

13.0 GLOSSARY

- acute toxicity: Short-term toxicity to organism(s) that have been affected by the properties of a substance, such as contaminated sediment. The acute toxicity of a sediment is generally determined by quantifying the mortality of appropriately sensitive organisms that are put into contact with the sediment, under either field or laboratory conditions, for a specified period.
- adsorb: The physical or chemical bonding of a gas or liquid (e.g., a contaminant) to a solid (e.g., soil); to adhere to the surface by electrostatic forces.
- adsorption: The act of adsorbing (see adsorb).
- amphipod: A small crustacean of the Amphipoda order such as the beach flea.
- anadromous: Migrating up rivers from the sea to breed in fresh water.
- anoxic: Absence of oxygen.
- anthropogenic: Of, relating to, or influenced by the impact of man on nature or natural ecosystems.
- bathypelagic zone: Ocean depths below 1,000 meters, characterized by complete darkness, low temperature, low oxygen, and great pressure.
- benthos: The bottom of an aquatic environment.
- bioaccumulation: The uptake of contaminants into an organism through any route, including respiration, ingestion, or direct contact with contaminated water or sediment.
- bioassay: The use of living organisms to determine the effect of some substance, factor, or condition.
- bioavailable: A contaminant existing in a form that can be taken up by living organisms.
- brackish: Containing some salt.
- breach: A gap or rift in a solid structure such as a levee; to make a hole or gap in.
- BTEX: A mixture of benzene, toluene, ethyl-benzene, and xylene
- cell: With respect to upland/wetland reuse of dredged material, such as rehandling facilities or wetland restoration, internally contained dredged material storage areas.
- cetacean: An order of aquatic, mostly marine mammals that includes whales, dolphins, and porpoises.
- chronic toxicity: Biological tests that use sublethal effects such as abnormal development, growth, and reproduction, rather than solely lethality, as endpoints. These tests involve all, or at least an important, sensitive portion of an organism's life history. A sublethal endpoint may result either from short-term or long-term (chronic) exposures.
- copepod: A member of the small marine and freshwater crustacean Copepoda order.
- Cretaceous: A period of geologic time and sedimentary rock formations of the third and last period of the Mesozoic era when flowering plants developed and dinosaurs became extinct.
- DDD: dichloro-diphenyldichloroethane (a breakdown product of DDT)
- DDE: dichloro-diphenyldichloroethylene (a breakdown product of DDT)
- DDT: dichloro-diphenyltrichloroethane (an insecticide)
- decibel: A unit of sound measurement.
- decibel, A-weighted: Sound frequencies normally heard by the human ear.
- de minimis thresholds: The level of pollutant emissions used to determine the need for a Conformity Determination according to Section 176(c) of the Clean Air Act (as codified in 40 CFR 51 Subpart W and 40 CFR 93 Subpart B). A Conformity Determination is required when the total of direct and indirect emissions in a nonattainment or maintenance area caused by a federal action would equal or exceed the de minimis thresholds.

- designated waste: A non-hazardous waste containing compounds that, under ambient environmental conditions, could be released and cause degradation of waters of the state. These wastes can only be discharged at Class I or Class II waste management facilities.
- desiccation: The process of drying out thoroughly.
- desorption: The process of removing an absorbed substance.
- ecotone: Ecological community of mixed vegetation formed by the overlapping of adjoining communities.
- effluent: Outflow or discharge of waste.
- El Niño: An oceanic condition when weakened upwelling causes warmer than usual, nutrient-poor water to predominate near the ocean surface; this can result in a dramatic decline in ocean food production, with reduced survival and reproductive success of marine organisms.
- elutriate: To purify, separate, or remove by washing.
- emergent plants: Newly created vegetation.
- entrapment zone: A region downstream of the null zone (see below) where gravitational circulation concentrates suspended materials such as nutrients, plankton, and very fine suspended sediments. The entrapment zone concentrates phytoplankton, zooplankton, and nutrients, providing a rich habitat for the rearing of juvenile fish.
- epibenthic: In aquatic environments, animals living just above the sea or lake bottoms.
- epifauna: In aquatic environments, animals living on top of sediments or other surfaces (cf infauna).
- epipelagic zone: The upper area of the open ocean (the surface to 200 meters deep).
- exotic species: Invasive or non-native species to the area or habitat.
- gravimetric: Of or pertaining to measurement by weight.
- Green Book: *The Ocean Disposal Testing Manual* (USEPA and USACE 1991)
- halophyte: A plant that grows in saline (exposed to brackish water) soil.
- hazardous waste: Material that is either a state or federal hazardous waste as described in the California Code of Regulations or the *Federal Register*, respectively. Such material is suitable only for disposal at a Class I landfill.
- holoplankton: Zooplankton that remain planktonic throughout their life.
- HPAH: high molecular weight polynuclear aromatic hydrocarbons
- hydraulic: Involving, moved, or operated by a fluid, especially water, under pressure.
- ichthyoplankton: The larval stages of fish.
- in-board: The inside edge of a levee; the side farthest from the water.
- inert waste: A waste that exhibits no chemically reactive properties.
- infauna: In aquatic environments, animals living within sediments on the bottom.
- inversion: A condition where a layer of warm air or water is trapped under a layer of cool air or water so that it cannot rise.
- isobath: Lines or contours representing equal depth.
- LC₅₀: lethal concentration for 50 percent of test species.
- LPAH: low molecular weight polynuclear aromatic hydrocarbons
- maintenance dredging: Dredging recently deposited sediments in navigation channels.
- “major dredgers”: In this document, those dredgers that typically initiate dredging projects of 13 feet or more (see “small dredgers”).
- mean higher high water: The average height of the higher of the daily high tides.
- mean lower low water: The average height of the lower of the daily low tides.
- meroplankton: The larval stages of benthic invertebrates.
- Merritt Sand: An ancient, fine-grained sand deposit in San Francisco Bay that occurs relatively close to the sediment surface.

