

These terms are defined for the purposes of this EIR/EIS and may have multiple definitions.

100-year flood	A flood having a 1% chance of being equaled or exceeded in magnitude in any given year.
abatement	Reduction; often used to describe mitigation of noise.
absorption	Taking in of fluids or other substances through, or as if through, cells or tissues.
abutment	That part of the valley wall against which the dam is constructed; the part of a dam that contacts the riverbank; a structure that supports the ends of a dam or bridge; the part of a structure that is the terminal point or that receives thrust or pressure.
accretion	The act of adding material, such as from the deposition and accumulation of water particles (e.g., the process of adding water to an aquifer from all sources).
acre-foot	The volume of water that would cover 1 acre of land to a depth of 1 foot. Equal to 1,233.5 cubic meters (43,560 cubic feet).
adsorbate	The material that has been or is to be adsorbed on a surface.
adsorbent	The material (for example, activated carbon) on which adsorption can occur.
adsorption	The process by which chemicals are held on the surface of a mineral or soil particle.
aeolian	Materials carried, deposited, produced, or eroded by the wind.
aggradation	Geologic process wherein streambeds, floodplains, sandbars, and the bottom of water bodies are raised in elevation by the deposition of sediment; the opposite of degradation.
algae	Simple plants containing chlorophyll; most live submerged in water.
alkali	A soluble salt obtained from the ashes of plants. A substance having marked basic properties. Various soluble salts, principally of sodium, potassium, magnesium, and calcium, that have the property of combining with acids to form neutral salts and that may be used in chemical water treatment processes.
allopatric	Having separate and mutually exclusive areas of geographical distribution.
alluvium	Sedimentary materials deposited by running water.
anadromous fish	Fish that spend a part of their lifecycle in the sea and return to freshwater streams to spawn. Anadromous fish are born in fresh water, migrate to the ocean to grow into adults, and then return to fresh water to spawn.
anoxic	Depleted of oxygen. Anaerobic.

anthropogenic	Of, relating to, or resulting from the influence of human beings on nature.
approach velocity	The component of the local water velocity vector perpendicular to the face of the fish screen. Approach velocity is simply a function of diversion flow rate (expressed in cubic feet/sec) and submerged screen area (square feet).
appropriative water rights	Right to use a given quantity of water for reasonable and beneficial use in a prescribed place in order of priority based on the time water is first put to use. Since December 19, 1914, the exclusive method for establishing an appropriative water right is through the permit system administered by the State Water Resources Control Board.
aquifer	A water-bearing stratum of rock, sand, or gravel capable of yielding considerable quantities of water.
aquitard	A water-saturated sediment or rock whose permeability is so low it cannot transmit any useful amount of water.
artificial recharge	Addition of surface water to a groundwater reservoir by human activity, such as putting surface water into spreading basins. See groundwater recharge, and recharge basin.
attainment	An air basin is considered to be in attainment for a particular pollutant if it meets federal or state standards set for that pollutant.
autotrophic	An organism that is capable of living exclusively on inorganic materials, water, and some energy source such as sunlight of chemically reduced matter, such as algae and plants.
auxiliary spillway	A spillway, usually located in a saddle or depression in the reservoir rim, that leads to a natural or excavated waterway located away from the dam and that permits the planned release of excess flood flow beyond the capacity of the service spillway.
average annual runoff	For a specified area, the average value of annual runoff amounts calculated for a selected period of record that represents average hydrologic conditions.
back pressure	A pressure that can cause water to backflow into the water supply.
backfill	Material used in refilling excavation, or the process of such refilling. Material used to fill an excavated trench.
backflow	A reverse flow condition created by a difference in water pressures, which causes water to flow back into the distribution system.
backswamp	The section of a floodplain where deposits of fine silts and clays settle after a flood. Backswamps usually lie behind a stream's natural levees.
backwater	A small, generally shallow body of water with little or no current of its own. Stagnant water in a small stream or inlet. Water moved backward or held back by a dam, tide, etc.

baffle	A flat board or plate, deflector, guide or similar device constructed or placed in flowing water to cause more uniform flow velocities, to absorb energy, and to divert, guide, or agitate the flow.
baffle block (dentate)	One of a series of upright obstructions designed to dissipate energy as in the case of a stilling basin or drop structure. A block, usually of concrete, constructed in a channel or stilling basin to dissipate the energy of water flowing at high velocity.
Basin Plan	Basin Plans (also called Water Quality Control Plans) provide the basis for protecting water quality in California.
bathymetry	The measurement of depths of water in oceans, seas, and lakes.
bed elevation	Height of streambed above a specified level.
bed layer	The flow layer, several grain diameters thick (usually taken as 2 grain diameters thick), immediately above the bed.
bed load	Sediment that moves by rolling or sliding along the bed and is essentially in contact with the streambed in the bed layer.
bed material	Unconsolidated material, or sediment mixture, of which a streambed is composed.
bed-load discharge	The quantity of a bed load passing a cross section of a stream during a unit of time.
bed-material discharge	That part of the total sediment discharge that is composed of grain sizes found in the bed. The bed-material discharge is assumed equal to the transport capability of the flow.
bedrock	The solid rock at the surface or underlying other surface materials.
bench mark	A permanent or temporary monument of known elevation above sea level, used for vertical control at a construction site.
beneficial use	As defined in Water Code §13050, beneficial uses of the waters of the state include domestic, municipal, agricultural, and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.
benthic	Pertaining to the bottom of rivers, lakes, or oceans; organisms that live on the bottom of water bodies.
benthos	Organisms living in or on the bottom of a water body.
bentonite	A very fine clay, expansible when moist, commonly used to provide a tight seal around a monitoring well. Also used in slurry walls.
berm	A horizontal strip or shelf built into an embankment or cut to break the continuity of the slope, usually for the purpose of reducing erosion or to increase the thickness of the embankment at a point of change in a slope or defined water surface elevation. A horizontal step in the sloping profile of an embankment dam. A shelf or artificial ridge that breaks the continuity of a slope.

biennial	Plant that produces seeds during its second year and then dies.
bioaccumulation	The intake and retention of nonfood substances by a living organism from its environment, resulting in a buildup of the substances in the organism.
bioassimilation	The accumulation of a substance within a habitat.
biological opinion (BiOp)	Document issued under the authority of the federal Endangered Species Act stating the U.S. Fish and Wildlife Service (USFWS) and/or National Marine Fisheries Service (NMFS) finding as to whether a federal action is likely to jeopardize the continued existence of a threatened or endangered species or result in the destruction or adverse modification of critical habitat.
biomagnification	Refers to increases in tissue concentrations of a pollutant as it passes upward through the food chain from prey to predator, to the topmost mature predators, where tissue concentrations may be harmful both to the animal (especially to offspring) and to those that consume it.
biomass	Total mass or amount of living organisms in a particular area or environment.
biotic potential	Maximum capacity of an organism to reproduce and survive, under ideal environmental conditions.
blooms	A relatively rapid increase in the population of (usually) phytoplankton algae in an aquatic system.
borrow area	An excavated area or pit created by the removal of earth material to be used as fill in a different location.
borrow material	Material excavated from one area to be used as fill material in another area.
bottom hinged lift gate	See flap gate.
brackish	Mixed fresh and salt water.
breeding density	Density of sexually mature organisms in a given area during the breeding period.
breeding potential	Maximum rate of increase in numbers of individuals of a species or population under optimum conditions.
breeding rate	Actual rate of increase of new individuals in a given population; the breeding potential minus limiting factors.
bulkhead	A pressure-resistant sealed barrier to any fluid in a large structure.
bulkhead gate	A gate used either for temporary closure of a channel or conduit before dewatering it for inspection or maintenance or for closure against flowing water when the head difference is small (e.g., for diversion tunnel closure).
butterfly valve	A valve designed for quick closure that consists of a circular leaf, slightly convex in form, mounted on a transverse shaft carried by two bearings.
buttress	A support usually of stone or brick; supports the wall of a building.

buttress dam	A dam consisting of a watertight upstream part (such as a concrete sloping slab) supported at intervals on the downstream side by a series of buttresses (walls normal to the axis of the dam). Buttress dams can take many forms.
caisson	A box or chamber used in construction work under water. A structure or chamber which is usually sunk or lowered by digging from the inside. Used to gain access to the bottom of a stream or other body of water.
calcite	Light-colored mineral composed of calcium carbonate that often fills veins in igneous rocks and forms the sedimentary rock limestone.
CALSIM model	CALSIM is a planning tool and model designed to simulate the operations of the CVP and SWP reservoir and water delivery system under current and future conditions. CALSIM predicts how reservoir storage and river flows would be affected based on changes in system operations. CALSIM output is typically used to help assess impacts on water supply, water quality, aquatic resources, and recreation.
camber	The extra height added to the crest of embankment dams to ensure that the freeboard will not be diminished by foundation settlement or embankment consolidation.
candidate species	Any species being considered by the U.S. Secretary of the Interior or Secretary of Commerce for listing under the Endangered Species Act as an endangered or threatened species, but not yet the subject of a proposed rule (see 50 CFR 424.02). Also, any species accepted by DFG for potential listing under the California Endangered Species Act.
capable fault	An active fault that is judged capable of producing macro-earthquakes and exhibits one or more of the following characteristics. <ol style="list-style-type: none"> (1) Movement at or near the ground surface at least once within the past 35,000 years. (2) Macroseismicity (3.5 magnitude Richter or greater) instrumentally determined with records of sufficient precision to demonstrate a direct relationship with the fault. (3) A structural relationship to a capable fault such that movement on one fault could be reasonably expected to cause movement on the other. (4) Established patterns of microseismicity that define a fault, with historic macroseismicity that can reasonably be associated with that fault.
carry over	The quantity of water which continues past an inlet.
carry-over storage	The amount of water stored in reservoirs carried over from one year to another.
cast-in-place	Concrete poured within form work on site to create a structural element in its final position.
cathodic protection	An electrical system for prevention of rust, corrosion, and pitting of metal surfaces that are in contact with water or soil.

