cable will be placed and approximately 550 cubic yards of concrete mattresses will be laid above the cables to prevent displacement and damage.

   According to PG&E, the "fill associated with the submarine cables is the minimum necessary." A majority of the 300 cy placed for the cable will be buried under the Bay floor. The concrete mattresses are needed because underlying conditions restrict trenching and burial techniques and the cable must be protected. Because the project will also remove approximately 2,900 cubic yards of sandstone rubble from areas totaling 49,000 square feet, the project will result in a net increase of Bay volume of 2,350 cubic yards and the uncovering of approximately 49,000 square feet (0.44 acres) of Bay bottom.

   Special Condition II.E of this authorization requires PG&E to remove approximately 2,900 cubic yards of sandstone rubble at areas totaling 49,000 square feet to offset the fill associated with the concrete mattresses. In addition, Special Condition II.A requires that all maintenance activities authorized

herein be "in-kind" in nature and not result in an expansion or increase of authorized fill quantities without prior plan review and approval by or on behalf of the Commission.

The Commission finds that, based on the information provided by the permittee and as conditioned herein, the fill associated with the project is the minimum necessary to achieve the project purpose and, therefore, is consistent with Section 66605(c) of the McAteer-Petris Act.

4. **Minimizing Harmful Effects.** In addition to relevant provisions in the McAteer-Petris Act (Section 66605), the Bay Plan addresses minimizing effects of fill projects on Bay resources, as noted in the following policies.

   The Bay Plan **Subtidal Areas** Policy 1 states, in part, "proposed filling or dredging project[s] in a subtidal area should be thoroughly evaluated to determine the local and Bay-wide effects of the project on… fish, other aquatic organisms and wildlife," and tidal hydrology and sediment movement, and bathymetric conditions. Further, the policy states projects in such areas "should be designed to minimize and, if feasible, avoid any harmful effects."

   The Bay Plan **Fish, Other Aquatic Organisms, and Wildlife** Policy 4 states, in part, "[t]he Commission should: (a) consult with the California Department of Fish and [Wildlife] and…the National Marine Fisheries Service whenever a proposed project may adversely affect an endangered or threatened plant, fish, other aquatic organism or wildlife species;…and (c) give appropriate consideration to the recommendations of the California Department of Fish and [Wildlife], the National Marine Fisheries Service…to avoid possible adverse effects of a proposed project on fish, other aquatic organisms and wildlife habitat."

   The Bay Plan **Water Quality** Policy 2 states, in part: "[w]ater quality in all parts of the Bay should be maintained at a level that will support and promote the beneficial uses of the Bay as identified in the Regional Water Quality Control Board's [RWQCB] Basin Plan. The policies, recommendations, decisions, advice and authority of the State Water Resources Control Board and the Regional Water Quality Control Board, should be the basis for carrying out the Commission's water quality responsibilities."

   The Bay Plan **Mitigation** Policy 1 states, in part, "projects 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."

a. **Subtidal Areas.** Immediately offshore of the San Francisco waterfront at the northern and southern project areas, the transmission cable system will be installed using HDD technology and travel under and avoid entirely any overlying habitat and benthic organisms. Most of the Bay floor in the cable alignment corridor is composed of and, following installation, will remain, small-grained size, soft-bottom sediment (mud, clay, sand) hosting mainly benthic organisms. The cable system will be mostly buried and, thus, localized bathymetric conditions will essentially remain unchanged. At the mid-way point of the aquatic alignment, eleven discrete areas of sandstone and sedimentary rock rubble exists which, according to PG&E, do "not present a high habitat value for encrusting organisms as species like oysters do not effectively settle on sandstone."

   Following removal of the sandstone, the Bay floor at the affected locations will be composed of soft surface sediment hosting benthic organisms, the assumed natural condition of these areas. In the northernmost section of the cable's alignment in the Bay, compacted Bay floor sediment restricts complete burial of the cable system. In this area, the individual lines will be installed in shallow trenches and subsequently covered with protective concrete mattresses. Consequently, a hard-bottomed area will be created that is expected to be ultimately covered with sediment which is expected to provide some habitat and host organisms associated with such areas.

