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Mr. Sergio Ramirez
West Bay Sanitary District
500 Laurel Street
Menlo Park, CA 94025
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Subject: Flow Equalization and Resource Recovery Facility Levee Improvements and Bayfront Recycled Water Facility Project, Draft Environmental Impact Report, SCH No. 2020050414, San Mateo County

Dear Mr. Ramirez:

The California Department of Fish and Wildlife (CDFW) has reviewed the draft Environmental Impact Report (EIR) prepared by the West Bay Sanitary District (District) for the Flow Equalization and Resource Recovery Facility Levee Improvements and Bayfront Recycled Water Facility Project (Project) located in San Mateo County. CDFW is submitting comments on the draft EIR regarding potentially significant impacts to biological resources associated with the Project.

CDFW ROLE

CDFW is a Trustee Agency with responsibility under the California Environmental Quality Act (CEQA; Pub. Resources Code, § 21000 et seq.) pursuant to CEQA Guidelines section 15386 for commenting on projects that could impact fish, plant, and wildlife resources. CDFW is also considered a Responsible Agency if a project would require discretionary approval, such as a California Endangered Species Act (CESA) Permit, a Lake and Streambed Alteration (LSA) Agreement, or other provisions of the Fish and Game Code that afford protection to the state's fish and wildlife trust resources.

REGULATORY REQUIREMENTS

California Endangered Species Act

Please be advised that a CESA Permit 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 reduce the number or restrict the range of an endangered, rare or threatened 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 Program

Notification is required, pursuant to CDFW's LSA 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. 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.

PROJECT DESCRIPTION SUMMARY

Proponent: West Bay Sanitary District

Location and Description: The proposed Project is located at 1700 Marsh Road, Menlo Park, San Mateo County, at the District's 20-acre Menlo Park Flow Equalization and Resource Recovery Facility (FERRF) site, which is at the end of Marsh Road in Menlo Park, adjacent to Bedwell Bayfront Park, on the edge of Flood Slough in the San Francisco Baylands. Westpoint Slough and Don Edwards National Wildlife Refuge are located to the north of the site, Flood Slough and salt evaporation ponds are located to the west, and Bedwell Bayfront park abuts the site's southern and eastern boundaries. Northern coastal salt marsh and tidal slough are located along the western and northern shorelines, and the eastern and southern boundaries of the property contain developed land and California annual grassland habitat.

The FERRF contains three open basins surrounded by earthen levees that provide wastewater storage for District flows when the conveyance system to the plant is at capacity, usually during wet weather events, or when the conveyance system to the plant is undergoing maintenance or repairs. The existing levees surrounding the site were built in the late 1960s and are not certified by the Federal Emergency Management Agency to protect the site from the 100-year flood event.

The project involves improvements and repairs to the levees to protect the site from the 100-year flood event as well as 50-year sea level rise projections. Levee improvements

consist of sheet pile installation (large sheets of metal inserted into the ground that rise above the ground surface) and the reconfiguration of a portion of existing levee into an ecotone levee, also known as a living shoreline. The sheet pile walls are interlocking steel metal plates that are driven or vibrated into the existing earthen levees. Approximately 3,400 linear feet of sheet piles would be placed on top of the bank, and the sheet piles would be driven or vibrated into the ground approximately 30 feet deep. Ecotone levees are nature-based and involve gentle slopes or ramps, to provide a gradual transition zone between tidal marshes and flood risk management levees. The ecotone levee will be constructed by installing coffer dams at low tide to isolate the area from tidal action. The cofferdams are anticipated to be sheet piles that would be vibrated into bay mud and staged on top of the existing levee. The existing marsh habitat is proposed to be mechanically removed, and then the ecotone levee will be revegetated from salvaged marsh sod, seeds, and container plants. In addition to flood improvements, the project would install a new satellite recycled water facility at the site. The system will also require new influent and effluent pump stations and piping to transport the recycled water to customers. Pipeline alignments will primarily utilize existing street right-of-way for installation.