centrifugal pump	A pump that moves water by centrifugal force developed by rapid rotation of an impeller.
certified water right	A state-issued document that serves as legal evidence that an approved application has been physically developed and the water put to beneficial use.
channel margin deposits	Narrow sand deposits that line channel banks.
channelization	The straightening and/or deepening of a natural watercourse.
check dam	A small dam designed to retard the flow of water and sediment in a channel, used especially to control soil erosion.
check structure	A structure used to regulate the upstream water surface and control the downstream flow in a canal.
check valve	A valve that will allow fluid or air to pass through it in only one direction.
chimney drain	A vertical or inclined layer of pervious material in an embankment to facilitate and control drainage of the embankment fill.
chute	Portion of spillway between the gate or crest structure and the terminal structure, where open-channel flow conditions exist. A conduit for conveying free-flowing materials at high velocity to lower elevations.
cistern	A reservoir or tank for holding water, especially for catching and holding rainwater for later use.
Clifton Court Forebay	A State Water Project impoundment used to regulate flows to the Harvey O. Banks pumping plant.
coarse gravel protection	Gravel generally placed in a layer upon a finished surface to protect the finished surface from deterioration or erosion.
cofferdam	A temporary in-water structure enclosing all or part of a construction area so that construction can proceed in the dry.
cohesion	The mutual attraction of soil particles due to molecular and capillary forces in the presence of water.
cold-water fishery	Water or water system in which the maximum mean monthly temperature and other ecological factors are capable of supporting year-round populations of cold water stenothermal aquatic life such as trout and salmonids.
colluviums	A general term applied to loose and incoherent deposits, usually at the foot of a slope and brought there chiefly by gravity.
compacted backfill	Backfill which has been reduced to bulk by rolling, tamping, or soaking.
compacted embankment	Embankment which has been reduced in bulk by rolling, tapping, or soaking.
compaction	To make soil dense by mechanical manipulation. Mechanical action which increases the density by reducing the voids in a material.

compressibility	Property of a soil describing its susceptibility to decrease in volume when subjected to load.
compression	The reduction in volume of a soil mass resulting from an increase in effective stress.
conceptual model	An explicit description of the critical cause-and-effect pathways in ecosystem function. A conceptual model includes a summary of current knowledge and hypotheses about ecosystem structure and function, and highlights key uncertainties where research might be necessary.
conductor	A device designed to transmit electricity, heat; a substance, body, device, or wire that readily conducts or carries electrical current.
conduit	A pipe, usually metal, in which wire is installed. A closed channel to convey water through, around, or under a dam.
cone of depression	An area of lowered groundwater levels resulting from pumping.
confined aquifer	An aquifer in which groundwater is confined under pressure that is significantly greater than atmospheric pressure.
conjunctive use	Coordinated and planned management of both surface water and groundwater resources to maximize the efficient use of the resource.
consolidation	Reduction in particle spacing in a soil, and decrease in water content, resulting from an increase in external pressure.
construction joint	Construction joints are purposely placed in concrete to facilitate construction; to reduce initial shrinkage stresses and cracks; to allow time for the installation of embedded metalwork; or to allow for the subsequent placing of other concrete.
consumptive use	Water uses normally associated with human activities, primarily municipal, industrial, and irrigation.
containment levee	A dike or embankment to contain stream flow.
contaminant	Any substance or property preventing the use or reducing the usability of water for ordinary purposes such as drinking, bathing, recreation and cooling.
continental deposit	Geologic deposits from terrestrial rather than marine sources.
continuous-flow irrigation	System of irrigation water delivery where each irrigator receives their allotted quantity of water at a continuous rate.
contour ditch	Irrigation ditch laid out approximately on the contour.
conveyance	A pipeline, canal, natural channel, or other similar facility that transports water from one location to another.
conveyance capacity	The rate at which water can be transported by a canal, aqueduct, or ditch.

conveyance losses	Evaporation, evapotranspiration, and seepage losses of water in major conveyance canals
core drill	A rotary drill, usually a diamond drill, equipped with a hollow bit and a core lifter.
core wall	A wall of substantial thickness built of impervious material, usually of concrete or asphaltic concrete, in the body of an embankment dam to prevent leakage.
coulees	Small streams or dry streambeds. A deep gulch or ravine, usually dry in the summer.
covered activities	BDCP actions for which incidental take authorization is requested.
covered species	Species that are covered under the incidental take permits and are the subject of a conservation strategy.
crest	The top surface of the dam. A roadway may be constructed across the crest to permit vehicular traffic or facilitate operation, maintenance, and examination of the dam. Also, the high point of the spillway control section.
criteria air pollutants	Pollutants for which federal and state air quality standards have been established.
critical habitat	An area designated as critical habitat listed in 50 CFR Parts 17 or 226 (50 CFR Section 402.02); specific geographic areas, whether occupied by special-status species or not, that are determined to be essential for the conservation and management of the special-status species, and that have been formally described in the Federal Register.
crop root zone	The soil depth from which a mature crop extracts most of the water needed for evapotranspiration.
crop water requirement	Crop consumptive use plus the water lost to evapotranspiration and required for leaching.
cropping pattern	The acreage distribution of different crops in any one year in a given farm area such as a county, water agency, or farm.
cubic feet per second (cfs)	A measurement of water flow equivalent to one cubic foot of water passing a given point in a second. One cubic foot is approximately 7.5 gallons.
culvert	A pipe or small bridge for drainage under a road or structure. A conduit for the free passage of surface drainage water under a highway, railroad, canal, or other embankment.
cut and cover	Construction technique in which a trench is excavated, infrastructure is installed, and the trench is closed.
cut and fill	Construction technique involving excavation or grading followed by placement and compaction of fill material.
cut slope	A slope that is shaped by excavation or grading.

cutoff trench (keyway)	An excavation in the foundation of an embankment dam, usually located upstream of the dam axis or centerline crest, which extends to bedrock or to an impervious stratum. The excavation is backfilled with impervious material to form a cutoff and reduce percolation under the dam.
cutoff wall	A wall of impervious material (e.g., concrete, asphaltic concrete, timber, steel sheet piling, or impervious grout curtain) located in the foundation beneath a dam and which forms a water barrier and reduces seepage under a dam or spillway.
damping	Resistance which reduces vibration by energy absorption.
dead capacity (dead storage)	The reservoir capacity from which stored water cannot be evacuated by gravity.
debris fan	Sloping mass of boulders, cobbles, gravel, sand, silt and clay formed by debris flows at the mouth of a tributary.
debris flow	Flash flood consisting of a mixture of rocks and sediment containing less than 40% water, by volume; forms a debris fan.
deep percolation	The movement of water by gravity downward through the soil profile beyond the root zone; this water is not used by plants. Percolation of irrigation water past the plant root zone to regions of deeper ground-water aquifers.
deflection	Upstream or downstream movement of a dam or dike as a result of stress.
degradation	Process wherein the elevation of streambeds, sandbars, and flood plains is lowered by erosion. The opposite of aggradation.
delist	To remove from the federal list of endangered and threatened species (50 CFR 17.11 and 17.12) because such species no longer meets any of the five listing factors provided under Section 4(a)(1) of the ESA and under which the species was originally listed (i.e., because the species has become extinct or is recovered).
Delta exports	Water exported from the Bay Delta through the North Bay Aqueduct, Contra Costa Canal, the CVP at Jones pumping plant, or the SWP at Banks pumping plant.
Delta imports	The total streamflow entering the Bay Delta from the Sacramento and San Joaquin Rivers, Yolo Bypass, and eastside streams.
Delta outflow	The net amount of water (not including tidal flows) at a given time flowing out of the Delta toward the San Francisco Bay. The Delta outflow equals Delta inflow minus the water used within the Delta and exported from the Delta.
Delta Simulation Model (DSM2)	The Delta hydrodynamic and salinity model developed by DWR to simulate hydrodynamic and mixing processes in the Delta, using upstream river flows and salinities, downstream tidal stage and salinity, diversion rates, agricultural return flow and seepage rates, and salinities as boundary conditions.
demersal	Fish eggs or organisms that dwell or hatch on the bottom of a lake or stream.
dendritic	Channel pattern of streams with tributaries that branch to form a tree-like pattern.

