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| <b>TERM</b>                            | <b>DEFINITION</b>  |
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| <b>100-year flood</b>                  | A flood having a 1% chance of being equaled or exceeded in magnitude in any given year.  |
| <b>abiotic</b>                         | Characteristics of an organism's physical environment. For example, rainfall, soils, sunlight are abiotic factors.   |
| <b>absorption</b>                      | Taking in of fluids or other substances through, or as if through, cells or tissues.   |
| <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>action area</b>                     | All areas that will be affected directly or indirectly by the federal action.  |
| <b>adaptive management</b>             | A method for examining alternative strategies for meeting measurable biological goals and objectives, and adjusting future conservation management actions accordingly (65 <i>Federal Register</i> 106 35242-35257, June 1, 2000). |
| <b>adsorption</b>                      | The process by which chemicals are held on the surface of a mineral or soil particle.  |
| <b>advection</b>                       | Transport of a substance by fluid as a result of the fluid's bulk motion.  |
| <b>aeration</b>                        | The process by which air is circulated through, mixed with, or dissolved in a liquid or substance.   |
| <b>aggradation</b>                     | Geologic process in which streambeds, floodplains, sandbars, and the bottom of water bodies are raised in elevation by the deposition of sediment; the opposite of degradation.  |
| <b>algae</b>                           | Simple, often single-celled or filamentous, usually aquatic plants.  |
| <b>alkali</b>                          | Soluble salts, principally of sodium, potassium, magnesium, and calcium, which have the property of combining with acids to form neutral salts and that may be used in chemical water treatment processes.                         |
| <b>alkali seasonal wetland complex</b> | A natural community in the Plan Area. Occurs on fine soils with a high concentration of dissolved salts; includes saturated wetlands and the surrounding vegetation.   |

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| <b>allochthonous</b>                      | Materials (such as wood or nutrients) that are transported into an ecosystem.  |
| <b>alluvium</b>                           | Sediment deposited by running water.   |
| <b>ammocoete</b>                          | The larva of a lamprey.  |
| <b>amphipod</b>                           | A small crustacean in the order Amphipoda. They are an important food source for small fishes.   |
| <b>anadromous</b>                         | Fish that are born in fresh water, migrate to the ocean to grow into adults, and then return to fresh water to spawn.  |
| <b>anoxic</b>                             | Lacking in oxygen.   |
| <b>anthropogenic</b>                      | Of, relating to, or resulting from the influence of human beings on nature.  |
| <b>approach velocity</b>                  | The component of the local water velocity vector perpendicular to the face of a fish screen. Excessive approach velocity results in impingement of aquatic life on the screen surface or entrainment past the screen.  |
| <b>appropriative water rights</b>         | Right to use a given quantity of water for reasonable and beneficial use in a prescribed place in order of priority based on the time water is first put to use. Established through the permit system administered by the State Water Resources Control Board.  |
| <b>aquifer</b>                            | A water-bearing stratum of rock, sand, or gravel capable of yielding considerable quantities of water.   |
| <b>associated federal actions</b>         | Otherwise lawful activities and projects that may be implemented in the Plan Area by the Bureau of Reclamation for which incidental take is authorized by the U.S. Fish and Wildlife Service and National Marine Fisheries Service pursuant to the incidental take statement in the integrated biological opinion. |
| <b>Authorized Entities</b>                | California Department of Water Resources, Reclamation, and those SWP/CVP contractors that receive take authorizations pursuant to the BDCP.  |
| <b>avoidance and minimization measure</b> | A measure to avoid or reduce potential adverse impacts of a covered activity on a covered species or community.  |
| <b>backfill</b>                           | Material used in refilling excavation, or the process of such refilling.   |
| <b>backwater</b>                          | A small, generally shallow body of water with little or no current.  |
| <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>baseline conditions</b>                | The existing environmental state, which includes past and present impacts as well as the anticipated impacts of all projects in the plan area with permits issued.   |

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| <b>bathymetry</b>                                     | The underwater topography of oceans, seas, and lakes.  |
| <b>Bay Delta Conservation Plan (BDCP or the Plan)</b> | The joint habitat conservation plan and natural community conservation plan prepared in accordance with the Planning Agreement and approved by the fish and wildlife agencies under Section 10 of the ESA and Section 2835 of the Fish & Game Code. The BDCP supports the Section 7 consultation and the integrated biological opinion and related incidental take statements issued concurrently. |
| <b>bed material</b>                                   | Unconsolidated material, or sediment mixture, of which a streambed is composed.  |
| <b>benthic; benthos</b>                               | Pertaining to the bottom of rivers, lakes, or oceans; organisms that live on the bottom of water bodies.   |
| <b> bentonite</b>                                     | A very fine clay, expansible when moist, commonly used to provide a tight seal around a monitoring well. Also used in slurry walls.  |
| <b>berm</b>   | A horizontal step in the sloping profile of an embankment dam. A shelf or artificial ridge that breaks the continuity of a slope.  |
| <b>biennial</b>                                       | A plant that produces seeds during its second year and then dies.  |
| <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>bioassimilation</b>                                | The intake and retention of nonfood substances by a living organism from its environment.  |
| <b>biodiversity</b>                                   | The variety and variability of all organisms, from genes to species to ecosystems, together with the ecological and evolutionary processes that sustain them.  |
| <b>bioenergetic</b>                                   | How an organism derives, uses, and preserves sources of metabolic energy.  |
| <b>biofouling</b>                                     | The attachment of an organism or organisms to a surface in contact with water.   |
| <b>biological assessment</b>                          | A document prepared for the federal Endangered Species Act Section 7 process to determine whether a proposed activity under the authority of a Federal action agency is likely to adversely affect a federally listed species, proposed species, or designated critical habitat.   |
| <b>biological goal</b>                                | A guiding principle for conservation in the Plan Area, based on the conservation needs of the covered species and natural communities.   |
| <b>biological objective</b>                           | Measurable target that, if met, will achieve or support a biological goal.   |

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| <b>biological opinion (BiOp)</b>                | A document issued under the authority of the federal Endangered Species Act stating the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service 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>                         | The increase in tissue concentration of a pollutant as it passes through the food chain from prey through successive predators.  |
| <b>biomass</b>                                  | The mass (weight) of living organisms in a particular area or environment.   |
| <b>bioturbation</b>                             | The displacement and mixing of sediment particles by benthic fauna (animals) or flora (plants).  |
| <b>biovolume</b>                                | The volume of plants in a particular area at a particular time.  |
| <b>bloom</b>                                    | A rapid increase in the population of algae in an aquatic system.  |
| <b>borrow area</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>brackish</b>                                 | Mixed fresh and salt water.  |
| <b>breeding density</b>                         | Density of sexually mature organisms in a given area during the breeding period.   |
| <b>breeding potential</b>                       | Maximum rate of increase in numbers of individuals of a species or population under optimum conditions.  |
| <b>breeding rate</b>                            | Actual rate of increase of new individuals in a given population; the breeding potential minus limiting factors.   |
| <b>buffer</b>                                   | A border area that has use restrictions use in order to prevent or reduce the undesired intrusion of biota, harmful materials, or disturbances into a sensitive area such as a water body or natural community.  |
| <b>bypass</b>                                   | A region of land or a large human-made structure designed to convey excess floodwaters from a river or stream to reduce the risk of flooding on the natural river or stream near a key point of interest, such as a city.  |
| <b>CALFED Bay-Delta Program (CALFED)</b>        | A consortium of state and federal agencies with management or regulatory responsibilities in the Bay-Delta. CALFED was superseded by the California Bay Delta Authority, the functions of which are now integrated into the Delta Stewardship Council.   |
| <b>California Endangered Species Act (CESA)</b> | California legislation which “declares that it is the policy of the state to conserve, protect, restore, and enhance any endangered species or any threatened species and its habitat and that it is the intent of the Legislature, consistent with conserving the species, to acquire lands for habitat for these species” (Fish and Game Code Section 2052).         |

