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State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Bay Delta Region
2825 Cordelia Road, Suite 100
Fairfield, CA 94534

Marine Region
1933 Cliff Drive, Suite 9
Santa Barbara, CA 93109
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

GOVERNOR'S OFFICE OF PLANNING AND RESEARCH
Jun 08 2022
STATE OF CALIFORNIA

June 8, 2022

Tess Byler, Senior Project Manager
San Francisquito Creek Joint Powers Authority
2100 Geng Road, Suite 201
Palo Alto, CA 94303
tbyler@sfcjpa.org

Subject: Strategy to Advance Flood Protection, Ecosystems and Recreation Along San Francisco Bay, Notice of Preparation of a Draft Environmental Report, SCH No. 2022040504, San Mateo County

Dear Ms. Byler:

The California Department of Fish and Wildlife (CDFW) received a Notice of Preparation (NOP) of a Draft Environmental Report (DEIR) from the San Francisquito Creek Joint Powers Authority (SFCJPA) for the Strategy to Advance Flood Protection, Ecosystems and Recreation Along San Francisco Bay (Project) pursuant the California Environmental Quality Act (CEQA) and CEQA Guidelines.[1]

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a)). CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802). Similarly, for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

[1] CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

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CDFW is also responsible for marine biodiversity under the Marine Life Protection Act in coastal marine waters of California, and ensuring fisheries are sustainably managed under the Marine Life Management Act. Pursuant to our jurisdiction, CDFW has the following comments and recommendations regarding the Project.

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, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority (Fish & G. Code, § 1600 et seq.). Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), the Project proponent may seek related take authorization as provided by the Fish and Game Code.

REGULATORY REQUIREMENTS

California Endangered Species Act

Please be advised that a CESA Incidental Take Permit (ITP) must be obtained 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 in order to obtain a CESA Permit.

CEQA requires a Mandatory Finding of Significance if a project is likely to substantially restrict the range or reduce the population of a threatened, rare, or endangered species. (Pub. Resources Code, §§ 21001, subd. (c), 21083; CEQA Guidelines, §§ 15380, 15064, and 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 Code section 2080.

Lake and Streambed Alteration

CDFW requires an LSA Notification, pursuant to Fish and Game Code section 1600 et. seq., for Project activities affecting lakes or streams and associated riparian habitat. Notification is required for any activity that may 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

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Responsible Agency under CEQA, will consider the CEQA document for the Project and may issue an LSA Agreement. CDFW may not execute the final LSA Agreement (or ITP) until it has complied with CEQA as a Responsible Agency.

PROJECT DESCRIPTION SUMMARY

Proponent: SFCJPA

Objectives: The objectives of the Project are: 1) to reduce the risk of flooding within the cities of East Palo Alto and Menlo Park from San Francisco Bay waters, including consideration of up to 3.5 feet of future sea level rise, and support the communities' objective to be removed from the Federal Emergency Management Agency (FEMA) floodplain; 2) enable climate change adaptation using tidal marsh areas for flood protection, to sustain marsh habitat, and to facilitate marsh restoration associated with the South Bay Salt Ponds Restoration Project and other restoration efforts; 3) expand opportunities for recreation and community connectivity in collaboration with the Bay Trail Program and efforts to enhance local trails; 4) minimize future maintenance requirements; and 5) partner with other agencies and organizations pursuing similar goals and objectives.

Primary Project activities include shoreline protection (installation of levees, floodwalls, and other flood risk reduction structures); habitat restoration, creation, and enhancement (tidal marsh restoration, tidal marsh-upland transition zone habitat, and western snowy plover breeding habitat enhancement); and recreation (improvements to existing recreational access to the shoreline and potentially new trails).

Location: The Project is located in San Mateo County, immediately west of San Francisco Bay along approximately seven miles of the shoreline from the Menlo Park/Redwood City border south to the East Palo Alto/Palo Alto border. The Project includes actions within the Don Edwards National Wildlife Refuge (Refuge), including Refuge-managed land in Laumeister and Faber Tract Marshes (owned by the City of Palo Alto) and Ravenswood Open Space Preserve (owned by the Midpeninsula Open Space District); the San Francisco Public Utilities Commission; the Cargill Corporation, and within the Caltrans State Route 84 right-of-way approach to the Dumbarton Bridge.

Timeframe: The Project is to be constructed in phases, anticipated to begin in 2025 and to be completed by 2030. The DEIR will contain both project-level and program-level evaluations.

MARINE 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

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supports both state and federally threatened and endangered species and sustains important commercial and recreational fisheries.

