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ALAMITOS BAY WATER QUALITY ENHANCEMENT PROJECT
DRAFT ENVIRONMENTAL IMPACT REPORT
SCH #2024051330

Dear Ms. Harbin:

The California Department of Fish and Wildlife (Department) received a Draft Environmental Impact Report (DEIR) from the City of Long Beach (City) for the Alamitos Bay Water Quality Enhancement Project (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 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 & G. Code, section 711.7, subd. (a) & 1802; Pub. 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 in coastal marine waters of California, and ensuring fisheries are sustainably managed under the Marine Life Management Act.

PROJECT DESCRIPTION SUMMARY

Proponent: City of Long Beach

Objective: The objective of the Project is to maintain existing water circulation patterns and healthy water quality in Alamitos Bay by installing a new "fish-friendly" pump system in place of the existing once-through-cooling (OTC) pumps at Applied Energy Services (AES) Alamitos Power Plant and Haynes Generating Station (HGS) since 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. According to the DEIR, the consistent water movement from the AES and HGS power plants has established habitat and water quality conditions that are now dependent on the established supply of new seawater from the open ocean that is actively pulled into Alamitos Bay and circulated. Based on the Hydrological and Water Quality Studies Desktop Review provided in Appendix C of the DEIR, the cessation of the AES and HGS powerplant pumps will have an immediate effect on Alamitos Bay's circulation resulting in increasing the residence time of water in Alamitos Bay, and the proposed Project is intended to address these potential effects by maintaining circulation within Alamitos Bay. The effect on Alamitos Bay's circulation could result in:

- Reduced water quality due to meandering of trash throughout Alamitos Bay;
- Prolonged periods of elevated coliform bacteria concentrations in Alamitos Bay;
- Buildup of dissolved copper concentrations from antifouling boat paint in dense marina areas; and
- Increased algal blooms and depressed levels of dissolved oxygen in shallow water habitat areas due to water stagnation.

The primary Project activities include dewatering, dredging, and excavation in the intake canal; construction of a concrete inlet structure, including concrete walls, channel bottom, and retaining walls; installation of three to six electrically-powered "fish-friendly" pumps within the intake channel and on land; and installation of a traveling screen within the intake channel of the existing AES Alamitos Unit 6 to provide continued circulation in Alamitos Bay. The installed screen would span the width and depth of the intake canal in the existing AES Units 5 and 6 intake canal adjacent to the existing AES vehicular bridge, which is the location within the canal where the current velocity is lowest to minimize fish impingement. The screen opening size would be 1 cm by 1 cm (or 0.38 inches) to minimize fish passage and target current speeds less than 0.5 feet/second during 63% of the operation time. The new seawater pump intakes would be located below the water level within the channel and would be designed to have "fish-friendly" protection features such as an open impeller with lower number of blades (more open passage spaces for fish) and lowest possible pump revolutions per minute. In addition, temperatures of the water being passed through the new pumps would remain constant and fish would not be exposed to elevated water temperatures as is the case in the current OTC AES Alamitos pump system. There would also be no chemical treatment of the water associated with the pumping and intake of water. Three to six discharge pipes or one large box would be constructed to connect the proposed pumps to the existing San Gabriel River outfall structure, and no modifications to the existing San Gabriel River outfall would be required.

Construction activities for the traveling screen and pump units include the installation of temporary coffer dams at two locations within the intake canal to block tidal water and groundwater flows into the construction areas. The water would then be pumped out so that concrete work and installation of the screen and pumps can be done in the dry. Intake canal bottom material would be removed to design grade and hauled offsite for disposal at an upland landfill. Coffer dams would remain in place for approximately 1 to 1.5 years and the coffer dams would be removed upon completion of construction, allowing water to flow back into the dewatered area. The Project would also use open trench construction methods to install the new discharge piping and new electrical power duct banks to the traveling screen and pump units. Shoring, either with sheet piles or shoring box, for trench excavation would be required. Construction equipment would likely include one or two land-based cranes, one water-based crane, excavators, pile driver (for installing shoring), dewatering pumps, forklifts, loaders, backhoes, work boat/skiff, concrete trucks, soil and debris haul trucks, and material delivery trucks.

It is anticipated that the pumps and traveling screen mechanism would operate autonomously and consistently year-round, with the ability for the City to monitor the systems remotely. The system would be designed to operate over the expected tidal range at the site and with future sea level rise of up to 3.8 ft. Maintenance activities would include daily removal of trash/debris from the traveling screen, pressure washing of the existing trash screens, and periodic maintenance/repair of the pumps.

