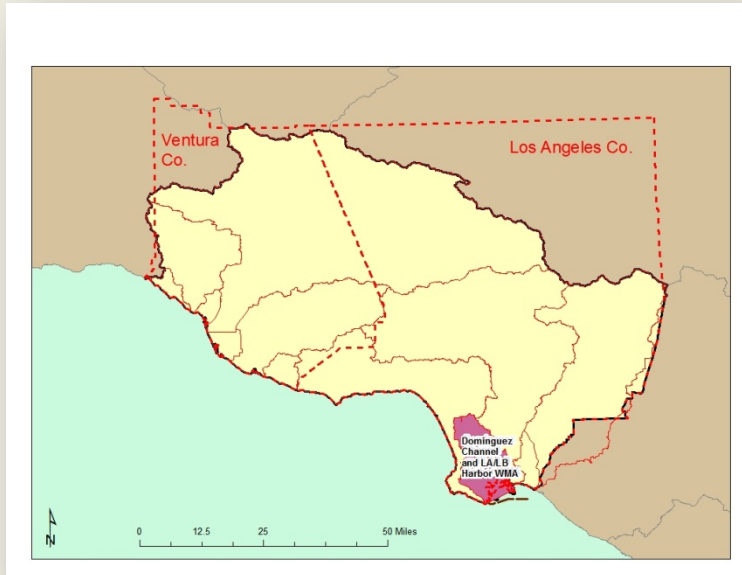


DOMINGUEZ CHANNEL AND LOS ANGELES/LONG BEACH HARBORS WMA



Watershed Description

The Los Angeles and Long Beach Harbors are located in the southern portion of the Los Angeles Basin. Along the northern portion of San Pedro Bay is a natural embayment formed by a westerly extension of the coastline which contains both harbors, with the Palos Verdes Hills the dominant onshore feature. Historically, the area consisted of marshes and mudflats with a large marshy area, Dominguez Slough, to the north, and flow from the Los Angeles River entered where Dominguez Channel now drains.

Near the end of the 19th century and during the beginning of the next century, channels were dredged, marshes were filled, wharves were constructed, the Los Angeles River was diverted, and a breakwater was constructed in order to allow deep draft ships to be directly offloaded and products be swiftly moved. The Dominguez Slough was completely channelized and became the drainage endpoint for runoff from a highly industrialized area. Eventually, the greater San Pedro Bay was enclosed by two more breakwaters and deep entrance channels were dredged to allow for entry of ships with need of 76 feet of clearance. The LA/LB Harbor complex together is now one of the largest ports in the country. The harbors are considered to be one oceanographic unit. Despite its industrial nature, contaminant sources, and low flushing ability, the inner harbor area supports fairly diverse fish and benthic populations and provides a protected nursery area for juvenile fish. The California least tern, an endangered species, nests in one part of the harbor complex. Some wetlands do persist in the Machado Lake area.

Beneficial Uses in WMA

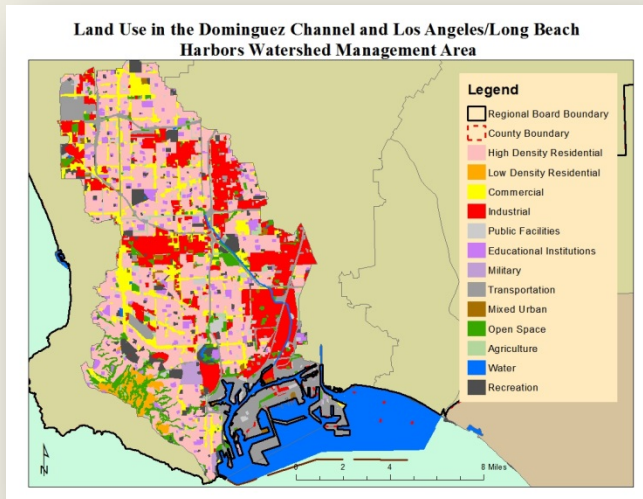
Dominguez Channel (above estuary)

Noncontact water recreation
Preservation of rare & endangered species

Dominguez Channel (in estuary)

Contact & noncontact water recreation
Preservation of rare & endangered species
Industrial water supply
Navigation
Commercial & sportfishing
Marine habitat
Estuarine habitat
Wildlife habitat
Migratory & spawning habitat

The outer part of both harbors (the greater San Pedro Bay within the breakwaters) has been less disrupted and supports a great diversity of marine life and a large population of fish. It is also open to the ocean at its eastern end and receives much greater flushing than the inner harbors. Collectively, the fish population of both inner and outer harbors was estimated at 44 million in 2000 which makes a large portion of this WMA a valuable marine resource.



