

# Chapter 12 Glossary

The definitions in this glossary refer to the areas covered under the primary and secondary planning objectives for the Draft Feasibility Report for the NODOS/Sites Reservoir Project and the regulatory terms used in the process.

Term	Definition
acre-foot	The volume of water that would cover 1 acre to a depth of 1 foot, or 325,851 gallons of water. A flow of 1 cfs for 1 day is approximately 2 acre-feet. An average California household uses between 0.5 and 1 acre-foot of water per year.
active capacity	The reservoir capacity normally usable for storage and regulation of reservoir inflows to meet established reservoir operating requirements. It is also the total capacity less the sum of the inactive and dead capacities.
active conservation capacity (active storage)	The reservoir capacity available for seasonal or cyclic water storage that is assigned to regulate reservoir inflow for irrigation, power, municipal and industrial use, fish and wildlife, navigation, recreation, water quality, and other purposes. It does not include exclusive flood control capacity. It extends from the top of the active conservation capacity to the top of the inactive capacity (or dead capacity, where there is no inactive capacity).
alluvial/alluvium	<p>A general term for clay, silt, sand, gravel, or similar unconsolidated soil strata deposited by flowing water in the bed of the stream or on its floodplain or delta.</p> <p>A general term referring to the clay, silt, and gravel that are deposited by a stream, creek, or water body. Alluvium is found around rivers and deltas, frequently making soils fertile.</p>
anadromous fish	<p>Freshwater fish species that migrate to the ocean then return to spawn in freshwater. They include Coho salmon, Chinook salmon, and steelhead.</p> <p><u>Alternative Definitions:</u> Fish that live in ocean water and move inland to spawn, such as salmon.</p> <p>Fish species, such as salmon, that migrate from freshwater streams to the ocean and back to complete their life cycles.</p>
Anadromous Fish Restoration Program	A program required to be developed under Section 3406(b)(1) of the CVPIA) (see <i>Central Valley Project Improvement Act</i> , below) that identifies instream and Delta flows and other actions needed for the recovery of anadromous fish species.
aquifer	An underground layer of permeable rock or soil that stores water and yields significant quantities of water to wells or springs.
average annual runoff	Average total annual runoff volume calculated for a selected period of record at a specified location, such as a dam or stream gauge.
average year water demand	Demand for water under average hydrologic conditions for a defined level of development.
bedload	Sediment in a stream that is moved on or immediately above the streambed, usually consisting of boulders, pebbles, and gravel.
beneficial use	Actual or reasonable potential use that may be made of waters of the State, including, but not limited to, domestic, municipal, agricultural, and industrial uses.
benefit-cost ratio (BCR)	The ratio of the present value of project benefits to the present value of the project costs; used in economic analysis.

## Chapter 12 Glossary

Term	Definition
berm	A sloped wall or embankment (typically constructed of earth, hay bales, or timber framing) used to prevent inflow or outflow of material.
Biological Opinion (BiOp)	Under Section 7 of the Federal ESA, a document that states the opinion of the appropriate Federal regulatory agency—NMFS or USFWS—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. Often, a Biological Assessment is prepared by the consulting or action agency as source material for the regulatory agency.
biota	All living organisms of a region.
brackish water	Water with a salinity level that exceeds normally acceptable standards for municipal, domestic, or irrigation uses, but that is less than that of seawater.
CALFED Bay-Delta Program (CALFED)	<p>A collaboration among 25 State and Federal agencies that came together with a mission to develop and implement a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the San Francisco Bay/Sacramento–San Joaquin River Delta system.</p> <p>CALFED focused on the following areas and programs: ecosystem health, water supply reliability, water quality, levee system integrity, watershed management, storage, conveyance, environmental water account, water use efficiency, water transfers, and science.</p>
CALFED Bay-Delta Program Final Programmatic Environmental Impact Statement / Environmental Impact Report (CALFED PEIS/EIR)	The NEPA and CEQA compliance document that provides the environmental consequences of alternative actions relating to CALFED.
CALFED Bay-Delta Programmatic Environmental Impact Statement / Report Record of Decision (CALFED ROD)	The ROD issued by the Federal lead agencies for adopting the CALFED program as described in the CALFED PEIS/EIR and associated actions. The CALFED ROD is a general framework for addressing CALFED. It includes program goals, objectives, and projects intended primarily to benefit the Delta system, its tributaries, and areas that receive water supplies exported from the Delta.
California Aqueduct	The primary conveyance facility of the SWP; it conveys water from the Delta through the San Joaquin Valley and along the eastern slope of the Coastal Range to Southern California.
California Endangered Species Act (CESA)	CESA is implemented by CDFW. CESA prohibits the “take” of listed threatened or endangered species.
California Environmental Quality Act (CEQA)	A California statute passed in 1970 (California Public Resources Code Section 21000 et seq.) shortly after the passage of the Federal NEPA. It requires lead agencies(public and private) to prepare and submit for public review environmental impact assessments on projects under their purview. There are four levels of analysis under CEQA: Initial Study, Negative Declaration; Mitigated Negative Declaration; and Environmental Impact Report.
California Species of Special Concern	Species designated by the CDFW as having declining population levels, limited ranges, and/or continuing threats that make them vulnerable to extinction. The purpose of this designation is to halt or reverse the decline of such species by calling attention to their plight and addressing issues of concern early enough to secure their long-term viability.
California Water Action Plan	A plan issued in January 2014 and updated in 2016, primarily as a response to the state’s deficiencies in drought preparedness. The plan is intended to be a 5-year roadmap toward achieving sustainable water management in California.

