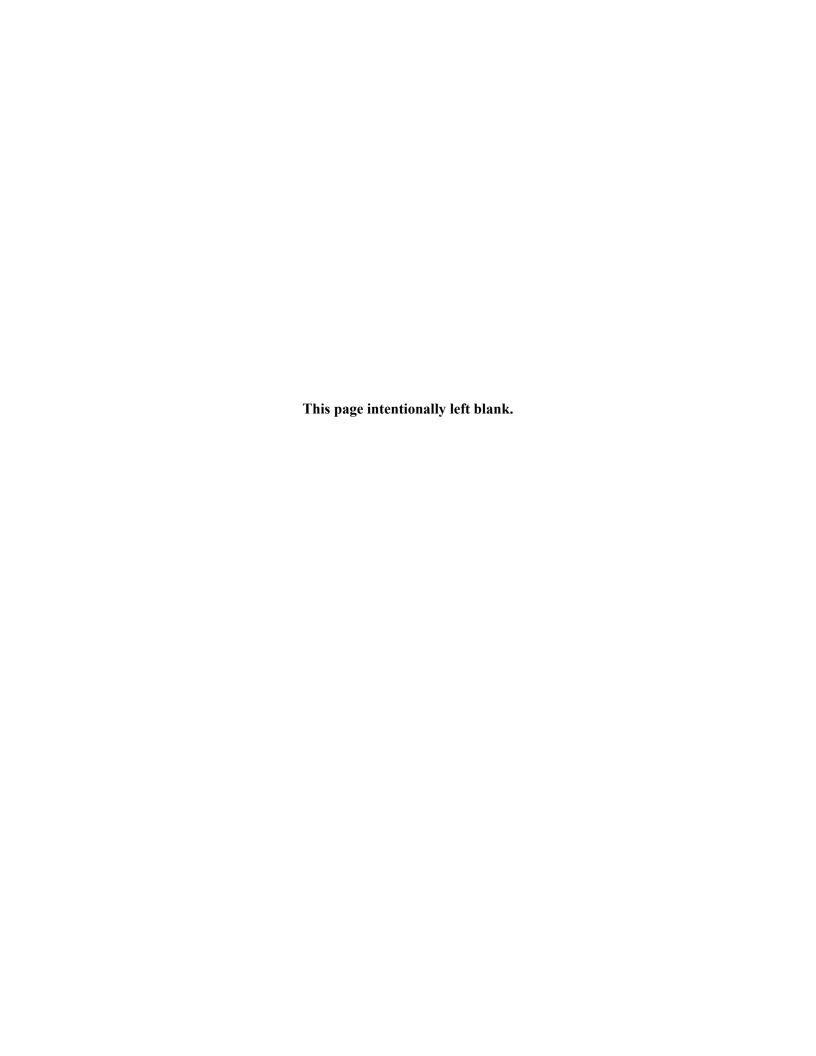
Chapter 9

Glossary



9 Glossary

100-year flood zone

Land area having a 1-percent chance of being flooded during a given year.

Alluvial

A loose deposit of gravel, sand, mud, etc., formed by flowing water.

Alquist-Priolo Earthquake Fault Zone In 1972 the State of California began delineating special studies zones (called Earthquake Fault Zones since January 1994) around active and potentially active faults in the state. The zones are revised periodically, and extend 200 to 500 ft (61 to 152 m) on either side of identified fault traces. No structures for human occupancy may be built across an identified active fault trace. An area of 50 ft (15.2 m) on either side of an active fault trace is assumed to be underlain by the fault, unless proven otherwise. Proposed construction in the Earthquake Fault Zone is permitted only following the completion of a fault location report prepared by a California-registered professional Geologist.

Ambient air quality standards (AAQS)

Standards established on a state or federal level that define the limits for airborne concentrations of designated criteria pollutants (nitrogen dioxide, sulfur dioxide, carbon monoxide, ozone, lead), to protect public health with an adequate margin of safety (primary standards) and public welfare, including plant and animal life, visibility, and materials (secondary standards) (also see Attainment area, below).