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| <b>California Environmental Quality Act (CEQA)</b> | California legislation stating “that all agencies of the state government which regulate activities of private individuals, corporations, and public agencies which are found to affect the quality of the environment, shall regulate such activities so that major consideration is given to preventing environmental damage, while providing a decent home and satisfying living environment for every Californian” (Public Resources Code Section 21000). |
| <b>CALSIM</b>                                      | A hydrologic model that simulates the operations of the Central Valley Project and State Water Project reservoir and water delivery system. 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 for listing under the federal Endangered Species Act as an endangered or threatened species, but not yet the subject of a proposed rule. Also, any species accepted by the California Department of Fish and Wildlife for potential listing under the California Endangered Species Act.   |
| <b>capital cost, capital outlays</b>               | Costs incurred on the purchase of fixed assets, construction, and equipment to be used in the production of goods or the rendering of services.   |
| <b>carry-over storage</b>                          | The amount of water stored in reservoirs carried over from one year to another.   |
| <b>Central Valley Project (CVP)</b>                | The federally authorized water management and conveyance system, operated by the Bureau of Reclamation, provides water to agriculture, urban, and industrial users in California.   |
| <b>centrarchids</b>                                | Small, carnivorous freshwater fishes that are members of the family Centrarchidae. Examples include bluegill and largemouth bass.   |
| <b>channelization</b>                              | The straightening and/or deepening of a natural watercourse.  |
| <b>circumstances, changed</b>                      | Changes in circumstance affecting a covered species or geographic area covered by the BDCP that have been reasonably anticipated by Permittees and the U.S. Fish and Wildlife Service and National Marine Fisheries Service, and that have been planned for in the BDCP.  |

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| <b>circumstances, unforeseen</b> | In the context of the federal Endangered Species Act, changes in circumstances affecting a covered species or geographic area covered by the BDCP that could not reasonably have been anticipated by the Permittees, the U.S. Fish and Wildlife Service, or the National Marine Fisheries Service at the time of the BDCP's negotiation and development, and that result in a substantial and adverse change in the status of a covered species. In the context of the Natural Community Conservation and Planning Act, means changes affecting one or more species, habitat, natural community, or the geographic area covered by a conservation plan that could not reasonably have been anticipated at the time of Plan development, and that result in a substantial adverse change in the status of one or more covered species. |
| <b>cladoceran</b>                | A small crustacean in the order Cladocera. They are an important food source for small fishes.  |
| <b>climate change</b>            | Any change in climate (e.g., precipitation patterns, range of high and low temperatures) over time.   |
| <b>cofferdam</b>                 | A temporary structure that, when placed in a water body, enclosing all or part of a construction area, allows construction to 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>cold-water fishery</b>        | Water body or ecosystem that has an environment suitable for salmonid fishes.   |
| <b>compaction</b>                | Mechanical action that increases soil density by reducing the voids.  |
| <b>compliance monitoring</b>     | Monitoring conducted to demonstrate adherence to terms and conditions of a permit.  |
| <b>conceptual model</b>          | An explicit description of the critical cause-and-effect pathways in ecosystem function, usually with reference to a particular species or natural community. Includes a summary of current knowledge and hypotheses about ecosystem structure and function.  |
| <b>conjunctive use</b>           | Coordinated and planned management of both surface water and groundwater resources to maximize the efficient use of the resource.   |
| <b>connectivity</b>              | A measure of how easy it is for energy, materials, or living things to move between different areas on a landscape.   |
| <b>conservation lands</b>        | Undeveloped lands subject to irrevocable protection against a change in primary land use through local, state, or federal authority. Include <i>existing conservation lands</i> , lands in the <i>reserve system</i> , and lands that will be protected in the future through other programs.   |
| <b>conservation easement</b>     | A legally binding agreement that limits certain types of uses or prevents development while protecting the ecological values of the site.   |

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| <b>conservation measure</b>               | Each action detailed in the conservation strategy to minimize and mitigate impacts, to the maximum extent practicable, and to provide for the conservation and management of covered species.   |
| <b>conservation standard</b>              | As defined for the Natural Community Conservation and Preservation Act, the habitat conservation plan must provide for the conservation and management of the covered species.  |
| <b>conservation strategy</b>              | The program that consists of four components: 1) biological goals and objectives; 2) conservation measures to minimize and mitigate impacts, and to provide for the conservation of covered species; 3) adaptive management; and 4) monitoring.           |
| <b>conservation zones</b>                 | Eleven portions of the Plan Area among which habitat protection and restoration targets are distributed.  |
| <b>conserve, conserving, conservation</b> | To use, and the use of, all methods and procedures necessary to bring any covered species to a state of recovery at which the legal protections of the California Endangered Species Act are no longer required.  |
| <b>construction monitoring</b>            | Monitoring of construction activities to ensure that prescribed avoidance and minimization measures are implemented.  |
| <b>consumptive use</b>                    | Water uses normally associated with human activities, primarily municipal, industrial, and irrigation uses that deplete water supplies.   |
| <b>contaminant</b>                        | Any substance or property that prevents the use or reduces the usability of water or soil as habitat.   |
| <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 canal, aqueduct, or ditch.  |
| <b>conveyance losses</b>                  | Evaporation, evapotranspiration, and seepage losses during conveyance operations.   |
| <b>copepod</b>                            | Minute marine or freshwater crustaceans in the subclass Copepoda. They are an important food source for small fishes.   |
| <b>corridors, wildlife or habitat</b>     | Areas that provide connectivity over different time scales (including seasonal or longer), between areas used by animal and plant species. Wildlife corridors can exist in unfragmented landscapes or join naturally or artificially fragmented habitats. |
| <b>cost contingency</b>                   | A provision that acknowledges the uncertainty of all items in the estimate, how work will be performed, and the nature of work conditions.  |
| <b>covered activities</b>                 | The otherwise lawful activities and projects described in Chapter 4 that may be implemented in the Plan Area by nonfederal parties for which take is authorized by the fish and wildlife agencies pursuant to permits.                                    |

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| <b>covered species</b>   | Species, listed and nonlisted, for which the BDCP minimizes and mitigates impacts to the maximum extent practicable and provides for conservation and management.  |
| <b>critical habitat</b>  | Specific geographic areas designated by the U.S. Fish and Wildlife Service and National Marine Fisheries Service for listed species, whether occupied by the species or not, that are essential for the conservation and management of the species.  |
| <b>critical uncertainties</b>                                    | Uncertainties that entail substantial uncertainty about the conceptual ecological model describing the habitat needs of a species, the functional attributes of a natural community, the rationale for a biological objective, or the essential attributes of a conservation measure. The uncertainty is substantial if its resolution is likely to require an adaptive management response, modification of a conceptual ecological model, a biological objective, or a conservation measure. |
| <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>cultivated lands</b>  | Lands in the Plan Area that are currently in agricultural production but also support covered species and native biodiversity.   |
| <b>culvert</b>   | A conduit for the free passage of surface drainage water under a highway, railroad, canal, or other embankment.  |
| <b>cumulative impact</b>   | Impacts that result from the current action added to other past, present, and reasonably foreseeable future nonfederal actions, regardless of the source of those actions.   |
| <b>cyanobacteria</b>   | Also called blue-green algae, a group of algae commonly associated with various types of water quality problems.   |
| <b>cyprinids</b>   | Members of the fish family Cyprinidae, includes carps and true minnows.  |
| <b>deciduous</b>   | Plants that shed all their leaves seasonally (usually in the autumn), as opposed to evergreens that do not.  |
| <b>degradation</b>   | Process wherein the elevation of streambeds, sandbars, and flood plains is lowered by erosion. The opposite of aggradation.  |
| <b>delist</b>  | To remove from state or federal lists of endangered and threatened species because the species no longer meets the listing requirements.   |
| <b>Delta Habitat Conservation and Conveyance Program (DHCCP)</b> | California Department of Water Resources program tasked with conducting an environmental review of the BDCP through a formal EIR/EIS process, and for developing engineering options for habitat restoration, other stressors, and water conveyance.   |
| <b>Delta Plan</b>  | A plan prepared by the Delta Stewardship Council to address the coequal goals of providing a reliable water supply and enhancing the Delta ecosystem. See <i>Delta Stewardship Council</i> .   |