COMMENTS AND RECOMMENDATIONS

CDFW offers the comments and recommendations below to assist the SFCJPA in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources. Based on the potential for the Project to have a significant impact on biological resources, CDFW concludes that an EIR at the project-level and programmatic-level (depending on the phase of the project) is appropriate for the Project.

I. Project Description and Related Impact

Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or U.S. Fish and Wildlife Service (USFWS)?

COMMENT #1 – Flood Wall and Levee Construction

Issue: The NOP discusses the proposed construction of flood walls in addition to or separate from levees within the Project area. The installation of flood walls, depending on materials and equipment used, could pose potential impacts to aquatic and terrestrial species that inhabit the ponds, adjacent sloughs, and bay habitat. The DEIR should include clear descriptions of the methods that will be used to create flood walls as well as equipment required for construction.

Specific impact: Flood wall construction activities such as pile driving in or near inundated areas could result in injury or mortality to aquatic species generated by excessive hydroacoustic pressures.

Why impact would occur: Under water sound generated from activities like pile driving have been shown to take State listed species due to a variety of factors, including behavioral modifications and both auditory and non-auditory injury or mortality. The Fisheries Hydroacoustic Working Group's *Agreement in Principle for Interim Criteria for Injury to Fish from Pile Driving Activities* (attached) specifies hydroacoustic levels that exceed 206 decibels (dB) peak pressure or accumulated sound exposure levels of 183 dB or 187 dB (depending on the size of the fish), can cause injury and/or mortality.

Evidence impact would be significant: Injury or mortality to fish resulting from activities such as pile driving may further population declines of fish species already at risk due to loss of bay habitat and exposure to pollutants.

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Recommended Potentially Feasible Mitigation Measures

Mitigation Measure #1: Hydroacoustic Impact Discussion

If flood wall construction will be in or near inundated areas, a hydroacoustic impact discussion for activities such as pile driving, should be included in the DEIR.

COMMENT #2 – Water Pumping and Flood Gates

Issue: The NOP discusses the potential for flood risk reduction structures to be incorporated into areas where it is not feasible to raise the elevation. These structures could include flood gates or improvements to pump stations. The DEIR should discuss the locations in which flood risk reduction structures and pump stations are present and whether the flood protection elements proposed could pose potential impacts to special-status fish species, such as the federal candidate and State threatened longfin smelt.

Specific impact: In areas where longfin smelt are present, water intake structures could pose potential impacts such entrainment and/or impingement. Additionally, flood gates could trap fish in areas that may not be suitable habitat during various times of the day or year.

Why impact would occur: Fish may be more susceptible to predation or could become trapped within unsuitable environmental conditions for a full tidal cycle without an option to return to unconfined habitats.

Evidence impact would be significant: Injury or mortality to fish resulting from predation or exposure to unsuitable environmental conditions may further population declines of fish species already at risk due to loss of bay habitat and exposure to pollutants.

Recommended Potentially Feasible Mitigation Measures

Mitigation Measure #1: Screening

To prevent or minimize entrainment or impinge risk, water intake structures are generally screened to meet CDFW and National Marine Fisheries Service screening criteria (attached). The DEIR should discuss whether current intake structures are screened and whether intake structure improvements will include screens that meet resource agency requirements.

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COMMENT #3 – Public Access

Issue: The NOP discusses the inclusion of 1.0-2.5 miles of new or improved trails, including creation of new sections of the Bay Trail and placement of existing sections of the Bay Trail atop new levees where they will be less susceptible to flooding. The DEIR will need to discuss potential impacts of visitor use along the trails to nearby breeding, roosting, or foraging shorebirds, including special-status species such as the federal and State endangered and State fully protected California Ridgway's rail (*Rallus obsoletus obsoletus*), the State threatened and State fully protected California black rail (*Laterallus jamaicensis coturniculus*), and the federal threatened and State species of special concern (SSC) western snowy plover (*Charadrius nivosus nivosus*).

Specific impact: Nest abandonment or reduced frequency or duration of care for young, as well as decreased time spent foraging and roosting, resulting in reduced health or vigor of all life stages may occur as a result of the Project.

Why impact would occur: Inclusion of new trails will increase the number and proximity of visitors to the Project site. In addition, placing trails on top of levees will increase the visibility of visitors, which may be perceived as threats to breeding, roosting, and foraging shorebirds. Signage and fencing associated with recreational access may provide perching opportunities to avian predators. All of these factors may reduce the time shorebirds spend performing activities associated with breeding, roosting, and foraging, in favor of increasing avoidance behaviors.