Aquifer

A layer of underground sand, gravel, or spongy rock in which water collects.

Artifact

Any product or human cultural activity; more specifically, any tools, weapons, artworks, etc., found in archeological contexts.

Asbestos

A carcinogenic substance formerly used widely as an insulation material by the construction industry; often found in older buildings.

Attainment area

A geographic area in which levels of a criteria air pollutant meet the health-based primary standard (national ambient air quality standard, or NAAQS) for the pollutant. An area may have an acceptable level for one criteria air pollutant, but may have unacceptable levels for others. Thus, an area could be both attainment and non-attainment at the same time. Attainment areas are defined using federal pollutant limits set by USEPA.

A-weighted decibel (dBA)

A number representing the sound level that is frequency weighted according to a prescribed frequency response established by the American National Standards Institute (ANSI-S1.4-1971); accounts for the response of the human ear.

Bay Area

Region loosely defined by San Francisco and San Pablo Bays and the geographic and urban areas along their shores.

Best-management practices (BMPs)

Includes schedule of activities, prohibition of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of Waters of the U.S. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Break-bulk cargo

A shipping term for any loose material that must be loaded individually, not in shipping containers or in bulk, as with oil or grain.

Btu

Approximately the amount of energy needed to heat 1 pound of water 1 degree Fahrenheit.

Bulkhead site

The area between the waterfront roadway and the pier or water. Many bulkhead sites house structures that provide entrances to the piers.

Capacity (transportation)

The maximum rate of flow at which vehicles can be reasonably expected to traverse a point or uniform segment of a lane or roadway during a specified time period under prevailing roadway, traffic, and control conditions.

Capacity (utilities)

The maximum load a system is capable of carrying under existing service conditions.

Carbon Monoxide (CO)

A colorless, odorless, poisonous gas produced by incomplete fossil-fuel combustion. One of the six pollutants for which there is a national ambient standard.

Carcinogen

A cancer-causing substance.

Class I, II, and III Areas Area classifications, defined by the *Clean Air Act*, for which there are established limits on the annual amount of air pollution increase. Class I areas include international parks and certain national parks and wilderness areas; allowable increases in air pollution are very limited. Air pollution increases in Class II areas are less limited, and are least limited in Class III areas. Areas not designated as Class I start out as Class II and may be reclassified up or down by the state, subject to federal requirements.

Clean Air Act (CAA)

The CAA legislates that air quality standards set by federal, state, and county regulatory agencies establish maximum allowable emission rates and pollutant concentrations for sources of air pollution on federal and private property. Also regulated under this law is proper removal and safe disposal of asbestos from buildings other than schools.

Clean Water Act (CWA)

The CWA is the major federal legislation concerning improvement of the nation's water resources. It provides for development of municipal and industrial wastewater treatment standards and a permitting system to control wastewater discharges to surface waters. The act contains specific provisions for regulation of ships' wastewater and disposal of dredge spoils within navigable waters. Section 404 of the act regulates disposal into Waters of the U.S., including wetlands.

Climate

The prevalent or characteristic meteorological conditions (and their extremes) of any given location or region.

Colluvial

A loose deposit of rock debris accumulated through the action of gravity at the base of a cliff or slope.

Combined Sewer Overflow (CSO)

An overflow is a pipe that discharges flows that exceed the capacity of the combined sewer system during very heavy rain. Such discharges receive primary (flow-through) treatment in underground storage/transport boxes. Overflow events are relatively rare in San Francisco.

Community noise equivalent level (CNEL) Noise compatibility level established by California Administrative Code, Title 21, Section 5000. The 24-hour average A-weighted sound level with a 5 dB weighting added to levels occurring between 10:00 P.M. and 7:00 A.M.

