

Term	Definition
<b>100-year flood</b>	A flood having a 1% chance of being equaled or exceeded in magnitude in any given year.
<b>200-year flood</b>	A flood having a 0.5% chance of being equaled or exceeded in magnitude in any given year.
<b>303(d) list</b>	Short for a state’s list of impaired and threatened waters (e.g., stream/river segments, lakes)
<b>A-weighted decibel</b>	An overall frequency-weighted sound level that approximates the frequency response of the human ear.
<b>absorption</b>	Taking in of fluids or other substances through, or as if through, cells, tissues or other media.
<b>abutment</b>	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.
<b>accretion</b>	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).
<b>acre-foot</b>	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).
<b>aerosol</b>	A fine spray with particles small and light enough to be carried in air.
<b>aesthetic resources</b>	Objects (natural and built, moving and stationary) and features (e.g., landforms and waterbodies) visible on a landscape that contribute to the public’s experience and appreciation of the environment.
<b>aggregate</b>	Gravel and sand used in construction.
<b>agricultural drainage</b>	The use of surface ditches, subsurface permeable pipes or both to remove standing or excess water from the soil of poorly drained lands.
<b>air basin</b>	Region with similar meteorological and geographic conditions. There are 15 air basins in California.
<b>air district</b>	The agency responsible for regional air quality planning, monitoring, and stationary source and facility permitting. The air districts administer air quality improvement grant programs and are the California Air Resources Board’s primary partners in efforts to ensure that all Californians breathe clean air.
<b>algae</b>	Simple plants containing chlorophyll; most live submerged in water.
<b>alignment</b>	The path or route of the conveyance facilities above ground and underground.
<b>alluvial fan</b>	A low, outspread mass of loose materials and/or rock material, commonly with gentle slopes. It is shaped like an open fan or a segment of a cone
<b>alluvium</b>	Sedimentary materials deposited by running water.
<b>ambient air quality standards</b>	Defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harming public health, and thus, define clean air.

Term	Definition
<b>ambient noise</b>	The composite of noise from all sources near and far in a given environment exclusive of particular noise sources to be measured.
<b>ambit</b>	The scope, extent, or bounds of something.
<b>anadromous fish</b>	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.
<b>annual exceedance probability (AEP)</b>	The percent chance of a flood occurring in any given year.
<b>anoxic</b>	Depleted of oxygen. Anaerobic.
<b>anthropogenic</b>	Of, relating to, or resulting from the influence of human beings on nature.
<b>anticline</b>	An arch of stratified rock in which the layers bend downward in opposite directions from the crest.
<b>approach velocity</b>	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 per second) and submerged screen area (square feet).
<b>aquifer</b>	A water-bearing stratum of rock, sand, or gravel capable of yielding considerable quantities of water.
<b>aquitard</b>	A water-saturated sediment or rock whose permeability is so low it cannot transmit any useful amount of water.
<b>AR6 Report</b>	The Sixth Assessment Report of the Intergovernmental Panel on Climate Change: Climate Change 2021: The Physical Science Basis
<b>archeological resource</b>	A resource that has been previously identified or identified during the course of this project for the purpose of CEQA as possessing archeological significance.
<b>atmospheric rivers</b>	Narrow corridors of water vapor transported in the lower atmosphere that traverse long swaths of Earth's surface.
<b>attainment</b>	An air basin is considered to be in attainment for a particular pollutant if it meets federal or state standards set for that pollutant.
<b>backfill</b>	Material used in refilling excavation, or the process of such refilling. Material used to fill an excavated trench.
<b>background (views)</b>	A visual distance zone that is beyond 3.0 miles from a vantage point.
<b>backwater</b>	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.
<b>baffle</b>	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.
<b>Banks Pumping Plant approach channel</b>	The section of the California Aqueduct located between Clifton Court Forebay and the Harvey O. Banks Pumping Plant.
<b>barge trip</b>	Commercial marine transportation within a waterway.
<b>Basin Plan</b>	Basin Plans (also called Water Quality Control Plans) provide the basis for protecting water quality in California.
<b>bathymetry</b>	The measurement of depths of water in oceans, seas, and lakes.
<b>bedrock</b>	The solid rock at the surface or underlying other surface materials.

Term	Definition
<b>bedload discharge</b>	The quantity of a bed load passing a cross section of a stream during a unit of time.
<b>bench</b>	Shallow, restored areas along the margins of river channels that have relatively gentle slopes compared to typical levees. May consist of riparian (e.g., oak trees) or wetland (e.g., marsh) vegetation, depending on elevation relative to the river.
<b>beneficial use</b>	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.
<b>benthic</b>	Pertaining to the bottom of rivers, lakes, or oceans; organisms that live on the bottom of water bodies.
<b>benthos</b>	Organisms living in or on the bottom of a water body.
<b>bentonite</b>	A clay consisting mostly of montmorillonite, expansive when moist and commonly used to provide a tight seal around a monitoring well. Also used in slurry walls.
<b>berm</b>	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.
<b>Bethany Complex</b>	All Bethany Reservoir alignment project facilities located south of the Byron Highway, including the Bethany Reservoir Pumping Plant and Surge Basin, the Bethany Reservoir Aqueduct, and Bethany Reservoir Discharge Structure.
<b>Bethany Reservoir</b>	An existing State Water Project (SWP) storage facility located on the California Aqueduct in Alameda County. Water is pumped from the Harvey O. Banks Pumping Plant into Bethany Reservoir and discharged into the California Aqueduct for continued conveyance to SWP users and reservoirs located south of the Delta. Bethany Reservoir also serves as the forebay for the South Bay Pumping Plant that feeds the South Bay Aqueduct.
<b>Bethany Reservoir alignment</b>	The corridor of project facilities that would extend from the intakes, follow along the eastern alignment to Lower Roberts Island and then continue along a modified southern tunnel route, with shafts located on Lower Jones Tract and Union Island, to the Bethany Reservoir Pumping Plant and Surge Basin and, ultimately, the existing Bethany Reservoir.
<b>Bethany Reservoir Aqueduct</b>	The conveyance facility that would convey water from the Bethany Reservoir Pumping Plant and Surge Basin to the Bethany Reservoir Discharge Structure along the rim of the existing SWP Bethany Reservoir. This aqueduct would consist of four pipelines of which a portion would be constructed within tunnels under existing pipelines and conservation easements.
<b>Bethany Reservoir Discharge Structure</b>	The project facility that would serve as the outlet for the Bethany Reservoir Aqueduct, releasing water into the existing Bethany Reservoir.
<b>Bethany Reservoir Pumping Plant and Surge Basin</b>	This facility would be located at the downstream end of the main tunnel system for the Bethany Reservoir alignment and convey water from the main tunnel into the Bethany Reservoir Aqueduct to be conveyed to the Bethany Reservoir.

Term	Definition
<b>bioaccumulation</b>	The intake and retention of nonfood substances by a living organism from its environment, resulting in a buildup of the substances in the organism.
<b>bioavailability</b>	The degree and rate at which a substance is absorbed into an organism or is made available at the site of physiological activity.
<b>biochronology</b>	The identification of geologic time based on fossils.
<b>biodegradation</b>	The breakdown (degradation) of organic matter by microorganisms (e.g., bacteria).
<b>biological opinion (BiOp)</b>	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.
<b>biomagnification</b>	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.
<b>biomass</b>	Total mass or amount of living organisms in a particular area or environment.
<b>bioretention</b>	The process in which contaminants and sedimentation are removed from stormwater runoff.
<b>blind thrust (blind fault)</b>	A seismic source that is not expected to rupture to the ground surface during an earthquake event but is still capable of producing large and damaging ground shaking.
<b>blooms</b>	A relatively rapid increase in the population of (usually) phytoplankton algae in an aquatic system.
<b>borrow area (borrow site)</b>	An excavated area or pit created by the removal of earth material to be used as fill in a different location.
<b>borrow material</b>	Material excavated from one area to be used as fill material in another area.
<b>bow wave</b>	Lateral divergence of flow around the bow of a ship, also used to describe divergence of flow around other in-water structures.
<b>brackish</b>	Mixed fresh and salt water.
<b>breeding colony</b>	A congregation of nesting birds.
<b>built-environment historical resource</b>	A resource that has been identified as eligible for listing in, or is listed in, the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR) for the purpose of complying with CEQA.
<b>buoyancy</b>	The ability or tendency to float in water or air or some other fluid.
<b>Byron Tract Working Shaft</b>	The central and eastern alignment project facility that would be used to receive and launch the TBM tunneling from the Southern Complex to the Bacon Island Tunnel Reception Shaft (central alignment) or Lower Roberts Island Tunnel Launch/Reception Shaft (eastern alignment). The tunnels would initially be constructed from a tunnel launch shaft at the location of the South Delta Pumping Plant along the Southern Forebay. As the tunnel proceeds to the Byron Tract Working Shaft location, all tunneling operations would be relocated to the Byron Tract Working Shaft to avoid interference with construction of the pumping plant and forebay.

Term	Definition
<b>California Aqueduct</b>	The existing SWP facility that serves as the primary method of transporting water from Northern California to Southern California in a concrete-lined channel from Clifton Court Forebay to Lake Perris, the SWP's southernmost reservoir.
<b>California Aqueduct Control Structure</b>	A structure with a series of six large radial gates and one small gate to control flows from Clifton Court Forebay into the California Aqueduct or to balance them with flows from the Southern Forebay for conveyance into the SWP Banks Pumping Plant.
<b>California Central Valley Simulation Model (C2VSim)</b>	A computer program that simulates water movement through the linked land surface, groundwater, and surface water flow systems in California's Central Valley. C2VSim is an application of the Integrated Water Flow Model (IWFModel) numerical code and is based on California Department of Water Resources' (DWR) C2VSim model, which provides an updated analysis of geologic and hydrogeologic data for the Sacramento Valley.
<b>California Historical Resources Information System (CHRIS)</b>	A statewide database of recorded cultural resources and previously conducted cultural resource studies. CHRIS includes a wide range of documents and materials relating to cultural resources.
<b>California Register of Historical Resources (CRHR)</b>	The official list of California's historical, archeological, and/or cultural resources worthy of preservation managed by the California Office of Historic Preservation. Includes a wide range of documents and materials relating to historical and archeological resources.
<b>California Water Resilience Portfolio</b>	Released in 2020, the <i>California Water Resilience Portfolio</i> is an approach to meeting California's overall water supply challenges that prioritizes conservation, recycling, groundwater management, and more, to build the resilience of local water systems across the state.
<b>CalSim model</b>	CalSim is a planning tool and model designed to simulate the operations of the Central Valley Project (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.
<b>candidate species</b>	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 the California Department of Fish and Wildlife (CDFW) for potential listing under the California Endangered Species Act.
<b>carry-over storage</b>	The amount of water stored in reservoirs carried over from one year to another.
<b>cast-in-drilled-hole piles</b>	A method commonly used in the construction of bridge structures in which the reinforced concrete piles are cast in drilled holes to predetermined elevations using a heavy wall steel casing to prevent caving.
<b>cast-in-place</b>	Concrete poured within form work on-site to create a structural element in its final position.
<b>cathodic protection</b>	An electrical system for prevention of rust, corrosion, and pitting of metal surfaces that are in contact with water or soil.
<b>central alignment</b>	The corridor of project facilities that would extend from the new north Delta intakes through the Delta to the Southern Complex, with tunnel shafts located on Glanville Tract, New Hope Tract, Staten Island, Bouldin Island, Mandeville Island, Bacon Island, and Byron Tract.