The proposed project consists of the following components:

- Flood protection, including installation of metal sheet pile walls;
- Construction of an ecotone levee and installation of fill;
- On-site stormwater drainage improvements;
- Improvement of an existing stormwater ditch;
- Raising existing grades near the northeast corner and southwest corners of the FERRF site;
- Construction and operation of a new Bayfront RWF, including a new off-site influent pump station and off-site influent and distribution pipeline system and bayside outfall to discharge concentrate from the Bayfront RWF reverse osmosis process.

COMMENTS AND RECOMMENDATIONS

CDFW offers the below comments and recommendations to assist the District in adequately identifying and/or mitigating the Project's significant, or potentially significant, direct and indirect impacts on fish and wildlife (biological) resources.

COMMENT 1: Fully Protected Species

Issue: Numerous State fully protected species are likely to be present in or near the Project site, including salt marsh harvest mouse (*Reithrodontomys raviventris*),

American peregrine falcon (*Falco peregrinus anatum*), California black rail (*Laterallus jamaicensis coturniculus*), California brown pelican (*Pelecanus occidentalis californicus*), and white-tailed kite (*Elanus leucurus*). 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, as defined by Fish and Game Code § 86 is to "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill". Take of any fully protected species is prohibited. CDFW cannot authorize incidental take of fully protected species unless the take is for necessary scientific research including efforts for species recovery. Without appropriate avoidance and minimization measures, Project activities conducted within occupied territories have the potential to significantly impact these species. Potentially significant impacts include, but are not limited to inadvertent entrapment, reduced reproductive success, reduced health and vigor, nest abandonment, loss of nest trees, and/or loss of foraging habitat that would reduce nesting success (loss or reduced health or vigor of eggs or young), and direct mortality.

Recommendation 1:

Fully Protected Species Surveys

To avoid impacts to fully protected species, CDFW recommends that a qualified biologist conduct species-specific surveys (using standard protocol or methodology, if available https://wildlife.ca.gov/Conservation/Survey-Protocols) of the Project site before Project implementation. If Project activities will take place when fully protected species are active or are breeding, CDFW recommends that additional pre-activity surveys for active nests or individuals be conducted by a qualified biologist no more than five (5) days prior to the start or restart of Project construction and should continue during Project construction.

Recommendation 2:

Fully Protected Species Avoidance

In the event a fully protected species is found within or adjacent to the Project site, CDFW recommends that a qualified biologist develops an appropriate no-disturbance buffer to be implemented. The qualified biologist should also be on-site during all Project activities to ensure that the fully protect species are not being disturbed by Project activities.

COMMENT 2: Vague Language

The draft EIR has several minimization and mitigation measures that are not strong enough or specific enough to be implemented. Wording such as "to the extent feasible", "if necessary", and portions of measures that will be determined at a later date, including buffer distances are not able to be implemented consistently during

construction. The vague language used in the draft EIR provides uncertainty that can result in no protections to the species.

To reduce the risk to species, CDFW suggests revising any minimization or mitigation measure that includes language such as “to the extent feasible”, undefined areas, buffers, or other vague language to better define measures to be implemented.

COMMENT 3: Regeneration of Habitat

Issue: The draft EIR does not discuss the amount of time it will take for salt marsh or other habitats to naturally regenerate on-site post-construction. The draft EIR also does not analyze the impacts related to temporal loss of salt marsh and other habitat from effects of potential increase in turbidity to vegetation regeneration. Depending on the length of time it takes for habitat to develop and post-construction conditions, there are potentially significant impacts to species, habitats, and water quality due to a lag in development of habitats.

Recommendation: The draft EIR should discuss the amount of time it will take for salt marsh and other habitats to reestablish on-site post construction, and evaluate the potential impacts to species, habitats, and water quality. The draft EIR should consider development of a revegetation plan depending on the evaluation of habitat impacts.

