7. GLOSSARY

The following glossary includes the full list of terms and definitions from the 2007 Final Environmental Impact Statement/Report (EIS/R) for the South Bay Salt Pond Restoration (SBSP) Project as well as additional terms or concepts developed for the Draft EIS/R and Final EIR for Eden Landing Phase 2.

100-year floodplain: The area adjacent to a waterbody that would be inundated during a base flood.

Archimedes' screw: A machine historically used for transferring water from a low-lying body of water into irrigation ditches.

accretion: The act of adding material, such as from the deposition and accumulation of waterborne particles.

acute toxicity: For purposes of this project, a median of less than 90 percent survival, or less than 70 percent survival more than 10 percent of the time, of test organisms in a 96-hour static or continuous flow test. See also *chronic toxicity*.

adsorption: The adherence of a gas, liquid, or dissolved material on the surface of a solid.

Alameda County Flood Control and Water Conservation District (ACFCWCD)-owned wetlands: An existing marsh feature owned by ACFCWCD that lies between Pond E2 and the ACFCC.

Alameda Creek Flood Control Channel (ACFCC): A federal flood control channel that forms the southern border of the Eden Landing Phase 2 Project Area. The lower 12 miles of Alameda Creek has been channelized for flood control and development. Both levees around the ACFCC support recreational trails (the Alameda Creek Regional Trail) that run along the top of the levee.

algae: Simple rootless plants that grow in bodies of water (e.g., estuaries) at rates dependent on sunlight, temperature and the amounts of plant nutrients (e.g., nitrogen and phosphorus) available in water.

alluvial: Relating to the deposits made by flowing water; washed away from one place and deposited in another; as, alluvial soil, mud, accumulations, deposits.

Alquist-Priolo Act: The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. This state law was a direct result of the 1971 San Fernando Earthquake, which was associated with extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures. The Alquist-Priolo Earthquake Fault Zoning Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Seismic Hazards Mapping Act, passed in 1990, addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides.

Alvarado Salt Works: An archaeological site that once held an early salt refinery, but now is in ruins along the northern border of Ponds E7 and E6. This site is eligible for the National Register of Historic Places under Criteria A and D.

amphibian: A cold-blooded, smooth-skinned vertebrate animal of the class Amphibia, such as a frog or salamander, that typically hatches as an aquatic larva with gills. The larva then transforms into an adult having air-breathing lungs.

amphipods: A small freshwater or marine crustacean with a thin body and without a carapace.

anadromous: Fish and invertebrates, such as shrimp, migrating from saline to freshwater to spawn.

anaerobic: Not containing oxygen or not requiring oxygen.

anoxic: Without oxygen; water that contains no dissolved oxygen.

anthropogenic: Involving the impact of humans on nature; induced, caused, or altered by the presence and activities of humans, as in water and air pollution.

aquifer: Underground rock or soil layer yielding groundwater for wells and springs, etc.

astronomic tides: The periodic rise and fall of a body of water resulting from gravitational interactions between the Sun, Moon and Earth.

atlatl: Spear-thrower.

attenuation: Reduction.

Authorized Expansion Boundary/Authorized Acquisition Boundary: In 1990, the United States Fish and Wildlife Service (USFWS) completed an Environmental Assessment and Finding of No Significant Impact (1990 EA) that evaluated potential acquisition of land to meet the Congressional purposes of establishing and expanding the San Francisco Bay National Wildlife Refuge (renamed the Don Edwards San Francisco Bay National Wildlife Refuge in 1995). The 1990 EA identified the Authorized Expansion Boundary on a map. (Both the 1990 EA and the Authorized Expansion Boundary map are presented in Appendix P of the 2007 Final EIS/R.) The vast majority of the Authorized Expansion Boundary is south of the San Mateo Bridge. Since 1990, USFWS has acquired land within the Authorized Expansion Boundary (through purchase, lease, or donation), including portions of the 15,100 acres acquired from Cargill Inc. in 2003. The Authorized Expansion Boundary has since been renamed the Approved Acquisition Boundary.

base flood: A flood having a one percent chance of being equaled or exceeded in any given year.