deposition	Material settling out of the water onto the streambed. Occurs when the energy of the flowing water is unable to support the load of suspended sediment. The process of dropping or getting rid of sediments by an erosional agent such as a river or glacier.
desalinization	The removal of dissolved salts from water by natural means (leaching) or by specific water treatment processes. The process of removing salt from seawater or brackish water.
designated floodway	The channel of a watercourse and those portions of the adjoining floodplain required to provide for the passage of a selected flood with a small increase in flood stage above that of natural conditions.
desiccate	To dry up; remove moisture from a substance.
destratification	The development of vertical mixing within a lake or reservoir to eliminate (either totally or partially) separate layers of temperature, plant, or animal life. This vertical mixing can be caused by mechanical means (pumps) or through the use of forced air diffusers which release air into the lower layers of the reservoir.
detention dam	A dam built to store streamflow or surface runoff, and to control the release of such stored water.
dewatering	Elimination of water from a lake, river, stream, reservoir, or containment.
diaphragm-type earthfill	An embankment dam constructed mostly of pervious material and having a diaphragm of impermeable material that forms a water barrier. The diaphragm may consist of earth, Portland cement concrete, bituminous concrete, or other material, and may occupy a position within the embankment or on the upstream face.
diatom	A major type of phytoplankton that have cell walls made of silica and shaped into two halves.
differential head (unbalanced head)	The condition in which the water pressure on the upstream and downstream sides of an object differ.
dike	A low embankment, usually constructed to close up low areas of the reservoir rim and thus limit the extent of the reservoir. Embankment for restraining a river or a stream. Embankments which contain water within a given course. Usually applied to dams built to protect land from flooding.
direct mortality	Mortality attributable to direct effects of a cause or action.
direct runoff	Water that flows over the ground surface or through the ground directly into streams, rivers, or lakes.
discharge	Volume of water that passes a given point within a given period of time. See flow. Any spilling, leaking, pumping, pouring, emitting, emptying, or dumping not including permitted activities in compliance with section 402 of the Clean Water Act.

discharge capacity	The maximum amount of water that can safely released from a given waterway.
dispersion	<ul style="list-style-type: none"> • Distortion of the shape of a seismic-wave train because of variation of velocity with frequency. • The dissemination, or scattering, of organisms over periods within a given area or over the Earth.
dissolved organic carbon (DOC)	DOC is used to describe the dissolved compounds found in water that derive from organic materials (such as decomposed plant matter). DOC is organic material from plants and animals broken down into such a small size that it is “dissolved” into water.
diversion	The action of taking water out of a river system or changing the flow of water in a system for use in another location.
diversion capacity	The flow that can be passed through the canal headworks at a dam under normal head.
diversion channel	A waterway used to divert water from its natural course.
diversion dam	A dam built to divert water from a waterway or stream into a different watercourse.
diversion inlet	A conduit or tunnel upstream from an intake structure. Diversion inlet may be integral with the outlet works or be part of a separate conveyance structure that will only be used during construction.
downlist	To reclassify a species from endangered to threatened based on reduction of threats as provided under section 4(a)(1) of the FESA.
drainage basin	All of the area drained by a river system.
drainage system	Collection of surface and/or subsurface drains, together with structures and pumps, used to remove surface or ground water.
drawdown	Lowering of a reservoir’s water level; process of depleting a reservoir or groundwater storage. The drop in the water table or level of water in the ground when water is being pumped from a well.
dry well	A deep hole, covered, and usually lined or filled with rocks, that holds drainage water until it soaks into the ground.
dynamic equilibrium	<p>A system in a steady state since forward reaction and backward reaction occur at the same rate.</p> <p>Condition achieved when the average sand load transported by flowing water is in balance with the sand load being supplied by tributaries.</p>
dynamic pressure	When a pump is operating, the vertical distance from a reference point (such as a pump centerline) to the hydraulic grade line.
earth dam (earthfill dam)	An embankment dam in which more than 50% of the total volume is formed of compacted fine-grained material.

easement	An interest in land owned by another individual or organization that entitles its holder to a specific limited use.
ecological productivity	The rate of generation of biomass (both plants and animals) in an ecosystem.
ecosystem	The biological community that occurs in some locale, and the physical and chemical factors that make up its nonliving or abiotic environment.
ecosystem processes	The physical, chemical, and biological interactions that link organisms and their environment.
edaphic	Influenced by the soil rather than by climate.
edge effects	A change in species composition, physical conditions, or other ecological factors at the boundary between two ecosystems.
effluent	Partially or completely treated wastewater flowing out of a treatment facility, reservoir, or basin.
effluent limitation	The maximum amount of a specific substance or characteristic that can be present in effluent discharge without violating water quality standards in receiving waters.
electrical conductivity	A measure of the total concentration of dissolved salts in water. A measure of a water's ability to conduct electricity.
electromotive force (EMF)	The electrical pressure available to cause a flow of current when an electrical circuit is closed.
embankment	An earth structure, the top of which is higher than the adjoining surface.
embankment dam or fill dam	Any dam constructed of excavated natural materials.
emergency action plan (EAP)	Procedures for personnel to follow during emergency situations or unusual occurrences at a given facility to reduce potential for property damage and loss of life and to provide proper notification to appropriate authorities.
eminent domain	A jurisdiction or agency's legal right to take private property for public use in exchange for fair compensation.
endangered species	Any species or subspecies of bird, mammal, fish, amphibian, reptile, or plant that is in serious danger of becoming extinct throughout all or a significant portion of its range.
endemic species	Plant and animal species that are native to and confined to a certain region.
energy dissipater	A device constructed in a waterway to reduce the kinetic energy of fast flowing water.
enhancement flow	Improved flows that result in better stream conditions for aquatic, terrestrial, and other resources.

entitlement	The legal right to benefits, income, and property that may not be reduced without due process under the law.
entrainment	The incidental trapping of fish and other aquatic organisms in water diverted from streams, rivers, and reservoirs.
ephemeral stream	A stream that flows briefly only in direct response to precipitation and whose channel is above the water table.
epifauna	Benthic animals that live on the surface of a substrate, such as rocks, pilings, marine vegetation, or the sea or lake floor itself.
erosion	The gradual wearing away of land by water, wind, and general weather conditions; the diminishing of property by the elements.
estuarine fish	Fish that spend a part of their life cycle in an estuary.
estuary	A water passage where the tide meets a river current; an arm of the sea at the lower end of a river.
eutrophic	Nutrient enrichment of a body of water that contains more organic matter than existing biological oxidization processes can consume.
evapotranspiration	Water evaporated from plant and soil surfaces or transpired by plant tissues.
excess capacity	Power generation capacity available on a short-term basis that exceeds the firm energy on a long-term contract offered to an electricity customer.
exempt land	Irrigation land in a district to which the acreage limitation and pricing provisions of Reclamation law do not apply.
expansive soils	Soils that shrink and swell as a result of moisture changes.
export pumps	CVP and SWP pumping plants in the southern portion of Delta—the Jones and Banks pumping plants, respectively, that export water to urban and agricultural water users in the Export Service Areas.
Export Service Areas	Lands that receive, store, and use CVP and SWP water pumped from the Delta.
ex-situ	Outside the original location.
extirpated	Describes a species that has been eliminated from a particular area but still exists elsewhere.
face	Exposed surface of dam materials (earth, rockfill, or concrete), upstream and downstream. The external surface that limits the structure. The more or less vertical surface of rock exposed by blasting or excavating. The cutting end of a drill hole.
farm loss (water)	Water delivered to a farm that is not made available to the crop to be irrigated.

field capacity (field moisture capacity)	Depth of water retained in the soil after ample irrigation or heavy rain when the rate of downward movement has substantially decreased, usually one to three days after irrigation or rain, expressed as a depth of water in inches or feet.
fill	Artificial deposits of natural soils or the process of the depositing.
fill slope	A slope shaped by the placement and compaction of loose “fill” materials, which may be reused from elsewhere on the construction site, or imported.
filter (filter zone)	One or more layers of granular material incorporated in an embankment dam and graded (either naturally or by selection) to allow seepage through or within the layers while preventing the migration of material from adjacent zones.
finished grade	The elevation or surface of the earth after all earthwork has been completed (also finish grade). The final grade required by specifications.
firm energy (power)	Non-interruptible energy and power guaranteed by the supplier to be available at all times, except for uncontrollable circumstances.
fish ladder (fishway)	An inclined trough that carries water from above to below a dam so that fish can easily swim upstream.
fish salvage	The process of screening fish at the south Delta export facilities and physically transporting them by truck to release in other parts of the Delta.
fish screen	Barrier on the front face of a water intake facility to prevent fish and debris from being drawn into the intake.
fish weir	A type of fish ladder.
fixed-wheel gate (fixed-roller gate, fixed-axle gate)	A gate consisting of a rectangular leaf mounted on wheels, particularly suited for high head situations.
flap gate	A gate hinged along one edge, usually either the top or bottom edge.
flash flood	A flood of short duration with a relatively high peak rate of flow, usually resulting from a high intensity rainfall over a small area.
flashboards	Temporary barriers, consisting of either timber, concrete or steel, anchored to the crest of a spillway as a means of increasing the reservoir storage. Flashboards can be removed, lowered, or carried away at the time of flooding either by a tripping device or by deliberate failure of the flashboards or their supports.
flexible pipe	Pipe designed to transmit the backfill load to the soil at the sides of the pipe. Flexible pipe must be supported on both the bottom and sides.
floc	Loose, open-structured mass formed in a suspension by the aggregation of minute particles. Clumps of bacteria and particulate impurities that have come together and formed a cluster.
flocculation	The process of forming flocs. A step in water filtration in which alum is added to cause particles to clump together.