Term	Definition
<b>Central Valley Project (CVP)</b>	California's federally owned and operated water conveyance and storage system resulting from the Central Valley Project Act, enacted in 1933. The system comprises of hundreds of miles of canals, tunnels, and pipelines plus 11 power plants and 20 dams and reservoirs and spans over 400 miles from near Redding to Bakersfield.
<b>channelization</b>	The straightening and/or deepening of a natural watercourse.
<b>character-defining features</b>	Natural and cultural features that characterize a cultural resource and its historical significance.
<b>check valve</b>	A valve that will allow fluid or air to pass through it in only one direction.
<b>chute</b>	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.
<b>cistern</b>	A reservoir or tank for holding water, especially for catching and holding rainwater for later use.
<b>clamshell excavator</b>	An excavator with a bucket with two hinged jaws carried by a crane suspended from the boom by two lines: one raises and lowers the bucket, and the other pulls the jaws together against gravity for digging action. Used chiefly for deep, narrow excavations.
<b>claypan</b>	A naturally occurring subsurface layer of significant clay accumulation.
<b>Clifton Court Forebay</b>	A State Water Project impoundment used to regulate flows to the Harvey O. Banks Pumping Plant.
<b>climate change</b>	Statistically significant variations of the mean state of the climate or of its variability, typically persisting for decades or longer.
<b>climate resiliency</b>	The capacity of social, economic, and ecosystems to cope with hazardous events, trends, or disturbances resulting from the effects of climate change.
<b>carbon dioxide (CO<sub>2</sub>)</b>	A common, naturally occurring colorless and odorless gas required for plant and animal life produced by burning carbon and organic compounds.
<b>carbon monoxide (CO)</b>	A colorless, odorless toxic flammable gas formed by incomplete combustion of carbon. It is a byproduct of the burning of fossil fuels such as oil, coal, and gas.
<b>co-equal goals</b>	Two primary goals established in the 2008 <i>Delta Vision</i> strategic plan by the governor's Blue Ribbon Task Force: (1) restore the Delta ecosystem and (2) create a more reliable water supply for California.
<b>cofferdam</b>	A temporary in-water structure enclosing all or part of a construction area so that construction can proceed in the dry.
<b>cohesion</b>	The mutual attraction of soil particles due to molecular and capillary forces in the presence of water.
<b>community noise equivalent level (CNEL)</b>	The energy average of the A-weighted sound levels occurring during a 24-hour period with 5 decibels (dB) added to the A-weighted sound levels occurring during the period from 7:00 p.m. to 10:00 p.m. and 10 dB added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
<b>compacted backfill</b>	Backfill that has been reduced to bulk by rolling, tamping, or soaking.
<b>compacted embankment</b>	Embankment that has been reduced in bulk by rolling, tapping, or soaking.
<b>compaction</b>	To make soil dense by mechanical manipulation. Mechanical action which increases the density by reducing the voids in a material.

Term	Definition
<b>Compensatory Mitigation Plan (CMP)</b>	A suite of activities proposed to compensate for the loss of natural communities, habitats for terrestrial and aquatic species, and aquatic resources by enhancing channel margins and creating tidal wetland habitat for aquatic resources and special-status species.
<b>compressibility</b>	Property of a soil describing its susceptibility to decrease in volume when subjected to load.
<b>compression</b>	The reduction in volume of a soil mass resulting from an increase in effective stress.
<b>conceptual model</b>	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.
<b>concrete batch plant</b>	Dedicated facility to mix concrete for construction of conveyance facilities.
<b>conductor</b>	A device designed to transmit electricity, heat; a substance, body, device, or wire that readily conducts or carries electrical current.
<b>conduit</b>	A pipe, usually metal, in which wire is installed. A closed channel to convey water through, around, or under a dam.
<b>cone of depression</b>	An area of lowered groundwater levels resulting from pumping.
<b>cone penetration test (CPT)</b>	A soil test involving pushing an instrumented cone, with the tip facing down, into the ground at a controlled rate to determine the geotechnical engineering properties of soils and to determine soil stratigraphy.
<b>conjunctive use</b>	Coordinated and planned management of both surface water and groundwater resources to maximize the efficient use of the resource.
<b>consolidation</b>	Reduction in particle spacing in a soil, and decrease in water content, resulting from an increase in external pressure.
<b>consulting Tribe(s)</b>	California Native American Tribe(s) that are traditionally and culturally affiliated with the study area and that chose to consult with DWR about the project.
<b>consumptive use</b>	Water uses normally associated with human activities, primarily municipal, industrial, and irrigation.
<b>contaminant</b>	Any substance or property preventing the use or reducing the usability of water for ordinary purposes such as drinking, bathing, recreation, and cooling.
<b>controlled low-strength backfill material</b>	A self-compacted, cementitious material used primarily as a backfill in place of compacted fill.
<b>conveyance</b>	A pipeline, canal, natural channel, or other similar facility that transports water from one location to another.
<b>conveyance capacity</b>	The rate at which water can be transported by a pipeline, canal, natural channel, or other similar facility that transports water from one location to another.
<b>conveyance loss</b>	Loss of water in major conveyance canals caused by evaporation, evapotranspiration, and seepage.
<b>Corcoran clay</b>	A regional aquitard consisting of a bed of laterally extensive reduced silt and clay. This continuous clay divides the groundwater-flow system of the western San Joaquin Valley into an upper semi-confined zone and a lower confined zone.

Term	Definition
<b>Council on Environmental Quality</b>	The Council on Environmental Quality coordinates federal environmental efforts and prepares guidelines for implementing the National Environmental Policy Act (NEPA).
<b>covered species</b>	Species that are covered under the incidental take permits of a Habitat Conservation Plan or a Natural Community Conservation Plan and are the subject of a conservation strategy.
<b>crest</b>	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.
<b>criteria air pollutants</b>	Pollutants for which federal and state air quality standards have been established.
<b>critical habitat</b>	An area designated as critical habitat listed in 50 CFR Parts 17 or 226 (50 CFR § 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.
<b>critical streakline</b>	The location dividing the parcel of water that is diverted away from a river channel (e.g., into a water intake) and the parcel of water that remains in the river channel
<b>crop root zone</b>	The soil depth from which a mature crop extracts most of the water needed for evapotranspiration.
<b>cropping pattern</b>	The acreage distribution of different crops in any one year in a given farm area such as a county, water agency, or farm.
<b>cubic feet per second (cfs)</b>	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.
<b>cultural landscape</b>	A geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person, or exhibiting other cultural or aesthetic values.
<b>cultural resources</b>	Built-environment resources and/or archaeological resources that are evaluated to determine if they are historical resources for the purpose of complying with CEQA.
<b>culvert</b>	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.
<b>cut and cover</b>	Construction technique in which a trench is excavated, infrastructure is installed, and the trench is closed.
<b>cut and fill</b>	Construction technique involving excavation or grading followed by placement and compaction of fill material.
<b>cut slope</b>	A slope that is shaped by excavation or grading.
<b>cutoff wall</b>	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.
<b>C.W. "Bill" Jones (Jones) Pumping Plant</b>	The existing CVP facility, located approximately 12 miles northwest of Tracy, that hydraulically lifts water from the Sacramento–San Joaquin Delta into the Delta-Mendota Canal to serve CVP water users located south of the Delta.
<b>cyanobacteria</b>	A phylum of bacteria that obtain their energy through photosynthesis.

Term	Definition
<b>cyanobacteria harmful algal blooms (CHABs)</b>	Blue-green algae that occur naturally in surface waters. Given the right conditions of light and temperature, nutrients (like phosphorous and nitrogen, and the ratio of the two), and lack of water turbulence, blue-green algae can quickly multiply into a bloom.
<b>cyanotoxin</b>	A toxin produced by cyanobacteria.
<b>D-1641</b>	State Water Resources Control Board Water Right Decision 1641.
<b>Day-night sound level (L<sub>dn</sub>)</b>	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 decibels (dB) added to the A-weighted sound levels occurring during the period from 10:00 p.m. to 7:00 a.m.
<b>dead capacity (dead storage or dead pool)</b>	The reservoir capacity from which stored water cannot be evacuated by gravity.
<b>debris flow</b>	A type of landslide that is sometimes referred to as mudflows, lahars, or debris avalanche.
<b>decibel (dB)</b>	A unit of measurement that gages the intensity of sound.
<b>degradation</b>	Changes in water quality conditions that substantially increase the likelihood of adverse effects to beneficial uses.
<b>delist</b>	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 Endangered Species Act (ESA) and under which the species was originally listed (i.e., because the species has become extinct or is recovered).
<b>Delta Conveyance Design and Construction Authority (DCA)</b>	A joint powers authority formed by several public water agencies to provide a flexible means of designing, contracting, constructing, and financing the Delta Conveyance Project (if approved) in a safe, timely, and cost-efficient manner to assist DWR and the public water agencies that would be financing it.
<b>Delta exports</b>	Water exported from the Delta through the North Bay Aqueduct, Contra Costa Canal, the CVP at Jones pumping plant, or the SWP at Banks pumping plant.
<b>Delta imports</b>	The total streamflow entering the Delta from the Sacramento and San Joaquin Rivers, Yolo Bypass, and eastside streams.
<b>Delta-Mendota Canal</b>	The existing 116-mile canal that conveys water from the Jones Pumping Plant to the Mendota Pool, approximately 30 miles west of Fresno.
<b>Delta-Mendota Canal Control Structure</b>	This facility would be located on the Jones Pumping Plant approach channel to regulate flows in the channel upstream of the Jones Control Structure into the Delta-Mendota Canal. This facility would only be included for project alternatives with a project design capacity for 7,500 cfs (Alternatives 2a and 4a).
<b>Delta outflow</b>	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.
<b>Delta Simulation Model (DSM2)</b>	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.