Comprehensive Environmental Response, Compensation, And Liability Act (CERCLA)

CERCLA, also known as the Superfund, was enacted in 1980 to ensure that a source of funds is available to clean up abandoned hazardous waste dumps, compensate victims, address releases of hazardous materials, and establish liability standards for responsible parties. The act also requires creation of a National Priorities List (NPL), which sets forth the sites considered to have the highest priority for cleanup under the Superfund.

Contamination

The degradation of naturally occurring water, air, or soil quality either directly or indirectly as a result of human activities.

Coastal Zone Consistency Review The federal regulations that implement the consistency provisions of the Coastal Zone Management Act (CZMA) are found at 15CFR Part 930. These regulations establish the procedures to be followed in order to assure that federal agency activities are consistent with the enforceable policies of the California Coastal Management Program.

Council on Environmental Quality (CEQ) Established by NEPA, the CEQ consists of three members appointed by the President. CEQ regulations (40 CFR 1500-1508, as of July 1, 1986) describe the process for implementing NEPA, including preparation of environmental assessments and environmental impact statements, and timing and extent of public participation.

Cultural

1) Characterized by the nonbiological and socially transmitted system of concepts, institutions, behavior, and materials by which a society adapts to its effective natural and human environment; 2) Characterized by similar or related assemblages of approximately the same age from a single locality or district, thought to represent the activities of one social group.

Cultural history

The archeological sequence of cultural activity through time, within a defined geographic space or relating to a particular group.

Cultural resource

Prehistoric or historic districts, sites, buildings, objects, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or any other reason.

Cumulative impacts

The combined impacts resulting from the addition of incremental impact of the proposed action to other past, present, and reasonably foreseeable future actions, regardless of which agency or person undertakes them.

Day-night average sound level (L_{dn})

The 24-hour average-energy sound level expressed in decibels, with a 10-decibel penalty added to sound levels between 10:00 P.M. and 7:00 A.M. to account for increased annoyance due to noise during the night.

Decibel (dB)

A unit of measurement on a logarithmic scale which describes the magnitude of a particular quantity of sound pressure or power with respect to a standard reference value.

Disposal

Legal transfer of DoN property to other ownership.

Dredging

Removal of mud from the bottom of water bodies using a scooping machine; underwater excavation.

Effluent

Waste material discharged into the environment.

Endangered species

A species that is threatened with extinction throughout all or a significant portion of its range.

Endangered Species Act (ESA) The ESA requires federal agencies to determine the effects of their actions on endangered species and their critical habitats.

Environmental impact statement (EIS)

A document required of federal agencies by NEPA for major projects or legislative proposals significantly affecting the environment. A tool for decision making, the EIS describes the positive and negative effects of the undertaking and lists alternative actions.

Equivalent noise levels (L_{eq})

Equivalent noise levels are used to develop single-value descriptions of average noise exposure over various periods of time.

Effects Range Median (ERM) The concentration above which effects are frequently or always observed among most species of biota.

Embayment

A small bay or any small semi-enclosed coastal water body, whose opening to a large body of water is restricted.

ENERGY STAR

A joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy that sets energy efficiency guidelines for appliances and homes.

Estuarine

The part of the mouth or lower course of a river in which the river's current meets the sea's tide.

Fault

Fracture in earth's crust accompanied by a displacement of one side of the fracture with respect to the other and in a direction parallel to the fracture.

Feasibility study (FS)

The feasibility study, part of the CERCLA remediation process, identifies and evaluates all applicable site cleanup alternatives. For most sites a long list of alternatives is possible. A risk assessment is performed as part of the study to quantify the level of risk to the public and environment posed by the site. Often, the risk assessment determines which alternative is selected for final remediation. Each alternative is evaluated for effectiveness in protecting human health and the environment, ease of implementation, and overall cost. Typically, the remedial investigation and FS are performed concurrently.

Fine Particulate

Matter

Extremely small, suspended particles or droplets 2.5 microns or smaller in diameter.

