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June 18, 2024

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**ALAMITOS BAY WATER QUALITY ENHANCEMENT PROJECT
NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT
SCH #2024051330**

Dear Ms. Harbin:

The California Department of Fish and Wildlife (Department) received a Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) from the City of Long Beach (City) for the Alamitos Bay Water Quality Enhancement Project (Project), pursuant to 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 the Department, by law, may be required to carry out or approve through the exercise of its own regulatory authority under the Fish and Game Code.

DEPARTMENT ROLE

The Department 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 and Game Code, Section 711.7, subd. [a] & 1802; Public Resources Code, Section 21070; CEQA Guidelines Section 15386, subd. [a]). The Department, 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., Section 1802). Similarly for purposes of CEQA, the Department 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

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.

adversely affect fish and wildlife resources. The Department is also responsible for marine biodiversity protection under the Marine Life Protection Act (Fish & G. Code, Section 2850-2863) and the Marine Managed Areas Improvement Act (Pub. Resources Code, Section 36700) in coastal marine waters of California and ensuring fisheries are sustainably managed under the Marine Life Management Act (Fish & G. Code, Section 7050-7090). Pursuant to our jurisdiction, the Department has the following comments and recommendations regarding the Project.

PROJECT DESCRIPTION SUMMARY

Proponent: City of Long Beach

Objective: The objective of the Project is to maintain existing water circulation patterns in Alamitos Bay by installing a new “fish-friendly” pump system in place of the existing once-through-cooling (OTC) pumps at Alamitos Generating Station (AES) Alamitos for power generating operations (the OTC operations are anticipated to cease in December 2026). The new pumps would convey water from Alamitos Bay to the San Gabriel River Estuary. The primary Project activities include the installation of “fish-friendly” pumps within the intake channel and on land, and the installation of screens within the intake channel of the existing AES Alamitos Unit 6.

Location: The proposed Project site is located in the water area between the Cerritos Channel and the San Gabriel River within the AES Alamitos Generating Station site, located at 690 North Studebaker Road in Long Beach, CA.

Timeframe: Construction is anticipated to take approximately 2 to 2.5 years. The anticipated construction start date was not included in the NOP.

BIOLOGICAL SIGNIFICANCE

Discussion and Comment: The Project site’s waters support many resident and migratory fish and special status wildlife such as seabirds, marine mammals, and sea turtles. Important marine plants such as eelgrass (*Zostera marina*) support those fish and wildlife species and may be present throughout shallow coastal environments in Alamitos Bay and surrounding waters. Eelgrass is important as fish nursery habitat and supports juvenile and adult fish. The Project site’s waters also support commercially and recreationally important fish and invertebrate species such as California halibut (*Paralichthys californicus*), California spiny lobster (*Panulirus interruptus*), and the important forage fish Northern anchovy (*Engraulis mordax*).

COMMENTS AND RECOMMENDATIONS

The Department offers the comments and recommendations below to assist the City in adequately identifying and/or mitigating the Project’s significant, or potentially significant, direct, and indirect impacts on fish and wildlife resources.

I. Project Level Impacts and Other Considerations

“Fish Friendly” Pump System

Comments: The pump system may directly harm and/or cause mortality to marine organisms via entrainment and/or impingement as water is drawn into the pump system. Entrainment typically affects smaller organisms such as algae, plankton, fish and invertebrate larvae, and eggs. Impingement typically impacts adult organisms that can become trapped against the pump system’s screens as water is drawn into the system. The NOP noted that the Project’s new “fish-friendly” pumps include the installation of screens within the existing intake channel that will comply with regulatory requirements for fish impingement, fish entrainment, and trash removal. However, the specific regulatory requirements regarding fish impingement, fish entrainment, and trash removal that the project would be in accordance with were not detailed in the NOP.