Evidence impact would be significant: Loss of emergent saline wetland habitat and upland refugia in San Francisco Bay has contributed to declines in local populations of both rail species. Increased contact with humans at coastal nesting and overwintering sites has reduced populations of western snowy plover. All three species are susceptible to both terrestrial and avian predation pressure. Project impacts, including increased conflicts associated with recreation may further population declines of these species, including cumulative impacts resulting in the restriction in the range of these species.

Recommended Potentially Feasible Mitigation Measures

Mitigation Measure #1: Shorebird Habitat Assessment

The DEIR should include an updated habitat assessment for shorebirds, including California Ridgway's rail, California black rail, and western snowy plover within and adjacent to the Project Area. Specific information on current habitat use by these species may be available by contacting staff at the Don Edwards National Wildlife Refuge.

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Mitigation Measure #2: Rail Surveys

A CDFW and USFWS-approved biologist should conduct protocol-level surveys of California Ridgway's rail in all suitable habitat adjacent to the Project using the 2015 *California Clapper Rail Survey Protocol* to determine where California Ridgway's rail are onsite in each year of construction. CDFW staff are available to work with you to incorporate calls of California black rail into the protocol to ensure that both species are sufficiently surveyed.

Mitigation Measure #3: Trail Alignment, Seating, and Signage

The DEIR should describe how the placement of additional trails, modifications of existing trails to be placed atop levees, and placement of any associated seating and signage will avoid and minimize impacts to shorebirds using adjacent habitat. Consideration should be given to placement of trail alignments away from known breeding habitat, as well as use of seasonal trail closures and/or vegetative screening where appropriate to reduce visitor disturbance to shorebirds. Interpretive signage and seating associated with recreational trails should be sized, configured, and placed appropriately to reduce predator perching opportunities.

COMMENT #4 – Transition Zone Habitat

Issue: The NOP discusses the construction of broad, gently sloped tidal salt marsh-upland transition zone habitat on the bayward slope of certain segments in association with levees, floodwalls, and hybrid features adjacent to existing and/or restored tidal salt marsh. The NOP mentions the benefits of such transition zones, such as provision of high-tide refugia for tidal marsh species and special-status marsh plants, increased habitat diversity, and sea level rise resilience. The DEIR will need to discuss the specific impacts to existing tidal marsh habitat and tidal marsh terrestrial and aquatic species that may result by placement of salt marsh-upland transition zone habitat.

Specific impact: Depending on the type of flood protection infrastructure selected, there may be placement of fill material in existing high quality salt marsh habitat (and thus, conversion of habitat type) to create transition zone habitat.

Why impact would occur: Fill and habitat conversion would reduce the amount of high-quality habitat currently available for tidal marsh species (such as California Ridgway's rail, California black rail, and the federal and State endangered and State fully protected salt-marsh harvest mouse (*Reithrodontomys raviventris*).

Evidence impact would be significant: Reduction of suitable habitat for special-status tidal marsh species may further population decline of these species already at

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risk due to historical losses of tidal marsh habitat, as well as the cumulative impacts of further restricting the range of these species.

Recommended Potentially Feasible Mitigation Measures

Mitigation Measure #1: Set Back Levees

The DEIR should consider the ability of the Project to set back levees (away from the Bay) in areas of existing high quality tidal salt marsh habitat to reduce the placement of fill material and habitat conversion. The DEIR should clearly identify and describe any constraints that would make setting back of levees infeasible, where and why placement of fill into existing high-quality habitat may be the only feasible alternative, and how the Project is minimizing impacts to existing high-quality habitat and its associated species.

Mitigation Measure #2: Upland Refugia Assessment

The DEIR should provide an assessment of the need for upland refugia habitat in existing high quality tidal marsh habitat and whether alternative upland refugia options (such as marsh mounds) may be appropriate in lieu of broad transition slopes in certain locations to minimize impacts to existing tidal marsh habitat.

Mitigation Measure #3: Ecological Cost and Benefit Assessment

The DEIR should provide a thorough analysis of the ecological costs and benefits (both short-term and long-term) of construction of transition zone habitat on existing marsh habitat to associated terrestrial and aquatic species, including whether bayward expansion of transition zone habitat can provide desired marsh transgression space and sea level rise resilience for tidal marsh species over the long-term.

Mitigation Measure #4: Habitat Transition Zone for Aquatic Species

In addition to discussing terrestrial habitat transition zones, the DEIR should discuss whether any submerged habitat zones are being proposed for fish and/or invertebrates.

II. Mitigation Measures and Impacts

Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS?

