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Western Water and Drought: Legislative Analysis of H.R. 2898 and S. 1894

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Summary

Several western states are experiencing extreme or exceptional drought conditions. The persistence and intensity of the drought, which began in 2011 in some areas, has received considerable attention from Congress. To date, federal legislative proposals have focused primarily on the management of federal water projects, support for drought-related programs, and needs of fish and wildlife for water. A broad policy question is how Congress might address western drought, drought in any part of the United States, and gaps in water supply and demand.

Several bills have been introduced in the 114th Congress that would address issues associated with drought. They include S. 176, S. 1837, S. 1894, H.R. 2898, H.R. 2983, and H.R. 3045, among others. Of the bills considered to date, H.R. 2898, the Western Water and American Food Security Act, and S. 1894, the California Emergency Drought Relief Act of 2015, have received the most congressional and public attention. On July 17, 2015, H.R. 2898 passed the House, and on October 8, 2015, both H.R. 2898 and S. 1894 were the focus of a Senate Energy and Natural Resources Committee hearing. There are reports that a draft bill addressing differences between H.R. 2898 and S. 1894 is being negotiated; however, no new bills have been introduced.

Although H.R. 2898 and S. 1894 address some common issue areas and include some similar provisions, the bills' approaches often differ in important ways. Both bills focus on water projects and management during drought, and do not attempt to address the broad suite of drought impacts and policies (e.g., effects on wildfire and agricultural assistance programs).

To date, the focus on both bills has centered primarily on provisions related to the management and operations of the federal Central Valley Project (CVP) and the State Water Project (SWP) in California; however, S. 1894 would authorize several programs and activities that would aim to benefit water users and increase water supplies, including water recycling and desalination. H.R. 2898's supporters contend that the bill would, among other things, improve the flexibility and responsiveness of CVP and SWP operations during the current drought in California and beyond. Supporters also contend that activities authorized under H.R. 2898 could increase water supplies to users facing curtailed allocations and improve the science and data collection activities for identifying the effects of operations on listed species. Broadly speaking, supporters of both H.R. 2898 and S. 1894 contend that the legislation would allow for maximum available water supplies in a manner that is consistent with existing laws and regulations; however, S. 1894 would provide fewer directives for project operations. Others believe the bills could harm listed species under the Endangered Species Act (ESA; P.L. 93-205).

H.R. 2898 and S. 1894 have generated both support and opposition from stakeholders and have raised questions about their potential implementation. The bills also raise a number of questions for Congress to consider when addressing drought, including how to reconcile environmental protections with demand for more water and increased pumping from the Sacramento and San Joaquin Rivers Delta to support CVP and SWP water contractors. Related questions include whether the Administration is already maximizing water supplies at federally operated water projects and whether water project management and operations pursuant to the ESA and other laws should be adjusted to better account for water resources challenges. The bills also raise other issues, including what principles and approaches should guide federal involvement in water resources management and how much (if any) support the federal government should provide for drought preparedness and relief efforts. Related topics may include the preferred mix of federal and state leadership in addressing drought; the proper balance of federal investment in surface water storage and in new "alternative" water supplies (e.g., water recycling and reuse, desalination); and the geographic scope of drought-related assistance, authorities, and programs.

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Introduction

Widespread drought is a recurring phenomenon for much of the country, and is especially acute for the West, where drought conditions such as low water supplies and soil moisture are prevalent. Several western states, including California, Oregon, Nevada, Washington, and portions of Montana and Idaho are experiencing extreme—and in some cases exceptional—drought conditions (see **Figure 1**).[1] Congressional interest in addressing water resource management during drought has been heightened due to the effects drought and water constraints have had on agriculture, communities, industry, recreation, natural resources (e.g., rangelands and forests), and the environment in general.

Although the federal government invested heavily in the development of water supplies in the 20th century – primarily through construction of irrigation projects in the arid West – the federal government generally defers to state and local governments in surface and groundwater allocation. Federal efforts to prepare for and respond to drought and water supply impacts have thus been inherently limited in recent decades. To date, federal legislative proposals to address current drought conditions have focused on managing federal water projects, supporting new or expanded drought-related projects and programs (including those at the state and local levels), and mitigating the effects of drought and water management on agricultural production, municipal and industrial water supplies, recreational resources, and the environment. Several bills introduced in the 114th Congress would address these issues. These bills include S. 176, S. 1837, S. 1894, H.R. 2898, H.R. 2983, and H.R. 3045, among others. On July 17, 2015, H.R. 2898, the Western Water and American Food Security Act, passed the House. For months, certain House and Senate Members have been negotiating new language to resolve differences in the bills and address concerns by federal and state governments. A draft House bill was reportedly circulated during discussions on the FY2016 Omnibus; however, no bill was amended nor introduced.[2] There was also discussion of a new Senate bill addressing outstanding issues and state and federal concerns; however, no bill was introduced.[3] Negotiations are reportedly still underway, and new language is expected in the second session of the 114th Congress.

This report summarizes and analyzes several key provisions in H.R. 2898 (as passed by the House) and S. 1894 (as introduced). It includes analysis of provisions specific to California, such as the management of threatened and endangered fish populations in relation to pumping operations of the CVP and SWP, as well as provisions that are broader in scope and might have nationwide implications (e.g., water resources financing, permitting issues, project repayment policies, and support for new water storage and water reuse/recycling).

This report does not comprehensively analyze each bill, nor does it cover each provision in the bills. Other CRS products on H.R. 2898 and S. 1894 and on drought in general are available. CRS Report R44180, *Drought Legislation: Comparison of Selected Provisions in H.R. 2898 and S. 1894*, by Charles V. Stern et al. summarizes and compares the provisions in H.R. 2898 and S.

[1] Drought conditions for the country can be found at U.S. Drought Monitor, at http://droughtmonitor.unl.edu/.

[2] Debra Kahn, "Drought Bill Language Leaked, Promptly Disavowed by Feinstein," *Energy and Environment Daily*, December 4, 2015 at http://www.eenews.net/eenewspm/stories/1060029019/.

[3] Senator Dianne Feinstein, "Feinstein Statement on California Water Bill," press release, December 13, 2015, http://www.feinstein.senate.gov/public/index.cfm/press-releases?ID=63891121-462C-4E80-871D-42A5B267F980.

1894, including many of the provisions that are outside the scope of this report.[4] More information about drought in California and in general is provided in the following CRS reports:

- CRS Report R40979, *California Drought: Hydrological and Regulatory Water Supply Issues*, by Betsy A. Cody, Peter Folger, and Cynthia Brown;
- CRS Report R43407, *Drought in the United States: Causes and Current Understanding*, by Peter Folger and Betsy A. Cody; and
- CRS In Focus IF10196, *Drought Policy, Response, and Preparedness*, by Nicole T. Carter and Betsy A. Cody.

Overview of the Bills

Of the bills in the 114th Congress considered to date, H.R. 2898 and S. 1894, the California Emergency Drought Relief Act of 2015, have received the most congressional and public attention. These bills were the focus of a Senate Energy and Natural Resources Committee hearing on October 8, 2015.[5] Both bills contain key elements of proposed legislation in the 113th Congress that was not enacted.[6] Broadly summarizing, both bills contain provisions that focus on water infrastructure and water conveyance in California and some west-wide and national programs that address water management and drought. Some of these provisions would be triggered by drought and water conditions or declarations, and others would result in permanent changes in water management. Further, some provisions in the bills are associated with specified states (typically the 17 western states,[7] Hawaii, and Alaska), whereas other provisions may have national application.[8] Many provisions of H.R. 2898 have no specified authorization of appropriations; S. 1894, by contrast, contains provisions that authorize either funding subject to appropriations or mandatory funding for certain activities. Many provisions in both bills are specific to the projects and programs of the Department of the Interior's Bureau of Reclamation (Reclamation)—in particular, management of the Central Valley Project (CVP) in California—but others are associated with different federal agencies (e.g., U.S. Army Corps of Engineers [the Corps], U.S. Environmental Protection Agency [EPA]). Some provisions would amend existing programs and activities, whereas others would authorize new federal programs and activities.[9] Both bills focus on water projects and management during drought, and do not attempt to address the broad suite of drought impacts and policies (e.g., effects on wildfire and agricultural assistance programs).

[4] A congressional-distribution memorandum providing a side-by-side comparison of legislative text in issue areas common to both bills is available from the authors upon request.

[5] U.S. Congress, Senate Committee on Energy and Natural Resources, *Full committee legislative hearing on Western and Alaska Water Legislation*, 114th Cong., 1st sess., October 8, 2015. See: http://www.energy.senate.gov/public/index.cfm/hearings-and-business-meetings?ID=65220e15-0479-492e-8423-ca1a381c1078.

[6] For example, see H.R. 3964, H.R. 5781, and S. 2198 in the 113th Congress.

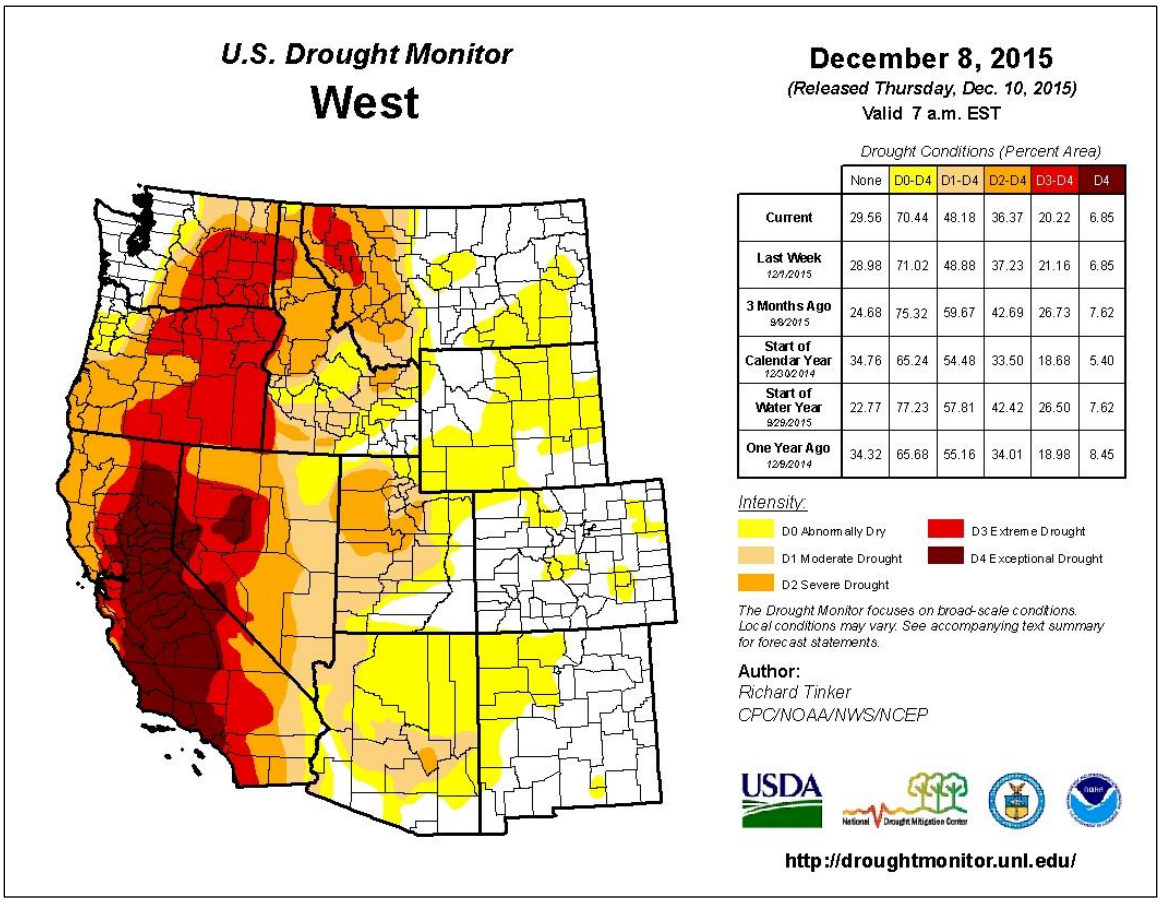
[7] These states are Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming.