Foot-candle

A unit of light intensity that represents the illumination given off by a single candle at a distance of 1 ft (0.3 m).

General Plan

The General Plan, adopted by the City Council or local governing board after public hearings and citizen input, is a comprehensive, long-range policy document that guides the ultimate physical development of a city or local government.

Geogrid

Synthetic fabric (fiberglass, polyester, treated steel, etc.) formed into nets with openings more than ¼ in (6.35 mm) in size to allow the fabric to interlock with surrounding soil, rock, and other below-ground-level materials and to function as reinforcement.

Ground water

Water within the earth that supplies wells and springs.

Hazard

Any situation that has the potential to cause damage to human health or the environment.

Hazard Index (HI)

The calculated ratio of predicted acute or chronic exposure of noncarcinogenic substance to a toxicity reference dose level for that particular substance. A Hazard Index (HI) threshold of 1 has been established by most regulatory agencies, including the RWQCB and BAAQMD for comparison purposes. Adverse health effects are not anticipated when chronic and acute hazard indices are less than one.

Hazardous material

A substance or mixture of substances that poses a substantial present or potential risk to human health or the environment. Any substance designated by the USEPA to be reported if a designated quantity of the substance is spilled in the Waters of the U.S. or if it is otherwise released into the environment.

Hazardous materials release site

Any area, location, or facility where a hazardous material has been released or threatens to be released to the environment (*California Health and Safety Code*, Section 25260(e)).

Hazardous substance

See "hazardous material."

Hazardous waste

A waste or combination of wastes which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either cause or significantly contribute to an increase in mortality or an increase in serious irreversible illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Regulated under RCRA.

Hectare (ha)

An area equivalent to 2.471 ac or 10,000 m².

Historic

A period of time after the advent of written history dating to the time of first Euro-American contact in an area. Also refers to items primarily of Euro-American manufacture.

Historical resource

Any resource listed in or determined to be eligible for listing in the California Register of Historical Resources (CRHR). The CRHR includes resources listed in or formally determined eligible for listing in the National Register of Historic Places (NRHP), as well as some California Historical Landmarks and Points of Historical Interest.

Impacts

An assessment of the changes in the characteristics of an environmental resource caused by the project; an aggregation of all the adverse effects, usually measured using a qualitative and nominally subjective technique. Impacts analyzed under CEQA must be related to a physical change.

Infrastructure

The basic installations and facilities on which the continuance and growth of a locale depend (roads, schools, power plants, transportation, and communication systems).

Installation
Pastoration Progra

Restoration Program (IRP)

A program established by the Department of Defense to meet requirements of CERCLA of 1980 and SARA of 1986, which identifies, assesses, and cleans up or controls contamination from past hazardous waste disposal practices and hazardous material spills.

Lead

Occurs in the atmosphere as particulate matter. Sources of lead include the manufacturing and recycling of batteries, paint, ink, ceramics, ammunition, and secondary lead smelters.

Level of Service (LOS)

In transportation analysis, a qualitative measure describing operational conditions within a traffic stream and how they are perceived by motorists and/or pedestrians. Usually given a letter grade from A to F, with A being free-flow; E, capacity; and F, forced-flow. Factors considered in LOS analyses include speed, travel time, traffic interruptions, freedom of maneuver, safety, driving comfort, and convenience. In public services, a measure describing the amount of public services available to community residents, generally expressed as the number of personnel providing service per 1,000 population.

Liquefaction

The transformation during an earthquake of unconsolidated, watersaturated sediment into a liquid form.

Lithology

The physical character of a rock or rock formation.

Marsh

A type of wetland that does not accumulate appreciable peat deposits and is dominated by herbaceous vegetation. Marshes may be either fresh or salt water and tidal or nontidal.

McKinney Act

The McKinney Act gives recognized providers of assistance to the homeless a high priority in acquiring unneeded land and buildings on federal properties. The property can be used only for the homeless and only for two years. Providers of assistance to the homeless must be able to finance upgrades of facilities, pay a proportionate share of municipal service costs, and fund its program operations.

