Glossary

Beneficial Uses	Uses of water that may be protected against degradation include, but are not limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; preservation and enhancement of fish, wildlife, and other aquatic resources and preserves (California Water Code (CWC) section 13050(f)).
Best Management Practices (BMP)	Methods, measures or practices selected by an agency to meet its nonpoint source control needs. BMPs include but are not limited to structural and nonstructural controls and operation and maintenance procedures. BMPs can be applied before, during and after pollution producing activities to reduce or eliminate the introduction of pollutants into receiving waters.
Binomial Distribution	A binomial distribution statistically describes the probabilities associated with the possible number of times particular outcomes will occur in series of observations (i.e., samples). Each observation may have only one of two possible results (e.g., yes/no, on/off, violation/compliance). The following assumptions must apply in order to reliably employ binomial distribution statistics: • Each observation may result in only two possible outcomes. • An "experiment" consists of *n* identical trials or observations. • The probability of one particular result (out of two) remains constant from one observation to the next. • The observations (i.e., samples) are independent, so that the outcome of one observation has no effect on the outcome of another.
Bioaccumulation	The process by which a chemical is taken up by an aquatic organism, both from water and through food.
Bioassessment	Biological assessment is the use of biological community information along with the measure of the physical/habitat quality to determine, in the case of water quality, the integrity of a water body of interest.

Contamination	An impairment of the quality of the water of the state by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. "Contamination" includes any equivalent effect resulting from the disposal of waste whether or not waters of the state are affected (CWC section 13050(k)).
California Toxics Rule (CTR)	USEPA established numerical water quality criteria for priority toxic pollutants for California Inland Surface Waters, Enclosed Bays and Estuaries.
Conventional Pollutants	Include dissolved oxygen, pH, and temperature (from the section 305(b) guidance).
Effects Range-Median (ERM) and Effects Range-Low (ERLs) Values	Sediment quality guidelines based on a biological effects empirical approach. These values represent chemical concentration ranges that are rarely (i.e., below the ERL), sometimes (i.e., between ERL and ERM), and usually (i.e., above the ERM) associated with toxicity for marine and estuarine sediments. Ranges are defined by the tenth percentile and fiftieth percentile of the distribution of contaminant concentrations associated with adverse biological effects.
Equilibrium Partitioning (EqP) Approach	Methodology of developing sediment quality guidelines that assumes that an organism receives an equivalent exposure from water only exposures or from any equilibrated phase (e.g., either from pore water via respiration; or from organic carbon, via ingestion; or from a mixture of the routes). Approach results in guideline values expressed in terms of a sediment phase controlling contaminant bioavailability (e.g., organic carbon for nonionic organic compounds or sulfides for metals).
Equilibrium Partitioning Sediment Guidelines (ESGs)	Sediment quality guidelines derived using the EqP approach. When used in conjunction with appropriately protective water only exposure concentration, a resulting guideline represents the sediment contaminant concentration that protects benthic organisms from the effects of that contaminant.
Index of Biologic Integrity (IBI)	The response of indicators designed to monitor or detect biological, community, or ecological conditions. IBI is a multimetric index indicating the ability of a habitat to support and maintain a balanced, integrated, adaptive biological system having the full range of elements expected in a region's natural habitat.

Maximum Contaminant Level (MCL)	The maximum permissible level of a contaminant in water delivered to any user of a public water system.
Maximum Tissue Residue Level (MTRL)	MTRLs were developed from human health water quality objectives in the 1997 California Ocean Plan and from the California Toxic Rule as established in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. MTRLs are used as alert levels or guidelines indicating water bodies with potential human health concerns and are an assessment tool and not compliance or enforcement criteria. The MTRLs are calculated by multiplying the human health water quality objectives by the bioconcentration factor for each substance.
National Academy of Science (NAS) Tissue Guidelines	NAS guidelines are established guidelines for the protection of predators. Values are suggested for residues in whole fish (wet weight) for: DDT (including DDD and DDE), aldrin, dieldrin, endrin, heptachlor (including heptachlor epoxide), chlordane, lindane, benzene hexachloride, toxaphene, and endosulfan either singularly or in combination.
National Toxics Rule (NTR)	USEPA established numerical water quality criteria for priority toxic pollutants for 12 states and two Territories who failed to comply with the section 303(c)(2)(B) of the Clean Water Act.
Nonpoint Source	Pollution sources are diffused and do not have a single point of origin or are not introduced into a receiving stream from a specific outlet. The pollutants are generally carried off the land by stormwater runoff. The commonly used categories for non-point sources are: agriculture, forestry, mining, construction, land disposal, and salt intrusion.
Point Source	Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigation agriculture or agricultural storm water runoff (40 CFR 122.2).