[8] U.S. territories are not specifically mentioned in either bill.

[9] For more information on drought in general, see CRS Report R43407, *Drought in the United States: Causes and Current Understanding*, by Peter Folger and Betsy A. Cody. For background on the drought in California, see CRS Report R40979, *California Drought: Hydrological and Regulatory Water Supply Issues*, by Betsy A. Cody, Peter Folger, and Cynthia Brown.

Figure 1. Drought Conditions in the West

(December 8, 2015)



	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	29.56	70.44	48.18	36.37	20.22	6.85
Last Week 12/1/2015	28.98	71.02	48.88	37.23	21.16	6.85
3 Months Ago 9/8/2015	24.68	75.32	59.67	42.69	26.73	7.62
Start of Calendar Year 12/30/2014	34.76	65.24	54.48	33.50	18.68	5.40
Start of Water Year 9/29/2015	22.77	77.23	57.81	42.42	26.50	7.62
One Year Ago 12/9/2014	34.32	65.68	55.16	34.01	18.98	8.45

Source: U.S. Drought Monitor, at http://droughtmonitor.unl.edu/Home/RegionalDroughtMonitor.aspx?west.

H.R. 2898 and S. 1894 have generated both support and opposition from stakeholders and have raised several questions about their implementation, if passed. For example, with respect to managing federal water projects in California, both bills would direct managers to maximize water supplies for users while adhering to applicable laws and regulations. Some contend such provisions provide water managers the directive and authority to increase water supplies; whereas others assert that this provision could lead to long-term negative effects on species. Some controversy is rooted in how the bills address implementation of the federal Endangered Species Act (ESA; P.L. 93-205), including water management under federal biological opinions (BiOps) designed to protect Delta smelt and salmon populations (see "Biological Opinions Under the Endangered Species Act" text box for information on BiOps).[10] For example, two federal BiOps currently limit operations of the federal CVP and the California State Water Project (SWP) at certain times of the year. These BiOps were developed to assess the effects on threatened and endangered species of proposed changes in the coordinated operations of the CVP and SWP beginning in 2004 and again in 2008. Both BiOps found that the proposed changes in operations, including increased pumping, would likely jeopardize the continued existence of Delta smelt and

[10] For legal documents related to the coordinated long-term operation of the CVP and SWP, see: http://www.usbr.gov/mp/BayDeltaOffice/Documents/lto.html.

several salmon and other species listed as threatened or endangered under the federal ESA. As a result, both BiOps include specific actions that limit pumping and call for reservoir releases to protect listed species. Such actions in turn have resulted in reduced water supplies for CVP and SWP water users, particularly in wet or above normal water years.[11]

To address CVP and SWP management under the BiOps, both H.R. 2898 and S. 1894 would direct agency officials to maximize water supplies, consistent with applicable laws and regulations; however, H.R. 2898 differs from S. 1894 in that it would alter the implementation of portions of federal BiOps for Delta smelt and salmon. For example, H.R. 2898 includes a new definition or standard for determining the status of listed species and would require higher levels of pumping than currently allowed, unless agency officials showed that the increased levels would be harmful to the long-term health of the species. H.R. 2898 also would direct agency officials to pump at the highest levels allowable under existing BiOps for longer periods. Supporters of H.R. 2898 contend that such changes would improve the flexibility and responsiveness of the management and operations of the CVP and SWP and could potentially make available additional water to users facing curtailed allocations.[12] Opponents contend it could have detrimental effects on species in the short and long term, and may actually limit agency flexibility.[13] S. 1894 also directs agency officials to increase pumping at certain times by pumping at the highest range allowable under existing BiOps, but it does not include a new standard for determining the effects of such pumping on species. S. 1894 also is explicit in refraining from altering existing environmental laws.

The bills contain several similar provisions such as addressing nonnative species, expediting environmental reviews, and increasing science and data collection on listed species, among others.

The bills differ in their approaches to other policy areas, such as constructing new surface water storage projects and providing support for alternative water supplies, among other things. At the October 2015 Senate Energy and Natural Resources Committee hearing, the Administration expressed concerns with several provisions in H.R. 2898 and noted several concerns with S. 1894. However, in speaking on both bills, the Administration disagreed "with the idea that new legislation will salvage more water than the operators on the ground are wringing from the system every day."[14]

Another question that has been raised is the potential value or effectiveness of each bill providing additional water supplies if a strong El Niño[15] produces above normal precipitation this winter.

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[11] For more on this topic, see: CRS Report R40979, *California Drought: Hydrological and Regulatory Water Supply Issues*, by Betsy A. Cody, Peter Folger, and Cynthia Brown.

[12] U.S. Congress, Senate Committee on Energy and Natural Resources, *Statement of Dan Keppen, Executive Director, Family Farm Alliance*, 114th Cong., 1st sess., October 8, 2015, p. 4. http://www.energy.senate.gov/public/index.cfm/hearings-and-business-meetings?Id=65220e15-0479-492e-8423-ca1a381c1078&Statement_id=378db42f-6b60-44a7-a16c-3d2b7d712984.

[13] U.S. Congress, Senate Committee on Energy and Natural Resources, *Statement of Michael L. Connor, Deputy Secretary, U.S. Department of the Interior*, 114th Cong., 1st sess., October 8, 2015, p. 1. Hereinafter, "Connor, October 2015 Testimony." (http://www.energy.senate.gov/public/index.cfm/files/serve?File_id=fb299e7d-7de8-41c8-b8a2-365d544c8911.)

[14] Connor, October 2015 Testimony, p. 7.

[15] El Niño is characterized by a large scale weakening of the easterly trade winds and warming of the sea surface temperatures in the eastern equatorial Pacific Ocean. Under normal conditions, atmospheric pressure at sea level is high in the eastern Pacific and low in the western Pacific and Indian Oceans. During El Niño the atmospheric pressure builds up to abnormally high levels in the western tropical Pacific and Indian Oceans—the El Niño-Southern Oscillation, or ENSO. ENSO/El Niño events occur irregularly at intervals of 2-7 years, and typically last 12-18 months. It is widely

Some stakeholders have noted that provisions in the bills would afford water managers added flexibility to take advantage of high-precipitation events due to a strong El Niño-influenced weather pattern. Forecasters have noted that although a strong El Niño system could improve water supply conditions, such an event is unlikely to end the current drought.[16] As California experiences its fourth year of drought and the Southwest endures more than a decade of drought conditions, western water management likely will remain an issue before Congress. As a result, elements from one or both of these bills (as well as from other bills) likely will receive continued attention from Congress.

Issues Specific to Drought and Water in California

H.R. 2898 and S. 1894 address drought-related water issues specific to California, which is among the states experiencing the worst of the current drought. Many of these provisions focus on the CVP, which is one of the largest and most complex water resources projects built and operated by Reclamation, part of the Department of the Interior (DOI). (See **Figure 2**.) The project spans hundreds of miles and delivers water stored in reservoirs to farms and cities throughout California's Central Valley. The CVP delivers water to contractors throughout the state, largely serving agricultural water contractors as well as some municipal and industrial (M&I) contractors. A somewhat parallel state system, the California State Water Project (SWP), serves primarily M&I water users and some agricultural users. It is operated in coordination with the CVP.[17] In order to move water through the CVP and SWP, extensive pumping is required. Water deliveries and pumping within the CVP and SWP are often controversial for a number of reasons.

recognized that El Niño drives substantial variability in rainfall and severe weather, including drought. Combined with other factors that play a role in winter weather, a strong El Niño in 2015/2016 is likely to result in wetter-than average conditions in the Southern Tier of the United States, including central and southern California. For more information, see http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/enso_advisory/ensodisc.html.

[16] National Oceanic and Atmospheric Administration, "Strong El Niño Sets the Stage for 2015-2016 Winter Weather," press release, October 15, 2015, at http://www.noaanews.noaa.gov/stories2015/101515-noaa-strong-el-nino-sets-the-stage-for-2015-2016-winter-weather.html.

[17] The projects are coordinated per an agreement (known as the Coordinated Operations Agreement) between the United States and the State of California, as implemented under P.L. 99-546 (100 Stat. 3050): https://www.usbr.gov/mp/cvp/docs/pl_99-546.pdf.

Figure 2. Major Rivers and Water Infrastructure Facilities in California

(CVP and SWP infrastructure are identified)

Source: California State Department of Water Resources, *California Water Plan Update 2013, Investing in Innovation & Infrastructure,* vol. I, chapter 3, figure 2-3, issued Oct. 30, 2014.

Multiple Factors Affect Pumping Water out of the Delta

The San Francisco Bay and Sacramento and San Joaquin Rivers' Delta (Bay-Delta) is a 1,153 square-mile area located where the Sacramento and San Joaquin Rivers converge and flow into San Francisco Bay. These rivers, along with other tributaries form a mosaic of sloughs and waterways that surround 57 man-made islands within the Bay-Delta. The Bay-Delta is among the largest estuaries on the West Coast and its combination of fresh and salt water ecosystems provide habitat for a diverse array of plant and animal life. Major CVP and SWP pumps that supply water for central and southern California are located at the southern portion of the Bay-Delta. An estimated 25 million people get some, if not all, of their drinking and agricultural water supplies from the Bay-Delta—often referred to as the hub of California's water supply system.

In addition to the ESA, several other state and federal laws enacted to protect Delta resources have resulted in restrictions on how much, and when, water may be pumped from the Delta by the SWP and CVP. For example, the California Endangered Species Act (CESA) was the basis for halting pumps in 2008,[18] and in 2014, California's water quality control plan (D-1641) often came into play by restricting pumping beyond ESA.

These restrictions, while protecting the interests of those who rely on and value Delta resources and the goods and services they provide (e.g., cleaner, less saline water; viable fish habitat for recreational and commercial fish species; and water supply for in-Delta or near-Delta users), also have resulted in some water users receiving less water than they originally contracted to receive from the SWP and CVP. Although many of these water users benefit from better-quality water than what otherwise might be delivered, these regulatory restrictions to protect threatened and endangered species and water quality have reduced the quantity of water available to those south-of-Delta SWP and CVP users with contracts based on water rights that are junior in priority to other water rights holders or with otherwise lower priority for CVP project deliveries.[19]

Many of those adversely affected have expressed anger over export reductions and frustration with federal and state officials who are responsible for or who implement Delta export reductions.[20] Others, including Pacific Coast fishermen's organizations and groups concerned about the effects of increased pumping on declining fish species and north-coast, fish-dependent economies, generally oppose efforts to halt or modify implementation of the BiOps, including recent legislative attempts to increase pumping.[21]

Legislation addressing the management of the CVP and SWP is particularly controversial because the coordinated operation and management of these projects involves a complex web of federal and state law—including state water rights priorities; water delivery contracts; federal, state, and local agency policies; and multiagency agreements. Achieving consensus on such legislation is often difficult because a change in any of these factors can affect several parties and interests, including potentially altering the timing or amount of water made available to such parties or the underlying ecosystem. As a result, H.R. 2898 and S. 1894 have raised a number of questions among interested stakeholders. For example, if water pumped from the Sacramento and San Joaquin Rivers' Delta (Delta) is directed to be increased beyond the status quo, where will that increased water come from and what effect might it have on other water users, various species, or in-Delta water quality? Similarly, if involuntary reductions to specified CVP and SWP users are not allowed for certain specified water users (e.g., contractors, or those in certain watersheds as in H.R. 2898), could such prohibition result in reduced water supplies or a change in the timing of water available to other water users who are not specified? How would such directions be

[18] Watershed Enforcers v. California Dept. of Natural Resources, No. RG06292124 (Sup. Ct. Alameda Co. March 22, 2007).

[19] Lack of sufficient water supplies in 2014 also resulted in historically low water deliveries to senior water rights holders south of the Delta. Some water users argue that had these regulatory restrictions not been in place in wet water years, more water would have been available for use during these drought years.

[20] See U.S. Congress, House Committee on Natural Resources, *California Water Crisis and Its Impact: The Need for Immediate and Long-Term Solutions*, oversight field hearing, March 19, 2014, and congressional floor debate on H.R. 2898, July 15 and 16, 2015.