Migratory Bird Treaty Act This act prohibits the taking or harming of a migratory bird, its eggs, nests, or young without the appropriate permit.

Mitigation

A method or action to reduce or eliminate project impacts, including application of existing plans, policies, and laws.

Municipal Separate Storm Sewer System (MS4) An MS4 is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) 1) designed or used for collecting or conveying stormwater, 2) that is not a combined sewer, and 3) that is not part of a Publicly Owned Treatment Works. The term MS4 also refers to the jurisdiction that operates such a system.

National Ambient Air Quality Standards (NAAOS) Nationwide standards for widespread air pollutants set by the USEPA under section 109 of the *Clean Air Act*. Currently, six pollutants are regulated by primary and secondary NAAQS: carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter (PM_{10}), and sulfur dioxide.

National Environmental Policy Act (NEPA) Public Law 91-190, passed by Congress in 1969, established a national policy designed to encourage consideration of the influence of human activities on the natural environment. NEPA also established the Council on Environmental Quality. NEPA procedures require that environmental information be made available to the public before decisions are made.

National Geodetic Vertical Datum (NGVD29) Equivalent to -1.77 ft (0.539 m) based on the San Francisco City Datum, or roughly equivalent to mean sea level.

National Historic Preservation Act (NHPA) The NHPA protects cultural resources. Section 106 of the act requires a federal agency to take into account the potential effect of a proposed action on properties listed on or eligible for listing on the National Register of Historic Places.

National Pollutant Discharge Elimination System (NPDES) The NPDES is a provision of the *Clean Water Act* which prohibits discharge of pollutants into Waters of the U.S. unless a special permit is issued by the USEPA or the state.

National Priorities List (NPL) A list of sites (regulated by either a federal or state agency) where releases of hazardous materials may have occurred and may cause an unreasonable risk to the health and safety of individuals, property, or the environment.

National Register Resources Properties listed on the National Register of Historic Places, properties formally determined eligible for listing on the National Register, and those properties appearing to qualify for listing on the National Register.

Native Americans

Used in the collective sense to refer to individuals, bands, or tribes who trace their ancestry to indigenous populations of North America prior to Euro-American contact.

Natural gas

A natural fuel containing primarily methane and ethane that occurs in certain geologic formations.

Nitrogen Dioxide (NO₂)

Gas formed primarily from atmospheric nitrogen and oxygen when combustion takes place at high temperature. NO₂ emissions contribute to acid deposition ("acid rain") and formation of atmospheric ozone. One of the six pollutants for which there is a national ambient standard.

Nitrogen Oxide (NO_x)

Gases formed primarily by fuel combustion, which contribute to the formation of acid rain. Hydrocarbons and nitrogen oxides combine in the presence of sunlight to form ozone, a major constituent of smog.

Noise Attenuation

The reduction of a noise level from a source by such means as distance, ground effects, or shielding.

North American and Pacific Plates

Tectonic plates that cover most of North America and the Pacific Ocean, respectively. These two plates have formed a transform boundary (where two plates grind past one another) on the western edge of California, along the San Andreas Fault system.

Outfall

An outfall is a pipe that discharges treated stormwater and wastewater flows into a receiving water body.

Ozone A major ingredient of smog. Ozone is produced from reactions of hydrocarbons and

nitrogen oxides in the presence of sunlight and heat. Some 68 areas, mostly metropolitan areas, did not meet a December 31, 1987 deadline in the Clean Air Act

for attaining the ambient air quality standard for ozone.

The hour of highest traffic volume on a given section of roadway between 7:00 A.M. Peak hour

and 9:00 A.M. or between 4:00 P.M. and 6:00 P.M.

Permit An authorization, license, or equivalent control document to implement the

requirements of an environmental regulation.

pHA numeric measurement of the hydrogen-ion concentration in water.