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| <b>Delta Regional Ecosystem Restoration Implementation Plan (DRERIP)</b> | A scientific evaluation process and conceptual models developed by the CALFED Bay-Delta Ecosystem Restoration Program.  |
| <b>Delta Science Program</b>   | Formerly the CALFED Science Program, reporting to the Delta Stewardship Council. See <i>Delta Stewardship Council</i> .   |
| <b>Delta Simulation Model (DSM2)</b>                                     | The Delta hydrodynamic and salinity model that simulates hydrodynamic and mixing processes in the Delta.  |
| <b>Delta Stewardship Council</b>   | An independent state agency tasked with developing a plan for achieving the coequal goals of providing a more reliable water supply and protecting, restoring, and enhancing the Delta ecosystem. See <i>Delta Plan</i> . |
| <b>demersal</b>  | Organisms or fish eggs that are found on the bottom of a lake or stream.  |
| <b>dendritic</b>   | Pattern of streams with tributaries that branch to form a tree-like pattern.  |
| <b>deposition</b>  | The process of material settling out of the air or water onto a substrate.  |
| <b>desalinization</b>  | The removal of dissolved salts from seawater or brackish water by natural means (leaching) or by technology, through a water treatment process.   |
| <b>desiccate</b>   | To dry up; remove moisture from a substance.  |
| <b>destratification</b>  | Mechanical or natural vertical mixing within a lake or reservoir to eliminate (either totally or partially) separate layers of temperature, plant, or animal life.  |
| <b>deterministic</b>   | Not random; in ecological modeling it refers to models without random variables, which produce the same output every time they are run.   |
| <b>dewatering</b>  | Removal of water that has seeped into an excavation, or pumping of groundwater to prevent it from seeping into an excavation.   |
| <b>diatom</b>  | A type of phytoplankton that has cell walls made of silica. Diatoms account for a large part of Delta aquatic productivity.   |
| <b>differential head (unbalanced head)</b>                               | The condition in which the water pressure on the upstream and downstream sides of an object differ.   |
| <b>dike</b>  | A low embankment that restrains a river or a stream, usually to protect from flooding.  |
| <b>discing</b>   | Towing a discer to break up the soil or turf. Commonly used as a farming technique, it is also sometimes used as an invasive plant control technique.   |
| <b>discharge</b>   | Volume of water that passes a given point within a given period.  |
| <b>discharge capacity</b>  | The maximum amount of water that can safely be released from a given waterway.  |

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| <b>dissolved organic carbon (DOC)</b> | The thousands of dissolved compounds found in water that derive from organic materials (such as decomposed plant matter).  |
| <b>dissolved oxygen</b>               | The amount of free (not chemically combined) oxygen dissolved in water.  |
| <b>disturbance</b>                    | In ecology, refers to an event that disturbs an ecosystem, typically causing a change in structure and biological diversity. Floods, fires, insect attacks, herbicide application, and oil spills are all examples of disturbance. |
| <b>disturbance regimes</b>            | The characteristic types of disturbance on a given ecosystem or habitat.   |
| <b>diurnal</b>                        | Occurs during the day. See <i>nocturnal</i> .  |
| <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, or the structure that performs this function.  |
| <b>drainage basin</b>                 | All of the area drained by a river system.   |
| <b>drainage system</b>                | The surface and/or subsurface drains, together with structures and pumps, used to remove surface or groundwater.   |
| <b>drawdown</b>                       | The process of lowering the level of a reservoir or groundwater storage.   |
| <b>dual conveyance</b>                | A system of moving water through the Delta via two intake locations.   |
| <b>early long-term (ELT)</b>          | The BDCP implementation period that extends 11 to 15 years after the BDCP permit term is initiated.  |
| <b>easement</b>                       | An interest in land owned by another individual or organization that entitles its holder to a specific limited use.  |
| <b>ecological processes</b>           | The physical, chemical, and biological changes that determine the capability of an ecosystem, natural community, or habitat to sustain the abundance and diversity of organisms.   |
| <b>ecological productivity</b>        | The rate of generation of biomass (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>edaphic</b>                        | Related to properties of soil.   |
| <b>edge effects</b>                   | A change in species composition, physical conditions, or other ecological factors at the boundary between two natural communities or at the boundary between a natural community and a developed area.                             |
| <b>effectiveness monitoring</b>       | Monitoring to evaluate the effects of a conservation action on covered species, natural communities, and ecosystems, and to determine whether the conservation strategy is achieving the biological goals and objectives.          |
| <b>effects, direct</b>                | Immediate effects of a covered activity on a species or its habitat that occur at the same time and place as the covered activity.   |

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| <b>effects, direct, permanent</b>   | Effects that result from one-time events associated with a covered activity.  |
| <b>effects, direct, temporary</b>   | Effects that result from events associated with a covered activity that are temporary in nature.  |
| <b>effects, indirect</b>            | Reasonably foreseeable effects that are caused by a BDCP action but occur at a different time or place.                                 |
| <b>effects, indirect, permanent</b> | Indirect effects that permanently continue beyond the directly affected area or completion of a project activity.                       |
| <b>effects, indirect, temporary</b> | Indirect effects that temporarily extend beyond the directly affected area or completion of a project activity.                         |
| <b>effluent</b>                     | Partially or completely treated wastewater flowing out of a treatment facility, reservoir, or basin.                                    |
| <b>electrical conductivity</b>      | A measure of the salt content of water.   |
| <b>embankment</b>                   | An earth structure, the top of which is higher than the adjoining surface.  |
| <b>emergent</b>                     | A plant rooted in shallow water and having most of its vegetative growth above water.   |
| <b>endangered species</b>           | Any species in danger of extinction throughout all or a significant portion of its range.   |
| <b>endemic</b>                      | Species that are native to and confined to a certain region.  |
| <b>enhancement flow</b>             | Improved flows that result in better stream conditions for aquatic, terrestrial, and other resources.                                   |
| <b>entrainment</b>                  | The incidental diversion of fish and other aquatic organisms that can occur when water is diverted from streams, rivers, or reservoirs. |
| <b>environmental gradient</b>       | A change in environmental conditions between two points.  |
| <b>ephemeral stream</b>             | A stream that flows briefly only in direct response to precipitation.   |
| <b>epifauna</b>                     | Benthic animals that live on the surface of a substrate, such as rocks, pilings, marine vegetation, or the sea or lake floor itself.    |
| <b>erosion</b>                      | The gradual wearing-away of land by water, wind, and weather conditions.  |
| <b>essential fish habitat (EFH)</b> | Waters and substrates necessary to fish for spawning, breeding, feeding or growth to maturity.  |
| <b>estuarine fish</b>               | Fish that spend a part of their life cycle in an estuary.   |
| <b>estuary</b>                      | A water passage where the ocean tide meets a river current.   |
| <b>eutrophic</b>                    | Nutrient enrichment of a body of water that contains more organic matter than existing biological oxidization processes can consume.    |

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| <b>evaluated starting operations (ESO)</b> | Initial water operations that are presented in the effects analysis quantitatively and compared qualitatively to other potential outcomes of the water operations decision tree.   |
| <b>evapotranspiration</b>                  | Water evaporated from plant and soil surfaces or transpired by plant tissues.  |
| <b>existing conditions</b>                 | Environmental conditions present in the BDCP Plan Area at the time of BDCP development.  |
| <b>existing conservation lands</b>         | Undeveloped lands subject to irrevocable protection against a change in primary land use through local, state, or federal authority. Existing conservation lands are defined by one of the following three categories.<br><br>Category 1: Primary land management goal related to protection of ecological value.<br><br>Category 2: Primary land management goal assessed to be that of open space for mixed use in a manner that maintains ecological value.<br><br>Category 3: Primary land management goal is not ecological protection, nor is it managed as open space for mixed use in a way that maintains ecological value. |
| <b>exports</b>                             | Water exported from the Bay-Delta through the North Bay Aqueduct, Contra Costa Canal, Jones pumping plant, Banks pumping plant, and future diversion points that will be constructed under the BDCP.   |
| <b>export pumps</b>                        | Pumping plants in the south Delta that export water to urban and agricultural water users.   |
| <b>export service areas</b>                | Lands that receive, store, and use water pumped from the Delta.  |
| <b>export, water</b>                       | Water diverted from the Delta and conveyed to users outside the Delta.   |
| <b><i>ex-situ</i></b>                      | Outside of a native, natural location.   |
| <b>extinct species</b>                     | A species no longer in existence.  |
| <b>extirpated species</b>                  | A species that has been eliminated from a particular area but still exists elsewhere.  |
| <b>fee title</b>                           | The typical purchase of real estate in common law countries; the most complete ownership interest that can be had in real property.  |
| <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 materials that may be sourced from the construction site or imported.  |
| <b>filter-feeder</b>                       | An aquatic animal that feeds by filtering particulate organic material from water.   |
| <b>fish and wildlife agencies</b>          | U.S. Fish and Wildlife Service, National Marine Fisheries Service, and California Department of Fish and Wildlife.   |