Land use is primarily industrial and high density residential as can be seen in the figure to the left. Additional information can be found in a “State of the Watershed” report for Dominguez prepared by Regional Board staff in 2008. The document can be downloaded at http://www.waterboards.ca.gov/losangeles/water_issues/programs/regional_program/wmi/water_report/DominguezChannelState.shtml.

Water Quality Problems and Issues

Dominguez Channel drains a highly industrialized area with numerous nonpoint sources of pollution for PAHs and also contains remnants of persistent

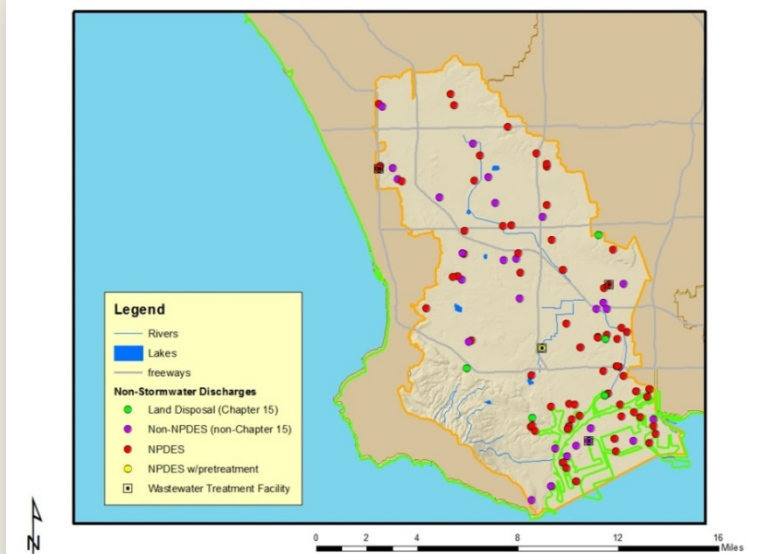
legacy pesticides as well as PCBs which results in poor sediment quality both within the Channel and in adjacent Inner Harbor areas. Although highest in Dominguez Channel estuary and Consolidated Slip sediments, DDT is pervasive throughout the harbors. The Channel was the recipient of runoff from the Montrose Chemical Facility which manufactured DDT for several decades until the early 1970s. Metals, particularly copper and zinc, remain elevated at some locations in the sediments of the inner harbors. A likely major nonpoint source contributor to these concentrations is antifouling paint containing copper that leach from the many ships and boats in the harbors as well as the zinc anodes used on watercraft. Sediment toxicity occurs more frequently in parts of the Inner Harbor than elsewhere. Consolidated Slip, the part of Inner Harbor immediately downstream of Dominguez Channel, continues to exhibit a very impacted benthic invertebrate community.

All discharges from point sources (a pipe or outfall) to surface waters are required to be regulated by federal National Pollutant Discharge Elimination System (NPDES) permits while discharges to land are regulated by State Waste Discharge Requirements (WDRs, often called non-NPDES permits). The Terminal Island Treatment Plant discharges tertiary-treated effluent to the outer LA/LB Harbor and is under a time

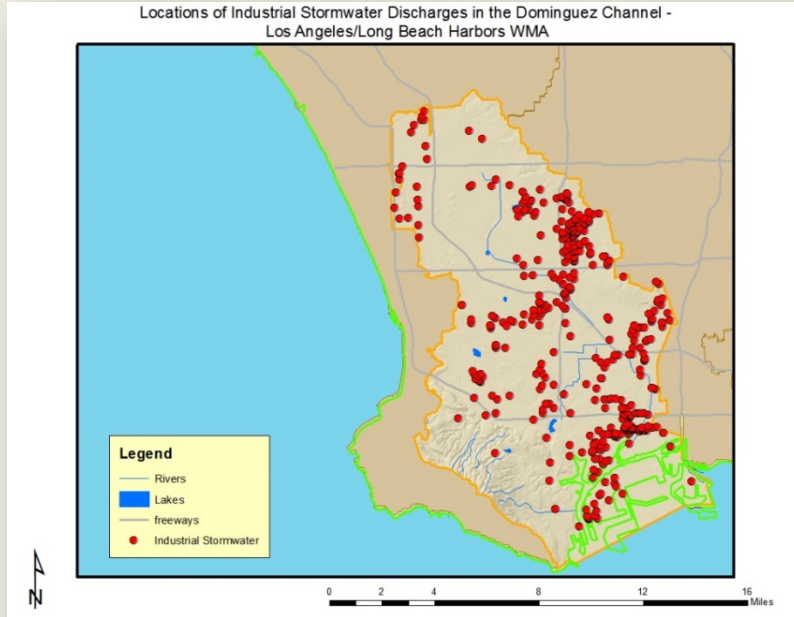
Permitted discharges:

- ~100 nonstormwater discharges
- Seven major NPDES discharges: one POTW, two generating stations, and four refineries;
- 441 dischargers covered under an industrial storm water permit
- 113 dischargers covered under the construction storm water permit
- Coverage by several municipal stormwater watershed and enhanced watershed management plan permit groups, and by the City of Long Beach municipal stormwater permit

Locations of Non-Stormwater Discharges in the Dominguez Channel - Los Angeles/Long Beach Harbors WMA

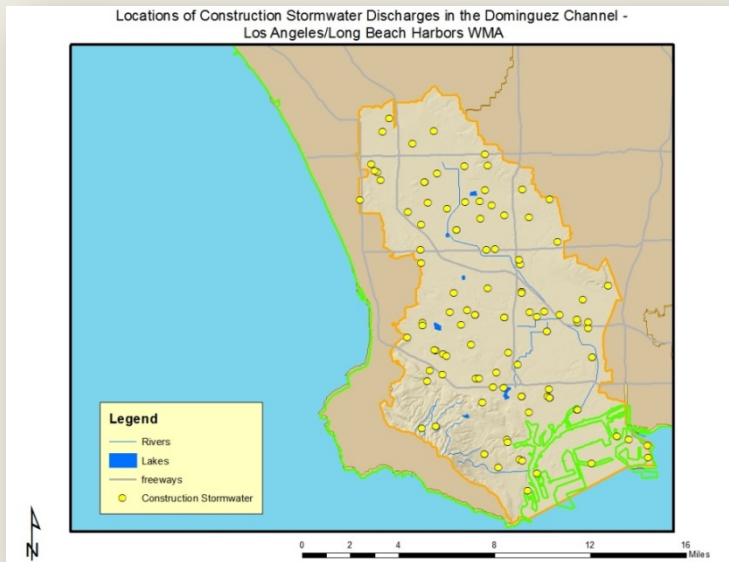


schedule order to remove the discharge. The discharger's plan consists of achieving full reclamation (mostly for industrial reuse purposes) by 2020 which would eliminate the discharge completely. Two generating stations discharge to the inner harbor areas. Many smaller, non-process waste discharges also occur into the harbors. The locations of facilities with discharges to surface water or to the ground (other



than those covered by general industrial or construction stormwater permits) are shown in the figure above. Major NPDES discharges are from either POTWs with a yearly average flow of over 0.5 MGD, from an industrial source with a yearly average flow of over 0.1 MGD, or are those discharges with lesser flows but with potential acute or adverse environmental impacts to surface waters. Minor NPDES discharges are all other discharges to surface waters that are not categorized as a Major. Minor discharges may be covered by general NPDES permits, which are issued administratively, for those

that meet the conditions specified by the particular general permit. Non-NPDES (non-Chapter 15) discharges are those to land or groundwater such as commercial septic systems or percolation ponds that are covered by Waste Discharge Requirements, a State permitting activity. Chapter 15 discharges generally relate to land disposal (landfills) under Chapter 15 of the California Code of Regulations, again an exclusively State permitting activity.



About one-half of the 74 NPDES permitted facilities discharge to Dominguez Channel; the rest discharge to the LA/LB Harbor complex.

Of the 441 dischargers enrolled under the general industrial storm water permit in the watershed, the largest numbers are located in the cities of Gardena, Wilmington, Torrance, and Carson, along Dominguez Channel. Wholesale trade-durable goods, fabricated metal products, trucking & warehousing, chemicals & allied

products, transportation equipment, and rubber & miscellaneous plastics products are a large component of these businesses based on their Standard Industrial Classification (SIC) code. The locations of facilities with discharges covered by the general industrial stormwater permit are shown in the figure above.

