

Water Allocation, Use, and Regulation in California

In California, water use and supplies are controlled and managed under an intricate system of common law principles, constitutional provisions, State and federal statutes, court decisions, and contracts or agreements. All of these components constitute the institutional framework for the protection of public interests and their balance with private claims in California's water allocation and management.¹

Constitutional, Statutory and Common Law Framework for Water Uses

The people of California own all the water in the state. Water rights provide the right to reasonable and beneficial use of the water, not ownership of the water. Public interests are thus involved at every level of water management in California.

Principle of Reasonable and Beneficial Use. California's water law and policy, Article X, Section 2 of the California Constitution, requires that all uses of the state's water be both reasonable and beneficial. It places a significant limitation on water rights by prohibiting the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water. However, the interpretation of what is wasteful can vary significantly depending on the circumstances and may depend on opinions of the State Water Resources Control Board (State Water Board) or ultimately, the courts.

CALIFORNIA CONSTITUTION ARTICLE 10 WATER

SEC. 2. It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare. The right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water. Riparian rights in a stream or water course attach to, but to no more than so much of the flow thereof as may be required or used consistently with this section, for the purposes for which such lands are, or may be made adaptable, in view of such reasonable and beneficial uses; provided, however, that nothing herein contained shall be construed as depriving any riparian owner of the reasonable use of water of the stream to which the owner's land is riparian under reasonable methods of diversion and use, or as depriving any appropriator of water to which the appropriator is lawfully entitled. This section shall be self-executing, and the Legislature may also enact laws in the furtherance of the policy in this section contained.

¹ Editor's note: See also articles in Volume 4 Reference Guide topic Legislation: "Recent Water, Energy, and Related Legislation: Bills Chaptered between 2006 and 2009," and in topic Litigation and Law: "Summary of Significant Litigation 2005-2009."

Public Trust Doctrine Values and Trustees. Rights to use water are subject to State government's obligation under the Public Trust Doctrine as trustee of certain resources for Californians. The Public Trust Doctrine is a legal doctrine that imposes responsibilities on State agencies to protect trust resources associated with California's waterways, such as navigation, fisheries, recreation, ecological preservation and related beneficial uses. In *National Audubon Society v. Superior Court of Alpine County*, the California Supreme Court concluded that the public trust is an affirmation of the duty of the State to protect the people's common heritage of streams, lakes, marshlands, and tidelands, surrendering such protection only in rare cases when the abandonment of that right is consistent with the purposes of the trust. Thus, California agencies have fiduciary obligations to the public when they make decisions affecting trust assets.

In *National Audubon*, the court addressed the relationship between the Public Trust Doctrine and California's water rights system, and integrated them. The court reached three major conclusions:

- 1 The State retains continuing supervisory control over its navigable waters and the lands beneath them. This prevents any party from acquiring a vested right to appropriate water in a manner harmful to the uses protected by the public trust. The State Water Resources Control Board may reconsider past water allocation decisions in light of current knowledge and current needs.
- 2 As a practical matter, it will be necessary for the State to grant usufructuary licenses to allow appropriation of water for uses outside the stream, even though this taking may unavoidably harm the trust uses of the source stream.
- 3 The State has an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible.

Thus, while the State may, as a matter of practical necessity, have to approve appropriations that will cause harm to trust uses, it "must at all times bear in mind its duty as trustee to consider the effect of such taking on the public trust, (cite omitted) and to preserve, so far as consistent with the public interest, the uses protected by the trust."

Surface Water Rights. California's system for surface water rights recognizes both riparian rights and appropriative rights. Riparian rights were adopted in California as a part of the English Common Law when California became a state in 1850. At that time, gold miners were already operating under their own system that recognized claims to water rights based on prior appropriation.

- **Riparian.** A riparian right is the right to divert, but not store, a portion of the natural flow for use based on the ownership of property adjacent to a natural watercourse. Water claimed through a riparian right must be used on the riparian parcel. Such a right is generally attached to the riparian parcel of land except where a riparian right has been preserved for non-contiguous parcels when land is subdivided. Generally, riparian rights are not lost through non-use. All riparian water users have the same priority; senior and junior riparian water rights do not exist. During times of water shortage, all riparian water users must adjust their water use to allow equal sharing of the available water supply.
- **Appropriative.** Under the prior appropriation doctrine, a person may acquire a right to divert, store, and use water regardless of whether the land on which it is used is adjacent to a stream or within its watershed. The rule of priority between appropriators is "first in time is first in right." A senior appropriative water rights holder may not change an established use of the water to the detriment of a junior, including a junior's reliance on a senior's return flow. Acquisition of appropriative water

rights is subject to the issuance of a permit by the State Water Board with priority based on the date a permit is issued. Permit and license provisions do not apply to pre-1914 appropriative rights (those initiated before the Water Commission Act took effect in 1914), but pre-1914 rights are still subject to reasonable and beneficial use. Appropriative rights may be sold or transferred.

