UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

JAN 30 2009

In response, refer to:
150308SWR2008PR00070:MLD

Dr. Ralph G. Appy
Director of Environmental Management
Port of Los Angeles
425 South Palos Verdes Street
San Pedro, CA 90731

Dear Dr. Appy:

NOAA's National Marine Fisheries Service (NMFS) has reviewed the Draft Environmental Impact Report (DEIR) for the Port of Los Angeles's (POLA) Wilmington Waterfront Development Project (Project). NMFS offers the following comments pursuant to section 305(b)(4)(A) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA), Marine Mammal and Protection Act (MMPA), and the Fish and Wildlife Coordination Act.

Proposed Project

The proposed Project would include the construction of a waterfront promenade, public viewing piers, and 5,870-square-feet of floating docks for recreational boaters, which would include the construction of 43,220 square feet of new overwater surface area and approximately 17,880 square feet of replacement area. In total, 61,100 square feet of pile-supported waterfront promenade and piers would be constructed. However, total new shaded area would be 41,325 square feet due to the design feature of adding 7,765 square feet of metal grating to permit light to pass through. Approximately 750 new and 478 replacement pilings would be required to support the promenade and piers.

The proposed Project would also reconstruct the existing bulkhead, which is an old, piecemeal structure that does not meet current seismic design standards. Two different structural systems would be used to reconstruct the bulkhead: (1) a deep soil-cement mixing landward of the existing bulkhead, with no work waterward of the existing bulkhead, and (2) a sheet pile bulkhead, located waterward of the existing bulkhead. This second system would require the filling of approximately 2,200 square feet (0.05-acres) of marine habitat below the mean higher high water (MHHW) line. The sheet pile bulkhead would require the sheet pile be driven using both a vibratory and an impact pile driver.

The loss of 0.05 acres of Inner Harbor habitat would be mitigated by debiting the appropriate credits from the Inner Harbor Mitigation Bank, as governed by the Memorandum of Understanding (MOU) to establish a procedure for advance compensation of marine habitat losses incurred by selected Port development projects within the Harbor District of the City of Los Angeles

The soft start technique will be employed for all pile driving activities. The soft start technique requires that the initial strikes of a piling with an impact type pile driver are not performed at full force, but at a significantly reduced force and slowly build to full force over several strikes. This method provides opportunity for species that may occur in the vicinity of the pile driving activities to effectively move to another area away from the pile driving, thus limiting the effects of pile driving to disturbance and avoiding injury.

The proposed Project would also result in use of the waterfront by recreational boaters. The floating docks allow for 9 vessels averaging 30 feet in length. A water taxi may also operate from the floating docks at some point in the future. As a worst-case scenario, it is estimated that, as a result of the proposed Project, there would be approximately 36 recreational boat trips and possibly a water taxi program that could be developed at a later time.

Magnuson-Stevens Fishery Conservation and Management Act Comments

Action Area

The proposed project occurs in essential fish habitat (EFH) for various federally managed fish species within the Pacific Groundfish and Coastal Pelagics Fishery Management Plans (FMPs). In addition, the project occurs within estuarine habitat, which is considered a habitat area of particular concern (HAPC) for various federally managed fish species within the Pacific Groundfish FMP. HAPC are described in the regulations as subsets of EFH which are rare, particularly susceptible to human-induced degradation, especially ecologically important, or located in an environmentally stressed area. Designated HAPC are not afforded any additional regulatory protection under MSA; however, federally permitted projects with potential adverse impacts to HAPC will be more carefully scrutinized during the consultation process.

Effects of the Action

The proposed fill associated with the bulkhead would result in the direct loss of 0.05 acres of EFH and habitat for other fishery resources. As part of the proposed project, POLA will debit the appropriate credits from the Inner Harbor Mitigation Bank to compensate for loss of EFH and habitat for other fish and wildlife resources. NMFS believes this will adequately offset the adverse impacts to EFH associated with the proposed fill.

The proposed Project involves a significant amount of overwater structures (e.g. docks, piers, and promenade). The shadow cast by an overwater structure affects both the plant and animal communities below the structure. Light is the single most important factor affecting aquatic plants. Light levels underneath overwater structures have been found to fall below threshold amount for the photosynthesis of diatoms, benthic algae, eelgrass, and associated epiphytes and

other autotrophs. These photosynthesizers are an essential part of nearshore habitat and the estuarine and nearshore food webs that support many species of marine and estuarine fishes.

In addition, fishes rely on visual cues for spatial orientation, prey capture, schooling, predator avoidance, and migration. The reduced-light conditions found under an overwater structure limit the ability of fishes, especially juveniles and larvae, to perform these essential activities. Shading from overwater structures may also reduce prey organism abundance and the complexity of the habitat by reducing aquatic vegetation and phytoplankton abundance. Able *et al.* (1998)[1] concluded that habitat quality under large platforms of large piers is likely poor for juvenile fishes when compared with nearby pile field and open-water habitat types.