There are 113 sites enrolled under the general construction storm water permit (see figure above). The sites are spread fairly evenly throughout the watershed and are a mix of residential, industrial, and commercial sites; about one-half of the sites are five acres or larger in size. The larger parcels of up to 500 acres in size are mostly located in the ports.

Click on the [link](#) for a complete list of permits in the watershed.

A considerable amount of water quality data are available on the California Environmental Data Exchange Network at <http://www.ceden.org> and on the My Water Quality web portal at <http://www.mywaterquality.ca.gov/index.shtml>.

Potential sources of pollution:

- Historical deposits of DDT and PCBs in sediment
- Discharges from POTW & refineries
- Spills from ships and industrial facilities
- Leaching of contaminated groundwater
- Stormwater runoff

Although the area is dramatically cleaner now than thirty-five years ago when rigorous water quality regulation of discharges began, parts of the Inner Harbor are still suffering the effects of historic deposits of pollutants in the sediment and current point and nonpoint source discharges. There are about 100 impairments in the WMA. **Click on the [link](#) to obtain a complete list of impairments.** The Los Angeles/Long Beach Inner Harbor is on the 2010 Clean Water Act Section 303(d) list due to bacteria, impaired benthic community, sediment toxicity, DDT, copper, zinc, PAHs, and PCBs. Potential sources of these

materials are considered to be historical deposition, discharges from the nearby POTW (especially for metals), spills from ships and industrial facilities, as well as stormwater runoff. Many areas of the harbors have experienced soil and/or groundwater contamination, which may result in possible transport of pollutants to the harbors' surface waters. Dredging and disposal, capping, and/or remediation of contaminated sediments and source control of pollutants in the harbors are current areas of focus by regulatory agencies.

Sediment data collected over many years for various research projects and pre-dredge studies have revealed areas of heavy contamination with metals, PCBs, and DDT, and occasionally PAHs at some sites but concentrations are quite variable spatially, possibly a result of the extensive dredging which has occurred in Inner Harbor over the years (an analysis of sediment data was conducted by Regional Board staff while preparing the previously-mentioned State of the Watershed Report in 2008. Additionally, development of the toxics and metals TMDL included a large number of modeling studies; all of these technical studies can be found at http://www.waterboards.ca.gov/losangeles/board_decisions/basin_plan_amendments/technical_documents/bpa_66_R11-008_td.shtml.

Regional Board Actions to Address Impairments

A number of Regional Board programs and actions are in place to address the water quality impairments noted earlier.

Total Maximum Daily Loads (TMDLs) have been developed (as required by the Clean Water Act) for many of the impairments in the watershed. The TMDL is a number that represents the assimilative capacity of a receiving water to absorb a pollutant and is the sum of the individual wasteload allocations for point sources, load allocations for nonpoint sources plus an allotment for natural background loading, and a margin of safety. TMDLs can be expressed in terms of mass per time (the traditional approach) or

in other ways such as toxicity or a percentage reduction or other appropriate measure relating to a water quality objective. A TMDL is implemented by reallocating the total allowable pollution among the different pollutant sources (through the permitting process or other regulatory means) to ensure that the water quality objectives are achieved. TMDLs in effect in all or parts of the watershed include those for various toxics and metals, nutrients, trash, and bacteria. Additional information on these TMDLs may be found at http://www.waterboards.ca.gov/losangeles/water_issues/programs/tmdl/.

The municipal discharges of storm water and non-storm water by the Los Angeles County Flood Control District, the County of Los Angeles, and 84 incorporated cities within the coastal watersheds of Los Angeles County with the exception of the City of Long Beach (hereinafter referred to separately as Permittees and jointly as the Dischargers) from all Municipal Storm Sewer Systems (MS4 – commonly known as the storm drain system) within Los Angeles County with the exception of Long Beach are subject to waste discharge requirements which were adopted in 2012. Both storm water and non-storm water from the MS4 is subject to the permit requirements. The permit effectively prohibits non-storm discharges into the MS4 and receiving waters with certain exceptions. It also requires that treatment control BMPs be designed to meet certain performance criteria, that each Permittee implement programs and measures to comply with the TMDLs' waste load allocations for the MS4 specified in the permit, and that regular inspections of various types of commercial facilities be undertaken. A monitoring program must also be implemented. Certain provisions of the permit are organized by watershed management area, which is appropriate given the requirements to implement 33 watershed-based TMDLs.