Groundwater Use and Management. With the exception of the 19 adjudicated groundwater basins and basins in which a local agency has obtained statutory authority to manage groundwater, any overlying landowner in California has the right to build a well and extract groundwater as long as that groundwater is put to a reasonable and beneficial use. In 1903, the California Supreme Court rejected the English Common Law system of absolute ownership of groundwater, which allowed for unregulated pumping of groundwater. Instead, the court adopted the rule of "reasonable use of percolating waters." This established the doctrine of "correlative rights and reasonable use" under which every landowner in the basin has a right to extract and use groundwater and that right is correlative with the rights of all the overlying landowners in the basin. Those correlative rights are not quantified until the basin is adjudicated. An overlying landowner's right is considered to be analogous to a riparian right to surface water. Groundwater can be appropriated by taking the water for use on non-overlying lands if water is surplus to the reasonable needs of overlying owners.

California does not have a statewide management program or permit system to regulate the extraction and appropriation of groundwater. Courts have recognized that groundwater management is the responsibility of local agencies. In addition to the 19 adjudicated basins in which groundwater extraction is regulated by the watermaster appointed by State or federal courts, some local agencies have obtained statutory authority from the legislature to manage groundwater within their agency's boundaries. Statutory management may be granted to a public agency that also manages surface water, or to a groundwater management agency created expressly for that purpose by a special district act. There are 9 such special districts, but most have not successfully developed groundwater management plans. Several other local agencies have obtained statutory authority to manage groundwater by returning to the legislature and requesting amendments to the Water Code to allow them to manage groundwater. Only a few of these agencies have enacted a groundwater replenishment fee, a groundwater extraction fee, or a recharge fee, all of which are colloquially called a "pump tax." Water resources are specifically referenced in general plan statutes and mandate close coordination of land use and water supply agencies. More recently, some counties have enacted ordinances that are aimed primarily at protecting groundwater resources within their county.

In 1991, the Water Code was amended by AB 255 to allow local water agencies overlying critically overdrafted groundwater basins to develop groundwater management plans. Seven local agencies adopted plans pursuant to that authorization. In 1992, the Water Code was again amended by AB 3030, which authorized water agencies in any groundwater basin to develop a groundwater management plan, if the groundwater was not subject to management under other provisions of law or a court decree. Plans adopted pursuant to the 1992 statute may include, but are not limited to, 12 technical components including control of salt water intrusion; identification and protection of wellhead and recharge areas; regulation of the migration of contaminated water; provisions for abandonment and destruction of wells; mitigation of overdraft; replenishment; monitoring; facilitating conjunctive use; identification of well construction policies; and construction of cleanup, recharge, recycling, and extraction projects by the local agency. About 190 agencies have adopted groundwater management plans in accordance with AB 3030.

The same part of the Water Code (section 10750 et seq.) was amended again in 2002 by SB 1938 and now requires that 5 specific components must be included in a groundwater management plan if the agency applies for State funding made available after September 1, 2002. Even if an agency does not apply for State funding, however, the legislature's intent was to provide standards for groundwater management by prudent groundwater managers. Applicant agencies for funding authorized by AB 303 (Thomson, Chapter 708, Statutes of 2000) are specifically excluded from the required components in that such funding was intended by the legislature to enable under funded local agencies to begin a groundwater management program. Again, however, a prudent manager would strive to meet minimum standards.

Tribal Water Rights. Some Indian reservations and other federal lands have reserved water rights implied from acts of the federal government, rather than state law. When tribal lands were reserved, their natural resources were also reserved for tribal use. Since reserved tribal rights were generally not created by state law, states' water allocations did not account for tribal resources. In the landmark *Winters v. U.S.* case, in 1908 the U.S. Supreme court established that sufficient water was reserved to fulfill the uses of a reservation *at the time the reservation was established*. The decision, however, did not indicate a method for quantifying tribal water rights. *Winters* rights also retain their validity and seniority over state appropriated water whether or not the tribes have put the water to beneficial use. Only after many years did tribes begin to assert and develop their reserved water rights. In 1963 the U.S. Supreme Court decision *Arizona v. California* reaffirmed *Winters* and established a quantification standard based on irrigation, presupposing that tribes would pursue agriculture. Despite criticisms of the "practicably irrigable acreage" (PIA) quantification standard from various perspectives, the PIA standard provided certainty to future water development. Quantifying water needs in terms of agricultural potential does not accurately show the many other needs for water. Even urban water quantity and quality assessments that look at the adequacy of the domestic water supply and sanitation do not provide a complete picture of tribal water needs. A large part of the tribal water needs are for instream flows and other water bodies that support environmental and cultural needs for fishing, hunting, and trapping.

The 1902 Reclamation Act promulgated the establishment of irrigated agriculture and settlement throughout the Western states. Historical perspective indicates this policy was pursued generally without regard to Indian water rights or the 1908 *Winters* decision. In 1952 Congress passed the McCarran Amendment allowing the federal government to waive sovereign immunity and participate in state general stream adjudications. The Court later ruled that state adjudications may also apply to Indian reserved water rights held in trust by the United States. In asserting their *Winters* rights, tribes have come into conflict with water-using development that grew out of substantial federal and private investment. Costly litigation, negotiation, or combinations thereof are the usual means of resolving Indian water disputes, and some cases can take decades to reach agreement. Some tribes request assistance from the federal government to pursue their water rights settlements, reminding concerned parties of the conflicting roles the federal government can assume on two or more sides of a judicial or administrative issue.