Pollutant Loads The amount of pollutants entering a water body, generally expressed in terms of

mass released over a given time frame (e.g., pounds/day).

Organic chemical byproduct formed by the incomplete combustion of raw fuel Polycyclic aromatic hydrocarbon (PAH) materials, typically present as a constituent of heavy-end fuels (e.g., diesel) or other

petroleum-based products such as asphalt.

Polychlorinated Any of a family of industrial compounds produced by chlorination of biphenyl. biphenyls (PCBs)

These compounds are noted chiefly as an environmental pollutant that accumulates in organisms and concentrates in the food chain with resultant pathogenic and

teratogenic effects. They also decompose very slowly.

Potable water Water that is suitable for drinking.

Prehistoric The period of time before the written record.

Quaternary The geologic time period after the Neogene period, approximately 1.8 million years

ago to the present.

Record of Decision The document prepared under the federal government pursuant to NEPA, (ROD)

documenting the reasoning behind the decision.

Recycling The process of minimizing the generation of waste by recovering usable products

that might otherwise become waste.

Region of influence For each resource, the region affected by the proposed action or alternatives; used

for analysis in the affected environment and impact discussion.

(ROI)

selected cleanup technology is implemented. RA can be as simple as soil excavation or as complicated as a complete ground water treatment system that operates for many years. Remedial action work plans for long term remediations will include Operation and Maintenance plans. Operation and Maintenance efforts continue until

During the remedial action phase, part of the CERCLA remediation process, the

the cleanup is complete.

Remedial This investigation, part of the CERCLA remediation process, is performed to more investigation (RI)

fully define the nature and extent of the contamination at a site and evaluate possible methods of cleaning up the site. During the investigation, ground water, surface water, soil, sediment, and biological samples are collected and analyzed to determine the type and concentration of each contaminant. Samples are collected at different

areas and depths to help determine the spread of contamination.

Conservation and Recovery Act (RCRA)

Resource

Remedial action

environmental problems associated with hazardous waste disposal. RCRA and the regulations developed by USEPA to implement its provisions provide the general framework of the national hazardous waste management system, including the determination of whether hazardous wastes are being generated, techniques for tracking wastes to eventual disposal, and the design and permitting of hazardous

RCRA was enacted in 1976 as the first step in regulating the potential health and

waste management facilities.

Richter Magnitude Scale The Richter Magnitude Scale is a logarithmic scale developed during 1935 and 1936 by Dr. Charles F. Richter and Dr. Beno Gutenberg to measure earthquake magnitude by the amount of energy released, as opposed to earthquake intensity as determined by local effects on people, structures, and earth materials (as in the Modified Mercalli Intensity Scale). Each whole number on the Richter scale represents a 10-fold increase in amplitude of the waves recorded on a seismogram, and about a 32-fold increase in the amount of energy released by the earthquake. Because the Richter scale tends to saturate above approximately M 7.5, it is being replaced in modern seismologic investigations by the moment magnitude (M) scale.

Risk

The probability of exposure to hazardous material and severity of harm that exposure would pose to human health or the environment, where the degree of risk is a function of the means of exposure, in addition to the inherent toxicity of the material.

Runoff

The noninfiltrating water entering a stream or other conveyance channel shortly after a rainfall event.

San Francisco City

Datum

A local vertical geodetic reference system specific to the City and County of San Francisco and formally established in 1964 as 8.616 ft (2.626 m) above the National Geodetic Vertical Datum of 1929 (NGVD29), making it about 8.13 ft (2.48 m) above mean sea level.

Seismicity

Relative frequency and distribution of earthquakes.

Semi-volatile organic compound (SVOC)

An organic chemical that readily, but only partially, evaporates or changes from a liquid to gas at temperatures normally found at the ground surface and at shallow depths.

Serpentinite

A rock composed almost entirely of serpentine materials.

Shadow Fan/Shadow

Trace

A figure identifying the maximum extent of all project-related shadows from one hour after sunrise to one hour before sunset for an entire year.