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| <b>fish ladder</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 to release in other parts of the Delta, or the recovery and rerelease of fish trapped in a closed in-water site such as a cofferdam. |
| <b>fish screen</b>                         | Barrier on the face of a diversion intake to prevent entrainment of fish.   |
| <b>fish weir</b>                           | A type of fish ladder.  |
| <b>floating aquatic vegetation (FAV)</b>   | Aquatic vegetation that floats at the water surface.  |
| <b>floc</b>                                | Loose, open-structured mass formed in a suspension by the aggregation of minute particles.  |
| <b>flocculation</b>                        | The process of forming flocs. A step in water filtration in which alum is added to cause particles to clump together.   |
| <b>flood</b>                               | A temporary rise in water levels resulting in inundation of areas not normally covered by water.  |
| <b>flood control capacity</b>              | Reservoir capacity assigned to regulating flood inflows to reduce flood damage downstream.  |
| <b>flood stage</b>                         | The elevation at which overflow of the natural banks of a stream or body of water begins in the reach or area in which the elevation is measured.   |
| <b>floodplain</b>                          | Land susceptible to inundation by floodwaters.  |
| <b>floodway</b>                            | The channel of a watercourse and those portions of the adjoining floodplain submersed under flowing water during a flood.   |
| <b>flow augmentation</b>                   | The release of stored water stored to increase the natural flow of a stream.  |
| <b>flow-dependent habitat availability</b> | The amount of appropriate spawning habitat, including the suitable water depths, velocities, and substrate, for successful spawning.  |
| <b>fluvial</b>                             | Pertaining to streams and stream processes.   |
| <b>food chain</b>                          | A succession of organisms that constitutes a continuation of food energy from one organism to another as each consumes a lower member and in turn is preyed upon by a higher member.  |
| <b>foodweb</b>                             | A community of organisms that includes several interrelated food chains.  |
| <b>forage fish</b>                         | Small fish that reproduce prolifically and are consumed by predators.   |
| <b>forebay</b>                             | Impoundment immediately upstream from a dam or hydroelectric plant intake structure.  |
| <b>fossorial</b>                           | Adapted to digging and life underground; usually refers to small mammals.   |

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| <b>fresh water</b>                         | Water that contains less than 1,000 milligrams per liter of dissolved solids.   |
| <b>freshet</b>                             | A brief peak flow event, not large enough to be called a flood, usually occurring in response to a single rainfall event.   |
| <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>full pool</b>                           | Volume of water in a reservoir when the reservoir is fully used for all project purposes, including flood control.  |
| <b>fully protected</b>                     | Species protected under the California Endangered Species Act for which incidental take is prohibited unless covered by an approved natural community conservation plan.  |
| <b>gage</b>                                | Device for registering water level, discharge, velocity, or pressure.   |
| <b>gametes</b>                             | Eggs or sperm.  |
| <b>gate</b>                                | A device that controls the flow in a channel, pipe, or tunnel without obstructing any portion of the waterway when in the fully open position.  |
| <b>genetic interchange</b>                 | Mixing of genes from individuals within a population.   |
| <b>geographic information system (GIS)</b> | Computer-based mapping technology that manipulates geographic data in digital layers and enables a wide array of environmental analyses.  |
| <b>grade</b>                               | The elevation of a surface or a surface slope.  |
| <b>grassland</b>                           | A natural community in the Plan Area. Includes a range of managed and natural grasslands.   |
| <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 recharge</b>                | The natural and intentional infiltration of surface water into the zones of saturation.   |
| <b>groundwater table</b>                   | The upper boundary of groundwater where water pressure is equal to atmospheric pressure.  |
| <b>grubbing</b>                            | Removal of stumps, roots, and vegetable matter from the ground surface.   |
| <b>habitat</b>                             | A place with all necessary physical and biological conditions required to support one or more life stages of individuals or populations of a species.   |
| <b>habitat conservation plan (HCP)</b>     | A planning document that supports an application for an incidental take permit issued under Section 10 of the federal Endangered Species Act.   |
| <b>habitat creation</b>                    | To establish a species' habitat or a natural community in an area that did not previously support it.   |
| <b>habitat enhancement</b>                 | The improvement of an existing degraded habitat. Enhancement involves improving the function of specific constituent elements of a species habitat that have been degraded or lost, typically due to human actions. |

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| <b>habitat fragmentation</b>           | Loss of prior connectivity among areas of habitat, usually resulting from changes in land cover type.   |
| <b>habitat function</b>                | The aspect of a species' biological requirements that is fulfilled by a physical attribute or process occurring in its habitat.   |
| <b>habitat protection</b>              | Maintaining species habitat or natural communities through acquisition, easements, or other practicable processes.  |
| <b>habitat quality</b>                 | The capacity of the environment to provide conditions that support the persistence of individuals and populations.  |
| <b>habitat restoration</b>             | The undertaking of actions that establish a species' habitat in a location that historically supported the habitat, but which had been removed typically as a result of human actions.                              |
| <b>habitat suitability index (HSI)</b> | A metric of habitat quality, typically established by a regulatory agency through a peer reviewed scientific process.   |
| <b>habitat unit (HU)</b>               | A quantitative measure of habitat derived from multiplying area by a habitat suitability index. Example: 10 acres with a habitat suitability index of 0.5 provides 5 HUs.   |
| <b>hardpan</b>                         | A hard, impervious layer composed chiefly of clay that is cemented by relatively insoluble materials, that does not become plastic when mixed with water, and that limits the downward movement of water and roots. |
| <b>harm</b>                            | An act that kills or injures wildlife.  |
| <b>harvest</b>                         | Commercial or recreational capture, killing, or trapping of fish or wildlife. Legal harvest is compliant with applicable regulations.   |
| <b>herbaceous</b>                      | Describes plants that have no woody tissue.   |
| <b>herbicide</b>                       | A compound, usually a synthetic organic chemical, used to kill plants or control plant growth.  |
| <b>herbivore</b>                       | An animal that feeds on plants.   |
| <b>hot spot</b>                        | A locality with a high abundance of predatory fish.   |
| <b>hydric</b>                          | Characterized by, or thriving in, an abundance of moisture.   |
| <b>hydrodynamics</b>                   | The description of liquids in motion.   |
| <b>hydrograph</b>                      | A graph that shows some property of groundwater or surface waters as a function of time.  |
| <b>hydrology</b>                       | Scientific study of the properties, distribution, and behavior of water.  |
| <b>hyporheic zone</b>                  | Groundwater habitats created by the movement of river water from the active channel to areas to the side and beneath the active channel.  |
| <b>hypothesis</b>                      | A proposed explanation for an observable phenomenon.  |

