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Central Valley Project: Issues and Legislation

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Central Valley Project: Issues and Legislation

The Central Valley Project (CVP), a federal water project owned and operated by the U.S. Bureau of Reclamation (Reclamation), is one of the world's largest water supply projects. The CVP covers approximately 400 miles in California, from Redding to Bakersfield, and draws from two large river basins: the Sacramento and the San Joaquin. It is composed of 20 dams and reservoirs and numerous pieces of water storage and conveyance infrastructure. In an average year, the CVP delivers more than 7 million acre-feet of water to support irrigated agriculture, municipalities, and fish and wildlife needs, among other purposes. About 75% of CVP water is used for agricultural irrigation, including 7 of California's top 10 agricultural counties. The CVP is operated jointly with the State Water Project (SWP), which provides much of its water to municipal users in Southern California.

CVP water is delivered to users that have contracts with Reclamation, which is part of the Department of the Interior (DOI). These contractors receive varying levels of priority for water deliveries based on several factors, including hydrology, water rights, prior agreements with Reclamation, and regulatory requirements. The Sacramento and San Joaquin Rivers' confluence with the San Francisco Bay (*Bay-Delta* or *Delta*) is a hub for CVP water deliveries; many CVP contractors south of the Delta receive water that is "exported" from north of the Delta.

Development of the CVP resulted in significant changes to the area's natural hydrology. However, construction of most CVP facilities predated major federal natural resources and environmental protection laws. Much of the current debate related to the CVP revolves around how to deal with changes to the hydrologic system that were not significantly mitigated when the project was constructed. Dry conditions sometimes lead to significant curtailments of contracted water supplies. Reclamation has been unable to provide any water supplies to a majority of CVP agricultural water contractors in 4 of the past 12 years (including 2021 and 2022), and in some dry years also has reduced water supplies for senior water rights holders. Wetter-than-normal hydrology since 2023 has improved the CVP's short-term water supply outlook.

Various state and federal proposals have been raised over time and have generated controversy for their potential to affect CVP operations and allocations. The first Trump Administration attempted to increase CVP water supplies for users and proposed changes to long-term operations of the CVP that were finalized in a 2020 record of decision (ROD). California and some environmental organizations opposed these efforts and filed lawsuits to prevent implementation of the changes. In May 2020, the federal district court temporarily prohibited Reclamation from implementing the operational changes. Under the Biden Administration, Reclamation revisited the Trump Administration analysis and implemented an interim operations plan for the CVP while the litigation was pending. In late 2024, the Biden Administration finalized changes to CVP operations in a new ROD. In August 2025, the Trump Administration asked the court to dismiss the litigation as moot. In December 2025, the plaintiffs requested, and the court granted, a voluntary dismissal of the lawsuit without prejudice.

In January 2025, the Trump Administration issued an executive order directing DOI and other agencies to maximize water supplies for users of the CVP, among other things. In December 2025, the Trump Administration issued a new ROD modifying part of the alternative selected in the 2024 ROD. According to Reclamation, actions under the new ROD are expected to increase annual water deliveries to users from the CVP by between 130,000 and 180,000 acre-feet (AF) beyond the 2024 ROD and from the SWP by 120,000-220,000 AF, depending on hydrologic conditions and other assumptions. In March 2026, nongovernmental organizations sued Reclamation, alleging its operation of the CVP and adoption of the December 2025 ROD without reinitiating consultation violated the Endangered Species Act.

Congress has engaged in CVP issues through oversight and legislation, including provisions enacted in the 2016 Water Infrastructure Improvements for the Nation Act (WIIN Act; P.L. 114-322). Among other things, this act authorized changes to CVP operations that were intended to provide increased water supplies for agricultural and municipal contractors under certain circumstances. In the same legislation, Congress authorized funding for new water storage projects with the potential to benefit CVP operations. Some of these operational and construction-related provisions have expired and been proposed for reauthorization. Legislators may conduct oversight of CVP operations and may consider new and amended authorities that aim to bolster CVP water supplies.

SUMMARY

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Contents

Figures

Tables

Appendixes

Contacts

Introduction

The Bureau of Reclamation (Reclamation), part of the Department of the Interior (DOI), operates the multipurpose federal Central Valley Project (CVP) in California, one of the world's largest water storage and conveyance systems. The CVP runs approximately 400 miles in California, from Redding to Bakersfield (**Figure 1**). It supplies water to hundreds of thousands of acres of irrigated agriculture throughout the state, including some of the most valuable cropland in the country. It also provides water to selected state and federal wildlife refuges, as well as to some municipal and industrial (M&I) water users. The CVP's operations are coordinated with the state's other largest water supply project, the state-operated State Water Project (SWP).

This report provides information on hydrologic conditions in California and their impact on state and federal water management, with a focus on deliveries related to the federal CVP. It also summarizes selected issues for Congress related to the CVP.

Recent Developments

California's water supplies are highly variable, with extended drought often followed by extremely wet years. The drought of 2012-2016, widely considered to be among California's most severe droughts in recent history, resulted in major reductions to CVP contractor allocations and economic and environmental impacts throughout the state.[1] The wet winter of 2017 temporarily alleviated those conditions, but October 2019 through September 2022 was the driest three-year period on record (in terms of water years) since 1977 and resulted in renewed delivery curtailments and attention on California's constrained water supplies.[2] The winter of 2022-2023 significantly improved the state's hydrology, but many point to the likelihood of longer-term trends of reduced water availability as posing an ongoing challenge to federal operation of the CVP. How to deal with both short- and long-term drought in the context of the CVP is among the issues confronting policymakers.

Due to the limited available water supplies, any proposed changes to current water operations and allocations associated with the CVP are controversial. Because of the relative scarcity of water in the West and the importance of federal water infrastructure to the region, western water issues are regularly of interest to many lawmakers. Legislation enacted in the 114th Congress (Title II of the Water Infrastructure Improvements for the Nation [WIIN] Act; P.L. 114-322) included several CVP-related sections.[3] These provisions (most of which have since expired) directed pumping to "maximize" water supplies for the CVP (including pumping or "exports" to CVP water users south of the Sacramento and San Joaquin Rivers' confluence with the San Francisco Bay, known as the *Bay-Delta* or *Delta*) in accordance with applicable biological opinions (BiOps) under the Endangered Species Act (ESA; 16 U.S.C. §§1531-1544) for project operations.[4] The provisions

[1] For more information on drought in general, see CRS Report R46911, *Drought in the United States: Science, Policy, and Selected Federal Authorities*, coordinated by Charles V. Stern and Eva Lipiec.

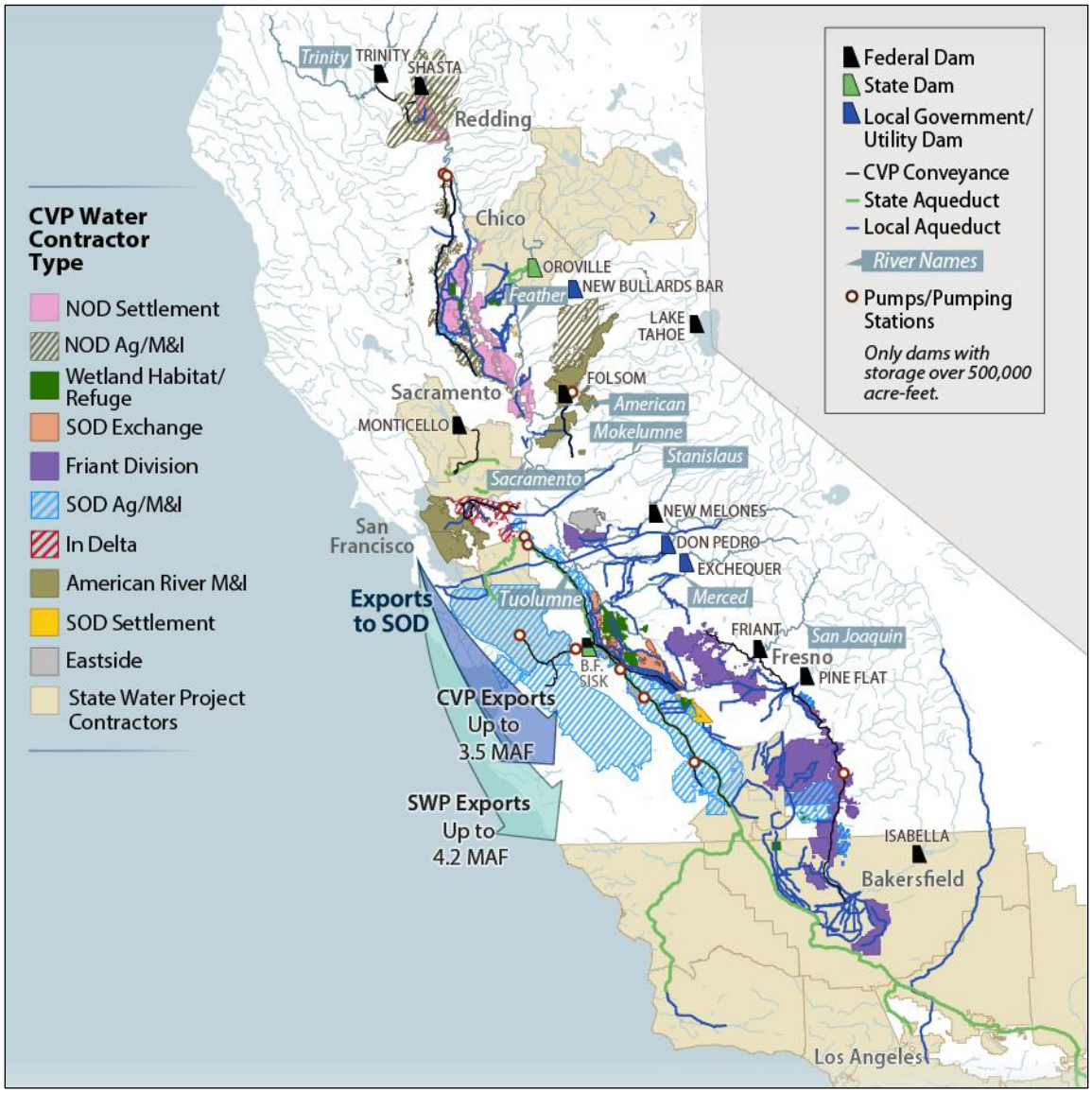
[2] A *water year* is a hydrologic unit for measuring a 12-month total for which precipitation totals are measured. In California, the water year typically is measured from October 1 of one year to September 30 of the following year.

[3] For more information, see CRS Report R44986, *Water Infrastructure Improvements for the Nation (WIIN) Act: Bureau of Reclamation and California Water Provisions*, by Charles V. Stern, Pervaze A. Sheikh, and Nicole T. Carter.

[4] The Endangered Species Act (ESA; 16 U.S.C. §§1531-1544) requires that a federal agency proposing an action that may have an effect on a listed species consult with the U.S. Fish and Wildlife Service or the National Marine Fisheries Service (i.e., regulatory agencies). The agency proposing the action commonly completes a biological assessment on potential effects to the species or its habitat and submits it to the regulatory agency. The regulatory agency then renders (continued...)

also allowed for increased pumping during certain storm events generating high flows, authorized actions to facilitate water transfers, and established a new standard for measuring the effects of water operations on species.

Figure 1. Central Valley Project (CVP) and Related Facilities



Source: Prepared by CRS based on data from the U.S. Bureau of Reclamation, California State Geoportal, U.S. Army Corps of Engineers, and Esri.

Notes: Colored areas are based on water and irrigation district boundaries and do not correspond to the amount of water delivered from the CVP or the State Water Project. NOD = north of Delta; SOD = south of

a biological opinion (BiOp) to the action agency making the proposal. The intent of a BiOp is to ensure that the proposed action will not reduce the likelihood of survival and recovery of an ESA-listed species. BiOps typically include conservation recommendations intended to further recovery of the ESA-listed species. For more information, see CRS Report R46677, *The Endangered Species Act: Overview and Implementation*, by Pervaze A. Sheikh and Erin H. Ward.

Delta; M&I = municipal and industrial water supplies; Ag = agricultural water supplies; SWP = State Water Project; MAF = million acre-feet.

Due to increased precipitation and disagreements with the state, among other factors, the WIIN Act's operational authorities generally did not yield significant new water exports south of the Delta in 2017-2020. Congress has appropriated funding for WIIN Act-authorized water storage project design and construction, and the majority of this funding has gone to CVP-related projects.

State and federal plans implemented pursuant to requirements under the Clean Water Act (CWA; 33 U.S.C. §§1251-1388) and the ESA, respectively, would alter water allocation and operational criteria—and have generated controversy. In mid-2018, the State of California proposed revisions to its Bay-Delta Water Quality Control Plan (developed pursuant to the CWA). These changes, which have not been implemented, would require that more flows from the San Joaquin and Sacramento Rivers reach the California Bay-Delta for water quality and fish and wildlife enhancement (and would thus further reduce water supplies for CVP and SWP users). Actions pursuant to *voluntary agreements* with the state could alter and/or replace some of these requirements. Separately, in February 2020, the first Trump Administration finalized an associated operations plan to increase water supplies for south-of-Delta (SOD) CVP users after issuing a new BiOp under the ESA and an environmental impact statement (EIS) under the National Environmental Policy Act (NEPA; 42 U.S.C. §§4321 et seq.). The BiOp, EIS, and record of decision (ROD) were challenged in court. The ROD and BiOp were implemented for a single water year (2020) before being replaced with a court-ordered interim operations plan (IOP) for water years 2021-2024.[5] On September 30, 2021, the Biden Administration reinitiated consultation with the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) under Section 7 of the ESA. In late 2024, FWS and NMFS issued revised BiOps and Reclamation issued its revised EIS and ROD, thereby replacing the IOPs.

In January 2025, the second Trump Administration issued both a presidential memorandum and an executive order directing DOI and other agencies to maximize water supplies for users of the CVP; identify and override existing activities that "burden" efforts to maximize water deliveries; and, among other things, consider actions consistent with the 2020 Trump Administration ROD. The directives also call for implementing emergency consultation procedures and the exemptions under Section 7 of the ESA.[6] In August 2025, the Trump Administration moved for the litigation over the 2019 BiOps and EIS and 2020 ROD to be dismissed on the basis that the 2024 ROD and associated BiOps and EIS rendered the claims moot.[7] In December 2025, Reclamation issued a new ROD modifying parts of the alternative selected in the 2024 ROD to respond to an executive order directing the Secretaries of the Interior and Commerce to undertake actions to move more water from the Sacramento and San Joaquin Rivers Delta to other parts of the state.[8]

[5] Order re Motions to Remand Without Vacatur, Stay, and Impose Interim Injunctive Relief, Pacific Coast Federation of Fishermen's Association v. Raimondo, No. 1:20-cv-00431, at 112-113 (E.D. Cal. March 11, 2022). The IOP included selected elements of the 2019 BiOp, as well as other plans. For more information, see the "Section 7 Consultation" section.

[6] See White House, "Putting People Over Fish: Stopping Radical Environmentalism to Provide Water to Southern California," presidential memorandum, January 20, 2025, at https://www.whitehouse.gov/presidential-actions/2025/01/putting-people-over-fish-stopping-radical-environmentalism-to-provide-water-to-southern-california/; and Executive Order 14181, "Emergency Measures to Provide Water Resources in California and to Improve Disaster Response in Certain Areas," 90 *Federal Register* 8747, January 24, 2025.