Term	Definition
California Water Commission	Advises the California Department of Water Resources on matters within the department's jurisdiction, approves rules and regulations, and monitors and reports on the construction and operation of the State Water Project. The commission is responsible for administering the Water Storage Investment Program (see <i>Water Storage Investment Program</i> , below).
California WaterFix	A proposal to update California's aging water delivery system, including how water is diverted from the Sacramento–San Joaquin River Delta. The proposal is part of the State's overall water management portfolio, along with water conservation, groundwater management, water recycling, and ecosystem protection.
California Water Plan (CWP) Update	The CWP provides a framework for water managers, legislators, and the public to consider options and make decisions regarding California's water future. The CWP is updated every 5 years, and it identifies and evaluates existing and proposed statewide demand management and water supply augmentation programs and projects to address the state's water needs.
CALSIM (California Statewide Integrated Model)	A planning model designed to simulate the systemwide monthly operations of the CVP and SWP under current and future conditions that was jointly developed by DWR and Reclamation. CALSIM predicts how reservoir storage and river flows would be affected based on incorporated changes in future system operations. CALSIM output is typically used to help assess impacts on water supply, water quality, aquatic resources, and recreation.
CALSIM II	The version of CALSIM used for this study.
carryover water	Table A water that is allocated to a contractor in a given year, but is unused in that year and stored for that contractor in SWP supply reservoirs (when storage space is available) for use by that contractor in a following year. The water is temporarily stored or carried over primarily in San Luis Reservoir (see <i>Table A amount</i> , below)
Central Valley Project (CVP)	A Federally operated water management and conveyance system that provides water to agricultural, urban, and industrial users in California. The CVP was originally authorized by legislation in 1937.
Central Valley Project Improvement Act (CVPIA)	P.L. 102-575, Title 34, which was signed into law on October 30, 1992, mandates major changes in the management of the Federal CVP. The CVPIA recognizes that fish and wildlife are equal in importance to agricultural, municipal, industrial, and hydropower uses.
CVP Operations Criteria and Plan (OCAP)	The OCAP describes the regulatory and physical constraints and conditions under which the CVP and SWP currently operate.
consumptive use	Divisions of water withdrawn upstream and not returned downstream as wastewater.
contaminants	Any undesirable physical, chemical, biological, or radiological substance present in water as a result of human activities.
conveyance	Provides for the movement of water. Conveyance infrastructure includes natural watercourses and constructed facilities like canals and pipelines.