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| <b>impervious</b>                      | Not permeable; not allowing liquid to pass through.  |
| <b>impingement</b>                     | Contact or collision with a diversion structure.   |
| <b>implementation action</b>           | An action undertaken to support achievement of one or more biological objectives. Implementation actions are components of conservation measures, but are usually limited in scope.  |
| <b>Implementation Office</b>           | The office that, under the direction of a program manager, will manage, coordinate, oversee, and report on all aspects of Plan administration, subject to the oversight of the Authorized Entity Group and certain limitation set out in the BDCP and the Implementing Agreement.  |
| <b>Implementing Agreement</b>          | The agreement that governs the implementation of the joint habitat conservation plan and natural community conservation plan for the Sacramento–San Joaquin Delta (Bay Delta Conservation Plan, Plan, or BDCP).  |
| <b>imports</b>                         | The total streamflow entering the Bay-Delta from the Sacramento and San Joaquin Rivers, Yolo Bypass, and eastside streams.   |
| <b>impoundment</b>                     | Body of water created by a dam.  |
| <b>incidental take</b>                 | Take that is not purposeful and that occurs during the carrying out of an otherwise lawful activity.   |
| <b>incidental take permit (permit)</b> | Federal permits (federal incidental take permits issued by the U.S. Fish and Wildlife Service and National Marine Fisheries Service pursuant to Section 10(a)(1)(B) of the Endangered Species Act) and the state permit (state Natural Community Conservation and Planning Act take permit issued by California Department of Fish and Wildlife pursuant to Section 2835 of the Fish & Game Code). |
| <b>in-Delta storage</b>                | Water storage in the Delta provided by converting an existing island to a reservoir.   |
| <b>indicator species</b>               | Organism, species, or community that indicates the presence of certain environmental conditions.   |
| <b>infiltration</b>                    | The gradual flow of water into and through the pores of a soil.  |
| <b>inflow</b>                          | Water that flows into a body of water.   |
| <b>inland dune scrub</b>               | A natural community in the Plan Area. Characterized by sandy dune soils that support a mix of rare and endemic plant and insect species.   |
| <b>instream</b>                        | The stream bed and bank.   |
| <b>instream flows</b>                  | The amount of flow required to sustain stream values, including fish, wildlife, and recreation.  |
| <b>instream uses</b>                   | Water uses that can be carried out without removing the water from its source, as in navigation and recreation.  |

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| <b>intake</b>                               | Any structure through which water can be drawn into a waterway.  |
| integrated biological opinion               | The joint biological opinion issued by the U.S. Fish and Wildlife Service and National Marine Fisheries Service to complete the Section 7 consultation process on (1) the decision to issue federal permits for the BDCP; and (2) for associated federal actions carried out by the Bureau of Reclamation in the Plan Area. The integrated biological opinion will also serve as a conference opinion for covered species proposed for listing and for proposed critical habitat under the Endangered Species Act. |
| <b>Interagency Ecological Program (IEP)</b> | A collaborative program that provides ecological information and scientific leadership for use in management of the San Francisco estuary.   |
| <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.  |
| <b>intertidal</b>                           | The zone between high and low tide.  |
| <b>introduced species</b>                   | See <i>nonnative species</i> .   |
| <b>introgression</b>                        | The mixing of genetic material when organisms from two different populations, varieties, or species interbreed.  |
| <b>invasive aquatic vegetation (IAV)</b>    | Nonnative aquatic plants that are capable of outcompeting native plants.   |
| <b>invasive species</b>                     | A species that is not native to the ecosystem and whose introduction is likely to cause economic or environmental harm or harm to human health.  |
| <b>invertebrate</b>                         | Any animal lacking a backbone or notochord.  |
| <b>irrigable land</b>                       | Arable land under a specific plan with access to a water supply and irrigation infrastructure.   |
| <b>isolated conveyance</b>                  | A conveyance system that does not use Delta waterways to transport Delta water, but pumps and transports it using a separate system.   |
| <b>isolated conveyance facility</b>         | A canal or pipeline that transports water between two different locations while keeping it separate from Delta water.  |
| <b>jeopardy</b>                             | Jeopardy occurs when an action is reasonably expected, directly or indirectly, to diminish a species' numbers, reproduction, or distribution so that the likelihood of survival and recovery in the wild is appreciably reduced.   |
| <b>Joint Point of Diversion (JPOD)</b>      | Allows the State Water Project and the Central Valley Project to pump water for each other via one set of pumps during times of restriction.   |
| <b>kelt</b>                                 | A thin, recently spawned salmon and steelhead.   |
| <b>lacustrine</b>                           | Lake or reservoir wetland habitat.   |
| <b>land-cover type</b>                      | The dominant feature of the land surface discernible from aerial photographs and defined by vegetation, water, or human uses.  |

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| <b>larval fish</b>          | An immature stage that develops from the fertilized egg before assuming the characteristics of the adult.   |
| <b>late long-term (LLT)</b> | Refers to the BDCP implementation period that extends 16 to 50 years after the BDCP permit term is initiated.   |
| <b>leachate</b>             | Liquids that have percolated through a soil and that carry substances in solution or suspension.  |
| <b>levee</b>                | A natural or artificial barrier that helps keeps rivers from overflowing their banks. See <i>dike</i> .   |
| <b>listed species</b>       | A species (including a subspecies, or a distinct population segment of a species) that is listed as a threatened or endangered species under the federal Endangered Species Act or as an endangered, threatened or candidate species under the California Endangered Species Act, or as a rare species under the Native Plant Protection Act. |
| <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>loam</b>                 | A soft, easily worked soil containing sand, silt, and clay.   |
| <b>logic chain</b>          | The process through which linkages between key plan elements were identified.   |
| <b>lotic</b>                | Pertaining to flowing water, such as rivers and streams.  |
| <b>low-salinity zone</b>    | The area where fresh water mixes with brackish water resulting in a salinity of approximately 2 practical salinity units and that moves upstream and downstream depending on flows and tides between Big Break and Three Mile Slough upstream to Chipps Island downstream.  |
| <b>macroinvertebrate</b>    | An invertebrate that is large enough to be seen without the use of a microscope.  |
| <b>main channel</b>         | The deepest or central part of the bed of a stream, containing the main current.  |
| <b>managed wetland</b>      | A natural community in the Plan Area. Intentionally flooded to improve habitat for specific wildlife species.   |
| <b>marsh</b>                | A frequently or continuously inundated wetland characterized by herbaceous vegetation.  |
| <b>marsh plain</b>          | The relatively level area of a tidal marsh that lies away from the direct influence of tidal channels.  |
| <b>matrix, landscape</b>    | The most extensive and connected landscape type, characterized by the density of the patches (porosity), boundary shape, networks, and heterogeneity.   |

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| <b>maximum contaminant level (MCL)</b> | The highest drinking water contaminant concentration allowed under federal and state Safe Drinking Water Act regulations.  |
| <b>mean higher high water (MHHW)</b>   | The arithmetic average of the elevations of the higher high waters of a mixed tide over the National Tidal Datum Epoch, a specific 19-year period.   |
| <b>mean lower low water (MLLW)</b>     | The average height of the lowest of the low tides in a day.  |
| <b>metamorphosis</b>                   | A biological process by which an animal physically develops after birth or hatching, involving a conspicuous and relatively abrupt change in the animal's body structure through cell growth and differentiation.  |
| <b>methylation</b>                     | The addition of a methyl group to a substrate or the substitution of an atom or group by a methyl group.   |
| <b>methylmercury</b>                   | An organometallic cation (CH <sub>3</sub> Hg) that is a bioaccumulative environmental toxicant.  |
| <b>metric</b>                          | Metrics are measurements of characteristics of ecological systems that are used to track progress toward conservation or recovery.   |
| <b>microclimate</b>                    | The climate of a small area, particularly that of the living space of a certain species, group, or community.  |
| <b>microhabitat</b>                    | A small, specialized, and effectively isolated location.   |
| <b>mitigation</b>                      | Measures taken to minimize or avoid adverse environmental effects.   |
| <b>mitigation bank</b>                 | Parcels of land preserved, restored, and enhanced to mitigate for projects that take listed species.   |
| <b>model</b>                           | A tool used to conceptually or mathematically represent a process; can be based on theoretical, empirical, statistical, or mathematical knowledge.   |
| <b>model, conceptual ecological</b>    | A verbal or graphical model, usually based on peer-reviewed science, that describes ecosystem functioning. Conceptual ecological models typically describe relationships between organisms, resources, environmental stressors, and ecosystem processes. |
| <b>model, species habitat</b>          | GIS-based model that predicts species occurrence from the size, distribution and location of existing habitat patches.   |
| <b>modeled habitat</b>                 | Habitat identified as suitable for a particular species using computer modeling.   |
| <b>monitoring program</b>              | A program to collect environmental data to verify compliance with permits or regulatory requirements, the accuracy of a conceptual ecological model, or the condition of a resource over time.   |
| <b>mudflat</b>                         | A mud-covered, gently sloping tract of land alternately covered and left bare by water.  |

