
SENATE COMMITTEE ON ENVIRONMENTAL QUALITY

Senator Allen, Chair

2021 - 2022 Regular

Bill No: AB 2758
Author: O'Donnell
Version: 4/19/2022
Urgency: No
Consultant: Gabrielle Meindl

Hearing Date: 6/16/2022
Fiscal: Yes

SUBJECT: Southern Los Angeles: ocean dumpsites: chemical waste

DIGEST: Requires the California Environmental Protection Agency (CalEPA) to hold public meetings, with relevant local, state, and federal agencies on efforts to study and mitigate DDT off the coast of California.

ANALYSIS:

Existing law:

- 1) Provides, pursuant to the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), also known as the federal Superfund law, the United States Environmental Protection Agency (US EPA) with authority over the remediation of uncontrolled or abandoned hazardous-waste sites as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment. (42 United States Code (USC) § 9601, et seq.)
- 2) Prohibits, pursuant to the Marine Protection, Research, and Sanctuaries Act (MPRSA, also known as the Ocean Dumping Act), the dumping of material into the ocean that would unreasonably degrade or endanger human health, welfare, or amenities, or the marine environment, ecological systems, or economic potentialities. (33 USC § 1401 et seq)

This bill:

- 1) Defines "DDT" as dichloro-diphenyl-trichloroethane or any metabolite or byproduct thereof.
- 2) Defines "Dumpsite-1" as the waters of the San Pedro Basin, off the coast of Los Angeles, approximately 10 nautical miles northwest of Catalina Island where chemical waste, including, but not limited to DDT, was known to be dumped and has been detected.

- 3) Defines "Dumpsite-2" as the water of the San Pedro Basin, off the coast of Los Angeles, where chemical waste, including, but not limited to, DDT, has been detected.
- 4) Defines "Southern California Bight" as the open embayment of the Pacific Ocean bounded on the east by the reach of the North American coastline extending from Point Conception, California, to Cabo Colnett, Baja California, Mexico, and on the west by the California Current, within which 14 known historic dumpsites for chemical waste exist.
- 5) Requires CalEPA to convene at least four public meetings annually, with the first meeting to be held on or before March 31, 2023, to provide members of the public with current information on CalEPA's efforts to study and mitigate DDT and other chemical waste at Dumpsite-1 and Dumpsite-2 and to receive input from the public through written and oral comments regarding dumped chemical waste and its effects on the Southern California Bight.
- 6) Requires CalEPA, when holding public meetings on efforts to study and mitigate DDT, to request representatives from the relevant local, state, and federal agencies to attend. Requires that these meetings are held in areas with coastlines reasonably close to Dumpsite-1 and Dumpsite-2.
- 7) Requires CalEPA, on or before June 30, 2025, to submit policy recommendations to the Legislature aimed at further mitigating the negative impacts of anthropogenic chemical waste deposits at or from Dumpsite-1 and Dumpsite-2, especially those impacts on the Southern California Bight. In developing the report, CalEPA shall consider:
 - a) The impacts of policy recommendations on the environment, local communities, Indigenous cultures, and public health;
 - b) The technical and financial feasibility of the policy recommendations; and,
 - c) The impact on the environment, local communities, Indigenous cultures, and public health of taking no action to mitigate the effects of chemical waste at Dumpsite-1 and Dumpsite-2.
- 8) Sunsets the provisions of the bill on January 1, 2027.

Background

- 1) *What is DDT?* Dichloro-diphenyl-trichloroethane, commonly known as DDT, is a colorless, tasteless, and almost odorless insecticide. Starting in the late

1940s, DDT was extensively used to combat insect-borne diseases like malaria and typhus around the world. It was credited with eradicating malaria in the United States and was also widely used in agricultural and commercial settings for pest control. Unlike most pesticides, whose effectiveness is limited to destroying one or two types of insects, DDT was capable of killing hundreds of different kinds at once.

In 1962, Rachel Carson's book, *Silent Spring*, meticulously described how DDT entered the food chain and accumulated in the fatty tissues of animals, including human beings, and caused cancer and genetic damage. A single application on a crop, she wrote, killed insects for weeks and months—not only the targeted insects but countless more—and remained toxic in the environment even after it was diluted by rainwater.

DDT has been shown to cause liver cancer in laboratory animals. It is stored in fatty tissues which results in biomagnification. Biomagnification means that DDT levels in animals increase in concentration farther up the food chain. DDT is highly acutely toxic to fish and aquatic invertebrates. Even though DDT is only slightly acutely toxic to birds, it can cause significant reproductive problems. Notably, one of the breakdown products of DDT causes the eggshells of birds to become thinner. This makes the eggs of birds crack under the weight of adult birds, interfering with birds' ability to reproduce and damaging bird populations.