bathymetry: Of or relating to measurements of the depths of waterbodies, such as oceans, estuaries or lakes.

baylands: Shallow water habitats around San Francisco Bay (Bay). They include lands that are touched by tides and lands that would be tidal in the absence of man-made structures.

benthic organisms: Those organisms living at or near the bottom of a body of water.

berm: A mound or bank of earth, used especially as a barrier.

bioaccumulation: The increase in concentration of a chemical in organisms that reside in environments contaminated with low concentrations of various organic compounds. Also used to describe the progressive increase in the amount of a chemical in an organism resulting from rates of absorption of a substance in excess of its metabolism and excretion.

biosentinel: Wildlife or plant species that can be used as a primary indicator of a spatial pattern or temporal trend.

biota: The combined flora and fauna of a region.

biotic: Pertaining to life or living things, or caused by living organisms.

bittern pond: A repository of concentrated soluble salts other than sodium chloride.

bittern: Waste materials left over after common salt (sodium chloride) is harvested from salt ponds. Shown in laboratory studies to have toxic effects on aquatic life.

bog: A wetland that has poorly drained, acidic peat soil dominated by sedges and sphagnum moss.

borrow ditch: An excavated ditch adjacent to the pond levees where material was excavated in order to create and maintain the pond levees.

brackish: A mixture of fresh and saltwater typically found in estuarine areas; of intermediate salinity.

brackish water: Water containing a mixture of seawater and freshwater; contains dissolved materials in amounts that exceed normally acceptable standards for municipal, domestic, and irrigation uses.

breach: An opening (especially a gap in a levee).

brines: Water containing large amounts of a salt or salts, especially sodium chloride.

buffer zone: A barrier between sensitive wildlife habitat and land uses such as agriculture or urban development. A transitional zone intended to provide for compatibility of nearby dissimilar uses.

Cal Hill: A hill that is part of Cargill's remaining inholdings.

candidate species (federal definition): A species for which the U.S. Fish and Wildlife Service has on file sufficient information to support a proposal to list the species as endangered or threatened, but for which proposed rules have not yet been issued.

candidate species (state definition): A native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the California Fish and Game Commission has formally noticed as being under review by the California Department of Fish and Game for addition to either the list of endangered species or the list of threatened species, or a species for which the Commission has published a notice of proposed regulation to add the species to either list.

catadromous: Fish and invertebrates, such as shrimp, migrating from fresh to saline water to spawn.

channel density: The amount of channel habitat per acre of marshplain.

chronic toxicity: A detrimental biological effect on growth rate, reproduction, fertilization success, larval development, population abundance, community composition, or any other relevant measure of the health of an organism, population, or community. See also acute toxicity.

CP3C: A pond that is owned by Cargill; this private inholding borders the Southern Ponds to the south.

cytochemical: Related to the chemistry of cells.

datum: A base elevation used as a reference from which to reckon heights or depths.

deep water habitat: Aquatic habitats, such as in lakes, rivers and oceans, where surface water is permanent and deeper than 6.6 feet (2 meters) most of the year.

delta: A nearly flat plain of alluvial deposits between diverging branches of the mouth of a river.

demersal: Dwelling at or near the bottom of a body of water.

desalination: The removal of salt (especially from sea water).

detritus: Organic waste material from decomposing dead plants or animals.

diadromous fishes: Fishes that migrate through estuaries on their way either to freshwater or to saltwater. Includes anadromous species, which migrate from salt water to spawn in fresh water, and catadromous species, which migrate from fresh water to spawn in the ocean.

diatoms: A major group of eukaryotic algae, and one of the most common types of phytoplankton.

ditch block: A constructed blockage in a flow path, such as a borrow ditch, designed to deflect the flow of water into an alternate flow path, such as a historic marsh channel.

diurnal: Having a daily cycle.

diversity: An ecological measure of the variety of organisms present in a habitat.

donut: A circular water control structure that has multiple intakes and that is used to distribute water through a canal and siphon system.

ebb tide: The tide defined when the movement of the tidal current is away from the shore or down a tidal river or estuary.