The Law of the River. The Colorado River is managed and operated under numerous compacts, federal laws, court decisions and decrees, contracts, and regulatory guidelines collectively known as the "Law of the River." In 1922, the seven Colorado River basin states negotiated the Colorado River Compact, which divided the states into two basins—upper and lower—and apportioned 7.5 million acre-feet per year to each basin. The compact also referenced Mexico's right to the Colorado. The Boulder Canyon Project Act

of 1928 ratified the Compact and established California's apportionment at 4.4 maf/year. In 1944, the United States signed a water treaty in which it agreed to deliver an annual quantity of 1.5 million acre-feet of water annually to Mexico.

While compact negotiators estimated the flow of the river to be at least 17 million acre-feet per year, today's records indicate a flow of 15 million at Lee Ferry, just below Lake Powell. Consequently, the sum of the actual compact apportionments and the Mexican treaty exceed the flow of the river in most years.

Water Contracts. Both the SWP and CVP have contracts to deliver water to water agencies:

- **State Water Project** – The Department of Water Resources (DWR) has long-term water supply contracts for water service from the State Water Project (SWP) with 29 local agencies from Plumas County Flood Control and Water Conservation District in the north to the Metropolitan Water District of Southern California in the south. In return for State financing, constructing, operating, and maintaining facilities needed to provide water service, the agencies contractually agreed to repay all associated SWP capital and operating costs. The Annual Table A represents the total amount of project water that a SWP contractor may request each year, according to that contractor's long-term water supply contract. Depending on hydrologic conditions, the actual delivery may be different than the requested amount. The majority of the SWP goes to urban uses. As a result of amendments to contracts in the 1990s, the current combined maximum annual Table A amount totals 4,172,786 acre-feet for all 29 contractors. The contracts are in effect for the longest of the following periods: (1) the project repayment period, which extends to the year 2035; (2) 75 years from the date of the contract; or (3) the period ending with the latest maturity date of any bond used to finance the construction costs of project facilities.
- **Central Valley Project** – The CVP supplies water to more than 250 long-term water contractors extending from Shasta County in the north to Kern County in the south. The majority of the CVP water goes to agricultural uses. Collectively, the contracts call for a maximum annual delivery of 9.3 million acre-feet; 4.8 million acre-feet is classified as project water; and 4.5 million acre-feet is classified as water right settlement water. Contractors that receive project water repay project capital and operation and maintenance costs. Water right settlement water is water covered in agreements with water rights holders whose diversions existed before the project was constructed. Project operations altered natural river flow upon which these pre-project diverters had relied, so contracts were negotiated to agree on the quantities of diversions that could be made without any payment to the United States. Water rights settlement contractors on the upper Sacramento River receive their supply from natural flow and storage regulated at Shasta Dam. Settlement contractors on the San Joaquin River (called exchange contractors) receive Delta water diverted from the Delta and stored in San Luis Reservoir and/or pumped directly via the Delta-Mendota Canal.

Releases of water for environmental uses. Fish and Game Code Section 5937 provides protection to fisheries by requiring that the owner of any dam allow sufficient water to pass downstream to keep in good condition any fisheries that may be planted or exist below the dam. See the adjoining page for other resource management regulations. See the adjoining page for other environmental regulations.

Water Transfers. Every year, hundreds of water transfers take place between water users within water districts. These districts have their own rules for the initial allocation of water to their users. Water transfers between water districts within the same water basin are becoming more common. Local rules allow districts to transfer water through groundwater banking agreements or other joint water

development projects. In many cases, local rules provide members the right of first refusal to obtain the water before the water is transferred to outside parties. Emergency water transfers are generally exempt from CEQA review.

In 1995 and 1996, the SWP negotiated a set of principles (Monterey Agreement), which among other things, changed the operating rules of the SWP to allow banking and limited water transfers among SWP users. Based on these principles and a final EIR, twenty-seven of the 29 SWP contractors executed the amendment (Monterey Amendment) to their contracts. Based on challenges to the EIR, DWR is preparing a new EIR for the Monterey Amendment.

CVPIA authorized transfer of project water outside the CVP service area, subject to many conditions, including a right of first refusal by entities within the service area. Transfers must be consistent with State law, be approved by USBR, and be approved by the contracting water district if the transfer involves more than 20 percent of its long-term contract supply. USBR has published interim guidelines for administration of this provision, pending formal promulgation of rules and regulations.

In the mid-1980s and 1990s, the Legislature passed several laws making it easier to transfer water beyond the boundaries of historical water service areas. These laws are aimed at protecting water users who are not a party to the transfer and fish and wildlife from being injured or unreasonably affected by the transfer. These laws developed an expedited process for the State Water Board to expand the water rights of those conducting a short-term (one year) water transfer. The process requires State Water Board to make findings within 45 days. Once the findings are made, the water right is modified to allow the water right holder to serve, on a temporary basis, additional places of use or to use alternative points of diversion. The receiving party gets the use of the water, but does not obtain any rights to the water; the water rights are maintained by the original water right holder.

CALFED included actions to facilitate water transfers. The ON TAP website provides information and disclosure of water market information resources for water users.