[7] Federal Defendants' Notice of Motion and Motion to Dismiss, Pacific Coast Federation of Fishermen's Associations v. Lutnick, No. 1:20-CV-00431 (E.D. Cal. Aug. 15, 2025).

[8] Reclamation, *Long-Term Operation of the Central Valley Project and State Water Project*, December 4, 2025, https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=57167.

Background

California's Central Valley encompasses almost 20,000 square miles in the center of the state (**Figure 1**). It is bound by the Cascade Range to the north, the Sierra Nevada to the east, the Tehachapi Mountains to the south, and the Coast Ranges and San Francisco Bay to the west. The northern third of the valley is drained by the Sacramento River, and the southern two-thirds of the valley are drained by the San Joaquin River. Historically, this area was home to significant fish and wildlife populations.

The CVP was originally conceived as a state project; the state studied the project as early as 1921, and the California state legislature formally authorized it for construction in 1933. After it became clear that the state was unable to finance the project, the federal government (through the U.S. Army Corps of Engineers, or USACE) assumed control of the CVP as a public works construction project under authority provided under the Rivers and Harbors Act of 1935.[9] The Franklin D. Roosevelt Administration subsequently transferred the project to Reclamation.[10] Construction on the first unit of the CVP (Contra Costa Canal) began in October 1937, with water first delivered in 1940. Additional CVP units were completed over time, and some USACE-constructed units have also been incorporated into the project.[11] The New Melones Unit was the last unit of the CVP to come online; it was completed in 1978 and began operations in 1979.

The CVP made significant changes to California's natural hydrology to develop water supplies for irrigated agriculture, municipalities, and hydropower, among other things. Most of the CVP's major units, however, predated major federal natural resources and environmental protection laws such as ESA and NEPA, among others. Thus, much of the current debate surrounding the project revolves around how to address the project's changes to California's hydrologic system that were not major considerations when it was constructed.

Today, CVP water serves a variety of different purposes for both human uses and fish and wildlife needs. The CVP provides a major source of support for California agriculture, which is first in the nation in terms of farm receipts.[12] CVP water supplies irrigate more than 3 million acres of land in central California and support 7 of California's top 10 agricultural counties. In addition, CVP M&I water provides supplies for approximately 2.5 million people per year. CVP operations are also critical for hydropower, recreation, and fish and wildlife protection. In addition to fisheries habitat, CVP flows support wetlands, which provide habitat for migrating birds.

Overview of the CVP and California Water Infrastructure

California's water infrastructure (**Figure 1**)—which includes an extensive interconnected network of federal, state, local, and private facilities that move water over hundreds of miles around the

[9] 49 Stat. 1028.

[10] Transfer of the project to Reclamation was pursuant to a presidential directive in 1935 and subsequent congressional enactment of the Rivers and Harbors Act of 1937 (50 Stat. 844, 850).

[11] Although Reclamation constructed much of the Central Valley Project (CVP) and maintains control over its operations, the U.S. Army Corps of Engineers (USACE) has also been involved in the project over the course of its history. Some dams, such as Folsom Dam and New Melones Dam, initially were built by USACE but have been turned over to Reclamation for operations and maintenance and incorporated into the CVP. Additionally, USACE constructed and continues to operate several major dams in and around the Central Valley for flood control and other purposes, including Terminus Dam, Isabella Dam, Pine Flat Dam, and Success Dam in the San Joaquin Valley. Since USACE operates these dams for flood control, Reclamation administers contracts to use surplus water from these reservoirs for irrigation.

[12] U.S. Department of Agriculture, Economic Research Service, "Farm Income and Wealth Statistics-Cash Receipts by Commodity State Ranking, 2023," at https://data.ers.usda.gov/reports.aspx?ID=4058.

state—is one of the most complex systems of its kind in the world. Numerous entities throughout the state, including major agricultural and urban economies, as well as a wide variety of terrestrial and aquatic species, depend on the operational decisions underpinning these facilities. As a result, water users and other organizations are often in conflict regarding the decisions related to where and to whom water is delivered, when it is available, and in what quantity. Short- and long-term periods of water scarcity in the state exacerbate these conflicts, many of which have been ongoing on for decades.

The CVP is the largest federal water project in the country. It encompasses 20 dams and reservoirs, 11 power plants, and 500 miles of canals, as well as numerous other conduits, tunnels, and storage and distribution facilities.[13] In an average year, it delivers approximately 5 million acre-feet (AF) of water to farms (including some of the nation's most valuable farmland); 600,000 AF to M&I users; 410,000 AF to wildlife refuges; and 800,000 AF for other fish and wildlife needs, among other purposes. A separate major project owned and operated by the State of California, the SWP, draws water from many of the same sources as the CVP and coordinates its operations with the CVP under several agreements.[14] In contrast to the CVP, the SWP delivers about 70% of its water to urban users (including water for approximately 25 million users in the San Francisco Bay, Central Valley, and Southern California); the remaining 30% is used for irrigation.[15]

At their confluence, the Sacramento and San Joaquin Rivers flow into the San Francisco Bay (the Bay-Delta, or Delta). Operation of the CVP and SWP occurs through the storage, pumping, and conveyance of significant volumes of water from both river basins (as well as trans-basin diversions from the Trinity River Basin in Northern California) for delivery to users. Federal and state pumping facilities in the Delta near Tracy, CA, export water from Northern California to Central and Southern California and are a hub for CVP operations and related debates. In the context of these controversies, *north of Delta* (NOD) and *south of Delta* (SOD) are important categorical distinctions for water users.

CVP storage is spread throughout Northern and Central California. The largest CVP storage facility is Shasta Dam and Reservoir in Northern California (**Figure 2**), which has a capacity of 4.5 million AF. Other major storage facilities, from north to south, include Trinity Dam and Reservoir (2.4 million AF), Folsom Dam and Reservoir (977,000 AF), New Melones Dam and Reservoir (2.4 million AF), Friant Dam and Reservoir (520,000 AF), and San Luis Dam and Reservoir (1.8 million AF of storage, of which half is federal and half is nonfederal).[16]

The CVP also includes numerous water conveyance facilities, the longest of which are the Delta-Mendota Canal (which runs for 117 miles from the federally operated Bill Jones pumping plant in the Bay-Delta to the San Joaquin River near Madera) and the Friant-Kern Canal (which runs 152 miles from Friant Dam to the Kern River near Bakersfield).[17]

Non-CVP water storage and infrastructure is also spread throughout the Central Valley and in some cases is integrated with CVP operations. Major non-CVP storage infrastructure in the Central Valley includes multiple storage projects that are part of the SWP (the largest of which is Oroville Dam and Reservoir in Northern California), as well as private storage facilities (e.g.,

[13] Bureau of Reclamation, "About the Central Valley Project," at http://www.usbr.gov/mp/cvp/about-cvp.html. Hereinafter Reclamation, "About the Central Valley Project."

[14] Reclamation, "About the Central Valley Project."

[15] CRS analysis of Reclamation water project delivery data.

[16] Reclamation project and facility data, available at https://www.usbr.gov/projects/. Hereinafter, "Reclamation project and facility data."

[17] Reclamation project and facility data.

Don Pedro and Exchequer Dams and Reservoirs) and local government-owned dams and infrastructure (e.g., O'Shaughnessy Dam and Hetch-Hetchy Reservoir and Aqueduct, which are owned by the San Francisco Public Utilities Commission).

In addition to its importance for agricultural water supplies, California's Central Valley also provides valuable wetland habitat for migratory birds and other species. As such, it is home to multiple state, federal, and private wildlife refuges north and south of the Delta. Nineteen of these refuges (including 12 refuges within the National Wildlife Refuge system, 6 State Wildlife Areas/Units, and 1 privately managed complex) provide managed wetland habitat that receives water from the CVP and other sources. Five of these units are located in the Sacramento River Basin (i.e., NOD), 12 are in the San Joaquin River Basin, and the remaining 2 are in the Tulare Lake Basin.[18]

Figure 2. Shasta Dam and Reservoir

Source: Bureau of Reclamation.

Central Valley Project Water Contractors and Allocations

Historically, snowpack has accounted for approximately 30% of California's water supplies and is an important factor in determining CVP and SWP allocations. Water from snowpack typically melts in the spring and early summer, and it is stored and made available to meet water needs throughout the state in the summer and fall.[19] By late winter, the state's water supply outlook is typically sufficient for Reclamation to issue the amount of water it expects to deliver to its

[18] Tulare Lake, a freshwater dry lake in the San Joaquin River Valley, historically was one of the largest freshwater lakes west of the Great Lakes. Under most normal (nonflood) conditions, the lake was *terminal*, meaning it had no outlet and did not drain downstream. Damming in the mid-20th century by the USACE of the Kaweah (Terminus Dam), Kern (Isabella Dam), Kings (Pine Flat Dam), and Tule Rivers (Success Dam), coupled with development of the basin for irrigated agriculture, dried up the lake bed under most conditions.

[19] For additional discussion on efforts to supplement existing storage, see below section, "New Storage and Conveyance."

contractors.[20] At that time, Reclamation announces estimated deliveries for its 250 CVP water contractors in the upcoming water year.

More than 9.5 million AF of water per year is *potentially* available from the CVP for delivery based on contracts between Reclamation and CVP contractors.[21] However, most CVP water contracts provide exceptions for Reclamation to reduce water deliveries due to hydrologic conditions and other conditions outside Reclamation's control. As a result of these stipulations, Reclamation rarely delivers the full amount of contracted water to CVP users, and regularly makes cutbacks to actual CVP water deliveries to contractors due to drought and other factors. Reclamation typically forecasts the amount of CVP water expected to be made available to various contractors during the water year (i.e., October-September) in terms of a percentage of the total contract supply. Reclamation also has a specific policy for those contracted to receive M&I water supplies from the CVP, whereby during times of shortage (i.e., any time in which full contract quantities cannot be delivered), these contractors are allocated water in terms of a percentage of their M&I historical use or the amount needed for public health and safety needs, whichever is greater.[22]

Since the early 1980s, an average of about 7 million AF of water has been made available to CVP contractors annually (including 5 million AF to agricultural contractors). However, during drought years deliveries may be significantly less. In the extremely dry water years of 2012-2015, CVP annual deliveries averaged approximately 3.45 million AF.[23]

CVP contractors receive varying levels of priority for water deliveries based on their water rights and other related factors, and some of the largest and most prominent water contractors have a relatively low allocation priority. Major groups of CVP contractors include *water rights* contractors (i.e., senior water rights holders such as the Sacramento River Settlement and San Joaquin River Exchange Contractors, see text box below), NOD and SOD water service and repayment contractors, and Central Valley refuge water contractors. The relative locations for these groups are shown in **Figure 1**.

Water Rights Contractors

California's system of state water rights has a profound effect on who gets how much water and when, particularly during times of drought or other restrictions on water supply. Because the waters of California are considered to be "the property of the people of the State," anyone wishing to use those waters must acquire a right to do so. California follows a dual system of water rights, recognizing both the riparian and prior appropriation doctrines. Under the riparian doctrine, a person who owns land that borders a watercourse has the right to make reasonable use of the water on that land (riparian rights). Riparian rights are reduced proportionally during times of shortage. Under the prior appropriation doctrine, a person who diverts water from a watercourse (regardless of his location relative thereto) and makes reasonable and beneficial use of the water acquires a right to that use of the water (appropriated rights). Appropriated rights are filled in order of seniority during times of shortage. Before exercising the right to use the water, appropriative users must obtain permission from the state through a permit system run by the State Water Resources Control Board (SWRCB).

[20] A *water contractor*, as described in this report, has a contract for specified water deliveries from conveyance structures managed by Reclamation. Reclamation typically estimates these deliveries as a percentage of the total contract allocation to be made available for contractors within certain divisions, geographic areas, and/or contractor types (e.g., south-of-Delta agricultural contractors).

[21] Water service contracts charge users a per-acre-foot rate based on the amount of water delivered. In contrast, repayment contracts (the most common type of Reclamation contract outside of the CVP) charge users based on the amount of water storage allocated to a contractor, among other things.

[22] Bureau of Reclamation, *Central Valley Project Municipal and Industrial Water Shortage Policy Guidelines and Procedures*, Effective February 1, 2017, at https://www.usbr.gov/mp/cvp/mandi.html.

[23] CRS analysis of CVP contract water delivery information by the Bureau of Reclamation, October 3, 2018.

Both the Central Valley Project (CVP) and the State Water Project (SWP) acquired rights for water use from the State of California, receiving several permits for water diversions at various points between 1927 and 1967. Since the Bureau of Reclamation found it necessary to take the water rights of other users to construct the CVP, it entered into *settlement contracts* (north and south of the Delta) and *exchange contracts* (south of the Delta only) with water users who had rights predating the CVP (and thus were senior users in time and right). Many of these special contracts were entered into in areas where water users were diverting water directly from the Sacramento and San Joaquin Rivers.

Sacramento River Settlement Contractors include the contractors (both individuals and districts) that diverted natural flows from the Sacramento River prior to the CVP's construction and executed a settlement agreement with Reclamation that provided for negotiated allocation of water rights (there is also a small group of settlement contractors south of the Delta who entered similar agreements). San Joaquin River Exchange Contractors are the irrigation districts that agreed to "exchange" exercising their water rights to divert water on the San Joaquin and Kings Rivers for guaranteed water deliveries from the CVP (typically in the form of deliveries from the Delta-Mendota Canal and waters north of the Delta). In contrast to water service contractors, water rights contractors receive 100% of their contracted amounts in most water-year types. During water shortages (typically designated as "critical years" based on inflows to Lake Shasta), their annual maximum entitlement may be reduced.

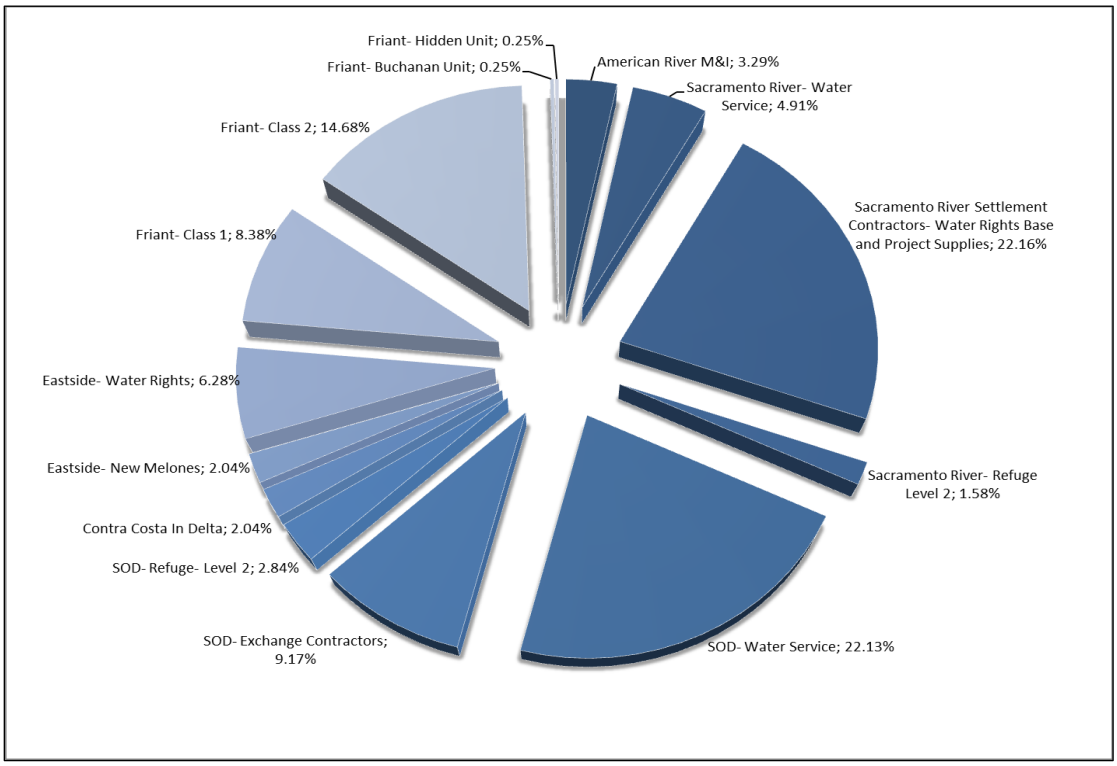
The largest contract holders of CVP water by percentage of total contracted amounts are Sacramento River Settlement Contractors, located on the Sacramento River. The second-largest group are SOD water service contractors (including Westlands Water District, the CVP's largest contractor), located in the area south of the Delta. Other major contractors include the San Joaquin River Exchange Contractors, located west of the San Joaquin River, and Friant Division contractors, located on the east side of the San Joaquin Valley. Central Valley refuges and several smaller contractor groups (e.g., Eastside Contracts, In-Delta-Contra Costa Contracts, and SOD Settlement Contracts) also factor into CVP water allocation discussions.[24]

Figure 3 depicts an approximate division of *maximum* available CVP water deliveries for major contractor groups. Some of these groups and their relative delivery priority are discussed in more detail in the **Appendix** to this report.