## Chapter 12 Glossary

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cooperating agency	<p>Under NEPA, any agency, other than the lead Federal agency, that has jurisdiction by law or special expertise related to an action requiring an EIS and has agreed to provide assistance in the preparation of an EIS.</p> <p><u>Alternative Definition:</u> According to the Council on Environmental Quality (40 C.F.R. 1508.5), "cooperating agency" means any Federal agency, other than a lead agency, that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposed project or project alternative. A State or local agency of similar qualifications or, when the effects are on lands of tribal interest, a Native American tribe may, by agreement with the lead agencies, also become a cooperating agency.</p>
Coordinated Operations Agreement (COA)	<p>The agreement between the United States and the State of California for Coordinated Operations of the CVP and SWP, commonly known as the Coordinated Operations Agreement, or COA, was executed in November 1986 pursuant to P.L. 99-546, the California Central Valley Project Act (California Water Code Part 3, Division 6 [starting at Section 11100]) and the California Water Resources Development Bond Act (California Water Code Chapter 8, Part 6, Division 6 [starting at Section 12930]) to coordinate the operations of the CVP and SWP facilities to meet Sacramento Valley in-basin uses, maintain their respective annual water supplies, and establish how the two agencies share surplus flows.</p>
critical habitat	<p>An area designated as critical habitat listed in 50 C.F.R. Parts 17 or 226 (50 C.F.R. Part 402.02). Critical habitat areas are specific geographic areas, whether occupied by special-status species or not, that are determined to be essential for the conservation and management of special-status species, and that have been formally described in the <i>Federal Register</i>.</p>
cubic feet per second (cfs)	<p>A unit of discharge for measurement of a flowing liquid equal to a flow of 1 cubic foot per second (448.8 gallons per minute, 7.48 gallons per second, or 1.98 acre-feet per day). This measurement is a rate of streamflow (the volume, in cubic feet, of water passing a reference point in 1 second).</p>
dead pool conditions	<p>Refers to the condition when water in a reservoir cannot be drained by gravity through a dam's outlet works. Water that is in the dead pool is not considered part of the conservation pool.</p>
Decision 1641 (D-1641)	<p>State Water Resources Control Board water rights decision (March 2000) that implemented the 1995 Bay-Delta Water Quality Control Plan, establishing terms and conditions regulating points of diversion for the CVP and SWP. D-1641 superseded earlier issued D-1485.</p>
Delta	<p>See <i>San Francisco Bay/Sacramento–San Joaquin River Delta, below</i>.</p>
Delta Cross Channel (DCC)	<p>An existing gated structure and channel connecting the Sacramento River at Walnut Grove to the North Fork of the Mokelumne River. The facility was constructed as a feature of the CVP to control movement of Sacramento River water into the central Delta and to the south-Delta export pumps.</p>
Delta export	<p>Water pumped from the Delta for use outside the Delta.</p>
Delta-Mendota Canal (DMC)	<p>The major conveyance facility of the CVP; it carries water from the Delta to the town of Mendota in the central San Joaquin Valley.</p>
Delta outflows	<p>Downstream freshwater flows from the Delta that protect the beneficial uses within the Delta from the intrusion of saline water.</p>
Delta Risk Management Strategy (DRMS)	<p>The DRMS program was undertaken to evaluate the risks and consequences of the failure of Delta levees and other assets to the State (e.g., water export disruption and economic impacts) and the Delta (e.g., levees, infrastructure, and the ecosystem). The program considered exposure to all hazards.</p>

Term	Definition
Delta Stewardship Council (DSC)	The DSC was created in legislation to achieve the State-mandated coequal goals for the Delta. "Coequal goals" means the two goals of providing more reliable water supply for California and protecting, restoring, and enhancing the Delta ecosystem. The primary responsibility of the DSC is to develop, adopt, and implement the Delta Plan. The DSC, through its adoption and implementation of the Delta Plan, is tasked with providing a more reliable water supply for California (California Water Code Section 85054).
Delta Vision	The Delta Vision process concluded at the end of 2008, a little more than 2 years after it began, with a suite of strategic recommendations for long-term, sustainable management of the Delta. The Delta Vision Committee submitted its final implementation plan to Governor Arnold Schwarzenegger on recommended actions on how the Sacramento–San Joaquin Delta should be managed to fulfill its coequal goals of water supply reliability and ecosystem restoration. The implementation plan sets priorities based on the Delta Vision Strategic Plan developed by the Governor's Delta Vision Blue Ribbon Task Force.
Directives and Standards	Reclamation's internal guidance for conducting business. The Directives and Standards provide a level of detail necessary to ensure consistent application of Reclamation-wide policy.
dissolved oxygen (DO)	The amount of oxygen dissolved in water, usually expressed in milligrams per liter, parts per million, or percent of saturation.
diversion	The act of taking water out of a river system or changing the flow of water in a system for use in another location.
drainage area	The area of land from which water drains into a river, usually bounded peripherally by a natural divide of some kind such as a hill. For example, the land area of the Sacramento River Basin drains into the Sacramento River. Also called river basin or watershed.
drought condition	Drought (a period of abnormally low rainfall) is a gradual phenomenon. Defining when drought begins is a function of water shortage impacts to water users. Hydrologic conditions constituting a drought for water users in one location may not constitute a drought for water users in a different part of the state or with a different water supply. Individual water suppliers may use criteria such as rainfall/runoff, amount of water in storage, decline in groundwater levels, or expected supply from a water wholesaler to define their water supply conditions.
DSM2 (Delta Simulation Model II)	Delta Simulation Model II (DSM2) is a publicly available one-dimensional hydrodynamic, water quality, and particle-tracking model. DSM2 can calculate stages, flows, and velocities; and many mass transport processes, including salts, multiple non-conservative constituents, temperature, trihalomethane formation potential, and individual particles throughout the Delta. DSM2 uses output from CALSIM II.
ecosystem	An interactive system that includes the organisms of a natural community association together with their abiotic physical, chemical, and geochemical environment.
electrical conductivity (EC)	A measurement of how easily electricity flows through water. EC correlates with the TDS in water. The higher the TDS, the more easily electricity flows through the water and the higher the electrical conductivity. See also <i>salinity, below</i> .
emergency response	A reaction by a person, community, or agency to an incident or event that threatens public safety, health, and welfare such as fire or flooding. Another example of an emergency response would be the release of supplemental freshwater to move or help stabilize the intrusion of seawater into the Delta in response to Delta levee failures.
emergent vegetation	Flooded or ponded areas that support rooted herbaceous vegetation with parts of the shoot both below and above water.