DWR purchases water for the newly created Environmental Water Account and the Dry Year Program for California. DWR has made it clear in recent water transfer papers that it only will be involved in the purchase of water from willing sellers who include in their proposals monitoring and mitigation programs that resolve possible impacts to other water users and fish and wildlife. DWR has evaluated its role as a water purchaser in light of the legislative guidance provided in the Water Code regarding water transfers. Through this evaluation DWR has defined the nature of the water it wishes to purchase in much the same way that any consumer in the marketplace decides the nature of the products to be purchased. These definitions are seen as a step toward creating a more equitable water market that addresses early in the process the impacts to third parties. These same issues and the development of mechanisms to resolve them are part of a settlement process between northern California water users, the CVP, and the SWP regarding the role northern California should play in making water available to assist in meeting water quality standards in the Delta.

Area of Origin Protections. During the years when California's two largest water projects, the CVP and SWP, were being planned and developed, area of origin provisions were added to the water code to protect local Northern California supplies from being depleted by the projects. County of origin statutes reserve water supplies for counties in which the water originates when, in the judgment of the State Water Board, an application for the assignment or release from priority of State water right filings will deprive

the county of water necessary for its present and future development. Watershed protection statutes are provisions that require that the CVP and the SWP not deprive those in a watershed from the future beneficial water needs.

The Delta Protection Act, enacted in 1959 (not to be confused with the Delta Protection Act of 1992), declares that the maintenance of an adequate water supply in the Delta to maintain and expand agriculture, industry, urban, and recreational development in the Delta area and provide a common source of fresh water for export to areas of water deficiency is necessary for the peace, health, safety, and welfare of the people of the State, and is subject to the County of Origin and Watershed Protection laws. The act requires the SWP and the CVP to provide salinity control in the Delta and an adequate water supply for water users in the Delta.

In 1984, additional area of origin protections were enacted covering the Sacramento, Mokelumne, Calaveras, and San Joaquin Rivers; the combined Truckee, Carson, and Walker Rivers; and Mono Lake. The protections prohibit the export of groundwater from the combined Sacramento River and Delta Basins, unless the export is in compliance with local groundwater plans.

Regulations Protecting Water Quality

Water quality is an important aspect of water resource management. Discussed below are the key State and federal laws governing water quality.

- **Clean Water Act-National Pollutant Discharge Elimination System.** Section 402 of the Clean Water Act established a permit system known as the National Pollutant Discharge Elimination System (NPDES) to regulate point and nonpoint sources of discharges in navigable waters of the United States. The EPA was given the authority to implement the NPDES, although the Act also authorizes states to implement the NPDES program in lieu of the EPA, provided the state has sufficient authority.

After the Clean Water Act was enacted in 1972, US EPA and the states focused primarily on implementing technology-based controls for “point” sources (for example, discharges from pipes from factories and municipal sewage treatment plants). Today, those controls are largely in place, and the focus is beginning to shift to “non-point source” pollution, such as runoff from cities and farms.

- **Porter-Cologne Water Quality Control Act.** This Act is California's comprehensive water quality control law and is a complete regulatory program designed to protect water quality and beneficial uses of the State's water.

The Act requires the adoption of water quality control plans by the State's nine RWQCBs for watersheds within their regions. These plans are nominally reviewed and updated triennially, and their adoption is subject to the approval of the State Water Board and ultimately the federal EPA. Moreover, pursuant to Porter-Cologne, these basin plans shall become part of the California Water Plan, when such plans have been reported to the Legislature (Section 13141, California Water Code).

In 1972, the Legislature amended the Porter-Cologne Act to give California the authority and ability to operate the federal NPDES permits program. Before a permit may be issued,

Section 401 of the Clean Water Act requires that the RWQCB certify that the discharge will comply with applicable water quality standards. In addition, under Porter-Cologne, the RWQCB may also issue waste discharge requirements, that set conditions on the discharge of a waste. These requirements must be consistent with the water quality control plan for the body of water that receives the waste discharge, as well as protect the beneficial uses of those receiving waters.

The regional boards also implement Section 402 of the federal Clean Water Act, which allows the State to issue a single discharge permit for storm water runoff for the purposes of both State and federal law.

- **Safe Drinking Water Act.** The Safe Drinking Water Act (SDWA), enacted in 1974 and significantly amended in 1986 and 1996, directed the EPA to set national standards for drinking water quality. It required the EPA to set maximum contaminant levels for a wide variety of constituents. Local water suppliers are required to monitor their water supplies to assure that regulatory standards are not exceeded.

The Maximum Contaminant Level (MCL) is the maximum concentration of a contaminant that is allowed in public drinking water systems. The 1986 amendments set a timetable for the EPA to establish standards for specific contaminants and increased the range of contaminants local water suppliers were required to monitor to include contaminants that did not yet have an MCL established. The 1986 Safe Drinking Water Act Amendments also led to the EPA's adoption of the Surface Water Treatment Rule, which addresses filtration and disinfection of surface waters. The amendments included a wellhead protection program, a grant program for designating sole-source aquifers for special protection, and grant programs and technical and financial assistance to small systems and states.