- mesopelagic zone: Ocean depths between 200 and 1,000 meters.
- middens: Organic soil associated with archaeological sites where food refuse, particularly shellfish, degrades over time, creating a dark brown, silty consistency.
- “mudlock”: A situation in the Bay Area in the 1980s when several large, important proposed dredging projects threatened to tax the region’s existing disposal options beyond capacity, and when repeated attempts to find other options failed due to various legal, environmental, and economic concerns.
- neo-tropical: The biogeographic region that includes Mexico, Central and South America, and the West Indies.
- nephelometer: A device used to measure the size and concentration of particles in a liquid using transmitted light.
- new work construction: Dredging sediments in their natural condition.
- NUAD material: Dredged material not suitable for unconfined aquatic disposal. There are three classes of NUAD material designating increasing levels of contamination.
- null zone: The most landward zone of gravitational circulation, where bottom ebb and flood currents are nearly equal.
- old Bay mud: The older, marine clay-silt sediments in San Francisco Bay.
- organotin: An organic (i.e., carbon-containing) compound that includes tin as a constituent. The non-aromatic varieties are known to be highly toxic.
- out-board: The side of a levee closest to the water.
- overstory: The top layer (canopy) of the vegetation cover (or foliage).
- oxidation: Combination of a substance with oxygen.
- oxygen minimum zone: The area in the ocean’s mesopelagic zone where oxygen concentrations are the lowest in the entire water column.
- PAHs: polynuclear aromatic hydrocarbons
- PCBs: polychlorinated biphenyls
- palustrine: A type of wetland that supports persistent vegetation and is inundated or saturated by waters of non-marine origin. Examples include marshes, swamps, bogs, etc.
- pelagic: Living in the open ocean or seas rather than adjacent to land or inland waters.
- pH: The measure of acidity or alkalinity of a solution, A pH of 7 is neutral, over 7 is alkaline, and a pH below 7 is acidic.
- phi size: a measure of soil/sediment grain size
- phytoplankton: Single-celled algae.
- pinniped: A suborder of aquatic carnivorous mammals with all four limbs modified into flippers, such as sea lions, seals, and walruses.
- piscivorous: Fish-eating.
- Pleistocene: A late Cenozoic geologic epoch characterized by fluctuating, generally cool climates — often accompanied by glaciation — and distinctive animal species, dating from 3 million years ago until approximately 11,000 years ago.
- polychaete: Member of marine worms of the Polychaeta class, with paired, flattened, bristle-tipped organs for locomotion.
- pycnocline: Rapid change in water density with changing depth.
- redox potential: Potential for undergoing the process of oxidation and reduction.
- refugia: A small, isolated area that has escaped extreme changes affecting a surrounding area (e.g., glaciation).
- revetment: A retaining structure made of earth.
- riprap: An assemblage of broken stones or concrete, etc., placed against a revetment or levee to prevent or reduce erosion.
- rookery: A breeding ground for certain types of birds and mammals, such as seals.

- rotifer: A member of the phylum Rotifera, including minute multicellular aquatic organisms with a wheel-like ring of cilia at their anterior end.
- sink: A depression or hole in which materials such as pollutants are concentrated.
- “small dredgers”: Relatively small dredging projects within channels, harbors, and marinas not exceeding a depth of 12 feet or a volume of 50,000 cy per year on average.
- source: Origin or location.
- SUAD material: Dredged material that is considered suitable for unconfined aquatic disposal
- sublethal: No directly causing death; producing less obvious effects on behavior, biochemical and/or physiological function, or the histology of organisms.
- subsidence: The process of sediment settling, usually at a lower level.
- Tertiary: Belonging to or dating from the first period of the Cenozoic era, extending from the Cretaceous period of the Mesozoic era to the Quaternary period of the Cenozoic era, when modern flora and apes and other large mammals appeared.
- tiered approach: A structured, hierarchical procedure for determining data needs relative to decisionmaking, which involves a series of tiers or levels of intensity of investigation. Typically, tiered testing involves decreasing uncertainty and increased available information with increasing tiers. This approach is intended to ensure the maintenance and protection of environmental quality, as well as the optimal use of resources.
- toe (of a levee): The bottom portion of a levee.
- toxicity test: A *bioassay* that measures an effect (e.g., acute toxicity, sublethal/chronic toxicity). Not a *bioaccumulation test* (see definition of bioassay).
- understory: Vegetation found under the canopy of arboreal (tree-covered) habitats.
- unsuitable sediment: Sediments that, due to contamination, cannot be disposed at unconfined aquatic disposal sites.
- upwelling: The upward movement of nutrient-rich water from the continental slope onto the continental shelf.
- vascular plant: Plants of the division Tracheophyta including ferns and seed-bearing plants with a system of specialized conductive or supporting tissue.
- water quality certification: A state certification that the proposed discharge of dredged material will comply with the applicable provisions of Sections 301, 303, 306, and 307 of the Clean Water Act.
- water quality standard: A law or regulation that consists of the beneficial designated use or uses of a water body, the numeric and narrative water quality criteria that are necessary to protect the use or uses of that particular water body, and an anti-degradation statement.
- winnow: To get rid of something unwanted, or to separate, sift, or sort (something) as if by winnowing.
- work category: In this document, there are three major categories of dredging work (“work categories”): maintenance dredging, new work dredging (i.e., deepening projects), and small dredging projects.
- young Bay mud: Surface deposits of Bay mud in San Francisco Bay.