COMMENT 4: California Ridgway’s Rail and California Black Rail

Issue: California black rail, a state fully protected species, has the potential to occur within the Project area. Both California black rail and California ridgeway rail (*Rallus longirostris obsoletus*) could be impacted by project activities. Complete avoidance measures should be incorporated into the Project to ensure full take avoidance of the species.

Evidence of Impacts: California black rail populations have been documented as declining in California in recent decades primarily as a result of habitat loss and degradation, (Evens et al. 1991, Conway and Sulzman 2007). Black rail populations and their required habitat features are vulnerable to both human-caused and natural stressors.

Grading, compacting, and filling aquatic habitat could cause direct habitat loss (Bauer et al. 2015). Construction near a wetland or water feature supporting these species would impact the quality of their habitat if dust, debris, petroleum, or other contaminants are discharged from the construction site into their habitat.

Vegetation clearing may impact rails where they require a dense cover of upland vegetation for protection from predators (Eddleman et al. 1994, Evens and Thorne 2015).

Disturbance to nesting rails, such as humans or pets intruding into the marsh, have been reported to cause rails to abandon nests or to try to defend nests, exposing eggs (Flores and Eddleman 1993). Intrusion can alter habitat and cause mortality through crushing of rails that generally freeze in place and are hesitant to flush (Evens and Thorne 2015).

Recommendation: To avoid impacts to California black rail and California ridgeway's rail, CDFW recommends that activities within or adjacent to tidal marsh or suitable rail habitat, be avoided during rail breeding season, January 15 – August 31 for Ridgway's rail and February 1 – August 31 for California black rail.

CDFW also recommends the in-water work period for the San Francisco Bay is June 1 – November 30; however, with the presence of ridgeway rails, the in-water work period should be reduced to September 1 – November 30 to avoid impacts.

If Project activities within 700 feet of habitat will be conducted during the nesting season (January 15 to August 31) multiple, pre-construction call back surveys should be required prior to initiation of Project activities. A minimum of 4 surveys should be conducted between January and April, a minimum of 2-3 weeks apart. The listening stations should be established at 150-meter intervals along road, trails, and levees that will be affected by Project implementation.

If California black rail are detected through surveys, then Project activities should not occur within 700 feet of an identified calling center. If the activity occurs where the Project site is across a major channel or slough from the Project site greater than 700 feet in distance the activity may continue. If bird activity is surveyed or discovered within the buffer limits immediate consultation with CDFW should be required. If rails are observed within the Project area at any time work should be stopped immediately by a qualified biologist and the rail species allowed to leave the area on its own. If the rail species does not leave the area, then no work should commence until CDFW has made a determination on how to proceed with work activities.

Daily monitoring surveys of Project sites should occur until the Project is complete. If an injured or dead rail is discovered at the Project sites, it should be reported to CDFW immediately for consultation and all Project activities cease.

COMMENT 5: Salt Marsh Harvest Mouse

Issue: Impacts to salt marsh habitat, including vegetation removal/disturbance, could cause take of salt marsh harvest mouse if the species is present during Project activities; and such take should be considered a significant impact under CEQA. Salt marsh harvest mouse is a fully protected species under the Fish and Game Code section 4700; therefore, CDFW cannot issue a Project permit for their take. Complete avoidance measures must be incorporated into the Project to ensure full take avoidance of the species.

Salt marsh harvest mice are endemic to the San Francisco Bay in salt marsh and brackish wetland habitats. The species has lost a significant amount of tidal marsh habitat in the last century as a result of filling and diking, changes in water salinity, invasive plant species, and pollution (Zeiner et al. 1990, U.S. Fish and Wildlife Service 2010). The continued fragmentation and degradation of salt marsh and wetland habitat is also a concern for the species. As salt marsh harvest mice are restricted to salt marsh and wetland habitats, activities that compromise these habitats may negatively affect the species.