The 1996 amendments included stronger regulation of microbial contaminants (i.e. *Cryptosporidium*) while managing levels of disinfection byproducts, source water assessment programs, and establishment of a drinking water state revolving fund. The source water assessment and protection programs offer tools and opportunities to build a prevention barrier to drinking water contamination. Under SDWA, the state is required to develop comprehensive Source Water Assessment Programs that will identify the areas that supply public tap water, inventory contaminants and assess water system susceptibility to contamination, and inform the public of the results.

For every new standard, EPA conducts an analysis to determine if the benefits of the standard justify the costs. If not, EPA may adjust the MCL to a level that "maximizes the health risk reduction benefits at a cost that is justified by the benefits."

- **California Safe Drinking Water Act.** In 1976, California enacted its own Safe Drinking Water Act, requiring DHS to regulate drinking water, including: setting and enforcing federal and State drinking water standards; administering water quality testing programs; and administering permits for public water system operations. In 1989, significant amendments to the California act incorporated the new federal safe drinking water act requirements into California law, gave DHS discretion to set more stringent MCLs, and recommended public health levels for contaminants.

Environmental Laws for Protecting Resources

Several laws outline the State and federal obligations to protect and restore degraded habitats and species.

Protecting Endangered Species and Habitats.

- **Federal Endangered Species Act.** Under the federal ESA, an endangered species is one that is in danger of extinction in all or a significant part of its range, and a threatened species is one that is likely to become endangered in the near future. The ESA is designed to preserve endangered and threatened species by protecting individuals of the species and their habitat and by implementing measures that promote their recovery. The ESA sets forth a procedure for listing species as threatened or endangered. Final listing decisions are made by USFWS or NMFS.

Once a species is listed, Section 7 of the act requires that federal agencies, in consultation with the USFWS or NMFS, ensure that their actions do not jeopardize the continued existence of the species or habitat critical for the survival of that species. The federal wildlife agencies are required to provide an opinion as to whether the federal action would jeopardize the species. The opinion must include reasonable and prudent alternatives to the action that would avoid jeopardizing the species' existence. Federal actions subject to Section 7 include issuance of federal permits such as the dredge and fill permit required under Section 404 of the federal Clean Water Act, which requires that the project proponent demonstrate that there is no feasible alternative consistent with the project goals that would not affect listed species. Mitigation of the proposed project is not considered until this hurdle is passed.

State agencies and private parties also are subject to the ESA. Section 9 of the ESA prohibits the "take" of endangered species and threatened species for which protective regulations have been adopted. Take has been broadly defined to include actions that harm or harass listed species or that cause a significant loss of their habitat. State agencies and private parties are generally required to obtain a permit from the USFWS or NMFS under Section 10(a) of the ESA before carrying out activities that may incidentally result in taking listed species. The permit normally contains conditions to avoid taking listed species and to compensate for habitat adversely impacted by the activities.

- **California Endangered Species Act.** The California Endangered Species Act is similar to the federal ESA. Listing decisions are made by the California Fish and Game Commission. All State lead agencies are required to consult with the Department of Fish and Game about projects that impact State listed species. DFG is required to render an opinion as to whether the proposed project jeopardizes a listed species and to offer alternatives to avoid jeopardy. State agencies must adopt reasonable alternatives unless there are overriding social or economic conditions that make such alternatives infeasible. For projects causing incidental take, DFG is required to specify reasonable and prudent measures to minimize take. Any take that results from activities that are carried out in compliance with these measures is not prohibited.

Many California species are both federally listed and State listed. CESA directs DFG to coordinate with the USFWS and NMFS in the consultation process so that consistent and compatible opinions or findings can be adopted by both federal and State agencies.

- **Natural Community Conservation Planning.** Adopted in 1991, California's Natural Community Conservation Planning Act establishes a program to identify the habitat needs of species before they become listed as threatened or endangered, and to develop appropriate voluntary conservation methods compatible with development and growth. Participants in the program develop plans to protect certain habitat and will ultimately enter into agreements with DFG to ensure that the plans will be carried out. Plans must be created so that they are consistent with endangered species laws.
- **Dredge and Fill Permits.** Section 404 of the federal Clean Water Act regulates the discharge of dredged and fill materials into waters of the United States, including wetlands. The term "discharge of dredged and fill material" has been defined broadly to include the construction of any structure involving rock, soil, or other construction material. No discharge may occur unless a permit is obtained from the US Army Corps of Engineers (USACE). Generally, the project proponent must agree to mitigate or have plans to mitigate environmental impacts caused by the project before a permit is issued. The EPA has the authority to veto permits issued by the USACE for projects that have unacceptable adverse effects on municipal water supplies, fisheries, wildlife, or recreational areas.

Section 404 allows the issuance of a general permit on a state, regional, or nationwide basis for certain categories of activities that will cause only minimal environmental effects. Such activities are permitted without the need of an individual permit application. Installation of a stream gaging station along a river levee is one example of an activity that falls within a nationwide permit.

The USACE also administers a permitting program under Section 10 of the 1899 Rivers and Harbors Act. Section 10 generally requires a permit for obstructions to navigable water. The scope of the permit under Section 10 is narrower than under Section 404 since the term "navigable waters" is more limited than "waters of the United States."

The majority of water development projects must comply with Section 404, Section 10, or both.