[21] John McManus, Dick Pool, and Randy Repass, et al., *The Impact of the California Drought on Salmon*, Golden Gate Salmon Association, handout from presentation for congressional staff, April 15, 2015, p. 1.

reconciled with requirements that the CVP be operated in conformity with state water law and under the standard that there shall be "no redirected water supply or fiscal impacts?" How can such impacts be avoided, and, if they cannot, who might bear responsibility or pay for unavoidable costs? Lastly, what would be the implications of constructing the state WaterFix[22] project based on the proposed provisions?

This section discusses proposed legislative changes that would address the drought in California, including changes specific to the CVP and SWP, and those that would affect other projects and areas. The topics that are discussed include:

- Management of Fish Populations and Water Flows, including
  - Definitions in H.R. 2898 and S. 1894,
  - Managing Delta Smelt Under H.R. 2898 and S. 1894,
  - Managing Salmon Under H.R. 2898 and S. 1894,
  - Operational Flexibility During Drought, and
  - Flexibility for Project Operations to Manage OMR Flows During High-Water Events;
- Water Transfers;
- Water Rights Protections and Existing Obligations; and
- New Storage Project Studies in California.

Management of Fish Populations and Water Flows

Operational changes associated with protecting fisheries in the SWP and CVP are among the most prominent and controversial issues addressed in H.R. 2898 and S. 1894. These operational changes largely relate to efforts to comply with the ESA and with state water-quality requirements that aim to stabilize salinity levels in the Delta, protect water quality for in-Delta farmers and nearby communities, and provide adequate flows for aquatic species and their habitat.[23] Factors such as water availability, water quality, species needs, and ecosystem functions are all taken into consideration when managing the CVP and SWP. Operation of this water-conveyance system is guided by the Long-Term Operational Criteria and Plan[24] for the coordinated operation of the CVP and SWP.

H.R. 2898 and S. 1894 include provisions that would address water conveyance and flows in relation to fish populations listed under the ESA. Specifically, both bills would address certain

[22] California WaterFix aims to have three new intakes on the Sacramento River capable of receiving 3,000 cubic feet of water per second (cf/s). The intakes will be gravity fed and will divert water into two 40-foot wide underground tunnels for about 30 miles to a forebay. Two pumping plants will be constructed in the forebay to pump water into the Central Valley Project (CVP) and State Water Project (SWP). The existing intakes in the Bay-Delta will remain under this proposal and will allow existing pumps to also divert water into the CVP and SWP. The combination of the new and existing infrastructure will make the water conveyance system in the Bay-Delta a *dual conveyance system*.

[23] Other state laws also play a role in CVP operations. For more information on factors that might limit water operations, see CRS Report R40979, *California Drought: Hydrological and Regulatory Water Supply Issues*, by Betsy A. Cody, Peter Folger, and Cynthia Brown.

[24] For more information, see Bureau of Reclamation, Central Valley Operations, "OCAP," at http://www.usbr.gov/mp/cvo/ocap.html.

operations of the CVP and SWP in relation to BiOps associated with the threatened Delta smelt[25] and with threatened and endangered salmon and other species.[26]

A discussion and analysis follows on how both bills would address the management of water flows in operating the CVP and SWP in relation to fish populations.

Definitions in H.R. 2898 and S. 1894

Both bills would provide definitions to complement other provisions, including definitions of the salmon BiOp and the Delta smelt BiOp. Both bills would define the term *Salmonid Biological Opinion* (salmon BiOp) as the opinion issued under the federal ESA by the National Marine Fisheries Service (NMFS) on June 4, 2009.[27] Both also would define the term *Smelt Biological Opinion* (Delta smelt BiOp) as the biological opinion on the Long-Term Operational Criteria and Plan for coordination of the CVP and SWP issued by the Fish and Wildlife Service (FWS) on December 15, 2008.[28]

Biological Opinions Under the Endangered Species Act

Section 7 of the ESA requires federal agencies to consult with the Fish and Wildlife Service (FWS) or the National Marine Fisheries Service (NMFS) to determine whether an agency project or action might (1) jeopardize the continued existence of species listed as endangered or threatened pursuant to the federal Endangered Species Act (ESA; P.L. 93-205)[29] or (2) destroy or adversely modify a species' critical habitat. This process is known as *consultation*. Consultation concludes with the appropriate service issuing a biological opinion (BiOp) on the potential harm the project poses. If a project could jeopardize a species, a *jeopardy opinion* is released, along with any reasonable and prudent alternatives (RPAs) to the agency action that would avoid jeopardy. If no jeopardy is found, a *no jeopardy opinion* is issued.

FWS and NMFS each have issued federal BiOps on the effects of changes to the coordinated operation of the California State Water Project (SWP) and Central Valley Project (CVP). The agencies have found that proposed changes, including increased pumping from the Sacramento and San Joaquin Rivers' Delta (Delta), would jeopardize the continued existence of several species protected under the ESA and thus risk the extinction of these species. To avoid such jeopardy, the FWS and NMFS BiOps included RPAs for project operations. These RPAs are

[25] U.S. Department of the Interior, Fish and Wildlife Service (FWS), California and Nevada Region, *Formal Endangered Species Act Consultation on the Proposed Coordinated Operations of the Central Valley Project (CVP) and State Water Project (SWP)*, Memorandum to Operation Manager, Bureau of Reclamation, from Regional Director, FWS Region 8, Sacramento, CA, December 15, 2008, at http://www.fws.gov/sacramento/es/documents/SWP-CVP_OPs_BO_12-15_final_OCR.pdf. This species was first listed as threatened under the ESA in 1993.

[26] The Salmonid Biological Opinion issued by the National Marine Fisheries Service on June 4, 2009, covers Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon, Central Valley steelhead, and several other species. (U.S. Department of Commerce, National Marine Fisheries Service (NMFS), Southwest Region, *Biological Opinion and Conference Opinion on the Long-term Operations of the Central Valley Project and State Water Project*, Endangered Species Act Section & Consultation, Sacramento, CA, June 4, 2009, at http://swr.nmfs.noaa.gov/ocap/NMFS_Biological_and_Conference_Opinion_on_the_Long-Term_Operations_of_the_CVP_and_SWP.pdf.)

[27] The wording of the two bills is slightly different. S. 1894 refers to the formal title of the NMFS "Biological and Conference Opinion," whereas H.R. 2898 refers simply to the biological opinion issued by NMFS on June 4, 2009. See footnote 21 of this report for the full citation for the NMFS BiOp. S. 1894 also notes that the term includes "the operative incidental take statement of that opinion." H.R. 2898 does not reference the incidental take statement in the definitions.

[28] Again, the Senate bill uses the formal title of the FWS BiOp, whereas H.R. 2898 uses a slightly abbreviated version. See footnote 20 for the full citation for the FWS BiOp.

[29] Act of December 28, 1973; 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 Endangered Species Act (ESA) and its major provisions may be found in CRS Report RL31654, *The Endangered Species Act: A Primer*, by M. Lynne Corn.

extensive and detailed and directly affect the management and operation of the CVP and SWP. Actions needed to avoid jeopardy to Delta smelt under the FWS BiOp issued in December 2008 resulted in restrictions on the amount of water exported via SWP and CVP Delta pumps (this water is often referred to as *Delta exports*). The June 2009 NMFS BiOp on salmon and other anadromous and ocean species includes further limitations on pumping and releases of stored water in CVP reservoirs. These restrictions, combined with reductions necessitated by drought conditions, have contributed to water supply reductions for some water users receiving water supplied by the CVP and SWP.

BiOp definitions in H.R. 2898 and S. 1894 appear to codify the specified BiOp as written on its original date.[30] Because either bill, if implemented, could remain in effect for a period of time during which the BiOps could be amended or replaced, it is unclear what would happen if an updated or new BiOp, perhaps based on new conditions or new information, were to conflict with the earlier BiOps whose precedence appears to be mandated under the bill. Under some provisions, this issue is addressed. For example, Section 103(e) of H.R. 2898 would direct the Secretary of the Interior (the Secretary) to consider relevant provisions of the Delta smelt BiOp or "any successor biological opinion" when implementing Old and Middle Rivers (OMR) flows; however, such language does not appear in all cases.

H.R. 2898 would also define a new standard to measure the status of species. Under H.R. 2898, *negative impact on the long-term survival* would be defined as follows:

> The term "negative impact on the long-term survival" means to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.[31]

This term is used several times in H.R. 2898 as the standard for measuring the effects of operational changes on Delta smelt and salmon. S. 1894 does not include such a definition. The term raises questions about how this standard would be interpreted and implemented by water managers, or litigated in the courts. The definition is not found in the statutory language of the ESA; however, a similar phrase is used in federal regulations implementing the ESA. Under federal regulations, the phrase *jeopardize the continued existence of* means

> to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.[32]

Notably, the regulatory definition applies to actions that both directly and indirectly reduce appreciably the likelihood of survival and recovery of a species. The apparent exclusion of indirect actions in the definition under H.R. 2898 could be interpreted to narrow the scope of the law, potentially allowing for the exclusion of some actions covered by current regulations.[33] For instance, it is unclear whether the term *negative impact on the long-term survival* in H.R. 2898 includes a species' critical habitat, which is considered under the ESA to be essential to the long-term health of the species.

[30] Both BiOps include provisions that are relatively rigid, such as mandating certain flow and pumping regimes at certain times; however, other provisions are more flexible and in some cases rely on actions to be taken depending on the results of monitoring or certain studies or outcomes.

[31] Section 3(5) of H.R. 2898.

[32] 50 C.F.R. §402.02.

[33] *Indirect effects* are defined in the federal regulations as "those that are caused by the proposed action and are later in time, but still are reasonably certain to occur."

Some stakeholders assert that the bill establishes a "new standard" for implementation of the ESA, which could negatively affect healthy commercial and recreational fish stocks, as well as those listed as threatened or endangered under the federal ESA.[34] Others contend that this definition would still require compliance with the ESA standard and that it therefore complements existing standards rather than replacing them. For example, proponents of H.R. 5781 in the 113th Congress, which also included this definition, stated that actions under the bill would be consistent with existing laws and regulations and that existing ESA provisions and regulations therefore would remain in effect.[35] Either way, the standard would likely require new and additional determinations by DOI for listed species.

The phrase *negative impact on the long-term survival* used in H.R. 2898 sometimes is qualified by other terms, which has the potential to further alter its meaning. For example, Section 103(e)(2) of H.R. 2898 refers to an "imminent" negative impact on long-term survival. The bill provides no definition of what constitutes imminent, and it is unclear how water managers might interpret this term. For instance, some might interpret the term as referring only to effects that could readily be measured in the short term (e.g., take levels at the pumps) and omitting effects that might be realized in the long term. This terminology also raises the question of how managers might relate imminent effects to the long-term survival of the species given the potential uncertainties regarding how the population might react to the effects over time, and how they might respond to other unforeseeable stressors.

Managing Delta Smelt Under H.R. 2898 and S. 1894

This section discusses provisions related to Delta smelt, which are listed as threatened under ESA. For the past decade, average Delta smelt abundance has been lower than in the previous decade (see **Figure 3**).[36] Both bills would aim to increase water supplies for users by authorizing changes in how pumps and flow rates are managed in the Delta, and both would attempt to do so while considering the effects of pumping and water flows on listed species. Whereas S. 1894 would aim to achieve this objective in accordance with existing laws and regulations, H.R. 2898 would make changes to how the Delta smelt BiOp are implemented.