ecology: The study of the interactions between living things and their environment.

ecosystem: A basic functional unit of nature comprising both organisms and their nonliving environment, intimately linked by a variety of biological, chemical, and physical processes.

ecotone: A transition zone between two ecosystems; referred to as *habitat transition zone* in the Final EIS/R.

endangered (federal definition): Any species which is in danger of extinction throughout all or a significant portion of its range.

endangered (state definition): A native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

essential fish habitat: Waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.

estuarine: Of, relating to, or found in an estuary.

estuary: The wide part of a river where it nears the sea; where fresh- and saltwater mix in a semi-enclosed body of water.

eustatic sea level: The global sea level, effected by changes due to glacial melting or formation, thermal expansion or contraction of sea water, etc.

eutrophication: Having waters rich in mineral and organic nutrients that promote a proliferation of plant life, especially algae, which reduces the dissolved oxygen content and often causes the extinction of other organisms.

exotic species: Any introduced plant or animal species that is not native to the area and that may be considered a nuisance (e.g., Norway rat, Spartina, etc.). See also invasive species.

fauna: Animals, especially the animals of a particular region or period, considered as a group.

floodplain: An area adjacent to a lake, stream, ocean or other body of water lying outside the ordinary banks of the water body and periodically filled by flood flows. Often referred to as the area likely to be filled by the 100-year flood (base flood).

flora: Plants considered as a group, especially the plants of a particular country, region, or time. fluvial flooding: Results when river, stream or creek discharges overtop their banks and result in the inundation of adjacent lands.

geomorphic: Pertaining to the shape or surface of the earth, including small-scale changes in land surface resulting from restoration projects.

geotechnical: A science that deals with the application of geology to engineering.

ground lurching: The horizontal movement of ground located adjacent to slope faces during strong, earthquake-induced ground motion.

groundwater: Water that penetrates the earth's surface from precipitation and from infiltration from streams; water present below ground from ponds and lakes; water that flows or ponds underground.

habitat: The range of environmental factors at a particular location supporting specific plant and animal communities.

habitat transition zone: High marsh, or ecotone, where species frequently occur above the high tide line; indicated by wrack material (water-transported organic and synthetic detritus); a transitional habitat from marsh to upland or other habitat. A habitat transition zone is sometimes also referred to as an upland transition zone, transition zone habitat, ecotone, or horizontal levee; this document uses “habitat transition zone” for this constructed feature.

halophyte: Salt-tolerant vegetation.

halophytic: having the characteristics of a hylophyte (salt-tolerant) plant.

hazardous air pollutant: The classification, under federal law, for a pollutant that increases the public’s risk of developing cancer. See also toxic air contaminant.

hemiparasitic: Partially dependent on another host plant in order to survive.

histopathological: Pertaining to the tissue changes that affect a part or accompany a disease.

hydraulic: Of or involving a fluid, especially water, under pressure.

hydrodynamics: Deals with the motion of fluids.

hydrographic: The scientific description and analysis of the physical conditions, boundaries, flow, and related characteristics of the earth's surface waters.

hydrology: The scientific study of the properties, distribution, and effects of water on the earth's surface, in the soil and underlying rocks, and in the atmosphere.

hygroscopic: Describing a chemical substance with an affinity for water, one that will absorb moisture, usually from the air.

hypersaline: Marked by increased salt in a saline solution. Applies to highly saline brines, typically several times as salty as seawater.

hypoxic: Refers to natural waters that have a low concentration of dissolved oxygen (≤2 milligrams per liter as compared with a normal level of 8–10 milligrams per liter).

igneous: Said of a rock or mineral that solidified from molten or partially molten material, i.e., from a magma.

infauna: Aquatic animals that live in the substrate of a body of water, especially in a soft sea bottom.

intermittent stream: A stream filled with water for only a portion of the year.

interstitial: Pertaining to the interstices, or small spaces between adjacent objects.

intertidal habitat: The tidal area between the mean lower low water (MLLW) and mean higher high water (MHHW) which is alternately exposed and covered by water twice daily.

intertidal mudflats: The habitat zone that is generally found between MLLW and approximately one foot above local mean sea level and that lacks vascular plants.

inundation: Covered by a flood.

invasive species: A species that is 1) non-native (exotic) to the ecosystem under consideration and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

invertebrate: A animal without a backbone.