According to the Centers for Disease Control and Prevention (CDC), human health effects of DDT at low levels in the environment are unknown. However, DDT is listed as a possible human carcinogen and a growing number of studies have linked it to endocrine disrupting effects like increased incidences of obesity and early onset of menstruation. It is possible that these effects could impact future generations (even if they are exposed to lower levels of DDT) as studies linked DDT levels in mothers during and just after pregnancy to impacts on those women and subsequent generations. These effects included breast cancer in the mothers themselves, obesity in their adult daughters, and obesity and early onset of menstruation in their granddaughters. Exposure to high doses of DDT can result in vomiting, tremors, and seizures.

DDT is highly persistent in the environment and has a half-life of 150 years in the aquatic environment, meaning that it will take hundreds of years to break down. Before it was banned for use in the United States by the US EPA, approximately 675,000 tons of DDT were applied domestically. Due to its widespread usage and persistence, DDT contamination is still a relevant environmental concern.

Rising concerns about carcinogenicity, bioaccumulation, and health effects on wildlife led to a ban on DDT use in the United States in 1972.

- 2) *Legacy of DDT manufacturing.* The Montrose Chemical Corporation of California was the largest producer of the insecticide DDT in the United States from 1947 until it stopped production in 1982. Even though DDT was banned for use in the United States after 1972, production continued in order to export DDT to other countries.

Between the late 1950s and early 1970s, the company was responsible for discharging an estimated 870-1450 tons of DDT into the ocean via the county's sewer system, which contaminated sediment on the ocean floor off the coast of Los Angeles on the Palos Verdes Shelf. In 1971, the last year Montrose used the county sewers, an estimated 50,500 pounds of DDT were discharged from the outfalls. PCBs, another persistent hazardous substance, also formed part of the industrial waste stream that was discharged to the sewer system until their ban in 1976. After these persistent pollutants ceased to dominate the waste stream, Los Angeles County Sanitation District continued discharging treated waste onto Palos Verdes Shelf. This created a layer of cleaner sediment on top of the DDT- and PCB-contaminated sediment.

The US EPA added the Montrose Chemical Corporation site to the Superfund National Priorities List in 1989. The site includes the former main plant near Torrance, California, stormwater pathways near the former plant, and a section of the Palos Verdes shelf. The cleanup of the Palos Verdes Shelf is still ongoing.

The San Pedro Bay Dominguez Channel was another recipient of runoff from Montrose. Consolidated Slip, the part of Inner Harbor immediately downstream of Dominguez Channel, continues to exhibit a very impacted benthic (bottom feeder) invertebrate community.

In the 1980s, it was discovered that Montrose Chemical Corporation contracted with California Salvage to dispose of acid waste from the DDT manufacturing process by dumping it off the coast of California. Records indicated that hundreds of thousands of barrels containing waste laced with DDT were dumped at a deep sea site located between the California coast and Santa Catalina Island between 1947 and 1961. In April 2021, researchers at the Scripps Institution of Oceanography at the University of California San Diego and the National Oceanic and Atmospheric Administration (NOAA) conducted a survey to map the dump site. They found more than 27,000 barrels of what potentially could be DDT on the ocean floor between the Palos Verdes

Peninsula and Catalina Island. The survey, conducted from March 10 to 24, 2021, mapped more than 36,000 acres of seafloor — at depths of up to 3,000 feet, and about 12 miles offshore from the Palos Verdes Peninsula and eight miles from Catalina — in an area where scientists had previously discovered an accumulation of DDT. But, the mapping sonars cannot determine the contents of the barrels, which remains unknown.

- 3) *Impacts to wildlife of Southern California.* The rediscovered DDT waste dumping site off the north coast of Santa Catalina Island represents a significant threat to the health of marine life in those waters and all animals in the food chain dependent on that marine life. DDT is highly persistent and moves from contaminated sediments into the water. Therefore, although the dumping of DDT stopped in 1982, the Palos Verdes Shelf remains contaminated to date and the recently rediscovered dumping site is still contaminated as well.

Since 1985, fish consumption advisories and health warnings have been posted in Southern California because of elevated DDT and other contaminant levels. Bottom-feeding fish are particularly at risk for high levels of contamination. Consumption of white croaker, which has the highest contamination levels, should be avoided and commercial fishing of white croaker has been banned in the area since 1990. Other bottom-feeding fish, including kelp bass, rockfish, queenfish, black croaker, sheepshead, surfperches, and sculpin, are also highly contaminated.