flood	A temporary rise in water levels resulting in inundation of areas not normally covered by water. May be expressed in terms of probability of exceedance per year such as 1% chance flood.
flood bypass	A region of land or a large artificial structure designed to convey excess flood waters from a river or stream in order to reduce the risk of flooding of a key point of interest, such as a city.
flood control capacity	Reservoir capacity assigned to the sole purpose of regulating flood inflows to reduce flood damage downstream.
flood control pool (flood pool)	Reservoir volume above active conservation capacity and joint use capacity that is reserved for flood runoff and then evacuated as soon as possible to keep that volume in readiness for the next flood.
flood gate	A gate to control flood releases from a reservoir.
flood irrigation	Method of irrigating where water is applied from field ditches onto land which has no guide preparation such as furrows, borders or corrugations.
flood severity	Qualitative description of how severe a possible flood could be (High, Medium, Low) depending on failure modes (including rate of failure), flood velocity, channel width, magnitude of damage potential, rate of rise for flood waters, etc. High severity would be associated with structures being swept clean from their foundations. Low severity would indicate that a slow, gradual rise of flood waters is anticipated.
floodplain	Any land area susceptible to inundation by floodwaters from any source.
flow augmentation	The release of water stored in a reservoir or other impoundment to increase the natural flow of a stream.
flow dependent habitat availability	For the adult spawning life stage of anadromous salmonids, flow dependent habitat availability refers to the amount of appropriate spawning habitat, including the suitable water depths, velocities, and substrate, for successful spawning.
flowage	Water that floods onto adjacent land.
flowage easement	The right or easement to overflow, submerge, or flood certain lands; a right to prohibit building on certain floodways.
fluctuating flows	Water released from a dam that varies in volume with time.
fluvial	Pertains to streams and stream processes.
forage fish	Generally, small fish that produce prolifically and are consumed by predators.
forebay	Impoundment immediately upstream from a dam or hydroelectric plant intake structure. The term is applicable to all types of hydroelectric developments (storage, run-of-river, and pumped-storage).

foreshore	That part of the shore between the ordinary high and low watermarks and generally crossed by the tide each day.
formwork	A temporary casing erected to contain concrete during its placing and subsequent hardening, usually constructed of timber or steel.
foundation drains	Tile or pipe for collecting seepage within a foundation.
foundation material (foundation soil)	The upper part of the earth mass carrying the load of the structure.
foundation surface	The surface of the upper part of the earth mass carrying the load of the structure.
foundation trench	A trench built at and into the foundation of a dam and filled with clay or other impermeable substances to prevent water from seeping beneath the dam.
freeboard	The difference in elevation between the maximum water surface in the reservoir and the dam crest. The vertical distance between a stated water level and the top of a dam, without camber.
French drain	A covered ditch containing a layer of fitted or loose stone or other pervious material.
fresh water	Water that contains less than 1,000 milligrams per liter (mg/L) of dissolved solids; generally, more than 500 mg/L of dissolved solids is undesirable for drinking and many industrial uses.
fry	Salmon that have emerged from gravel, completed yolk absorption, remained in freshwater streams, and are less than a few months old.
full gate	Maximum gate position of a turbine for a particular head.
full hydraulic capacity	The designed capacity of a pipe or conduit.
full pool	Volume of water in a reservoir at normal water surface. The reservoir level that would be attained when the reservoir is fully utilized for all project purposes, including flood control.
fuse plug spillway	A form of auxiliary spillway consisting of a low embankment designed to be overtopped and washed away during an exceptionally large flood.
gabion	Wire basket, filled with stones, used to stabilize banks of a water course and to enhance habitat.
gage	Device for registering water level, discharge, velocity, or pressure.
gage height	Elevation of water surface measured by a gage.
gage pressure	Absolute pressure minus atmospheric pressure. The pressure within a closed container as measured with a gage. Sometimes referred to as relative pressure.
gaining stream	Stream or reach that receives water from the zone of saturation.

gametes	Eggs or sperm.
gantry crane	A crane or hoisting machine mounted on a frame or structure spanning an intervening space, which often travels on rails.
gaseous supersaturation	Condition of higher levels of dissolved gases in water due to entrainment, pressure increases, or heating.
gate	A device that controls the flow in a conduit, pipe, or tunnel without obstructing any portion of the waterway when in the fully open position.
gate chamber (valve chamber)	A chamber in which a guard gate in a pressurized outlet works or both the guard and regulating gates in a free-flow outlet works are located.
gate hanger	A device used to maintain a set gate opening.
gate structure	Portion of spillway between inlet channel and chute, tunnel or conduit, which contains gates, such as radial gates.
gate valve	A valve with a circular-shaped closing element that fits securely over an opening through which water flows.
gated pipe	Portable pipe with small gates installed along one side for distributing irrigation water to corrugations or furrows.
gated spillway	Overflow section of dam restricted by use of gates that can be operated to control releases from the reservoir to ensure the safety of the dam.
generation	Process of producing electric energy by transforming other forms of energy. Amount of electric energy produced, expressed in kilowatt-hours.
Geographic Information System (GIS)	Computer-based mapping technology that manipulates geographic data in digital layers and enables one to conduct a wide array of environmental analyses.
geohydrology	Geological study of the character, source, and mode of groundwater.
geomorphic	Of or relating to the form or shape of the earth.
geophysics	Refers to the physics of the earth, e.g., seismology, oceanography, volcanology, geomagnetism, etc.
gigawatt (gw)	Unit of power equal to 1 billion watts.
global positioning systems (GPS)	Space-based radio positioning systems that provide 24-hour, three-dimensional position, velocity, and time information.
grade	The elevation of a surface or a surface slope.
graded stream	Streams that receive and carry away equal amounts of sediment.
gravel blanket	Thin layer of gravel spread over an area either of natural ground, excavated surface, or embankment.

gravity dam	A dam constructed of concrete and/or masonry that relies on its weight and internal strength for stability. Gravity dams are generally used where the foundation is rock and earthfill in proper quality and quantity is not available.
gravity irrigation	Irrigation method that applies irrigation water to fields by letting it flow from a higher level supply canal through ditches or furrows to fields at a lower level.
gray water	Wastewater other than sewage, such as sink and bath drainage or washing machine discharge.
grid	A system of interconnected power lines and generators that is managed so that the generators are dispatched as needed to meet the requirements of the customers connected to the grid at various points. Gridco is sometimes used to identify an independent company responsible for the operation of the grid.
gross crop value	The sum of annual receipts from sale of crops produced.
groundwater	Any water naturally stored underground in aquifers, or that flows through and saturates soil and rock, supplying springs and wells.
groundwater banking	Storing water in the ground for use to meet demand during dry years.
groundwater basin	An alluvial aquifer or a stacked series of alluvial aquifers with reasonably well defined boundaries in a lateral direction and having a definable bottom.
Groundwater Management Plan	A comprehensive written document developed for the purpose of groundwater management and adopted by an agency having appropriate legal or regulatory authority.
groundwater overdraft	A condition of a groundwater basin in which the amount of water withdrawn by pumping exceeds the amount of water that recharges the basin over a period of years.
groundwater recharge	The natural and intentional infiltration of surface water into the zones of saturation.
groundwater subbasin	A subdivision of the groundwater basin created by dividing the basin using geologic and hydrologic conditions or institutional boundaries.
groundwater substitution transfer	Additional pumping of groundwater with a one-for-one reduction in surface water diversions that would have occurred absent the additional groundwater pumping. The amount of reduced surface water diversions is then transferred to other water users.
groundwater table	The upper boundary of ground water where water pressure is equal to atmospheric pressure, i.e., water level in a bore hole after equilibrium when ground water can freely enter the hole from the sides and bottom.
grout	A fluid mixture of cement and water or sand, cement, and water used to seal joints and cracks in a rock foundation.