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| <b>mysid</b>  | Small shrimp-like crustacean species in the Mysida and Lophogastrida orders.  |
| <b>National Environmental Policy Act (NEPA)</b>       | Federal law requiring federal agencies to consider the environmental impacts of their actions prior to approving the actions.   |
| <b>native species</b>                                 | A species that was not introduced into a particular area and historically, or currently, occurs in a given area.  |
| <b>natural community</b>                              | A distinct and reoccurring assemblage of plants and animals associated with specific physical environmental conditions and ecological processes.  |
| <b>Natural Community Conservation Plan</b>            | A planning document prepared for a planning agreement to conserve and manage biological diversity while allowing appropriate uses, pursuant to the state Natural Community Conservation Planning Act. |
| <b>Natural Community Conservation Planning Act</b>    | State legislation that provides for regional or area-wide planning for natural wildlife diversity and compatible and appropriate development and growth.  |
| <b>neap tide</b>                                      | A tide during the period of the month when tidal amplitude (the difference between high and low tide) is at a minimum.  |
| <b>near-term</b>                                      | Refers to the BDCP implementation period that extends from permit approval to the construction and operation of an isolated conveyance facility (estimated to be 10 years).                           |
| <b>neotropical migrant</b>                            | Birds that spend the winter in Central and South America and breed in North America during summer.  |
| <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>No Action Alternative</b>                          | Assumes that no BDCP would be adopted and implemented.  |
| <b>nocturnal</b>                                      | Occurs during the night. See <i>diurnal</i> .   |
| <b>nonconsumptive water uses</b>                      | Water uses that do not substantially deplete water supplies, including recreation activities, habitat maintenance, and hydropower generation.   |
| <b>nonnative species</b>                              | 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 affect the environment for native species.            |
| <b>nonphysical fish barrier</b>                       | A device placed in a waterway to deter and prevent fish from passing without preventing the flow of water.  |
| <b>nonpoint source pollution</b>                      | Pollution discharged over a wide land area, not from one specific location.   |
| <b>nontidal freshwater perennial emergent wetland</b> | A natural community in the Plan Area. Perennially saturated wetlands dominated by emergent plant species intolerant of saline or brackish conditions.   |

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| <b>nontidal perennial aquatic</b>          | A natural community in the Plan Area. Ranges in size from small ponds to small lakes. Associated with any terrestrial habitat, and may transition to nontidal freshwater perennial emergent wetland and valley/foothill riparian communities.  |
| <b>noxious weed</b>                        | 1974 Federal Noxious Weed Act defines noxious weeds as “any living stage, such as seeds and reproductive parts, of any parasitic or other plant of a kind, which is of foreign origin, is new to or not widely prevalent in the United States, and can directly or indirectly injure crops, other useful plants, livestock, or poultry or other interests of agriculture, including irrigation, or navigation, or the fish or wildlife resources of the United States or the public health.” |
| <b>nutrients</b>                           | Chemical substances that are essential for the survival and growth of organisms.   |
| <b>obligate host plants</b>                | A plant that is necessary for the completion of some stage of the life cycle of an organism.   |
| <b>obligate riparian species</b>           | A species that depends completely on habitat along a body of water.  |
| <b>occurrence</b>                          | For plant species as defined by the California Natural Diversity Database: <i>A population or group of populations found within 0.25 mile and not separated by significant habitat discontinuities.</i> For the purposes of the BDCP, all non-CNDDDB plant occurrence data meet the California Natural Diversity Database definition.  |
| <b>oligotrophic</b>                        | Reservoirs and lakes that are nutrient poor and contain little aquatic plant or animal life.   |
| <b>operable gate</b>                       | A gate on a water facility, such as a dam, that can be opened or closed to control the flow of water.  |
| <b>operational losses</b>                  | Losses of water resulting from evaporation, seepage, and spills.   |
| <b>Operations Criteria and Plan (OCAP)</b> | The long-term plan of operations for the Central Valley Project and the State Water Project; the plan on which the biological opinions (BiOps) of the fish and wildlife agencies are based pursuant to Section 7 consultations.  |
| <b>open water</b>                          | Aquatic habitats such as lakes, reservoirs, water treatment ponds, sloughs, and ponds that do not support emergent vegetation.   |
| <b>organic compound</b>                    | Any compound of carbon synthesized by an organism.   |
| <b>osmerid</b>                             | Members of the Osmeridae family, including smelt.  |
| <b>Other Authorized Entities</b>           | The entities described in Chapter 7 that receive take authorizations through the permits issued to the California Department of Water Resources.   |

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| <b>other natural seasonal wetland</b>        | A natural community in the Plan Area. All unmanaged seasonal wetland communities not included in the vernal pool complex and alkali seasonal wetland complex communities. |
| <b>other stressors conservation measures</b> | A certain category of conservation measures, as described in CM13 through CM21.   |
| <b>outflow</b>                               | The amount of water passing a given point downstream of a structure.  |
| <b>outlet channel (exit channel)</b>         | Channel downstream from terminal structure that conveys releases back to the stream or river.   |
| <b>outmigration</b>                          | The seasonal movement of anadromous fish from fresh to salt water.  |
| <b>overstory</b>                             | Larger species of plants in a community, the canopy of a forest, or emergent trees.   |
| <b>overtopping</b>                           | Flow of water over the top of a dam or embankment.  |
| <b>Pacific Flyway</b>                        | A major north-south route of travel for migratory birds in the Americas, extending from Alaska to Patagonia.  |
| <b>palustrine</b>                            | Referring to marsh or wetland.  |
| <b>parasitism, nest</b>                      | Reproduction by laying eggs in the nests of other birds, leaving the nest owners to provide parental care.  |
| <b>particulate matter</b>                    | Liquid and solid particles of a wide range of sizes and compositions.   |
| <b>patch</b>                                 | A surface area of a natural community or habitat that is distinct from its surroundings.  |
| <b>peak flow</b>                             | Maximum instantaneous flow in a specified period of time.   |
| <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.   |
| <b>pelagic organism decline (POD)</b>        | A recent decline (beginning around 2000) in the abundance of delta smelt, longfin smelt, striped bass, and threadfin shad in the Bay-Delta region.                        |
| <b>perennial stream</b>                      | A stream that flows continually throughout the year.  |
| <b>periphyton</b>                            | An assemblage of microorganisms firmly attached to and growing upon solid surfaces, such as the bottom of a stream, rocks, logs, pilings, and other structures.           |
| <b>permit</b>                                | See <i>incidental take permit</i> .   |
| <b>permit term</b>                           | The duration of the incidental take permits.  |
| <b>Permittees</b>                            | The California Department of Water Resources and the participating state and federal water contractors  |
| <b>Permit Oversight Group</b>                | Fish and wildlife agency representatives responsible for issuing and ensuring compliance with incidental take permits.  |

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| <b>pH</b>                     | A measurement of acidity. A relative scale, from 0 to 14, of how acidic or basic (alkaline) a material is, where a pH of 7 is neutral, smaller readings increasingly acid.  |
| <b>photosynthesis</b>         | The process by which plants convert carbon dioxide into organic compounds using the energy from sunlight.   |
| <b>phytoplankton</b>          | See <i>plankton</i> .   |
| <b>piscivore</b>              | A species that eats fish.   |
| <b>Plan Area</b>              | The area covered by the BDCP and within which the Authorized Entities are seeking authorization from the fish and wildlife agencies for the take of covered species resulting from covered activities and associated federal actions.   |
| <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>point source pollution</b> | Pollutants discharged from any identifiable point.  |
| <b>pollutant</b>              | Any inorganic or organic substance that contaminates air, water, or soil.   |
| <b>population</b>             | A group of individuals of the same species inhabiting a given geographic area, among which mature individuals reproduce or are likely to reproduce.   |
| <b>population viability</b>   | The propensity of a population to persist and to avoid extinction.  |
| <b>porosity</b>               | The ratio of the volume of void or air spaces in a rock or sediment to the total volume of the rock or sediment.  |
| <b>predation</b>              | The act of one animal killing and eating another.   |
| <b>primary productivity</b>   | A measure of the rate at which new organic matter is developed through photosynthesis and chemosynthesis.   |
| <b>Program Manager</b>        | The person that will direct and oversee the BDCP Implementation Office.   |
| <b>project levees</b>         | Levees that were part of an authorized federal flood control project of the Sacramento and San Joaquin River systems and eligible for U.S. Army Corps of Engineers rehabilitation. They make up about one third of levees in the Delta and are typically considered more stable than nonproject levees. |
| <b>proposed project</b>       | Refers to all covered activities proposed under the BDCP.   |
| <b>protect</b>                | To permanently conserve land that supports species' habitat through acquisition by fee title, conservation easement, or other mechanisms.   |
| <b>public involvement</b>     | Process of obtaining stakeholder input into each stage of development of planning documents.  |