The high DDT levels in fish are reflected in predators that eat fish as well, including dolphins and birds of prey. A 2015 study by researchers from San Diego State University found high levels of DDT and other human-made chemicals in the blubber of bottlenose dolphins that died of natural causes. The Institute for Wildlife Studies, a conservation organization on Catalina Island, has worked to restore bald eagles to the island on Santa Catalina Island Conservancy land since the late 1970s. Bald eagles had been common on the island until the 1960s, when it is believed that the effects of dumping DDT off the coast of Southern California made it impossible for eagles to successfully hatch their young. Until as recently as 2007, bald eagles on the Island were unable to reproduce.

In May 2022, a sophisticated chemical analysis in Environmental Science & Technology, found that DDT-related chemicals were seven times more abundant in coastal condors than condors that feed farther inland. Looking at the birds' coastal food sources, researchers found that dolphin and sea lion carcasses that washed ashore in Southern California were also seven times

more contaminated with DDT than the marine mammals they analyzed along the Gulf of California in Mexico. One mysterious chemical that is likely connected to the DDT dumping in California was 56 times more abundant in coastal condors and 148 times more abundant in California dolphins.

AB 2758 requires CalEPA to hold public meetings, with relevant local, state and federal agencies to provide current information to the public on efforts to mitigate and study DDT at Dumpsite-1 and Dumpsite-2. Additionally, by holding these meetings, CalEPA may also hear from other scientists and academic researchers with information on DDT and Dumpsite-1 and Dumpsite-2. While there are several different local, state, and federal agencies working to study and mitigate DDT at Dumpsite-1 and Dumpsite-2, there does not seem to be one entity, at least in California, that is responsible for providing centralized and updated information to the public.

Comments

- 4) *Purpose of Bill.* According to the author, "California's coastal and marine waters are among the state's most precious resources and their conservation is essential to the preservation of both marine wildlife and California's thriving ocean economy. Since the rediscovery of chemical waste in the San Pedro Basin off the coast of Los Angeles, California's Environmental Protection Agency has been working with scientists and federal partners to determine next steps in dealing with these pollutants. However, despite significant public interest and concern, little information has been made available to the public on the dangers the chemical waste presents, what questions remain unanswered, and what next steps policymakers, researchers, and the general public should be taking to mitigate the damage from this waste site. AB 2758 requires the California Environmental Protection Agency to convene meetings of agency representatives, local leaders, and the public to hear their concerns and disclose the agency's progress. The bill would also require the agency to report to the Legislature on potential mitigation strategies. This will help educate the public on how best to protect themselves and ensure that the development of any mitigation efforts at the waste site is a transparent and collaborative process."

Related/Prior Legislation

AB 1553 (O'Donnell, 2021) would have established the Southern Los Angeles Ocean Chemical Waste Community Oversight Council (Council) under CalEPA to oversee the study and mitigation of the toxic waste at "Dumpsite-2," the DDT dumpsite off the California coast. This bill was not heard in the Assembly

Appropriations Committee and subsequently died on file.

AJR 2 (O' Donnell, Chapter 142, Statutes of 2021). Requests that the United States Congress and US EPA take all measures necessary to ensure that the DDT waste dumped near Santa Catalina Island does not cause further harm to the citizens, wildlife, and natural resources of California.

SOURCE: Heal the Bay

SUPPORT:

City of Long Beach
City of Rancho Palos Verdes
Heal the Bay (SPONSOR)
Los Angeles County Sanitation Districts
Surfrider Foundation

OPPOSITION:

None received

ARGUMENTS IN SUPPORT: According to Heal the Bay, "Heal the Bay is pleased to sponsor and offer its strong support for AB 2758 (O'Donnell) which will establish public meetings on the ocean dumping of toxic DDT off the coast of Southern California. Currently, there is not a clear or easy way for the public or for stakeholders to get updates on this critical issue, to voice concerns, or to understand progress and next steps to protect public and environmental health. AB 2758 is a critical first step in increasing transparency, rebuilding public trust, and tackling this massive problem that has repercussions for human and environmental health. The California Environmental Protection Agency to convene public meetings will allow the public and stakeholders to be informed, have a voice, and help promote progress in addressing this overwhelming environmental and public health disaster. With an issue of such urgency, centralized public efforts are needed to ensure good communication and accountability on progress."

ARGUMENTS IN OPPOSITION: None received

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