## Chapter 12 Glossary

Term	Definition
endangered species	Those species listed as endangered under ESA and CESA; any species that is at high risk of extinction in the near future throughout all or a significant portion of its range.
Endangered Species Act (ESA)	The Federal Endangered Species Act of 1973 is administered by the U.S. Department of the Interior's USFWS and the U.S. Department of Commerce's National Oceanic and Atmospheric Administration's NMFS. ESA Section 9 and its implementing regulations prohibit "take" of listed threatened or endangered species.
endemic species	A species restricted to and known to occur naturally only within a specific geographic area.
enhancement	Actions that are expected to improve conditions beyond current levels.
entrainment	The incidental trapping of fish and other aquatic organisms in water diverted from streams, rivers, and reservoirs; the process of drawing fish into diversions along with water, resulting in the loss of such fish.
environmental water	The water for wetlands, for the instream flow in a major river or in the Bay-Delta designated for environmental purposes, or for a designated wild and scenic river.
ephemeral	A stream, pool, or lake that occurs for only the "wet" portion of the year. These bodies of water are usually dry during the summer months.
erosion	The gradual degradation of land by water, wind, general weather conditions, and reservoir fluctuations; the diminishing of property by the elements. With regard to levees specifically: loss of levee material as a result of the effects of channel flows, tidal action, boat wakes, and wind-generated waves.
estuary	Regions of interaction between rivers and nearshore ocean waters, where river flow and tidal action mix saltwater and freshwater.
eutrophication	The degradation of water quality as a result of enrichment by nutrients, primarily nitrogen and phosphorus, which in turn results in excessive plant (principally algae) growth and decay.
Evolutionarily Significant Unit (ESU)	A population or group of populations that is considered distinct (and hence a "species") for purposes of conservation under the ESA. To qualify as an ESU, a population must (1) be reproductively isolated from other conspecific populations; and (2) represent an important component in the evolutionary legacy of the biological species.
exceedance plots	A probability plot of, for example, flows where $N$ percent exceedance flow is the flow that is equaled or exceeded $N$ percent of the time.
extinct (species)	No longer in existence because of failure to adapt to environmental change. (Compare to <i>extirpated (species)</i> , <i>below</i> .)
extirpated (species)	No longer surviving in regions that were once part of the species' range. (Compare to <i>extinct (species)</i> , <i>above</i> .)
Federal Energy Regulatory Commission (FERC)	The Federal agency that licenses hydroelectric facilities.
Federally recognized tribe	Native American tribes or groups recognized by the Federal government and eligible for funding and services from the Bureau of Indian Affairs.
flood frequency analysis	A procedure for identifying the magnitude of flow (i.e., the $N$ year precipitation event) that would be the event equaled on an average of every $N$ years. In the case of a 20-year event, there is a 5 percent chance that it will be equaled during any given year. Flood frequency is also referred to as recurrence interval and return period.
forebay	A storage reservoir that is upstream from a generating or pumping plant.