   According to PG&E, "[n]o intertidal areas, marsh, wetlands, eelgrass beds, oyster beds, or underwater pinnacles would be disturbed" by the project. Because of the technology used to install the cable system, because of the removal of sandstone rubble, and because of the relatively small size of the fill for the concrete protective mattresses, PG&E states that the project fill "would not affect the volume of Bay waters, Bay surface area, or circulation of Bay water."

b. **Fish, Other Aquatic Organisms, and Wildlife.** On July 15, 2014, the National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries) issued an Endangered Species Act (ESA) Section 7(a)(2) Concurrence Letter and Magnuson-Stevens Fishery Conservation Management Act Essential Fish Habitat Response regarding the project. The concurrence letter found that the project could have potential effects on the federally-threatened Central California Coast steelhead (*Oncorhynchus mykiss*) and the North American green sturgeon (*Acipenser medirostris*), and on designated critical habitat for both species. The CCC steelhead and the green sturgeon are anadromous, spending time in fresh- and salt-water environments, with steelhead migration occurring in the project area during the winter and spring seasons and sturgeon present year-round at all life stages. The letter also states that the project is

located in an area identified as Essential Fish Habitat (EFH) for species managed with the Pacific Coast Salmon Fishery Management Plans (FMP), the Pacific Groundfish FMP, and the Coastal Pelagic FMP, and that the project "has the potential to adversely impact EFH for federally managed fisheries in California waters….[due to] highly localized and temporary disturbance, and potentially conver[sion of] soft bottom habitat to concrete. Despite this potential effect, NOAA Fisheries concludes in its consultation that "…the proposed action is not likely to adversely affect the subject listed species and designated critical habitats," as discussed below.

NOAA Fisheries' letter states, in part, "[t]he hydroplow buries the line without displacing the majority of material…and minimizes suspension of sediments in surrounding waters. This installation method was selected because it disturbs the substrate less than other techniques….Pumps on the barge [towing the hydroplow] would provide the water source for the hydroplow's jets and these pumps [will be] screened per California Department of Fish and Wildlife and NOAA Fisheries standards to prevent the entrainment or impingement of fish…." Regarding the HDD drilling occurring just offshore of the City of San Francisco, the letter further provides that drilling fluids will be used during the installation process and "[b]est management practices for monitoring [potential] loss of drilling fluids, spill containment, and response measures would be implemented…[and] land-to-submarine drilling and operation of the hydroplow [would be limited] to the period between June 1 and November 30." According to NOAA Fisheries, the potential effects of the project include degradation of water quality during hydroplow operations, disturbance of benthic habitat, and placement of concrete at the bay bottom. Limiting work in the Bay to the period between June 1 to November 30 avoids the migration period of threatened CCC steelhead and, thus, NOAA Fisheries concluded that the proposed construction effects on the CCC steelhead "are anticipated to be discountable."

Special Condition II.B contained herein requires PG&E to restrict construction activities authorized herein to the period of June 1 to November 30 as recommended by NOAA Fisheries thereby limiting disturbance to specific special-status species.

Regarding the green sturgeon, which is present year-round, NOAA Fisheries concluded that the effects of sediment displacement (during hydroplow use), associated turbidity, and potential gill injury are expected to be "insignificant" as the sturgeon "is tolerant of high levels of turbidity, including levels exceeding those expected of the proposed work." NOAA Fisheries also described the green sturgeon as "highly mobile," stating that the fish are expected to disperse temporarily while the plow is present over the 3- to 4.5-day period of operation. Further,

the use of fish screens required by the California Department of Fish and Wildlife on the hydroplow's water intake would prevent entrainment and impingement. NOAA Fisheries also determined that the concrete mattress placement is "not expected to adversely affect foraging or movements by green sturgeon." Special Condition II.C contained herein requires PG&E to ensure that the hydroplow water intake is equipped with fish screens, as required by the California Department of Fish and Wildlife, to prevent entrainment and impingement of the special-status green sturgeon and, if necessary, other species of concern.

Designated critical habitat for CCC steelhead and green sturgeon will be temporarily affected by turbidity associated with hydroplow use and disturbance to benthic habitat and invertebrates, yet NOAA Fisheries states that the "impacts to existing benthic community is expected to be minimal…and benthic invertebrates are expected to rapidly recolonize [within a few months] at the [affected area] disturbed by the hydroplow." Further, NOAA Fisheries states that the "installation of the transmission cable is not expected to degrade [the primary constituent elements of designated critical habitat, including water and sediment quality, salinity conditions, food resources] for CCC steelhead or green sturgeon. The potential effects of this project are considered insignificant or discountable and are not expected to result in a net change to existing habitat values or result in adverse impacts to designated critical habitat."

