



Lower Bay Dredging & Confined Aquatic Disposal (CAD)

FAQs

(updated May 21, 2021)

Why does Newport Harbor need to be dredged?

Over time, sediment accumulates on the harbor floor, which reduces water depths and can impede navigation. Dredging Newport Harbor is essential to maintain safe, navigable waterways for recreational and commercial boaters as well as public safety vessels.

As the largest small-craft harbor in the western United States, Newport Harbor is a local, regional and national asset. It serves about 4,500 recreational and commercial boaters and is home to U.S. Coast Guard, Orange County Sheriff's Department and Newport Beach Harbor Department vessels. Newport Harbor has the largest shipyards and fuel docks between Los Angeles and San Diego.

Newport Harbor generates about \$393 million a year in direct economic output, more than \$1 billion a year in indirect economic impacts, and directly supports more than 4,800 jobs. Dredging is critical to maintaining one of the City's most vibrant recreational areas and economic engines.

What would the dredging project accomplish?

The proposed dredging project would remove about 1 million cubic yards of accumulated sediment. By removing the sediment, the harbor floor would return to its design depths of 10 to 20 feet. The project will also provide an opportunity for disposal of dredged material by private dock owners who would like to dredge their own slips.

When was the harbor last dredged and what quantity?

The harbor was last dredged in 2012, but only a partial amount of the sediment deposits (600,000 cubic yards) was removed. No other major dredging has been done since the original construction of the harbor by the federal government in 1936.

What happens to the dredged material once it is removed from the harbor floor?

Most material will be placed in the open ocean (an offshore site known as "LA-3") or nearshore

ocean placement off the Newport Beach peninsula.

About 100,000 cubic yards of material does not meet the open ocean disposal criteria and requires alternative disposal. This material will be sequestered using an EPA-approved method called Confined Aquatic Disposal (CAD).

What is a CAD and is it safe?

Confined Aquatic Disposal has been shown to be an effective long-term management solution for sediment that does not meet regulatory standards for open ocean disposal. The material is placed in a large depression (hole), then capped with sediment. It has been used in several other locations in Southern California and is widely accepted by the regulatory agencies as an environmentally safe approach for sediment management. Regulatory agencies such as the EPA and the Regional Water Quality Board supported, and even encouraged, the CAD concept when evaluating the harbor's sediment characterization. No dredged material from outside Newport Harbor will be allowed in the Newport CAD.

Where would the CAD be located?

The proposed site is within a large area of water outside of the main navigational channel between Lido Isle and Bay Island. There are several benefits to this location: It will not impede navigation during construction; it is the center point of the dredge locations; it contains beach-suitable material that can be added to the City's beaches; and, it is located away from the sensitive eelgrass beds near the entrance channel. Other locations were considered in the harbor but ultimately not selected for various reasons. When selecting a final location, there are several critical criteria that must be met. The first is that the underlying material must be suitable for reuse someplace else to avoid the need to find a disposal location for the excavated material. In this case, the material at the location selected for the Newport CAD has been shown to contain high quality beach sand based on exploratory core samples collected nearby. The next most important criterion is that the location be accessible by deep (>10-15') water so that the fully loaded barges can bring the material to the site as efficiently as possible. The selected location is next to the federal channel which has the deep water to allow access. Next, it is important to locate the CAD site in the most central location to the material needing management so that travel time to and from the CAD site can be minimized, therefor also minimizing the construction schedule and the other site impacts like air quality, noise and vessel traffic. Lastly, it is important to try and locate the CAD cell in an area that does not include sensitive habitat. The selected location is far from the shoreline where most sensitive species live and is far away from the eelgrass beds at the entrance to the harbor.

Why can't we dispose the unsuitable material in the open ocean (at LA-3)?

The material does not meet the EPA's chemical standards for open ocean disposal of dredged materials. Therefore, placement of unsuitable material is not allowed.

Why is the material considered unsuitable for open ocean disposal?