grubbing	Removal of stumps, roots, and vegetable matter from the ground surface after clearing and prior to excavation.
gullying	Small-scale stream erosion.
habitat unit	An approach to adjusting acreage of habitat suitable for a given species on the basis of the habitat's quality.
hardness	A characteristic of water determined by the levels of calcium and magnesium.
hardpan	A hard, impervious layer, composed chiefly of clay, that is cemented by relatively insoluble materials, that does not become plastic when mixed with water, and definitely limits the downward movement of water and roots.
harvest (fisheries)	In a recreational fishery, refers to numbers of fish that are caught and kept.
haul distance	Distance measured along the most direct practical route between excavation and the placement of fill.
hazard classification	The rating for a dam based on the potential consequences of failure. The rating is based on potential for loss of life and damage to property that failure of the dam could cause
head	Differential of pressure causing flow in a fluid system, usually expressed in terms of the height of a liquid column that pressure will support. The difference in number of feet between two water surface elevations. Height of water above a specified point. The back-pressure against a pump. The vertical distance between two points in a fluid. The vertical distance that would statically result from the velocity of a moving fluid.
head loss	The energy lost from a flowing fluid due to friction, transitions, bends, etc.
hectare	A measure of area in the metric system similar to an acre. One hectare is equal to 10,000 square meters and 2.4711 acres.
herbaceous	Describes plants that have little or no woody tissue. Herbaceous plants typically survive for only a single growing season.
herbicide	A compound, usually a synthetic organic chemical, used to kill or control plant growth.
herbivore	Animal that feeds on plants.
herpetofauna	Reptiles and amphibians.
heterotrophic	An organism that does not make its own food and must consume other organisms.
high-pressure gate	A gate consisting of a rectangular leaf encased in a body and bonnet and equipped with a hydraulic hoist for moving the gate leaf.
hogback	Ridge formed by erosion of resistant, steeply inclined sedimentary layers.

hollow gravity dam	A dam which has the outward appearance of a gravity dam but is of hollow construction. A dam constructed of concrete and/or masonry on the outside but having a hollow interior and relying on its weight for stability.
hydraulic conductivity	Hydraulic conductivity, symbolically represented as K, is a property of vascular plants, soil, or rock that describes the ease with which water can move through pore spaces or fractures.
hydraulic efficiency	Efficiency of a pump or turbine to impart energy to or extract energy from water.
hydraulic fill	Fill material that is transported and deposited using water.
hydraulic fill dam	An embankment dam constructed of materials, often dredged, that are conveyed and/or placed by suspension in flowing water.
hydraulic height	Height to which the water rises behind the dam, and is the difference between the lowest point in the original streambed at the axis or the centerline crest of the dam, or the invert of the lowest outlet works, whichever is lower, and the maximum controllable water surface.
hydric	Characterized by, or thriving in, an abundance of moisture.
hydrocarbons	A wide variety of organic compounds, including methane (CH ₄), emitted principally from the storage, handling, and combustion of fossil fuels.
hydrodynamics	The description of liquids motion.
hydrogeologic conditions	Conditions stemming from the interaction of groundwater and the surrounding soil and rock.
hydrogeologic cycle	The natural process of recycling water from the atmosphere down to (and through) the earth and back to the atmosphere again.
hydrograph	A graph that shows some property of groundwater or surface waters as a function of time at some given point.
hydrologic cycle	Cycle of water movement from atmosphere to Earth by precipitation and its return to the atmosphere by interception, evaporation, runoff, infiltration, percolation, storage, and transpiration.
hydrology	Scientific study of the properties, distribution, and behavior of water.
hydrophilic	Having a strong affinity (liking) for water. The opposite of hydrophobic.
hydrophobic	Having a strong aversion (dislike) for water. The opposite of hydrophilic.
hydrophyte	A plant that can grow in soil that is too waterlogged and/or oxygen deficient for most other plants to survive.
hydroseeding	The application of a slurry of seed, fertilizer, water, and other materials.
hydrostatic pressure	The pressure exerted or transmitted by water at rest.

hyperconcentrated flow	Moving mixture of sediment and water between 40 and 80 percent water by volume.
hypolimnion	The lower, or bottom, layer of a lake or reservoir with essentially uniform colder temperatures.
hyporheic zone	Groundwater habitats created by the movement of river water from the active channel to areas to the side and beneath the active channel. Uniquely adapted organisms that can provide food for fish live in the groundwater habitat.
impeller	A rotary pump member using centrifugal force to discharge a fluid into outlet passages. A rotating set of vanes in a pump designed to pump or lift water.
impermeable	Having a texture that does not permit water to move through quickly. Not easily penetrated. The property of a material or soil that does not allow, or allows only with great difficulty, the movement or passage of water.
impervious	Not permeable; not allowing liquid to pass through. Resistant to movement of water.
impingement	Contact or collision with a diversion structure (used to describe deleterious effects of some diversion facilities on aquatic species).
Implementing Agreement	An agreement that legally binds the permittee to the requirements and responsibilities of a conservation plan and incidental take permit. It may assign the responsibility for planning, approving, and implementing the mitigation measures under the HCP.
impoundment	Body of water created by a dam.
incidental take	Take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.
incised stream	A stream that has cut its channel into the bed of the valley through degradation.
In-Delta storage	Water storage in the Delta by converting an existing island to a reservoir. The storage can help facilitate flexible operations of the export pumps by allowing export of stored water when critical fish species are present in the south Delta.
Indian Trust Assets (ITAs)	Indian trust assets are legal interests in property held in trust by the federal government for federally recognized Indian tribes or individual Indians. "Assets" are anything owned that has monetary value. Examples of ITAs are land, minerals, hunting and fishing rights, water rights, and instream flows.
indicator species	Organism, species, or community that indicates the presence of certain environmental conditions.
indirect mortality	Mortality occurring later in time or spatially removed from the direct effects of an action.
infiltration	Flow of a liquid into a substance through pores of small openings. The gradual flow or movement of water into and through the pores of a soil.

inflow	Water that flows into a body of water. The amount of water entering a reservoir expressed in acre-feet per day or cubic feet per second.
influent	Untreated water flowing into a treatment facility, reservoir, or basin.
inlet channel (inlet structure)	Concrete lined portion of spillway between approach channel and gate or crest structure.
instream flows	The amount of flow required to sustain stream values, including fish, wildlife, and recreation. May refer either to specific instream water needs as determined by scientific studies or a protected flow level set by regulation.
instream uses	Water uses that can be carried out without removing the water from its source, as in navigation and recreation.
intake	Any structure through which water can be drawn into a waterway. Any structure in a reservoir, dam, or river through which water can be discharged.
intake structure	Concrete portion of an outlet works, including trashracks and/or fish screens, upstream from the tunnel or conduit portions. The entrance to an outlet works.
intermittent capacity	The load-carrying capability of a generator having less than full availability for meeting loads over specific periods of time.
intermittent stream	A stream that flows part of the time, usually after rainstorms, during wet weather, or for only part of the year. Stream on or in contact with the ground water table that flows only at certain times of the year when the ground water table is high.
interruptible demands	Demands that, by contract, can be interrupted if the supplying system lacks capacity.
intertidal	The zone between high and low tide.
invert	The lowest point of an underground excavation or the lowest point of the interior of a circular conduit, pipe, or tunnel. The lowest portion of the inside of any horizontal pipe. The lowest point of the channel inside a pipe, conduit, or canal.
irrigable land	Arable land under a specific plan for which a water supply is or can be made available and which is provided with or planned to be provided with irrigation, drainage, flood protection, and other facilities as necessary for sustained irrigation.
irrigated acreage	Irrigable acreage actually irrigated in any one year.
irrigation check	Small dike or dam used in the furrow alongside an irrigation border to make the water spread evenly across the border.
irrigation requirement	Quantity of water, exclusive of effective precipitation, that is required for crop production.
isolated conveyance facility	A canal or pipeline that transports water between two different locations while keeping it separate from Delta water.

jet-flow gate	A gate consisting of a wheel-mounted leaf moved vertically by a motor-driven screw hoist. High pressure gate resembling a ring follower gate in general configuration, but designed for regulating flow with minimal cavitation damage.
jetting	A method of compacting soil using a hose or other device, with a high velocity stream of water, worked down through the depth of soil placed. Drilling with high pressure water or air jets.
jetty	Pier or other structure built out into a body of water to influence the current or tide, or to protect a harbor or shoreline. A long fill or structure extending into water from the shore, that serves to change the direction or velocity of water flow.
Joint Point of Diversion (JPOD)	SWRCB Water Rights Decision 1641 refers to the ability of the SWP and CVP to utilize each other's point of diversion. Allows the SWP and CVP to pump water for each other during times of restriction for one set of pumps.
joint use capacity	The reservoir capacity assigned to flood control purposes during certain periods of the year and to conservation purposes during other periods of the year.
jurisdictional waters	Waters under the jurisdiction of USACE pursuant to Section 404 of the Clean Water Act.
kilowatt (kW)	An electrical unit of work or power. Unit of electric power (capacity) equal to 1000 watts, or about 1.34 horsepower, and 1.18 KVA.
kilowatt-hour (kWh)	Basic unit of electric energy equal to an average of one kilowatt of power applied over one hour. A unit of energy equivalent to one thousand watt hours.
lacustrine habitat	Lake or reservoir wetland habitat.
larval fish	An immature stage that develops from the fertilized egg before assuming the characteristics of the adult.
leachate	Liquids that have percolated through a soil and that carry substances in solution or suspension.
leaching	The process by which soluble materials in the soil, such as salts, nutrients, pesticide chemicals, or contaminants, are washed into a lower layer of soil or are dissolved and carried away by water.
leaching field (leaving cesspool)	A lined or partially lined underground pit into which raw household water (sewage) is discharged and from which the liquid seeps into the surrounding soil.
leaching requirement	Quantity of irrigation water required for transporting salts through the soil profile to maintain a favorable salt balance in the root zone for plant development.
levee	A natural or artificial barrier that helps keep rivers from overflowing their banks. See dike.
Light Detection and Ranging (LiDAR)	An optical remote sensing technology used to measure the distance to, or other properties of, a target by illuminating the target with light, often using a laser.