Term	Definition
greenhouse gas (GHG) emissions	Also referred to as carbon intensity or carbon footprint. Various water use activities (and other activities) can involve the use of substantial amounts of carbon-based energy, which in turn results in GHG emissions that contribute to the accumulation of GHGs in the atmosphere and is related to climate change.
gross reservoir capacity	The total storage capacity available in a reservoir for all purposes, from the streambed to the normal maximum operating level. Includes inactive storage, but excludes surcharge (water temporarily stored above the elevation of the top of the spillway).
groundwater	Any water naturally stored underground in aquifers or that flows through and saturates soil and rock, supplying springs and wells.
groundwater overdraft	The 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 during which water supply conditions approximate average conditions.
habitat	The specific places where the environmental conditions (i.e., physical and biological conditions) are present that are required to support occupancy by individuals or populations of a given species.
harm	An act that kills or injures wildlife. Such an act may include significant habitat modification or degradation that kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering (50 C.F.R. 17.3).
hydraulics	The study of the practical effects and control of moving water; it is used to refer to the relationship between channel geometry and flow, velocity, and the depth of water.
hydrodynamic	The study of the motion of water. A hydrodynamic model is a tool able to represent the movement of water within a study area. Such a model is typically a numerical computational model.
hydrograph	A chart or graph showing the change in flow over time for a particular stream or river.
hydrology	The science that studies natural runoff and its effects on streamflows.
hydrostatic pressure	The pressure of water at a given depth resulting from the weight of the water above it.
inactive capacity (inactive storage)	Reservoir capacity exclusive of and above the dead capacity, from which the stored water is normally not available because of operating agreements or physical restrictions. Under abnormal conditions, such as a shortage of water or a requirement for structural repairs, water may be evacuated from this space. The inactive capacity extends from the top of inactive capacity to the top of the dead capacity.
incidental take	Take that results from, but is not the purpose of, carrying out an otherwise lawful activity.
instream uses	The beneficial uses of water within a river or stream, such as providing habitat for aquatic life, sport fishing, river rafting, or scenic beauty.
lead agency	The government agency that has the principal responsibility for carrying out or approving a project and, therefore, the principal responsibility for preparing CEQA/NEPA documents. For the NODOS Feasibility Report, DWR is the state lead agency under CEQA, and Reclamation is the federal lead agency under NEPA.
Least-Cost Planning Simulation model (LCPSIM)	Urban economic model to determine the least-cost solution for supply/demand balance.
levee	A natural or artificial embankment that constrains the flow of water to a channel.

## Chapter 12 Glossary

Term	Definition
Level 2 refuge water	The current average annual water supply required to meet existing refuge management needs within the Central Valley.
Level 4 refuge water	The supply required for optimum habitat management within the Central Valley.
Locally Preferred Plan	Project alternative other than the NED Plan that is preferred by the non-Federal sponsor or project proponent.
mean sea level (msl)	The average height of the sea's surface over a long period. MSL is used as a datum plane for the measurements of elevations and depths.
mitigation	Those actions that will minimize the impacts that are projected to occur through project development.
Monterey Agreement	DWR and certain representatives of the SWP contractors agreed in 1994 to a set of principles, known as the Monterey Agreement, to settle long-term water allocation disputes and to establish a new water management strategy for the SWP. The disputes focused on the allocation of shortages in water supply—particularly under what circumstances the initial reductions to agricultural use should be imposed before reducing allocations to urban contractors—and concerned both temporary shortages that occur due to droughts and other temporary causes and the possibility of specified types of permanent shortages of supply of project water.
municipal and industrial (M&I)	Freshwater for urban area and industrial consumptive uses; also known as “urban water.”
National Economic Development (NED)	A plan that reasonably maximizes net national economic development benefits consistent with the Federal objective to contribute to national economic development while protecting the nation's environment.
National Environmental Policy Act (NEPA)	A Federal law passed in 1970 (40 C.F.R. Parts 1501.1–1501.8) requiring Federal lead agencies to prepare and submit for public review Environmental Impact Statements on major Federal projects under their purview with potentially significant environmental effects. NEPA has three levels of analysis: Categorical Exclusion, Environmental Assessment, and Environmental Impact Statement.
non-government organization (NGO)	An organization that is neither a part of a government nor a conventional for-profit business. NGOs may be funded by governments, foundations, businesses, or private persons.
non-native species	Botanical, wildlife, and aquatic species brought into a new area that originate elsewhere. Non-native species may dominate the local species or in some way negatively affect the environment of the native species.
non-project water	Water that is not CVP or SWP water. Refers to other water supplies acquired by CVP and SWP contractors.
normal pool (or reservoir) elevation	The highest elevation at which reservoir water is normally stored. This elevation is usually the spillway crest elevation.
noxious weed	An alien, introduced, or exotic, undesirable plant species that is aggressive and overly competitive with more desirable native species.
offstream storage	A reservoir that is not constructed on a major stream and receives water through conveyance from a remote location. The water supply for the reservoir is diverted from a nearby stream via one or more conveyance facilities to the reservoir.
Operations Criteria and Plan (OCAP)	See <i>CVP Operations Criteria and Plan</i> , above.