The MS4 Permittees are allowed the flexibility to develop Watershed Management Programs to implement requirements in the permit on a watershed scale through customized strategies, control measures, and BMPs. Participation in a Watershed Management Program is voluntary and allows a Permittee to address the highest watershed priorities. Customized strategies, control measures, and BMPs shall be implemented on a watershed basis, where applicable, through each Permittee's storm water management program and/or collectively by all participating Permittees through a Watershed Management Program (WMP). Permittees may elect to develop an enhanced Watershed Management Program (EWMP). An EWMP is one that comprehensively evaluates opportunities, within the participating Permittees' collective jurisdictional area in a Watershed Management Area, for collaboration among Permittees and other partners on multi-benefit regional projects that, wherever feasible, retain all non-storm water runoff and all storm water runoff from the 85th percentile, 24-hour storm event for the drainage areas tributary to the projects, while also achieving other benefits including flood control and water supply, among others. Permittees have formed several EWMP groups within the Dominguez WMA which include the Beach Cities Watershed Management Group, the Peninsula EWMP Agencies, and Dominguez Channel Watershed Management Area Group. Several other permittees are developing individual WMPs including: Carson, Gardena, Lawndale, and Lomita. More information about this permit may be found at http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/index.shtml#los_angeles.

Municipal storm water and urban runoff discharges from the MS4 owned and operated by the City of Long Beach are covered by separate waste discharge requirements. More information about this permit may be found at http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/index.shtml#long_beach.

A number of TMDLs contain load allocations assigned to irrigated agriculture. The Regional Board adopted a conditional waiver for discharges from irrigated lands (see http://www.waterboards.ca.gov/losangeles/water_issues/programs/tmdl/waivers/index.shtml) which requires agricultural interests to monitor and implement various best management practices as needed to

improve the quality of runoff from irrigated lands. This can be accomplished by growers either individually or through joining a group effort; within Los Angeles County, growers are organized into the Nursery Growers Association Los Angeles County Irrigated Lands Group.(NGA).

The regulatory and permitting issues surrounding the dredging and disposal of often contaminated sediments in the harbors are complex. Regional Board staff participates on an interagency team called the Southern California Dredged Material Management Team (SC-DMMT) which was established for the coordinated review of dredging projects and dredging policy issues within the Southern California area, including Los Angeles and Ventura Counties. In Los Angeles County, selected dredging projects are reviewed through the Los Angeles Regional Contaminated Sediment Task Force (CSTF) which was established through legislation in 1997 and with which Regional Board staff also participates. The CSTF developed a long-term management plan for dredging and disposal of contaminated sediments in the Los Angeles area. The CSTF also formulated guidelines for an Advisory Committee to conduct a coordinated project review of dredging activities in the Los Angeles region. Currently, the CSTF Advisory Committee evaluates proposed dredging and disposal projects, including pre-application planning, and evaluation of sampling results.

Activities Led by Watershed Stakeholders

The **Los Angeles Basin Stormwater Conservation Study** is being undertaken by the Los Angeles County Department of Public Works and the U.S. Department of the Interior, Bureau of Reclamation. The purpose of this proposed Basin Study is to identify alternatives, conduct trade-off analyses and develop recommendations to help bridge the gap between current and future water supply and water demand in the Basin Study watersheds (Los Angeles River, San Gabriel River, Ballona Creek, Dominguez Channel/Los Angeles Harbor, North Santa Monica Bay, South Santa Monica Bay, and Malibu Creek), taking into account climate change and population growth projections. The Basin Study will analyze imbalances in supply and demand by conducting a literature review of all water inputs and outputs. The Basin Study will identify issues where changes to the operation of water supply systems, modifications to existing facilities, development of new facilities, or non-structural changes by the Los Angeles County Flood Control District and its partners could help address water supply needs.

The Dominguez Channel Watershed Advisory Council was formed in 2001 and met frequently to conduct a variety of tasks including development of a **Watershed Management Master Plan** aimed at protecting and improving the environment and beneficial uses of the watershed. Proposition 13 funding was approved by the State Water Resources Control Board for the LA County Department of Public Works to work on the plan which was finalized in 2004. A list of potential implementation projects/programs is included in the Plan. Many members of the group now participate in Regional Board TMDL work in the watershed. More information can be found at <http://ladpw.org/wmd/watershed/dc/>.