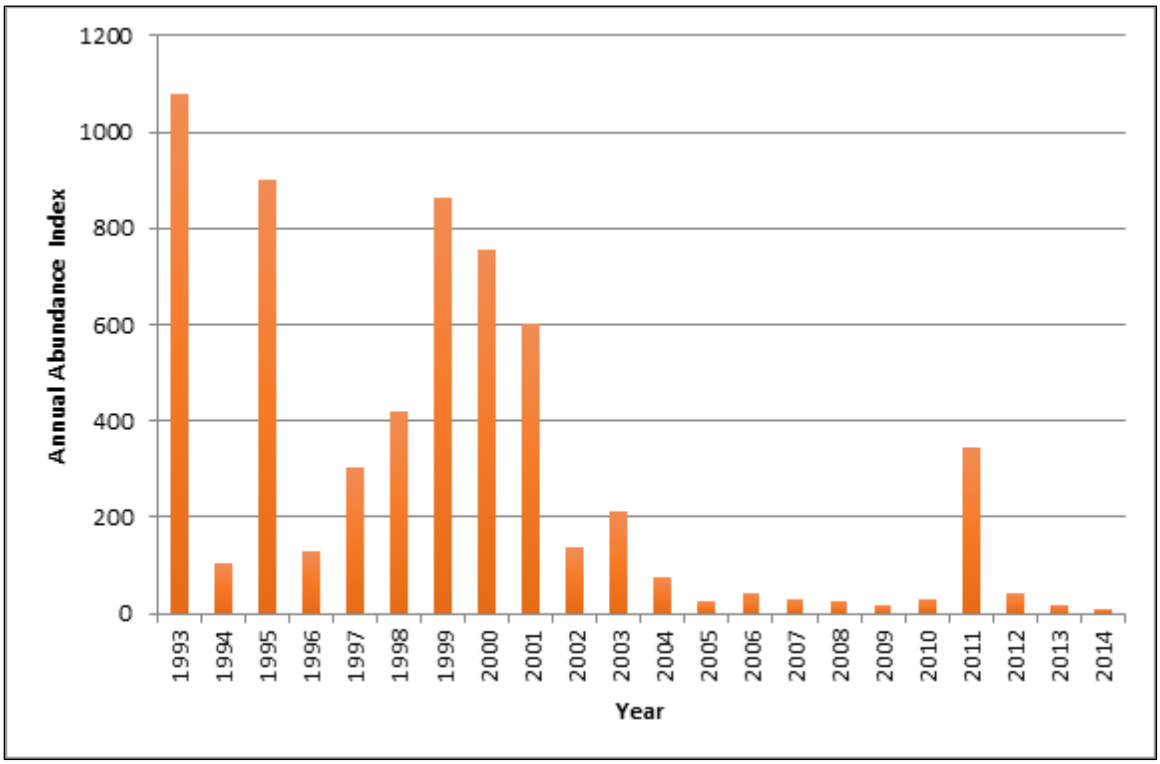
[34] See letter from Michael Connor, Assistant Director of the Department of Interior, to Hon. Rob Bishop, Chairman, Committee on Natural Resources, July 7, 2015.

[35] Rep. David Valadao, "California Emergency Drought Relief Act of 2014," remarks in the House, *Congressional Record* daily edition, vol. 160, no. 148 (December 8, 2014), p. H883. Rep. Valadao: "The bill is simple, and it is very specific that it does keep in place all protections of the Endangered Species Act, the biological opinions and others that have been put in place to protect the environment, but this does give a little more flexibility to those agencies to allow some pumping to help these poor communities."

[36] The Abundance Index is a calculation of the number of individuals caught by trawling at various sampling stations in the Delta. Abundance is the relative representation of a species in an ecosystem. Abundance can be used as an indicator of population size, and changes in abundance are sometimes used to estimate trends in population size.

Figure 3. Delta Smelt Abundance: Fall Midwinter Trawl

(1993-2014)



Source: California Department of Fish and Wildlife.

Notes: Delta Smelt abundance was higher in the 1970s. The trawl reached more than 1,600 in 1970 and 1980, before declining steeply in the 1980s. Delta smelt abundance fell in the 2000s to historic lows in 2014. For a summary of Delta smelt and other species indices from 1967 to 2013, see California Dept. of Fish and Game, Fall Midwinter Trawl Surveys at http://www.dfg.ca.gov/delta/data/fmwt/Indices/sld002.asp.

Recalculating Incidental Take Levels of Delta Smelt

H.R. 2898 would authorize a new method for calculating the incidental take level[37] for Delta smelt due to the coordinated operations of CVP and SWP. S. 1894 does not have a similar provision. The approach H.R. 2898 would take differs from the Delta smelt BiOp in some ways. For example, Section 103(b) of H.R. 2898 would use Delta smelt population data since 1993 to calculate the incidental take level. By contrast, the current BiOp uses data from 2006 to 2008[38] to determine a cumulative salvage index, which is then used to calculate incidental take levels. The recalculation of incidental take under H.R. 2898 is likely to result in a higher incidental take value (allowing more agency flexibility) than is currently used because Delta smelt levels are higher, on

[37] Take is defined under ESA as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect listed species, or to attempt to engage in any such conduct. Incidental take under ESA means the take of a species that is incidental to, and not the purpose of, carrying out of an otherwise lawful activity. If, in a consultation under the ESA, FWS or NMFS find that the incidental take resulting from an agency's project is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat, FWS or NMFS will prepare an "incidental take statement" that includes the amount of anticipated take due to the federal action, reasonable and prudent measures to minimize the take, and terms and conditions that must be observed when implementing those measures.

[38] The estimated Delta smelt abundance from 2006 to 2008 was significantly lower than historic levels, including when the species was listed as endangered in 1993.

average, when calculated using data since 1993 than when calculated using data from 2006 to 2008.

A higher incidental take level might in turn allow for increased pumping levels and additional water for users. Some stakeholders who oppose the proposals in H.R. 2898 might contend that such a change could be harmful to the Delta smelt, which are currently at historic lows. (Delta smelt abundance increased sharply in 2011, a wet year, but have declined since that time; see **Figure 3**.)

Proponents of H.R. 2898, including the bill's sponsors, state that the incidental take calculation proposed in the legislation would be based on the most up-to-date science and would allow managers to maximize water supplies without harming species.[39] In addition, supporters contend that this proposed method of calculating incidental take is more robust than what is done under the current BiOp because it covers a larger span of time and a greater sample size for Delta smelt population estimates,[40] including higher population levels in 2011 and possibly 2012. If Delta smelt population levels continue to decline over time, the calculation proposed under H.R. 2898 could eventually result in a lower incidental take level than presently used.

Data Collection and Real-Time Monitoring

Both bills call for greater data collection on Delta smelt population through a distribution study, and both bills would authorize more real-time monitoring of Delta smelt to inform management decisions. However, the bills differ on how they would authorize changes to coordinated CVP and SWP operations based on these data. For example, Section 103(a) of H.R. 2898 would require the Director of FWS to use the best scientific and commercial data available to implement, evaluate, refine, or amend the reasonable and prudent alternatives (RPAs)[41] in the Delta smelt BiOp or successor BiOp. It also would direct the Secretary of the Interior to document all "significant decisions" under the Delta smelt BiOp. This provision appears to set up an active adaptive management approach[42] intended to collect data on smelt distribution in the Bay-Delta and to inform managers how to minimize salvage and maximize pumping. This approach does not appear to be altering the implementation of the BiOp; rather, it is calling for an increase in data collection that eventually may be used to justify modifications to RPAs under the BiOp. It is unclear if these modifications to the Delta smelt BiOp would trigger re-consultation under ESA regulations or if this process would be bypassed and changes implemented immediately. The Administration has stated that H.R. 2898 would "negatively impact our ability to protect Delta fish and wildlife in the long-term," and further contends that H.R. 2898 could create new complexities and conflicts with existing laws leading to delays in implementation.[43]

In contrast, S. 1894 does not have a broad directive to increase monitoring of Delta smelt; however, Section 203(b) of S. 1894 would direct the Secretary to monitor turbidity levels daily,

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[39] Congressman David Valadao, "The Western Water and American Food Security Act: Major Provisions," press release, June 2015, at http://valadao.house.gov/information/westernwateramericanfoodsecurity/.

[40] For example, see U.S. Congress, House Committee on Natural Resources, *Western Water and American Food Security Act of 2015*, committee print, 114th Cong., 1st sess., July 13, 2015.

[41] *Reasonable and prudent alternatives* are alternate ways of implementing a project presented in a BiOp that, if implemented, would avoid jeopardizing a species and adversely modifying its habitat.

[42] Adaptive management is the process of incorporating new scientific and programmatic information into the implementation of a project or plan to ensure that the goals of the activity are being reached efficiently. It promotes flexible decisionmaking to modify existing activities or to create new activities if new circumstances arise (e.g., new scientific information) or if projects are not meeting their goals.

[43] Letter from Michael L. Connor, Deputy Secretary of the Interior, to Honorable Rob Bishop, Chairman, House Committee on Natural Resources, July 7, 2015.

conditioned on funding and other conditions, to inform project operations to achieve fish protection and water supply benefits. Further, Section 101(c)(8) of S. 1894 would direct the Secretaries of Commerce and the Interior (the Secretaries) to use all scientific tools to identify changes to the real-time operations of Reclamation and of state and local water projects that could increase water supplies. However, S. 1894 does not contain a directive to implement any changes that have been identified. Implementing changes based on these data might instead be anticipated through directives to maximize water supplies, which are discussed in a section entitled Operational Flexibility During Drought in this report.

Old and Middle River (OMR) Flows

The Old and Middle Rivers are channels of the San Joaquin River as it enters the Delta. The location of these channels can result in reverse flows when the CVP and SWP pumps are turned on and operating at higher levels, thus resulting in a negative flow rate. Higher pumping levels result in higher negative flows, which in turn increase the probability of fish being drawn into the pumps (entrained) and that habitat will be modified (e.g., increased turbidity and other factors affecting fish habitat). Both bills address negative OMR flows as they pertain to listed species. Under Section 103(e)(2) of H.R. 2898, OMR flows would be set at -5,000 cubic feet per second (cfs) unless collected information allows the Secretary of the Interior to conclude that a lower flow rate (less negative flow rate) is needed to protect species. If a lower flow rate were to be implemented, H.R. 2898 would require a series of conditions to make the change. Some of these conditions would center on obtaining evidence from real-time monitoring and near-term forecasts using salvage models that show a significant negative impact on the long-term survival of the Delta smelt is imminent. H.R. 2898 also would mandate an increase in flow rates above -5,000 cfs (i.e., increased pumping) if information indicated that the higher flow rate would not have an "imminent negative impact on the long term survival of Delta smelt."[44] This analysis would be done for current as well as future BiOps addressing Delta smelt.

Supporters of this approach under H.R. 2898 contend that the provisions addressing Delta smelt and salmon would be implemented within the framework of the existing BiOps.[45] Further, it could be interpreted that setting flow rates higher would increase water supplies available to users immediately and that evidence must be presented by the Secretary before flows are reduced, thus requiring justification for reducing water flows to protect Delta smelt.

This change from the Delta smelt BiOp has generated questions and concerns from some stakeholders. For example, some note that the flow rate of -5,000 cfs in the legislation is at the high end of the allowable flows under the Delta smelt BiOp during certain times of the year and might have detrimental effects on Delta smelt and other species.[46] They also contend that the approach of setting a high baseline for flows and then measuring its effect on smelt could harm the species in the short term, decreasing the chances of mitigating effects on the population in the long term.[47] As discussed earlier, the use of undefined qualifiers with the standard included in H.R. 2898 of *negative impact on the long-term survival of Delta smelt* could create additional uncertainty as to how this standard would be implemented. For example, under Section 103(e)(2)

[44] For example, see §103(e)(2) of H.R. 2898.

[45] U.S. Congress, House Committee on Natural Resources, *Western Water and American Food Security Act of 2015*, committee print, 114th Cong., 1st sess., July 13, 2015.

[46] Executive Office of the President, "Statement of Administrative Policy: H.R. 2898—Western Water and American Food Security Act of 2015," press release, July 14, 2015, at https://www.whitehouse.gov/sites/default/files/omb/legislative/sap/114/saphr2898r_20150714.pdf.

[47] This sentiment is reflected in a letter from Michael L. Connor, Deputy Secretary of the Interior, to Honorable Rob Bishop, Chairman, House Committee on Natural Resources, July 7, 2015.

of H.R. 2898, the term *imminent* qualifies *negative impact on the long-term survival of Delta smelt*. It is unclear how managers would measure imminent impacts and whether these impacts (or lack thereof) might indicate any effect on species due to changes in flow rates.

In broad terms, S. 1894 would mandate the maximization of flows to benefit water supply contractors, but—unlike H.R. 2898—it would not specify flow rates in statute. Section 101(c)(3)(B) of S. 1894 contains a directive to managers to manage OMR flows as prescribed by the Delta smelt and salmon BiOps "to minimize water supply reductions" for the CVP and SWP. This would be achieved consistent with applicable laws and regulations according to Section 101(a) of S. 1894. Some might question how this provision would be implemented and whether it would result in additional water supplies for users. Managers have stated that they are trying to maximize operational flexibility under existing laws and regulations to increase water supplies for users.[48] However, this provision could provide additional legal protection for efforts to maximize water supplies.