- **Public Interest Terms and Conditions.** The Water Code authorizes the State Water Board to impose public interest terms and conditions to conserve the public interest, specifically the consideration of instream beneficial uses, when it issues permits to appropriate water.
- **Local General Plans and Specific Plans.** Local (city and county) general plans and specific plans provide methods to manage and protect fish and wildlife. The Conservation element of a plan provides direction and objectives for the conservation, development and use of natural resources. The Open-Space element of a plan guides the comprehensive, long-range preservation and conservation of open space lands including water bodies.
- **Releases of Water for Fish.** Fish and Game Code Section 5937 provides protection to fisheries by requiring that the owner of any dam allow sufficient water at all times to pass through the dam to keep in good condition any fisheries that may be planted or exist below the dam. In *California Trout, Inc. v. the State Water Resources Control Board* (1989), the court determined that Fish and Game Code sections 5937 and 5946 required the State Water Board to modify the permits and licenses issued to the City of Los Angeles to appropriate water from the streams feeding Mono Lake to ensure sufficient water flows for downstream fisheries. The State Water Board reconsidered Los Angeles' permits and licenses in light of Fish and Game Code Section 5937 and the public trust

doctrine. In 1994, the State Water Board adopted D-1631, which requires Los Angeles to allow sufficient flows from the streams feeding Mono Lake to reach the lake to allow it to rise to the level of 6,391 feet in approximately twenty years.

- **Streambed Alteration Agreements.** Fish and Game Code Sections 1601 and 1603 require that any governmental entity or private party altering a river, stream, lakebed, bottom, or channel enter into an agreement with DFG. When the project may substantially impact an existing fish or wildlife resource, DFG may require that the agreement include provisions designed to protect riparian habitat, fisheries, and wildlife. New water development projects and ongoing maintenance activities are often subject to these sections.
- **Migratory Bird Treaty Act.** This act implements various treaties for the protection of migratory birds and prohibits the "taking" (broadly defined) of birds protected by those treaties without a permit. The Secretary of the Interior determines conditions under which a taking may occur, and criminal penalties are provided for unlawfully taking or transporting protected birds. Liability imposed by this act was one of several factors leading to the decision to close the San Luis Drain and Kesterson Reservoir.
- **Fish and Wildlife Coordination Act.** The Fish and Wildlife Coordination Act expresses congressional policy to protect the quality of the aquatic environment as it affects the conservation, improvement, and enjoyment of fish and wildlife resources. Under this act, any federal agency that proposes to control or modify any body of water, or to issue a permit allowing control or modification of a body of water, must first consult with the USFWS and State wildlife officials. This requires coordination early in the project planning and environmental review processes.
- **CVPIA.** In 1992, the Central Valley Project Improvement Act (Title 34 of PL 102-575) made significant changes to the CVP's legislative authorization, amending the project's purposes to place fish and wildlife mitigation and restoration on a par with water supply, and to place fish and wildlife enhancement on a par with power generation.

See Box: Major Provisions of CVPIA (1992) next page.

Major Provisions of CVPIA (1992)

- No new CVP water supply contracts for purposes other than fish and wildlife (with a few limited exceptions) until all environmental restoration actions specified in the act have been completed.
- Allows transfers of project water to users outside of the CVP service area, under numerous specified conditions including a right of first refusal to a proposed transfer by existing CVP water users (under the same terms and conditions specified in the proposed transfer), and a requirement that proposed transfers of more than 20 percent of a contracting agency's project water supply be subject to review and approval by the contracting agency.
- Requires DOI to develop water conservation criteria, and to review conservation plans submitted by contracting agencies pursuant to Reclamation Reform Act requirements for conformance to the CVPIA criteria. Tiered pricing is to be included in CVP water supply contracts when they are renewed. Project water supply and repayment contractors' surface water delivery systems are to be equipped with water measurement devices.
- All reasonable efforts to double, by 2002, natural production (based on 1967-91 fishery population levels) of specified anadromous fish in the Central Valley, and to implement that program. A portion of the San Joaquin River is exempted from this provision.)
- Dedication of 800 thousand acre-feet per year of CVP yield to fish and wildlife purposes, and acquisition of supplemental water for meeting the fish doubling goal.
- An annual Trinity River instream flow of at least 340 thousand acre-feet through 1996, via releases from Lewiston Dam, with subsequent instream flow requirements to be determined by a USFWS instream flow study.
- Deliver water corresponding to existing non-firm supplies to specified federal, State, and private wildlife refuges in the Sacramento and San Joaquin Valleys. DOI is to acquire, from willing sellers, an additional increment of water supply for the wildlife areas, corresponding to their full habitat development needs. All of the supplemental water needs are to be met by 2002.
- Implementation of numerous specified environmental restoration actions, such as remedying fish passage problems at Red Bluff Diversion Dam, replenishing spawning gravel, and assisting in screening non-federal diversions.
- Preparation of specified reports and studies including a least-cost plan to replace the 800 thousand acre-feet per year of project yield dedicated to environmental purposes, and an evaluation of water supply and development requirements for 120,000 acres of wetlands identified in a Central Valley Habitat Joint Venture report.
- A land retirement program, and specifies categories of land that may be acquired. San Joaquin Valley drainage-impaired lands are among the authorized categories.
- CVPIA restoration fund within the federal treasury to collect mitigation and restoration payments from project water and power users.