NOAA Fisheries determined that the project would adversely affect EFH because of "localized temporary degradation of water quality, disturbance of the benthic community, and the conversion of soft-bottom habitat to hardscape." However, NOAA Fisheries concluded that these adverse effects "are minimal in nature….[and that NOAA Fisheries] has no practical EFH Conservation Recommendations to provide to avoid or reduce the magnitude of these effects."

c. **Water Quality.** On August 29, 2014, the RWQCB issued a certification for the project covering temporary water quality effects from construction through the accidental release of soil and hazardous materials (HDD drilling fluids), hydroplow use and associated turbidity, and the turbidity resulting from excavating 936 cubic yards of Bay sediment with a clamshell dredge to create six HDD exit pits and from removing the sandstone sedimentary rock rubble. In certifying the project, the RWQCB evaluated and required measures to minimize such impacts including: (1) the implementation of Best Management Practices (BMPs) to reduce erosion and sediment transport and control pollution sources to prevent impacts during construction, e.g., the preparation of a Storm Water Pollution Prevention Plan (SWPPP); (2) the use of a hydroplow to minimize suspension of sediments in the water column as compared to other cable burial techniques; (3) the restriction of in-water work to periods approved

by the state Department of Fish and Wildlife (DFW) and NOAA Fisheries; (4) the use of DFW- and NOAA Fisheries-approved screens on the hydroplow's water intakes to prevent fish entrainment or impingement; and (5) the implementation of a HDD Fluid Release Contingency Plan (February, 2014) for monitoring the loss and clean-up of drilling fluids, spill containment, and response measures.

Special Condition II.D of this authorization requires, when undertaking the construction activities authorized herein, PG&E to comply with the requirements included in the water quality certification dated August 29, 2014 issued by the California Regional Water Quality Control Board, San Francisco Bay Region, including, but not limited to: the implementation of Best Management Practices (BMP) to reduce erosion and sediment transport and to control pollution sources; the preparation of a Storm Water Pollution Prevention Plan (SWPPP); and the incorporation of BMPs identified in the HDD Fluid Release Contingency Plan for the project (prepared by CH2M Hill and dated February 2014) to monitor the potential loss of HDD fluids, spill containment, and response measures.

d. **Mitigation.** The RWQCB's certification addressed the placement of concrete mattresses covering areas totaling approximately 0.5-acres of Bay floor and stated that this element of the project would result in a "permanent impact" on the Bay floor requiring "compensatory mitigation" subject to additional RWQCB consideration and approval. However, since issuance of the certification, the RWQCB informed the Commission staff and PG&E on October 8, 2014 that the removal of approximately 2,900 cubic yards of sandstone and sedimentary rock rubble from areas totaling 49,000 square feet "will serve as mitigation for the placement of up to 550 cubic yards of protective concrete mattresses" and, thus, no further mitigation or action will be required by the RWQCB for the project. Special Condition II.E contained herein requires PG&E to remove approximately 2,900 cubic yards of sandstone and sedimentary rock rubble from areas totaling 49,000 square feet to offset the concrete mattress fill placement authorized herein.

The Commission finds that potential project impacts on the Bay, including on tidal hydrology, sediment movement, bathymetric conditions, fish, other aquatic organisms and wildlife, and water quality, will be minimized or avoided as a result of the project design and the requirements of the special conditions herein. Those special conditions require, among other things, adhering to federal and state resource agency recommendations and requirements, and require the removal of sandstone and sedimentary rock rubble to offset the concrete mattress fill. Therefore, the Commission finds that the project authorized herein is consistent with

Section 66605 of the McAteer-Petris Act and also with Bay Plan policies regarding subtidal areas, fish, other aquatic organisms, and wildlife, mitigation, and water quality.

5. **Sound Safety Standards**. According to PG&E, "the transmission cable[s] would be designed to withstand a 7.8 magnitude earthquake on the San Andreas Fault." The project was not reviewed by the Commission's Engineering Criteria Review Board. PG&E states that "a third party geotechnical and seismic engineering consultant [was hired]…to provide third party reviews of all engineering and geotechnical work…for this project. In addition, PG&E Engineering Group also reviewed all work product related to this project…. In addition, the [project] geotechnical information has been provided to the City and County of San Francisco, Port of San Francisco and [the California Department of Transportation] as part of [PG&E's] construction permits, which have been approved for the HDD installations." Prior to project commencement, PG&E is required to provide final engineering plans to the Commission staff for review and approval on behalf of the Commission pursuant to Special Condition II.A contained herein.

   Based on the geotechnical and seismic information provided in the permit application for the project and this authorization's requirement that final engineering plans be reviewed and approved by the staff on behalf of the Commission, the Commission finds that the project authorized and conditioned herein will be constructed in accordance with sound safety standards and, thus, is consistent with Section 66605 of the McAteer-Petris Act.