It is important to know that the material is not toxic nor hazardous as defined by the regulatory agencies. The terms "toxic" and "hazardous" have very specific regulatory definitions, and this material is not considered to be either. The term "toxic" implies that the material elicited a negative response, such as mortality, during the laboratory biological tests. This material did not show any toxic responses to several different test animals. The term "hazardous" implies that the

chemical concentrations are at levels that the government considers an immediate threat to human health or the environment. The material in Newport does not exceed these criteria. Rather, the material is considered “unsuitable” for open ocean disposal at EPA’s dredged material disposal sites.

The primary concern in the harbor is the presence of mercury. The generally accepted threshold allowed in Southern California for open ocean disposal is 1.0 parts per million (ppm). The in-harbor mercury levels to be placed within the CAD range from about 1.5 ppm to 5 ppm. While EPA has occasionally allowed sediment with elevated mercury concentrations to be placed at the offshore disposal sites, their approval has only been for small quantities because EPA has not conducted studies to determine the potential effects of larger disposal events with elevated mercury. In the absence of this data, EPA is being cautious and therefore have deemed the material as unsuitable for ocean disposal.

Can a CAD site be created in the ocean within 1-2 miles of the coast?

No. Federal regulations do not allow CAD sites or similar construction activities in the open ocean.

Can the unsuitable material be taken to a landfill?

The City considered this option; however, it is believed to be unfeasible for this project due to the space requirements and community impacts associated with implementing the process. Upland landfill disposal can be used for low volumes of dredged material, but generally not used for higher volumes due to the high costs and impacts to neighboring communities. Water Boards generally do not support large-volume disposal at public landfills. Therefore, the City would be limited to out-of-county private landfills such as Otay Landfill in San Diego or Azusa Landfill in Azusa, or beyond, assuming available capacity and daily limitation.

Transporting dredged material by truck would cause negative impacts on the community through increased truck traffic and related air emissions. The City estimates that at least 8,800 truck trips would be required over 9 months to transport the material by land.

Has an inland confined disposal facility (CDF) been considered? How about the LA/Long Beach ports?

Yes, but this disposal method would have the same concerns as landfill disposal, unless a large area in the harbor could be converted to land, or a location was available near the water so the material could be transferred via barge instead of via trucks. As an example, in 2006 the City evaluated a theoretical CDF to manage contaminated material from within the Rhine Channel that included installation of a new bulkhead waterward from the existing bulkheads and filling between the old and new bulkheads with the dredged sediment. The analysis concluded that the alternative was infeasible and not carried forward for the following reasons:

- The site offers little available volume capacity for sediment confinement - a new bulkhead would have to remain inside of the channel’s federally mandated U.S. pierhead line. This line is typically only 15 to 20 feet out from the existing site bulkheads, leaving little room for placement of dredged sediment.
- The available space between the existing concrete bulkhead and the designated U.S. bulkhead line to create a thin CDF that could contain approximately 6,000 cy of material is insufficient.

- Lining the entire eastern side of the Rhine Channel (known as Reach 2) with a new CDF bulkhead built outward from the shore, would produce a maximum of only 20,000 cy of storage capacity, which is only a fraction of the total amount of unsuitable material that requires dredging (106,900 cy).
- Site usage - a new bulkhead built along the channel pierhead line would preclude installation of piers/floats outward from the bulkhead, since they would infringe on the defined navigational channel width. This would significantly reduce the volume of vessel berthing available along the sides of the channel, wherever such bulkheads are located.

Occasionally, the Ports of LA and Long Beach have accepted dredged material for shipping terminal construction projects. However, there are no CDFs currently in construction, and no CDFs have been identified for the next 5-10 years that would have the potential for receiving outside material.

Will the CAD be open after dredging is complete?

No. After the main harbor dredging is complete, the CAD will be closed for two years. Then, it is proposed to be reopened for 6 months during which time Newport residents may dispose their own in-slip dredged material. After this time, the CAD will be closed and preparations for the final cap will be implemented.

Will the CAD construction and placement disrupt sailing activities and general harbor use?

