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Governor's Office of Planning & Research

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STATE CLEARINGHOUSE

Subject: SFO Shoreline Protection Program Notice of Preparation (SCH No. 2020110456)

Dear Mr. Li:

The California Department of Fish and Wildlife (CDFW) has reviewed the Notice of Preparation (NOP) for the San Francisco International Airport (SFO) Shoreline Protection Program (Project). The Project is located within unincorporated San Mateo County approximately 13 miles south of downtown San Francisco along the western shoreline of San Francisco Bay and is proposed to occur from 2025 to 2032. The purpose of the Project is to address flood protection and future sea-level rise at SFO. The Project would install new shoreline protection infrastructure that complies with Federal Emergency Management Administration standards. The infrastructure would include concrete walls, steel king and sheet pile walls, stormwater outfall reconstruction, road relocation, lighting trestle reconstruction, and associated construction and maintenance of the infrastructure. The shoreline protection infrastructure is estimated to be approximately 40,564 feet long (roughly 7.6 miles). The Project will impact approximately 4.4 acres of wetlands and will require approximately 27.5 acres of bay fill.

Department Jurisdiction

As a trustee for the State's fish and wildlife resources, CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. In this capacity, CDFW administers the California Endangered Species Act (CESA), the Native Plant Protection Act, and other provisions of the California Fish and Game Code that afford protection to the State's fish and wildlife trust resources. CDFW is the State's fish and wildlife "Trustee Agency" under the California Environmental Quality Act (CEQA guidelines §15386). CDFW is responsible for marine biodiversity protection under the Marine Life Protection Act (Fish and Game Code Section 2850) and the Marine Managed Areas Improvement Act (Public Resources Code Section 36700-36900) in coastal marine waters of California

CDFW is also submitting comments as a Responsible Agency under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As

proposed, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & Game Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in take¹ as defined by State law of any species protected under the CESA (Fish & Game Code, § 2050 et seq.), related authorization as provided by the Fish and Game Code will be required.

Biological Significance

The San Francisco Bay-Delta is the second largest estuary in the United States and supports numerous aquatic habitats and biological communities. It encompasses 479 square miles, including shallow mudflats. This ecologically significant ecosystem supports both state and federally threatened and endangered species and sustains important commercial and recreational fisheries.

Regulatory Requirements

California Endangered Species Act: Please be advised that a CESA permit will be recommended if the project has the potential to result in "take" of plants or animals listed under CESA, either during construction or over the life of the project. Issuance of a CESA permit is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required to obtain a CESA Permit.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially impact threatened or endangered species (CEQA section 21001(c), 21083, & CEQA Guidelines section 15380, 15064, 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports Findings of Overriding Consideration (FOC). The CEQA Lead Agency's FOC does not eliminate the Project proponent's obligation to comply with Fish and Game Commission section 2080.

Lake and Streambed Alteration (LSA) Program: Notification is required, pursuant to CDFW's Lake and Streambed Alteration Program (Fish and Game Code section 1600 et. seq.) for any Project-related activities that will substantially divert or obstruct the natural flow; change or use material from the bed, channel, or bank including associated riparian or wetland resources; or deposit or dispose of material where it may pass into a river, lake, or stream. Work within ephemeral streams, washes, watercourses with a subsurface flow, and floodplains are subject to notification requirements. CDFW, as a Responsible Agency under CEQA, will consider the CEQA document for the Project.

¹ Take is defined by Fish and Game Code Section 86 as to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.

CDFW may not execute the final LSA Agreement until it has complied with CEQA (Public Resources Code section 21000 et seq.) as the responsible agency.

State and Federally Listed and Commercially/Recreationally Important Species

Protected species under the State and Federal Endangered Species Acts that could potentially be present near Program activities include:

- Chinook salmon (*Oncorhynchus tshawytscha*), state and federally threatened (Spring-run), state and federally endangered (Winter-run)
- Steelhead (*Oncorhynchus mykiss*), federally-threatened (Central California Coast and Central Valley ESUs)
- Green sturgeon (*Acipenser medirostris*), federally-threatened (southern DPS)
- Longfin smelt (*Spirinchus thaleichthys*), state-threatened
- Peregrine falcon (*Falco peregrinus anatum*), state fully protected
- Brown pelican (*Pelecanus occidentalis californicus*), state fully protected
- American peregrine falcon (*Falco peregrinus anatum*), state fully protected
- Alameda song sparrow (*Melospiza melodia pusillula*), state species of special concern
- California red-legged frog (*Rana draytonii*), federally-threatened, state species of special concern
- California Ridgway's rail (*Rallus obsoletus obsoletus*), state fully protected
- Pallid bat (*Antrozous pallidusi*), state species of special concern
- San Francisco owl's-clover (*Triphysaria floribunda*), moderately threatened (CNPS rank and threat - 1B.2)
- San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), federally endangered, state endangered, and state fully protected