Term	Definition
<b>DeltaGW Model</b>	The DeltaGW model is an integrated surface water groundwater flow model built on DWR's Integrated Water Flow Model platform and simulates land surface processes, groundwater flows, surface water flows, and stream aquifer interactions in response to stresses from water use, land use, and hydrologic variability. The model uses the same model grid structure as the California Central Valley Simulation Fine Grid (C2VSim-FG) model but covers a smaller model domain, which includes the Delta and surrounding areas.
<b>demersal</b>	Fish eggs or organisms that dwell or hatch on the bottom of a lake or stream.
<b>deposition</b>	Material settling out of water onto a 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.
<b>desalination</b>	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.
<b>desiccate</b>	To dry up; remove moisture from a substance.
<b>detention basin</b>	A stormwater management facility that temporarily impounds and discharges runoff through an outlet to a downstream channel.
<b>developed recreation use areas</b>	A discrete formally designated and named area containing a concentration of facilities, infrastructure, and services used to provide recreation opportunities to the public.
<b>dewatering</b>	Elimination of water from a lake, river, stream, reservoir, or containment.
<b>diatom</b>	A major type of phytoplankton that have cell walls made of silica and shaped into two halves.
<b>dike</b>	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 that contain water within a given course. Usually applied to dams built to protect land from flooding.
<b>direct economic effects</b>	An actual change in employment, income, value added, and/or output, which also creates indirect and induced effects.
<b>direct mortality</b>	Mortality attributable to direct effects of a cause or action.
<b>discharge</b>	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.
<b>discharge capacity</b>	The maximum amount of water that can be safely released from a given waterway.
<b>disinfection byproduct</b>	A compound formed by the reaction of a disinfectant such as chlorine with organic material in the water supply during water treatment.
<b>dispersed recreation use areas</b>	Areas without built recreation facilities that are open space areas, often on or near shorelines, which include angler trails and paths or some primitive beach areas.
<b>dispersion</b>	The dissemination, or scattering, of organisms or particles over periods within a given area or over the Earth.

Term	Definition
<b>dissolved organic carbon (DOC)</b>	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.
<b>diversion</b>	The action of taking water out of a river system or changing the flow of water in a system for use in another location.
<b>diversion capacity</b>	The flow that can be passed through the canal headworks at a dam under normal head.
<b>diversion channel</b>	A waterway used to divert water from its natural course.
<b>diversion dam</b>	A dam built to divert water from a waterway or stream into a different watercourse.
<b>drainage basin</b>	All of the area drained by a river system.
<b>drainage system</b>	Collection of surface and/or subsurface drains, together with structures and pumps, used to remove surface or ground water.
<b>early Native American resources</b>	Native American archaeological resources from before European contact, or before approximately AD 1500.
<b>easement</b>	An interest in land owned by another individual or organization that entitles its holder to a specific limited use.
<b>eastern alignment</b>	The corridor of project facilities that would extend from the new north Delta intakes along the eastern edge of the Delta near I-5 to the Southern Complex, with tunnel shafts located on Glanville Tract, New Hope Tract, Canal Ranch Tract, Terminous Tract, Lower Roberts Island, Lower Jones Tract, and Byron Tract.
<b>ecological productivity</b>	The rate of generation of biomass (both plants and animals) in an ecosystem.
<b>ecosystem</b>	The biological community that occurs in some locale, and the physical and chemical factors that make up its nonliving or abiotic environment.
<b>ecosystem processes</b>	The physical, chemical, and biological interactions that link organisms and their environment.
<b>edaphic</b>	Influenced by the soil rather than by climate.
<b>effluent</b>	Partially or completely treated wastewater flowing out of a treatment facility, reservoir, or basin.
<b>effluent limitation</b>	The maximum amount of a specific substance or characteristic that can be present in effluent discharge without violating water quality standards in receiving waters.
<b>electrical conductivity</b>	A measure of the total concentration of dissolved salts in water. A measure of a water’s ability to conduct electricity.
<b>electrical resistivity tomography (ERT)</b>	Used to characterize subsurface soil characteristics. A linear array of removable small steel electrodes (approximately 0.5 inches in diameter by 8 inches long) driven into the ground approximately every 10 feet over several hundred feet to induce a low current in the ground, while a small readout unit provides the measurements.
<b>electrofishing</b>	A fishing technique that uses direct current electricity flowing between submerged electrodes, which affects the movements of nearby fish so they swim toward the equipment, where they can be caught (e.g., with nets) or stunned.

Term	Definition
<b>electromagnetic field (EMF)</b>	An electromagnetic field (EMF) is an invisible line of force that is produced by an electrically charged object. An EMF is a combination of an electric and a magnetic field. Electric fields are created by charged particles and magnetic fields are created by the flow of electric current.
<b>embankment</b>	An earth structure, the top of which is higher than the adjoining surface.
<b><i>en echelon</i> splay</b>	Closely spaced, parallel or subparallel, overlapping or step-like minor structural features (e.g., faults, tension fractures) that lie oblique to the overall structural trend.
<b>emission inventory</b>	Accounting of the total emissions from all sources in a geographic area over a specified time period.
<b>endangered species</b>	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.
<b>endemic species</b>	Plant and animal species that are native to and confined to a certain region.
<b>entrainment</b>	The incidental trapping of fish and other aquatic organisms in water diverted from streams, rivers, and reservoirs.
<b>environmental justice</b>	The fair treatment and meaningful involvement of people of all races, cultures, incomes, and national origins, with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.
<b>ephemeral stream</b>	A stream that flows briefly only in direct response to precipitation and whose channel is above the water table.
<b>eolian</b>	Materials carried, deposited, produced, or eroded by the wind.
<b>equivalent sound level (Leq)</b>	An average of the sound energy occurring over a specified period. In effect, Leq is the steady-state sound level containing the same acoustical energy as the time-varying sound that actually occurs during the same period. The duration of the measurement is commonly indicated in the metric; for example, a 1-hour Leq sound level would be indicated as dBA 1-hour Leq.
<b>erosion</b>	The gradual wearing away of land by water, wind, and general weather conditions; the diminishing of property by the elements.
<b>erosion hazard</b>	The degree to which a soil will be subject to accelerated erosion rates when the land surface is disturbed.
<b>estuarine fish</b>	Fish that spend a part of their life cycle in an estuary.
<b>estuary</b>	A water passage where the tide meets a river current; an arm of the sea at the lower end of a river.
<b>ethnographic, ethnography</b>	Relating to the description of peoples and cultures with their customs, languages, and worldviews, sometimes based on participant-observation and usually resulting in a written account of a people, place, or institution.
<b>ethnohistorical</b>	Pertaining to information about peoples and cultures that is found in historical documents such as maps, journals, histories, and newspapers; pertaining to cultural places and resources that are known through such means.
<b>eutrophic</b>	Nutrient enrichment of a body of water that contains more organic matter than existing biological oxidization processes can consume.
<b>evapotranspiration</b>	Water evaporated from plant and soil surfaces or transpired by plant tissues.

Term	Definition
<b>expansive soil</b>	Soils that shrink and swell because of moisture changes. (Also referred to as high shrink-swell soil.)
<b>export pumps</b>	CVP and SWP pumping plants in the southern portion of the Delta—the Jones and Banks pumping plants, respectively, that export water to urban and agricultural water users in the export service areas.
<b>export service areas</b>	Lands that receive, store, and use CVP and SWP water pumped from the Delta.
<b>extirpated</b>	Describes a species that has been eliminated from a particular area but still exists elsewhere.
<b>fill</b>	Artificial deposits of natural soils or the process of the depositing.
<b>fill slope</b>	A slope shaped by the placement and compaction of loose “fill” materials, which may be reused from elsewhere on the construction site or imported.
<b>fish ladder (fishway)</b>	An inclined trough that carries water from above to below a dam so that fish can easily swim upstream.
<b>fish salvage</b>	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.
<b>fish screen</b>	Barrier on the front face of a water intake facility to prevent fish and debris from being drawn into the intake.
<b>fish weir</b>	A type of fish ladder.
<b>flap gate</b>	A gate hinged along one edge, usually either the top or bottom edge.
<b>flood</b>	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.
<b>flood bypass</b>	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.
<b>flood irrigation</b>	Method of irrigating where water is applied from field ditches onto land that has no guide preparation, such as furrows, borders, or corrugations.
<b>floodway</b>	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.
<b>floodplain</b>	Any land area susceptible to inundation by floodwaters from any source.
<b>flotation</b>	Upward movement of a below ground or buried structure (e.g., tunnel) as a result of buoyancy.
<b>fluvial</b>	Pertaining to streams and stream processes.
<b>food web</b>	Consists of all the food chains in a single ecosystem. Each living thing in an ecosystem is part of multiple food chains. Each food chain is one possible path that energy and nutrients may take as they move through the ecosystem. All of the interconnected and overlapping food chains in an ecosystem make up a food web.
<b>forage fish</b>	Generally, small fish that produce prolifically and are consumed by predators.
<b>forebay</b>	Impoundment immediately upstream from a dam or hydroelectric plant intake structure. The term is applicable to all types of hydroelectric developments (e.g., storage, run-of-river, and pumped-storage).
<b>foreground (views)</b>	A visual distance zone that is up to 0.5 mile from a vantage point.