J-Ponds: The "J-Ponds" are Alameda County-owned freshwater outflow channels and diked marsh areas. The J-Ponds separate the Bay and Inland Ponds from the Southern Ponds.

jurisdictional wetlands: Wetlands which meet the criteria of "waters of the United States" and are thereby under the jurisdiction of the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency. The definition developed by the Corps of Engineers considers as wetlands those areas which "...are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Under this definition, all three of the following conditions must be present: a) a dominance of wetland plants; b) hydric soils (soils with low oxygen concentrations in the upper layers during the growing season); and c) wetlands hydrology.

lagoon: A coastal body of water separated from the ocean by a sand bar, which may periodically breach, opening the lagoon to the ocean for a time. Lagoons can form where a river meets the ocean (an estuarine lagoon), or without the influence of a river.

larvicide: Control agent that targets the larval portion of the life cycle, as used in the control of mosquitoes.

lateral and vertical tectonic displacement: The large scale horizontal and vertical movement of the Earth's crust due to structural plate interaction.

lateral spreading: The horizontal displacement of soil during strong, earthquake-induced ground motion.

levee: A barrier constructed to contain the flow of water, prevent flooding, or to keep out the sea.

liquefaction: see "soil liquefaction".

lower tidal marsh: Habitat that occurs above mudflats along stream and slough channels and typically is found between mean tide level and mean high water (3.3 to 5.5 feet National Annual Vertical Datum 88). Within the range of daily tidal fluctuations; ground surface and low-growing plants are exposed at low tides and completely inundated at higher tides and during periods of high stream discharge.

mammal: Any of various warm-blooded vertebrate animals of the class Mammalia, including humans, characterized by a covering of hair on the skin and, in the female, milk-producing mammary glands for nourishing the young.

managed ponds: Diked wetland, generally shallow open water habitats.

marsh: A common term applied to describe treeless wetlands characterized by shallow water and abundant emergent, floating, and submerged wetland flora. Typically found in shallow basins, on lake margins, along low gradient rivers, and in calm tidal areas. Marshes may be fresh, brackish or saline, depending on their water source(s).

marsh panne: Marsh pannes are topographic depressions on mature tidal marsh plains. They are most common in areas most distant from any tidal source and exist on drainage divides between channel networks, and on the backsides of natural levees. Marsh pannes range in age from less than 50 years to more than 1,500 years.

mean sea level: The arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. metamorphic rock: Any rock derived from pre-existing rocks by mineralogical, chemical, and/or structural changes, essentially in the solid state, in response to marked changes in temperature, pressure, shearing stress, and chemical environment, generally at depth in the earth's crust.

methylation: Conversion of sediment-bound mercury may through both biotic and abiotic processes to its more bioavailable methylated form. Methyl mercury has known neurological toxicity effects that tend to increase at each level up the food chain in aquatic environments. Thus, the availability of such contaminants, even in the seemingly insignificant parts per trillion range, often are ecologically important.

MHHW: Mean Higher High Water, the average height of the higher of the two daily high tides.

MHW: Mean High Water, the average height of all the high tides.

microtidal marsh: A tidal marsh that receives less than full tidal flow because of a physical impediment. Muting can result from the presence of natural formations such as a sand bar or of human-made structures such as tide gates, culverts, or other water control structures. Muted tidal marshes exhibit many of the same features of fully tidal marshes, although they frequently lack the same range of plant diversity.

middle tidal marsh: Habitat that occurs between mean high water and mean high higher water (5.5 to 6.0 feet National Annual Vertical Datum 88); inundated only during higher high tides.

migratory: Moving regularly or occasionally from one region or climate to another; as, migratory birds.

MLLW: Mean Lower Low Water, the average height of the lower of the two daily low tides.

MLW: Mean Low Water, the average height of all low water heights.

morphology: That branch of biology which deals with the structure of animals and plants.