6. **Valid Title.** The in-Bay portion of the transmission cable would be located within land that the State Lands Commission legislatively granted to the City and County of San Francisco, which has provided a license to PG&E for undertaking the project. That license expires in the year 2054 with an option of a 20-year extension granted at a later date. The license states, among other things, that PG&E is responsible for removing the facilities from the property upon expiration of the lease or the decommissioning of the cable system. PG&E's application for a Commission permit did not include a proposal for ultimate removal of the facilities. However, Special Condition II.H contained herein recognizes that if the authorized facilities are abandoned or deteriorate over time PG&E is required to prepare a report evaluating the cable system's condition and, if determined necessary by the Commission, remove the cable system.

   Based on the information provided to the Commission by PG&E, the Commission finds that PG&E possesses valid title to the subject property. As conditioned, the Commission may require removal of the cable system if it is abandoned or deteriorated and conditions warrant removal.

For these reasons, the Commission finds that the project, as conditioned, is consistent with the McAteer-Petris Act and relevant Bay Plan policies.

C. **Dredging and Sediment Disposal.** The project involves excavating 936 cubic yards of sediment to create six pits where the transmission cable system comprised of three individual lines exits and re-enters HDD drill points, and removing approximately 400 cy of sediment associated with the removal of sandstone and rock material. The Bay Plan **Dredging** Policy 2 states, in part, that the Commission should authorize dredging when "(a) the applicant has demonstrated that the dredging is needed to serve a water-oriented use or other important public purpose…; (b) the materials to be dredged meet the water quality requirements of the San Francisco Bay Regional Water Quality Control Board; (c) important fisheries and Bay natural resources would be protected through seasonal restrictions established by the California Department of Fish and [Wildlife], the U.S. Fish and Wildlife Service and/or the [NOAA Fisheries], or through other appropriate measures; (d) the siting and design of the project will result in the minimum dredging volume necessary for the project; and (e) the materials would be disposed of in accordance with Policy 3." The Bay Plan Dredging Policy 3 states, in part: "Dredged materials should, if feasible, be reused or disposed outside the Bay and certain waterways."

As discussed previously, the installation of submarine electric cables in the Bay serves a water-oriented use. In 2014, the inter-agency Dredged Material Management Office (DMMO) completed its review of the project concluding, among other things, that the sediment would be suitable for excavation and disposal outside of the Bay at the previously-authorized Port of Oakland's Berth 10 drying facility or similar facility. The DMMO's review did not specifically address the excavation of 400 cy of sediment overlying the sandstone to be removed, but this sediment will be disposed outside the Bay. On August 29, 2014, the RWQCB issued a certification for the removal of all dredged material authorized herein.

The dredging will occur in an area where special-listed fish species exist, including the federally-threatened Central California Coast steelhead, the North American green sturgeon, the federally threatened Chinook salmon (*Oncorhynchus tshawytscha*), federally and state threatened steelhead trout (*Oncorhynchus mykiss)*, and the state threatened Pacific herring (*Clupea pallasii*). In recognition of potential impacts to these species from dredging, PG&E will undertake the dredging within the DFW, NMFS, and U.S. Fish and Wildlife Service (USFWS) work windows defined in the Biological Opinions on the Long Term Management Strategy for the Placement of Dredged Material in the San Francisco Bay Region. PG&E will limit the dredging to June 1 to November 30, which covers the range of work windows for the above-referenced special listed species (Pacific herring, between March 1 to November 30, and Chinook Salmon and Steelhead Trout, between June 1 to November 30).

To ensure that the dredging and sediment disposal activities occur in a manner that is consistent with the subject authorization, Special Condition II.F requires PG&E to conduct pre- and post-dredging surveys regarding locations, depths, volumes, etc., and provide the information to the Commission staff for its review. In addition, Special

Condition II.F requires that disposal occur outside of the Bay and that PG&E comply with the environmental work windows as prescribed by the federal and state resource agencies.

For these reasons, the Commission finds that, as conditioned, the sediment removal and disposal activities are consistent with the Bay Plan policies on dredging.

D. **Navigational Safety.** The Bay Plan **Navigational Safety and Oil Spill Prevention** Policy 1 states, in part, "[p]hysical obstructions to safe navigation, as identified by the U.S. Coast Guard and the Harbor Safety Committee of the San Francisco Bay Region, should be removed to the maximum extent feasible when their removal would contribute to navigational safety and would not create significant adverse environmental impacts." Further, Policy 2 states, in part, "[t]o ensure navigational safety and help prevent accidents that could spill hazardous materials…the Commission should encourage major marine facility owners and operators, the U. S. Army Corps of Engineers and the National Oceanic and Atmospheric Administration to conduct frequent, up-to-date surveys of major shipping channels, turning basins and berths used by deep draft vessels and oil barges. Additionally, the frequent, up-to-date surveys should be quickly provided to the U.S. Coast Guard Vessel Traffic Service-San Francisco, masters and pilots."