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| <b>pyrethroid</b>                         | A synthetic compound similar to pyrethrin, used as an insecticide.   |
| <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>radial gates</b>                       | A pivoted crest gate, the face of which is usually a circular arc, with the center of curvature at the pivot about which the gate swings.  |
| <b>range</b>                              | Geographic region in which a given plant or animal normally lives or grows.  |
| <b>raptor</b>                             | A bird species in the order Falconiformes (hawks, eagles, kites, and falcons), or in the order Strigiformes (owls).  |
| <b>reach</b>                              | Any specified length of stream, channel, or other water conveyance.  |
| <b>reasonable and prudent alternative</b> | An alternative to a proposed action that would avoid jeopardizing a species.   |
| <b>reclamation, reclaim</b>               | Historically, a wide-ranging federal program to irrigate arid lands throughout the west and to drain wetlands for agricultural use.  |
| <b>Record of Decision (ROD)</b>           | Legal document that officially discloses the federal lead agency's decision following the completion of an environmental impact statement.   |
| <b>recovery</b>                           | The restoration of listed species to a point of population health and stability at which protection under the federal Endangered Species Act or the California Endangered Species Act is no longer required.                               |
| <b>recovery goal</b>                      | An established goal, usually quantitative, that identifies when a listed species is restored to a point at which the protections under the federal Endangered Species Act or the California Endangered Species Act are no longer required. |
| <b>recovery plan</b>                      | A document that lists the criteria necessary to recover a listed species and the actions necessary to delist it.   |
| <b>recruitment</b>                        | Survival of young plants and animals from birth to a life stage less vulnerable to environmental change.   |
| <b>redd</b>                               | A salmon nest in gravel substrate, in which the female deposits her eggs.  |
| <b>redd dewatering</b>                    | A reduction in water levels below the level of egg deposition, potentially causing egg and alevin mortality.   |
| <b>refugia</b>                            | Areas that remained unchanged while areas surrounding it changed markedly, and so offer greater protection and habitat value to species.   |

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| <b>reserve system</b>                     | The assemblage of land acquired and dedicated in perpetuity by either fee interest or conservation easement that is intended to advance the preservation, conservation, enhancement, and restoration objectives of the conservation strategy of the BDCP. |
| <b>reserve</b>                            | The assemblage of all lands in the Plan Area managed under the provisions of Conservation Measures 3 and 11 for conservation of natural communities or covered species.   |
| <b>reserve unit</b>                       | Multiple reserves in a specified geographic area that share common management needs.  |
| <b>reservoir</b>                          | A body of water impounded by a dam and in which water can be stored.  |
| <b>residence time, hydraulic</b>          | The duration that a water molecule resides in a defined area.   |
| <b>restoration</b>                        | See <i>habitat restoration</i> .  |
| <b>Restoration Opportunity Area (ROA)</b> | Those locations in the Plan Area considered most appropriate for the restoration of tidal wetland natural communities.  |
| <b>reverse flows</b>                      | Changes in direction that some waterways experience in the Delta, especially the south Delta, where water flows upstream during periods of low inflow and high export.  |
| <b>revetment</b>                          | Facing of stone or other material placed along the edge of a body of water to stabilize or protect the bank.  |
| <b>right-of-way</b>                       | A legal right of passage over a defined area of real property.  |
| <b>rill</b>                               | Small groove, furrows, or channel in soil made by water flowing over its surface.   |
| <b>riparian</b>                           | Pertaining to the banks of a river, lake, estuary, or other body of water as well as to plant and animal communities along such bodies of water.  |
| <b>riparian area</b>                      | The land adjacent to a water body such as a river or lake, within which the transition from aquatic to upland conditions occurs.  |
| <b>riprap</b>                             | Rock facing that supports an embankment and prevents erosion, usually at a specific slop, such as 2:1.  |
| <b>riverine</b>                           | The area along a stream that encompasses both aquatic and riparian areas and their biological components.   |
| <b>rough proportionality</b>              | Implementation of BDCP conservation measures that is roughly proportional in time and extent to the impact on habitat or covered species authorized under the BDCP.   |
| <b>ruderal</b>                            | Weedy vegetation, commonly including or dominated by introduced species, characteristic of areas where native vegetation has been disturbed or removed.   |

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| <b>run, salmon</b>                          | The time at which salmon swim upstream from the ocean to spawn. Different genetic races are classified by their run timing.  |
| <b>runoff</b>                               | Precipitation, snowmelt, or irrigation that flows over or through the soil, to enter surface waters.   |
| <b>Sacramento–San Joaquin Delta (Delta)</b> | See <i>statutory Delta</i> .   |
| <b>saline</b>                               | Containing dissolved or soluble salts.   |
| <b>salinity</b>                             | The amount of dissolved salts in a given volume of water.  |
| <b>salmonid</b>                             | Fish belonging to the family Salmonidae, which includes char, trout, salmon, steelhead, and whitefish.   |
| <b>saltwater intrusion</b>                  | The movement of saline water into freshwater aquifers, or the movement of dense saline water upstream along the base of freshwater bodies.   |
| <b>Science Manager</b>                      | Member of the Implementation Office that will assist in the implementation of the BDCP and ensure that implementation decisions are guided by the best available scientific information.   |
| <b>scour</b>                                | Erosion in a stream bed, particularly if caused or increased by channel changes.   |
| <b>sea level rise</b>                       | Long-term increase in mean sea level.  |
| <b>Secchi depth</b>                         | A measure of water clarity.  |
| <b>sedge</b>                                | A graminoid plant (related to grasses and rushes) common in wetlands.  |
| <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, expressed in millions of tons.  |
| <b>sediment yield</b>                       | Amount of mineral or organic soil material that is in suspension, is being transported, or has been moved from its site of origin.   |
| <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>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>seral</b>                                | Referring to a stage in ecological succession. Early seral communities are those which have recently or frequently been disturbed; late seral communities are those which have persisted a relatively long time since a major disturbance and are relatively stable. |

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| <b>setback levee</b>             | A constructed embankment to prevent flooding that is positioned some distance from the edge of the river or channel.   |
| <b>sheet pile</b>                | A form of piling used to shut out water, generally made of several planks spiked or bolted together.   |
| <b>slope</b>                     | An inclined surface usually defined by the ratio of the horizontal distance to the vertical distance.  |
| <b>slough</b>                    | A muddy or marshy area; a secondary channel of a river delta, usually flushed by the tide.   |
| <b>smolt</b>                     | A juvenile salmonid migrating to the ocean and undergoing physiological changes (called smoltification) to adapt from fresh water to a saltwater environment.  |
| <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>south of Delta storage</b>    | Water storage supplied with water exported south from the Delta.   |
| <b>spawn</b>                     | To lay eggs; refers mostly to fish.  |
| <b>spawning beds</b>             | Places in which eggs of aquatic animals lodge or are placed during or after fertilization. See <i>redd</i> .   |
| <b>species of concern</b>        | Species that may become threatened or endangered, and may be reviewed as candidates or proposed for listing.   |
| <b>spoil</b>                     | Soil, dirt, and rubble that results from excavation.   |
| <b>staging area</b>              | Area where equipment and materials may be stored prior to use.   |
| <b>Stakeholder Council</b>       | A committee that will provide a forum through which interested public and private entities will consider and discuss matters related to Plan implementation.   |
| <b>State Water Project (SWP)</b> | The state-authorized and operated water storage and delivery system of reservoirs, aqueducts, power plants and pumping plants that provides and distributes water and urban and agricultural water suppliers in Northern California, the San Francisco Bay Area, the San Joaquin Valley, the Central Coast, and southern California. |
| <b>statutory Delta</b>           | The Sacramento–San Joaquin Delta (Delta) as defined in the California Water Code, Section 12220. Generally extends from Sacramento in the north, to Tracy to the south, and from Interstate 5 in the east to Collinsville in the west. The Bay-Delta covers approximately 738,000 acres.   |
| <b>Steering Committee</b>        | A BDCP management group, active 2006–2010, and comprised of the local water agencies, environmental and conservation organizations, state and federal agencies, and other interest groups committed to advancing the goals of ecosystem restoration and water supply reliability.  |