Shale Matrix

Shale, or mudstone, is a fine-grained sedimentary rock, usually formed from clay minerals compacted together by pressure. The matrix, or groundmass, is the fine-grained mass of material in which other larger grains are embedded within.

Shear Strength

Describes the maximum strength of soil at which point significant plastic deformation (yielding) occurs due to an applied shear stress.

Shear Zone

A wide zone of sheared rock, where intense foliation and deformation may occur. The zone may be associated with a fault, but it is often difficult to distinguish a fault plane in the zone.

Significance

The importance of a given impact on a specific resource as defined under the Council on Environmental Quality regulations.

Single-family housing

A conventionally built house consisting of a single dwelling unit occupied by one household.

Site

The location of past cultural activity; a defined space with more or less continuous archeological evidence.

Soil

A natural body consisting of layers or horizons of mineral and/or organic constituents of variable thickness and differing from the parent material in their morphological, physical, chemical, and mineralogical properties and biological characteristics.

Soil types

A category or detailed mapping unit used for soil surveys based on phases or changes within a series (e.g. slope, salinity).

State Historic Preservation Officer (SHPO) The official within each state, authorized by the state at the request of the Secretary of the Interior, to act as a liaison for purposes of implementing the National Historic Preservation Act.

Strategic Plan

Strategic Plan was adopted in 2003 and remains the guiding document for the San Francisco Public library (SFPL).

Sulfur Dioxide (SO₂)

A toxic gas that is produced when fossil fuels, such as coal and oil, are burned. SO_2 is the main pollutant involved in the formation of acid rain. SO_2 can irritate the upper respiratory tract and cause lung damage. During 1980, some 27 million tons of sulfur dioxide were emitted in the United States, according to the Office of Technology Assessment. The major source of SO_2 in the United States is coalburning electric utilities.

Surcharging

Overloading and flooding of the drainage system.

Total Organic Carbon (TOC) An indicator of the total organic matter present in water.

Total Maximum
Daily Load (TMDL)

A calculation of the total daily load (or "amount") of a pollutant that a water body can receive on a daily basis and still meet water quality standards.

Total petroleum hydrocarbons (TPH)

Fuel products such as diesel, gasoline, and motor oil containing organic chemical compounds of varying types and concentrations that are specific to type product.

Total Suspended Solids (TSS) An indicator of the undissolved solids in stormwater runoff.

Toxic

Harmful to living organisms.

Toxic Hot Spots

Locations in enclosed bays, estuaries, or the ocean where pollutants have accumulated in the water or sediment to levels that 1) may pose a hazard to aquatic life, wildlife, fisheries, or human health; 2) may impact beneficial uses; or 3) exceed State Water Resources Control Board or RWQCB-adopted water quality or sediment quality objectives.

Traffic, peak hour

The highest number of vehicles observed to traverse a section of roadway during 60 consecutive minutes.

U.S. Environmental Protection Agency (USEPA) The independent federal agency established in 1970 to regulate federal environmental matters and to oversee the implementation of federal environmental laws.

Waters of the U.S.

Waters that are subject to Section 404 of the Clean Water Act. These include both deep water aquatic habitats and special aquatic sites, including wetlands.

Volatile Organic Compound (VOC) An organic chemical that readily evaporates at temperatures normally found at the ground surface and at shallow depths.

Waffling Grade

A surface texture marked by ridges and valleys that would help to channel flow.

Waste Discharge Requirement (WDR) WDRs are regulatory requirements pertaining to water quality. WDRs may apply to a general activity or program (e.g., construction runoff) or they may be specific to a particular facility. An NPDES permit is an example of a type of WDR.

Zoning

The division of a municipality into districts for the purpose of regulating land use, types of buildings, required yards, necessary off-street parking, and other prerequisites to development. Zones are generally shown on a map and the text of the zoning ordinance specifies requirement for each zoning category.

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