Protecting Wild and Natural Areas. Several statutes designed to set aside resources or areas to preserve their natural conditions for habitat, watershed protection, recreational, and scenic values also affect water use and management. These statutes preclude many activities, including most water development projects, within the areas set aside.

- **State and Federal Wild and Scenic Rivers System.** In 1968, Congress passed the National Wild and Scenic Rivers Act to preserve, in their free flowing condition, rivers which possess "outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values." The act also states " . . . that the established national policy of dam and other construction at appropriate sections of rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes."

The act prohibits federal agencies from constructing, authorizing, or funding the construction of water resources projects having a direct and adverse effect on the values for which a river was designated. This restriction also applies to rivers designated for potential addition to the National Wild and Scenic Rivers System. Included in the system are most rivers protected under California's State Wild and Scenic Rivers Act; these rivers were included in the national system upon California's petition on January 19, 1981. The West Walker and East Fork Carson Rivers are not included in the federal system.

In 1972, the Legislature passed the California Wild and Scenic Rivers Act, declaring that specified rivers possess extraordinary scenic, recreational, fishery, or wildlife values, and should be preserved in a free flowing state for the benefit of the people of California. The Act declared that such use of the rivers would be the highest and most beneficial use within the meaning of Article X, Section 2 of the California Constitution. The act prohibits construction of any dam, reservoir, diversion, or other water impoundment on a designated river. Diversions needed to supply domestic water to residents of counties through which the river flows may be authorized, if the Secretary for Resources determines that the diversion will not adversely affect the river's free-flowing character. The major difference between the national and State acts is that if a river is designated wild and scenic under the State act, the Federal Energy Regulatory Commission (FERC) can still issue a license to build a dam on that river, thus overriding the State system. (See Federal Power Act later in this chapter.) This difference explains why national wild and scenic designation is often sought.

- **National Wilderness Act.** The Wilderness Act sets up a system to protect federal land designated by Congress as a "wilderness area" and preserve it in its natural condition. Wilderness is defined as undeveloped federal land retaining its primeval character and influence without permanent improvements or human habitation. Commercial enterprise, permanent roads, motor vehicles, aircraft landings, motorized equipment, or construction of structures or installations (such as dams, diversions, conveyance facilities, and gaging stations) are prohibited within designated wilderness areas.

Watershed Management and Protection Practices. Many State and federal agencies have authority for managing and protecting watershed areas including the State Parks and Recreation system, national forest service lands, public lands administered by the Bureau of Land Management,

and the national park system. Cities and Counties serve as local land management agencies that often coordinate and provide an institutional focus for watershed efforts. In addition, local resource conservation districts and watershed groups assume active roles in management and protection for many watersheds.

Regulating Project Planning, Implementation and Mitigation

Another set of environmental statutes compels governmental agencies and private individuals to document and consider the environmental consequences of their actions. The statutes define the procedures through which governmental agencies must consider environmental factors in their decision-making process.

- **National Environmental Policy Act.** NEPA directs federal agencies to prepare an environmental impact statement (EIS) for all major federal actions that may have a significant effect on the human environment. It states that it is the goal of the federal government to use all practicable means, consistent with other considerations of national policy, to protect and enhance the quality of the environment. It is a procedural law requiring all federal agencies to consider the environmental impacts of their proposed actions during the planning and decision-making processes.

NEPA requires preparation of an EIS to document a major Federal action that could significantly affect the quality of the human environment. An EIS includes the environmental impact of the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented, alternatives to the proposed action, the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented. NEPA does not generally require federal agencies to adopt mitigation measures or alternatives provided in the EIS.

- **California Environmental Quality Act.** CEQA, modeled after NEPA, requires California public agency decision-makers to document and consider the environmental impacts of their actions. It requires an agency to identify ways to avoid or reduce environmental damage, and to implement those measures where feasible. CEQA applies to all levels of California government, including the State, counties, cities, and local districts.

CEQA requires that a public agency carrying out a project with significant environmental effects prepare an environmental impact report (EIR). An EIR contains a description of the project; a discussion of the project's environmental impacts, mitigation measures, and alternatives; public comments; and the agency's responses to the comments. In other instances, a notice of exemption from the application of CEQA may also be appropriate.

CEQA imposes substantive duties on all California governmental agencies that approve projects with significant environmental impacts to adopt feasible alternatives or mitigation measures that substantially lessen these impacts, unless there are overriding reasons. When a project is subject to both CEQA and NEPA, both laws encourage the State and federal agencies to cooperate in planning the project and to prepare joint environmental documents.