MTL: Mean Tide Level.

mudflat: Flat un-vegetated wetlands subject to periodic flooding and minor wave action. The area, which lies between tidal marshes and the edge of the Bay at low tide, provides habitat for invertebrates, fish, and shorebirds.

mutagenicity: The capacity to induce a mutation or an abrupt change in the genetic constitution of an organism.

muted tidal marsh: A tidal marsh that receives less than full tidal flow because of a physical impediment. Muting can result from the presence of natural formations such as a sand bar or of human-made structures such as tide gates, culverts, or other water control structures that reduce the range of the tides but still allow for frequent inundation. Muted tidal marshes exhibit many of the same features of fully tidal marshes, although they frequently lack the same range of plant diversity. Also referred to as damped tidal marsh (see also microtidal marsh).

native species: Species which have lived in a particular region or area for an extended period of time.

navigation channel: The buoyed, dredged, and policed waterway through which ships proceed, especially in general shallow areas.

neap tides: The tides resulting when the sun and moon are at right angles to each other, characterized by a reduced tidal range.

Newark Aquiclude: A thick layer of silt and clay which overlies the Newark groundwater aquifer, creating a shallow water-bearing zone.

nonattainment areas: Areas that do not meet the national ambient air quality standards established in 1970 by the Clean Air Act.

nonpoint source: A diffuse source of pollution that cannot be attributed to a clearly identifiable, specific physical location or a defined discharge channel. This includes the nutrients that run off the ground from any land use (e.g., croplands, feedlots, lawns, parking lots, streets, forests, etc.) and enter waterways. It also includes nutrients that enter through air pollution, through the groundwater, or from septic systems.

nutrient load: Quantity of plant nutrients added to a given area (e.g., a pond).

obligates: Obligate wetland plant species. Wetland indicator species are designated according to their frequency of occurrence in wetlands. Obligate and facultative wetland indicator species are hydrophytes that occur "in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present" (Environmental Laboratory 1987).

Old Alameda Creek (OAC): A creek that forms the northern border of the Eden Landing Phase 2 Project Area; it also separates the Reserve into northern and southern halves.

outfall: The place where a sewer, drain, or stream discharges.

oxidant: An oxidizing agent.

pannes: See salt pannes.

pelagic: Referring to the open sea at all depths.

peripheral halophytes: Plants adapted to living in a saline environment. Peripheral halophytes occur along the banks and tops of levees separating tidal areas from salt ponds, and occasionally along levees separating salt ponds from each other.

permeability: The degree to which something (e.g., an earthen structure) can be penetrated by a liquid.

pH: Measure of the acidity or alkalinity (basicity) of water (pH 7 is neutral, increasing values indicate alkalinity and decreasing value indicate acidity).

phytoplankton: Small (often microscopic) aquatic plants suspended in water.

piecemealing: An unacceptable practice in which projects are analyzed incrementally by parts to make the environmental impacts appear smaller to the overseeing agencies.

piscivorous: Fish-eating.

point source: A source of pollution that can be attributed to a specific physical location; an identifiable, end of pipe "point." The vast majority of point source discharges of plant nutrients are from wastewater treatment plants, although some come from industries.

point-source discharge: A discharge of a pollutant from an identifiable point, such as a pipe, ditch, channel, sewer, tunnel, or container.

pond complex: A group of salt ponds being treating as a unit for planning purposes.

ppt: Parts per thousand (used as a measurement of salinity); the salinity of ocean water is approximately 35 ppt.

proposed species of concern (federal definition): A group of organisms for which a general notice has been published in a local newspaper and a proposed rule for listing has been published in the Federal Register. A species that may or may not be listed in the future (formerly "C2 candidate species" or "species under consideration for listing for which there is insufficient information to support listing").

rare (state definition): A species, subspecies, or variety is rare when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens.

restoration: The return of an ecosystem to a close approximation of its condition prior to disturbance.

riparian area: Riparian refers to the area of land adjacent to a body of water, stream, river, marsh, or shoreline, forming a transition between the aquatic and the terrestrial environment.