Several species with important commercial and recreational fisheries value that could potentially be impacted by Project activities include:

- Dungeness crab (*Cancer magister*)
- Pacific herring (*Clupea pallasii*)
- Rockfish (*Sebastes* spp.)
- California halibut (*Paralichthys californicus*)
- Surfperches (*Embiotocidae*)

Habitat descriptions and species profiles should include information from multiple sources: aerial imagery, historical and recent survey data, field reconnaissance, scientific literature and reports, and findings from "positive occurrence" databases such as California Natural Diversity Database (CNDDDB). Based on the data and information from the habitat assessment, the CEQA document can then adequately assess which special-status species are likely to occur in the Project vicinity.

CDFW recommends that prior to Project implementation surveys be conducted for special-status species with potential to occur in the Project area. Survey and monitoring protocols and guidelines for some species are available at: <https://www.wildlife.ca.gov/Conservation/Survey-Protocols>.

Botanical surveys for special-status plant species, including those listed by the California Native Plant Society (<http://www.cnps.org/cnps/rareplants/inventory/>), must be conducted during the blooming period for all sensitive plant species potentially occurring within the Project area and require the identification of reference populations. Please refer to CDFW protocols for surveying and evaluating impacts to rare plants available at: <https://www.wildlife.ca.gov/Conservation/Plants>.

Impacts to State Listed and Commercially/Recreationally Important Species

Due to the scope and duration of the proposed Project, there are likely to be substantial impacts to state listed and commercially/recreationally important species. CDFW recommends that the draft environmental impact report (DEIR) provide specific details of the anticipated impacts to the special status species present in the area and how Project activities will avoid, minimize, or mitigate potential significant impacts to those species. This information and discussion will determine whether CDFW may need to exercise its regulatory authority as provided by the Fish and Game Code Section 2081(b) for potential incidental take of Longfin smelt and winter and spring run Chinook. The DEIR should discuss the following types of potential impacts in detail to provide CDFW with enough information to determine if the proposed avoidance, minimization, and mitigation measures will be sufficient:

- Hydroacoustic impacts caused by pile driving
- Potential for entrainment and/or impingement of fish
- Utilization of sheet pile corrosion prevention coating and placement of treated wood piles into waters of San Francisco Bay
- Potential impacts to Pacific herring and commercial Pacific herring fishing activities
- Potential impacts to Pacific herring spawning habitat at SFO and in adjacent areas
- Impacts to wetland habitat and how those impacts affect listed terrestrial and marine species

Mitigation for Impacts to Special Status Species and Bay and Wetland Habitat

Given the amount of potential impact to special status species and bay and wetland habitat, CDFW recommends that the lead agency and applicant begin early discussion with CDFW to determine mitigation for Project related impacts. CDFW authorization for the Project may require an Incidental Take Permit (Fish and Game Code section 2081(b)) in which a Project's impacts must be fully mitigated. Determining what full mitigation for take may be, given the scope of potential impacts, will require an

additional amount of time and discussion leading up to Project implementation. CDFW recommends that early consultation with CDFW take place to discuss mitigation options that may be proposed within the DEIR.

Impacts to San Francisco Garter Snake and California Red-legged Frog

San Francisco garter snake and California red-legged frog are known to occur on the west side of Highway 101. The NOP Project Description is unclear whether the proposed project will impact San Francisco garter snake and/or California red-legged frog. CDFW recommends that the DEIR disclose all direct and indirect impacts the Project may have on San Francisco garter snake and California red-legged frog.

California Ridgway's Rail

California Ridgway's rail, a state fully protected species, has the potential to occur within the Project area. CDFW has jurisdiction over fully protected species of birds, mammals, amphibians, reptiles, and fish pursuant to Fish and Game Code §§ 3511, 4700, 5050, and 5515. Take of any fully protected species is prohibited. CDFW cannot authorize incidental take of fully protected species unless the take is for scientific purposes pursuant to Fish and Game Code Section 2081(a) or for species recovery. To avoid impacts to Ridgway's rail, CDFW recommends that the proposed Project avoid encroachment into marsh or mudflat habitat.

Concrete Wall Alternatives Analysis

Installation of concrete walls within the streambank may have direct and cumulative adverse impacts on fish and wildlife resources within the Millbrae and San Bruno Channels. Concrete walls (e.g., streambank armoring) could alter stream flow (e.g., stream deflection), cause stream erosion, and decrease fish and wildlife habitat.