Vegetation removal may impact salt marsh harvest mice as they need non-submerged vegetation for cover from predators and utilize grasses, seeds, and other vegetation as a food source (Zeiner et al. 1990). Areas with non-submerged vegetation are particularly used during high tides (Smith et al. 2014). Additionally, vegetation clearing can cause fragmentation and create edge effects that permeate far beyond the Project site (Harris 1988, Murcia 1995).

Road construction and use can result in mortality for small mammals (Trombulak and Frissell 2000).

Artificial light has been shown to suppress the immune system of some mammals (Bedrosian et al. 2011), and it can cause disruption of normal circadian rhythms. Although it has not been studied in salt marsh harvest mice specifically, rodents often decrease foraging in higher light levels due to higher risk of predation (Clarke 1983, Daly et al. 1992, Bird et al. 2004).

Construction sites often have significant amounts of noise from generators and equipment. Rodents have been shown to increase their vigilance behavior when exposed to noise because they need to rely more on visual detection of predators when auditory cues are masked by noise (Rabin et al. 2006). This can result in unnecessary increased energy expenditure that may negatively impact survival.

Recommendation: In addition to the exclusion fencing, CDFW recommends that an approved qualified biologist, familiar with salt marsh harvest mouse walk through and inspect suitable habitat immediately prior to vegetation removal and search for signs of harvest mice or other sensitive wildlife and plants.

Prior to Project activities (e.g., vegetation removal, disturbance to vegetation) occurring in potential salt marsh harvest mouse habitat each day, an approved qualified biologist, familiar with salt marsh harvest mice, shall walk through and inspect suitable habitat and search for signs of harvest mice or other sensitive wildlife and plants. If a salt marsh harvest mouse is discovered, no work shall occur within 150 feet of that location. Following inspection, personnel, under the supervision of the qualified biologist, will disturb (e.g., flush) vegetation to force movement of salt marsh harvest mice into

adjacent marsh areas. Immediately following vegetation flushing, personnel, under the supervision of the qualified biologist, will remove vegetation with hand tools (e.g., weed-eater, hoe, rake, trowel, shovel, grazing) so that vegetation is no taller than two inches. If string trimmers (a.k.a. weed whackers) are used, they shall be used to the minimum extent necessary and shall be used to take down vegetation height a couple inches at a time so that the biological monitor can search for potential salt marsh harvest mouse nests. If a nest is discovered, all work shall stop immediately and CDFW shall be notified. Work shall not resume until CDFW provides written permission to do so. After vegetation removal, the mouse-proof barrier should be installed as described in the EIR. A qualified biologist should inspect the integrity of the exclusion fencing daily to ensure there are no gaps, tears, or damage. Vegetation removal shall include a two-foot-wide buffer from the edge of the Project site to ensure mice will not enter the Project site. Large equipment shall not enter suitable salt marsh harvest mouse habitat until all vegetation has been taken down to ground level. If an injured or killed mouse is discovered at any time during Project activities, all work shall cease immediately and CDFW shall be contacted for further direction. A restoration ecologist with documented experience with salt marsh habitat restoration shall monitor the site to ensure that marsh habitat restores naturally to the same coverage rate prior to disturbance. If after three years, the site is not revegetated, the restoration ecologist shall develop a site restoration plan to revegetate all salt marsh habitat temporarily impacted by the Project. Restoration may include hand transplanting of marsh vegetation (e.g., pickleweed) from clean donor areas.

COMMENT 6: Western Burrowing Owl (*Athene cunicularia*)

Issue: The draft EIR acknowledges burrowing owls could be present on-site or in the surrounding area, and construction activities could cause loss of habitat or abandonment of active nests. The EIR identifies that burrowing owl, a California Species of Special Concern, has previously been documented on-site, and that suitable habitat exists on-site. The EIR notes that surveys will be completed in conformance with CDFW's 2012 guidelines, however, not all aspects of the guidelines are included in the mitigation measures for this species. The Project could result in burrowing owl nest abandonment, loss of young, reduced health and vigor of owlets, or injury or mortality of adults. Burrowing owls are a California Species of Special Concern due to population decline and breeding range retraction. Based on the above, the Project may potentially significantly impact burrowing owls.