The DEIR included the following project alternatives:

> *Alternative A: No Project*
> The City would not construct the project and the cessation of the AES and HGS powerplant pumps would have an immediate effect on Alamitos Bay circulation. The City would continue to monitor water quality conditions and would inform the public if the water quality standards fell below those recommended for recreational uses, such as swimming.
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> *Alternative B: Limited Triggered Pumping Alternative*
> The City would install pumps and supporting infrastructure, screen mechanisms, electrical systems, and piping. However, the pumps would only be operated when needed as determined by weekly water quality testing, in order to maintain water quality standards, then the pumps would be turned off once water quality standards were met. It is anticipated that the pumps would run for a cumulative, but non-continuous duration of three months (90 days) annually.

Alternative C: Limited Seasonal Pumping Rate

The City would install pumps and supporting infrastructure, screen mechanisms, electrical systems, and piping. However, the pumps would be operated seasonally from April to October when recreational demand is highest and natural water circulation from storm events is lowest and the pumps would operate at the lowest rate (400 cubic feet per second) that is estimated to maintain water quality standards.

Alternative D: In-Bay Water Quality Enhancements

Does not include construction of the pumps and supporting infrastructure, screen mechanisms, electrical systems, and piping, but would instead rely on localized water quality improvements in areas with high pollution sources and/or high recreational uses, such as Mother's Beach.

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 commence in 2026 and will continue for approximately 2 to 2.5 years.

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 Northern anchovy (*Engraulis mordax*), which is an important forage fish.

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.

"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.

According to the DEIR, a potential mortality of approximately 417 million fish larvae would occur annually because of entrainment even though a low proportional mortality value for entrainment was calculated for target larval species (i.e., below 5 percent of the larval populations). Of the target taxa, goby larvae would suffer the greatest larval population loss, followed by combtooth blennies and silversides, and Northern anchovy is predicted to incur the least impact. The Department remains concerned about the entrainment impacts as a result of the proposed Project.

While the Department acknowledges that maintenance activities would include daily removal of trash/debris from the traveling screen and pressure washing of the existing trash screens, the Department is concerned that daily screen cleaning may not be sufficient at all times of the year. Potential increases in water velocity at the screens due to excess debris, such as eelgrass from die-off in the winter season, could accumulate and get impinged on the screens which would increase velocity at the screen.

Recommendations: Due to remaining entrainment concerns, the Department recommends that the City implements an adaptive management plan that includes a combination of Alternative B: Limited Triggered Pumping Alternative and Alternative D: In-Bay Water Quality Enhancements. To reduce entrainment of larval species while maintaining water quality for sensitive species like eelgrass, pumps could be operated based on the results of weekly water quality testing. The DEIR should include the City's adaptive management plan for implementing Alternatives B and D to balance minimizing entrainment impacts with water quality impacts. The adaptive management plan should include clear objectives and measurable performance indicators, proposed management actions with expected outcomes, a robust monitoring program, and a mechanism for adjusting strategies based on lessons learned.

The Department recommends that the DEIR include additional monitoring of the screen during times when there is potential of increased debris, potentially causing impingement and increased velocity. The velocity should be monitored behind the screen, and an increase in debris will necessitate more frequent inspections and cleaning to prevent exceeding a through screen velocity of 0.5 ft/s.

Native Eelgrass Impacts

Comments: According to the DEIR, the closest known eelgrass bed to the marine study area is at the confluence of Los Cerritos Channel with Marine Stadium at the Jack Dunster Marine Biological Reserve, which is approximately one mile west of the marine study area. 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 National Marine Fisheries Service (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 City includes conducting a preliminary eelgrass survey in accordance with the California Eelgrass Mitigation Policy (CEMP) to determine whether eelgrass is present in the Project area as a mitigation measure in the DEIR. 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 impacts to eelgrass, 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 impacts to eelgrass 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; and
- To minimize impacts to eelgrass 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.

Invasive Species Impacts

Comments: While the Department appreciates that the DEIR recognized *Caulerpa spp.* as a potential invasive species, the Department is concerned that the DEIR did not include a mitigation measure for conducting pre-construction *Caulerpa spp.*

surveys. 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 the City includes 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) as a mitigation measure in the DEIR. Any sightings of *Caulerpa spp.* should be reported within 24 hours to the Department (Caulerpa@wildlife.ca.gov) and NMFS (nmfs.wcr.caulerpa@noaa.gov).

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 (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 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 DEIR 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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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.