[24] Central Valley Project refuges are discussed more in the **Appendix** to this report.

Figure 3. Central Valley Project (CVP): Maximum Contract Amounts

(relative share of total maximum contracted CVP supplies)



Source: CRS, using Bureau of Reclamation Central Valley Project Annual Ratebooks and Schedules as of 2025, available at https://www.usbr.gov/mp/cvpwaterrates/ratebooks/index.html.

Notes: SOD = South of Delta; M&I = municipal and industrial water service contractors. Sacramento River Settlement Contractors includes both "base" water rights supplies (18.6%) and additional CVP "project" supplies (3.5%). For SOD Refuges, the chart does not reflect "Level 4" supplies (for more information on Level 4 supplies, see **Appendix** section, "Central Valley Wildlife Refuges").

CVP Allocations

Reclamation announced its initial allocations for the 2026 water year in February 2026;[25] these allocations typically are revised over the course of the spring based on updated hydrology. Based on forecasted inflow to Shasta Lake, Reclamation designated the 2026 water year as *noncritical*.[26] Reclamation may subsequently revise these allocations.

Table 1 shows recent CVP allocations. Senior water rights contractors and some refuges were initially allocated 100% of their maximum contract allocations in 2026, while other contractors were allocated lesser amounts. Reclamation expected to allocate NOD and SOD agricultural water service and repayment contractors 100% and 15% of their contracted water, respectively, in 2026.[27] In some prior years, these allocations have been increased as a result of late spring

[25] Reclamation, "Reclamation Announces Initial 2026 Water Supply Allocations for Central Valley Project Contractors," February 26, 2026, https://www.usbr.gov/newsroom/news-release/5289. Hereinafter Reclamation, 2026 Initial Allocations.

[26] A *Shasta critical year* is defined as a year in which inflows into Lake Shasta are forecasted to be at or below 3.2 million acre-feet (MAF). This designation triggers specific (reduced) allocations for some contractors and refuges.

[27] Reclamation, 2026 Initial Allocations.

storms.[28] SOD contractors have received their full contract allocations five times since 1990: 1995, 1998, 2006, 2017, and 2023.[29] Since 2024, allocations also have included a *drought reserve pool*, which sets aside a portion of current year water in San Luis Reservoir in case of future droughts.[30]

State Water Project Allocations

The other major water project serving California, the SWP, is operated by California's Department of Water Resources (DWR). The SWP primarily provides water to M&I users and some agricultural users, and it integrates its operations with the CVP. Similar to the CVP, the SWP has more contracted entitlements than it typically makes available in its deliveries. SWP contracted entitlements are 4.17 million AF, but annual deliveries are less than that amount, considerably in some years.

SWP water deliveries were historically low in 2014 and 2015, before rebounding to significantly higher levels in 2017. Due to drought in 2021 and 2022, allocations again fell to historically low levels.[31] SWP water supply allocations for water years 2015-2026 are shown below in **Table 2**. Similar to the CVP, the state updates these allocations as hydrology and other conditions warrant.

[28] For instance, in 2024 NOD and SOD contractors initially received 75% and 15%, respectively, of their contracted supplies, but these allocations were eventually increased to 100% and 50%, respectively. See Bureau of Reclamation, "Reclamation Announces Initial 2024 Water Supply Allocations for Central Valley Project Contractors," press release, February 21, 2024, at https://www.usbr.gov/newsroom/news-release/4743?filterBy=region&region=California-Great%20Basin.

[29] Bureau of Reclamation, "Summary of Water Supply Allocations," at http://www.usbr.gov/mp/cvo/vungvari/water_allocations_historical.pdf.

[30] Reclamation, Initial 2024 Allocations.

[31] California Department of Water Resources, "State Water Project Historical Table A Allocations, 1996-2024," at https://cawaterlibrary.net/document/state-water-project-historical-table-a-allocations-water-years-1996-2024-2/.

Table 1. Central Valley Project (CVP) Contractor Water Allocations by Water Year, 2015-2026

(percentage of maximum contract allocation made available)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026 (est.)
North-of-Delta Users												
Agricultural	0%	100%	100%	100%	100%	50%	5%	0%	100%	100%	100%	100%
M&I	25%	100%	100%	100%	100%	75%	25%	5%	100%	100%	100%	100%
Settlement Contractors	75%	100%	100%	100%	100%	100%	75%	18%	100%	100%	100%	100%
Refuges (Level 2)	75%	100%	100%	100%	100%	100%	75%	18%	100%	100%	100%	100%
American River M&I	25%	100%	100%	100%	100%	75%	55%	15%	100%	100%	100%	100%
In Delta: Contra Costa (M&I)	25%	100%	100%	100%	100%	75%	55%	33%	100%	100%	100%	100%
South-of-Delta Users												
Agricultural	0%	5%	100%	50%	75%	20%	0%	0%	100%	50%	55%	15%
M&I	25%	55%	100%	75%	100%	70%	25%	33%	100%	75%	80%	65%
Exchange/Settlement Contractors	75%	100%	100%	100%	100%	100%	75%	75%	100%	100%	100%	100%
Refuges (Level 2)	75%	100%	100%	100%	100%	100%	75%	75%	100%	100%	100%	100%
Eastside Division	0%	0%	100%	100%	100%	100%	100%	0%	100%	100%	100%	0%
Friant Class 1	0%	65%	100%	88%	100%	65%	40%	30%	100%	95%	100%	100%

Sources: U.S. Bureau of Reclamation, CVP Historical Water Supply Allocations, at https://usbr.gov/mp/cvp-water/allocations.html.

Notes: Water years refer to the period from October 1 to September. In times of shortage, municipal and industrial (M&I) water contractor allocations typically reference a percentage in terms of historic use or public health and safety needs (whichever is greater).

Table 2. California State Water Project Allocations by Water Year, 2015-2026

(percentage of maximum contract allocation)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026 (est.)
Allocation	20%	60%	85%	35%	75%	20%	5%	5%	100%	40%	50%	30%

Source: California Department of Water Resources, "Notices to State Water Project Contractors," at https://water.ca.gov/Programs/State-Water-Project/Management/SWP-Water-Contractors.

Combined CVP/SWP Operations

The CVP and SWP are operated in conjunction under the 1986 Coordinated Operations Agreement (COA), which was executed pursuant to P.L. 99-546.[32] COA defines the rights and responsibilities of the CVP and SWP with respect to in-basin water needs and provides a mechanism to account for those rights and responsibilities. Several major changes to California water supply allocations that occurred since 1986 (e.g., water delivery reductions pursuant to the Central Valley Project Improvement Act [CVPIA], ESA requirements, and new Delta Water Quality Standards, among other things) caused some to argue for renegotiation of the agreement's terms.[33] Dating to 2015, Reclamation and DWR conducted a mutual review of COA but did not agree on revisions. On August 17, 2018, Reclamation provided a Notice of Negotiations to DWR.[34] Following negotiations in fall 2018, Reclamation and DWR agreed to an addendum to COA in December 2018.[35] Whereas the original 1986 agreement included a fixed ratio of 75% CVP/25% SWP for the sharing of regulatory requirements associated with storage withdrawals for Sacramento Valley in-basin uses (e.g., curtailments for water quality and species uses), the revised addendum adjusted the ratio of sharing percentages based on water-year types (**Table 3**).

The 2018 addendum also adjusted the sharing of export capacity under constrained conditions. Whereas under the 1986 COA, export capacity was shared evenly between the CVP and the SWP, under the revised COA the split is to be 60% CVP/40% SWP during excess conditions, and 65% CVP/35% SWP during balanced conditions.[36] Finally, the state also agreed in the 2018 revisions to transport up to 195,000 AF of CVP water through the SWP's California Aqueduct during certain conditions. Recent disagreements related to CVP and SWP operational changes by the federal and state governments, in particular operational changes adopted to meet ESA requirements, have called into question the future of coordinated operations under COA.

[32] "Agreement Between the United States of America and the State of California for Coordinated Operation of the Central Valley Project and the State Water Project," No. 7-07-20-WO551, November 24, 1986.

[33] For example, see Joint Letter to the Bureau of Reclamation from Placer County Water Agency, City of Folsom, Tehama-Colusa Canal Authority et al., March 1, 2016, at http://www.ccwater.com/DocumentCenter/View/1854. For more information on water delivery restrictions as they apply to the CVP, see "Constraints on CVP Deliveries."

[34] Letter from David G. Murillo, Regional Directory, Bureau of Reclamation, to Karla Nemeth, Director, California Department of Water Resources, August 17, 2018.

[35] See Bureau of Reclamation and California Department of Water Resources, *Addendum to the Agreement Between the United States of America and the Department of Water Resources of the State of California for Coordinated Operation of the Central Valley Project and the State Water Project*, December 12, 2018.

[36] "Balanced" conditions refer to those conditions under which reservoir releases and unregulated flows in the Delta are equal to the water supply needed to meet Sacramento Valley in-basin uses plus exports. Excess conditions are periods in which releases and unregulated flows exceed the aforementioned uses.

Table 3. Coordinated Operations Agreement (COA) Regulatory Requirements for CVP/SWP In-Basin Storage Withdrawals

(requirements pursuant to 1986 and 2018 agreements)

Water-Year Type	1986 COA	COA with 2018 Addendum
All	75% CVP, 25% SWP	NA
Wet & Above Normal	NA	80% CVP, 20% SWP
Below Normal	NA	75% CVP, 25% SWP
Dry	NA	65% CVP, 35% SWP
Critically Dry	NA	60% CVP, 40% SWP

Source: *Addendum to the Agreement Between the United States of America and the Department of Water Resources of the State of California for Coordinated Operation of the Central Valley Project and the State Water Project*, December 12, 2018.

CVP/SWP Exports

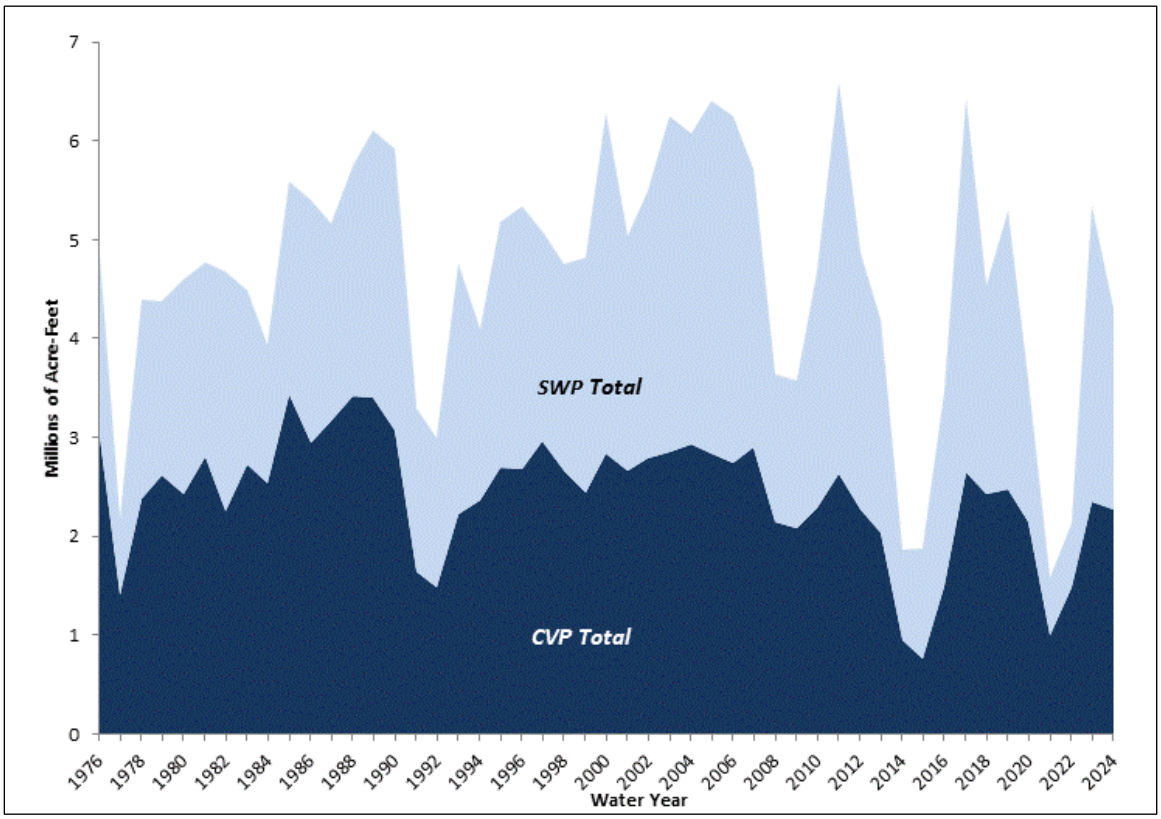
"Exports" reflect trends over time in the transfer of water from north to south of the Bay-Delta by the CVP and SWP, in particular through pumping. Combined CVP and SWP exports (i.e., water transferred from north to south of the Delta) is of interest to many observers because exports are important sources of water supply in central and southern CA. Exports of the CVP and SWP, as well as total combined exports since 1978, have varied over time (**Figure 4**). Combined exports dropped significantly during the 2012-2016 drought and rebounded in 2017-2018, before once again dropping during the most recent drought. Prior to the 2012-2016 drought, overall export levels had increased over time, having averaged more from 2001 to 2011 than over any previous 10-year period. The 6.42 million AF of combined exports in 2017 was the second most on record, behind 6.59 million AF in 2011. In 2024, exports totaled 4.30 million AF.

Despite the aforementioned trends, over time, CVP exports have decreased on average. Additionally, exports for agricultural purposes have declined as a subset of total exports, in part due to those exports being made available for other purposes (e.g., fish and wildlife purposes).