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COMMENT #5 – Special-Status Fish and Wildlife Species

Issue: Without appropriate mitigation measures, the Project could potentially have a significant impact on the following special-status fish and wildlife species (in addition to the species already mentioned in comments above), including but not limited to:

- White-tailed kite (*Elanus leucurus*; State fully protected)
- California least tern (*Sternula antillarum browni*; federal and State endangered and State fully protected)
- Brown pelican (*Pelecanus occidentalis californicus*; State fully protected)
- Salt-marsh wandering shrew (*Sorex vagrans halicoetes*; SSC)
- Northern harrier (*Circus hudsonius*; SSC)
- Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*; SSC)
- Alameda song sparrow (*Melospiza melodia pusillula*; SSC)
- Yellow rail (*Coturnicops noveboracensis*; SSC)
- Longfin smelt (*Spirinchus thaleichthys*; federal candidate and State threatened)
- Central California Coast steelhead (*Oncorhynchus mykiss*; federal threatened; Central California Coast and Central Valley Evolutionarily Significant Units)
- Green sturgeon (*Acipenser medirostris*; federal threatened; southern Distinct Population Segment)
- White Sturgeon (*A. transmontanus*; SSC)

Several species with important commercial/recreational fisheries value and habitat value for spawning and rearing could potentially be present near Project activities. These include:

- Pacific herring (*Clupea pallasii*)
- Crangon shrimp (*Crangon* spp.)
- Surfperches (*Embiotocidae*)

Specific impact: Direct mortality through crushing of adults or young or individuals within nests, loss of nests, capture, nest abandonment, loss of potential nesting habitat, loss of potential foraging habitat resulting in reduced reproductive success (loss or reduced health or vigor of eggs or young), inadvertent entrapment or

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entrainment, impingement, lack of water resulting in reduced reproductive success or desiccation of eggs.

Why impact would occur: The Project may include construction of levees and/or floodwalls, restoration or construction of trails, installation of flood gates, improvements to pump stations, and habitat restoration that may include tidal marsh and/or managed pond habitat conversion. The Project will include impacts such as noise, groundwork, and operation and movement of equipment and workers that would have the potential to disturb foraging, roosting, and nesting. Temporary water diversion structures may need to be constructed to dewater wetted areas of the Project.

Evidence impact would be significant: The species listed above are either fully protected species under California Fish and Game Code (§ 3511, § 4700 or § 5050), listed under the federal Endangered Species Act (ESA) or CESA and may also be designated as rare, threatened or endangered under §15380, subds. (c)(1) and (c)(2), or designated by CDFW as SSC and are at conservation risk and may be experiencing serious population declines or range retractions. In addition, take of nesting birds, birds in the orders Falconiformes or Strigiformes, and migratory nongame birds as designated in the Migratory Bird Treaty Act is a violation of Fish and Game Code (§ 3503, § 3503.5, and § 3513).

Recommended Potentially Feasible Mitigation Measures

Mitigation Measure #1: Habitat Assessment

The DEIR should include results of a through habitat assessment conducted by a qualified biologist to determine the locations and quality of suitable habitat for special-status species within the vicinity of the Project site.

Mitigation Measure #2: Special-Status Surveys

Focused surveys for special-status species using appropriate protocols should be conducted by qualified biologists at the Project site prior to any Project-related construction. If Project activities are to take place during the avian nesting season, an additional pre-Project activity survey for active nests should be conducted by a qualified biologist no more than seven days prior to the start of Project activity. See Mitigation Measure #2 under Comment #1 above regarding the protocol for rail surveys.

Mitigation Measure #3: Seasonal Work Windows

The DEIR should include species-appropriate seasonal work windows to avoid and minimize impacts to special-status species. The following are examples of seasonal

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work windows that may be appropriate to implement in all or portions of the Project site, depending on the suitability of the habitat and likelihood of species presence:

- In the vicinity of nesting rails, the Project should limit construction activities to September 1-January 31 to avoid the rail breeding season.

- In the vicinity of western snowy plovers, the Project should limit construction activities to September 15-February 28 to avoid the western snowy plover breeding season.

- In-water work should be limited to June 15-November 30 to minimize impacts to salmonids in the Project area.

Mitigation Measure #4: Buffers

The DEIR should include species-appropriate buffers to avoid and minimize impacts to special-status species. For example, a 700-foot no-work buffer should be implemented between construction activities and any current-year breeding rail detections if construction cannot be avoided during the rail breeding season. If establishing a 700-foot buffer around breeding rail detections is not feasible, noise reducing modifications to equipment as well as portable acoustic barriers/blankets placed near noise sources may be appropriate to reduce auditory and visual impacts to breeding rails. Note that these features may be appropriate regardless of time of year to minimize impacts to foraging rails as well.