riprap: Large rock or other material often used to stabilize streambanks or erosive shorelines.

ruderal: Disturbed habitat usually of poor quality.

saline wedge: Viscous, dense brine that forms in the siphon when the denser, heavier saline water falls to the bottom of the siphon and blocks the passage of water.

salina: Natural impoundment of tidal water less than 30 cm deep on the high marsh plain. They tend to be longer than wide, and to parallel the extreme high tide contour.

saline: Of, relating to, or containing salt; salty.

salinity: A measure of the salt concentration of water; higher salinity means more dissolved salts.

salt marsh: A coastal habitat consisting of salt-resistant plants residing in an organic-rich sediment.

salt pannes: Salt pannes are shallow, generally unvegetated areas that form shallow ponds on the salt marsh. They become hypersaline in late summer. Salt pannes often contain fish populations and provide valuable habitat for shorebirds when flooded.

salt ponds: Commercial facilities that extract salt from Bay water by evaporation. Algae are the main vegetation, brine shrimp and birds the primary inhabitants.

sand boil: Sand and water ejected to the ground surface as a result of liquefaction at shallow depth; the conical sediment deposit that remains as evidence of liquefaction

sausal: Sausals (termed by Spanish explorers) are groves of willows on flat lands, often associated with creeks that are sustained by springs, seeps, or a shallow water table.

seasonal wetlands: Shallow depressions that typically contain standing water during the rainy season but become drier, or dry out, in summer and fall. They include diked (formerly tidal) salt and brackish marshes, farmed wetlands, abandoned salt ponds, inland freshwater marshes and vernal pools.

sediment budget: An accounting of all sediment delivery, export, and storage.

sedimentation: The deposition or accumulation of sediment.

semidiurnal: Occurring twice each day.

sensitive receptors: For impacts related primarily to noise or air quality, sensitive receptors are those facilities that typically host people or communities that are more susceptible to adverse environmental impacts. For air quality impacts, for example, these include schools, churches, residences, apartments, hospitals, licensed day care facilities, elderly care facilities, etc.

sensitive species (federal definition): Those plant and animal species identified by a regional forester for which population viability is a concern, as evidenced by significant current or predicted downward trends in population numbers or density, or significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution.

sessile: Sitting directly on base without support, stalk, pedicel, or peduncle; attached or stationary as opposed to free living, or exhibiting or capable of movement.

slough: A narrow, winding waterway edged with marshy and muddy ground. These water bodies are distinguished by low flow or stagnant waters.

soil liquefaction: The sudden and total loss of soil strength during earthquake-induced ground motion. Occurs in loose, saturated, clean sand where ground shaking increases effective pore pressure resulting in the displacement of individual sand grains and groundwater. The soil transforms into a fluid-like state, allowing displacement of water and the potential mobilization of sand if not confined.

Spartina (alterniflora): Smooth cordgrass, an invasive species.

special status species: Collective term for endangered species, threatened species, species of concern and species of special concern.

species of concern (federal definition): An informal term that refers to those species which USFWS believes might be in need of concentrated conservation actions. (Formerly known as Category 1 or 2 Candidate).

species of special concern (state definition): Native species or subspecies that have become vulnerable to extinction because of declining population levels, limited ranges, or rarity. The goal is to prevent these animals and plants from becoming endangered by addressing the issues of concern early enough to secure long term viability for these species.

specific yield: A measure of aquifer productivity; the volume of water drained divided by the total volume of the sample.

spring tides: The tides resulting when the gravitational forces exerted on the earth by the sun and moon are acting in the same direction.

staircase issue: A staircase issue is an area of uncertainty for which it is difficult to predict specific outcomes based on the available data and current understandings of the system. Staircase issues are being addressed through the Adaptive Management Plan (AMP), which includes monitoring to measure and track actual outcomes of management and restoration actions, together with predefined triggers designed to detect adverse outcomes early on, before they reach levels of significance. Corrective actions can thus be developed and implemented before the thresholds of significance are reached. If monitoring indicates that no adverse impacts are occurring, then the planned restoration can continue along the staircase to the next step. The “restoration staircase” was a concept developed for the South Bay Salt Pond Restoration Project at its program level and was included in the 2007 Final EIS/R.