Constraints on CVP Deliveries

Concerns over CVP water supply deliveries persist in part because, even in years with higher levels of precipitation and runoff, some contractors (in particular SOD water service contractors) have regularly received allocations of less than 100% of their contract supplies. Allocations for some users have declined over time; additional environmental requirements in recent decades have reduced water deliveries for human uses. Those factors, coupled with reduced water supplies available in drought years, have led some policymakers and stakeholders to increasingly focus on what can be done to increase water supplies for users. At the same time, others that depend on or advocate for the health of the San Francisco Bay and its tributaries, including fishing and environmental groups and water users throughout Northern California, have argued for maintaining or increasing existing environmental protections (the latter of which would likely further constrain CVP exports).

Figure 4. Central Valley Project (CVP) and State Water Project (SWP) Exports
(1976-2024)



Source: CRS, based on data provided by the U.S. Department of the Interior, Bureau of Reclamation, email communication, November 15, 2024, *Total Annual Pumping at Banks, Jones, and Contra Costa Pumping Plants 1976-2024 (MAF).*

Hydrology and state water rights are the two primary drivers of CVP allocations. However, at least three other regulatory factors affect the timing and amount of water available for delivery to CVP contractors and are regularly the subject of controversy:

- State water quality requirements pursuant to state and federal water quality laws (including the CWA)
- Regulations and court orders pertaining to implementation of the federal ESA[37]
- Implementation of the CVPIA (P.L. 102-575)[38]

Each of these factors is discussed in more detail below.

[37] Requirements of the California Endangered Species Act (CESA) currently are being satisfied through implementation of the federal ESA due to a California state determination that project operations under the federal BiOps are consistent with requirements under CESA. Presumably, if protections afforded to threatened and endangered species under the federal ESA were no longer in place, the State of California could invoke protections under CESA.

[38] P.L. 102-575, Title 34, 106 Stat. 4706.

Water Quality Requirements: Bay-Delta Water Quality Control Plan

California sets water quality standards and issues permits for the discharge of pollutants in compliance with the federal CWA, enacted in 1972.[39] Through the Porter-Cologne Act (a state law), California implements federal CWA requirements and authorizes the State Water Resources Control Board (State Water Board) to adopt water quality control plans, or basin plans.[40] The CVP and the SWP affect water quality in the Bay-Delta depending on how much freshwater the projects release into the area as "unimpaired flows" (thereby affecting area salinity levels).

The first Water Quality Control Plan for the Bay-Delta (Bay-Delta Plan) was issued by the State Water Board in 1978. Since then, there have been three substantive updates to the plan—in 1991, 1995, and 2006. The plans have generally required the SWP and CVP to meet certain water quality and flow objectives in the Delta to maintain desired salinity levels for in-Delta diversions (e.g., water quality levels for in-Delta water supplies) and fish and wildlife, among other things. These objectives often affect the amount and timing of water available to be pumped, or exported, from the Delta and thus at times result in reduced Delta exports to CVP and SWP water users south of the Delta.[41] The Bay-Delta Plan is currently implemented through the State Water Board's Decision 1641 (or D-1641), which was issued in 1999 and placed responsibility for plan implementation on the state's largest two water rights holders, Reclamation and the California DWR.[42]

Pumping restrictions to meet state-set water quality levels—particularly to address salinity—can sometimes be significant. However, the relative magnitude of these effects varies depending on hydrology. For instance, Reclamation estimated that in 2014, water quality restrictions accounted for 176,300 AF, which was roughly 10% of the long-term pumping average for CVP exports that year.[43]

Bay-Delta Plan Update

Updates to the 2006 Bay-Delta Plan (i.e., the Bay-Delta Plan Update) are being carried out in two separate processes: one for the San Joaquin River and Southern Delta, and the other for the Sacramento River and tributaries north of the Delta.[44] In December 2018, the State Water Board adopted amendments to the 2006 Bay-Delta Plan establishing flow objectives and revised salinity

[39] The CWA requires the states to implement water quality standards that designate water uses to be protected and adopt water quality criteria that protect the designated uses. For application to California, see United States v. State Water Resources Control Board (Racanelli), 182 Cal. App. 3d 82, 109 (Cal. Ct. App. 1986).

[40] See Cal. Water Code §13160.

[41] Inability to reach agreement on water quality objectives through deliberation and litigation nearly shut down Delta pumping in the early 1990s and was a significant factor in the creation of the Bay-Delta Accord—a partnership between federal and state agencies with projects, responsibilities, and activities affecting the Delta. Habitat protection commitments in the accord were incorporated into the Bay-Delta Water Quality Control Plan, as were actions called for under the Vernalis Adaptive Management Program, and were included by the State Water Board in D-1641. (See U.S. Department of the Interior (DOI), Bureau of Reclamation, Mid-Pacific Region, *Long-Term Central Valley Project Operations Criteria and Plan*, Sacramento, CA, May 22, 2008, pp. 2-6.)

[42] California Environmental Protection Agency, State Water Resources Control Board, "Revised Water Right Decision 1641," March 15, 2000, at https://www.waterboards.ca.gov/waterrights/board_decisions/adopted_orders/decisions/d1600_d1649/wrd1641_1999dec29.pdf.

[43] Personal communication with the Bureau of Reclamation, October 15, 2015.

[44] For more information, see the State Water Resources Control Board Bay-Delta Plan update page, at https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/.

objectives for the Lower San Joaquin River and Southern Delta.[45] The San Joaquin portion of the Bay-Delta Plan Update requires additional flows to the ocean (generally referred to as *unimpaired flows*) from the San Joaquin River and its tributaries (i.e., the Stanislaus, Tuolumne, and Merced Rivers). Under the proposal, the unimpaired flow requirement for the San Joaquin River is approximately 40% (within a range of 30%-50%); average unimpaired flows currently range from 21% to 40%.[46] The state estimates that the updated version of the plan would reduce water available for human use from the San Joaquin River and its tributaries by between 7% and 23%, on average, depending on the water-year type, but it could reduce these water supplies by as much as 38% during critically dry years.[47] The state also is updating flow requirements on the Sacramento River and its tributaries, and proposed updates to the plan were announced in July 2025 and updated in December 2025.[48] The conditions in the Bay-Delta Plan Update would be implemented through water rights conditions imposed by the State Water Board; originally, these conditions were to be implemented no later than 2022, but they have been delayed by litigation (see below for additional discussion).

According to the state, the Bay-Delta Plan Update establishes a "starting point" for increased river flows but also makes allowances for reduced flow requirements on tributaries where stakeholders have reached so-called *voluntary agreements* (see box below) to pursue both flow and "non-flow" measures, such as habitat restoration projects.[49] Negotiations to finalize these agreements have been ongoing since prior to the passage of the first plan update amendments, and the negotiations involve the state and federal governments as well as numerous stakeholders. If water users do not enter into voluntary agreements to implement the plan update, the board might eventually take actions to require their implementation, such as promulgation of regulations and conditioning of water rights. The proposed updates to the plan include two pathways for water users and agencies to comply with water quality requirements under the plan. One pathway incorporates voluntary agreements that are to be approved, and a second pathway includes regulations for those who do not have approved voluntary agreements. Both pathways are expected to create legal requirements for compliance.

[45] See California State Water Board, *Adoption of Amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and Final Substitute Environmental Document*, Resolution No. 2018-0059, December 12, 2018.

[46] California Water Boards, "State Water Board Seeks Public Comment on Final Draft Bay-Delta Plan Update for the Lower San Joaquin River and Southern Delta," July 6, 2018, at https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/Bay-Delta_Plan_Update_Press_Release.pdf.

[47] California Water Boards, "Summary of Proposed Amendments to the Bay-Delta Water Quality Control Plan," July 6, 2018, at https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/sed/lsjr_sdwq_summary_070618.pdf. "Critically dry" years refers to a classification that is part of a broader index of water-year types for the San Joaquin River; it is calculated based on runoff from the San Joaquin River and its tributaries. A similar index characterizes Sacramento River runoff.

[48] California Water Boards, *Revised Draft Sacramento/Delta Updates to the Bay-Delta Plan*, December 12, 2025, https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/2025/h/dec2025-rev-draft-sacdelta-bdplan.pdf.

[49] California Water Boards, "State Water Board Adopts Bay-Delta Plan Update," press release, December 12, 2018, at https://www.waterboards.ca.gov/press_room/press_releases/2018/pr121218_bay-delta_plan_update.pdf.

Voluntary Agreements

Voluntary agreements are proposed agreements between the State of California and water users that would aim to improve conditions for native fish with new flows for the environment, habitat restoration, and new funding for environmental improvements and science. These agreements, if finalized, would apply in lieu of flow-only measures in the State Water Resources Control Board's update to the Bay-Delta Water Quality Control Plan. The state has created a framework for the agreements, which it expects would be monitored, enforceable, and in place for 15 years. Preliminary estimates for implementing the agreements by the state indicate they will cost approximately $5.2 billion over 15 years. Of this amount, the federal government is assumed to contribute $740 million, the state government would contribute $2.2 billion, and water users would contribute $2.3 billion.

Source: California State Water Resources Control Board, *Proposals for Voluntary Agreements to Update and Implement the Bay-Delta Plan*, May 4, 2023, at https://waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/proposed_voluntary_agreements.html.

Reclamation and its contractors would likely play key roles in implementing any update to the Bay-Delta Plan, as they do in implementing the current Bay-Delta Plan under D-1641. Pursuant to Section 8 of the Reclamation Act of 1902,[50] Reclamation generally defers to state water law in carrying out its authorities, but the proposed Bay-Delta Plan Update has generated controversy. In a July 2018 letter to the State Water Board, the Commissioner of Reclamation opposed the proposed standards for the San Joaquin River, arguing that meeting them would necessitate decreased water in storage at New Melones Reservoir of approximately 315,000 AF per year (a higher amount than estimated by the State Water Board). At the time, Reclamation asserted that such a change would be contrary to the CVP prioritization scheme as established by Congress.[51]

On March 28, 2019, the federal government filed civil actions in federal and state court against the State Water Board for failing to comply with the California Environmental Quality Act (CEQA).[52] The United States' state court lawsuit was consolidated with 11 other cases challenging the Bay-Delta Plan Update.[53] On March 15, 2024, the state court issued an order denying all of the petitioners' claims in the consolidated cases, concluding, among other things, that the State Water Board had complied with its obligations under CEQA.[54] The United States' federal case had been stayed for a period of time, initially to allow for settlement negotiations and

[50] 43 U.S.C. §383.

[51] Letter from Brenda Burman, Commissioner, Bureau of Reclamation, DOI, to Felicia Marcus, Chair, State Water Resources Control Board, July 27, 2018, at https://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/docs/comments_lsjr_finalsed/Brenda_Burman_BOR.pdf. Hereinafter, "Letter from Brenda Burman to Felicia Marcus."

[52] Complaint for Declaratory and Injunctive Relief, United States v. State Water Resources Control Board, No. 2:19-cv-00547 (E.D. Cal. March 28, 2019); Verified Petition for Writ of Mandate Under the California Environmental Quality Act, United States v. State Water Resources Control Board, No. 34-2019-80003111 (Cal. Sup. Ct. March 28, 2019).

[53] Order Granting Petition for Coordination of Add-On Case, State Water Board Cases, JCCP No. 5013 (Cal. Sup. Ct. December 13, 2019) (granting petition to coordinate United States v. State Water Resources Control Board, No. 34-2019-80003111, with coordinated cases in State Water Board Cases, JCCP No. 5013).

[54] Order on the Merits of Petitioners' Claims, State Water Board Cases, JCCP No. 5013 (Cal. Sup. Ct. March 15, 2024). The court issued its final judgment denying the United States' petition a few weeks later on April 3, 2024. Judgment Denying Verified Petition for Writ of Mandate Under California Environmental Quality Act, United States v. State Water Resources Control Board, No. 34-2019-80003111 (Cal. Sup. Ct. April 3, 2024).

later to await issuance of the state court's merits ruling.[55] In light of the state court's judgment, the federal court dismissed the United States' CEQA claims at the United States' request.[56]

Endangered Species Act

Several species listed under the ESA are affected by the operations of the CVP and the SWP.[57] For example, the Delta smelt, a small pelagic fish that was listed as threatened under the ESA in 1993, can be trapped and killed (i.e., "entrained") in CVP and SWP pumps in the Delta. No Delta smelt were found in the annual September midwater trawl survey from 2018 to 2024 (last reported year), marking six years in a row with no smelt found in the September survey.[58]

These results for ESA-listed fish raised concerns for many stakeholders, because a low Delta smelt population could result in greater restrictions on water flowing to users. The survey results also raise larger concerns among stakeholders about the overall health and resilience of the Bay-Delta ecosystem. In addition to Delta smelt, multiple anadromous salmonid species found in the Bay-Delta ecosystem have been listed under the ESA since 1991. These species include the endangered Sacramento River winter-run Chinook salmon, the threatened Central Valley spring-run Chinook salmon, the threatened Central Valley steelhead, threatened Southern Oregon/Northern California Coast coho salmon, and the threatened Central California Coast steelhead.[59] Certain runs of chinook salmon also are faced with population declines in the Bay-Delta. Winter-run chinook salmon population estimates were as high as 120,000 fish in the 1960s and then plummeted to fewer than 200 fish in the 1990s.[60] The population has increased in recent years; however, the number of salmon returning to spawn has recently shown significant variation.[61]

The potential for CVP and SWP operations to affect listed species imposes certain requirements and limitations on those operations, as well as any other activities in the area. In particular,

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[55] Stipulation and Order Staying Case for 120 Days, United States v. State Water Resources Control Board, No. 2:19-cv-00547 (E.D. Cal. June 10, 2021); Order Continuing Stay for 120 Days, United States v. State Water Resources Control Board, No. 2:19-cv-00547 (E.D. Cal. October 6, 2021); Order Regarding Parties' Stipulation, United States v. State Water Resources Control Board, No. 2-19-cv-00547 (E.D. Cal. November 28, 2023).

[56] Notice of Motion and Motion for Entry of Partial Judgment and for Voluntary Dismissal, United States v. State Water Resources Control Board, No. 2-19-cv-00547 (E.D. Cal. July 10, 2024). The United States simultaneously requested that the federal court issue a partial final judgment on the United States' claim asserting a violation of the intergovernmental immunity doctrine, to allow the United States to appeal that decision. Ibid.; Order Directing Clerk of Court to Enter Partial Judgment on Fourth Cause of Action and Approving Voluntary Dismissal of All Other Claims, United States v. State Water Resources Control Board, No. 2:19-cv-00547 (E.D. Cal. July 29, 2024). The United States filed a notice of appeal of that claim to the Ninth Circuit on September 26, 2024. Notice of Appeal, United States v. State Water Resources Control Board, No. 2:19-cv-00547 (E.D. Cal. September 26, 2024).

[57] Act of December 28, 1973, P.L. 93-205; 87 Stat. 884, codified at 16 U.S.C. §§1531 et seq. This report assumes a basic knowledge of the act; an overview of the ESA and its major provisions may be found in CRS Report R46677, *The Endangered Species Act: Overview and Implementation*, by Pervaze A. Sheikh and Erin H. Ward.

[58] See October 2024 data from Fall Midwater Trawl index for Delta smelt at California Department of Fish and Wildlife, "Monthly Abundance Indices," at https://apps.wildlife.ca.gov/FMWT.

[59] *Anadromous* fish are born in freshwater, spend the majority of life in saltwater, and return to freshwater to spawn. Examples include salmon and some species of sturgeon. Winter-run Chinook salmon, listed in 1991, were the first anadromous species listed from the Central Valley. Other species were listed subsequently.