Term	Definition
participating agency	<p>Under NEPA, any Federal, State, tribal, regional, or local government agency, other than a lead or cooperating agency, that may have an interest in the implementation of a project. Non-governmental organizations and private entities cannot serve as participating agencies.</p> <p>A cooperating agency is any Federal agency other than a lead agency.</p>
partnering agency	The project proponents that cost-share in the planning, design, construction, and operation of a project.
pelagic fish	<p>Fish that live near the water's surface rather than on the bottom. Pelagic fish include Delta smelt, longfin smelt, striped bass, and salmon.</p> <p>Also refers to fish that live their entire lives in open water (e.g., Delta smelt, longfin smelt, and striped bass).</p>
Principles and Guidelines	<p>Released in 1983 by the U.S. Water Resources Council, the <i>Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies</i>, known as the Principles and Guidelines or P&amp;Gs, established standards and procedures for use by Reclamation and other Federal agencies when formulating, evaluating, and selecting major water projects, including projects related to water supply, navigation, storm resilience, wetland restoration, and flood-damage reduction (WRC 1983).</p> <p>The Water Resources Development Act of 2007 (P.L. 110-114) called for revisions to the 1983 P&amp;Gs. In 2013, <i>Principles, Requirements, and Guidelines for Investments in Water Resources</i> (PR&amp;G) were issued with the intent to revise and replace the 1983 P&amp;Gs.</p>
project yield	Water supply that can be delivered on a long-term basis that is attributed to all features of a project, including integrated operation of units that could be operated individually.
Proposition 1	Approved In November 2014 by California voters, Proposition 1 authorizes \$7.545 billion in general obligation bonds to fund various water-related programs, including \$2.7 billion for new water storage projects. The programs will support the California Water Action Plan (see <i>California Water Action Plan</i> , above)
pumped storage project	A hydroelectric power plant and reservoir system that uses an arrangement whereby water released for generating energy during peak load periods is stored and pumped back into the upper reservoir, usually during periods of reduced power demand.
pumping-generating plant	<p>A plant that can either pump water or generate electricity, depending on the direction of water flow.</p> <p><u>Alternative Definition:</u> A plant with reversible turbine units that may be used to pump water or generate electricity.</p>
range	The geographic area a species is known or believed to occupy.
Reasonable and Prudent Alternative (RPA)	The BiOps prepared by USFWS and NMFS may include RPAs that provide alternative actions to a proposed project that impose certain restrictions on project operations to be protective of the species when a proposed project is found to have the potential to jeopardize endangered species.
Reasonable and Prudent Measure (RPM)	The BiOps prepared by USFWS and NMFS may include RPMs that impose certain restrictions on project operations to be protective of the species.
Reclamation Temperature and Mortality model (RECTEMPMORT)	This model provides monthly average temperature calculations and uses output from CALSIM II.

## Chapter 12 Glossary

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recycled water	Urban wastewater that becomes suitable, as a result of treatment, for a specific beneficial use. Also called reclaimed water.
responsible agency	Under CEQA, an agency other than the lead agency that has legal responsibility for carrying out or approving a project or elements of a project. This agency is required to rely on the lead agency's environmental document in acting on whatever aspect of the project requires its approval, but must prepare and issue its own findings regarding the project (CEQA Guidelines Section 15096 [California Natural Resources Agency 2014]). CDFW, the Office of Historic Preservation, the Central Valley Flood Protection Board, the Air Resources Board, and the Central Valley Regional Water Quality Control Board are responsible agencies for the NODOS Feasibility Report.
restoration	Actions that are viewed as providing recovery to a pre-existing ecological condition.
riparian	Vegetation or other resources associated with a river that are dependent on groundwater and floodwater controlled by the river, the land adjacent to a natural watercourse such as a river or stream, and riparian water rights. Often supports vegetation that provides important wildlife habitat and important fish habitat values when growing large enough to overhang the bank.
riprap	A protective blanket of large, loose stones placed in random fashion on the upstream and downstream faces of embankment dams, streambanks, a reservoir shore, the sides of a channel, or other land surfaces to protect them from erosion or scour caused by current, wind, and/or wave action.
river basin	The area of land from which water drains into a river, usually bounded peripherally by a natural divide of some kind such as a hill. For example, the land area of the Sacramento River Basin drains into the Sacramento River. Also called a drainage area or watershed.
runoff	The volume of surface flow from an area.
saddle dam	A subsidiary dam of any type constructed across a saddle or low point on the perimeter of a reservoir.
salinity	The amount of dissolved salts in a given volume of water. Salinity may be expressed in terms of a concentration or as an EC. When describing salinity influenced by seawater, salinity often refers to the concentration of chlorides in the water. See <i>total dissolved solids, below</i> .
SALMOD	Salmonid population model that incorporates streamflow, water temperature, and habitat type.
salmonid	Fish species belonging to the salmon family, including salmon and trout.
San Francisco Bay/Sacramento–San Joaquin River Delta (Delta)	As described in California Water Code Section 12220, an area that generally extends from Sacramento to the north, Tracy to the south, Interstate 5 to the east, and Collinsville to the west. The Delta covers approximately 738,000 acres.
scour	Removal of soil or fill material by the flow of floodwaters. The term is frequently used to describe storm-induced, localized conical erosion around pilings and other foundation supports where the obstruction of flow increases turbulence.
sediment	Rock and mineral particles transported by water. Sediment relevant to wetlands tends to be relatively fine because the low gradients involved do not transport larger particles.
sedimentation	The deposition by settling of a suspended material.
seepage	The movement of water through a porous material in response to a hydraulic gradient.
seismicity	The frequency, intensity, and distribution of earthquake activity in an area.