For other species of nesting birds, CDFW recommends implementing appropriate buffers around active nests based on species, behavior of birds, ambient noise levels, type of construction activities, topography, and other site-specific factors that may affect nesting bird disturbance levels. It is advised that buffers remain in place until the breeding season has ended or until a qualified 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 buffers is possible when there is compelling biological or ecological reason to do so, such as when the Project site would be concealed from a nest site by topography. CDFW recommends that a qualified avian biologist advise and support any variance from established buffers.

Mitigation Measure #5: Non-Mechanized Hand Tools

CDFW recommends the use of non-mechanized hand tools for any necessary vegetation removal activities in habitat suitable for salt-marsh harvest mouse to the maximum extent practicable. Use of mechanized hand tools has resulted in mortality and/or injury to this and other species during vegetation removal for other projects in the Bay Area.

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Mitigation Measure #6: In-Water Work Avoidance

CDFW recommends avoiding in-water work to the extent practicable. If in-water work cannot be avoided, conducting in-water work and placing material at low tide when fish are unlikely to be present may reduce the risk of take of special-status fish species.

Mitigation Measure #7: Take Authorizations

If known or expected occurrences of State-listed wildlife species are present at a Project site or the species is identified during surveys and full avoidance of take is not feasible, the Project proponent should apply to CDFW pursuant to Fish and Game Code § 2081(b) for take authorization through issuance of an Incidental Take Permit (ITP). Fully protected species may not be taken or possessed at any time, except for necessary scientific research, including efforts for recovery. Under the CDFW's Cutting the Green Tape Program, a Restoration Management Permit (RMP) consolidates take authorizations needed for voluntary habitat restoration projects into a single streamlined permit and can include take authorization for CESA-listed and State fully protected species. CDFW staff can work with you to help determine whether a RMP may be appropriate for this Project. More information about the Cutting the Green Tape Program can be found at the following link: https://wildlife.ca.gov/Conservation/Watersheds/Cutting-Green-Tape.

COMMENT #6 – Special-Status Plant Species

Issue: Without appropriate mitigation measures, the Project could potentially have a significant impact on the following special-status plant species, including but not limited to:

- Coastal marsh milk vetch (*Astragalus pycnostachyus* var. *pycnostachyus*) – California Rare Plant Rank 1B.2
- Alkali milk vetch (*A. tener* var. *tener*) – California Rare Plant Rank 1B.2
- San Joaquin spearscale (*Atriplex joaquiniana*) – California Rare Plant Rank 1B.2
- Congdon's tarplant (*Centromadia parryi* ssp. *condonii*) – California Rare Plant Rank 1B.1
- Point Reyes salt bird's beak (*Chloropyron maritimum* ssp. *plustre*) – California Rare Plant Rank 1B.2
- California seablite (*Suaeda californica*) – Federal endangered and California Rare Plant Rank 1B.1

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- Saline clover (*Trifolium hydrophilum*) – California Rare Plant Rank 1B.2
- Hairless popcorn flower (*Plagiobothrys glaber*) – California Rare Plant Rank 1A

Specific impact: Direct mortality or inability to reproduce.

Why impact would occur: Implementation of the Project could include grading and heavy equipment use associated with the construction of floodwalls, levees, trails, and transition zone habitat, as well as with restoration/enhancement of tidal marsh and managed pond habitat. Dewatering of stream channels may also be necessary.

Evidence impact would be significant: Special-status plant species are typically narrowly distributed and often endemic species, susceptible to habitat loss and habitat fragmentation resulting from development, vehicle and foot traffic, and introduction of non-native plant species.

Recommended Potentially Feasible Mitigation Measures

Mitigation Measure #1: Special-Status Plant Focused Surveys

The Project site should be surveyed for special-status plant species by a qualified botanist following protocol-level surveys. Protocol-level surveys, which are intended to maximize detectability, may include identification of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period.

Mitigation Measure #2: Special-Status Plant Avoidance

Direct and indirect impacts to special-status plant species should be avoided through delineation and establishment of a no-disturbance buffer of at least 50 feet from the outer edge of the plant population or specific habitat type required by special-status plant species.

Mitigation Measure #3: Seed Collecting/Planting

If complete avoidance of impacts to special-status plants is not possible, CDFW recommends collecting seed (if appropriate) and planting at an approved off-site location or providing seed to an acceptable seed banking facility certified by the Center for Plant Conservation for long-term conservation storage.