Recommendation: Burrowing owl surveys should be conducted by a qualified CDFW-approved biologist. Since suitable burrowing owl habitat is present, CDFW recommends that surveys be conducted following the methodology described in Appendix D: Breeding and Non-breeding Season Surveys of the CDFW Staff Report on Burrowing Owl Mitigation (Staff Report), which is available at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=83843. In accordance with the

Staff Report, a minimum of four survey visits should be conducted within 500 feet of the Project Area during the owl breeding season which is typically between February 1 and August 31. A minimum of three survey visits, at least three weeks apart, should be conducted during the peak nesting period, which is between April 15 and July 15, with at least one visit after June 15. Pre-construction surveys should be conducted no-less-than 14 days prior to the start of construction activities with a final survey conducted within 24 hours prior to ground disturbance.

In accordance with CDFW's 2012 Staff Report, owls may be disturbed up to 1,640 feet (500 meters) from a project. Therefore, the buffer area surveyed should be increased commensurate with the type of disturbance anticipated as outlined in the CDFW 2012 Staff Report and include burrow surrogates such as culverts, piles of concrete or rubble, and other non-natural features. The CEQA document for the Project should also include measures to avoid or minimize loss of burrowing owl foraging habitat, and mitigation for loss of habitat that cannot be fully avoided.

Please be advised that CDFW does not consider exclusion of burrowing owls or "passive relocation" as a "take" avoidance, minimization, or mitigation method, and considers exclusion as a significant impact. The long-term demographic consequences of exclusion techniques have not been thoroughly evaluated, and the survival rate of evicted or excluded owls is unknown. Burrowing owls are dependent on burrows at all times of the year for survival or reproduction; therefore, eviction from nesting, roosting, overwintering, and satellite burrows or other sheltering features may lead to indirect impacts or "take" which is prohibited under Fish and Game Code section 3503.5. All possible avoidance and minimization measures should be considered before temporary or permanent exclusion and closure of burrows is implemented to avoid "take." Any passive relocation plan for non-nesting owls will be subject to CDFW review. If passive relocation is used, habitat compensation should be required, with the acreage amount identified in the eviction plan.

If the Project would impact an unoccupied active burrowing owl burrow or burrow surrogate (i.e., a burrow used in the past three years for nesting or a burrow where a non-nesting owl would be evicted as described above), the following habitat preservation should be implemented prior to Project construction:

> Impacts to each nesting site should be mitigated by permanent preservation of two occupied nesting sites with appropriate foraging habitat through a conservation easement and provision of an endowment for long-term management. Impacts to burrowing owl roosting, overwintering, and foraging habitat should be mitigated by permanent preservation of off-site habitat occupied by burrowing owl at a 2:1 mitigation to impact ratio, through a conservation easement and provision of an endowment for long term management. The CDFW 2012 Staff Report states, "current scientific literature supports the conclusion that mitigation for permanent

habitat loss necessitates replacement with an equivalent or greater habitat area for breeding, foraging, wintering, dispersal…". The Project may implement alternative methods for preserving habitat with written acceptance from CDFW. Finding suitable habitat to preserve as described above may be infeasible, and in this case impacts to burrowing owl as described above will be fully avoided in order to avoid potentially significant impacts.