Managing Salmon in H.R. 2898 and S. 1894

Both bills would address salmon management in the Delta, but they would do so in different ways. H.R. 2898 contains specific directions for incorporating new science and data into the management of salmon stocks and the implementation of the NMFS BiOp; S. 1894 would direct implementation of the National Oceanic and Atmospheric Association's (NOAA's) Salmon Restoration Plan.[49]

Under Section 202 of H.R. 2898, the RPAs in the salmon BiOp would be adjusted to reflect new science and data in accordance with existing adaptive management provisions in the BiOp. Section 202(b) outlines a process for examining new science and data on salmon and providing recommendations to alter the RPAs to reduce the water supply impacts of the salmon BiOp. The recommendations would be implemented if they would have a net effect on listed species that is similar to the operational parameters in the BiOp (Section 202(c)). The recommendations would be limited to those actions that reduce water supply impacts. It is unclear what would be implemented if analysis of scientific data under this adaptive management approach suggested a need to change pumping rates and reduce flows (i.e., a greater water supply impact to users than before). This ambiguity might lead some stakeholders to contend that this provision only mandates increases, not decreases, in pumping rates.

In contrast, S. 1894 does not specifically direct that RPAs in the salmon BiOp are to be adjusted to reflect new information. Section 101(c)(8) of S. 1894 would require the Secretaries of the Interior and Commerce to identify any changes to real-time operations that could result in increased water supplies. These changes could occur from adaptive management processes that exist under the salmon BiOp. Since adaptive management processes already exist under the salmon BiOp, some stakeholders might question whether this provision would lead to any changes to the status quo regarding the management of flows under the BiOp. However, S. 1894 elsewhere directs that the Secretaries shall provide the maximum quantity of water to CVP and

[48] U.S. Bureau of Reclamation, California Department of Water Resources, and U.S. Fish and Wildlife Service, et al., *Central Valley Project and State Water Project Drought Contingency Plan January 15, 2015-September 30, 2015*, January 15, 2015, p. 8, http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/docs/2015_drought_contingency_plan.pdf.

[49] See National Oceanic and Atmospheric Association, "West Coast Salmon Recovery Planning & Implementation," at http://www.westcoast.fisheries.noaa.gov/protected_species/salmon_steelhead/recovery_planning_and_implementation/

SWP contractors, within law and regulations, which some believe would result in increased pumping rates.[50]

Offsetting Measures

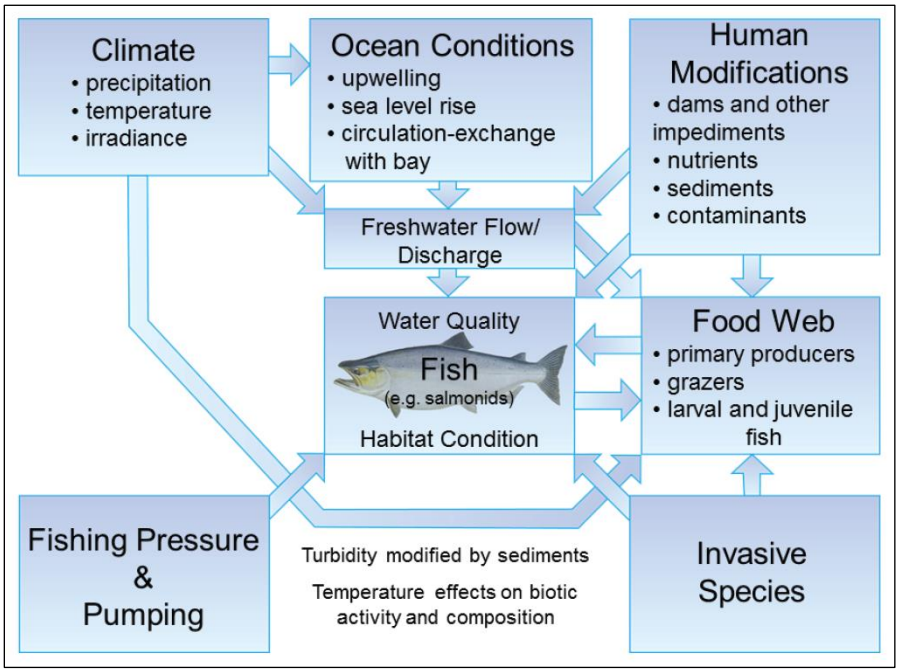
Section 202(d) and (e) of H.R. 2898 discuss the evaluation of conservation measures (e.g., physical habitat improvement, predation control, and hatchery programs) that could increase the population of salmon in the ecosystem relative to pumping restrictions. A framework for identifying offsetting actions and estimating how each action would affect the survival of salmonid species is provided in Section 202(e) of H.R. 2898. After the framework is established, Section 202(g) would direct an evaluation of alternative management measures based on the recommended actions and their potential effect on salmonid survival. If the evaluation determines that an alternative measure would offset the existing effects of restricting water supplies—and that implementing the alternative measure is feasible—then the alternative measure would be implemented to increase pumping rates to the maximum extent possible while maintaining equivalent through-Delta survival rates for listed salmon species. These actions would be intended to offset the effects of pumping on salmon populations. Thus, if conservation actions were to result in greater survival for salmon, more pumping could occur. Section 202(h) of H.R. 2898 discusses oversight responsibilities for adaptive management under the BiOp and would direct that operational criteria be developed to coordinate the management of Delta smelt and salmon under the BiOps.

Supporters of this approach contend that scientific studies suggest that multiple factors affect salmon and Delta smelt in the Bay-Delta, including pumping rates, invasive species, and pollutants, among others.[51] (See **Figure 4**.) Mitigating the effects of one or a suite of these factors on the salmon population might increase survival, which could allow for more pumping. Critics of this approach, however, might contend that associating a conservation action with an increase in salmon survival may be difficult to determine because of the multitude of factors affecting fish. They might contend that this approach is not needed because if conservation actions increase survival of Delta smelt and salmon, existing processes to calculate incidental take levels in the BiOps might record a greater abundance of individuals, thus allowing for an increase in pumping. The question of how individual conservation actions might lead to an increase in the abundance of Delta smelt and salmon could be answered, in part, by Section 202(f) of H.R. 2898, which would direct the Assistant Administrator of NOAA to determine the percentage increase in survival of salmon as a result of alternative conservation measures. While scientifically challenging to consider the number of factors that affect salmon in the Delta, this directive might allow managers to quantify the survival of salmon due to conservation measures. With estimates of survival, it might be easier to calculate incidental take levels of salmon when pumping operations are adjusted. Further, adaptive management could be used under the provisions of both bills to determine how alternative management measures are working.

[50] Senator Dianne Feinstein, "Feinstein, Boxer Introduce California Emergency Drought Relief Act," press release, July 29, 2015, at http://www.feinstein.senate.gov/public/index.cfm/press-releases?ID=FD026FAA-4DB2-4A77-BD62-AC3829DAAD0A.

[51] For example, the National Academy of Sciences' National Research Council found that many different factors contribute to declining species levels in the Delta. See National Research Council, *Sustainable Water and Environmental Management in the California Bay-Delta*, 2012, p. 59.

Figure 4. Stress Complexes Affecting Fish



Source: National Research Council, *Sustainable Water and Environmental Management in the California Bay-Delta*, 2012, p. 59.

S. 1894 would not direct managers to create management regimes that offset the effects of increased pumping beyond what is prescribed in the BiOps. Instead, S. 1894 is tied to the salmon BiOp, which calls for some conservation measures to be implemented but does not propose increasing flow restrictions if these measures are completed. Section 201 of S. 1894, however, would authorize several actions that aim to help threatened and endangered fish populations. These actions might resemble the alternative conservation measures listed under Section 202(g) of H.R. 2898. Examples include implementation of nonstructural barriers at Delta Cross Channel gates (see "Operation of the Delta Cross Channel Gates," below), alternative hatchery salmon release strategies, and a trap-and-barge pilot project to increase fish survival in the Delta. S. 1894 also would direct agencies to implement the NOAA Salmon Recovery Plan, which contains several conservation- and flow-related projects to increase salmon populations. S. 1894 further would authorize $4 million per year through 2020 from the Central Valley Project Restoration Fund[52] to carry out the plan.

Operational Flexibility During Drought

Both H.R. 2898 (Section 302) and S. 1894 (Section 101) would provide broad authority to the Secretaries to approve any project or operational change to address emergency drought conditions,[53] although both also contain limitations on this authority. Under both bills, projects

[52] The Central Valley Project Restoration Fund was established under Title XXXIV of P.L. 102-575 to provide funding from project beneficiaries to restore ecosystems, improve and acquire habitat, and conduct other fish and wildlife restoration activities in the Central Valley Project area within California.

[53] The emergency operational flexibility under S. 1894 is mandated "in response to the declaration of a state of drought emergency by the Governor of the state." By contrast, H.R. 2898 directs operational flexibility to maximize water supplies when the Sacramento Valley Index (SVI) is 6.5 or lower, or at the request of the state of California, and until

and operational changes would be approved consistent with applicable laws and regulations. H.R. 2898 and S. 1894 would streamline permit decisions and authorize expedited procedures to make final decisions on operations and projects that address their respective sections on maximizing water supplies.[54] In addition, Section 302(f) of H.R. 2898 would require the Secretaries to develop a drought operations plan that is consistent with provisions under the bill. S. 1894 contains no comparable provision.

Analysis of Operational Flexibility During Drought

Both bills would direct managers to maximize water supplies by approving, "consistent with applicable laws (including regulations)," projects and operations to provide additional water supplies to water users.[55] This provision apparently would require managers to make decisions that would maximize water supplies and provide them with legal authority to do so as long as such decisions are consistent with applicable law. It is unclear how this directive would be implemented and whether it would change CVP and SWP operations, which agency officials believe are already maximizing water supplies.[56]

Several stakeholders have expressed concern that maximizing water supplies in the present could have unintended or long-term consequences. For example, projects and actions meeting the minimum requirements under law for addressing species and water quality might not fully account for long-term effects. In addition, requiring managers to maximize water supplies in implementing projects and actions might be interpreted as narrowing their discretionary decisionmaking flexibility to address long-term effects. Therefore, although maximizing water supplies could benefit water users under drought conditions, the long-term effects on factors such as species viability, recreation, and water quality would be unclear. Further, DOI states that this provision in both bills contains potential legal uncertainties associated with the maximum quantity of water supplies standard.[57]

The directive to maximize water flows, used in both bills, also might raise the question of how agencies would provide the "maximum quantity of water supplies possible" to CVP and other contractors and, relatedly, how they would make such a determination consistent with laws and regulations. Implementation of the provision could be difficult and possibly contentious, according to the Administration's statement of policy.[58] For example, agencies and water users may not agree that particular actions are providing maximum water quantities. Notably, under the status quo, some observers already believe the agencies are maximizing water supplies to the detriment of species, whereas others contend that the agencies are not doing enough to maximize water supplies within the parameters of existing laws and regulations. Further, some advocates

the SVI is 7.8 or greater for two successive years.

[54] Section 302(c) of H.R. 2898 and Section 101(e) of S. 1894.

[55] The phrase "consistent with applicable laws," used in both bills to condition the extent of projects and operations that can be used to maximize water supplies, raises questions of how "consistent with the law" might be interpreted as opposed to "pursuant to" or "in compliance with" applicable laws. Some might question if the phrase "consistent with applicable laws" would allow for more agency discretion or flexibility than other phrases.

[56] Connor, October 2015 Testimony.

[57] Ibid.

