

XV. ENVIRONMENTAL IMPACTS

Environmental impacts of POLA and POLB affect air and water quality. POLB implemented a “Green Port Policy” in January 2005 that serves as a guide for decision making and established a framework for environmentally friendly Port operations. The policy’s five guiding principles are:

- Protect the community from harmful environmental impacts of Port operations.
- Distinguish the Port as a leader in environmental stewardship and compliance.
- Promote sustainability.
- Employ best available technology to avoid or reduce environmental impacts.
- Engage and educate the community.

POLA Environmental Policy states that the port is committed to managing resources and conducting Port developments and operations in both an environmentally and fiscally responsible manner. The Port will strive to improve the quality of life and minimize the impacts of its development and operations on the environment and surrounding communities through the continuous improvement of its environmental performance and the implementation of pollution prevention measures, in a feasible and cost effective manner that is consistent with the Port’s overall mission and goals, as well as with those of its customers and the community.

A. Air

A new state rule on cleaner-burning ship fuel took effect January 1, 2007. The regulation, adopted by the California Air Resources Board in 2005, requires large ocean-going vessels, including container and cruise ships, to use low-sulfur fuels in their auxiliary engines within 24 nautical miles of the California coastline. The regulation will reduce emissions of harmful diesel particulate matter (PM), smog-forming nitrogen oxides (NO_x) and sulfur oxide (SO_x).

B. Water

Environmental Baseline: LA/LB Harbors Natural Resources Inventory: This inventory comprises natural habitats, plants and animals that Plan provisions may affect.

Considerable changes have occurred in the harbors since the comprehensive biological surveys of the 1970’s and more focused ones in the 1980 and 1990’s. Some of these changes included deepening of navigational channels and basins, constructing landfills at piers 300 and 400 in POLA, constructing a transportation corridor out to Pier 400, expanding Pier J in POLB, and constructing the west basin of the Cabrillo Marina complex. As part of mitigation for construction, shallow water habitats were created in formerly deepwater areas. Thus several areas that were previously aquatic habitat are now land, some previous areas that were deep water are now shallow, and

circulation patterns within the harbors have been altered.

Invasive species are potential threats to the ports. Invasive species are non-native species whose introduction does or is likely to cause economic or environmental harm or harm to human health. Environmental harm may be a result of direct effects of *invasive species*, leading to biologically significant decreases in native species populations. Invasive species can be introduced to the ports via ship ballast water.

For further information, Appendix H contains a reference bibliography, a list of advisors and resources and the environmental study group's report of the harbors.

POLA/POLB and their associated approach areas support highly diverse biological communities in the following six habitats (see Table 1 for further detail):

- a. Benthic Habitats: Hard substrate, a common habitat including artificial features such as cement pilings, provides forage and resting areas for shorebirds and shelters numerous fish. Algal beds include 87 species of macro-algae. Soft bottom habitat, comprising most of San Pedro Bay and over 10,000 acres of outer harbor, supports burrowing organisms and bottom-dwellers. The outer harbor supports more diverse and less dense fauna than the inner harbor. Sandy intertidal habitats, along Cabrillo Beach, and Los Angeles Harbor's 190-acre landfill, support burrowing invertebrates, which provide food for shore birds at low tide and fish at high tide.
- b. Water Column: This habitat nurtures 130 fish species, including several commercially and recreationally valuable fish. These in turn feed resident and migratory birds. Eggs and larvae proliferate in late winter and early spring. Birds and larger fish spawn, breed and forage in the shallow water habitat near the former seaplane anchorage, the Los Angeles breakwater near Cabrillo Beach, and along the east side of the Pier 400 Corridor. These habitats, although in some cases new and not yet fully productive, are proving environmentally significant.
- c. Salt Marsh: The only extant wetlands habitat in LA-LB Harbor is the 3.5 acre constructed Cabrillo Marsh adjacent to POLA's Cabrillo Beach area. The historic wetlands in the area were largely converted to port uses before World War II; only the wetlands in and around the Seal Beach Naval Weapons Station remain.
- d. Kelp Beds: Kelp and macroalgal communities are narrowly distributed within the harbor areas, being principally restricted to the shallow hard bottom environments associated with riprap shorelines, breakwaters, and pier structures. Large stands of giant kelp line both sides of the San Pedro Breakwater, along with ribbon kelp and smaller stands occur on riprap in

the Outer Harbor. There is a general decline of algal diversity from the outermost portions of the harbors to the innermost channel environments. Giant kelp communities within LA-LB Harbor are not abundant totaling only about 25 acres in the spring and declining to about 14 acres in the fall. Coastal kelp feeds and shelters near shore fish and invertebrates, which eat up to 50% of the fronds each season. Much uneaten kelp sheds and drifts to benthic habitats, where it feeds other invertebrates.

- e. Special Designation Habitats: The harbor approaches are near the ecologically sensitive Point Fermin Marine Life Refuge and Seal Beach National Wildlife Refuge. In addition, 13% of California's endangered Least Terns (state and federally listed) live in a Least Tern Management Area on the southern portion of the Pier 400 Stage 1 landfill. Shallow water habitats in the harbor feed the terns and also provide a nursery for halibut.
- f. Bird/Marine Mammal Habitat: In winter, the harbor hosts up to 16,500 birds from 153 species, with those migrating along the Pacific Flyway joining species present all year. Most birds roost in the inner harbor and feed in the outer harbor. Waterfowl forage in shallow water, endangered brown pelicans (state and federally listed) in deeper waters. The breakwater annually hosts pelicans foraging on northern anchovies. Another state endangered bird, the peregrine falcon, nests on bridges throughout the harbor area.