Armoring streambanks with riprap or concrete alters natural stream processes, such as, hydrology, geomorphology, biology, water quality, and connectivity (Instream Flow Council, 2004). The effects of streambank armoring include but are not limited to altering stream velocity and channel roughness. For example, water flowing along armored streambanks tends to flow fast and turbulent, causing increased erosion and scour potential both at the toe and at the ends of the armored streambank. In contrast, vegetated banks provide complexity and contribute to channel roughness. Changes in stream velocity can also change channel width, depth, discharge, slope, sediment load, and/or sediment size within a channel (Rosgen 1994, e.g., bank slumping, accelerated erosion, channel migration and complete shifts in channel shape).

CDFW recommends exploring all other flood control techniques (e.g., setbacks) before installing concrete walls or hardscape within the streambank. If concrete walls or hardscape are deemed necessary, CDFW recommends that effects to biological resources and stream processes are analyzed in the DEIR and mitigation measures are included to address significant impacts.

Nesting Birds

Project construction could result in disturbance of nesting birds. Noise can impact bird behavior by masking signals used for bird communication, mating, and hunting (Bottalico et al. 2015). Birds' hearing can also be damaged from noise and impair the ability of birds to find or attract a mate and prevent parents from hearing calling young (Ortega 2012).

If ground-disturbing or vegetation-disturbing activities occur during the bird breeding season (February through early-September), the Project applicant is responsible for ensuring that implementation of the Project does not result in violation of Fish and Game Codes. To evaluate and avoid for potential impacts to nesting bird species, CDFW recommends incorporating the following mitigation measures into the Projects DEIR and that these measures be made conditions of approval for the Project.

- Nesting Bird Surveys: To maximize the probability that nests are detected, CDFW recommends that a qualified avian biologist conduct pre-Project activity nesting bird surveys no more than seven days prior to the start of ground or vegetation disturbance and if there is a lapse of four days or more between construction, CDFW recommends that nesting bird surveys cover a sufficient area around the Project area to identify nests and determine their status. A sufficient area means any area potentially affected by the Project. During nesting bird surveys, CDFW recommends that a qualified avian biologist establish behavioral baseline of all identified nests. During Project activities, CDFW recommends having the qualified avian biologist continuously monitor nests to detect behavioral changes resulting from Project activities. If behavioral changes occur, CDFW recommends stopping the activity, that is causing the behavioral change, and consulting with a qualified avian biologist on additional avoidance and minimization measures.
- Nesting Bird Buffers: During Project activities, if continuous monitoring of nests by a qualified avian biologist is not feasible, CDFW recommends a minimum no-disturbance buffer of 250 feet around active nests of non-listed bird species and a 1,000-foot no disturbance buffer around active nests of non-listed raptors. These buffers are advised to remain in place until the breeding season has ended or until a qualified avian biologist has determined that the birds have fledged and are no longer reliant upon the nest or on-site parental care for survival. Variance from these no disturbance buffers is possible when there is compelling biological or ecological reason to do so, such as when the Project area would be concealed from a nest site by topography. CDFW recommends that a qualified avian biologist advise and support any variance from these buffers.

Additional Recommendations

- The DEIR should address species specific in-water work windows and whether the proposed project will comply with those windows.
- Fish and Game Code states that it is unlawful to deposit into, permit to pass into, or place where it can pass into waters of the state any substance or material deleterious to fish, plant life, or bird life (FGC Section 5650(6)). CDFW recommends avoiding the use of treated wood materials in or above the waters of San Francisco Bay. The DEIR should address alternatives for pile materials for the lighting trestle reconstruction.
- CDFW recommends the DEIR include discussion on softer shoreline protection alternatives incorporating natural features and why these alternatives are not proposed to be included.
- CDFW recommends that the DEIR address whether eelgrass habitat could be impacted by Project related activities by providing information on recent surveys and whether potential habitat existing within the Project footprint.

Filing Fees

CDFW anticipates that the Project will have an impact on fish and/or wildlife, and assessment of filing fees is necessary (Fish and Game Code Section 711.4; Pub. Resources Code, section 21089). Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW.

Conclusion

The Department appreciates the opportunity to comment on SFO Shoreline Protection Program NOP. If you have any questions or comments, please contact Arn Aarreberg, Environmental Scientist – Marine Region (707) 791-4195, Arn.Aarreberg@wildlife.ca.gov or Wes Stokes, Senior Environmental Scientist – Bay-Delta Region (707) 339-6066, Wes.Stokes@wildlife.ca.gov.

Sincerely,



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References

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