III. Editorial Comments and/or Suggestions

Figure 1 of the NOP shows seven cross-section locations on an aerial figure of the Project site but does not label them in accordance with the figure numbers of the

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subsequent cross-sections themselves. There are eight cross-sections provided in the NOP, and it appears that two of the cross-sections (Figures 3 and 4) refer to the tech campus trail. In addition, Figure 8 (Conceptual Cross-Section of Integrated Floodwall and Transition Zone Habitat Creation) and 9 (Conceptual Cross-Section of Levee with Transition Zone Habitat Creation) are both are labeled as South of Bay Road. It is unclear whether these are two different potential scenarios for the same location, or whether Figure 8 is located adjacent to Laumeister Marsh and Figure 9 is located adjacent to Faber Tract Marsh (as both Laumeister Marsh and Faber Tract Marsh are both located south of Bay Road). The DEIR should show specific cross-section figure numbers in Figure 1 to ensure they can easily be cross-referenced to the appropriate corresponding cross-section figures. In addition, each cross-section figure should include enough detail to clearly describe its location within the Project.

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations. (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special-status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDB). The CNNDB field survey form can be filled out and submitted online at the following link: https://wildlife.ca.gov/Data/CNDDB/Submitting-Data. The types of information reported to CNDDB can be found at the following link: https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

ENVIRONMENTAL DOCUMENT FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of environmental document filing fees is necessary. 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. Payment of the environmental document filing fee is required in order for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089).

CONCLUSION

CDFW appreciates the opportunity to comment on the NOP to assist the SFCJPA in identifying and mitigating Project impacts on biological resources.

If you have any questions for staff in the Bay Delta Region, please contact Ms. Tami Schane, Senior Environmental Scientist (Specialist), at (415) 710-0711 or Tami.Schane@wildlife.ca.gov; or Ms. Brenda Blinn, Senior Environmental Scientist

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(Supervisory), at (707) 339-0334 or Brenda.Blinn@wildlife.ca.gov. For questions for staff in Marine Region, please contact Mr. Arn Aarreberg, Environmental Scientist, at (707) 791-4195 or Arn.Aarreberg@wildlife.ca.gov; or Mr. Eric Wilkins, Senior Environmental Scientist (Supervisory), at (805) 594-6172 or Eric.Wilkins@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Erin Chappell
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Erin Chappell
Regional Manager
Bay Delta Region

DocuSigned by:
343995CB95354BC...
Craig Shuman
Regional Manager
Marine Region

ATTACHMENTS

1. Agreement in Principle for Interim Criteria for Injury to Fish from Pile Driving Activities

2. Department of Fish and Game Fish Screening Criteria

ec: Office of Planning and Research, State Clearinghouse, Sacramento

Tami Schane, CDFW Bay Delta Region – Tami.Schane@wildlife.ca.gov
Brenda Blinn, CDFW Bay Delta Region – Brenda.Blinn@wildlife.ca.gov
Craig Weightman, CDFW Bay Delta Region – Craig.Weightman@wildlife.ca.gov
Wesley Stokes, CDFW Bay Delta Region – Wesley.Stokes@wildlife.ca.gov
Arn Aarreberg, CDFW Marine Region – Arn.Aarreberg@wildlife.ca.gov
Eric Wilkins, CDFW Marine Region – Eric.Wilkins@wildlife.ca.gov
Becky Ota, CDFW Marine Region – Becky.Ota@wildlife.ca.gov

NOAA's Fisheries Northwest and Southwest Regions	U.S. Fish and Wildlife Service Regions 1 & 8	California/Washington/ Oregon Departments of Transportation	California Department of Fish and Game	U.S. Federal Highway Administration

MEMORANDUM

June 12, 2008

From: Fisheries Hydroacoustic Working Group

Subject: Agreement in Principle for Interim Criteria for Injury to Fish from Pile Driving Activities

To: Applicable Agency Staff

The signatory agencies, identified below, have agreed in principle to use the attached Interim Criteria for Injury to Fish from Pile Driving Activities. The agreement was concluded at a meeting in Vancouver, Washington on June 10-11, 2008 with key technical and policy staff from the Federal Highway Administration, NOAA Fisheries, U.S. Fish and Wildlife Service, the Departments of Transportation from California, Oregon, and Washington; and national experts on sound propagation activities that affect fish and wildlife species of concern. The agreed upon criteria identify sound pressure levels of 206 dB peak and 187 dB accumulated sound exposure level(SEL) for all listed fish except those that are less than 2 grams. In that case, the criteria for the accumulated SEL will be 183 dB.

These criteria will apply to all new projects beginning no later than 60 days from the date of this memorandum. During the interim 60 day period, the Transportation Agencies will work with the Services to identify projects currently in the consultation process and reach agreement on which criteria will be used to assess project effects.