Term	Definition
<b>fossils</b>	The remains, traces, imprints, or life history artifacts (e.g., nests) of prehistoric plants and animals found in ancient sediments. Also called paleontological resources.
<b>foundation material (foundation soil)</b>	The upper part of the earth mass carrying the load of the structure.
<b>freeboard</b>	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.
<b>fresh water</b>	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.
<b>fry</b>	Salmon that have emerged from gravel, completed yolk absorption, remained in freshwater streams, and are less than a few months old.
<b>gage height</b>	Elevation of water surface measured by a gage.
<b>gaining stream</b>	Stream or reach that receives water from the zone of saturation.
<b>gantry crane</b>	A crane or hoisting machine mounted on a frame or structure spanning an intervening space, which often travels on rails.
<b>gate</b>	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.
<b>genus</b>	A taxonomic rank below “family” and above “species.”
<b>Geographic Information System (GIS)</b>	Computer-based mapping technology that manipulates geographic data in digital layers and enables one to conduct a wide array of environmental analyses.
<b>geomorphic</b>	Refers to landforms, the materials of which they are made, and the dynamics by which they are made and function.
<b>gigawatt hours (gwh)</b>	Unit of power equal to one million kilowatt hours.
<b>glare</b>	A direct light source caused by the reflection of the sun, moon, or artificial light source from a reflective surface. The intensity of glare is a function of the brightness of the surroundings and the intensity of the light source.
<b>global positioning systems (GPS)</b>	Space-based radio positioning systems that provide 24-hour, three-dimensional position, velocity, and time information.
<b>global warming</b>	Increasing global surface temperatures that result from rising atmospheric concentrations of greenhouse gases (GHGs) in excess of natural levels.
<b>global warming potential</b>	Methodology defined by the Intergovernmental Panel on Climate Change (IPCC) to compare the warming potential of greenhouse gases on a normalized scale.
<b>grade</b>	The elevation of a surface or a surface slope.
<b>greenhouse gas (GHG)</b>	A gas that absorbs and emits radiant energy within the thermal infrared range, causing the greenhouse effect.
<b>groundborne vibration</b>	An oscillatory motion through a solid medium in which the motion’s amplitude can be described in terms of displacement, velocity, or acceleration.
<b>groundwater</b>	Any water naturally stored underground in aquifers, or that flows through and saturates soil and rock, supplying springs and wells.
<b>groundwater banking</b>	Storing water in the ground for use to meet demand during dry years.

Term	Definition
<b>groundwater basin</b>	An alluvial aquifer or a stacked series of alluvial aquifers with reasonably well-defined boundaries in a lateral direction and having a definable bottom.
<b>groundwater elevation</b>	See groundwater table definition.
<b>groundwater overdraft</b>	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.
<b>groundwater recharge</b>	The natural and intentional infiltration of surface water into the zones of saturation.
<b>groundwater storage</b>	The volume of void space that can be occupied by water in a given volume of a formation, aquifer, or groundwater basin.
<b>groundwater subbasin</b>	A subdivision of the groundwater basin created by dividing the basin using geologic and hydrologic conditions or institutional boundaries.
<b>groundwater substitution transfer</b>	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.
<b>Groundwater Sustainability Agency (GSA)</b>	A local public agency with either water supply, water management, or land use responsibilities within a groundwater basin that provides governance and is responsible for the development and implementation of a groundwater sustainability plan for a basin or in coordination with other local agencies and county government within a basin (California Water Code § 10721(j)).
<b>Groundwater Sustainability Plan (GSP)</b>	A plan developed and adopted by a groundwater sustainability agency (GSA) or GSAs to sustainably manage the groundwater resources in a basin or portion of a basin (California Water Code § 10721(k)).
<b>groundwater table</b>	The upper boundary of groundwater where water pressure is equal to atmospheric pressure (i.e., water level in a bore hole after equilibrium when groundwater can freely enter the hole from the sides and bottom).
<b>grout</b>	A fluid mixture of cement and water or sand, cement, and water used to seal joints and cracks in a rock foundation.
<b>grubbing</b>	Removal of stumps, roots, and vegetable matter from the ground surface after clearing and before excavation.
<b>gully</b>	Small-scale stream erosion.
<b>hardpan</b>	A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance and limits the downward movement of water and roots.
<b>harvest (fisheries)</b>	In fisheries, refers to numbers of fish that are caught and kept.
<b>Harvey O. Banks (Banks) Pumping Plant</b>	The existing SWP facility, located approximately 2.5 miles southwest of Clifton Court Forebay, which hydraulically lifts water from Clifton Court Forebay in the Sacramento–San Joaquin Delta into the California Aqueduct.
<b>haul route</b>	The designated route used to haul material to and from a construction or building site.
<b>hazing</b>	A process where one disturbs the animal's sense of security so much that it decides to move on.
<b>hectare</b>	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.

Term	Definition
<b>herbaceous</b>	Describes plants that have little or no woody tissue. Herbaceous plants typically survive for only a single growing season.
<b>herbicide</b>	A compound, usually a synthetic organic chemical, used to kill or control plant growth.
<b>herbivore</b>	An organism that feeds on plants.
<b>historic district</b>	A significant concentration, linkage, or continuity of sites, buildings, structures, or objects that are historically or aesthetically united by either a plan or physical development.
<b>historical resource</b>	A resource that has been identified as eligible for listing in, or is listed in, the NRHP or CRHR for the purpose of complying with CEQA.
<b>holistic, holistically</b>	Characterized by comprehension of the parts of something as intimately interconnected and explicable only by reference to the whole.
<b>hydraulic barrier</b>	A barrier created by injecting fresh water to control seawater intrusion in an aquifer or created by water injection to control migration of contaminants in an aquifer.
<b>hydraulic gradient</b>	The change in head per unit of horizontal distance in a given direction; generally, has the units of feet or meters.
<b>hydric</b>	Characterized by, or thriving in, an abundance of moisture.
<b>hydrocarbons</b>	A wide variety of organic compounds, including methane (CH <sub>4</sub> ), emitted principally from the storage, handling, and combustion of fossil fuels.
<b>hydrodynamics</b>	The description of liquids' motion.
<b>hydrogeologic conditions</b>	Conditions stemming from the interaction of groundwater and the surrounding soil and rock.
<b>hydrograph</b>	A graph that shows some property of groundwater or surface waters as a function of time at some given point.
<b>hydrologic cycle</b>	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.
<b>hydrologic region</b>	A study area consisting of multiple planning subareas. California is divided into 10 hydrologic regions.
<b>hydrology</b>	Scientific study of the properties, distribution, and behavior of water.
<b>hydropower (hydroelectric power)</b>	A source of power that uses the natural flow of moving water to generate electricity.
<b>hydroseeding</b>	The application of a slurry of seed, fertilizer, water, and other materials to control erosion.
<b>hypolimnion</b>	The lower, or bottom, layer of a lake or reservoir with essentially uniform colder temperatures.
<b>impact pile driving</b>	Pile driving using a hydraulic hammer that incorporates the use of an external energy source to lift the hammer to the top of its stroke and produces intense, broadband impulsive sounds that can propagate far from the impact location.
<b>impermeable</b>	Having a texture or cementation 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.
<b>impervious</b>	Not permeable; not allowing liquid to pass through. Resistant to movement of water.

Term	Definition
<b>impingement</b>	Contact or collision with a diversion structure (used to describe deleterious effects of some diversion facilities on aquatic species, in particular prolonged contact with an intake screen when an organism is too large to pass through the screen opening).
<b>IMPLAN</b>	A computer database and modeling system used to create input-output models for any combination of United States regions.
<b>incidental take</b>	Take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.
<b>indicator species</b>	Organism, species, or community that indicates the presence of certain environmental conditions.
<b>indirect economic effects</b>	Changes in employment, income, value added, and/or output created by changes in business-to-business spending due to a direct effect.
<b>indirect growth</b>	Population growth that is not attributed to new employees moving into the study area, but rather growth over a long period of time that could result from things such as changes in land use, availability of public services and utilities, and economic vitality.
<b>indirect mortality</b>	Mortality occurring later in time or spatially removed from the direct effects of an action.
<b>induced economic effects</b>	Changes in employment, income, value added, and/or output created by changes in personal income due to a direct effect.
<b>infiltration</b>	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.
<b>inflow</b>	Water that flows into a body of water (e.g., the amount of water entering the Delta expressed in acre-feet per day/month or cubic feet per second).
<b>inlet channel (inlet structure)</b>	Concrete lined portion of a spillway between an approach channel and a gate or crest structure.
<b>intake</b>	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.
<b>intake structure</b>	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.
<b>Integrated Water Flow Model (IWFM)</b>	A computer program used for water resources management and planning within a basin. It calculates groundwater flows, soil moisture movement in the topsoil, stream flows, land surface flows and flow exchange between the groundwater, streams and land surface as generated by rainfall, agricultural irrigation, and municipal and industrial water use.
<b>integrity</b>	The authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association.
<b>interconnected surface water</b>	Surface water that has a hydraulic connection to the underlying aquifer system.
<b>Interferometric Synthetic Aperture Radar (inSAR)</b>	Satellite-based tool used for remote monitoring of surface elevations

Term	Definition
<b>intermittent stream</b>	A stream that flows part of the time, usually after rainstorms, during wet weather, or for only part of the year. A 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.
<b>intertidal</b>	The zone at the interface of land and a water body that occurs between high and low tide.
<b>invertebrate</b>	Animals without a notochord, such as mollusks, arthropods, sponges, and annelids (worms).
<b>irradiance</b>	The amount of light or other radiant energy striking a given surface area.
<b>irrigated acreage</b>	Irrigable acreage actually irrigated in any one year.
<b>irrigation requirement</b>	Quantity of water, exclusive of effective precipitation, that is required for crop production.
<b>Jones Pumping Plant approach channel</b>	The section of the Delta-Mendota Canal located between the Tracy Fish Facility on Old River and the C.W. "Bill" Jones Pumping Plant.
<b>Jones Control Structure</b>	This facility would be located on the Banks Pumping Plant approach channel to regulate flows out of the channel and into the tunnel connecting the Delta-Mendota Canal to the California Aqueduct. This facility would only be included for project alternatives with a project design capacity for 7,500 cfs (Alternatives 2a and 4a).
<b>Jones Outlet Structure</b>	This facility would be located on the Jones Pumping Plant approach channel to regulate flows into the channel from the tunnel connecting the Delta-Mendota Canal to the California Aqueduct. This facility would only be included for project alternatives with a project design capacity for 7,500 cfs (Alternatives 2a and 4a).
<b>jurisdictional waters</b>	Waters under the jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act.
<b>kilovolt (kV)</b>	A unit of electromotive force, equal to 1,000 volts.
<b>kilowatt (kW)</b>	An electrical unit of work or power. Unit of electric power (capacity) equal to 1000 watts, or about 1.34 horsepower, and 1.18 kilovolt ampere (KVA).
<b>kilowatt-hour (kWh)</b>	Basic unit of electric energy equal to an average of 1 kilowatt of power applied over 1 hour. A unit of energy equivalent to 1,000 watt hours.
<b>lacustrine habitat</b>	Lake or reservoir wetland habitat.
<b>larval fish</b>	An immature stage that develops from the fertilized egg before assuming the characteristics of the adult.
<b>leach field</b>	A subsurface wastewater disposal facility used to remove contaminants and impurities from wastewater.
<b>leaching</b>	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.
<b>levee</b>	A natural or artificial barrier that helps keep rivers from overflowing their banks. See dike definition.
<b>level-of-service (LOS)</b>	A term used to qualitatively describe the operating conditions of a roadway based on factors such as speed, travel time, maneuverability, delay, and safety.