Recommendations: The Department recommends that the DEIR analyze the potentially significant biological impacts associated with the “fish-friendly” pump system, including the entrainment and impingement of species of commercial, recreational, and biological importance. All fish screens should meet the Department and National Marine Fisheries Service (NMFS) fish screening criteria (see Attachment 1). Screen criteria for structure placement, approach velocity, sweeping velocity, screen openings, and screen construction should be detailed in the DEIR in accordance with the Department and NMFS’s fish screening criteria. The Department recommends that fish screens also meet the [California Ocean Plan](#) criteria for seawater desalination surface intake facilities to minimize impacts to important species.

Invasive Species Impacts

Comments: Any potential disturbance of bottom sediments from the removal of the OTC pumps and the installation of the “fish-friendly” pump system may redistribute non-native species that compete with native species. This could cause widespread adverse impacts to eelgrass and marine ecology. The invasive alga *Caulerpa taxifolia* is listed as a federal noxious weed under the U.S. Plant Protection Act and, while deemed eradicated in 2006, is monitored for potential future emergence. Another invasive alga species found recently in Newport Bay and San Diego Bay is *Caulerpa prolifera*, which is also a potential threat to growth and expansion of native eelgrass beds and other native algae. *Caulerpa prolifera* can grow as deep as 50 meters and appears to be more tolerant of low light environments than most other macroalgae. Additionally, since all *Caulerpa* species pose a serious risk to native marine life, Fish and Game Code Section 2300 was amended in 2023 so that no person shall sell, possess, import, transport, transfer, release alive in the state, or give away without consideration all species of the genus *Caulerpa*, with the exception of bona fide scientific research upon authorization by the Department.

Recommendations: The Department recommends conducting pre-construction *Caulerpa spp.* surveys to identify potential existence of invasive *Caulerpa spp.* in accordance with the *Caulerpa* Control Protocol:

<https://media.fisheries.noaa.gov/2021-12/caulerpa-control-protocol-v5.pdf> (October 2021). Any sightings of *Caulerpa spp.* should be reported within 24 hours to the Department (Caulerpa@wildlife.ca.gov) and NMFS at (562) 980-4037 and nmfs.wcr.caulerpa@noaa.gov.

Native Eelgrass Impacts

Comments: Eelgrass has the potential to occur at the Project site and could be impacted by Project activities. Native eelgrass species create large beds beneficial for fish habitat and have been identified as special aquatic sites and given protections by the Clean Water Act. The Magnuson-Stevens Fishery Conservation and Management Act identifies eelgrass as a Habitat Area of Special Concern. Additionally, the importance of eelgrass protection and restoration, as well as the marine ecological benefits of eelgrass, is identified in the California Public Resources Code (PRC Section 35630). The Department uses the California Eelgrass Mitigation Policy (CEMP) (NOAA 2014), developed by NMFS, for guidance on identifying eelgrass impacts, eelgrass mitigation measures and compensation, and for identifying appropriate eelgrass mitigation and donor sites. Project impacts may include, but are not limited to, vessel shading and anchoring within eelgrass habitat, bottom disturbances, demolition and construction turbidity, sedimentation, and falling debris.

Recommendations: The Department recommends that the applicant conduct a preliminary eelgrass survey in accordance with the [California Eelgrass Mitigation Policy \(CEMP\)](#) to determine whether eelgrass is present in the Project area. If eelgrass is identified in or adjacent to the Project area, comprehensive pre- and post-construction surveys for eelgrass beds or patches should be conducted consistent with the CEMP. If eelgrass impacts occur, these impacts should be compensated using guidance described within the CEMP. Plans should be developed to avoid and minimize potential impacts to eelgrass to the maximum extent feasible. The proposed Project should avoid and minimize disturbance and damage to or losses of eelgrass beds from Project construction. The Department recommends the following should eelgrass beds or patches be identified within or adjacent to the Project area:

- To avoid direct eelgrass impacts, locate construction vessels and all anchoring outside of eelgrass habitat.
 - To avoid scouring of eelgrass and potential eelgrass habitat, anchor chain designs should avoid eelgrass habitat impacts.
 - To avoid and minimize eelgrass impacts from demolition and construction debris, the City should use Best Management Practices (BMPs) such as perimeter debris booms. If debris is observed falling into the water, retrieve debris as soon as possible.
 - To minimize eelgrass impacts from water turbidity and sedimentation, install silt curtains around demolition areas if applicable. Restrict the turbidity plumes to the smallest possible area during all phases of in-water construction.
- If eelgrass harvest and transplanting is required for mitigation, a Scientific Collecting Permit (SCP) from the Department will be required prior to harvest and transplanting

activities. The SCP may include permit conditions such as donor eelgrass surveys, submittal of an eelgrass harvest and transplant plan, limits on number of turions collected, methods for collection and transplanting, notification of activities, and reporting requirements. Please visit the Department's SCP webpage for more information: <https://wildlife.ca.gov/Licensing/Scientific-Collecting>.

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, Section 21003, subd. (e).) Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDDB). The CNDDDB field survey form can be filled out and submitted online at the following link: <https://wildlife.ca.gov/Data/CNDDDB/Submitting-Data>. The types of information reported to CNDDDB can be found at the following link: <https://www.wildlife.ca.gov/Data/CNDDDB/Plants-and-Animals>.

ENVIRONMENTAL DOCUMENT FILING FEES

The Project, as proposed, could 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 the Department. Payment of the environmental document filing fee is required for the underlying project approval to be operative, vested, and final. (Cal. Code Regs, tit. 14, Section 753.5; Fish & G. Code, Section 711.4; Pub. Resources Code, Section 21089.)

CONCLUSION

The Department appreciates the opportunity to comment on the NOP to assist the City in identifying and mitigating Project impacts on biological resources. Questions regarding this letter or further coordination should be directed to Leslie Hart, Environmental Scientist at R7CEQA@wildlife.ca.gov.

Sincerely,



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ATTACHMENT 1

Department of Fish and Wildlife and National Marine Fisheries Service (NMFS). 2011. Fish Screening Criteria.

REFERENCES

NMFS. 2014. California Eelgrass Mitigation Policy, National Marine Fisheries Service, https://archive.fisheries.noaa.gov/wcr/publications/habitat/california_eelgrass_mitigation/Final%20CEMP%20October%202014/cemp_oct_2014_final.pdf.

State Water Resources Control Board. 2019. California Ocean Plan. https://www.waterboards.ca.gov/water_issues/programs/ocean/docs/oceanplan2019.pdf

ATTACHMENT 1

FISH SCREENING CRITERIA

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 current National Marine Fisheries Service - Southwest Region criteria for these types of installations shall be used.

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 criteria Attachment A.

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.

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: The design approach velocity shall not exceed:

1. Streams and Rivers (flowing waters) - Either:

a. 0.33 feet per second, where exposure to the fish screen shall not exceed fifteen minutes, or

b. 0.40 feet per second, for small (less than 40 cubic-feet per second) pumped diversions using manufactured, self-contained screens.

2. In Canals (flowing waters) - 0.40 feet per second, with a bypass entrance 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 species and life stage of fish being protected. Velocities which exceed those described above will require a variance to these criteria (see Section 5.F. below).

(Note: At this time, 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 Estuary should use this criterion for design purposes.)

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.

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.

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

$1.0 \text{ cubic-feet per second} / 0.33 \text{ feet per second} = 3.0 \text{ square feet}$

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

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.

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).

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 appropriate Regional Manager.

The approval shall be documented in writing to the project sponsor, with copies to both the Deputy Director, Habitat Conservation Division and the Deputy Director, Wildlife and Inland Fisheries 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 appropriate Regional Manager and concurrence from both the Deputy Director, Habitat Conservation Division and the Deputy Director, Wildlife and Inland Fisheries 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.

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, the National Marine Fisheries Service (for projects in marine and anadromous waters) 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 through the appropriate Regional office, which should be the first point of contact for any fish screening project.