lining	Any protective material used to line the interior surface of a conduit, pipe, or tunnel. With reference to a canal, tunnel or shaft, a coating of asphaltic concrete, concrete, reinforced concrete, or shotcrete to provide water tightness, to prevent erosion, or to reduce friction. Protective covering over the perimeter of a conduit, reservoir, or channel to prevent seepage losses, to withstand pressure, or to resist erosion.
liquefaction	The process in which soil loses cohesion when subject to seismic activity (i.e., shaking).
liquid limit	The moisture content corresponding to the arbitrary limit between the liquid and plastic states of consistency of a soil.
listed	For the purposes of this document, the term “listed” is defined as any species that is identified as candidate, threatened, or endangered pursuant to ESA or listed as threatened or endangered under CESA.
littoral	Pertaining to the shore.
littoral zone	The zone or strip of land along the shoreline between the high and low water marks. That portion of a body of fresh water extending from the shoreline lakeward to the limit of occupancy of rooted plants.
load	Amount of electrical capacity or energy delivered or required at a given point. The power output of an engine or power plant under given circumstances.
load factor	The ratio of an average load to the maximum load. Average load carried by an engine, machine, or plant, expressed as a percentage of its maximum capacity.
loam	A soft, easily worked soil containing sand, silt, and clay.
log boom	A chain of logs, drums, or pontoons secured end to end and floating on the surface of a reservoir so as to prevent floating debris from obstructing spillways and intakes.
loose yards	Measurement of soil or rock after it has been loosened by digging or blasting.
losing stream	A stream or reach that contributes water to a zone of saturation.
lotic	Pertaining to flowing water, such as rivers and streams.
macroclimate	The climate representative of relatively large area.
macrohabitat	An extensive habitat presenting considerable variation of the environment, containing a variety of ecological niches, and supporting a large number and variety of complex flora and fauna.
macrophytes	A plant large enough to be seen by the naked eye.
main channel	The deepest or central part of the bed of a stream, containing the main current.
main channel pool	Reach of a stream or river with a low bed elevation, relative to rapids or riffles.

masonry dam	Any dam constructed mainly of stone, brick, or concrete blocks jointed with mortar. Masonry dams differ from rockfill dams in that the stone is hand-placed with mortar resulting in the entire dam being impermeable.
mat slab	A concrete slab designed with reinforcement to resist the uplift forces created by hydrostatic pressure.
maximum contaminant level (MCL)	The highest drinking water contaminant concentration allowed under federal and state Safe Drinking Water Act regulations.
maximum contaminant level goal (MCLG)	The level of a contaminant in drinking water below which there is no known or expected risk to health as set by the U.S. Environmental Protection Agency. Non-enforceable public health goal.
meander belt	Protecting and preserving land in the vicinity of a river channel in order to allow the river to meander. Meander belts are a way to allow the development of natural habitat around a river.
membrane (diaphragm)	A membrane, sheet, thin zone, or facing made of a flexible impervious material such as asphaltic concrete, plastic concrete, steel, wood, copper, plastic, etc. A cutoff wall or core wall, if thin and flexible, is sometimes referred to as a <i>diaphragm wall</i> .
mesotrophic	Reservoirs and lakes that contain moderate quantities of nutrients and are moderately productive in terms of aquatic animal and plant life.
microclimate	The climate of a small area, particularly that of the living space of a certain species, group, or community.
microhabitat	A small, specialized, and effectively isolated location.
mitigation	Measures taken to minimize or avoid adverse environmental impacts.
model	A tool used to mathematically represent a process; can be based on empirical or mathematical functions. Models can be computer programs, spreadsheets, or statistical analyses.
modeled habitat	Habitat identified as suitable for a particular species using computer modeling.
monoculture	The cultivation of a single product to the exclusion of other uses of land.
mudflat	A mud-covered, gently sloping tract of land alternately covered and left bare by water. The muddy, nearly level bed of a dry lake.
nitrogen oxides (NO_x)	A class of pollutant compounds that include nitrogen dioxide (NO ₂) and nitric oxide (NO), both of which are emitted by motor vehicles.
no jeopardy opinion	U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS) opinion that an action is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat.

nonattainment	An air basin is considered to be in nonattainment for a particular pollutant if it is exceeding federal or state standards for that pollutant.
nonconsumptive water uses	Water uses that do not substantially deplete water supplies, including swimming, boating, waterskiing, fishing, maintenance of stream related fish and wildlife habitat, and hydropower generation.
nonnative species	Also called introduced or exotic species; refers to plants or animals that originate elsewhere and are brought into a new area, where they may dominate the local species or in some way negatively impact the environment for native species.
nonpoint source pollution	Pollution discharged over a wide land area, not from one specific location.
non-potable	Water that may contain objectionable pollution, contamination, minerals, or infective agents and is considered unsafe and/or unpalatable for drinking.
nutrients	Animal, plant, or mineral substance that sustains individual organisms and ecosystems.
obligate riparian species	A species that depends completely upon habitat along a body of water.
observation well	A hole used to observe the groundwater surface at atmospheric pressure within soil or rock.
off-peak energy	Electric energy supplied during periods of relatively low system demand.
oligotrophic	Reservoirs and lakes that are nutrient poor and contain little aquatic plant or animal life.
on-district storage	Small water storage facilities located within the boundaries of an irrigation entity, including reregulating reservoirs, holding ponds, or other new storage methods that allow for efficient water use.
operational losses	Losses of water resulting from evaporation, seepage, and spills.
outflow	The amount of water passing a given point downstream of a structure, expressed in acre-feet per day or cubic feet per second. Water flowing out of a body of water.
outlet	An opening through which water can be freely discharged from a reservoir to the river for a particular purpose.
outlet capacity	The amount of water that can be safely released through the outlet works.
outlet channel (exit channel)	Channel downstream from terminal structure that conveys releases back to the “natural” stream or river. Channel can be excavated in rock or soil, with or without riprap, soil cement or other types of erosion protection.
outlet gate	A gate controlling the flow of water through a reservoir outlet.
overdraft	The pumping of water from a groundwater basin or aquifer in excess of the supply flowing into the basin. This pumping results in depletion of groundwater in the basin.

overtopping	Flow of water over the top of a dam or embankment.
ozonation	The application of ozone to water for disinfection or for taste and odor control.
ozone (O₃)	A photochemical oxidant that is a major cause of lung and eye irritation in urban environments.
palustrine habitat	Marsh habitat
particulate matter	Liquid and solid particles of a wide range of sizes and compositions; of particular concern for air quality are particles smaller than or equal to 10 microns and 2.5 microns (PM10 and PM2.5 respectively).
parts per million (ppm)	A measurement of concentration on a weight or volume basis. Equivalent to milligrams per liter (mg/l). One ppm is comparable to one drop of water in 55 gallons.
peak demand	Maximum electrical demand occurring within a specified period of time. Maximum power used in a specific time period.
peak flow	Maximum instantaneous flow in a specified period of time.
peak load	The maximum power load in a stated period of time.
peaking capacity	Capacity of generating equipment normally reserved for operation during the hours of highest daily, weekly, or seasonal loads.
peat	Soil formed of dead but not fully decayed flora found in bog areas.
pelagic fish	Fish that spend most of their life swimming in the water column with little contact with or dependency on the bottom. Adult spawning usually occurs in open water, often near the surface.
pelagic organism decline (POD)	A recent collapse (beginning around 2000) in the abundance of delta smelt, longfin smelt, striped bass, and threadfin shad.
perched water table	A water table, usually of limited area, maintained above the normal free water elevation by the presence of an intervening relatively impervious confining stratum.
percolation	Downward movement of water through the soil profile or other porous media.
perennial stream	A stream that flows continually throughout the year.
permeability	The measure of the flow of water through soil. The ease (or measurable rate) with which gases, liquids, or plant roots penetrate or pass through a layer of soil or porous media.
pH	A measurement of acidity. A relative scale, from 0 to 14, of how acidic or basic (alkaline) a material is, where a pH of 7 is neutral, smaller readings are increasingly acidic.
phytoplankton	Small, usually microscopic plants (such as algae), found in lakes, reservoirs, and other bodies of water.

plankton	Tiny, usually microscopic, plants (phytoplankton) and animals (zooplankton) with limited powers of locomotion, usually living free in the water away from substrates.
playa	An intermittent shallow lake formed at the bottom of an undrained desert basin after heavy rains.
plot	Area of land that is studied or used for an experimental purpose, in which sample areas are often located.
plume	A space in air, water or soil containing pollutants released from a point source.
point source pollution	Pollutants discharged from any identifiable point, including pipes, ditches, channels, sewers, tunnels, and containers of various types.
pollutant	Any inorganic or organic substance that contaminates air, water or soil.
porosity	The ratio of the volume of void or air spaces in a rock or sediment to the total volume of the rock or sediment.
power demand	Rate at which electric energy is required and delivered to or by a system over any designated period of time.
project-use energy	This is intended to cover primarily power and energy used for project operations such as pumping or other miscellaneous uses. In some instances it also includes power and energy sold for project irrigation purposes.
propeller wash	Water thrown backward by the motion of a propeller.
public involvement	Process of obtaining stakeholder input into each stage of development of planning documents.
qualitative	Having to do with quality or qualities. Descriptive of kind, type or direction, as opposed to size, magnitude or degree.
quantitative	Having to do with quantity, capable of being measured. Descriptive of size, magnitude or degree.
radial gates	A gate with a curved upstream plate and radial arms hinged to piers or other supporting structure.
range	Geographic region in which a given plant or animal normally lives or grows.
reach	Any specified length of stream, channel, or other water conveyance.
reactive organic compounds (ROG)	Reactive hydrocarbon pollutants.
recharge zone	A land area into which water can infiltrate into an aquifer relatively easily, replenishing the aquifer.
reclaimed water	Municipal, industrial, or agricultural wastewater treated and/or managed to produce water of quality suitable for additional uses.