[58] Executive Office of the President, "Statement of Administration Policy: H.R. 2898 Western Water and American Food Security Act of 2015," July 14, 2015, at https://www.whitehouse.gov/sites/default/files/omb/legislative/sap/114/saphr2898r_20150714.pdf.

fear that the maximization language may result in reduced reservoir levels, thereby creating larger water supply shortages in future years and jeopardizing urban water supplies.[59]

In a broad sense, some may respond that if either bill is enacted, agency actions specified under this provision would be directed to maximize water supplies as a priority over other considerations (e.g., water quality or habitat conservation), albeit within parameters allowed under existing laws and regulations. In response to this concern, some might contend that other factors, such as water quality and species needs, are addressed in laws and regulations that would prevent harm.[60]

Flexibility for Project Operations to Manage OMR Flows During High-Water Events

H.R. 2898 contains two sections that authorize managers to increase OMR flows above the -5000 cfs required in Section 103(e)(2) under certain situations that are not addressed in S. 1894. Section 306 would authorize the Secretaries to manage reverse flows in the OMR at -6,100 cfs or more during specific periods if real-time monitoring indicates that there is no significant negative impact on the long-term survival of Delta smelt. Currently, ESA BiOps for salmon and Delta smelt prohibit OMR flows more negative than -5,000 cfs, which were considered unsafe for imperiled fish species when the BiOps were written. This provision would direct managers to maintain -6,100 cfs flow unless a significant impact on Delta smelt is found. It is unclear how this flow rate would be adjusted if impacts to salmon, water quality, or other species are found. Further, some might question the extent of the term *significant* as used in the provision. The qualification in part implies that some negative effect would be allowed (up to *significant*); however, without the term being defined, it is unclear what type of effects on smelt would be needed to lower flows. Such ambiguity could hinder management decisions or leave them vulnerable to criticism.

Section 307 of H.R. 2898 also would authorize a new period of temporary operational flexibility for CVP and SWP operations during the winter. The temporary period would be authorized for 56 cumulative days after October 1 of each water year.[61] Temporary period operations would be triggered during certain high-flow conditions on the Sacramento River—specifically, on days that California DWR determines that the daily average flow of the Sacramento River is at or above 17,000 cfs.[62] Under these conditions, more negative flows could occur than otherwise would be allowed on the OMR under the BiOps.[63] However, Section 307(a) of H.R. 2898 would appear to direct flows that lead to a daily average of -7,500 cfs over the temporary period of operational flexibility. This provision likely would result in temporarily increased pumping and additional

[59] Restore the Delta, "Call for Senator Dianne Feinstein to Keep Her Word on Drought Legislation," press release of Restore the Delta, December 5, 2014.

[60] See U.S. Congress, House Committee on Natural Resources, *California Water Crisis and Its Impact: The Need for Immediate and Long-Term Solutions*, oversight field hearing, March 19, 2014, and congressional floor debate on H.R. 2898, July 15 and 16, 2015.

[61] For operations of the CVP and SWP, the water year runs from October 1 to September 30 of each year.

[62] The legislation specifies that daily average flows at or above 17,000 acre-feet per second at the Freeport gauge on the Sacramento River would trigger the temporary operational period. It does not specify how "lag" time in between gauge readings and pumping are to be handled.

[63] The risk of entrainment of listed species in Delta CVP and SWP pumps increases with increased reverse flows on the Old and Middle Rivers, which occur as a result of project export pumping. Such reverse flows also can alter turbidity and other habitat features for Delta smelt.

water supplies for some CVP and SWP contractors compared to what otherwise would be available.

Some might question whether additional water supplies exported out of the Delta during this time could lead to short-term or long-term water quality issues. Freshwater flows to the ocean not only help maintain a salinity gradient in the Delta, but also provide dilution of other water pollutants from run-off or other sources. If water flows to the ocean are significantly reduced, the salinity gradient might move further east into the Delta and provide less freshwater for other purposes, potentially causing negative effects to the ecosystem and water quality. However, if water flows are sufficiently high to the ocean to maintain or surpass the desired salinity gradient, and other water quality factors remain stable, then increased pumping might have a diminished effect on water quality.

The effects of CVP and SWP operations on water quality and flows for species are addressed, in part, by the State Water Resources Control Board (SWRCB).[64] H.R. 2898 states that the Secretaries actions under this section (Section 307) should be consistent with applicable regulatory requirements under state law, which addresses water quality.

Section 307(c) and (d) of H.R. 2898 would limit the extent of these flows due to environmental effects. For example:

- Section 307(c) would authorize the Secretaries to impose requirements under the salmon and Delta smelt BiOps during the period of temporary operational flexibility if they determine that the requirements would avoid a significant negative impact on the long-term survival of listed species (in the short term)[65] beyond what is allowed under ESA, as long as the requirements do not impose a reduction in water supplies for CVP and SWP users. It is unclear what baseline of water supplies for users is being referred to in this provision. Would the limit be a reduction from -5,000 cfs, the amount prescribed in the BiOps, or from -7,500 cfs, as prescribed for temporary operational flexibility? Managers may impose any requirements under the BiOps during the period of temporary operational flexibility provided that they do not reduce water supplies for the CVP and SWP. It is unclear what requirements could be implemented in situations where there is an effect on species, since water flows to CVP and SWP apparently would not be reduced.
- Section 307(d) would require actions to be consistent with state law and regulations and would allow for "less negative" OMR flows (i.e., less pumping) during the initial sediment flush each water year "for a minimum duration."[66] This approach might be undertaken to avoid movement of Delta smelt that could increase entrainment at CVP and SWP pumps during this time.
- Section 307(d)(3) would require that Section 307 not affect implementation of the salmon BiOp from April 1 to May 31 of each year, except to provide emergency water supplies without resulting in additional adverse effects "beyond those authorized under" the ESA. Thus, the application of the salmon BiOp

[64] Through the Porter-Cologne Act (a state law), California implements federal Clean Water Act requirements and authorizes the State Water Resources Control Board (SWRCB) to adopt water quality control plans, or basin plans (see Cal. Water Code §13160). SWRCB oversees the allocation of water resources to various entities, has regulatory authority to protect water quality, and addresses flow requirements for fish.

[65] It is not clear if or how agency officials would be able to measure or assess long-term negative effects on species in the short term.

[66] The exact length of time is unspecified in legislation.

would be effective for a least a two-month period, unless the Secretary of Commerce determined that such actions would not be in violation of the federal ESA. It is unclear how Section 307 would affect the application of the salmon BiOp during other parts of the year.

- Section 307(d)(4) would direct the Commissioner of Reclamation, in coordination with FWS and NMFS, to undertake a monitoring program that generally would attempt to identify any negative impacts associated with the temporary flexibility being authorized under the section, including exceedance of incidental take levels under the ESA. It also would direct the Commissioner to identify actions to mitigate any negative impacts of the section. This authority would not call for modifying temporary flexibility if negative effects are found, but it would call for identifying actions to mitigate the impacts. The provision is silent on what these actions might be and if they might involve reducing water flows.
- Section 307(e) would provide that CVP and SWP operations resulting in flows "less negative" than -7,500 cfs (i.e., less pumping) before the 56 cumulative days of operational flexibility authorized would not be counted toward the 56-day cumulative period in the legislation. Therefore, only days with a daily average flow of -7,500 cfs would be counted toward the 56-day cumulative total. This provision would provide a greater chance that a flow rate of -7,500 cfs would be used for at least 56 days. Data for 2014 flow rates at the Freeport gauge on the Sacramento River indicate that this temporary operational flexibility could have occurred for approximately 33 days, when average daily flows were above 17,000 cfs. H.R. 2898 would direct the commissioner to use emergency ESA consultation procedures if actions necessary to implement this provision would exceed 56 days, with certain limitations.
- Section 307(g) would stipulate that in making determinations under this section, the Secretaries would not be required to provide supporting detail at a greater level than feasible within the time frame given to make a determination. Based on this provision, it is not specified how authoritative or comprehensive the data need to be to make a decision on temporary operational flexibility.

Water Transfers

Academics and other water resource professionals for decades have advocated the use of water transfers, or water marketing, as a mechanism to stretch water supplies during times of water shortages and to move water to its highest valued use. CVP agricultural water users routinely transfer water within the CVP service area and at times transfer large quantities of water from CVP agricultural use to urban agencies hundreds of miles away. Some impediments exist, however, to completing transfers in a timely manner. Thus, several provisions of H.R. 2898 and S. 1894 address the transfer of water from or through the CVP system. In general, both bills seek to facilitate or expand the use and timing of allowable water transfers and to expedite review of proposed transfers. Both bills also address San Joaquin River inflow-to-export (I:E) ratios as they pertain to pumping and transferred water.[67]

[67] The inflow to export (I:E) ratio is the ratio of San Joaquin River water flowing or projected to flow into the Delta during certain times of year (inflow) that may be exported (export) at CVP and SWP pumping stations in the South-Delta area. The I:E ratio is used to manage the amount of water exported from the Delta through the pumps. Specific

H.R. 2898

Section 302(b)(2) requires the Director of FWS and the Commissioner of Reclamation to complete all National Environmental Policy Act (NEPA; 42 U.S.C. §§4321 et seq.) and ESA requirements within 30 days of receiving requests for water transfers and to approve such transfers "to maximize the quantity of water supplies available for non-habitat uses, on the condition that actions associated with the water transfer comply with applicable Federal laws (including regulations)." Section 302(b)(3) directs the Secretaries to adopt a 1:1 I:E ratio from April 1 to May 31 of each year (regardless of water year type) for increased San Joaquin River flows resulting from transfers, unless a written determination specifies that a more restrictive I:E ratio is necessary to "avoid a significant negative impact on the long-term survival of a listed salmonid species" under the ESA. Section 308 of H.R. 2898 would amend the Central Valley Project Improvement Act (CVPIA; Title 34 of P.L. 102-575) to require that the Secretary of the Interior take "all necessary actions to facilitate and expedite transfers of Central Valley Project water" in accordance with (1) the bill, (2) NEPA, and (3) Reclamation law. It would require the appropriate entity (i.e., the contracting district from which the water is coming, the agency, or the Secretary) to determine if a transfer proposal is complete within 45 days. The House bill also provides that the Secretaries should "allow and facilitate" water transfers through the two major federal and state pumping plants at the south end of the Delta from April 1 to November 30, provided transfers comply with state law.

S. 1894

S. 1894 includes language similar to Section 302(b) of H.R. 2898; however, it would require federal officials to complete NEPA and ESA requirements "within the shortest practicable time period after receiving such request" and would apply only to permit decisions on water transfers associated with voluntarily fallowing nonpermanent crops (Section 101(c)(6)). Section 101(c)(4)(a) of S. 1894 would require that any proposal to increase flows in the San Joaquin River through a voluntary sale, transfer, or exchange be evaluated by the Secretary of the Interior in a "timely manner" and consistent with "applicable law." Section 101(c)(4)(b) of S. 1894 would require the adoption of a 1:1 I:E ratio on the San Joaquin River from April 1 through May 31 (the same time period as H.R. 2898) for increased flows resulting from voluntary water transfers, sales, and exchanges during the period that the bill is in effect (i.e., during the drought designation). Under the bill, this ratio would be allowed unless the Secretaries determine that implementing the requirement would impact species listed as threatened or endangered under ESA more than currently anticipated through the implementation of the current salmon BiOp.

Issue and Legislative Considerations

Water agencies wishing to transfer water and those wanting to receive transferred water have highlighted as challenges cumbersome transfer requirements and the length of time it takes to approve CVP water transfers under CVPIA and in general. Although H.R. 2898 would propose a specific limit of 30 days for the Administration to make a decision on water transfers, the Administration has argued that such a deadline is unrealistic and potentially unworkable due to a

I:E ratios are included in current BiOps for the coordinated operation of the CVP and SWP. A 1:1 ratio means that the entire river's flow (measured at a certain point) can be exported out of the Delta. When a 2:1 ratio is in effect, only half the inflow may be exported. (Note: the I:E ratio should not be confused with the export/inflow ratio used to manage water quality conditions in the Delta under the State's water quality control plan (D-1641).)

number of factors.[68] S. 1894 proposes that permits decisions would be made in the "shortest practicable time period" after receiving a request.

As noted above, both bills address San Joaquin River I:E ratios as they pertain to pumping water transfers. Section 302(b)(3) of H.R. 2898 provides that the 1:1 I:E ratio, similar to S. 1894, would be allowed, but the bill would allow for a more restrictive ratio only if the Secretaries make a determination that such a ratio would be required "to avoid a significant negative impact on the long-term survival of a listed salmonid species" under ESA. Thus, whereas S. 1894 uses existing ESA documents as the standard for its determination, H.R. 2898 uses the new "negative impact on long-term survival" standard that appears in other places throughout that bill. S. 1894 also includes other conditions for the 1:1 I:E ratio to apply.