Term	Definition
settlement	A downward movement of a surface as a result of underlying soil compression or consolidation caused by an increased load or the loss of underlying soil (foundation) support.
signal spillway	A spillway above the operating high water elevation of the reservoir that is alarmed to alert operators if the level in the reservoir exceeds the high water elevation (most likely due to over pumping). It is not an emergency release structure.
Sites Project Authority (Authority)	The Authority consists of seven member agencies: Reclamation District 108, Tehama-Colusa Canal Authority, Yolo County Flood Control and Conservation District, Maxwell Irrigation District, Glenn-Colusa Irrigation District, the County of Colusa, and the County of Glenn. The Authority formed to pursue the development and construction of Sites Reservoir.
smolt	A young salmon that has assumed the silvery color of the adult and is ready to migrate to the sea.
snags	Fallen branches, any dead or dying standing tree, washed-out shrubs, and small logs. Snags are important for the provision of food, shelter, and breeding places for animals in the water.
special-status species	Federal and State classifications for plant and animal species that are either listed as threatened or endangered, are formally recognized candidates for listing, or are declining to a point where they may be listed.
spillway	A structure that passes normal and/or flood flows in a manner that protects the structural integrity of the dam, an overflow channel of a dam or impoundment structure, or a structure over or through which flow is discharged from a reservoir.
stage	Water surface elevation above an established datum; typically measured in feet above msl.
stakeholder	Anyone who lives in a watershed or has land management, administrative, or other responsibilities or interests in it. Stakeholders may be individuals, businesses, government agencies, or interest groups.
State Water Project (SWP)	A major California State water storage and conveyance system that pumps water from the Delta for agricultural, urban domestic, and industrial purposes. The SWP was authorized by legislation in 1951.
surface water	Water that remains on the earth's surface, in rivers, lakes, reservoirs, or oceans.
suspended load	Sediment that is transported by suspension in the water column of a stream or river.
Sustainable Groundwater Management Act (SGMA)	The California law (2015 Amendments [effective January 1, 2016]; related statutory provisions are SB 1168 [Pavley], AB 1739 [Dickinson], and SB 1319 [Pavley]) that aims for local and regional agencies to develop and implement sustainable groundwater management plans. When fully implemented, SGMA is expected to effectively administer groundwater pumping within the state.
Table A amount	<p>The maximum amount of SWP water that the State has agreed to make available for delivery to a contractor during the year. The State and the SWP contractors also use Table A amounts to serve as a basis for allocation of some SWP costs among the contractors.</p> <p><u>Alternative Definition:</u> The amount of water a contractor is entitled to buy from DWR over a specified period, usually 1 year.</p>