[60] Bureau of Reclamation, *Long-Term Operation Biological Assessment*, November 2023, pp. 5-1 to 5-2. https://deltacouncil.ca.gov/pdf/science-program/review-documents/2024-01-17-chapter-5-winter-run-chinook-salmon.pdf.

[61] California Department of Fish and Wildlife, *CDFW Fisheries Branch Anadromous Resources Assessment - Chinook Salmon*, June 30, 2021, at https://www.calfish.org/ProgramsData/Species/CDFWAnadromousResourceAssessment/tabid/415/Agg1270_SelectTab/2/Default.aspx.

Section 7 of the ESA requires federal agencies to ensure their actions do not jeopardize the continued existence of listed species or adversely modify or destroy designated critical habitat.[62] The Section 7 consultation process and ESA requirements have resulted in modifications to CVP and SWP operations plans over time and a series of lawsuits. From 2020 until 2024, Reclamation and DWR operated the CVP and SWP in accordance with 2019 BiOps and a 2020 ROD, as modified for the 2021 to 2024 water years by IOPs ordered by the court while litigation was pending. In 2024, FWS and NMFS issued new BiOps and Reclamation issued a new ROD for CVP operations plans.[63] In August 2025, the federal government asked the court to dismiss the litigation over the 2019 BiOps and 2020 ROD, arguing such claims were moot in light of the 2024 BiOps and ROD.[64] In December 2025, Reclamation amended the 2024 ROD by issuing a ROD to implement the "Action 5" operations plan, modifying components included in one of the alternatives to the 2024 ROD. The CVP and SWP are presently operating under the 2024 BiOps and ROD as amended by the 2025 Action 5 ROD. On March 2, 2026, the Center for Biological Diversity and other plaintiffs sued Reclamation for exceeding the 2024 BiOp's limit on incidental take of California Central Valley steelhead and North American green sturgeon and for failing to reinitiate consultation on the BiOp after exceeding the incidental take limit and modifying the action to implement the Action 5 operations plan.[65]

Section 7 Consultation

Under Section 7 of the ESA, federal agencies generally must consult with FWS in DOI or NMFS in the Department of Commerce (DOC) to determine whether a federal agency action (e.g., project) is likely to jeopardize the continued existence of species listed under the ESA or to adversely modify critical habitat.[66] If an adverse effect is possible, the agency initiates formal consultation with the applicable service, which generally concludes with FWS or NMFS issuing a BiOp on the potential harm the project poses to the species and critical habitat—specifically, whether the action, as proposed, is likely to jeopardize listed species or adversely modify critical habitat.[67] If the action is likely to jeopardize listed species or adversely modify critical habitat, FWS or NMFS suggests any reasonable and prudent alternatives (RPAs) to the action that may avoid such harm.[68] If the action is not likely to jeopardize listed species or adversely modify critical habitat, or if there are RPAs to the action, then the Service specifies, as necessary and appropriate, reasonable and prudent measures to reduce the harm.[69] The BiOp also includes an incidental take statement (ITS), which authorizes the anticipated amount of incidental take of listed species from the agency's action, provided the agency complies with the terms and

[62] 16 U.S.C. §1536(a)(2).

[63] FWS, *Programmatic Biological Opinion for the Reinitiation of Consultation of the Long-Term Operations of the Central Valley Project and the State Water Project*, November 8, 2024, https://www.usbr.gov/mp/bdo/docs/11.8.24_lto-final-biological-opinion.pdf; NMFS, *Endangered Species Act Section 7(a)(2) Programmatic Biological Opinion for the Reinitiation of Consultation on the Long-Term Operation of the Central Valley Project and State Water Project*, December 6, 2024, https://s3.amazonaws.com/media.fisheries.noaa.gov/2024-12/lto-biological-opinion-appendices-2024.pdf; Bureau of Reclamation, *Record of Decision, Long-Term Operation of the Central Valley Project and State Water Project*, December 2024, at https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=55600.

[64] Federal Defendants' Notice of Motion and Motion to Dismiss, Pacific Coast Federation of Fishermen's Associations v. Lutnick, No. 1:20-CV-00431 (E.D. Cal. Aug. 15, 2025).

[65] Complaint, Center for Biological Diversity v. Bureau of Reclamation, No. 2:26-CV-00671 (E.D. Cal. Mar. 2, 2026).

[66] 16 U.S.C. §1536(a)(2).

[67] 16 U.S.C. §1536(b); 50 C.F.R. §402.14.

[68] 16 U.S.C. §1536(b)(3).

[69] 16 U.S.C. §1536(b)(4).

conditions of the ITS that implement the reasonable and prudent measures.[70] As conditions or plans change, or if the project exceeds the anticipated amount of incidental take specified in the ITS, the project agency may be required to reinitiate consultation and give FWS and NMFS another opportunity to assess the project's effects on species and habitat.

The Section 7 requirements and consultation process, including the resulting BiOps, often have resulted in the modification of CVP and SWP operations. In some cases, Reclamation and DWR have developed operations plans for the CVP and SWP, respectively, in ways that would allow a finding that those operations will not jeopardize a listed species or adversely modify critical habitat. In other cases, FWS and NMFS have identified RPAs in their BiOps that they considered necessary to allow such a finding. Those BiOps are subject to judicial review, as are the underlying operations plans and any associated environmental review conducted pursuant to NEPA.

Biological Opinions and Associated Litigation

CVP and SWP BiOps have been challenged in court and revised by FWS and NMFS over time. Federal courts invalidated a 2004 BiOp by NMFS and a 2005 BiOp by FWS that analyzed a proposed change in SWP and CVP operations known as OCAP (Operations Criteria and Plan).[71] As a result, FWS and NMFS developed new BiOps in 2008 and 2009, respectively.[72] These BiOps both concluded that the coordinated long-term operation of the CVP and SWP, as proposed in Reclamation's 2008 biological assessment (BA), was likely to jeopardize the continued existence of listed species and to destroy or adversely modify designated critical habitat. Accordingly, both BiOps included RPAs designed to allow the CVP and the SWP to continue operating without jeopardizing listed species or destroying or adversely modifying designated critical habitat. The RPAs placed additional restrictions on the amount of water exported via SWP and CVP Delta pumps and other limitations on pumping and release of stored water.[73] Reclamation accepted the BiOps and began project operations consistent with the FWS and NMFS RPAs.

In August 2016, Reclamation and DWR requested reinitiation of consultation on long-term, system-wide operations of the CVP and the SWP based on new information related to multiple years of drought, species decline, and related data.[74] Reclamation issued a new BA on January 31, 2019, discussing the operational changes proposed by Reclamation and mitigation factors to address listed species.[75] The BA proposed various operational measures that, according to Reclamation, would benefit listed species, including a shift to pumping based on real-time

[70] 16 U.S.C. §1536(b)(4).

[71] NRDC v. Kempthorne, 506 F. Supp. 2d 322 (E.D. Cal. 2007); Pacific Coast Federation of Fishermen's Associations v. Gutierrez, 606 F. Supp. 2d 1122 (E.D. Cal. 2008).

[72] U.S. Fish and Wildlife Service, *Formal Endangered Species Act Consultation on the Proposed Coordinated Operations of the Central Valley Project (CVP) and State Water Project (SWP)*, December 15, 2008, at https://usbr.contentdm.oclc.org/digital/collection/p15911coll9/id/8596/; National Marine Fisheries Service, *Biological Opinion and Conference Opinion on the Long-Term Operations of the Central Valley Project and State Water Project*, June 4, 2009, at https://www.fisheries.noaa.gov/resource/document/biological-opinion-and-conference-opinion-long-term-operations-central-valley.

[73] Among other things, the 2009 National Marine Fisheries Service BiOp requires temperature considerations for the benefit of species in the Sacramento River and in the Bay-Delta.

[74] Letter from David Murillo, Regional Director, Bureau of Reclamation, and Mark W. Cowin, Director, Department of Water Resources, to Ren Lohoefener, Pacific Southwest Regional Director, August 2, 2016, at https://www.noaa.gov/sites/default/files/legacy/document/2020/Oct/0.7.115.8365-000003.pdf.

[75] Bureau of Reclamation, *Updates to the Coordinated Long-Term Operation of the CVP and SWP and Related Facilities*, January 2019, at https://www.usbr.gov/mp/bdo/lto.html.

monitoring rather than calendar-based targets, updated science and monitoring information, and a revised plan for cold-water management and releases at Shasta Dam. Nonoperational activities to augment and bolster listed fish populations would include habitat restoration and the introduction of hatchery-bred Delta smelt, among other things.

FWS and NMFS simultaneously issued BiOps for Reclamation's proposed changes to CVP operations on October 21, 2019.[76] In contrast to the 2008 and 2009 BiOps, the 2019 BiOps concluded that Reclamation's proposed operations would not jeopardize threatened or endangered species or adversely modify their designated critical habitat. In reaching these conclusions, FWS and NMFS reported that they worked with Reclamation during the consultation process to modify the proposed action to reduce potential threats to the listed species and their critical habitat and to increase mitigation measures, such as habitat restoration, to support listed species. The final action was modified to include performance metrics for real-time monitoring, cold-water management in Lake Shasta, increased habitat restoration, and a process for independent scientific review, among other things.[77] After issuing the BiOps, Reclamation completed its review of environmental impacts of the proposed action under NEPA,[78] and Reclamation's proposed changes were finalized in an ROD on February 20, 2020.[79]

California and a group of nongovernmental organizations sued the federal government, asserting that the 2019 BiOps and the 2020 ROD violated the ESA, NEPA, and Administrative Procedure Act (APA).[80] All of those plaintiffs asked the court to permanently enjoin the approved operational changes and also to temporarily stay those operations while the litigation was pending.[81] The court granted a temporary stay from May 11 to May 31, 2020, but declined to extend it further.[82] Therefore, the 2019 BiOps and the 2020 ROD were in effect during the 2020 water year, although the litigation challenging those decisions continued. Following the change in

[76] U.S. Fish and Wildlife Service, *Biological Opinion for the Reinitiation of Consultation on the Coordinated Operations of the Central Valley Project and State Water Project*, Service File No. 08FBTD00-2019-F-0164, October 21, 2019; and National Marine Fisheries Service, *Biological Opinion on Long-Term Operation of the Central Valley Project and State Water Project*, WCRO-2016-00069, October 21, 2019, at https://repository.library.noaa.gov/view/noaa/22046.

[77] U.S. Fish and Wildlife Service, *Biological Opinion for the Reinitiation of Consultation on the Coordinated Operations of the Central Valley Project and State Water Project*, Summary, October 21, 2019.

[78] After issuing the BiOps, Reclamation completed its review of environmental impacts of the proposed action under NEPA. Reclamation concluded its NEPA review by issuing an environmental impact statement (EIS) on December 19, 2019, regarding the anticipated environmental effects of the action. Bureau of Reclamation, *Final Environmental Impact Statement, Reinitiation of Consultation on the Coordinated Long-Term Modified Operations of the Central Valley Project and State Water Project*, December 2019, at https://www.usbr.gov/mp/nepa/nepa_project_details.php?Project_ID=39181. Hereinafter, "Final 2019 EIS."

[79] Bureau of Reclamation, R*ecord of Decision, Reinitiation of Consultation on the Coordinated Long-Term Modified Operations of the Central Valley Project and State Water Project*, February 2020, at https://www.usbr.gov/mp/nepa/nepa_project_details.php?Project_ID=39181.

[80] Complaint for Declaratory and Injunctive Relief, California Natural Resources Agency v. Ross, No. 3:20-cv-01299 (N.D. Cal. February 20, 2020).

[81] Complaint for Declaratory and Injunctive Relief at 36, California Natural Resources Agency v. Ross, No. 3:20-cv-01299 (N.D. Cal. February 20, 2020); Plaintiffs' Motion for Preliminary Injunction, Pacific Coast Federation of Fishermen's Associations v. Ross, No. 3:19-cv-07897 (N.D. Cal. March 5, 2020); Plaintiffs' Motion for Preliminary Injunction, California Natural Resources Agency v. Ross, No. 1:20-cv-00426 (E.D. Cal. April 21, 2020).

[82] Order Granting in Part and Denying in Part as Moot Motion for Preliminary Injunction and Holding Certain Issues in Abeyance, California Natural Resources Agency v. Ross, No. 1:20-cv-00426, & Pacific Coast Federation of Fishermen's Association v. Ross, No. 1:20-cv-00431, at 4 (E.D. Cal. May 11, 2020); Order Denying Without Prejudice Motion for Preliminary Injunction as to Shasta Operations, Pacific Coast Federation of Fishermen's Associations v. Ross, No. 1:20-cv-00431, at 4 (E.D. Cal. June 24, 2020).

administration in January 2021, Executive Order 13990 required Reclamation, FWS, and NMFS to reconsider the 2019 BiOps.[83] In response, the court agreed to stay the litigation.[84]

On September 30, 2021, Reclamation and California DWR requested to reinitiate consultation with FWS and NMFS.[85] In the letter, Reclamation stated that reinitiation was warranted due to anticipated changes to the proposed action (i.e., CVP operations) that may affect the species or critical habitat in ways the Services had not analyzed in the 2019 BiOps.[86] Reclamation stated that its goals in revising CVP operations were "to support species viability, protect life history diversity, support operational flexibility, provide regulatory certainty, support science and monitoring, and to create a single feasible adaptable cooperated operation for the CVP and SWP."[87]

When it requested additional consultation, Reclamation stated that it would continue to operate the CVP pursuant to the 2019 BiOps and the 2020 ROD, but it noted that such operations might be modified by interim measures "as required by ongoing drought conditions or as ordered in conjunction with any ongoing litigation."[88] It incorporated those measures into an IOP for the October 1, 2021, to September 30, 2022, water year. Although multiple parties contended that the IOP did not comply with various statutory obligations, the court ultimately issued an injunction for the federal defendants to operate the CVP consistent with the proposed IOP.[89] The court allowed the 2019 BiOps and 2020 ROD to remain in place, as modified by the IOP, while the agencies reconsidered them.[90]

The IOP governed CVP operations under the court's order for water years 2021-2024 while the agencies were reconsidering the BiOps and ROD during the Biden Administration. The IOP for the 2024 water year made minor adjustments to the 2023 water year IOP.[91] The court order allowing Reclamation to operate the CVP consistent with the modified IOP for the 2024 water year extended the stay of the litigation through December 20, 2024, or the issuance of a new ROD—whichever happened first.[92]

[83] 86 *Federal Register* 7037, January 25, 2021.

[84] Order Granting Motion to Stay Until September 30, 2021, Pacific Coast Federation of Fishermen's Associations v. Raimondo, No. 1:20-cv-00431, at 6 (E.D. Cal. August 19, 2021).

[85] Letter from Reclamation to FWS and NMFS, "Reinitiation of Section 7 Consultation for the Long-Term Operation of the Central Valley Project (CVP) and State Water Project (SWP)," September 30, 2021.

[86] Letter from Reclamation to FWS and NMFS, "Reinitiation of Section 7 Consultation for the Long-Term Operation of the Central Valley Project (CVP) and State Water Project (SWP)," September 30, 2021. The Services' regulations include four scenarios that require reinitiation of consultation, including "if the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence." 50 C.F.R. §402.16(a)(3).

[87] Letter from Reclamation to FWS and NMFS, "Reinitiation of Section 7 Consultation for the Long-Term Operation of the Central Valley Project (CVP) and State Water Project (SWP)," September 30, 2021.