Overwater structures and their associated artificial structures may also have additional impacts beyond just changes in light conditions. Recent research has suggested that placement of artificial substrates in the nearshore environment may disproportionately favor the proliferation of non-native species. In addition, these structures may alter local hydrological and sedimentation patterns, which may in turn affect community structure. Lastly, the addition of overwater structures for public access purposes (e.g. promenade) may inadvertently result in increased pollution or debris due to the expected increase in public use. NMFS believes the net increase in overwater structures and coverage would adversely affect EFH by reducing the quality of habitat available within the Inner Harbor.

Pile driving and other related construction activities will result in direct benthic disturbances and will increase turbidity within the project area. Turbidity can adversely affect fish and other aquatic life by impairing vision and sense of smell, injuring gills, reducing water transparency, and covering sessile organisms. NMFS expects these impacts will likely be temporary and minimal.

The construction activities associated with this project may generate significant underwater noise. For example, pile driving can generate intense underwater sound pressure waves that may adversely affect the ecological functioning of EFH. These pressure waves have been shown to injure and kill fish. Injuries associated directly with pile driving are poorly studied, but include rupture of the swimbladder and internal hemorrhaging. Sound pressure levels (SPL) 100 decibels (dB) above the threshold for hearing are thought to be sufficient to damage the auditory system in many fishes. Short-term exposure to peak SPL above 190 dB (re: 1 μPa) are thought to cause physical harm to fish. However, 155 dB (re: 1 μPa) may be sufficient to temporarily stun small fish. According to the DEIR, noise and vibration from pile driving will be in the range of 192 dBpeak, or roughly 172 to 182dB_{RMS}. POLA proposes to utilize a 'soft start' approach when utilizing an impact hammer for concrete piles. NMFS believes this approach would help minimize impacts to EFH. Turbidity, noise, and vibration would likely cause most fish to temporarily leave the immediate project area during construction.

---

[1] Able, K. W., J.P. Manderson, and A.I. Studholme. 1998. The distribution of shallow water juvenile fishes in an urban estuary: the effects of man-made structures in the Lower Hudson River. Estuaries 21: 731-44.

Another potential project concern is the spread of the invasive alga *Caulerpa taxifolia* from pile driving activities. As you may be aware, this alga has been introduced to our coastline. Evidence of harm that can ensue as a result of an uncontrolled spread of the alga has already been seen in the Mediterranean Sea where it has destroyed local ecosystems, impacted commercial fishing areas, and affected coastal navigation and recreational opportunities. Although it is not known to be present within POLA, it has been detected in two other locations in Southern California. If the invasive alga is present within the project area, the pile driving activities would adversely affect EFH by promoting its spread and increasing its negative ecosystem impacts.

EFH Conservation Recommendations

As described in the above effects analysis, NMFS has determined that the proposed action would adversely affect EFH for various federally managed fish species within the Coastal Pelagics Species and the Pacific Coast Groundfish FMPs. Therefore, NMFS offers the following EFH conservation recommendations to avoid, minimize, mitigate, or otherwise offset the adverse effects to EFH pursuant to section 305(b)(4)(A) of the MSA.

1. POLA should evaluate an additional alternative that further minimizes the amount of overwater coverage. NMFS recognizes the importance of providing coastal access opportunities. However, NMFS believes that coastal access can also be provided by creating viewing opportunities that are adjacent to marine habitat, rather than over it. POLA should describe the water dependency of the action and provide justification for any increases in overwater coverage.

2. Given the relatively large amount of habitat impacted (~ 1 acre) by increased overwater coverage, POLA should develop a mitigation plan that offsets the reduction in habitat quality. This plan should be developed in consultation with NMFS and other interested resource agencies.

3. A pre-construction survey for Caulerpa of the project area should be conducted in accordance with the Caulerpa Control Protocol (see http://swr.nmfs.noaa.gov/hcd/caulerpa/ccp.pdf) not earlier than 90 days prior to planned construction and not later than 30 days prior to construction. The results of that survey should be transmitted to NMFS and the California Department of Fish and Game at least 15 days prior to initiation of proposed work. In the event that Caulerpa is detected within the project area, no work shall be conducted until such time as the infestation has been isolated, treated, and the risk of spread is eliminated.

Marine Mammal Protection Act (MMPA) Comments

Marine mammals have not been well studied within Los Angeles Harbor, however, both pinnipeds and cetaceans have been recorded including: Pacific harbor seals (*Phoca vitulina richardii*), California sea lions (*Zalophus californianus*), bottlenose dolphins (*Tursiops truncatus*), short-beaked common dolphins (*Delphinus delphis),* pacific white-sided dolphins

(*Lagenorhynchus obliquidens*), Risso's dolphins (*Grampus griseus*), and gray whales (*Eschrichtius robustus*). The harbor's most common marine mammal is the sea lion, which can be observed throughout the year foraging within the harbor or resting on buoys, breakwaters, and other man-made objects. They are commonly found on the Main Channel, adjacent to the commercial fishing markets and around sport fishing vessels, specifically near the Ports O'Call. Harbor seals are less likely to be found in the area, but have been observed. The other marine mammals listed above are rare visitors to the harbor area. Possible impacts to marine mammals from the proposed project may include underwater sound from pile driving and project-related vessels. In addition, we offer comments related to dredging, as it was not clear from the DEIR if dredging will be a component of this project over the lifetime of this project.