Term	Definition
<b>light</b>	Natural and artificial illumination that is present during the day and night within the natural, cultural, and project visual environments. Sources of natural light include the sun, moon, stars, fire, and lightning. Sources of artificial light include streetlights, vehicle headlights, landscape lighting, external security lighting, internal building lighting, and stadium/playing field lighting.
<b>Light Detection and Ranging (LiDAR)</b>	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.
<b>linear extensibility (coefficient)</b>	Refers to the change in length of an unconfined soil clod as moisture content is decreased from a moist to a dry state. Used to determine the shrink-swell potential of soils.
<b>lining</b>	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.
<b>liquefaction</b>	The process in which soil loses cohesion when subject to seismic activity (i.e., shaking).
<b>listed</b>	Any species that is identified as candidate, threatened, or endangered pursuant to ESA or listed as threatened or endangered under CESA.
<b>littoral</b>	Pertaining to the shore.
<b>littoral zone</b>	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.
<b>load</b>	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.
<b>load serving entity</b>	Any entity (or the duly designated agent of such an entity), including a load aggregator or power marketer, that (a) (i) serves End Users within the California Independent System Operator (CAISO) Balancing Authority Area and (ii) has been granted authority or has an obligation pursuant to state or local law, regulation, or franchise to sell electric energy to End Users located within the CAISO Balancing Authority Area; (b) (i) is an End User, (ii) has been granted authority pursuant to state or local law or regulation to serve its own Load through the purchase of electric energy from an entity that does not qualify as a Load Serving Entity, and (iii) serves its own Load through purchases of electric energy from an entity that does not qualify as a Load Serving Entity with respect to such purchases of electric energy; or (c) is a federal power marketing authority that serves End Users.
<b>loam</b>	Soil material that is 7% to 27% clay particles, 28% to 50% silt particles, and less than 52% sand particles.
<b>log boom</b>	A chain of logs, drums, or pontoons secured end to end and floating on the surface of a water body so as to prevent floating debris from obstructing intakes and other in-water structures.
<b>losing stream</b>	A stream or reach that contributes water to a zone of saturation.

Term	Definition
<b>low income</b>	Populations in which median household income is at or below the Department of Health and Human Services poverty guidelines, or a locally developed threshold that is at least as inclusive as the poverty guidelines.
<b>lyse</b>	To break apart a larger particle (e.g., a human cell) into smaller pieces.
<b>macroclimate</b>	The climate representative of relatively large area.
<b>mainstem</b>	The main branch of major rivers such as the Sacramento River, off of which lie smaller distributaries such as sloughs.
<b>maximum sound level (L<sub>max</sub>)</b>	The maximum or minimum sound level measured during a specified interval.
<b>mean higher high water event</b>	The average of the highest of the two high tides per day (or the one high tide) over the same 19-year period.
<b>median household income</b>	The amount that divides the income distribution into two equal groups, with half having incomes above the median and half having incomes below the median.
<b>mercury methylation</b>	A small fraction of mercury in natural waters and sediments is converted to methylmercury by bacteria in anoxic (oxygen deficient) environments. This compound accumulates in wildlife via the food chain.
<b>methylmercury</b>	The most common form of organic mercury found in the environment, which can be toxic to humans and wildlife. Environmental methylmercury arises from the methylation of inorganic mercury by microorganisms in soil and sediments, in air or under water.
<b>microclimate</b>	The climate of a small area, particularly that of the living space of a certain species, group, or community.
<b>microcystin toxins</b>	Microcystin toxins, or microcystins, are a class of toxins produced by certain freshwater cyanobacteria, commonly known as blue-green algae.
<b>microhabitat</b>	A small, specialized, and effectively isolated location.
<b>minimum sound level (L<sub>min</sub>)</b>	The minimum sound level measured during a specified interval.
<b>minority</b>	Individuals identifying in the U.S. Census as American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic or Latino.
<b>mitigation</b>	Measures taken to minimize or avoid adverse environmental impacts.
<b>model</b>	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.
<b>modeled habitat</b>	Habitat identified as suitable for a particular species using computer modeling.
<b>Most Likely Descendent</b>	A member of a California Tribe that has been designated through California Native American Heritage Commission processes regarding ancestral human remains; commonly applied during Native American Graves Protection and Repatriation Act procedures.
<b>mound; mound site</b>	An architectural earthen structure and its place on the landscape, pertaining to Native American heritage and cosmology; an archaeological feature associated with early Native American villages and customs.
<b>muck</b>	Dark, finely divided, well-decomposed organic soil material.
<b>mudflat</b>	A mud-covered, gently sloping tract of land alternately covered and left bare by water. The muddy, nearly level bed of a dry lake.

Term	Definition
<b>multifamily home</b>	A single structure with two or more housing units that can include attached homes.
<b>multimodal</b>	Planning that considers various modes (walking, cycling, automobile, public transit, etc.) and connections among modes.
<b>National Register of Historic Places (NRHP)</b>	The official list of the nation's historic places worthy of preservation, managed by the National Parks Services. Maintains a wide range of documents and materials relating to historical and archeological resources.
<b>natural harmony</b>	This is based on the idea that the natural environment (as defined under "visual environment") creates a sense of visual harmony in people.
<b>net flow</b>	The difference in flows in a tidally influenced channel between flood tide flows and ebb tide flows over a given time period (e.g., 1 day or 1 month), where a positive value indicates more flow towards the ocean, and a negative value indicates more flow upstream (also known as negative or reverse flow).
<b>nitrogen oxides (NO<sub>x</sub>)</b>	A class of pollutant compounds that include nitrogen dioxide (NO <sub>2</sub> ) and nitric oxide (NO), both of which are emitted by motor vehicles.
<b>noise</b>	Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
<b>nonattainment</b>	An air basin is considered to be in nonattainment for a particular pollutant if it is exceeding federal or state standards for that pollutant.
<b>nonnative species</b>	Also called <i>introduced species</i> or <i>exotic species</i> ; 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.
<b>nonpoint source pollution</b>	Pollution discharged over a wide land area, not from one specific location.
<b>non-potable</b>	Water that may contain objectionable pollution, contamination, minerals, or infective agents and is considered unsafe and/or unpalatable for drinking.
<b>nonproject levee</b>	Levees that are generally privately owned and are constructed and maintained by local maintaining agencies.
<b>nonurban levee</b>	A levee that does not protect an urban area. Also known as a <i>rural levee</i> .
<b>nose cone</b>	Cone-shaped structure on the upstream end of cylindrical water intake screens, installed to facilitate flow past the screen.
<b>nutrients</b>	Animal, plant, or mineral substance that sustains individual organisms and ecosystems.
<b>obligate riparian species</b>	A species that depends completely upon habitat along a body of water.
<b>occupied habitat</b>	A specific area occupied by a plant or animal species.
<b>ocean acidification</b>	The chemical response to increased CO <sub>2</sub> dissolving in the ocean from the atmosphere.
<b>off-peak energy</b>	Electric energy supplied during periods of relatively low system demand.
<b>organic soil</b>	A soil that contains 12% to 18% or more organic carbon, depending on the clay content and water saturation conditions. Includes both muck and peat.
<b>outflow</b>	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. See also Delta outflow.

Term	Definition
<b>outlet</b>	An opening through which water can be freely discharged from a reservoir to the river for a particular purpose.
<b>outlet channel (exit channel)</b>	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.
<b>overdraft</b>	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.
<b>overtopping</b>	Flow of water over the top of a dam or embankment.
<b>ozone (O<sub>3</sub>)</b>	A photochemical oxidant that is a major cause of lung and eye irritation in urban environments.
<b>paleoecology</b>	The study of ancient organisms, their environment, and how they interacted with one another.
<b>paleontological resources</b>	The remains, traces, imprints, or life history artifacts (e.g., nests) of prehistoric plants and animals found in ancient sediments. Also called fossils.
<b>paleontological sensitivity</b>	The probability of encountering fossils. Paleontological sensitivity is based on the paleontological potential of the stratigraphic unit, the local geology and geomorphology, and any other local factors that may be germane to fossil preservation and potential yield.
<b>particulate matter (PM)</b>	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).
<b>parts per million (ppm)</b>	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.
<b>parts per thousand (ppt)</b>	A measurement of concentration on a weight or volume basis, typically used for salinity (salt concentration in water).
<b>peak demand</b>	Maximum electrical demand occurring within a specified period of time. Maximum power used in a specific time period.
<b>peak flow</b>	Maximum instantaneous flow in a specified period of time.
<b>peak ground acceleration (PGA)</b>	The maximum acceleration by a soil particle at the ground surface during an earthquake.
<b>peak load</b>	The maximum power load in a stated period of time.
<b>peak particle velocity (inches per second PPV)</b>	Used to describe groundborne vibration, the velocity at which particles of rock and soil oscillate when subject to vibration waves.
<b>peaking powerplant</b>	Peaking powerplants meet the fluctuating needs of users, and generally run only when there is a high demand, known as peak demand, for electricity. Common peaking periods include hot summer days or cold winter days and most often occur in the afternoons and evenings.
<b>peat</b>	Unconsolidated soil material, largely undecomposed organic matter, that has accumulated under excess moisture.
<b>pelagic fish</b>	Fish that spend most of their life swimming in the water column with little contact with or dependency on the bottom, often away from shore.
<b>pelagic organism decline (POD)</b>	A recent collapse (beginning around 2000) in the abundance of delta smelt, longfin smelt, striped bass, and threadfin shad.

