

# Digging up bay's dirty secrets

## Dredging plan would make bay healthier by removing toxic sediment

By [Deborah Sullivan Brennan \(/staff/deborah-brennan/\)](#) 6 a.m. Aug. 11, 2013



[\(/photos/2013/aug/09/1079408/\)](#)

An aerial view of the San Diego Bay shipyards where dredging will take place, located to the right of the Coronado Bridge. U-T file photo.

The San Diego Bay is scheduled for a deep cleaning next month, when shipyards south of the Coronado Bridge will dredge contaminated sediment to ensure healthier waters.

Toxins from industrial operations, shipyards and urban runoff have built up over decades, settling in the sediment. They are absorbed by small animals, fish and eventually people, especially frequent fishermen.

The dredging effort would remove 158,000 cubic yards of contaminated sediment from the area in front of BAE and NASSCO shipyards near the Coronado Bridge.

“San Diego Bay is an area of national importance,” said Dave Gibson, executive officer of the San Diego Regional Water Quality Control Board, which issued the cleanup order last month. “It is one of the most commercially important bays, and it is an important military base. So cleaning that up is one of the board’s highest priorities.”

While modern shipyards employ environmental controls to reduce contamination to the bay, the companies, along with other bay users and the port itself, are responsible for cleaning up decades of previous pollution.

The plan targets heavy metals and other industrial chemicals that harm humans or marine life. It will employ a large “clamshell” shovel to capture and enclose the material, and will dry and ship it to landfills.

But the dredging, scheduled to start in mid-September, is still subject to disputes among the port, shipyards and other users over who is responsible for the cleanup bill, estimated at \$75 million

The cleanup has been a work in progress for 20 years, as agencies argued over the extent of the contamination, the areas of dredging, and the cleaning bill. While environmental groups say the cleanup won’t solve all the bay’s problems, they’re happy it’s finally poised to happen, said Laura Hunter, senior policy advocate for the Environmental Health Coalition’s clean ports campaign.

“The cleanup is not as stringent and protective as we wanted it to be,” she said. “But they are getting the worst of the worst out of the bay, and I think that’s very important. Because they’re removing the source of their contaminants, at least we have a fighting chance to put San Diego Bay on the road to health.

Before the last century, “San Diego Bay was a fertile, shallow bay supporting tremendous biodiversity in its open water, salt marshes and mud flats,” the Environmental Health Coalition stated in an online document.

As the area urbanized, industrial, commercial and military operations cropped up on along the shoreline, stirring up what environmentalists have called a “toxic soup” of contaminants.

“Navigation channels were dredged. Mudflats and salt marshes were filled,” the coalition document stated. “More than 90 percent of the mudflats and 78 percent of the salt marshes were eliminated and those that remain are found mostly in South San Diego Bay.”

While the bay front drove a thriving marine economy, it had its costs as well. Heavy metals built up in the bay floor, including mercury and lead, both potent poisons to the human neurological system, and copper, which is toxic to shellfish.

Tributyltin, an anti-fouling chemical once used in boat coatings, is toxic to both humans and shellfish, causing immune damage and reproductive disruption. The compound leached into the bay from boat hulls before it was banned in California in 1988 and outlawed internationally 20 years later.

Cancer-causing chemicals including polychlorinated biphenyls, a common industrial chemical, and polyaromatic nuclear hydrocarbons, a product of combustion, also seeped into the water from various sources.

Those contaminants accumulate in sediment, and are magnified as they travel up the food chain to insects, fish and people. That’s a particular risk to anglers who use San Diego Bay as a food source, said Hunter. A 2005 survey by the group found that 61 percent of people who fish on the bay eat their catch, and that a quarter of Latino anglers, and nearly 100 percent of Filipino anglers, fish daily or weekly.

To reduce the pollution, authorities have dredged or capped toxic sediment at eight sites, mainly on the eastern shore of the bay, Gibson said. Thirty-three more are in the pipeline. But the shipyard cleanup is the largest of all.

“There’s no question at all, that part of the bay is one of the most polluted parts of the entire bay,” he said. “It was a shipyard from 1910 and all manner of chemicals were deposited there.”

But although the shipyards, port and other companies agree that the cleanup is necessary, they’re disagree on who is responsible for it.

The port maintains that it should not be included in that list.

While the port is a “trustee of the tidelands,” it requires its tenants, including the shipyards, to take legal responsibility for their own activities, port spokeswoman Tanya Castaneda explained in an e-mail to the U-T.

In June the port filed a letter with the water board disputing its designation as a “discharger” in the cleanup order, and it has appealed that status to the State Water Resources Control Board.

“As a non-operating, non-discharging landlord, we did not agree that it was right or fair for the Port to be named as a primarily responsible discharger,” Castaneda wrote.

The water board maintains it has authority to hold the port accountable for discharges into the bay. And environmental groups and the shipyards say the port should be leading the effort, not fighting it.

Along with the port and the shipyards, other parties named as dischargers in the cleanup order include National Steel and Shipbuilding Company, Campbell Industries, SDG&E, the U.S. Navy and the city of San Diego. If the port and other agencies don’t pay their share, the shipyards warn, the cleanup might not happen on time.

“We believe that as the claimed ‘stewards of San Diego Bay’ the Port should, rather than challenging the order, demonstrate leadership in this cleanup,” Sarah Strang, spokeswoman for General Dynamics NASSCO, wrote in an e-mail to the U-T.

Castaneda said, however, that the port “The Port fully supports this clean-up effort, along with many other environmental stewardship efforts taking place in San Diego Bay.”

### **Primary chemicals of concern in San Diego Bay**

**Copper:** used in anti-fouling boat paints. Effects: toxic to shellfish and other marine life.

**Mercury:** released by coal-fired power plants, mining and other industrial activities. Effects: forms methylmercury, which causes neurological damage, organ damage.

**Polynuclear Aromatic Hydrocarbons:** formed during combustion, and found in plastics, pesticides, asphalt, crude oil, tar and creosote. Effects: human cancer, reproductive damage

**Polychlorinated biphenyls:** used in transformers, capacitors, and other electrical equipment, old fluorescent lighting fixtures and old hydraulic oil; effects: human endocrine and liver damage, cancer

Tributyltin: used as an anti-fouling agent in boat paints. Effects extremely toxic to aquatic life, causes endocrine disruption and severe reproductive damage in aquatic organisms.

Other pollutants: arsenic, lead, cadmium, zinc

Sources: Agency for Toxic Substances and Disease Registry, U.S. Environmental Protection Agency, San Diego Regional Water Quality Control Board

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