[88] Letter from Reclamation to FWS and NMFS, "Reinitiation of Section 7 Consultation for the Long-Term Operation of the Central Valley Project (CVP) and State Water Project (SWP)," September 30, 2021.

[89] Order re Motions to Remand Without Vacatur, Stay, and Impose Interim Injunctive Relief, Pacific Coast Federation of Fishermen's Association v. Raimondo, No. 1:20-cv-00431, at 112-113 (E.D. Cal. March 11, 2022).

[90] Ibid.

[91] Exhibits 1 and 2 to Joint Status Report, Pacific Coast Federation of Fishermen's Associations v. Raimondo, No. 1:20-cv-00431 (E.D. Cal. December 22, 2023).

[92] Order Granting in Part Request to Extend Interim Operations Plan; Denying All Other Alternative Requests for Relief; Denying Motion to Strike as Moot; and Continuing Stay, Pacific Coast Federation of Fisherman's Associations, No. 1:20-cv-00431, p. 3 (E.D. Cal. March 28, 2024).

On November 15, 2024, Reclamation released the final EIS.[93] FWS issued a new BiOp on November 8, 2024,[94] and NMFS issued a separate BiOp on the CVP on December 6, 2024.[95] Reclamation issued a final ROD for CVP operations on December 20, 2024.[96] On December 27, 2024, Reclamation informed the court that it had signed the ROD.[97] In August 2025, the federal government asked the court to dismiss the litigation over the 2019 BiOps and 2020 ROD, arguing such claims were moot in light of the 2024 BiOps and ROD.[98] In December 2025, the plaintiffs asked the court to dismiss their claims without prejudice.[99] The court granted the motion on December 18, 2025, thereby ending the litigation over the 2019 BiOp and 2020 ROD.[100]

Executive Order 14181 and 2025 Record of Decision (ROD) Amending the 2024 ROD

On January 20, 2025, the Trump Administration sent a memorandum to the Secretary of the Interior and Secretary of Commerce directing them to restart work from the first Trump Administration to move more water from the Sacramento and San Joaquin Rivers Delta to other parts of the state.[101] The memorandum also directed the Secretary of the Interior and Secretary of Commerce to submit a progress report within 90 days on implementing policies to achieve the directive, along with recommendations for future implementation. In addition, on January 24, 2025, the Trump Administration issued Executive Order (E.O.) 14181, which addresses, in part, federal water policy in California.[102] The executive order directs multiple agencies to ensure adequate water supplies for California and to "immediately take actions to override existing activities that unduly burden efforts to maximize water deliveries" to users in California. The executive order also directs the Secretary of the Interior to consider actions consistent with the 2020 Trump Administration ROD to maximize water deliveries from the CVP and SWP. Further,

[93] Bureau of Reclamation, *Final Environmental Impact Statement, Long-Term Operation of the Central Valley Project and State Water Project*, November 2024, at https://www.usbr.gov/mp/nepa/nepa_project_details.php?Project_ID=54661. Reclamation also issued a notice of intent to prepare an EIS and a draft EIS. Letter from Reclamation to FWS and NMFS, *Reinitiation of Section 7 Consultation for the Long-Term Operation of the Central Valley Project (CVP) and State Water Project (SWP)*, September 30, 2021, p. 1; 87 *Federal Register* 11093, February 28, 2022.

[94] FWS, *Programmatic Biological Opinion for the Reinitiation of Consultation of the Long-Term Operations of the Central Valley Project and the State Water Project*, November 8, 2024, at https://www.usbr.gov/mp/bdo/docs/11.8.24_lto-final-biological-opinion.pdf.

[95] NMFS, *Endangered Species Act Section 7(a)(2) Programmatic Biological Opinion for the Reinitiation of Consultation on the Long-Term Operation of the Central Valley Project and State Water Project*, December 6, 2024, at https://s3.amazonaws.com/media.fisheries.noaa.gov/2024-12/lto-biological-opinion-appendices-2024.pdf.

[96] Bureau of Reclamation, *Record of Decision, Long-Term Operation of the Central Valley Project and State Water Project*, December 2024, at https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=55600.

[97] Federal Defendants' Notice of Issuance of Record of Decision, Pacific Coast Federation of Fisherman's Associations, No. 1:20-cv-00431 (E.D. Cal. December 27, 2024). For a copy of the record of decision, see Reclamation, *Record of Decision, Long-Term Operation of the Central Valley Project and State Water Project*, December 20, 2024, at https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=55600.

[98] Federal Defendants' Notice of Motion and Motion to Dismiss, Pacific Coast Federation of Fishermen's Associations v. Lutnick, No. 1:20-CV-00431 (E.D. Cal. Aug. 15, 2025).

[99] Stipulation and (Proposed) Order of Dismissal, Pacific Coast Federation of Fisherman's Associations, No. 1:20-cv-00431 (E.D. Cal. December 17, 2025).

[100] Stipulation and Order of Dismissal, Pacific Coast Federation of Fisherman's Associations, No. 1:20-cv-00431 (E.D. Cal. December 18, 2025).

[101] White House, "Putting People Over Fish: Stopping Radical Environmentalism to Provide Water to Southern California," presidential memorandum, January 20, 2025, at https://www.whitehouse.gov/presidential-actions/2025/01/putting-people-over-fish-stopping-radical-environmentalism-to-provide-water-to-southern-california/.

[102] Executive Order 14181, "Emergency Measures to Provide Water Resources in California and Improve Disaster Response in Certain Areas," 90 *Federal Register* 8747, January 24, 2025.

the executive order directs the Secretaries of the Interior and Commerce to expedite the exemption process under the ESA and to develop a plan to "suspend, revise, or rescind any regulations or procedures that unduly burden" water projects, among other things.[103]

In December 2025, Reclamation issued a new ROD modifying parts of the alternative selected in the 2024 ROD with the aim of implementing actions that respond to parts of E.O. 14181.[104] The update, commonly referred to as Action 5, is intended to implement certain initial actions to address parts of the E.O.

Action 5 deviates from the 2024 ROD in several ways. According to Reclamation, Action 5 includes adjustments to Delta export operations,[105] removal of the Delta Summer and Fall Habitat Action (i.e., Fall X2 actions),[106] removal of early export-reduction concepts from the State of California's Healthy Rivers and Landscapes Program,[107] and revisions to the governance structure.[108] According to Reclamation, Action 5 is expected to increase annual water deliveries to users from the CVP by between 130,000 AF and180,000 AF, and from the SWP by 120,000-220,000 AF, depending on hydrologic conditions and whether California adopts Action 5.[109]

FWS and NMFS regulations require federal agencies to reinitiate consultation when, among other triggers, the relevant action is later "modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion."[110] Reclamation asserts that Action 5 is not expected to result in "any significant negative effects to the environment or species listed under the Endangered Species Act."[111] Reclamation contends that the effects of Action 5 to listed species are "within the range of effects analyzed in the 2024 NOAA Fisheries Biological Opinion and 2024 USFWS Biological Opinion."[112] Some other stakeholders disagree, contending that Action 5 could be detrimental to listed fish species and the ecosystem.[113]

[103] Ibid.

[104] Reclamation, *Long-Term Operation of the Central Valley Project and State Water Project*, December 4, 2025, https://www.usbr.gov/mp/nepa/includes/documentShow.php?Doc_ID=57167.

[105] This includes updating Delta operating criteria to include limits for Old and Middle River (OMR) management at no more negative than -5,000 cubic feet per second (cfs), and a stormflex action of -6,500 cfs.

[106] The Fall X2 strategy in California's Delta aims to improve water quality and habitat for Delta smelt in the Suisun Marsh and Grizzly Bay by increasing freshwater flows to the ecosystem to lower salinity.

[107] This program aims to implement voluntary agreements. Voluntary agreements are proposed agreements between the State of California and water users that would aim to improve conditions for native fish with new flows for the environment, habitat restoration, and new funding for environmental improvements and science. See textbox under Bay-Delta Plan Update.

[108] The governance structure aims to ensure that any water-supply restrictions provide measurable benefits to endangered species through predictive, real-time assessment tools.

[109] U.S. Bureau of Reclamation, "Reclamation Updates Long-Term Operation Plan for the Central Valley Project," press release, December 4, 2025, https://www.usbr.gov/newsroom/news-release/5252.

[110] 50 C.F.R. §402.16(a)(3). The federal agency must also have discretionary involvement or control over the action. 50 C.F.R. §402.16(a).

[111] Bureau of Reclamation, *Maximizing Water Deliveries for California*, U.S. Department of Interior, December 4, 2025, https://www.usbr.gov/mp/mpr-news/docs/factsheets/action5-fact-sheet-12-3-2025.pdf.

[112] Bureau of Reclamation, *Maximizing Water Deliveries for California*, U.S. Department of Interior, December 4, 2025, https://www.usbr.gov/mp/mpr-news/docs/factsheets/action5-fact-sheet-12-3-2025.pdf.

[113] For example, see Chaewon Chung, "New Federal Plan for Delta Water Pumping Conflicts with California Requirements," *The Sacramento Bee*, December 6, 2025, https://www.sacbee.com/news/politics-government/capitol-alert/article313412826.html.

On March 2, 2026, the Center for Biological Diversity and other plaintiffs sued Reclamation based on its operation of the CVP and its adoption of Action 5.[114] First, the plaintiffs allege that Reclamation failed to ensure the operation of the CVP was not likely to jeopardize the continued existence of listed species, as required by ESA Section 7(a)(2), by exceeding the 2024 BiOp's limit on incidental take of California Central Valley steelhead and North American green sturgeon.[115] Second, the plaintiffs allege that Reclamation violated ESA Section 7 and the ESA regulations by failing to reinitiate consultation on the BiOp after exceeding the incidental take limit and modifying the action to implement the Action 5 operations plan.[116] Finally, the plaintiffs allege that Reclamation violated ESA Section 9 by taking listed species without authorization after it exceeded the incidental take limit in the BiOp and otherwise failed, in the plaintiffs' view, to comply with terms and conditions of the incidental take statement as required to benefit from the "safe harbor" function of the ITS.[117] The plaintiffs ask the court to declare that Reclamation has violated the ESA and issue an injunction requiring Reclamation to comply with the terms and conditions of the 2024 BiOp until reinitiation of consultation is complete.[118]

Central Valley Project Improvement Act

In an effort to mitigate many of the environmental effects of the CVP, in 1992, Congress passed the CVPIA as Title 34 of P.L. 102-575. The act made major changes to the management of the CVP. Among other things, it formally established fish and wildlife purposes as an official project purpose of the CVP and called for a number of actions to protect, restore, and enhance these resources. Overall, the CVPIA's provisions resulted in a combination of decreased water availability and increased costs for agricultural and M&I contractors, along with new water and funding sources to restore fish and wildlife. Thus, the law remains a source of tension, and some would prefer to see it repealed in part or in full.

Some of the CVPIA's most prominent changes to the CVP included directives to

- double certain anadromous fish populations by 2002 (which did occur);[119]
- allocate 800,000 AF of "(b)(2)" CVP yield (600,000 AF in drought years) to fish and wildlife purposes;[120]
- provide water supplies (in the form of "Level 2" and "Level 4" supplies) for 19 designated Central Valley wildlife refuges;[121] and

[114] Complaint, Center for Biological Diversity v. Bureau of Reclamation, No. 2:26-CV-00671 (E.D. Cal. Mar. 2, 2026).

[115] Complaint, Center for Biological Diversity v. Bureau of Reclamation, No. 2:26-CV-00671, at 32-35 (E.D. Cal. Mar. 2, 2026).

[116] Complaint, Center for Biological Diversity v. Bureau of Reclamation, No. 2:26-CV-00671, at 35-37 (E.D. Cal. Mar. 2, 2026).

[117] Complaint, Center for Biological Diversity v. Bureau of Reclamation, No. 2:26-CV-00671, at 37-38 (E.D. Cal. Mar. 2, 2026).

[118] Complaint, Center for Biological Diversity v. Bureau of Reclamation, No. 2:26-CV-00671, at 38-39 (E.D. Cal. Mar. 2, 2026).

[119] CVPIA's "fish doubling" goal was established on a baseline of average population levels during the period of 1967-1991.

[120] The term "*(b)(2) water*" references the provision in CVPIA that required these allocations.

[121] Authorized refuge water supply under CVPIA is divided into two categories: Level 2 and Level 4 supplies. Level 2 supplies (422,251 acre-feet [AF], except in critically dry years, when the allocation is reduced to 75%) are the historical average of water deliveries to the refuges prior to enactment of CVPIA. Reclamation is obligated to acquire and deliver this water under CVPIA, and costs are 100% reimbursable by CVP contractors through the Central Valley Project Restoration Fund. For more information, see **Appendix**.

- establish a fund, the Central Valley Project Restoration Fund (CVPRF), to be financed by water and power users for habitat restoration and land and water acquisitions.

Pursuant to court rulings since enactment of the legislation, CVPIA (b)(2) allocations may be used to meet other state and federal requirements that reduce exports or require an increase from baseline reservoir releases. Thus, in a given year, the aforementioned export reductions due to state water quality and federal ESA restrictions are counted and reported on annually as (b)(2) water, and in some cases overlap with other stated purposes of CVPIA (e.g., anadromous fish restoration). The exact makeup of (b)(2) water in a given year typically varies. For example, in 2014 (a critically dry year), out of a total of 402,000 AF of (b)(2) water, 176,300 AF (44%) was attributed to export reductions for Bay-Delta Plan water quality requirements.[122] Remaining (b)(2) water was composed of a combination of reservoir releases classified as CVPIA anadromous fish restoration and NMFS BiOp compliance purposes (163,500 AF) and export reductions under the 2009 salmonid BiOp (62,200 AF).[123] In 2016 (a wet year), 793,000 AF of (b)(2) water included 528,000 AF (66%) of export pumping reductions under FWS and NMFS BiOps and 114,500 AF (14%) for Bay-Delta Plan requirements. The remaining water was accounted for as reservoir releases for the anadromous fish restoration programs, the NMFS BiOp, and the Bay-Delta Plan.[124]

Ecosystem Restoration Efforts

Development of the CVP made significant changes to California's natural hydrology. In addition to the aforementioned CVPIA efforts to address some of these impacts, three ongoing, congressionally authorized restoration initiatives administered by Reclamation also factor into federal activities associated with the CVP:

- The Trinity River Restoration Program (TRRP), attempts to mitigate impacts and restore fisheries impacted by construction of the Trinity River Division of the CVP.
- The San Joaquin River Restoration Program (SJRRP) is an ongoing effort to implement a congressionally enacted settlement to restore fisheries in the San Joaquin River.
- The California Bay-Delta Restoration Program aims to restore and protect areas within the Bay-Delta that are affected by the CVP and other activities.

In addition to their habitat restoration activities, both the TRRP and the SJRRP involve the maintenance of instream flow levels that use water that was at one time diverted for other uses. Each effort is discussed briefly below.

Trinity River Restoration Program

TRRP aims to mitigate impacts of the Trinity Division of the CVP and restore fisheries to their levels prior to the Bureau of Reclamation's construction of this division in 1955. The Trinity

[122] Bureau of Reclamation, *Water Year 2014 CVPIA Section 3406(b)(2) Operations and Accounting*, January 28, 2015, at https://www.usbr.gov/mp/cvo/data/FINAL_WY14_b2_presentation.pdf.

[123] Bureau of Reclamation, *Water Year 2014 CVPIA Section 3406(b)(2) Operations and Accounting*, January 28, 2015, at https://www.usbr.gov/mp/cvo/data/FINAL_WY14_b2_presentation.pdf.