Term	Definition
<b>per capita income</b>	Average income per person in a region that is calculated by dividing an area's total income by its total population.
<b>percentile-exceeded sound level (Lx)</b>	The sound level exceeded for an indicated percentage of time during a sound-level measurement period, denoted as Lx, where x is the percentage of a specified time interval. For example, a 1-hour L90 is the sound level exceeded 90 percent of the time during an hour, and a 1-hour L10 is the sound level exceeded 10 percent of the time during an hour. The L90 is generally used to represent the ambient sound level.
<b>perched water table</b>	A water table, usually of limited area, maintained above the normal free water elevation by the presence of an intervening relatively impervious confining stratum.
<b>percolation</b>	Downward movement of water through the soil profile or other porous media.
<b>perennial stream</b>	A stream that flows continually throughout the year.
<b>permeability, permeable</b>	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.
<b>pH</b>	A measurement of acidity or alkalinity. 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.
<b>photodegradation</b>	The breakdown (degradation) a substance by light, particularly sunlight.
<b>photosynthetic</b>	Relating to or involved in the process by which plants and some other organisms use sunlight to synthesize nutrients from carbon dioxide and water.
<b>phylogenetics</b>	Study of the relationships between organisms.
<b>phylum</b>	A taxonomic rank second in the classification hierarchy below "kingdom" and above "class."
<b>phytoplankton</b>	Small, usually microscopic plants (such as algae), found in lakes, reservoirs, and other bodies of water.
<b>plankton</b>	Tiny, usually microscopic, plants (phytoplankton) and animals (zooplankton) with limited powers of locomotion, usually living free in the water away from substrates.
<b>plasticity index (PI)</b>	A measure of the plasticity of a soil. Reflects the size of the range of water contents in which the soil exhibits plastic properties.
<b>plume</b>	A space in air, water, or soil containing pollutants released from a point source.
<b>plume mobilization</b>	A contaminant plume is the body of groundwater that has been affected by the presence of pollutants in the soil or aquifer. Plume mobilization refers to the movement of the contaminant plume through the aquifer.
<b>point source pollution</b>	Pollutants discharged from any identifiable point, including pipes, ditches, channels, sewers, tunnels, and containers of various types.
<b>pollutant</b>	Any inorganic or organic substance that contaminates air, water, or soil.
<b>post-contact archaeological resources</b>	Archaeological resources from after European contact.

Term	Definition
<b>poverty level</b>	Defined by the U.S. Census Bureau using the Office of Management and Budget's Statistical Policy Directive 14. Income thresholds are used to determine who is in poverty. If an individual's or family's total income is less than a specified threshold, the individual or family is considered to be in poverty.
<b>project levee</b>	Levees that are constructed and maintained under the State Plan of Flood Control.
<b>project site coherence</b>	This is created by the visual character of the project site environment in combination with viewer preferences (i.e., how compatible the project features are perceived by the viewer within the context of the surrounding natural and cultural visual environments).
<b>public involvement</b>	Process of obtaining input into each stage of development of planning documents.
<b>Public water agency (PWA)</b>	One of 29 public entities throughout the state that deliver water to wholesalers, retailers, or directly to agricultural and municipal and industrial (M&I) water users
<b>qualitative</b>	Having to do with quality or qualities. Descriptive of kind, type, or direction, as opposed to size, magnitude, or degree.
<b>quantitative</b>	Having to do with quantity, capable of being measured. Descriptive of size, magnitude, or degree.
<b>QWEST</b>	Net flow of water past Jersey Point on the San Joaquin River in the Delta.
<b>rail served materials depot</b>	Sites with rail sidings extending from main tracks to transport large volume construction materials, such as tunnel liner segments, to tunnel launch shaft sites and sometimes to convey RTM from the tunnel launch shaft sites to the Southern Complex.
<b>range</b>	Geographic region in which a given plant or animal normally lives or grows.
<b>reach</b>	Any specified length of a stream, channel, or other water conveyance.
<b>reactive organic gases (ROG)</b>	Reactive hydrocarbon pollutants.
<b>recruitment</b>	Survival of young plants and animals from birth to a life stage less vulnerable to environmental change.
<b>recycled water</b>	Water that, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource.
<b>redd</b>	A redd is a nest of fish eggs consisting of gravel, typically formed by digging motion performed by an adult female salmon.
<b>redd dewatering</b>	Occurs when water levels fall below the level of egg deposition, potentially causing egg and alevin mortality.
<b>regional transportation plan (RTP)</b>	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.
<b>renewable resources</b>	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.
<b>reservoir</b>	A body of water impounded by a dam and in which water can be stored.
<b>reservoir capacity</b>	The capacity of the reservoir, usually in acre-feet.

Term	Definition
<b>residence time</b>	The duration of persistence of a substance (such as a bacteria or toxin) in a medium or place (such as a waterbody).
<b>resiliency and adaptability</b>	The ability of the study area and its resources to remain stable or flexibly change as the effects of climate change increase.
<b>responsible agency</b>	A state or local public agency other than the CEQA lead agency that has discretionary approval over aspects of the project.
<b>return flow</b>	Drainage water from irrigated farmlands that reenters the water system.
<b>reusable tunnel material (RTM)</b>	The soil removed by the TBM boring the tunnel, mixed with conditioners, and lifted to the ground surface.
<b>revetment</b>	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.
<b>right-of-way (ROW)</b>	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.
<b>rill</b>	Small groove, furrow, or channel in soil made by water flowing over its surface.
<b>riparian area/corridor</b>	The land adjacent to a natural watercourse such as a river or a stream.
<b>riprap</b>	Rock facing to support an embankment and prevent erosion, usually at a specific slope, such as 2:1.
<b>riverine</b>	Riparian ecosystems encompassing both instream and adjacent riparian zones, especially their biological components.
<b>rookery</b>	A colony of breeding animals, generally gregarious birds.
<b>ruderal</b>	Weedy vegetation, commonly including or dominated by introduced species, characteristic of areas where native vegetation has been disturbed or removed.
<b>runoff</b>	The portion of precipitation, snowmelt, or irrigation that flows over the soil, eventually making its way to surface water supplies.
<b>run-of-the-river powerplant</b>	A type of hydroelectric generation plant whereby little or no water storage is provided. They use a stream or river's sustained minimum flows or are regulated by a lake or upstream reservoir.
<b>Sacramento–San Joaquin Delta (Delta)</b>	The statutory 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 Delta covers approximately 738,000 acres.
<b>saline</b>	The condition of containing dissolved or soluble salts.
<b>salinity</b>	The amount of dissolved salts in a given volume of water.
<b>salmonid fishes</b>	Fish in the family Salmonidae that includes salmon and steelhead.
<b>scour</b>	Erosion in a stream bed, particularly if caused or increased by channel changes.
<b>sea level rise (SLR)</b>	An increase in the level of the ocean due to climate change effects, such as ocean thermal expansion and glacier melting.
<b>seawater/saltwater intrusion</b>	The advancement of seawater into a water supply that results in degradation of water quality in the basin and includes seawater from any source.
<b>secchi depth</b>	A measure of water clarity.

Term	Definition
<b>secondary economic effects</b>	The sum of the indirect and induced economic effects.
<b>sediment</b>	Any finely divided organic and/or mineral matter deposited by air or water in nonturbulent areas.
<b>sediment load</b>	Mass of sediment passing through a stream cross section in a specified period of time, often expressed in millions of tons (mt).
<b>sedimentation</b>	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.
<b>sedimentation basin</b>	The part of the intake structure that would contain diverted water to allow particulate matter to settle out before entering the tunnel.
<b>seepage</b>	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.
<b>seiche</b>	A wave that oscillates in an enclosed or partially enclosed body of water caused by atmospheric or seismic disturbances.
<b>seine</b>	A net that hangs vertically in the water with floats at the top and weights at the bottom edge, the ends being drawn together to encircle fish and other aquatic organisms.
<b>seismicity</b>	The frequency, intensity, and distribution of earthquake activity in a given area.
<b>seismogenic</b>	Capable of generating earthquakes.
<b>selenium toxicity</b>	Selenium is an essential trace mineral found in soil and water that can cause adverse effects (selenium toxicity) in animals at high concentrations. High concentrations of selenium can occur from pollution of the aquatic environment by subsurface agricultural drainwater and other sources.
<b>sensitive locations (receptors)</b>	Locations where human populations, especially children, seniors, and sick persons, are located and where there is reasonable expectation of continuous human exposure according to the averaging period for the air quality standards. In the context of noise and vibration, a sensitive receptor is a location where noise or vibration would potentially cause disturbance. Noise- and vibration-sensitive receptors are generally defined as residences, hospitals, convalescent homes, schools, churches, hotels, motels, and sensitive wildlife habitat.
<b>setback levee</b>	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.
<b>settlement</b>	The sinking of the land surface because of subsurface compaction, usually occurring when moisture, added deliberately or by nature, causes a reduction in void volumes.
<b>shaft pad</b>	A built-up earthen area to provide a working platform for construction of shaft diaphragm walls to minimize groundwater from entering the shaft construction site and provide refuge for workers in the event of localized flooding during construction.
<b>shared socioeconomic pathway (ssp) scenarios</b>	Modeling trajectory scenarios used for climate model simulations. GHG concentration trajectories vary depending on socioeconomic assumptions and climate mitigation levels.

Term	Definition
<b>shear</b>	A seismic body wave that shakes the ground back and forth perpendicular to the direction the wave is moving.
<b>sheet pile</b>	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.
<b>single-family residence</b>	A detached structure maintained and used as a single dwelling unit.
<b>site fidelity</b>	Animals that have high site fidelity return each year to the same breeding or nonbreeding area.
<b>slope</b>	An inclined surface usually defined by the ratio of the horizontal distance to the vertical distance (e.g., 2:1 = 2 horizontal units to 1 vertical unit).
<b>slough</b>	A muddy or marshy area; a secondary channel of a river delta, usually flushed by the tide.
<b>slurry</b>	Watery mixture of insoluble matter that is pumped beneath a dam to form an impervious barrier.
<b>slurry wall</b>	An underground wall designed to stop groundwater flow, constructed by digging a trench and backfilling it with a slurry rich in bentonite clay.
<b>smolt</b>	A juvenile salmonid migrating to the ocean and undergoing physiological changes (called smoltification) to adapt from a freshwater to a saltwater environment.
<b>soil association</b>	Groupings of individual soils that occur together in the landscape and typically named after the two or three dominant soil series.
<b>soil balance</b>	Stockpiling and reuse of soils excavated during construction to reduce the need for importing construction fill material, hauling of excavated soils to disposal areas, and extending long-term storage of RTM at tunnel launch sites following construction.
<b>soil classification</b>	Systematic arrangement of soils into classes of one or more categories or levels of classification for a specific objective.
<b>soil conservation</b>	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.
<b>soil corrosion</b>	The deterioration of metal or concrete due to interaction with materials in the soil.
<b>soil series</b>	A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.
<b>sound</b>	A vibratory disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
<b>sound exposure level (SEL)</b>	A logarithmic measure of the sound exposure of a sound relative to a reference value
<b>South Delta Conveyance Facilities</b>	All central and eastern alignment project facilities located between the southern end of the Southern Forebay and the Banks Pumping Plant (Alternatives 1, 2b, 2c, 3, 4b, and 4c), and Jones Pumping Plant (Alternatives 2a and 4a) for alternatives with project design capacity of 7500 cfs, including the Southern Forebay Outlet Structure, South Delta Outlet and Control Structure, California Aqueduct Control Structure, and dual tunnels that connect to the control structures.