COMMENT 7: Noise and Vibrations Impacts to Fish Species

Issue: Special-status fish species are likely to be present within the tidally influenced habitat within and adjacent to the Project area, including:

- Central California Coast steelhead (*Oncorhynchus mykiss*); FT
- Longfin smelt (*Spirinchus thaleichthys*); ST
- North American green sturgeon (*Acipenser medirostris*); FT, SSC

FE = Federally Endangered; FT = Federally Threatened; SE = State Endangered; SFP = State Fully Protected; SSC = California Species of Special Concern

The draft EIR does not provide any mitigation measures to protect special-status fish species from construction equipment noise and vibrations that could cause disruptions to special-status fish species. Additionally, fish could be crushed, injured, or killed if they are present when construction of the ecotone levee begins.

Recommendation: To reduce the potential for noise and vibration impacts to special-status fish and to encourage fish to leave the area, CDFW recommends initiating a soft start to allow fish to leave the area prior to operating the vibratory hammer at full capacity. The hammer operatory shall initiate noise from the hammer for 15 seconds at reduced energy followed by a one-minute waiting period. This procedure shall be repeated two additional times before commencing hammering at full capacity.

Additionally, depending on the specific pile-driving methods, ITP consultation with CDFW may be recommended.

COMMENT 8: Dewatering Plan

Issue: The draft EIR states that a dewatering plan will be implemented if necessary but does not provide any information about the dewatering plan or how it will be decided whether a dewatering plan is necessary. It is also unclear whether sheet pile walls are required and whether it would be less impactful to dewater the Project area as a whole versus deterring fish from the area.

Recommendation: CDFW recommends that the EIR include additional information and a more detailed proposed dewatering plan to address the comments above. The dewatering plan should also include a figure showing where cofferdams and other structures or equipment will be placed for the diversion.

COMMENT 9: Special-Status Plants

Issue: The proposed Project may significantly impact multiple special-status plants due to disturbance or destruction of individuals and habitat, including:

- Coastal marsh milk-vetch (*Astragalus pycnostachyus* var. *pycnostachyus*); 1B.2
- Point Reyes bird's beak (*Chloropyron maritimum* ssp. *Palustre*); 1B.2
- Congon's tarplant (*Centromadia parryi* ssp. *Congdonii*); 1B.1
- Saline clover (*Trifolium hydrophilum*); 1B.2

CNPS Plant Ranks

- 1B = Rare, Threatened, or Endangered in California and Elsewhere
- 2A = Presumed Extirpated in California, But Common Elsewhere
- 2B = Rare, Threatened, or Endangered in California, But More Common Elsewhere

CNPS Threat Ranks

- 0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- 0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- 0.3 Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

Recommendation: CDFW recommends that the Project area be surveyed for special-status plants by a qualified botanist following the "Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities," which can be found online at https://wildlife.ca.gov/Conservation/Survey-Protocols. This protocol, which is intended to maximize detectability, includes identification of reference populations to facilitate the likelihood of field investigations occurring during the appropriate floristic period. In the absence of protocol-level surveys being performed, additional surveys may be necessary.

CDFW recommends impacts to special-status plants be avoided. If Project impacts to special-status plants cannot be completely avoided, consultation with CDFW is warranted and the Project should provide compensatory mitigation such as off-site habitat preservation or another method. If a state-listed or state Rare[1] plant is identified during botanical surveys and take cannot be avoided, acquisition of take authorization through an Incidental Take Permit (ITP) issued by CDFW pursuant to Fish and Game Code Sections 2081(b) and/or Section 1900 et seq is necessary to comply with Fish and Game Code, CESA and the Native Plant Protection Act.