stillwater flood elevation: Projected elevation that flood waters would assume in the absence of waves resulting from wind or seismic effects.

streambed: A channel occupied (or formerly occupied) by a stream.

strike slip fault: A fault on which the movement is parallel to the fault's strike (the direction taken by a structural surface, e.g., a bedding or fault plane, as it intersects the horizontal).

submerged plants: Plants growing with their root, stems, and leaves completely under the surface of the water.

submerged: Below water.

subsidence: The motion of a surface (usually, the Earth's surface) as it shifts downward relative to a datum such as sea level.

subtidal habitat: Areas below mean lower low water (MLLW) that are covered by water most of the time.

swamp: A seasonally flooded bottomland with more woody plants than a marsh and better drainage than a bog.

tectonically: Pertaining to the forces involved in, or the resulting structures of geology dealing with the broad architecture of the outer part of the earth, that is, the major structural or deformational features and their relations, origin, and historical evolution.

teratogenicity: The capacity to cause birth defects.

tertiary wastewater treatment: Selected biological, physical, and chemical separation processes to remove organic and inorganic substances that resist conventional treatment processes; the additional treatment of effluent beyond that of primary and secondary treatment methods to obtain a very high quality of effluent.

threatened (federal definition): Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

threatened (state definition): A native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts.

tidal dispersion: The transportation of a water parcel resulting from the spatial and temporal variability in the speed and direction of tidal currents.

tidal excursion: The horizontal distance a particle or water parcel travels during a single flood or ebb tide.

tidal marsh: Wetlands with fresh water, brackish water, or salt water along tidal shores.

tidal marsh corridor: A continuous band of tidal marsh.

tidal mud flat: The unvegetated shoreline area exposed to air during low tide.

tidal muting: The restriction of tidal flow by friction; contributes to channel shape and form as a result of erosion and sedimentation.

tidal prism: The volume of water that flows into and out of a marsh.

topography: The general configuration of a land surface, including its relief and the position of its natural and man-made features.

Total Maximum Daily Load program: A quantitative assessment, provided for in the Clean Water Act, of a problem that affects water quality. Establishes the amount of a pollutant present in a water body and specifies an allowable load of the pollutant from individual sources to ensure compliance with water quality standards.

toxic air contaminant: The classification, under California law, for a pollutant that increases the public's risk of developing cancer. See also hazardous air pollutant.

toxic: The property of being poisonous, of causing death or severe temporary or permanent damage to an organism.

toxicity: The degree to which a substance is toxic.

trophic level: Stage in a food chain or web leading from primary producers (lowest trophic level) through herbivores to primary and secondary carnivores (consumers—highest level).

tsunami: A seismically induced flood caused by the transfer of energy from an earthquake epicenter to coastal areas by ocean waves.

turbidity: The relative clarity of water, which depends in part on the material in suspension in the water.

Turk Island: A Cargill-owned inholding within the Southern Ponds.

upland: Ground elevated above the lowlands along rivers or shorelines.

upper tidal marsh: Habitat that occurs from mean high higher water and up several feet (>6.0 feet National Annual Vertical Datum 88) to the maximum elevation of tidal effects. This habitat is inundated only during higher high tides.

upland transition zone: High marsh, or ecotone, where species frequently occur above the high tide line; indicated by wrack material (water-transported organic and synthetic detritus); referred to as *habitat transition zone* in the Final EIS/R.

vascular plant: Green plant having a vascular system: ferns, gymnosperms, angiosperms.

vector: An insect or other organism that transmits a pathogenic fungus, virus, bacterium, etc.

water control structure: A structure in a water management feature that conveys water, controls the direction or rate of flow, or maintains a desired water surface elevation. Examples of water control structures include tide gates, culverts, and others.

watershed: An area of land where all of the ground water and surface water drains to the same water body (typically a river or creek).

zooplankton: Floating and free-swimming invertebrates that are suspended in the water column.

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