[124] Bureau of Reclamation, *Water Year 2016 CVIPA §3406(b)(2) Accounting*, at https://www.usbr.gov/mp/cvo/vungvari/FINAL_wy16_b2_800TAF_table_20170930.pdf.

Division primarily consists of two dams (Trinity and Lewiston Dams), related power facilities, and a series of tunnels (including the 10.7-mile Clear Creek Tunnel) that divert water from the Trinity River Basin to the Sacramento River Basin and Whiskeytown Reservoir. Diversion of Trinity River water resulted in the near drying of the Trinity River in some years, thereby damaging spawning habitat and severely depleting salmon stocks.

Efforts to mitigate the effects of the Trinity Division date back to the early 1980s, when DOI initiated efforts to study the issue and increase Trinity River flows for fisheries. Congress authorized legislation in 1984 (P.L. 98-541) and in 1992 (P.L. 102-575) providing for restoration activities and construction of a fish hatchery, and directed that 340,000 AF per year be reserved for Trinity River flows (a significant increase from the original amount). Congress also mandated completion of a flow evaluation study, which was formalized in a 2000 ROD that called for additional water for instream flows,[125] river channel restoration, and watershed rehabilitation.[126]

The 2000 ROD forms the basis for TRRP. The flow releases outlined in that document have in some years been supplemented to protect fish health in the river, and these increases have been controversial among some water users.

San Joaquin River Restoration Program

Historically, the San Joaquin River supported large Chinook salmon populations. After the Bureau of Reclamation completed Friant Dam on the San Joaquin River in the late 1940s, much of the river's water was diverted for agricultural uses and approximately 60 miles of the river became dry in most years. These conditions made it impossible to support Chinook salmon populations upstream of the Merced River confluence.

In 1988, a coalition of environmental, conservation, and fishing groups advocating for river restoration to support Chinook salmon recovery sued the Bureau of Reclamation. A U.S. District Court judge eventually ruled that operation of Friant Dam was violating state law because of its destruction of downstream fisheries.[127] Faced with mounting legal fees, considerable uncertainty, and the possibility of dramatic cuts to water diversions, the parties agreed to negotiate a settlement instead of proceeding to trial on a remedy regarding the court's ruling. This settlement was agreed to in 2006 and implementing legislation was enacted by Congress in 2010 (Title X of P.L. 111-11).

The settlement agreement and its implementing legislation form the basis for the SJRRP, which requires new releases of CVP water from Friant Dam to restore fisheries (including salmon fisheries) in the San Joaquin River below Friant Dam (which forms Millerton Lake) to the confluence with the Merced River, a distance of 60 miles. The SJRRP also requires efforts to mitigate water supply delivery losses due to these releases, among other things. In combination with the new releases, the settlement's goals are to be achieved through a combination of channel and structural modifications along the San Joaquin River and the reintroduction of Chinook salmon. These activities are funded in part by federal discretionary appropriations and in part by repayment and surcharges paid by CVP Friant water users that are redirected toward the SJRRP as required by P.L. 111-11.

[125] The additional flows outlined in the 2000 record of decision are based on water-year type and range from 369,000 AF in critically dry years to 815,000 AF in extremely wet years. A greater proportion of Trinity River water goes to the river in dry years, and a greater proportion of the water goes to CVP contractors in wet years.

[126] DOI, Record of Decision for Trinity River Mainstem Fishery Restoration Final Environmental Impact Statement/Environmental Impact Report, December 2000, at http://www.restoresjr.net/?wpfb_dl=2163.

[127] Natural Resources Defense Council v. Patterson, 333 F. Supp. 2d 906, 925 (E.D. Cal. 2004).

Because increased water flows for restoring fisheries (known as *restoration flows*) would reduce CVP diversions of water for off-stream purposes, such as irrigation, hydropower, and M&I uses, the settlement and its implementation have been controversial. The quantity of water used for restoration flows and the quantity by which water deliveries would be reduced are related, but the relationship is not necessarily one to one, due to flood flows in some years and other mitigating factors. Under the settlement agreement, no water would be released for restoration purposes in the driest of years; thus, the agreement would not reduce deliveries to Friant contractors in those years. Additionally, in some years, the restoration flows released in late winter and early spring may free up space for additional runoff storage in Millerton Lake, potentially minimizing reductions in deliveries later in the year—assuming Millerton Lake storage is replenished. Consequently, how deliveries to Friant water contractors may be reduced in any given year is likely to depend on many factors. Regardless of the specifics of how much water may be released for fisheries restoration vis-à-vis diverted for off-stream purposes, the SJRRP will impact existing surface and groundwater supplies in and around the Friant Division service area and affect local economies. SJRRP construction activities are in the early stages, but planning efforts have targeted a completion date of 2024 for the first stage of construction efforts.[128]

California Bay-Delta Restoration Program

The California Bay-Delta Restoration Program (also sometimes referred to as the "CALFED" Bay-Delta Restoration Program) is a collaborative effort involving state and federal agencies and representatives of California's urban, agricultural, and environmental communities. The goals of the program are to improve fish and wildlife habitat, water supply reliability, water quality, and levee integrity in the Bay-Delta.

The CALFED program began administratively in 1996, and the CALFED Bay-Delta Restoration Act (P.L. 108-361), enacted in 2004, supplemented those actions with new and expanded federal authorities for seven agencies implementing the existing program. These authorities have been extended on multiple occasions. The current action plan for the Bay-Delta Restoration Program has four objectives: a renewed federal-state partnership, smarter water supply and use, habitat restoration, and drought and floodplain management.[129]

A summary of agency activities under CALFED is generally included as a "crosscut budget" in the Analytical Perspectives section of the Administration's budget request. Reclamation typically spends the majority of this funding on habitat restoration projects to address the degraded Bay-Delta ecosystem.[130] Other agencies also receive funding to carry out authorities under this program, including DOI's FWS and U.S. Geological Survey, the U.S. Department of Agriculture's Natural Resources Conservation Service, USACE, National Oceanic and Atmospheric Administration, and the U.S. Environmental Protection Agency. Similar to Reclamation, these agencies report on expenditures for the CALFED/Bay-Delta program that involve a combination of activities under "base" authorities, and new authorities that Congress enacted in the aforementioned CALFED authorizing legislation.

[128] For more information, see San Joaquin River Restoration Program (SJRRP), *Funding Constrained Framework for Implementation*, May 2018.

[129] *Interim Federal Action Plan for the California Bay-Delta*, December 22, 2009, at https://www.doi.gov/sites/doi.gov/files/migrated/news/doinews/upload/CAWaterWorkPlan.pdf.

[130] In addition to funding under its CALFED authorities and through its CALFED Account, Reclamation counts funding under its other CVP restoration authorities (e.g., CVPIA, SJRRP) as CALFED activities in its annual reporting.

New Storage and Conveyance

Reductions in available water deliveries due to hydrological and regulatory factors have caused some stakeholders, legislators, and state and federal government officials to look at other methods of augmenting water supplies. In particular, proposals to build new or augmented CVP and/or SWP water storage projects have been of interest to some policymakers. Additionally, the State of California is pursuing a major water conveyance project, the California WaterFix, with a nexus to CVP operations.

New and Augmented Water Storage Projects

In recent years, new and augmented water storage projects have been proposed throughout the Central Valley, as well as in other areas of California. While it is unclear whether any of these projects will be completed and/or incorporated into the CVP itself, their status has ramifications for the water supply questions related to the CVP. In the past, construction recommendations for new Reclamation projects have been subject to congressional approval. Section 4007 of the WIIN Act authorized Reclamation financial support for new or expanded federal and nonfederal water storage projects. It also provided that these projects could be deemed authorized, subject to a finding by the Administration that individual projects met certain criteria and were recommended by name in an enacted appropriations act.[131] **Table 4** shows recent funding for these projects, including regular appropriations, as well as funding that was allocated from the Infrastructure Investment and Jobs Act (P.L. 117-58).[132] Most of the projects recommended by current and prior Administrations under this authority have been approved by Congress in enacted appropriations legislation. The only exception was funding that the first Trump Administration proposed for the Shasta Dam and Reservoir Enlargement Project in 2019 and 2020, which was not agreed to by Congress.

[131] For more information, see CRS In Focus IF10626, *Reclamation Water Storage Projects: Section 4007 of the Water Infrastructure Improvements for the Nation (WIIN) Act*, by Charles V. Stern.

[132] For more information, see CRS Report R47032, *Bureau of Reclamation Provisions in the Infrastructure Investment and Jobs Act (P.L. 117-58)*, by Charles V. Stern and Anna E. Normand.

Table 4. Allocations for WIIN Act Section 4007 Water Storage Projects in California, FY2018-FY2025

($ in millions)

	Regular Appropriations Released by Congress	IIJA Supplemental Appropriations Allocations
Shasta Dam and Reservoir Enlargement Project	$20.00	—
Sites Reservoir Storage Project	$541.85	$256.50
Upper San Joaquin River Basin Storage Investigation	$1.50	—
Friant-Kern Canal Subsidence Challenges Project	$210.55	—
Del Puerto Water District Feasibility Study	$18.00	—
Los Vaqueros Reservoir Phase 2 Expansion	$82.11	$3.00
Delta Mendota Canal Subsidence Correction	$3.00	—
San Luis Low Point Improvement Project	$1.70	—
Sacramento Regional Water Bank	$0.87	—
B.F. Sisk Dam Raise and Reservoir Expansion	$60.00	$235.00

Sources: Bureau of Reclamation Reports to House and Senate Committees on Appropriations and Energy and Water Appropriations bills for FY2018 through FY2026; Bureau of Reclamation Bipartisan Infrastructure Law Spend Plan Addendums for fiscal years 2022 through 2025.

Notes: Pursuant to that legislation, Infrastructure Investment and Jobs Act (IIJA; P.L. 117-58) allocations are not subject to congressional approval. WIIN Act = Water Infrastructure Improvements for the Nation Act.

Delta Conveyance Project

In addition to water storage, some have advocated for a more flexible water conveyance system for CVP and SWP water. In 2019, California Governor Gavin Newsom introduced a plan for conveying water through the Delta, known as the Delta Conveyance Project.[133]

The Delta Conveyance Project is expected to involve the construction of a single tunnel to convey water from two new intakes on the Sacramento River to the existing pumps in the Bay-Delta. DWR's stated reasons for supporting this approach are to protect water supplies from climate change, sea-level rise, saltwater intrusion, and earthquakes.[134] The Delta Conveyance Design and Construction Authority, a joint powers authority created by public water agencies to oversee the design and construction of the new conveyance system, is leading the project.[135] DWR is overseeing the planning effort for the project; the estimated $20.1 billion cost is expected to be paid largely by public water agencies and their ratepayers.[136] Efforts to secure state and federal permitting are ongoing.

The State of California released its final environmental impact report for the project in December 2023 and formally approved the project later that month.[137] In January 2024, lawsuits were filed against DWR alleging, among other things, that the environmental impact report and subsequent approval of the project violated the California Environmental Quality Act (CEQA).[138] On June 20, 2024, the trial court granted a preliminary injunction that precludes DWR from proceeding with geotechnical investigations that DWR intends to undertake prior to construction until the department submits a certification, required by the Sacramento-San Joaquin Delta Reform Act of 2009 (Delta Reform Act), that the planned action is consistent with California's management plan for the Delta.[139] On October 17, 2025, the California court of appeals reversed, determining that

[133] State of California, Executive Order N- 10- 19, April 29, 2019, https://www.gov.ca.gov/wp-content/uploads/2019/04/4.29.19-EO-N-10-19-Attested.pdf.

[134] California Department of Water Resources, *Delta Conveyance*, August 2025, https://water.ca.gov/deltaconveyance.

[135] California Department of Water Resources, *Modernizing Delta Conveyance Infrastructure Q&A*, California Department of Water Resources, at https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Delta-Conveyance/Images/Modernizing-Delta-Conveyance-Infrastructure-QA-9419a.pdf.

[136] Delta Conveyance Design and Construction Authority, *Total Project Cost Summary Memorandum*, May 14, 2024, https://www.dcdca.org/wp-content/uploads/2024/05/2023-Bethany-Total-Project-Cost-Estimate.pdf.

[137] For all project updates, see California Department of Water Resources, "Delta Conveyance Updates," at https://water.ca.gov/deltaconveyance.

[138] Tulare Lake Basin Water Storage District v. California Department of Water Resources, No. 24WM000006 (Cal. Super. Ct. Jan. 18, 2024); Sierra Club v. California Department of Water Resources, No. 24WM000008 (Cal. Super. Ct. Jan. 19, 2024); City of Stockton v. California Department of Water Resources, No. 24WM000009 (Cal. Super. Ct. Jan. 19, 2024); County of San Joaquin v. California Department of Water Resources, No. 24WM000010 (Cal. Super. Ct. Jan. 22, 2024); County of Butte v. California Department of Water Resources, No. 24WM000011 (Cal. Super. Ct. Jan. 22, 2024); Sacramento Area Sewer District v. California Department of Water Resources, No. 24WM000012 (Cal. Super. Ct. Jan. 22, 2024); County of Sacramento v. California Department of Water Resources, No. 24WM000014 (Cal. Super. Ct. Jan. 22, 2024); San Francisco Baykeeper v. California Department of Water Resources, No. 24WM000017 (Cal. Super. Ct. Jan. 22, 2024); South Delta Water Agency v. California Department of Water Resources, No. 24WM000062 (Cal. Super. Ct. Jan. 22, 2024). In May 2024, another lawsuit was filed also alleging the environmental impact report and subsequent project approval violated the California Environmental Quality Act. North Delta Water Agency v. California Department of Water Resources, No. 24WM000076 (Cal. Super. Cr. May 13, 2024). The cases were consolidated on October 21, 2024, with *Tulare Lake Basin Water Storage District v. California Department of Water Resources* as the lead case.

[139] Ruling on Submitted Matter – Petitioners' Motions for Preliminary Injunction, Tulare Lake Basin Water Storage District v. California Department of Water Resources, No. 24WM000006 (Cal. Super. Ct. June 20, 2024). On April 9, 2025, the trial court denied a motion to stay enforcement of the preliminary injunction while DWR's appeal is pending. (continued...)

CEQA's "whole-of-the-action" requirement that prohibits piecemealing a project for purposes of review is not incorporated into the Delta Reform Act.[140] Observing that the parties agreed that the tunnel project is an action covered by the Delta Reform Act but the preconstruction geotechnical investigations are not, the appeals court found that the plaintiffs were not likely to succeed on the merits of their motion.[141] The California court of appeals remanded the matter to the trial court to reconsider its preliminary injunction in light of the appeals court's determination.[142]

Some stakeholders support the initiative because it might result in lower fish mortality at the pumps, more consistent water supplies for users (notably urban water supply and reliability), and greater protection against climate change, earthquakes and levee failures.[143] Others assert that the project's cost might not be worth the benefits,[144] could harm threatened and endangered fish populations, and could increase salinity levels in the Bay-Delta.[145]

Congressional Interest

Congress plays a role in CVP water management and has attempted to make available additional water supplies in the region by facilitating efforts such as water banking, water transfers, and the construction of new and augmented storage. In 2016, Congress enacted provisions aiming to benefit the CVP and the SWP, including major operational changes in the WIIN Act and additional appropriations for western drought response and new water storage that have benefited (or are expected to benefit) the CVP. Congress also continues to consider legislation that would further alter CVP operational authorities and responsibilities related to individual project units. The below section discusses some CVP-related issues that may receive congressional attention.