Both bills would implement the 1:1 I:E ratio from April 1 to May 31 annually in all types of water years pending the conditions set in the provisions of each bill. The current BiOp allows a 1:1 ratio in "critically dry" years only. As water conditions improve, the BiOp allows for an increase in the ratio, up to 4:1 in "wet" years—meaning 25% of the river's flow may be exported.

Water Rights Protections and Existing Obligations

Both H.R. 2898 and S. 1894 include titles aiming to protect California water rights priorities under existing law as well as confirming the obligations of the United States to honor state water rights laws and, more broadly, to operate the CVP in conformance with state law. The bills differ, however, in how they address these topics. S. 1894 includes general language stating that nothing in the act authorizes the Secretaries to "take any action" that would (1) alter existing obligations to avoid either extinction of threatened or endangered species or harm to critical habitat beyond actions that are anticipated under existing federal BiOps or (2) alter obligations under the CVPIA.

H.R. 2898

Title V of H.R. 2898 includes provisions that aim to protect California water rights priorities under state law, termed area of origin protections. [69] It would specifically direct the Secretary of the Interior to "adhere to California's water rights laws governing water rights priorities and to honor water rights senior to those held by the United States for operation of the Central Valley Project, regardless of the source of priority."[70] Title V goes on to list several specific California Water Code sections. The specificity in Title V of H.R. 2898 may raise questions as to what is not included in the water rights protection language. Section 504 would set specific requirements that Reclamation provide "not less than 100 percent of ... contract water quantities" to agriculture water service contractors in the Sacramento River Watershed during wet, above normal, and

[68] Connor, October 2015 Testimony.

[69] For a more detailed analysis of the language addressing area of origin, no redirected impacts, effects on allocations for Sacramento River watershed contractors, and effects on existing legal obligations, see CRS Report R43820, *Analysis of H.R. 5781, California Emergency Drought Relief Act of 2014*, by Betsy A. Cody, Pervaze A. Sheikh, and Charles V. Stern.

[70] The U.S. Supreme Court has held that §8 of the Reclamation Act of 1902 (43 U.S.C. §383) requires Reclamation to comply with state law in the "control, appropriation, use or distribution of water" by a federal project. See California v. United States, 438 U.S. 645, 674-75 (1978). This requirement to comply with state law applies so long as the conditions imposed by state law are "not inconsistent with clear congressional directives respecting the project." See Ibid. at 670-73. Under §8, the agency is also required to acquire water rights for its projects, such as for the CVP. In California, Reclamation found it necessary to enter into settlement or exchange contracts with senior water users who had rights predating the CVP and were thus senior water rights holders. Sacramento River Settlement Contractors are one such class; the San Joaquin Exchange Contractors are another.

below normal water years and "not less than 50 percent of their contract quantities" in dry years. This section also includes instructions for making allocations in all other years. Finally, Section 505 of H.R. 2898 states that nothing in the act shall preempt or modify existing obligations of the United States under Reclamation law to operate the CVP in conformity with state law, including water rights priorities.

S. 1894

S. 1894 also includes language on area of origin[71] and water rights protections more broadly, including provisions on no redirected impacts and effects on existing obligations of the United States to operate the CVP in conformance with state law. S. 1894 includes a shorter list than H.R. 2898 of California Water Code citations that "[n]othing in this title" is to limit or otherwise affect;[72] however, the bill also includes an additional qualifier stating that the act should not limit or otherwise affect "any other provision of State water rights law, without respect to whether such a provision is specifically referred to in this act." This provision would appear to negate a concern that some sections of the water code are not specifically listed, but it also raises the question of why some sections of the California code are specifically mentioned but others are not. In addition, S. 1894 includes language on "no redirected adverse impacts" (Section 113),[73] which is similar to language in H.R. 2898; however, the language in S. 1894 appears to be broader in that it aims to protect "any other water user or purveyor organized under State law that obtains water based on any other legal right" (e.g., potentially covering contractual rights in addition to state-issued water rights) from direct involuntary reduction of water supply—not solely CVP and SWP contractors or those within certain watersheds, as in H.R. 2898.[74] S. 1894 also includes a

[71] California has enacted five "Area of Origin Laws" intended to protect water supplies in areas where water resources originate from impacts of water being exported out of the area of origin. According to the California State Water Resources Control Board (SWRCB), the laws were enacted to "reassure" water users that proposed water projects, such as the federal CVP and SWP would not deprive northerly water users of developing their own water supplies. See Wilson, Craig M., Delta Watermaster. *California's Area of Origin Laws*. A Report to the State Water Resources Control Board and the Delta Stewardship Council, October 2013, p. 5 (http://www.waterboards.ca.gov/board_info/agendas/2013/oct/100813_7origin.pdf).

[72] For example, S. 1894 does not include references to California Water Code §§11461 and 11462, referring to the Friant and American River Divisions of the CVP.

[73] No redirected adverse impacts under S. 1894 refers to Section 113, which states "The Secretary of the Interior and Secretary of Commerce shall not carry out any specific action authorized under this title that will directly result in the involuntary reduction of water supply to an individual or district that has in effect a contract for water with the State Water Project or the Central Valley Project, or to any other water user or purveyor organized under State law that obtains water based on any other legal right, as compared to the water supply that would be provided in the absence of action under this Act."

[74] H.R. 2898 notes that the Secretary of the Interior shall "ensure" that except as provided for in water service or repayment contracts, legal obligations imposed pursuant to the bill shall not directly or indirectly result in involuntary water supply reductions for CVP or SWP contractors or "cause redirected adverse water supply or fiscal impacts to those within the Sacramento River watershed, the San Joaquin River watershed, or the SWP service area." It is not clear if the word "those" applies to CVP and SWP contractors or is meant to be applied to all water users in those areas. Either way, it appears to apply to a smaller class of water users than S. 1894. Further, H.R. 2898 would appear to maintain reductions allowable under shortage provisions in existing contracts (Section 503(a)); whereas, S. 1894 does not reference such reductions. This could be an important distinction as CVP water delivery contracts include provisions noting that water supply quantities are not necessarily guaranteed. See, for example, CVP Contract article 3(b) ("Because the capacity of the Central Valley Project to deliver Project Water has been constrained in recent years and may be constrained in the future due to many factors including hydrologic conditions and implementation of Federal and State laws, the likelihood of the Contractor actually receiving the amount of Project Water set out [in this contract] in any given Year is uncertain.") See also contract articles 11 and 12 noting shortage conditions outside the control of the contracting officer. (For a CVP-wide form of contract (CVP Contract) that Reclamation uses, see http://www.usbr.gov/mp/cvpia/3404c/lt_contracts/cvpwide_final_form_contract_04-19-04.pdf.)

provision requiring documentation and explanation of any secretarial determination that an action under Title I of the bill cannot be carried out without resulting in redirected adverse impacts. H.R. 2898 does not have a similar provision. Lastly, S. 1894 includes more explicit language stating that nothing in the act (1) authorizes federal officials to take any action that would jeopardize threatened or endangered species or cause adverse effects on species or habitat beyond effects anticipated under existing BiOps; (2) preempts or modifies obligations of the United States to operate the CVP in conformance with state law; or (3) affects or modifies obligations under the CVPIA.

Issue and Legislative Considerations

At issue is how each bill might affect existing water allocations under state law as well as under Reclamation law, including CVP water allocation priorities. Because both bills contain specific directives to operate the CVP in certain ways, some parties want to ensure that in maximizing water supplies to CVP and SWP water users south of the Delta—some of which are junior in priority under state law and CVP allocation priorities—any unintended shortages do not affect other, more senior water users (or other water users in general). Relatedly, both bills include provisions addressing "existing obligations" of the United States to comply with state law. S. 1894 also includes language specific to obligations to avoid jeopardy and adverse modification of habitat of threatened and endangered species and to comply with provisions of the CVPIA.

Some, including the Administration, have raised concerns that provisions such as the specific annual allocations tied to various water year types (e.g., 100% in wet, above normal, and below normal years)[75] under Section 504 of H.R. 2898 would make it difficult to meet the multiple authorized purposes of CVP operations.[76]

New Storage Project Studies in California

H.R. 2898 and S. 1894 both would attempt to expedite work on certain ongoing California surface water storage studies that originally were authorized under Title I of the Calfed Bay-Delta Authorization Act (CALFED; P.L. 108-361). To date, only one of the authorized studies (the Shasta Lake Water Resources Investigation) has been completed; the others are in various stages of the study process (see **Table 1**). Both bills would establish deadlines to complete the CALFED studies and include processes to facilitate their construction. However, the new authorities in both bills differ in some ways.

Table 1. Status of CALFED Studies

Study	Current Estimated Completion Date	H.R. 2898/S. 1894 Proposed Deadline
Shasta Reservoir Water Resources Investigation	Completed in July 2015	Dec. 31, 2015
Upper San Joaquin/Temperance Flat Reservoir	Late 2015	Dec. 31, 2015
Los Vaqueros Phase 2 Expansion	TBD	Nov. 30, 2016
Sites Reservoir/NODOS	TBD	Nov. 30, 2016

[75] Water year types are determined by estimates of unimpaired runoff (absent dams, diversions, exports) in the Sacramento and San Joaquin River Basins. Indices for both basins are used to classify water year types. For more information in these indices, see: http://www.waterplan.water.ca.gov/docs/cwpu2009/0310final/v4c12a01_cwp2009.pdf.

[76] Connor, October 2015 Testimony.

Study	Current Estimated Completion Date	H.R. 2898/S. 1894 Proposed Deadline
San Luis Dam Lowpoint Improvement Project	Fall 2017	Dec. 31, 2017

Source: Congressional Research Service, based on information provided by the Bureau of Reclamation.

Notes: TBD = To be determined; NODOS = North of Delta Offstream Storage; CALFED = Calfed Bay-Delta Authorization Act (P.L. 108-361).

H.R. 2898

Section 401 of H.R. 2898 would direct Reclamation to complete ongoing feasibility studies for the new and augmented surface water storage studies in California that were authorized under CALFED. The bill would impose financial penalties on Reclamation for failing to meet the deadlines specified in the legislation. It also would authorize construction of these projects pending a positive feasibility report finding; however, pursuant to Section 404 of the bill, no federal funding could be used to construct the projects. Thus, the construction authority would be contingent on 100% nonfederal funding. H.R. 2898 also includes a directive in Section 402 for Reclamation to complete the study for Temperance Flat Reservoir; it would direct that the Secretary manage any land on the San Joaquin River recommended for designation or designated under the Wild and Scenic Rivers Act (16 U.S.C 1271 et seq.) in a manner that would not impede project activities, including environmental reviews and construction.

S. 1894

Section 313 of S. 1894 would direct Reclamation to complete the CALFED studies by the same deadlines as the House bill specifies but would not authorize the projects for construction. However, whereas the House bill would bar federal funding for these projects, S. 1894 stipulates that if and when these projects are authorized, they would potentially be eligible to receive federal funding under Section 312 of the bill.[77] Section 312(b) contains specific requirements that would need to be met for the federal government to provide funding to assist nonfederal water storage construction efforts at three of the CALFED study locations (Los Vaqueros, North of Delta Offstream Storage (NODOS)/Sites Reservoir, and Upper San Joaquin). It notes that the authorization of federal funding for these projects would be contingent on the state finding that the project is, among other things, feasible, and that 50% or more of the project benefits would be attributed to ecosystem and water quality improvements, flood control benefits, emergency response, emergency water supplies, and recreational purposes.

Issues and Legislative Considerations

In considering federal involvement in the CALFED surface water storage studies, Congress may seek to determine its interest in proceeding with these projects, as well as the potential for each bill's specific provisions to facilitate the studies' completion. Notably, the ability of the studies themselves to eventually further the goal of new water storage in California is unclear and likely will depend on a recommendation by the Administration to proceed with construction. Although many support proposed requirements for expedited completion of the studies as an important step toward construction of the projects themselves, the Administration has noted concerns with these provisions. In October 2015 testimony before the Senate Energy and Natural Resources

[77] As discussed below, §312 of S. 1894 generally would authorize funding for both federally authorized storage facilities and nonfederal storage facilities owned and operated by the states at federal cost-share levels of 50% and 25%, respectively. (See below section, "New Surface Water Storage Projects.")