## Chapter 12 Glossary

Term	Definition
take	Take of species under the Federal ESA: To harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Take of species under the CESA: An action to or attempt to hunt, pursue, catch, capture, or kill.
terrestrial species	Types of species of animals and plants that live on or grow from the land.
threatened species	Any species that has the potential to become endangered in the near future.
total dissolved solids (TDS)	A quantitative measure of the residual minerals dissolved in water that remain after evaporation of a solution. Usually expressed in milligrams per liter. See <i>salinity</i> .
trash rack	A metal or reinforced concrete structure placed at the intake of a conduit, pipe, or tunnel that prevents the entrance of debris over a certain size. A device or structure at an intake to prevent floating or submerged debris from entering the intake.
tributary	A stream flowing into a lake or larger stream.
turbidity	A decrease in the transparency of a solution due to the presence of suspended and dissolved substances. This decrease causes incident light to be scattered, reflected, and attenuated rather than transmitted in straight lines; the higher the intensity of the scattered or attenuated light, the higher the value of the turbidity. Generally reported as either Nephelometric Turbidity Units (newer usage) or Fiber Transceiver Units (older usage).
unimpaired flow	The flow past a specified point on a natural stream that is, or would be, unaffected by stream diversion, storage, import, export, return flow, or change in use caused by modifications in land use. Sometimes referred to as historic flow without development.
Upper Sacramento River Daily Operations Model (USRDOM)	A model developed to simulate daily reservoir operations and daily river flows for the Upper Sacramento River.
Upper Sacramento River Temperature/ Water Quality Model (USRWQM)	A model developed to simulate the temperature regime of the Upper Sacramento River and provide estimates of daily average riverine temperature conditions.
vernal pools	Ephemeral wetlands forming in shallow depressions underlain by a substrate near the surface that restricts the percolation of water.
water conveyance capacity	The flow capacity of a channel; used to describe the flow in channels.
water diversions	Withdrawal of water from a water body, some of which might be returned downstream after use.
water quality	Description of the chemical, physical, and biological characteristics of water, usually in regard to its suitability for a particular purpose or use.
Water Quality Control Plan (WQCP)	The WQCP (or Basin Plan) defines and designates beneficial uses of waters, establishes water quality objectives to protect those uses, identifies water quality threats, and outlines corrective measures to be implemented. The WQCP is used to develop discharge limits and guide Regional Water Quality Control Board decisions on specific cases.
water reliability	A measure of a system's ability to sustain the social, environmental, and economic systems that it serves during different types of years (e.g., dry, wet, average years).

Term	Definition
water rights	<p>In water law, refers to the right of a user to use water from a water source (e.g., a river, stream, pond, or source of groundwater). Water rights in California are administered by the State Water Resources Control Board.</p> <p><u>Alternative Definition:</u> A legally protected right to take possession of water occurring in a water supply and to divert it to beneficial uses.</p> <p>Appropriative Water Right – A water right based on physical control over surface water or based on a permit or license for its beneficial use. Appropriative water rights are divided into pre-1914 and post-1914 water rights. Post-1914 rights require a State-issued permit or license for beneficial use.</p> <p>Area of Origin – Water right statutes initiated in 1931 to protect local areas against export of water. These statues have seldom been invoked.</p> <p>Riparian Water Right – A water right based on the ownership of land bordering a river or waterway. A landowner whose property borders a river has a right to use water from that river on his land. This right cannot be transferred apart from the land.</p>
watershed	The area of land from which water drains into a river, usually bounded peripherally by a natural divide of some kind such as a hill. For example, the land area of the Sacramento River Basin drains into the Sacramento River. Also called drainage area or river basin.
waters of the United States	As defined in Section 404 of the Federal Clean Water Act waters of the United States refers to: Navigable waters of the United States, interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or are adjacent to any of the above.
Water Storage Investment Program (WSIP)	A program through which the California Water Commission evaluates applications and allocates \$2.7 billion of bond funding to eligible projects. Funding is limited to eligible projects for benefits associated with: (1) Ecosystem improvements, (2) Water quality improvements in the Delta, or in other river systems, (3) Flood control, 4) Emergency response, and (5) Recreation (WC § 79753).
water transfers	Marketing arrangements that can include the permanent sale of a water right by the water right holder; a lease of the right to use water from the water right holder; and the sale or lease of a contractual right to water supply.
water-year	California's water-year begins on October 1, the beginning of the rainy season, and ends on September 30 in the following year.
wetland	Areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support—and that under normal circumstances do support—a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

## Chapter 12 Glossary

Term	Definition
X2	<p>The location (measured in kilometers from the Golden Gate Bridge) where TDS concentrations are 2 parts per thousand. The length of time X2 must be positioned at set locations in the estuary each month is determined by a formula that considers the previous month's inflow to the Delta and a "Level of Development" factor, denoted by a particular year. X2 is currently used as the primary indicator in managing Delta outflows. The X2 indicator is also used to reflect a variety of biological consequences related to the magnitude of freshwater flowing downstream through the estuary and the upstream flow of saltwater in the lower portion of the estuary. The outflow that determines the location of X2 also affects both the downstream transport of some organisms and the upstream movement of others and affects the overall water operations of the CVP and SWP.</p>