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| <b>stream capacity</b>                    | Total volume of water that a stream can carry within the normal high water channel.   |
| <b>stressor</b>                           | Pressure or change on an ecosystem caused by environmental factors such as contaminants, nonnative species, and management practices.   |
| <b>Study Area</b>                         | The area where physical changes attributable to the BDCP have the potential to affect covered fish species. Included is the Sacramento River upstream to Keswick Dam, the San Joaquin River upstream to the Stanislaus River, tributaries downstream of SWP and CVP dams (Clear Creek, Feather River, American River, and Stanislaus River), and the Plan Area. |
| <b>sturgeon ramp</b>                      | Structure designed to accommodate the swimming ability of sturgeon to facilitate fish movement across weirs, dams, or other situations where sturgeon passage is an issue. See <i>fish ladder</i> .   |
| <b>submerged aquatic vegetation (SAV)</b> | Aquatic vegetation that grows below the water surface.  |
| <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>subtidal</b>                           | Inundated tidal areas that lie below mean lower low water.  |
| <b>succession</b>                         | The change in the composition and structure of a biological community over time.  |
| <b>suitable habitat</b>                   | Habitat with characteristics necessary to support a given species.  |
| <b>Supporting Entity</b>                  | An agency, organization, or individual that performs certain Plan implementation tasks, at the request of the Program Manager.  |
| <b>surface water</b>                      | An open body of water, such as a river, stream, or lake.  |
| <b>surge</b>                              | A rapid increase in the depth of flow.  |
| <b>suspended</b>                          | The state of floating in water rather than being dissolved in it.   |
| <b>swale</b>                              | A low place in a tract of land. A wide, shallow ditch, usually grassed or paved. A wide, open drain with a low center line.   |
| <b>swamp</b>                              | A frequently or continuously inundated wetland characterized by woody vegetation.   |
| <b>take</b>                               | Defined in the Endangered Species Act as “...harass, harm pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” In the context of the Fish and Game Code, take means to hunt, pursue, catch, capture, or kill.  |

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| <b>take authorization</b>                | The federal permits, the state permit, and the incidental take statement issued with the integrated biological opinion to collectively authorize take associated with covered activities, joint federal and nonfederal actions, and associated federal actions. |
| <b>temporal</b>                          | Of or relating to or limited by time.   |
| <b>terrestrial species</b>               | Animals and plants that live on or grow from the land.  |
| <b>thalweg</b>                           | Deepest part of a river channel in a cross section of a river profile. The path of deepest flow.  |
| <b>thermoregulation</b>                  | The capacity of an organism to regulate its body temperature.   |
| <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>tidal brackish emergent wetland</b>   | A natural community in the Plan Area. Transitional community between the tidal perennial aquatic and the terrestrial upland communities.  |
| <b>tidal damping</b>                     | The reduction or minimization of tidal amplitude or range such that both the average maximum and minimum tidal elevation is reduced.  |
| <b>tidal freshwater emergent wetland</b> | A natural community in the Plan Area. Transitional community between the tidal perennial aquatic, valley/foothill riparian, and terrestrial upland communities.   |
| <b>tidal mudflat</b>                     | A natural community in the Plan Area. Includes the unvegetated sediments in the intertidal zone between the mean higher high tide and the mean lower low water.   |
| <b>tidal perennial aquatic</b>           | A natural community in the Plan Area. Includes the deep water aquatic, shallow aquatic, and unvegetated intertidal zones of estuarine bays, river channels, and sloughs.  |
| <b>tidal prism</b>                       | The volume of water in an estuary as calculated by the volume between mean high tide and mean low tide.   |
| <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 levee used in conjunction with horizontal drainage blankets to collect seepage from the embankment and foundation and convey the seepage to a location downstream.                               |
| <b>topsoil</b>                           | The topmost layer of soil, usually containing organic matter.   |
| <b>total dissolved solids (TDS)</b>      | A quantitative measure of the residual minerals dissolved in water that remains after the evaporation of a solution.  |
| <b>total maximum daily load (TMDL)</b>   | Estimated amount of specific pollutants that a body of water can safely take without threatening beneficial uses.   |

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| <b>toxin</b>                           | Poisonous substance, generally from a plant or animal.   |
| <b>trash rack</b>                      | A metal or reinforced concrete structure placed at the intake of a conduit, pipe, or tunnel that prevents entrance of debris over a certain size.  |
| <b>tributary</b>                       | A river or stream that flows into a larger river or stream.  |
| <b>trihalomethane (THM)</b>            | Organic compounds that may be harmful to health at certain levels in drinking water. Formed as a byproduct when chlorine or bromine is used to disinfect water for drinking.                       |
| <b>trophic level</b>                   | The place of an animal in the food chain.  |
| <b>turbidity</b>                       | A measure of the cloudiness of water caused by the presence of suspended matter.   |
| <b>turbulent flow</b>                  | Flow in which any water particle may move in any direction with respect to any other particle, and in which the head loss is approximately proportional to the second power of the velocity.       |
| <b>understory</b>                      | Vegetation underneath the trees.   |
| <b>upstream storage</b>                | Any water storage upstream of the Delta supplied by the Sacramento or San Joaquin Rivers or their tributaries.   |
| <b>valley/foothill riparian</b>        | A natural community in the Plan Area. A transitional community between aquatic and terrestrial habitats, expressing a wide range of environmental conditions.                                      |
| <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>vernal pool complex</b>             | A natural community in the Plan Area. Interconnected and isolated seasonal pools and swales within grassland or alkali seasonal wetland vegetation.  |
| <b>water column</b>                    | A section of water extending from the surface of a body of water to its bottom.  |
| <b>water conveyance infrastructure</b> | Structures that convey water from one location to another.   |
| <b>water delivery system</b>           | Reservoirs, canals, ditches, pumps, and other facilities to move water.  |
| <b>water demand</b>                    | Water requirements for a particular purpose, as for irrigation, power, municipal supply, plant transpiration or storage.   |
| <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 use. |
| <b>water table</b>                     | The surface of underground, gravity-controlled water.  |

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| <b>water transfers</b>             | Transfers that use State Water Project/Central Valley Project conveyance to move water, typically from areas north of the Delta to areas south or west of the Delta.  |
| <b>water year</b>                  | A continuous 12-month period for which hydrological records are compiled and summarized. In California, from October 1 to September 30.   |
| <b>waters of the United States</b> | As defined in the Clean Water Act Section 404, these are surface waters, rivers, lakes, estuaries, coastal waters, and wetlands.  |
| <b>watershed</b>                   | A region or area that ultimately drains to a particular watercourse or body of water.   |
| <b>weir</b>                        | A small dam that restricts flow in a stream in order to raise water level, or that diverts flow into a desired course.  |
| <b>wetland</b>                     | A zone that is periodically or continuously submerged or has high soil moisture, has aquatic and/or riparian vegetation components, and is maintained by water supplies significantly in excess of those otherwise available through local precipitation. |
| <b>X2</b>                          | The distance, expressed in kilometers from the Golden Gate Bridge, at which channel bottom water salinity is two parts per thousand.  |
| <b>zooplankton</b>                 | See <i>plankton</i> .   |

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