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October 4, 2022

Julie Moore
City and County of San Francisco, Environmental Planning
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San Francisco, CA 94103
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Subject: Fort Funston Bank Swallow Habitat Assessment Technical Memorandum for the Ocean Beach Climate Change Adaptation Project, Draft Environmental Impact Report, SCH No. 2020090171, City and County of San Francisco

Dear Ms. Moore:

Thank you for conducting a bank swallow (*Riparia riparia*) habitat assessment for the Ocean Beach Climate Change Adaptation Project (Project), as requested in the California Department of Fish and Wildlife (CDFW) CEQA Comment Letter dated January 21, 2022. CDFW also responded with comments to the Notice of Preparation for the Project on September 25, 2020. CDFW's comments in part identify that the Project will significantly impact bank swallows, a California Endangered Species Act (CESA) listed as a threatened species. CDFW requested the Fort Funston Bank Swallow Habitat Assessment Technical Memorandum (Technical Memo) be prepared to better understand the extent of Project impacts. CDFW has reviewed the Technical Memo and has the below comments and recommendations, including potential mitigation options to reduce Project impacts to bank swallows.

TECHNICAL MEMORANDUM SUMMARY

The Technical Memo objectives are to: 1) identify, describe, and delineate potentially suitable nesting habitat used by the Fort Funston bank swallow colony; 2) identify and delineate cliff sites that could be enhanced through vegetation management or other means to provide potentially suitable bank swallow nesting habitat; and 3) quantify potential bank swallow nesting areas to provide a baseline of available habitat in the Project vicinity.

Potential nesting habitat was defined in coordination with the Project proponent's consulting biologists, CDFW, and the National Park Service (NPS) as cliff faces with the following attributes:

- Vertical cliff face slope (90 degrees) to slightly inclined slope (minimum 70 degrees)
- Little or lack of vegetation on cliff face

- Presence of friable soils suitable for burrowing (freshly exposed cliffs)
- Minimum cliff height of 3 meters above the ground (or less, if bank swallow activity is observed or present historically, which does occur at the Project site)

The Technical Memo uses a combination of 2019 oblique aerial imagery, field observations, and desktop GIS mapping technology to determine bank swallow habitat types and attributes. Through this process, the Technical Memo identified 33,743 square feet of bank swallow habitat in the 2.9-mile-long survey area, with an average slope of 72 degrees. The majority of this mapped habitat, 25,006 square feet (74%), is identified as potential habitat with no previously observed bank swallow use. The Technical Memo also describes existing recreational pressures at the site and provides recommendations for Project mitigation.

COMMENTS AND RECOMMENDATIONS

Bank Swallow Nesting Habitat Assessment

CDFW appreciates the effort and technique used to identify and map bank swallow habitat in the Fort Funston area. The Technical Memo provides context for determining the extent the proposed Project will affect nesting bank swallow habitat and also identifies limited opportunities for bank swallow nesting habitat enhancement. It is CDFW's assessment that the Technical Memo demonstrates significant impacts will occur to bank swallows from the Project due to a reduction in nesting habitat. However, key considerations are missing from the Technical Memo and further refinement is needed to accurately assess the Project impacts to bank swallows. Specifically, the terminology of active and historic habitat used in the Technical Memo does not incorporate all of the best available scientific information. In addition, the Technical Memo omits evaluation of impacts to bank swallow nesting habitat from beach nourishment and other activities within the Project footprint.

Proposed terminology of active, historic, and potential nesting habitat appear to overestimate potential and historic nesting habitat and underestimate active nesting habitat. CDFW recommends updating the Technical Memo to include formal definitions of nesting habitat based on the best available science including CDFW's *Statewide Bank Swallow Colony Inventory Survey Methods* (CDFW 2021, Survey Methods). Bank swallows typically do not occupy all suitable burrows or nesting habitat within a colony site every year, and there is considerable turnover of colony sites between years (Garrison 1989). CDFW therefore considers available burrows that have been used by bank swallows in the past to be active nesting habitat.