Pollutants	This term *pollutants* is defined in section 502(6) of the CWA as "dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water."
Pollution	The term *pollution* is defined in section 502(19) of the CWA as the "the man-made or man-induced alternation of the chemical, physical, biological, and radiological integrity of water." *Pollution* is also defined section 13050(1) of the California Water Code as an alternation of the quality of the waters of the state by waste to a degree that unreasonably affects either the waters for beneficial uses or the facilities that serve these beneficial uses.
Probable Effect Concentration (PEC)	Consensus based PECs are empirically derived freshwater sediment quality guidelines (SQG) that rely on the correlation between the chemical concentration in field collected sediments and observed biological effects. PECs are based on geometric means of various SQG approaches (with matching chemical and toxicity field data) to predict toxicity for freshwater sediment on a regional and national basis.
Probable Effects Level (PELs) and Threshold Effects Levels (TEL)	Sediment quality guidelines based on a biological effects empirical approach similar to ERMs/ERLs. A generalized approach used to develop effects-based guideline for the state of Florida and others. The lower of the two guidelines for each chemical (i.e., the TEL) is assumed to represent the concentration below which toxic effects rarely occur. In the range of concentrations between the two guidelines, effects occasionally occur. Toxic effects usually or frequently occurs at concentrations above the upper guideline value (i.e., the PEL). Ranges are defined by specific percentiles of both the distribution of contaminant concentrations associated with adverse biological effects and the "no effects" distribution.
Rank Correlation	A non-parametric distribution free test that determines whether there is a monotonic relation between two variables or paired data (e.g., chemical measurements and percent response in a toxicity test).

Reference Condition	The characteristics of water body segments least impaired by human activities. As such, reference conditions can be used to describe attainable biological or habitat conditions for water body segments with common watershed/catchment characteristics within defined geographical regions.
Spatial Representation	The degree of compatibility or overlap in the study area, locations of measurements or samples, locations of stressors or potential pollutant sources, and locations of potential exposure to pollutants.
Statistical Significance	A finding (for example, the observed difference between the means of two random samples) is statistically significant when it can be demonstrated the probability of obtaining such a difference by chance only is relatively low.
Temporal Representation	Compatibility or overlap between measurements (when data were collected or the period for which data are representative) and the period during which effects of concern would likely to be detected.
Total Maximum Daily Load (TMDL)	TMDL is the sum of individual wasteload allocations (WLAs) and load allocations (LA); a margin of safety (MOS). TMDLs can be expressed in terms of mass per time, toxicity, or other appropriate measures that relate to a state's water quality standards.
Toxicants	Include priority pollutants, metals, chlorine and nutrients (from the section 305(b) guidance).
Toxicity Identification Evaluation (TIE)	TIE is technique to identify the unexplained cause(s) of toxic events. TIE involves selectively removing classes of chemicals through a series of sample manipulations (e.g. solid phase extraction to remove organic compounds), effectively reducing complex mixtures of chemicals in natural waters to simple components for analysis. Following each manipulation the toxicity of the sample is assessed to see whether the toxicant class removed was responsible for the toxicity.
Toxicity Test	A test to determine the toxicity of a chemical in ambient water using living organisms. A toxicity test measures the degree of effect on exposed test organism. Toxicity is determined when there is a statistically significant difference in mortality, and/or growth and reproduction of an organism in water compared to the laboratory control.

Use Attainability Analysis	A structured scientific assessment of the factors affecting the attainment of the use which may include physical, biological, and economic factors as described in section 303.10(g) (40 CFR 131.3).
Waste Discharge Requirements (WDR)	WDRs are issued under State law pursuant to CWC section 13263 and apply to dischargers that discharge waste to land or to water. WDRs implement water quality control plans, take into consideration beneficial uses, water quality objectives, other waste discharges, the need to prevent nuisance, and the provisions of CWC section 13241. The disposal method may be by agricultural or non-agricultural irrigation, ponds, landfills, mono-fills, or leachfields.
Water Quality Enforcement Policy	The Enforcement Policy is a framework for identifying and investigating instances of noncompliance, for taking enforcement actions that are appropriate in relation to the nature and severity of the violation, and for prioritizing enforcement resources to achieve maximum environmental benefits. • Group 1 Pollutants. List of pollutants is based on Appendix A to Section 123.45 of Title 40 of the Code of Federal Regulations which includes: oxygen demand, solids, nutrients, detergent and oils, minerals and metals. • Group 2 Pollutants. List of pollutants is based on Appendix A to Section 123.45 of Title 40 of the Code of Federal Regulation which includes; all metals not specified under Group 1, inorganics (cyanide and total residual chlorine) and all organics not specifically listed under Group 1.
Water Quality Limited Segment	Any segment [of a water body] where it is known that water quality does not meet applicable water quality standards, and /or is not expected to meet applicable water quality standards, even after application of technology-based effluent limitations required by CWA Sections 301(d) or 306 as defined in the Federal Regulations.
Water Quality Standard (WQS)	Provisions of State and Federal Law which consist of a designated use or uses for the waters of the United States, water quality criteria for such waters based upon such uses. Water quality standards are to protect public health or welfare, enhance the quality of the water and serve the purpose of the Act (40 CFR 131.3).