The agencies agree to review the science periodically and revise the threshold and cumulative levels as needed to reflect current information. Behavioral impacts to fish and impacts to marine mammals are not addressed in this agreement. Sub-injurious effects will continue to be discussed in future meetings.

The respective agencies also agree to develop appropriate training for staff on these revised criteria, as well as a process to review and possibly refine the criteria, when appropriate.

For questions or concerns about the revised criteria, we recommend staff contact their agency environmental coordinator or agency expert on pile driving issues.

Federal Highway Administration*

*FHWA supports the use of these interim criteria in the states signing this agreement in principle. FHWA leaves the schedule for implementation to the discretion of the state DOTs in cooperation with their respective FHWA Division Offices and the Services.

NOAA Fisheries – NWR

NOAA Fisheries – SWR

US Fish and Wildlife Service Region 1

US Fish and Wildlife Service Region 8

California Department of Transportation

California Department of Fish and Game

Oregon Department of Transportation

Washington State Department of Transportation

EXHIBIT A
DEPARTMENT OF FISH AND GAME
FISH SCREENING CRITERIA
June 19, 2000

1. STRUCTURE PLACEMENT

A. Streams And Rivers (flowing water): The screen face shall be parallel to the flow and adjacent bankline (water's edge), with the screen face at or streamward of a line defined by the annual low-flow water's edge.

The upstream and downstream transitions to the screen structure shall be designed and constructed to match the bankline, minimizing eddies upstream of, in front of, and downstream of, the screen.

Where feasible, this "on-stream" fish screen structure placement is preferred by the California Department of Fish and Game.

B. In Canals (flowing water): The screen structure shall be located as close to the river source as practical, in an effort to minimize the approach channel length and the fish return bypass length. This "in canal" fish screen location shall only be used where an "on-stream" screen design is not feasible. This situation is most common at existing diversion dams with headgate structures.

The National Marine Fisheries Service - Southwest Region "Fish Screening Criteria for Anadromous Salmonids, January 1997" shall be used for these types of installations.

C. Small Pumped Diversions: Small pumped diversions (less than 40 cubic-feet per second) which are screened using "manufactured, self-contained" screens shall conform to the National Marine Fisheries Service - Southwest Region "Fish Screening Criteria for Anadromous Salmonids, January 1997."

D. Non-Flowing Waters (tidal areas, lakes and reservoirs): The preferred location for the diversion intake structure shall be offshore, in deep water, to minimize fish contact with the diversion. Other configurations will be considered as exceptions to the screening criteria as described in Section 5.F. below.

2. APPROACH VELOCITY (Local velocity component perpendicular to the screen face)

A. Flow Uniformity: The design of the screen shall distribute the approach velocity uniformly across the face of the screen. Provisions shall be made in the design of the screen to allow for adjustment of flow patterns. The intent is to ensure uniform flow distribution through the entire face of the screen as it is constructed and operated.

B. Self-Cleaning Screens:[1]

The U.S. Fish and Wildlife Service has selected a 0.2 feet per second approach velocity for use in waters where the Delta smelt is found. Thus, fish screens in the Sacramento-San Joaquin Delta and San Francisco Estuary should use this criterion for design purposes. In addition:

1. Streams and Rivers (flowing waters) - exposure to the fish screen shall not exceed fifteen minutes.

[1] Approach velocities in the June 19, 2000 Fish Screening Criteria that are inapplicable if delta smelt are present are omitted.

2. In Canals (flowing waters) - a bypass entrance shall be located every one-minute of travel time along the screen face.
3. Non-Flowing Waters (tidal areas, lakes and reservoirs) - The specific screen approach velocity shall be determined for each installation, based on the delta smelt life stage being protected. Velocities which exceed those described above will require a variance to these criteria (see Section 5.F. below).

C. Screens Which Are Not Self-Cleaning: The screens shall be designed with an approach velocity one-fourth that outlined in Section B. above. The screen shall be cleaned before the approach velocity exceeds the criteria described in Section B.

D. Frequency Of Cleaning: Fish screens shall be cleaned as frequently as necessary to prevent flow impedance and violation of the approach velocity criteria. A cleaning cycle once every 5 minutes is deemed to meet this standard.

E. Screen Area Calculation: The required wetted screen area (square feet), excluding the area affected by structural components (i.e., pore space or open area), is calculated by dividing the **maximum** diverted flow (cubic-feet per second) by the allowable approach velocity (feet per second). Example:

1.0 cubic-feet per second / 0.2 feet per second = 5.0 square feet of pore space

Unless otherwise specifically agreed to, this calculation shall be done at the **minimum** stream stage.