According to PG&E, it "designed the proposed [transmission cable] route to avoid known underwater obstacles….[and] the north/south shipping lanes or designated anchor areas." The exact location of vessels anchoring at the site during construction will vary daily based on local ship traffic and guided via the Vessel Traffic Service and the U.S. Coast Guard. Further, "[o]nce the submarine cables are installed they would be recorded by the Coast Guard and given to NOAA for publication. PG&E would publish a Local Notice to Mariners (LNM) via Coast Guard District 11. This would provide advisory [information] to the San Francisco Vessel Traffic Service (VTS) to allow the management of waterway traffic…through the project location. Besides promoting awareness [of the new cable] and engaging stakeholders by registering the new cable on navigational maps, PG&E intends to implement an operation and maintenance strategy that would include an automatic identification system (AIS) vessel monitoring to ensure the new cable security. The system would use live vessel position in conjunction with the cable location information to create automatic warnings if the cable is at risk due to abnormal shipping activities such as vessels that are off course or moving at unusual speed." Special Condition II.G contained herein requires PG&E to ensure that the cable system's location be recorded through the appropriate vessel notification channels, and to implement an automatic identification system for monitoring the facility's location following installation.

The Commission finds that, as conditioned, the transmission cable facility is consistent with the Bay Plan policies regarding navigational safety and oil spill prevention**.**

E. **Public Access and Views.** Section 66632.4 of the McAteer-Petris Act states, in part, that the Commission "may deny an application for a permit for a proposed project only on the grounds that the project fails to provide maximum feasible public access, consistent with the proposed project, to the bay and its shoreline." The 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…." Further, the Bay Plan policies on **appearance, design, and scenic views** state, in part, that "bayfront development should be designed to enhance the pleasure of the user or viewer of the Bay."

The project authorized herein will involve work within the 100-foot shoreline band, specifically the installation and in-kind maintenance of a 200-foot-long (total) section of the underground transmission cable, and construction activities during a 22-month period. Because the cable system will be located underground and the construction work will be limited in time and to an area not available or seen by the public, the project will not impact public access or views. In addition, the transmission cable system project authorized herein will place no additional burden on existing access or generate a need for new access in the vicinity of the project. For these reasons, PG&E did not propose and this authorization does not require public access improvements.

Therefore, the Commission finds that the project authorized herein is consistent with the McAteer-Petris Act and the Bay Plan policies regarding public access and scenic views.

F. **Engineering Criteria Review Board and the Design Review Board**. The Commission's Engineering Criteria Review Board, and Design Review Board did not review the project because in light of proposed design and location, it does not warrant advice regarding seismic safety, flooding, or public access.

G. **Compliance with the California Environmental Act/CEQA Findings**. On October 28, 2013, the California Public Utilities Commission certified the Final Mitigated Negative Declaration finding that "although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent." All potentially significant impacts associated with the proposed project can be mitigated to a level below significance (Exhibit F). On January 16, 2014, the Notice of Determination was approved by CPUC and was filed at the State Clearing House on January 21, 2014.

H. **Coastal Zone Management Act.** The Commission further finds, declares, and certifies that the activities authorized herein are consistent with the Commission's Amended Management Program for San Francisco Bay, as approved by the Department of Commerce under the Federal Coastal Zone Management Act of 1972, as amended.

I. **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, 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 permittee executes the original of this permit and returns 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. **Certification of Contractor Review.** Prior to commencing construction authorized herein, the general contractor or contractors in charge of such work within the Commission's jurisdiction shall submit written certification that s/he has reviewed and understands the requirements of the permit and any final plans subject to BCDC approval.

C. **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.

D. **Permit Assignment**. The rights, duties, and obligations contained in this permit are assignable. When the permittee transfers 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 permittee/transferors 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.

E. **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.

F. **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 permittee of any obligations imposed by State or Federal law, either statutory or otherwise.

G. **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.

H. **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.

I. **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.

J. **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.

K. **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. The Commission may revoke any permit for such violation after a public hearing held on reasonable notice to the permittee 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 permittee or their assignees if the permit has been assigned.

L. **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 permittee 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.

M. **Permission to Conduct Site Visit**. The permittee 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.

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 permittee, its assigns, 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 permittee shall immediately retrieve and remove such material at its expense.