COMMENT 10: Nesting Birds

The draft EIR describes methods to reduce impacts to nesting birds. CDFW concurs that measures should be conducted to assist in the avoidance of native bird species. All migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA). Sections 3503, 3503.5, and 3513 of the Fish and Game Code prohibit take of birds and their active nests, including raptors and other migratory nongame birds as listed under the MBTA. Additionally, many special-status bird species may be present and/or nesting at the site, including:

- Alameda song sparrow (*Melospiza melodia pusillula*); SSC
- American peregrine falcon (*Falco peregrinus anatum*); SFP
- Bryant's savannah sparrow (*Passerculus sandwichensis alaudinus*); SSC
- Black skimmer (*Rynchops niger*); SSC
- California black rail (*Laterallus jamaicensis coturniculus*); ST, SFP
- California brown pelican (*Pelecanus occidentalis californicus*); SFP
- California least tern (*Sterna antillarum browni*); FE, SE
- California Ridgeway's rail (*Rallus obsoletus obsoletus*); FE, SE
- Loggerhead shrike (*Lanius ludovicianus*); SSC
- Northern harrier (*Circus cyaneus*); SSC
- San Francisco common yellowthroat (*Geothlypis trichas sinuosa*); SSC
- Short-eared owl (*Asio flammeus*); SSC
- Western burrowing owl (*Athene cunicularia*); SSC
- Western snowy plover (*Charadrius nivosus nivosus*); FT, SSC

[1] In this context, "Rare" means listed under the California Native Plant Protection Act.

- White-tailed kite (*Elanus leucurus*); SFP

FE = Federally Endangered; FT = Federally Threatened; SE = State Endangered; SFP = State Fully Protected; SSC = State Species of Special Concern

Issue: Mitigation Measure BIO-6b specifies up to a 250-foot construction buffer for nesting birds, and up to 1000 feet for and raptors. Depending on the species, nest stage, and site conditions, these distances may not be sufficient to prevent disturbance-related nest failure and subsequent take. The Project proponent is responsible for ensuring that the Project does not result in any violation of the MBTA or relevant Fish and Game Codes.

Recommendation 1: If work will occur during nesting bird season (January 15 through August 31) no more than five (5) days prior to work commencing, including staging, clearing and grubbing, a qualified biologist should survey a sufficient area around the Project site to identify any nests that are present and determine their status and an appropriate buffer. Once construction work begins, the survey effort should continue to identify any nest starts established after the work commences. 'Sufficient' in this context means any nest within an area that could potentially be affected by the Project. In addition to direct impacts, such as nest destruction, nesting birds might be affected by noise, vibration, odors, lighting, and movement of workers or equipment. Identified active nests should be surveyed for the first 24 hours prior to any construction-related activities to establish a behavioral baseline of the adults and any nestlings. Once work commences, all active nests should continue to be monitored by the qualified biologist to detect any signs of disturbance and behavioral changes as a result of the Project. If signs of disturbance and behavioral changes are observed, the biologist should reassess the appropriate buffer to prevent disturbance-related nest failure and subsequent take.

Recommendation 2: A qualified biologist, experienced in raptor behavior, should be assigned to monitor the behavior of any raptors nesting within disturbance distance of Project activities. Even within species, disturbance distances can vary according to time of year or geographical location. The qualified biologist should have authority to order the cessation of all Project activities within disturbance distance of any raptor nest if the birds exhibit abnormal nesting behavior which may cause reproductive failure (nest abandonment and loss of eggs and/or young). Abnormal nesting behaviors which may cause reproductive harm include, but are not limited to: defensive flights/vocalizations directed towards project personnel, standing up from a brooding position, interrupted feeding patterns, and flying away from the nest. Project activities within line of sight of the nest should not resume until the qualified biologist has consulted with CDFW and both the qualified biologist and CDFW confirm that the bird's behavior has normalized or the young have left the nest.

COMMENT 12: Light Pollution

Issue: The Project would generate sources of light near sensitive natural vegetation communities, including permanent lighting from additional buildings and temporary lighting for proposed nighttime construction. The draft EIR does not discuss the type or color of lighting that will be used outdoor, i.e., bright security lighting along the perimeter, white light, blue light, etc.

Although the draft EIR does provide some discussion of the effects of increased lighting and glare over natural conditions it does not adequately analyze potentially significant impacts on rare, threatened, endangered, or nocturnal wildlife species, and migratory birds. Artificial lighting and light pollution are potential significant impacts to rare, threatened, endangered, and nocturnal wildlife and migratory birds because light pollution impacts can disrupt routine behavior of the species life cycle, degrade the quality of the environment utilized by said species and can substantially reduce the number of individuals.