CDFW's Survey Methods describes inactive burrows as "rough or craggy and lack scrape marks and whitewash. They may appear grayish because they are shallow,

incompletely dug or collapsed. Spiderwebs may crisscross burrows and should not be confused with root fringes which may occur at the edges of occupied burrows" (CDFW 2021). Therefore, CDFW recommends the Technical Memo be updated to include the below definitions:

Historic nesting habitat is any area with previous observations of bank swallow use that no longer contains viable burrows, such as collapsed or shallow burrows, or burrows with obstructions such as roots across the entry of the burrow.

Active nesting habitat is any area with previous or current observations of bank swallow use with viable burrows.

The Technical Memo should be updated using revised nesting habitat definitions to quantify if bank swallow burrows are active or historical, and where there may be potential nesting habitat within the assessment area. This information should be itemized in a new summary table as part of the bank swallow nesting habitat assessment.

CDFW agrees with the definition of potential nesting habitat included in the Technical Memo. However, the practical application of identifying potential nesting habitat did not include all the necessary habitat attributes. Specifically, the Technical Memo states that presence of friable soils could not be examined due to lack of data. CDFW is concerned that potential habitat is overestimated without incorporation of this important feature. CDFW recommends the Technical Memo include a strategy to measure friable soils in consultation with a geologist and conduct additional in-person surveys within the habitat assessment area.

The Technical Memo identifies inland ("off beach") potential habitat may be less suitable for bank swallow occupancy than potential habitat identified at the beach. However, given the lack of evidence that bank swallows use the inland habitat, CDFW recommends removing the inland areas from the potential habitat estimate. In addition, the remaining potential nesting habitat identified in the Technical Memo has no documented use by bank swallows and does not include the friable soils attribute.

The Technical Memo should discuss beach nourishment (sand replenishment) potential to reduce bank swallow habitat and potential habitat, and recognize that recent sand nourishment activity is not captured in the 2019 imagery that was used to model habitat. CDFW recommends the effects of sand replenishment activities be evaluated in the assessment of habitat and potential habitat. CDFW conducted numerous site visits in 2022 and observed sand placed against the cliff face immediately below bank swallow habitat. Bank swallows typically require a minimum cliff height of 3 meters above the ground to protect themselves from predators (Humphrey and Garrison 1987). Additionally, for long-term tracking and modeling of bank swallow habitat CDFW

recommends aerial oblique imagery be conducted once a year prior to bank swallow nesting season in February.

The Technical Memo should clearly describe and quantify bank swallow nesting habitat loss that will occur from Project activities. An additional table that identifies existing habitat amounts pre- and post-Project within the Project footprint should be included in the Technical Memo. In addition, a figure should be included showing the Project footprint in relation to the identified active, historic and potential bank swallow nesting habitat.

Mitigation Options

CDFW recommends researching and further detailing the mitigation options considered in the Technical Memo, as well as researching the new options identified below to protect and enhance bank swallow nesting habitat at the site and to mitigate impacts from the Project. **The Project impacts to bank swallow habitat will be significant**. A single mitigation option will likely not be adequate to fully mitigate impacts and a combination of activities will be needed. Successful implementation of mitigation options should be demonstrated prior to Project impacts. The following mitigation concepts, some of which are briefly described in the Technical Memo, are not ordered in priority and some may be more feasible and/or have higher conservation value than others.

1. Fund a dedicated full-time position with NPS, or another appropriate agency or organization, to act as interpretive staff and biological monitor along the Fort Funston and Phillip Burton Memorial Beach. This position would educate and inform beach goers about banks swallows and patrol the area to keep human disturbance at a minimum. They would remind beach goers to keep dogs on leash during the nesting period (February through early September), request people and their dogs not climb on bank swallow habitat, etc. They would also assist with monitoring the bank swallow colony through time.

2. Fund and conduct an experimental artificial nesting habitat enhancement and/or creation at the site and if successful, fund additional enhancement and/or creation and provide for the long-term maintenance of the nesting habitat.

3. Conduct or fund a study on bank swallow movement and nesting habitat use that would track individuals that use the Fort Funston area in order to determine whether they explore other locations or have the potential to use other coastal areas. Results could provide important data for future nesting habitat protection and/or enhancement.