Whales, dolphins, porpoises, seals, and sea lions are protected under the Marine Mammal Protection Act (MMPA). *See* 16 U.S.C. § 1361 *et seq.* Under the MMPA, it is generally illegal to "take" a marine mammal without prior authorization from NMFS. "Take" is defined as harassing, hunting, capturing, or killing, or attempting to harass, hunt, capture, or kill any marine mammal. Except with respect to military readiness activities and certain scientific research conducted by, or on behalf of, the Federal Government, "harassment" is defined as any act of pursuit, torment, or annoyance which has the potential to injure a marine mammal in the wild, or has the potential to disturb a marine mammal in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.

Sounds introduced into the sea by man-made devices could have a deleterious effect on marine mammals by causing stress or injury, interfering with communication and predator/prey detection, and changing behavior. Acoustic exposure to loud sounds, such as those produced by pile driving activities, may result in a temporary or permanent loss of hearing (termed a temporary (TTS) or permanent (PTS) threshold shift) depending upon the location of the marine mammal in relation to the source of the sound. NMFS is currently in the process of determining safety criteria (*i.e.,* guidelines) for marine species exposed to underwater sound. However, pending adoption of these guidelines, we have preliminarily determined, based on past projects, consultations with experts, and published studies, that 180 dB re $1\mu Pa_{RMS}$ (190 dB re $1\mu Pa_{RMS}$ for pinnipeds) is the impulse sound pressure level that can be received by marine mammals without injury. Marine mammals have shown behavioral changes when exposed to impulse sound pressure levels of 160 dB re $1\mu Pa_{RMS}$.

Harassment of marine mammals may occur if hauled animals flush the haul out site and/or move out of the immediate aquatic area to increase their distance from pile driving or dredging-related activities, such as noise associated with the dredging, pile driving, presence of workers, or unfamiliar activity in proximity to a haul out site. Percussive piles, such as an impact hammer or drop hammer, generally result in the greatest noise production when compared to other methods of pile installation. Although percussive pile driving does not produce a continuous noise, the high amplitude and repeated blows of the hammer every few seconds can affect ambient noise levels in the surrounding acoustic environment. The force used to drive a pile, or power setting of the hammer, pile type and diameter, and hardness of the substrate the pile is driven, are important factors in determining the amount of energy released into the surrounding waters. Because of the high amplitude and wide frequency spectrum of pile driving noise, many species can potentially be affected. The measured sound exposure levels of a clamshell dredge may

range between 75-88 dBA (re 20 μPa) at 50 feet. Animals have been observed flushing from haul out sites at a sound exposure level of less than 100dBA, and it is possible that marine mammals may modify their behavior as a result of the noise produced by the pile driving and dredging operations.

In section 3.3.4.3.1, Impact BIO-1a, the DEIR indicates that installation of 24-inch concrete piles with an impact hammer typically generates 192 dB_{peak} or roughly 172 to 182 dB_{RMS} at 33 feet. NMFS supports the recommendation for a "soft start," as proposed for minimizing impacts to marine mammals in the area, however, as noted in the DEIR using the San Francisco Oakland Bay bridge project as an example, "...sea lions swam rapidly out of the area when the piles were being driven" and it is expected that the animals would react similarly during this project. Please note the definition of a "take" under the MMPA and that the rapid exit from the project area could be considered harassment under the MMPA. In addition, this is not considered a mitigation measure to reduce impacts to marine mammals should the action cause harassment and remove the animals from the project area. Please note, that for the example used in the DEIR for pile driving, Caltrans was issued an Incidental Harassment Authorization under the MMPA, permitting them for take by harassment for their activities at the San Francisco Oakland Bay Bridge, which included pile driving.

Based on the information provided in the DEIR regarding the potential take of pinnipeds, it may be necessary to receive authorization from NMFS under the MMPA for this proposed project. Most incidental take authorizations to date have involved the incidental harassment of marine mammals by noise.

Please note, that in the event of a construction vessel collision with a marine mammal, Mr. Joseph Cordaro, the NMFS Southwest Regional Office's Stranding Coordinator must be immediately contacted at 562-980-4017 and a report must be sent to the NMFS Southwest Regional Office.

In addition, NMFS recommends that the applicant consider including a design feature, particularly to the low-lying docks on the water, to non-lethally deter pinnipeds, specifically California sea lions, from hauling out. NMFS offers their expertise and assistance, should the applicant want to explore design modifications.

Thank you for coordinating with NMFS regarding this project. We appreciate your efforts to comply with Federal regulations and to conserve and protect marine mammals. Please contact Monica DeAngelis at 562-980-3232 or Monica.DeAngelis@noaa.gov if you have any questions concerning this letter or if you require additional information.

Sincerely,

for

Rodney McInnis
Regional Administrator