Term	Definition
<b>South Delta Outlet and Control Structure</b>	The terminus of the two tunnels that would convey water from the Southern Forebay. A series of radial gates would control the rate of flow released into the existing SWP system. It would also act as an emergency outlet to convey emergency releases from the Southern Forebay Outlet Structure.
<b>South Delta Outlet and Control Structure</b>	The central and eastern alignment project facility that would regulate flows from the dual tunnels conveyance system south of the Southern Forebay into the Banks Pumping Plant approach channel.
<b>South Delta Pumping Plant</b>	The project facility that would hydraulically lift water from the downstream end of the main tunnel system for the central and eastern alignments into the Southern Forebay.
<b>Southern Complex</b>	All central and eastern alignment project facilities located on Byron Tract and west of Byron Highway, including the Southern Forebay Inlet Structure Launch Shaft, Byron Tract Working Shaft, South Delta Pumping Plant, Southern Forebay embankment and emergency spillway, Southern Forebay Outlet Structure, South Delta Outlet and Control Structure, and the California Aqueduct Control Structure.
<b>Southern Forebay</b>	The central and eastern alignment project facility located at the downstream end of the main tunnel system for the central and eastern alignments, which would regulate flows between the tunnel system and the existing Banks Pumping Plant. The facility would provide temporary equalization storage to balance flows for dual conveyance from the project and the existing SWP facilities at Clifton Court Forebay.
<b>Southern Forebay Inlet Structure Launch Shaft</b>	The central and eastern alignment project facility located adjacent to the South Delta Pumping Plant where a TBM would initiate tunneling to the Byron Tract Working Shaft.
<b>Southern Forebay Outlet Structure</b>	Structure containing two shafts to feed water from the Southern Forebay into two tunnels connecting to the South Delta Outlet and Control Structure for release to the Banks Pumping Plant approach channel (California Aqueduct).
<b>Southern Tunnel Dual Launch Shafts</b>	The central and eastern alignment project facility located at the Southern Forebay Outlet Structure where TBMs would initiate tunneling of two tunnels, extending to the Banks Pumping Plant Approach Channel Dual Reception Shaft.
<b>spawn</b>	To lay eggs; refers mostly to fish.
<b>spillway</b>	A structure that passes normal and/or flood flows in a manner that protects the structural integrity of the dam.
<b>spoil</b>	Soil, dirt, and rubble that results from excavation.
<b>stage</b>	The level of the water surface of a river or stream above an established gage datum at a given location.
<b>staging area</b>	Area where equipment and materials may be stored prior to use.
<b>standard penetration test (SPT)</b>	An <i>in situ</i> dynamic penetration test that measures the density of granular soil.
<b>standby engine generators</b>	Diesel or propane generators to be used during in the event of a power outage.
<b>State Implementation Plan (SIP)</b>	Statewide plan for complying with the federal Clean Air Act. The SIP consists of narrative, rules, and agreements that California will use to clean up polluted areas.

Term	Definition
<b>State Water Project (SWP)</b>	California's state-owned and operated water conveyance and storage system resulting from the Burns-Porter Act of 1959. The system is comprised of hundreds of miles of canals, tunnels, and pipelines, plus 8 power plants and 21 dams and reservoirs, and spans over 700 miles from north of Yreka to Lake Perris, southeast of Riverside.
<b>statutory Delta</b>	The Sacramento–San Joaquin Delta as defined in the California Water Code, Section 12220.
<b>stormwater</b>	Untreated surface runoff into a body of water during periods of precipitation.
<b>storyscape</b>	A place and its attributes that convey a narrative pertaining to culture and heritage.
<b>stratification</b>	Thermal layering of water in lakes and streams. See thermal stratification.
<b>stratified reservoir</b>	A reservoir with several thermal layers of water.
<b>stratigraphy</b>	Study of rock layers, and particularly their distribution, environment of deposition, and age.
<b>straying</b>	Of adult salmonids, returning to spawn in streams that were not the streams they were born in.
<b>stream aquifer interaction</b>	A hydraulic connection between a stream and the underlying aquifer system that results in flow between the two systems. Streams can be losing (water going out of stream into the aquifer) or gaining (groundwater coming into stream) at different locations depending on the corresponding hydraulic gradient between the stream and the surrounding groundwater level at those locations.
<b>streamflow</b>	The volume of water flowing in a river or stream.
<b>streamline</b>	A line representing the direction of movement of water in a channel.
<b>stressor</b>	Pressure or change on an ecosystem caused by environmental factors, such as contaminants, nonnative species, and management practices.
<b>subsidence</b>	A decrease in ground surface elevation caused by oxidation of organic materials and groundwater extraction.
<b>substrate</b>	A surface on which an organism grows or is attached.
<b>suitable habitat</b>	Habitat featuring ecological characteristics that may provide for the breeding, feeding, resting, or sheltering of any species. Ecological characteristics may include, but are not limited to, seasonal wetland or dry land, roost sites, nesting grounds, spawning sites, feeding sites, vegetative community size, age, structure, or diversity; waterway or pond water quality, size, or substrate; and soil types or hydrologic characteristics.
<b>sulfur dioxide (SO<sub>2</sub>)</b>	A chemical compound that is an important criteria pollutant regulated by the U.S. Environmental Protection Agency.
<b>sunny-day levee failure</b>	A levee failure that occurs during non-flooding conditions. Hazards that cause sunny-day levee failures include internal erosion, burrowing animals, encroachments, penetrations, etc.
<b>supervisory control and data acquisition (SCADA)</b>	A fiber optic communications system that enables remote monitoring and control of the performance and operation of the system, including video security cameras.
<b>supply well</b>	A well used to supply water for irrigation and domestic, industrial, or public supply purposes.
<b>surface water</b>	An open body of water, such as a river, stream, or lake.

Term	Definition
<b>surge</b>	A rapid increase in the depth of flow.
<b>surge basin</b>	A below ground-level structure adjacent to the Bethany Reservoir Pumping Plant to receive water from the tunnel system if a hydraulic transient-surge event occurred in the tunnel between the intakes and Bethany Reservoir Pumping Plant, in the unlikely event that there was a simultaneous shutdown of the main raw water pumps in the Bethany Reservoir Pumping Plant followed by the closure of sediment basin outlet gates at an intake.
<b>suspended</b>	The state of floating in water rather than being dissolved in it.
<b>Sustainable Groundwater Management Act (SGMA)</b>	On September 16, 2014, Governor Brown signed into law a three-bill legislative package, composed of Assembly Bill 1739 (Dickinson, 2014), Senate Bill 1168 (Pavley, 2014), and Senate Bill 1319 (Pavley, 2014), collectively known as SGMA. SGMA requires the “management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results.”
<b>swale</b>	A low-lying or depressed and often wet stretch of land.
<b>sweeping velocity</b>	The component of the water velocity vector parallel to and immediately upstream of the screen surface.
<b>take</b>	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.”
<b>taphonomic</b>	The study of the death, decay, burial, and fossilization of an organism.
<b>taxonomy</b>	Classification of plants and animals based on shared physical characteristics. A <i>taxon</i> is a named group of organisms linked by shared physical or genetic characteristics.
<b>tectonic</b>	Pertaining to the plates that make up the Earth’s crust.
<b>terrestrial species</b>	Animals and plants that live on or grow from the land.
<b>thalweg</b>	The deepest part of a river channel in a cross section of a river profile. The path of deepest flow.
<b>thermal stratification</b>	The formation of layers of different temperatures in bodies of water.
<b>thermocline</b>	The middle layer of a lake, separating the upper, warmer portion (epilimnion) from the lower, colder portion (hypolimnion).
<b>threatened species</b>	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.
<b>tillage</b>	Plowing, seedbed preparation, and cultivation practices.
<b>toe drain</b>	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. A toe drain can also be a channel at the base of a levee for capturing water seeping through the levee.
<b>topographic map</b>	A map indicating surface elevation and slope.
<b>topsoil</b>	The upper 12 inches of the soil profile that typically has the highest concentration of organic matter, microorganisms, and biological soil activity and has more favorable conditions of plant growth compared to lower part of the soil profile.