Record of Decision (ROD)	A concise, public, legal document that identifies and officially discloses the federal lead agency's decision following the completion of an environmental impact statement.
recruitment	Survival of young plants and animals from birth to a life stage less vulnerable to environmental change.
redd	A redd is a nest of fish eggs consisting of gravel, typically formed by digging motion performed by an adult female salmon.
redd dewatering	Redd dewatering occurs when water levels fall below the level of egg deposition, potentially causing egg and alevin mortality.
regional transportation plan (RTP)	A long-range (20+ year) transportation plan generally developed by a metropolitan planning organization or other regional entity to evaluate necessary future investments in transportation infrastructure.
regulating dam (reregulating dam)	A dam impounding a reservoir from which water is released to regulate the flow downstream.
regulating gate	A gate used to regulate the rate of flow of water through an outlet works or spillway. A gate or valve that operates under full pressure flow conditions to regulate the rate of discharge.
renewable resources	Renewable energy resources are naturally replenishable, but flow limited. They are virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time. Renewable energy resources include biomass, hydroelectric, geothermal, solar, and wind.
reservoir	A body of water impounded by a dam and in which water can be stored.
reservoir capacity	The capacity of the reservoir, usually in acre-feet.
Restoration Opportunity Area	Those locations in the Plan Area considered most appropriate for the restoration of tidal upland natural communities.
return flow	Drainage water from irrigated farmlands that reenters the water system.
return-flow system (reuse system)	A system of pipelines or ditches to collect and convey surface or subsurface runoff from an irrigated field for reuse.
revetment	Facing of stone or other material either permanent or temporary, placed along the edge of a body of water to stabilize the bank and/or protect it
right-of-way	A legal right of passage over a defined area of real property. In transit usage, right-of-way refers to the corridor along a roadway or track alignment that is controlled by a transit or transportation agency/authority.
rill	Small groove, furrow, or channel in soil made by water flowing down over its surface.
riparian area	The land adjacent to a natural watercourse such as a river or a stream.

riparian rights	The rights of an owner of land contiguous to a navigable body of water, including principally the right of access to the water, the right to accretion and reliction, and the right to other improvements.
riprap	Rock facing to support an embankment and prevent erosion, usually at a specific slope, such as 2:1.
riverine	Riparian ecosystems encompassing both instream and adjacent riparian zones, especially their biological components.
ruderal	Weedy vegetation, commonly including or dominated by introduced species, characteristic of areas where native vegetation has been disturbed or removed.
runoff	The portion of precipitation, snowmelt, or irrigation that flows over the soil, eventually making its way to surface water supplies.
Sacramento–San Joaquin Delta (Bay Delta)	The legal Bay Delta, as described in the California Water Code Section 12220, generally extends from Sacramento in the north, to Tracy to the south, and from Interstate 5 in the east to Collinsville in the west. The Bay Delta covers approximately 738,000 acres.
safe yield	The annual quantity of water that can be taken from a source of supply over a period of years without depleting the source beyond its ability to be replenished naturally in wet years.
saline	The condition of containing dissolved or soluble salts.
salinity	The amount of dissolved salts in a given volume of water.
salmonid fishes	Family of fish that includes salmon and steelhead.
saturated zone	A zone in which all voids are filled with water. The area below the water table where all open spaces are filled with water.
scenic corridor	A corridor with landscapes and vistas of high scenic quality.
scour	Erosion in a stream bed, particularly if caused or increased by channel changes.
secchi depth	A measure of water clarity.
sediment	Any finely divided organic and/or mineral matter deposited by air or water in nonturbulent areas.
sediment concentration	The quantity of sediment relative to the quantity of transporting fluid, or fluid-sediment moisture.
sediment discharge	Rate at which sediment passes a stream cross section in a given period of time, expressed in millions of tons per day (mtd).
sediment load	Mass of sediment passing through a stream cross section in a specified period of time, expressed in millions of tons (mt).
sediment yield	Amount of mineral or organic soil material that is in suspension, is being transported, or has been moved from its site of origin.

sedimentation	The phenomenon of sediment or other fine particulates entering a water body, or being disturbed from the bottom of a water body such that they move downstream and settle on the substrate in other aquatic areas.
seepage	The slow movement or percolation of water through soil or rock. The movement of water into and through the soil from unlined canals, ditches, and water storage facilities.
seepage velocity	The rate of discharge of seepage water through a porous medium per unit area of void space perpendicular to the direction of the flow.
seiche	A wave that oscillates in an enclosed or partially enclosed body of water caused by atmospheric or seismic disturbances.
seismicity	The frequency, intensity, and distribution of earthquake activity in a given area.
setback levee	A constructed embankment to prevent flooding that is positioned some distance from the edge of the river or channel. Setback levees allow wildlife habitat to develop between the levee and the river or stream.
settlement	The sinking of land surfaces because of subsurface compaction, usually occurring when moisture, added deliberately or by nature, causes a reduction in void volumes.
shear wall	A vertical lateral force-resisting element in a structure assigned to resist wind- or earthquake-generated lateral forces.
sheepsfoot roller	A cylindrical steel drum to which knob-headed spikes are fastened; used for compacting earth. Also known as tamping roller.
sheet pile	A form of piling used to shut out water, generally made of several planks spiked or bolted together, and arranged to secure a tongued and grooved effect when driven close together.
shoring	Temporary bracing to hold the sides of an excavation from caving.
siltation	Sediment influx either from erosion or sediment carried into a water body by inflowing rivers and tributaries.
sink	Depression in the land surface, especially one having a central playa or saline lake with no outlet.
sinkhole	A steep-sided depression formed when removal of subsurface embankment or foundation material causes overlying material to collapse into the resulting void.
siphon	A system of pipes and valves which may be used to convey water to a lower level over intervening higher ground without the use of a pump.
siphon tube	Relatively short, light-weight, curved tube used to convey water over ditch banks to irrigate furrows or borders.
siphonage	A partial vacuum created by the flow of liquids in pipes.
slide gate	A steel gate that upon opening or closing slides on its bearings in edge guide slots.

slope	An inclined surface usually defined by the ratio of the horizontal distance to the vertical distance, i.e., 2:1 (2 horizontal units to 1 vertical unit).
slough	A muddy or marshy area; a secondary channel of a river delta, usually flushed by the tide.
slurry	Watery mixture of insoluble matter that is pumped beneath a dam to form an impervious barrier.
slurry trench	A narrow excavation whose sides are supported by a mud slurry filling the excavation. Sometimes used incorrectly to describe the cutoff itself.
slurry wall	An underground wall designed to stop groundwater flow; constructed by digging a trench and backfilling it with a slurry rich in bentonite clay.
smolt	A juvenile salmonid migrating to the ocean and undergoing physiological changes (called smoltification) to adapt from a freshwater to a saltwater environment.
soil classification	Systematic arrangement of soils into classes of one or more categories or levels of classification for a specific objective.
soil conservation	Protection of soil against physical loss by erosion and chemical deterioration by the application of management and land use methods that safeguard the soil against all natural and human-induced factors.
soil corrosion	The deterioration of metal due to interaction with materials in the soil.
south of Delta storage	Water storage supplied with water exported south from the Delta.
spawn	To lay eggs; refers mostly to fish.
spawning beds	Places in which eggs of aquatic animals lodge or are placed during or after fertilization.
spillway	A structure that passes normal and/or flood flows in a manner that protects the structural integrity of the dam.
spoil	Soil, dirt, and rubble that results from excavation.
staging area	Area where equipment and materials may be stored prior to use.
standpipe	Pipe or tank connected to a closed conduit and extending to or above the hydraulic grade line of the conduit to afford relief from surges of pressure in pipelines.
State Implementation Plan (SIP)	Statewide plan for complying with the federal Clean Air Act. The SIP consists of narrative, rules, and agreements that California will use to cleanup polluted areas.
static head	The difference in elevation between the pumping source and the point of delivery. The vertical distance between two points in a fluid.