Human activity, noise, and pollution interfere with bird feeding. Repeated disturbance forces birds to consume five times their normal intake to maintain body weight. Least terns are especially vulnerable to nesting disruptions. POLB relocated a large colony of black-crowned night herons from the former Long Beach Naval Station to Gull Park at the end of the Navy Mole in 1998. The population monitoring is ongoing.

Dolphins inhabit the harbor year-round, with record numbers counted in 1995. Seals and sea lions rest and forage on the breakwaters and other rocky harbor areas. Marine turtles, including federally endangered green sea turtles, also visit. Whale species migrate through the area, southbound from November through February and northbound from March through May. A navy vessel struck and killed an adult gray whale in 1995, highlighting the need for caution during migrations.

- g. Water Quality: Water quality measurements have proven to be consistent with expected values for near-coastal and harbor environments. Results indicate a continued trend of water quality improvement since the 1970's, with most dissolved oxygen concentrations in excess of 5 milligrams/liter. Episodic and localized changes in some parameters, such as low dissolved oxygen concentrations coinciding with low water clarity, suggested minor effects possibly associated with sediment dredging events.

Table 1: Examples of species found in various harbor habitats

<p><u>Benthic habitat species:</u></p> <p><u>Primary hard substrate:</u> acorn barnacle, articulated coralline alga, bat ray, coral, corbina, filter-feeding gastropod, kelp bass, limpet, leopard shark, mussel, octopus, purple sea urchin, rockfish, shore crab</p> <p><u>Algal bed:</u> blacksmith, feather boa kelp, giant kelp, kelp bass, sargassum kelp, sea bass, señorita, surfperch</p> <p><u>Soft bottom habitat:</u> halibut, tongue fish, gobie, sand dabs, round stingray, white croaker, clam, starfish, sea urchin, worm</p> <p><u>Sandy intertidal habitat:</u> worm, sand crab, silversides, grunion</p>
<p><u>Water column species:</u></p> <p>Barracuda, grunion, mackerel, northern anchovy, queenfish, ray, sardine, shad, smelt, white sea bass</p>
<p><u>Kelp bed species:</u></p> <p>amphipod, black abalone, crab, flatworm, lobster, mollusks, polychaete worm, purple sea urchin, shrimp, black perch, kelp bass, señorita, California sheephead</p>
<p><u>Bird species:</u></p> <p>American kestrel, Anna's hummingbird, barn swallow, belted kingfisher, black oystercatcher, brown pelican, Caspian tern, cormorant, diving duck, elegant tern, grebe, gull, loon, mockingbird, peregrine falcon, royal tern, western gull</p>
<p><u>Marine mammal species:</u></p> <p>Blue whale, bottlenose dolphin, common dolphin, harbor seal, Pacific gray whale, Pacific white-sided dolphin, California sea lion</p>

C. Environmental Impact Analysis: The following Plan chapters may have an environmental impact:

Chapter VI	Contingency Routing
Chapter X	Small Craft
Chapter XI	Vessel Traffic Service
Chapter XII	Tug Escort/Assist for Tank Vessels
Chapter XIII	Pilotage
Chapter XVI	Plan Enforcement
Chapter XVII	Other: Offshore Marine Oil Terminals

In addition, the Los Angeles Regional Water Quality Control Board, through its “Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties” (June 13, 1994), has identified the following beneficial uses for the Los Angeles/Long Beach Harbor areas:

- a. Inner & Outer Harbor; Beaches, Marinas: Existing Uses: Industrial service, navigation, contact and non-contact recreation, commercial and sport fishing, marine habitat, wildlife habitat, preservation of rare and endangered species, shellfish harvesting. Potential: spawning.
- b. Los Angeles River Estuary: Existing Uses: preservation endangered species, estuarine habitat, wetland, habitat, marine habitat, wildlife habitat, migration of aquatic organisms, spawning, reproduction and/or early development of fish, navigation, commercial and sport fishing, industrial service supply, and contact and non-contact water recreation. Potential uses: shellfish harvesting.
- c. Dominguez Channel Estuary: Existing Uses: preservation of rare and endangered species, estuarine habitat, marine habitat, wildlife habitat, migration of aquatic organisms, spawning, reproduction and/or early development of fish, commercial and sport fishing, and contact and non-contact water recreation. Potential uses: navigation.

The Los Angeles Regional Water Quality Control Board (“RWQCB”) has also recognized that these waters presently do not achieve the water quality objectives of the Federal Water Pollution Control Act (“Clean Water Act”) and are therefore identified by the State of the “1998 California 303(d) List and TMDL Priority Schedule” (approved by USEPA May 2, 1999). Pollutants causing impairment include, among others, DDT, PAHs, PCBs, Tributyltin, Chlordane, Chromium, Lead, Zinc, Copper and sediment toxicity. The specific part of the 303(d) List with a list of the water quality impairments in the LA/LB Harbor area, by specific waterway, is available through the RWQCB. Over the next thirteen years, the Regional Board will be establishing pollution limits for these impairments pursuant to Section 303(d) of the Clean Water Act.