Term	Definition
<b>total dissolved solids (TDS)</b>	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.
<b>total maximum daily load (TMDL)</b>	Estimates of the amount of specific pollutants that a body of water can safely take without threatening beneficial uses.
<b>toxic</b>	Containing or being poisonous material, especially when capable of causing death or serious debilitation.
<b>toxic air contaminant</b>	Pollutant with the potential of increasing the risk of cancer or an acute or chronic health issue.
<b>toxin</b>	Poisonous substance, generally from a plant or animal.
<b>trace fossils</b>	Fossilized tracks, trails, burrows, and other traces of an animal.
<b>traffic volume</b>	Traffic volume is a measure of the amount of traffic or number of vehicles moving on the roads at a particular section during a particular time period.
<b>transmission</b>	The act or process of transporting electric energy.
<b>transmission corridor</b>	Land adjacent to or in the right-of-way of transmission lines.
<b>transpiration</b>	The process by which water in plants is transferred into water vapor in the atmosphere. Evaporation of water through the leaves of plants.
<b>transportation demand management (TDM)</b>	The application of strategies and policies to reduce travel demand, or to redistribute this demand in space or in time.
<b>travel demand</b>	Travel demand refers to the amount and type of travel people would choose under specific conditions, taking into account factors such as the quality of transport options available and their prices.
<b>travel demand model</b>	Travel demand models use current travel behavior to predict future travel patterns from a sample of travel behavior data.
<b>travel modes</b>	A travel mode represents a means of transportation, such as transit, driving, walking, or bicycling.
<b>Tribal cultural landscape</b>	A cultural landscape with historical significance attributed by Native American Tribes.
<b>Tribal cultural resource (TCR)</b>	Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are either of the following: a) Included or determined to be eligible for inclusion in the CRHR; or b) Included in a local register of historical resources as defined in Public Resources Code (PRC) § 5020.1(k). <i>OR</i> A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC § 5024.1(c). In applying the criteria set forth in PRC § 5024.1(c), the lead agency shall consider the significance of the resource to a California Native American Tribe.
<b>Tribal knowledge</b>	Native American Tribes' historical and modern practices and information related to the environment, including Tribal ecological knowledge and land management techniques.
<b>tributary</b>	River or stream flowing into a larger river or stream.
<b>trihalomethane (THM)</b>	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.
<b>trophic level</b>	Place of an animal in the food chain.

Term	Definition
<b>trustee agencies</b>	State agencies that have jurisdiction by law over natural resources affected by a project that are held in trust for the people of California (CEQA Guidelines § 15386). Trustee Agencies must be consulted when the lead agency is preparing an EIR with potential project effects on those resources.
<b>tsunami</b>	Waves that travel in the open ocean and other large water bodies caused by an undersea earthquake, landslide, or volcanic activity.
<b>tunnel boring machine (TBM)</b>	A machine that uses large rotating cutter heads to drill through underground material.
<b>tunnel launch shaft</b>	A concrete-lined vertical shaft used to lower the tunnel boring machine (TBM), to transport the concrete tunnel liners into the tunnel, and to remove the excavated material (reusable tunnel material, RTM).
<b>tunnel maintenance shaft</b>	A concrete-lined vertical shaft to provide access for TBM maintenance, repair, access or evacuation, and logistic support in a free-air (not pressurized) environment.
<b>tunnel reception shaft</b>	A concrete-lined vertical shaft at the terminus of each tunnel drive, where the TBM is disassembled and lifted out of the tunnel.
<b>turbidity</b>	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.
<b>Twin Cities Complex</b>	The project site located on Glanville Tract, which would include two tunnel launch shafts, RTM storage and processing areas, new rail spur, roadway improvements, and ancillary facilities, with a temporary ring levee surrounding the entire site. One tunnel launch shaft would be used to construct the tunnel to the intakes and one tunnel launch shaft would be used to construct the tunnel to Bouldin Island reception/launch shaft (central alignment) or Terminus Tract reception shaft site (eastern alignment).
<b>unconsolidated</b>	Sediment that is loosely arranged or whose particles are not cemented together.
<b>understory</b>	Vegetation growing underneath the main canopy of trees.
<b>unimpaired runoff</b>	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.
<b>unique archeological resource</b>	An archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it 1) contains information needed to answer important scientific research questions, and there is a demonstrable public interest in that information; 2) has a special and particular quality, such as being the oldest of its type or the best available example of its type; or 3) is directly associated with a scientifically recognized important prehistoric or historic event or person.
<b>upstream storage</b>	Any water storage upstream of the Delta supplied by the Sacramento or San Joaquin Rivers or their tributaries.
<b>urban levee</b>	A levee that protects an urban area, which is defined as a developed area in which there are 10,000 residents or more.
<b>vacancy rate</b>	Calculated as the difference between total and occupied housing units, divided by total housing units.
<b>valley fever</b>	A disease caused by inhaling <i>Coccidioides immitis</i> ( <i>C. immitis</i> ) fungus spores.

Term	Definition
<b>vegetation alliance</b>	A category of vegetation classification that describes repeating patterns of plants across a landscape. Each alliance is defined by plant species composition and reflects the effects of local climate, soil, water, disturbance, and other environmental factors.
<b>vehicle miles traveled (VMT)</b>	A measure used extensively in transportation planning for a variety of purposes. It measures the amount of travel for all vehicles in a geographic region over a given period of time, typically a one-year period. It is calculated as the sum of the number of miles traveled by each vehicle.
<b>vehicle queuing</b>	A vehicle is considered as queued when it approaches within one car length of a stopped vehicle and is itself about to stop. All vehicles that join a queue are then included in the vehicle-in-queue counts until the rear axle of the vehicle crosses the stop line.
<b>vernal pool</b>	Seasonally ponded landscape depressions in which water accumulates because of limitations to subsurface drainage and that support a distinct association of plants and animals.
<b>vertebrate</b>	Animal with a vertebral column, such as fish, reptiles, birds, and mammals.
<b>vibratory pile driving</b>	Pile driving using vibratory hammers that cut soil rather than drive piles using a spinning technique and counter-weight system. They are powered by hydraulic motors. A crane or excavator lifts the hammer. Hydraulic clamps attach it to the pile. They drive piles faster and their operation is comparatively quieter.
<b>viewer exposure</b>	A measure of a viewer's ability to see a particular object. Viewer exposure has three attributes: <i>location</i> , <i>quantity</i> , and <i>duration</i> . Location relates to the position of the viewer in relationship to the object being viewed. Quantity refers to how many people see the object. Duration refers to how long a viewer is able to keep an object in view.
<b>viewer response</b>	A measure or prediction of a viewer's reaction to the visual environment, which has two dimensions, <i>viewer exposure</i> and <i>viewer sensitivity</i> .
<b>viewer sensitivity</b>	A measure of a viewer's recognition of a particular object having three attributes: <i>activity</i> , <i>awareness</i> , and <i>local values</i> . Activity relates to the preoccupation of viewers (i.e., whether the viewer preoccupied, thinking of something else, or whether they truly engaged in observing their surroundings). Awareness relates to the focus of view (i.e., whether the focus is wide and the view general, or whether the focus is narrow and the view specific). Local values and attitudes are dependent on whether the viewer values aesthetics in general or whether a specific visual resource has been protected by designation.
<b>viewshed</b>	The viewing area determined by what viewers can see in the landscape (e.g., an area of land, water, or other urban or environmental element) from a fixed vantage point. These are confined by the physical constraints of the environment and the physiological limits of human sight.
<b>viscosity</b>	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.
<b>visitor-day</b>	A recreation visitor day is a count or estimation of each visit by a person to a development for recreational purposes during any portion of a 12-hour period.
<b>visual character</b>	Describes the visual environment using attributes, such as form, line, color, and texture.

Term	Definition
<b>visual dominance</b>	Visual dominance is determined by the distance between the position of the viewer and a feature in the landscape (i.e., based on viewer proximity in a viewshed and the feature's location in the viewshed).
<b>visual environment</b>	The physical appearance of a view from a given vantage point.
<b>visual quality</b>	Describes what viewers like and dislike about the visual resources that compose a particular scene and is expressed in terms of <i>natural harmony</i> , <i>cultural order</i> , and <i>project site coherence</i> .
<b>visual resources</b>	Objects (natural and built, moving and stationary) and features (e.g., landforms and waterbodies) visible on a landscape that contribute to the public's experience and appreciation of the environment.
<b>volcaniclastic</b>	Composed of volcanic materials that have been transported and reworked through mechanical action, such as wind or water.
<b>voltage</b>	Electrical pressure. The force that causes current to flow through an electrical conductor.
<b>water balance</b>	The comparison of total inflows to total outflows in a waterbody.
<b>water balancing facility</b>	The Southern Forebay, which would temporarily store water used to equalize the difference between Delta Conveyance Project supply, existing Clifton Court Forebay south Delta supply, and SWP Banks Pumping Plant demand capacity.
<b>water column</b>	A section of water extending from the surface of a body of water to its bottom.
<b>water contractor</b>	See Public Water Agency (PWA).
<b>water conveyance structure</b>	Any structure that conveys water from one location to another.
<b>water delivery system</b>	Reservoirs, canals, ditches, pumps, and other facilities to move water.
<b>water purveyor</b>	Anyone who sells drinking water to the public, usually the owner of a public water supply system.
<b>water quality criteria</b>	The U.S. Environmental Protection Agency's compilation of threshold concentrations for over 150 pollutants for the protection of aquatic life and human health in surface water. These values provide guidance for states and Tribes to establish water quality standards and ultimately provide a basis for controlling discharges or releases of pollutants.
<b>water quality objective</b>	State of California's limits or levels of water quality constituents or characteristics, which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.
<b>water right</b>	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, non-wasteful use.
<b>water supplier</b>	A person who owns or operates a public water system.
<b>water supply reliability</b>	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.
<b>water surface elevation (WSE)</b>	The height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929 (or other datum, where specified), of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.
<b>water table</b>	The surface of underground, gravity-controlled water.

Term	Definition
<b>water transfers</b>	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.
<b>water year</b>	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.
<b>Waters of the United States</b>	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 that are subject to the ebb and flow of the tide.
<b>Waters of the State</b>	As defined by the Porter-Cologne Water Quality Control Act, "Waters of the State" are "any surface water or ground water, including saline waters, within the boundaries of the state."
<b>watershed</b>	A region or area that ultimately drains to a particular watercourse or body of water.
<b>wave run-up</b>	Wave-induced flood hazard that occurs when waves encounter the shoreline and break, resulting in an uprush of water.
<b>weir</b>	A barrier, such as a small dam, which restricts flow in a stream in order to raise water level, or that diverts flow into a desired course.
<b>wet excavated RTM</b>	The bulk material, including conditioners, excavated from the tunnel and placed or piled after excavation.
<b>wetland</b>	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.
<b>wildlife corridor</b>	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.
<b>withdrawal</b>	Water removed from the ground or diverted from a surface-water source for use.
<b>working shaft</b>	A second shaft site located on Byron Tract near the South Delta Pumping Plant and Southern Forebay Inlet Structure launch shaft to allow tunneling to proceed concurrent with construction of the South Delta Pumping Plant.
<b>X2</b>	The location (kilometers upstream from the Golden Gate Bridge) with near-bottom salinity of two parts per thousand that must be maintained at certain values during months specified under various regulatory authorities in the San Francisco Estuary.
<b>zooplankton</b>	The animal component of plankton; free-floating organisms in the water column including larvae of many fish and benthic invertebrates.