statutory Delta	The Sacramento–San Joaquin Delta as defined in the California Water Code, Section 12220.
stilling pool	A pool located below a spillway, gate, or valve into which the discharge dissipates energy to avoid downstream channel degradation. An unlined stilling basin usually constructed in natural ground or rock.
stormwater	Untreated surface runoff into a body of water during periods of precipitation.
stratification	Thermal layering of water in lakes and streams. See thermal stratification.
stratified reservoir	A reservoir with several thermal layers of water.
stream capacity	Total volume of water that a stream can carry within the normal high water channel.
stressor	Pressure or change on an ecosystem caused by environmental factors such as contaminants, nonnative species, and management practices.
subsidence	A decrease in ground surface elevation caused by oxidation of organic materials and groundwater extraction.
substrate	A surface on which an organism grows or is attached.
sulfur dioxide (SO₂)	A chemical compound, which is an important criteria pollutant Regulated by the U.S. Environmental Protection Agency.
sump	A well or pit in which liquids collect below floor level; sometimes refers to an oil or water reservoir.
sump pump	The pump placed inside a sump to remove the excess water that has collected there.
surface water	An open body of water, such as a river, stream, or lake.
surge	A rapid increase in the depth of flow.
suspended	The state of floating in water rather than being dissolved in it.
swale	A low place in a tract of land. A wide, shallow ditch, usually grassed or paved. A wide open drain with a low center line.
sweeping velocity	The component of the water velocity vector parallel to and immediately upstream of the screen surface.
tailings	Second grade or waste material separated from pay material during screening or processing.
tailwater	The water in the natural stream immediately downstream from a dam. Applied irrigation water that runs off the lower end of a field.
tainter gate	A term used by the Corps of Engineers to describe radial gates.

take	This is a term used to describe the removal of a State or federally (CESA or ESA) listed species. Defined in the ESA as “...harass, harm pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct”.
tamp	To pound or press soil to compact. To firmly compact earth during backfilling.
tamping roller	One or more steel drums, fitted with projection feet, used to densify soil. See sheepsfoot roller.
taproot	A big root that grows downward from the base of a tree.
tectonic	Pertaining to the plates that make up the Earth’s crust.
terrestrial species	Animals and plants that live on or grow from the land.
thalweg	Deepest part of a river channel in a cross section of a river profile. The path of deepest flow.
thermal stratification	The formation of layers of different temperatures in bodies of water.
thermocline	The middle layer of a lake, separating the upper, warmer portion (epilimnion) from the lower, colder portion (hypolimnion).
threatened species	Legal status afforded to plant or animal species that are likely to become endangered within the foreseeable future throughout all or a significant portion of the range, as determined by the relevant agency.
thrust block (anchor block)	A massive block of concrete built to withstand a thrust or pull. A mass of concrete or similar material appropriately placed around a pipe to prevent movement when the pipe is carrying water. Usually placed at bends and valve structures.
tie lines	Transmission line connecting two or more power systems.
tiering	Refers to the practice of addressing general issues in broader environmental impact reports or statements such as program-level documents and providing more detailed site-specific analyses in subsequent (typically project-level) documents that incorporate the initial broad analysis by reference.
tillage	Plowing, seedbed preparation, and cultivation practices.
toe (toe of dam)	The point of intersection between the bottom of a slope or the upstream or downstream face of a dam and the natural ground.
toe drain	Open-jointed tile or perforated pipe located at the toe of the dam used in conjunction with horizontal drainage blankets to collect seepage from the embankment and foundation and convey the seepage to a location downstream from the dam.
topographic map	A map indicating surface elevation and slope.
topsoil	The topmost layer of soil, usually containing organic matter. Usually refers to soil containing humus which is capable of supporting plant growth.

total dissolved solids (TDS)	A quantitative measure of the residual minerals dissolved in water that remains after the evaporation of a solution. Usually expressed in milligrams per liter or parts per million.
total dynamic head	When a pump is lifting or pumping water, the vertical distance from the elevation of the energy grade line on the suction side of the pump to the elevation of the energy grade line on the discharge side of the pump.
total maximum daily load (TMDL)	Estimates of the amount of specific pollutants that a body of water can safely take without threatening beneficial uses.
toxin	Poisonous substance, generally from a plant or animal.
transformer	A device which through electromagnetic induction transforms alternating electric energy in one circuit into energy of similar type on another circuit, commonly with altered values of voltage and current.
transmission	The act or process of transporting electric energy.
transpiration	The process by which water in plants is transferred into water vapor in the atmosphere. Evaporation of water through the leaves of plants.
transverse	Pertaining to or extending along the short axis, or width, of a structure.
trashrack	A metal or reinforced concrete structure placed at the intake of a conduit, pipe, or tunnel that prevents entrance of debris over a certain size. A device or structure located at an intake to prevent floating or submerged debris from entering the intake.
tremie	A device used to place concrete or grout under water.
tributary	River or stream flowing into a larger river or stream.
trihalomethane (THM)	Organic compounds that may be harmful to health at certain levels in drinking water. Trihalomethanes are formed as a byproduct when chlorine or bromine is used to disinfect water for drinking.
trophic level	Place of an animal in the food chain.
tsunami	Waves that travel in the open ocean and are caused by an undersea earthquake, landslide, or volcanic activity.
turbidity	A measure of the cloudiness of water caused by the presence of suspended matter. Turbidity in natural waters may be composed of organic and/or inorganic constituents, and has direct implications to drinking water treatment.
turbine	A machine for generating rotary mechanical power from the energy of a stream of fluid (such as water, steam, or hot gas).
turbulent flow	That type of flow in which any water particle may move in any direction with respect to any other particle.
turnout	A structure used to divert water from a supply channel to a smaller channel.

ultimate bearing capacity	The load per unit of area required to produce failure by rupture of a supporting soil or rock mass.
uncompacted backfill	Material used in refilling an excavated area without the material being compacted.
unconfined aquifer	An aquifer containing water that is not under pressure; the water level in a well is the same as the water table outside the well. An aquifer that discharges and recharges with an upper surface that is the water table.
understory	Vegetation growing underneath the main canopy of trees.
uniform flow	Open channel flow where the depth and discharge remain constant with respect to space. Also, the velocity at a given depth is the same everywhere.
unimpaired runoff	Unimpaired runoff represents the natural water production of a river basin, unaltered by upstream diversions, storage, or export or import of water to or from other watersheds.
upstream storage	Any water storage upstream of the Delta supplied by the Sacramento or San Joaquin Rivers or their tributaries.
valve	A device used to control the flow in a conduit, pipe, or tunnel that permanently obstructs a portion of the waterway.
vernal pool	Seasonally ponded landscape depressions in which water accumulates because of limitations to subsurface drainage and that support a distinct association of plants and animals.
viewshed	Total visible area from a single observer position, or the total visible area from multiple observer positions.
viscosity	The resistance of a fluid to flow. A liquid with a high viscosity rating will resist flow more readily than will a liquid with a low viscosity.
visual resources	The natural and artificial features of a landscape that characterize its form, line, texture, and color.
volcaniclastic	Composed of volcanic materials that have been transported and reworked through mechanical action, such as wind or water.
voltage	Electrical pressure; i.e., the force that causes current to flow through an electrical conductor.
water column	A section of water extending from the surface of a body of water to its bottom.
water conservation	Those practices that encourage consumers to reduce the use of water.
water conveyance structure	Any structure that conveys water from one location to another.
water delivery system	Reservoirs, canals, ditches, pumps, and other facilities to move water.

water purveyor	Anyone who sells drinking water to the public, usually the owner of a public water supply system.
water right	A legal entitlement, granted as a permit or license from the California State Water Resources Control Board, authorizing water to be diverted from a specified source and put to a beneficial, nonwasteful use.
water supplier	A person who owns or operates a public water system.
water supply reliability	The occurrence of water supplies of sufficient quality and certainty to enhance or sustain a diverse portfolio of economic activity and ecosystem health and maintain quality of life.
water table	The surface of underground, gravity-controlled water.
water transfers	A temporary or long-term change in the point of diversion, place of use, or purpose of use through a transfer of or exchange of water or water rights.
water year	A continuous 12-month period for which hydrological records are compiled and summarized. In California, a water year begins October 1 and ends September 30 of the following year.
Waters of the United States	As defined in the Clean Water Act Section 404, “Waters of the United States” applies only to surface waters, rivers, lakes, estuaries, coastal waters, and wetlands that are, were, or may be used in interstate and foreign commerce, including all waters which are subject to the ebb and flow of the tide.
watershed	A region or area that ultimately drains to a particular watercourse or body of water.
weir	A barrier, such as a small dam, that restricts flow in a stream in order to raise water level, or that diverts flow into a desired course.
wetland	Lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface.
wildlife corridor	A belt of habitat that is essentially free of physical barriers such as fences, walls, and development, connecting two or more larger areas of habitat and allowing wildlife to move between physically separate areas.
withdrawal	Water removed from the ground or diverted from a surface-water source for use.
X2	Salinity criteria of two parts per thousand that must be maintained in the Suisun Bay during the February through June spring runoff period.
xeriphytic	Adapted to growing in dry conditions.
xeriscape	Landscaping that does not require a lot of water.
zooplankton	The animal component of plankton; free-floating organisms in the water column including larvae of many fish and benthic invertebrates.