Evidence of Impacts: Sensitive species, wildlife, and their habitats may be adversely affected by increased and artificial night lighting, even temporarily due to night construction activities. Light plays a vital role in ecosystems by functioning as both an energy and an information source (Gaston et al. 2012, 2013). The addition of artificial light into a landscape disrupts this role, altering the natural circadian, lunar, and seasonal cycles under which species have evolved. Artificial lights result in direct illumination, altering the natural patterns of light and dark, and sky glow (i.e., scattered light in the atmosphere), which can extend the ecological impacts of light far beyond the light source (Longcore and Rich 2004). On cloudy nights in urban areas, for example, the sky glow effect can be of an equivalent or greater magnitude than high-elevation summer moonlight (Kyba et al. 2013). The addition of artificial light into a landscape can impact a broad range of system processes, including:

- Activity patterns
- Availability and detectability of food resources
- Movement, navigation and migration
- The timing of phenological events
- Physiological functions
- Foraging behavior and predator-prey interactions
- Phototaxis (attraction and movement towards light)
- Circadian rhythms (both physiological and behavioral)
- Causing disorientation, entrapment, and temporary blindness

Recommendation: CDFW recommends further discussion of the types of lighting that may be used at the site, and how this lighting may impact local species and the nearby sensitive natural vegetation communities. To mitigate the potentially negative impacts of artificial light, light structures can be shielded and downward facing so that trespass of light is minimized. In addition, lights can be motion-activated, or turned off or dimmed during critical times of the year (e.g., migration) or during times of night that have the most significant impact on wildlife (i.e., dawn and dusk) (Gaston et al., 2012, 2013). Lights with wildlife-friendly spectral composition (i.e., minimize light avoidance/ attraction) can also be used (Sweeney et al. 2011; Gaston et al. 2012, 2013). LED lights are well suited for operating at variable brightness and being switched off or dimmed during certain times of the year or during times of low demand, as they operate at full efficiency and have no “warm-up” time (Gaston et al., 2012, 2013). Vegetation may also be used to shield sensitive areas against light, and light-absorbent surfaces can be used in in place of reflective surfaces (Gaston et al., 2012, 2013). In addition, all lights should be disposed of properly, as many contain mercury and other toxins.

COMMENT 13: Fencing Hazards

Issue: The Project may result in the use of open pipes used as fence posts, property line stakes, signs, etc. Raptor's talons can become entrapped within the bolt holes of metal fence stakes resulting in mortality.

Recommendation: CDFW recommends that all hollow posts and pipes be capped to prevent wildlife entrapment and mortality because these structures mimic the natural cavities preferred by various bird species and other wildlife for shelter, nesting, and roosting. Metal fence stakes used on the Project site should be plugged with bolts or other plugging materials to avoid this hazard. Further information on this subject may be found at: https://ca.audubon.org/conservation/protect-birds-danger-open-pipes.

ENVIRONMENTAL DATA

CEQA requires that information developed in draft environmental impact reports and negative declarations be incorporated into a data base 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, online field survey form, and contact information for CNDDB staff can be found 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://wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

FILING FEES

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

CONCLUSION

CDFW appreciates the opportunity to comment on the draft EIR to assist the District in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to Ms. Stephanie Holstege, Environmental Scientist at (707) 210-5104 or Stephanie.Holstege@wildlife.ca.gov; or Mr. Wesley Stokes, Senior Environmental Scientist (Supervisory), at (707)339-6066, or Wesley.Stokes@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Stacy Sherman for
692D021D81CA4F7...
Gregg Erickson
Regional Manager
Bay Delta Region

cc: Office of Planning and Research, State Clearinghouse (SCH#2020050414)

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