4. Research existing protections, if any, at the Phillip Burton Memorial Beach (i.e., property owners and easements) and fund any conservation gaps. This could involve funding a conservation easement, or if one already exists, providing

additional funding for long-term management planning and implementation at the site.

5. Remove iceplant (*Caprobrotus* spp.) where feasible. Even though only small areas are available for treatment, CDFW highly recommends this approach as iceplant restricts the natural erosion process that bank swallows require for nesting. Bank swallow nests are typically free of vegetation, both due to erosion and soil exposure needs and for reduced risk of predation (Garrison 1989).

6. Provide for the installation and removal of temporary signage and fencing during the bank swallow nesting season in perpetuity.

7. Revegetate with native plants and install permanent fencing and signage at the top of the bluff to prevent human disturbance to nesting bank swallows. Funding should be provided to maintain the fencing and manage the native plants in perpetuity.

8. Remove accumulated sand beneath bank swallow habitat. CDFW understands that this may not be feasible due to liability concerns.

9. Restore and enhance native dune plants to improve bank swallow foraging habitat near the Project. Restoration of foraging habitat should occur both on-site from Ocean Beach to Thornton State Beach, as well as off-site at Lake Merced.

CALIFORNIA ENDANGERED SPECIES ACT

Incidental Take Permit

CDFW has determined the Project as proposed will have significant impacts to bank swallow nesting habitat by reducing the carrying capacity of the bluffs to support bank swallow colonies. Bank swallows are protected under CESA as a threatened species and permanent removal of bank swallow nesting habitat could result in take of bank swallows through crushing, injuring, or entombing individuals, or through nest abandonment and mortality of young. Further, any loss of habitat at this site could lead to extirpation of this small and unique population. CDFW strongly recommends the Project obtain a CESA Incidental Take Permit for bank swallows pursuant to Fish and Game Code Section 2080 et seq. in advance of Project implementation.

CALIFORNIA COASTAL ACT

Coastal Development Permit

The Project is located within the Coastal Zone and is protected by the California Coastal Act. It is also within the City of San Francisco (City) Western Shoreline Area Plan, which

is a portion of the City's certified local coastal program and guides land use planning within the Coastal Zone (City and County of San Francisco 2021). The Project will require a Coastal Development Permit, which will ensure consistency with the Coastal Act and the City's Western Shoreline Area Plan. CDFW supports requirements under the Coastal Act to protect environmentally sensitive habitat areas (ESHA), including bank swallow nesting habitat (Pub. Resources Code, § 30240). ESHA is defined as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (Pub. Resources Code, § 30107.5). In this case, bank swallows are a rare species, as previously described they are listed as threatened under CESA, and their preferred nesting habitat near the Project area consists of rare eroding coastal bluffs that are highly susceptible to human disturbance and degradation. CDFW agrees with the conclusion in the Draft Environmental Impact Report that Project construction could conflict with the Coastal Act's ESHA policy due to the permanent removal of bank swallow nesting habitat. CDFW looks forward to working closely with the Project and the Coastal Commission to appropriately address the impact to bank swallow nesting habitat.

CONCLUSION

CDFW thanks you for your continued effort coordinating with state and federal agencies to address Project impacts to bank swallow habitat. CDFW looks forward to working with San Francisco Planning, the San Francisco Public Utilities Commission, and other partners as we work to reduce impacts to bank swallows. CDFW has concluded that the Project will have significant impacts to, and will likely result in take of, bank swallows. The Technical Memo, with recommended revisions, will help quantify those impacts in the context of the local bank swallow population and provide further details on potential mitigation options.

If you have any questions regarding this letter or for further coordination with CDFW, please contact Will Kanz, Environmental Scientist, at (707) 337-1187 or via email at Will.Kanz@wildlife.ca.gov; or Wesley Stokes, Senior Environmental Scientist (Supervisory), at (707) 339-6066 or via email at Wesley.Stokes@wildlife.ca.gov.

Sincerely,

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REFERENCES

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