Regulations for Water Use Efficiency

Article X, Section 2 of the California Constitution prohibits the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water. It also declares that the conservation and use of water "shall be exercised with a view to the reasonable and beneficial use thereof in the public interest and for the public welfare." Although provisions and requirements of the Constitution are self-executing, the Constitution states that the Legislature may enact statutes to advance its policy. Water Code Section 275 directs DWR and State Water Board to "take all appropriate proceedings or actions before executive, legislative, or judicial agencies to prevent waste or unreasonable use of water." State Water Board's Water Right Decision 1600, directing the Imperial Irrigation District to adopt a water conservation plan, is an example of an action brought under Article X, Section 2. State Water Board's authority to order preparation of such a plan was upheld in 1990 by the courts in *Imperial Irrigation District v. State Water Resources Control Board*. Other complaints have been pending before the Board for years including some which pose the question of whether continued irrigation of soils known to contain toxic concentrations of selenium and other contaminants constitute either reasonable or beneficial use when measured against their known impacts.

- **Urban Water Management Planning Act.** Since 1983, this act has required urban water suppliers that serve more than 3,000 customers or more than 3,000 acre-feet per year to prepare and adopt urban water conservation plans. The act authorizes the supplier to implement the water conservation program. The plans must contain several specified elements, including estimates of water use, identification of existing conservation measures, identification of alternative conservation measures, a schedule of implementation of actions proposed by the plan, and identification of the frequency and magnitude of water shortages. In 1991, the act was amended in response to the drought to require water suppliers to estimate water supplies available at the end of one, two, and three years, and to develop contingency plans for severe shortages. The act also requires water suppliers to review and update their plans at least once every five years. New requirements for urban water management plans are periodically passed by the State legislature (see SB 610, SB 672, and SB 1518 in Section 2.6.9).
- **Water Conservation in Landscaping Act.** The Water Conservation in Landscaping Act required DWR, with the assistance of an advisory task force, to adopt a model water-efficient landscape ordinance. The model ordinance was adopted in August 1992, and has been codified in Title 23 of the California Code of Regulations. It establishes methods of conserving water through water budgeting plans, plant use, efficient irrigation, and auditing.

Cities and counties were required to review the model ordinance and adopt a water-efficient landscape ordinance by January 1, 1993, if they had not done so already. Alternatively, cities and counties could make a finding that such an ordinance is unnecessary due to climatic, geological, or topographic conditions, or water availability. If a city or county failed to adopt a water efficient landscape ordinance or make findings by January 31, 1993, the model ordinance became effective in that jurisdiction.

- **Agricultural Water Management Planning Act.** Under this act, agricultural water suppliers supplying more than 50 thousand acre-feet of water annually were required to submit a report to DWR indicating whether a significant opportunity exists to conserve water or reduce the quantity of highly saline or toxic drainage water through improved irrigation water management. The act provided that agricultural water suppliers who indicated that they had an opportunity to conserve

water or reduce the quantity of highly saline or toxic water should prepare a water management plan and submit it to the DWR.

- **Agricultural Water Suppliers Efficient Management Practices Act.** The Agricultural Water Suppliers Efficient Management Practices Act, adopted in 1990, required that DWR establish an advisory committee to review efficient agricultural water management practices. Under the act, DWR was required to offer assistance to agricultural water suppliers seeking to improve the efficiency of their water management practices. The committee developed a Memorandum of Understanding to implement the practices, and to establish an Agricultural Water Management Council. The advisory committee adopted the MOU in October 1996. The MOU was declared in effect in May 1997 after 15 agricultural water suppliers, representing 2 million irrigated acres, had signed. The Council was established and held its first meeting in July 1997. The Council consists of members of the agricultural and environmental communities and other interested parties with the expressed goal for water suppliers to voluntarily develop Water Management Plans and implement Efficient Water Management Practices (EWMPs) to further advance water use efficiency while maintaining and enhancing economic, environmental and social viability and sustainability of soil and crop production.
- **Agricultural Water Conservation and Management Act of 1992** (AB3616, Statutes of 1992). This act gives any public agency that supplies water for agricultural use authority to institute water conservation or efficient management programs. The programs can include irrigation management services, providing information about crop water use, providing irrigation consulting services, improving the supplier's delivery system, providing technical and financial assistance to farmers, encouraging conservation through pricing of water, and monitoring.
- **Water Recycling Act of 1991.** This act describes the environmental benefits and public safety of using recycled water as a reliable and cost-effective method of helping to meet California's water supply needs. It sets a statewide goal to recycle 700 thousand acre-feet per year by the year 2000 and 1 million acre-feet per year by 2010.
- **CALFED Water Use Efficiency Program.** CALFED's Water Use Efficiency Program encourages investments in water use efficiency primarily through its competitive grant/loan program.

Other Regulations

- **Federal Power Act.** The Federal Power Act created a federal licensing system administered by the Federal Energy Regulatory Commission and required that a license be obtained for nonfederal hydroelectric projects proposing to use navigable waters or federal lands. The act contains a clause modeled after a clause in the Reclamation Act of 1902, which disclaims any intent to affect state water rights law. In a number of decisions dating back to the 1940s, the U.S. Supreme Court has attempted to interpret the clause. In some cases they have upheld states rights and in others have held that federal law prevents any state regulation of federally licensed power projects other than determining proprietary water rights. Most recently, in 1994, the U.S. Supreme Court issued a decision referred to as the Elkhorn decision or Tacoma decision (PUD No. 1 of Jefferson County and City of Tacoma v. Washington Department of Ecology) that upheld the state's minimum instream flow requirement as a permissible condition of a Clean Water Act Section 401 certification.