No. During construction, the existing anchorage will be relocated to the Turning Basin at the western tip of Lido Isle. Therefore, most of the entire area between Lido Isle and Bay Island will be unobstructed and free of anchored vessels (except for the footprint of the barge, scow and safety buffer zone). During the disposal period, the area between Lido Isle and Bay Island will be occupied by the tug and scow approximately 2-3 times a day for brief periods (typically 10-20 minutes).

Otherwise, this area will remain unobstructed and open for navigation, regattas, instruction, etc.

Who is funding the dredging project?

It will be jointly funded by the federal government, the City, and the County.

What happens if the City does not dispose the unsuitable material through the CAD?

The federal government and City will still collaborate to dredge the suitable material for nearshore ocean or open ocean placement. This work is projected to start in 2021. The unsuitable material would be left in place and would not be dredged, therefore creating high spots in the channels that would continue to build up over time.

Navigation would be affected along the entirety of W. Coast Highway as well as the peninsula channel from 12th Street to 19th Street. Larger vessels and vessels with deep keels would be restricted to favorable tides, and they would continue to stir up unsuitable sediment and create plumes in the harbor. Navigation concerns affect all vessels, including visiting vessels, and vessels requiring shipyard maintenance that require passage through these channels. The Lower Harbor would continue to experience reduced tidal flushing due to the shallower water depths.

Unsuitable material would remain within the Federal Channels and other areas of Lower Newport Harbor where they could be stirred up or resuspended by vessel activities. Chemicals in the

environment are typically only able to cause impacts when they are mobilized within the water column through resuspension or when they diffuse into the water from the upper layers of the sediment.

One of the added benefits of constructing the CAD facility for material disposal is that the underlying sediments in the target location for the CAD facility contain clean, high-quality beach sand which can be used to nourish the adjacent ocean shoreline. Not constructing the CAD facility would mean that beach nourishment would not occur, thereby exacerbating coastal erosion.

What is the City’s Sediment Management Plan (SMP)?

The City has developed an SMP which is a planning document that builds on previous harbor-wide planning tools and projects to assist the City in managing sediment. An SMP was prepared and included in Appendix D to the Draft Environmental Impact Report. The SMP creates an inventory of all sediment requiring dredging both within and outside of the federal channels. It identifies currently available management options depending on sediment characteristics (i.e. alternate disposal locations and permitting requirements) and what procedures would be required to implement each option.

During the April 2021 Harbor Commission meeting, representatives of the public offered to accept the unsuitable material and offer to fund an alternate disposal option. Is this feasible?

There is legal precedence that would preclude the general public from taking ownership of the unsuitable material as the City (and likely the County) would still remain liable for the ultimate disposal. Further, alternatives have been extensively evaluated during the CEQA process, so any alternative considered will need to be fully evaluated, including further review of upland disposal and the impact associated with truck trips, traffic, and also costs.

Sediment management in Southern California is governed by the State and Federal regulatory agencies authorized under various laws who follow the procedures outlined in the Los Angeles Region Contaminated Sediment Management Strategy document¹. During the development of that document, a committee was formed to evaluate the feasibility of offering impacted sediment for beneficial reuse by other parties at upland sites. The conclusion that the group reached was that the current regulatory laws do not allow potential liability issues to be transferred from one entity to the next. As such, the entity that dredged the sediment would forever be liable for potential future impacts caused by the material even if it was used in a manner that was not agreed upon during the transfer. This caused the group to conclude that this type of reuse was not currently feasible, and it was not recommended as an option in the document. The same concerns would apply in this situation where the City would be liable for the material regardless of where it ended up, unless it was a licensed landfill that is approved by the state to receive the material.

As committed to during the Harbor Commission hearing, an ad hoc committee has been established to further review the feasibility (and legality) for the general public to either contribute financially to the dredging and/or to accept responsibility to manage the unsuitable material.

¹ Los Angeles Regional Los Angeles Regional Contaminated Sediments Contaminated Sediments Task Force: Task Force: Long Term Management Strategy. May 2005.