CVP Operations

While the WIIN Act provided Reclamation with new CVP operational authorities and directives, Reclamation reported limited implementation of many of those provisions prior to their expiration in 2021. For instance, Reclamation reported that, pursuant to the WIIN Act, communication and transparency between Reclamation and other agencies increased for some operational decisions, allowing for reduced or rescheduled pumping restrictions.[146] Additionally, in 2018, relaxed inflow-to-export ratios pursuant to the WIIN Act were reportedly utilized to effect a transfer resulting in additional exports of 50,000-60,000 AF of water.[147] Reclamation noted that hydrology during 2017 and 2018 affected the agency's ability to fully implement some of the act's

Ruling on Submitted Matter – Respondent's Motion for Stay of Enforcement of Injunction Ruling, Tulare Lake Basin Water Storage District v. California Department of Water Resources, No. 24WM000006 (Cal. Super. Ct. Apr. 9, 2025).

[140] Tulare Lake Basin Water Storage District v. Department of Water Resources, 338 Cal. Rptr. 3d 110, 114-115 (Cal. Ct. App. 2025).

[141] *Tulare Lake Basin Water Storage District*, 338 Cal. Rprt. at 115.

[142] *Tulare Lake Basin Water Storage District*, 338 Cal. Rprt. at 115.

[143] David Sunding and Oliver Browne, *Benefit-Cost Analysis of the Delta Conveyance Project*, Berkeley Research Group, May 16, 2024, at https://water.ca.gov/-/media/DWR%20Website/Web%20Pages/Programs/Delta%20Conveyance/Public%20Information/DCP%20Benefit-Cost%20Analysis%202024-05-13__ADA.pdf.

[144] Restore the Delta, "Delta Tunnel," 2024, at https://restorethedelta.org/delta-tunnel/.

[145] For example, see Restore the Delta, "Tribes, Environmental Advocates, and Delta Communities Rally For the Delta As Legislative Session End Nears," press release, September 5, 2025, https://restorethedelta.org/2025/09/05/tribes-environmental-advocates-and-delta-communities-rally-for-the-delta-as-legislative-session-end-nears/.

[146] Personal communication with the Bureau of Reclamation, May 30, 2018.

[147] This provision of the WIIN Act generally lessened existing restrictions on the amount of water that could be exported for water transfers. Personal communication with the Bureau of Reclamation, May 30, 2018.

provisions.[148] In some cases, Reclamation proposed other federal operational changes pursuant to the WIIN Act that reportedly were deemed incompatible with state requirements.[149]

Most of the WIIN Act's operational provisions expired at the end of 2021 (five years after the bill's enactment). However, the Trump Administration's revised 2020 BiOps cited congressional direction to maximize water supplies in Section 4001 of the WIIN Act. During the first Trump Administration, Reclamation also reported that the general principles in Sections 4002-4003 of the WIIN Act had been incorporated into its operational changes.[150] Likewise, many of these elements, such as real-time monitoring and operations, also were included in the Biden Administration BiOps; thus, some of the WIIN Act CVP directives are likely to continue to be incorporated into CVP operations.

Congress may be interested in oversight of CVP operational questions, including the status of the BiOps and the process underpinning any alterations to operations. Some also may propose extension of the WIIN Act operational provisions, thereby extending legislatively mandated requirements and authorities on CVP operations and supporting some ongoing administrative actions. In the 119th Congress, several bills have been proposed related to CVP operations. H.R. 6639, the Water Agency and Transparency Enhancement Review (WATER) Act would codify certain parts of the 2025 Trump Administration Executive Order related to emergency actions for California water resources.

In debating CVP operations issues, stakeholders likely will focus on the extent to which the changes are likely to provide for increased water deliveries relative to various baselines for CVP and SWP contractors, and any related effects on species and water quality. Congress also may be interested in disagreements between state and federal project operators related to proposed operating procedures and species protections, including how these disagreements may affect the historical norms of coordinated project operations and what this might mean for water deliveries. Proposed voluntary agreements under the Bay-Delta Water Quality Plan also may receive congressional attention in this context.

Water Storage and Conveyance Projects

As noted, Reclamation and the State of California have funded the study of new water storage projects in recent years. Congress may opt to provide additional direction for these and other efforts to develop new water supplies for the CVP in future appropriations acts and reports. In addition, Congress may consider oversight, authorization, and/or funding for these projects. Some projects, such as the Shasta Dam and Reservoir Enlargement Project, could augment CVP water supplies but have generated controversy for their potential to conflict with the intent of certain state laws.[151] Although Reclamation under the Trump Administration previously indicated its interest in pursuing the Shasta Dam and Reservoir Enlargement Project, the State of California has consistently opposed the project because it violates the state's Wild and Scenic Rivers law.[152]

[148] Personal communication with the Bureau of Reclamation, May 30, 2018.

[149] Personal communication with the Bureau of Reclamation, May 30, 2018.

[150] Bureau of Reclamation, *Reinitiation of Consultation on the Coordinated Long-Term Operation of the Central Valley Project and State Water Project*, Final Biological Assessment, October 2019, pp. 1-6.

[151] In particular, Section 5093.542 of the California State Public Resources Code prevents participation (other than technical or economic feasibility studies of the Shasta Dam raise project) by state departments or agencies in facilities that would have an adverse effect on the free-flowing condition of the McCloud River. In previous documents, Reclamation indicated this requirement could limit some state agency participation in the project.

[152] State of California Public Resources Code, Section 5093.50 et seq.

It is unclear how such a project might proceed absent state regulatory approvals and financial support.

Congress has approved Reclamation-recommended funding for other projects that could add flexibility to CVP operations, including the Sites Reservoir Project and the Friant-Kern Canal Subsidence Challenges Project, among others. Overall, from FY2017 to FY2025, Congress appropriated more than $3 billion to Reclamation for new and augmented water storage projects authorized under Section 4007 of the WIIN Act. This includes more than $1 billion in annual discretionary funding, plus mandatory funding in the form of $1.05 billion in the Infrastructure Investment and Jobs Act (P.L. 117-58) for water storage and conveyance projects, plus $1.0 billion FY2025 budget reconciliation law (P.L. 119-21) funding for projects that enhance capacity at existing Reclamation surface water storage facilities.[153] A significant share of this funding was allocated for projects that benefit the CVP and other areas in California.[154]

Apart from appropriating funding for ongoing projects, Congress is also considering new and amended authorities for Reclamation to support water resources projects, including water conveyance, groundwater and water recycling projects that would make available additional water storage and supplies. In the 119th Congress, H.R. 6641, the Central Valley Water Solutions Act, would authorize Reclamation to provide financial and technical assistance for 22 individual surface and ground water storage and conveyance projects at a total cost of approximately $4.4 billion, as well as selected water recycling projects, south of the Delta.[155] S. 3738, the MORE WATER Act, would, among other things, authorize $800 million in funding for water conveyance projects, as well as additional funding for water recycling and reuse projects and environmental restoration projects. Other bills, such as H.R. 338 and S. 3732, would authorize Reclamation's Small Water Storage Program, a general authority that has been used to support storage projects in California.

Concluding Observations

The CVP is one of the largest, most complex water storage and conveyance projects in the world. Congress has regularly expressed interest in CVP operations and allocations, in particular pumping in the Bay-Delta. In addition to ongoing oversight of project operations and previously enacted authorities, a number of developing issues and proposals related to the CVP may be of interest to congressional decisionmakers. These issues include study and approval of new water storage and conveyance projects, updates to the state's Bay-Delta Water Quality Plan, and the status of CVP BiOps and related efforts to make available more water for CVP water contractors (in particular those south of the Delta). Stressors on California water supplies (e.g., drought) are likely to magnify these issues in the future.

[153] For more information, see CRS Report R47987, *Bureau of Reclamation Support for Water Storage Projects*, by Charles V. Stern.

[154] Project allocations are available at https://www.usbr.gov/bil/2022-spendplan.html .

[155] For more information, see CRS In Focus IF12414, *Bureau of Reclamation WaterSMART Program*, by Charles V. Stern and Anna E. Normand/

Appendix. CVP Water Contractors

The below sections provide a brief discussion some of the major contractor groups and individual contractors served by the CVP.

Sacramento River Settlement Contractors and San Joaquin River Exchange Contractors (Water Rights Contractors)

Reclamation first makes CVP water available for delivery to contractors north and south of the Delta with water rights that predate construction of the CVP. The two largest of these groups are the Sacramento River Settlement Contractors and the San Joaquin River Exchange Contractors. (These contractors are sometimes referred to collectively as *water rights contractors*.)

Sacramento River Settlement Contractors include the 145 contractors (both individuals and districts) that diverted natural flows from the Sacramento River prior to the CVP's construction and executed a settlement agreement with Reclamation that provided for negotiated allocation of water rights. Reclamation entered into this agreement in exchange for these contractors withdrawing their protests related to Reclamation's application for water rights for the CVP. As a result of their settlement, Sacramento River Settlement Contractors receive most of their supplies ("base supplies") free of charge, while additional "project supplies" also are delivered to these contractors based on reclamation law and pricing requirements.[156] These contractors typically receive 100% of their contracted amounts in most water-year types. During "critical" years, Reclamation may reduce total deliveries to these contractors by a maximum of 25%.[157]

The San Joaquin River Exchange Contractors include four irrigation districts that agreed to "exchange" exercising their water rights to divert water on the San Joaquin and Kings Rivers for guaranteed water deliveries from the CVP (typically in the form of deliveries from the Delta-Mendota Canal and waters north of the Delta).[158] During all years except for when critical conditions are declared, Reclamation is responsible for delivering 840,000 acre-feet (AF) of "substitute" water to these users (i.e., water from north of the Delta as a substitute for San Joaquin River water). In so-called critical years, this substitute water is reduced to 650,000 AF. In the event Reclamation is unable to make its contracted deliveries, these contractors have the right to divert water directly from the San Joaquin River, which may in turn reduce water available for other San Joaquin River water service contactors.

Friant Division Contractors

CVP's Friant Division contractors receive water stored behind Friant Dam (completed in 1944) in Millerton Lake. This water is delivered through the Friant-Kern and Madera Canals. The 32 Friant Division contractors, who irrigate roughly 1 million acres on the San Joaquin River, are contracted to receive two "classes" of water: Class 1 water is the first 800,000 AF available for delivery;[159] Class 2 water is the next 1.4 million AF available for delivery. Some districts receive

[156] The total amount of base supply is 1,775,509 AF and the total amount of project water is 340,111 AF.

[157] Critical years are years in which either (1) the forecasted full natural inflow to Shasta Lake for the current water year is equal to or less than 3.2 million AF or (2) the total accumulated actual deficiencies below 4 million AF in the immediately prior water year, together with the forecasted efficiency for the current water year, exceed 800,000 AF.

[158] Bureau of Reclamation, Central Valley Project Water Contracts, https://usbr.gov/mp/mpr-news/docs/factsheets/cvp-water-contracts.pdf. Hereinafter, "Reclamation Central Valley Project Water Contracts."

[159] This water typically is provided for municipal and industrial use or for districts without access to groundwater.

water from both classes. Generally, Class 2 waters are released as "uncontrolled flows" (i.e., for flood control concerns), and may not necessarily be scheduled at a contractor's convenience.

Deliveries to the Friant Division are affected by a 2009 congressionally enacted settlement stemming from Friant Dam's effects on the San Joaquin River.[160] The settlement requires reductions in deliveries to Friant users for protection of fish and wildlife purposes. In some years, some of these "restorations flows" have been made available to contractors for delivery as Class 2 water.

Unlike most other CVP contractors, Friant Division contractors have converted their water service contracts to repayment contracts and have repaid their capital obligation to the federal government for the development of their facilities. In years in which Reclamation is unable to make contracted deliveries to Exchange Contractors, these contractors can make a "call" on water in the San Joaquin River, thereby requiring releases from Friant Dam that otherwise would go to Friant contractors.[161]

South-of-Delta (SOD) Water Service and Repayment Contractors: Westlands Water District

As shown in **Figure 3**, SOD water service and repayment contractors account for a large amount (2.09 million AF, or 22.1%) of the CVP's contracted water. The largest of these contractors is Westlands Water District, which consists of 700 farms covering more than 600,000 acres in Fresno and Kings Counties. In geographic terms, Westlands is the largest agricultural water district in the United States; its lands are valuable and productive, producing more than $1 billion of food and fiber annually.[162] Westlands' maximum contracted CVP water is in excess of 1.2 million AF, an amount that makes up more than half of the total amount of SOD CVP water service contracts and significantly exceeds any other individual CVP contactor.[163] Due to a number of factors, Westlands often receives considerably less water on average than it did historically. Westlands has been prominently involved in a number of policy debates, including proposals to alter environmental requirements to increase pumping south of the Delta.

Central Valley Wildlife Refuges

The 20,000-square-mile California Central Valley provides valuable wetland habitat for migratory birds and other species. As such, it is the home to multiple state and federally designated wildlife refuges north and south of the Delta. These refuges provide managed wetland habitat that receives water from the CVP and other sources.

[160] When constructed, Friant Dam impounded the entire flow of the San Joaquin River, except for releases to manage flooding and provide water for some riparian water rights holders immediately below the dam. For more information, see the section "San Joaquin River Restoration Program."

[161] Reclamation Central Valley Project Water Contracts.

[162] Westlands Water District, "Who We Are," at https://wwd.ca.gov/wp-content/uploads/2016/08/wwd-who-we-are.pdf.

[163] CRS analysis of data from Bureau of Reclamation, "Central Valley Project Water Contractors," March 30, 2016, at https://www.usbr.gov/mp/cvp-water/docs/latest-water-contractors.pdf.

The Central Valley Project Improvement Act (CVPIA; P.L. 102-575),[164] enacted in 1992, sought to improve conditions for fish and wildlife in these areas by providing them coequal priority with other project purposes. CVPIA also authorized a Refuge Water Supply Program to acquire approximately 555,000 AF annually in water supplies for 19 Central Valley refuges administered by three managing agencies: California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and Grassland Water District (a private landowner). Pursuant to CVPIA, Reclamation entered into long-term water supply contracts with the managing agencies to provide these supplies.

Authorized refuge water supply under CVPIA is divided into two categories: Level 2 and Level 4 supplies. Level 2 supplies (approximately 422,251 AF, except in critically dry years, when the allocation is reduced to 75%) are the historical average of water deliveries to the refuges prior to enactment of CVPIA.[165] Reclamation is obligated to acquire and deliver this water under CVPIA, and costs are 100% reimbursable by CVP contractors through a fund established by the act, the Central Valley Project Restoration Fund (CVPRF; see previous section, "Central Valley Project Improvement Act"). Level 4 supplies (approximately 133,264 AF) are the additional increment of water beyond Level 2 supplies for optimal wetland habitat development. This water must be acquired by Reclamation through voluntary measures and is funded as a 75% federal cost (through the CVPRF) and 25% state cost.

In most cases, the Level 2 requirement is met; however, Level 4 supplies have not always been provided in full for a number of reasons, including a dearth of supplies due to costs in excess of available CVPRF funding and a lack of willing sellers. In recent years, costs for the Refuge Water Supply Program (i.e., the costs for both Level 2 and Level 4 water) have ranged from $11 million to $20 million.[166]

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[164] P.L. 102-575, Title 34, 106 Stat. 4706.

[165] Prior to the Central Valley Project Improvement Act (CVPIA; P.L. 102-575), refuges had a legal entitlement only to 121,700 AF.

[166] Reclamation Central Valley Project Water Contracts.

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