3. SWEEPING VELOCITY (Velocity component parallel to screen face)

A. In Streams And Rivers: The sweeping velocity should be at least two times the allowable approach velocity.

B. In Canals: The sweeping velocity shall exceed the allowable approach velocity. Experience has shown that sweeping velocities of 2.0 feet per second (or greater) are preferable.

C. Design Considerations: Screen faces shall be designed flush with any adjacent screen bay piers or walls, to allow an unimpeded flow of water parallel to the screen face.

4. SCREEN OPENINGS

A. Porosity: The screen surface shall have a minimum open area of 27 percent. We recommend the maximum possible open area consistent with the availability of appropriate material, and structural design considerations.

The use of open areas less than 40 percent shall include consideration of increasing the screen surface area, to reduce slot velocities, assisting in both fish protection and screen cleaning.

B. Round Openings: Round openings in the screening shall not exceed 3.96mm (5/32in). In waters where steelhead rainbow trout fry are present, this dimension shall not exceed 2.38mm (3/32in).

C. Square Openings: Square openings in screening shall not exceed 3.96mm (5/32in) measured diagonally. In waters where steelhead rainbow trout fry are present, this dimension shall not exceed 2.38mm (3/32in) measured diagonally.

D. Slotted Openings: Slotted openings shall not exceed 2.38mm (3/32in) in width. In waters where steelhead rainbow trout fry are present, this dimension shall not exceed 1.75mm (0.0689in).

5. SCREEN CONSTRUCTION

A. Material Selection: Screens may be constructed of any rigid material, perforated, woven, or slotted that provides water passage while physically excluding fish. The largest possible screen open area which is consistent with other project requirements should be used. Reducing the screen slot velocity is desirable both to protect fish and to ease cleaning requirements. Care should be taken to avoid the use of materials with sharp edges or projections which could harm fish.

B. Corrosion and Fouling Protection: Stainless steel or other corrosion-resistant material is the screen material recommended to reduce clogging due to corrosion. The use of both active and passive corrosion protection systems should be considered. Consideration should be given to anti-fouling material choices, to reduce biological fouling problems. Care should be taken not to use materials deemed deleterious to fish and other wildlife.

C. Project Review and Approval: Plans and design calculations, which show that all the applicable screening criteria have been met, shall be provided to the Department before written approval can be granted by the Regional Manager, Bay Delta Region.

The approval shall be documented in writing to the project sponsor, with a copy to the Deputy Director, Resource Management and Policy Division. Such approval may include a requirement for post-construction evaluation, monitoring and reporting.

D. Assurances: All fish screens constructed after the effective date of these criteria shall be designed and constructed to satisfy the current criteria. Owners of existing screens, approved by the Department prior to the effective date of these criteria, shall not be required to upgrade their facilities to satisfy the current criteria unless:

1. The controlling screen components deteriorate and require replacement (i.e., change the opening size or opening orientation when the screen panels or rotary drum screen coverings need replacing),

2. Relocation, modification or reconstruction (i.e., a change of screen alignment or an increase in the intake size to satisfy diversion requirements) of the intake facilities, or

3. The owner proposes to increase the rate of diversion which would result in violation of the criteria without additional modifications.

E. Supplemental Criteria: Supplemental criteria may be issued by the Department for a project, to accommodate new fish screening technology or to address species-specific or site-specific circumstances.

F. Variances: Written variances to these criteria may be granted with the approval of the Regional Manager, Bay Delta Region and concurrence from the Deputy Director, Resource Management and Policy Division. At a minimum, the rationale for the variance must be described and justified in the request. Evaluation and monitoring may be required as a condition of any variance, to ensure that the requested variance does not result in a reduced level of protection for the aquatic resources.

EXHIBIT A
DEPARTMENT OF FISH AND GAME
FISH SCREENING CRITERIA
June 19, 2000

It is the responsibility of the project sponsor to obtain the most current version of the appropriate fish screen criteria. Project sponsors should contact the Department of Fish and Game and the U.S. Fish and Wildlife Service (for projects in anadromous and fresh waters) for guidance.

Copies of the current criteria are available from the Department of Fish and Game Bay Delta Region; 7329 Silverado Trail/P.O. Box 46, Yountville, CA 94599, (707) 944-5500.

Technical assistance can be obtained directly from the Habitat Conservation Branch; 1416 Ninth Street, Sacramento, CA 95814 - (916) 653-1070.

The National Marine Fisheries Service Southwest Region "Fish Screening Criteria for Anadromous Salmonids, January 1997" is available at: http://swr.ucsd.edu/hcd/fishscrn.htm and from their Southwest Region, 777 Sonoma Avenue, Room 325, Santa Rosa, CA 95402 - (707) 575-6050.