Committee, the Administration noted that two of these projects (NODOS/Sites Reservoir and Los Vaqueros Reservoir) are dependent on participation and funding by nonfederal partners. The Administration also argued that requiring completion of the remaining ongoing studies (Upper San Joaquin/Temperance Flat and San Luis Low Point Improvement Project) by a specific date could compromise Reclamation's ability to make an informed decision on construction and to include adequate input from partners.[78]

In addition, the two bills highlight differing opinions as to the type and extent of future federal involvement in these projects. Although S. 1894 appears to envision federal funding for these projects (either at the 50% or 25% cost-share level, depending on the project type), it would not authorize the projects for construction. H.R. 2898, by contrast, would authorize the projects to go forward with construction, but only as a nonfederal responsibility. Neither bill would provide federal authority to both finance and construct one or more of these projects, which is a course of action that some may support.

Other Drought and Related Water Issues

New Surface Water Storage Projects

Both H.R. 2898 and S. 1894 would aim to encourage federal involvement in new water storage projects by authorizing new construction and/or improvements to existing facilities. Each bill's approach to new surface water storage is discussed below.

H.R. 2898

Under H.R. 2898, new storage projects potentially would be expedited and authorized for construction by Congress under a reporting process proposed in Title VIII (Sections 801-806) of the bill. Section 803 of H.R. 2898 would provide that any new studies initiated by the Administration after the date of enactment must be completed within three years, at a cost of no more than $3 million per project study. Section 805 would allow for the Secretary to enter into agreements with the nonfederal sponsor to support the planning, design, and permitting of projects. Section 806 would attempt to expedite construction authorizations of all projects by directing an annual report in which the Administration proposes Reclamation studies and construction projects for congressional authorization, including new projects, enhancements to existing projects, and federal projects proposed by nonfederal entities.[79] This report would be similar to that authorized for the U.S. Army Corps of Engineers (the Corps) in the Water Resources Reform and Development Act of 2014 (P.L. 113-121).[80] Congress would have discretion over whether to authorize some or all of the projects proposed by the Administration. These projects also would be authorized to receive an undetermined amount of financial support. In addition, both federal and nonfederal storage projects would be authorized to receive funding from a proposed new Reclamation Surface Storage Account authorized under Title IX of the bill.

[78] Connor, October 2015 Testimony.

[79] The Secretary of the Interior also would be required to publish annually in the *Federal Register* a request for proposed new studies by nonfederal interests.

[80] For more information on this process, see CRS Report R41243, *Army Corps of Engineers: Water Resource Authorizations, Appropriations, and Activities*, by Nicole T. Carter and Charles V. Stern.

S. 1894

Unlike H.R. 2898, S. 1894 does not contain provisions to expedite study of new projects by nonfederal entities or a reporting requirement in which the Administration would propose new federal and nonfederal studies and surface storage construction projects.[81] Rather, Section 312 of S. 1894 would provide a general authority for federal funding to support the construction or expansion of federal storage projects that have been authorized for construction. It also would authorize federal participation in nonfederal water storage construction projects under certain conditions. The bill would authorize $600 million in discretionary funding under this section, with a maximum federal cost share of 50% of the total project costs for new federal projects and 25% of costs for new nonfederal projects.

Issues and Legislative Considerations

The bills highlight a number of issues for Congress related to the authorization of new storage projects. These issues include the total amount of discretionary funding to be authorized to support these purposes, who should take the lead on these projects, and who should ultimately pay for them. Neither bill would provide a broad authority for federal study and construction of new projects without congressional authorization. However, H.R. 2898 would authorize a reporting process that would attempt to facilitate the proposal and authorization of new projects to Congress (and potentially would allow for a means to authorize these projects). H.R. 2898 also would provide for a stronger nonfederal role in project implementation, in particular by allowing nonfederal entities to propose and provide financial support for new studies and requiring expedited completion of studies in general.

Although both bills would provide for potential appropriations to federal and nonfederal storage projects, their cost shares and approaches to doing so differ. Whereas H.R. 2898 would provide funding support for new federal and nonfederal storage based on existing Reclamation law (i.e., costs to be paid back over time, without interest for irrigation purposes), S. 1894 would provide for a new cost-sharing structure in which the federal government would pay for 50% and 25% of federal and nonfederal projects, respectively. The Administration has argued against new storage that "perpetuates the historical federal subsidies available for financing water storage projects" and instead prefers federal participation in state and locally led projects.[82] The need for and likelihood of authorization for new projects, as well as the appropriate split of responsibilities for new investments in storage could be debated in consideration of these and other drought bills.

Nontraditional Water Supplies, Efficiency, and Conservation

Congress is considering whether to maintain or alter federal roles in nontraditional water supplies and in water efficiency and conservation. Examples of nontraditional or alternative water supplies include recycling and reuse of treated wastewater, brackish water or seawater desalination, stormwater capture, and groundwater recharge. Examples of water efficiency and conservation include identification and incentives for consumer products that use less water and initiatives to encourage or assist manufacturers, utilities, and others adopting practices and technologies that save both water and energy.

[81] It would, however, set deadlines and reporting requirements for the completion of certain ongoing studies in California (see previous section, "New Storage Project Studies in California").

[82] Letter from Michael L. Connor, Deputy Secretary of the Interior, to Honorable Rob Bishop, Chairman, House Committee on Natural Resources, July 7, 2015.

Although no comprehensive policy delineates the federal role in nontraditional water supply, efficiency, and conservation activities, some Congresses and some Administrations have acted to create or bolster programs that provide support for or otherwise assist these activities and associated investments. Current federal activities in nontraditional supplies, efficiency, and conservation include the U.S. Department of Agriculture's water conservation assistance; DOI's WaterSMART initiative, including Reclamation's Title XVI[83] wastewater recycling and reuse program; and the Environmental Protection Agency's (EPA's) WaterSense labeling effort.

Much of the interest in alternative water supplies, efficiency, and conservation activities potentially would be for augmenting or stretching municipal water supplies. Historically, federal actions for municipal water supplies have been associated primarily with municipal water quality rather than with the augmentation or management of municipal water quantity supply and demand.[84] This tendency has stemmed, in part, from the federal government generally deferring to state primacy in surface and groundwater allocation and in water supply planning (including drought planning). In other policy arenas, such as energy generation and use, the federal government has supported nontraditional sources, conservation, and efficiency.

H.R. 2898

H.R. 2898 does not include any provision that is specifically focused on authorizing new alternative water supply, conservation, or efficiency projects or programs. Instead, the bill's attention to alternative supplies appears to be limited to Title VIII's definition of "project," which includes water reuse (as specified in Title XVI of CVPIA). Therefore, qualifying reuse studies and projects that require congressional authorization to proceed would appear to be eligible for inclusion in the annual Report to Congress on Future Water Project Development called for in Section 806. Similarly, these reuse projects apparently also would be eligible for the expedited and accelerated processes for studies and projects established in other sections of Title VIII of H.R. 2898.

S. 1894

S. 1894 includes multiple provisions associated with expanding federal support for alternative water supplies, efficiency, and conservation. The bill would provide the following authorizations for DOI (which typically has a western United States focus for water project eligibility):

- Section 301 would authorize the Secretary of the Interior to award federal funds competitively for qualifying water recycling projects, desalination projects, and innovative water supply projects. Title IV of the bill also would establish $75 million in funding without further appropriation (i.e., mandatory funding) for desalination projects under Section 301(c) for 25 years beginning in 2026.
- Section 431 would authorize federal grant funding for qualifying water recycling and reuse projects by expanding Reclamation's existing Title XVI reuse program and prioritizing drought-affected areas. Title IV of the bill would establish $40

[83] This initiative is laid out in Title XVI of the Central Valley Project Improvement Act (P.L. 102-575), which is Reclamation's existing water recycling authority.

[84] For municipal and industrial water supply, Congress declared the following as its policy in 1958 (43 U.S.C. §390b): "It is declared to be the policy of the Congress to recognize the primary responsibilities of the States and local interests in developing water supplies for domestic, municipal, industrial, and other purposes and that the Federal Government should participate and cooperate with States and local interests in developing such water supplies in connection with the construction, maintenance, and operation of Federal navigation, flood control, irrigation, or multiple purpose projects."

million in funding without further appropriation for Title XVI projects for 25 years beginning in 2026.

- Section 322 would authorize the Secretary of the Interior to enter into voluntary agreements with public water agencies that receive water from Reclamation projects to implement water conservation programs. It also would direct that water conserved from these activities be available as follows: 25% to the water agency and 75% retained by the Secretary for marketing and allocation to wildlife refuges.
- Section 421 would amend the Secure Water Act (Title IV of P.L. 111-11) by authorizing federal assistance for planning, design, and construction of reclamation, reuse, and other water management projects, including water storage and conveyance.

The bill also includes several new program authorizations for EPA. (EPA's programs generally have a national scope.) These authorizations include the following:

- Section 302, which would reauthorize and modify provisions of the Water Desalination Act of 1996 (P.L. 104-298; 42 U.S.C. §10301 note), would create a new grant program at EPA to evaluate and determine the feasibility of a public or public-private desalination project. The bill would authorize EPA to provide assistance up to 50% federal cost sharing for desalination project studies and 25% for desalination project designs. The bill would authorize $10 million per year for FY2016-FY2020 to implement this program. This type of authority would be new for EPA, which currently does not provide assistance for project studies or designs and does not have program authority or institutional experience with desalination projects.
- Section 321 would authorize WaterSense, a voluntary labeling and recognition program that focuses on reducing water use. EPA established WaterSense administratively in 2006; the program is a companion to the Department of Energy's Energy Star program. Energy Star is authorized in law (Energy Policy Act of 2005, P.L. 109-258; 42 U.S.C. §6295), whereas WaterSense is not. Both programs involve partnerships between government, manufacturers, and others to help consumers and businesses identify highly efficient products, homes, and buildings. The bill would authorize $5 million per year to EPA in FY2016-FY2019 to implement WaterSense. Authorized amounts for subsequent years would be the applicable amount for the previous year, adjusted to reflect inflation.
- Section 327 would create a new program at EPA for research and development of innovative water supply and conservation technologies. EPA would be authorized to award grants or enter into contracts to assist in financing such projects. The bill would authorize to be appropriated $35 million for FY2016-FY2020 and generally would limit assistance to a 25% federal cost share.

For rural communities with populations of fewer than 10,000 persons, the bill includes Section 323, which would establish a new program within the U.S. Department of Agriculture's (USDA's) Rural Water and Waste Disposal Program to assist drought-stricken communities. The program would provide up to 100% grants for projects such as point-of-use treatment (i.e., systems to purify incoming water used for cooking and drinking); point-of-entry treatment (i.e., systems to treat all water coming into a home); and the construction of new water-source

facilities, such as new wells and connections to existing systems. The bill would authorize $15 million for up to 15 pilot projects to implement this program.

Issue and Legislative Considerations

The current drought is raising questions about the nature, focus, and size of federal support and responsibilities for these types of projects. Although expanding federal support may bolster adoption of nontraditional water supplies and efficiency and conservation measures, augmented federal support also may raise concerns about the expansion of the federal role, the increased expectations for federal assistance, and the associated fiscal impacts. Potential federal efficiency and effectiveness challenges with these activities include the fragmentation of water-related programs across multiple federal agencies, without one agency identified as a coordinator or lead, and the differing eligibility criteria (e.g., geographic limitations) and differing technological emphases of federal programs. Each technology and water supply source represents a different set of trade-offs among environmental, investment, behavioral, and performance costs and benefits.

H.R. 2898 and S. 1894 illustrate the range of perspectives and approaches regarding the federal role in nontraditional water supplies, efficiency, and conservation. S. 1894 would expand federal support for numerous activities by creating or augmenting federal programs and authorities for the different types of technologies, but it is not clear how the new activities would mesh with existing programs and activities or whether the new programs would replace the existing ones. The geographic and other eligibility criteria for these programs vary under the provisions of S. 1894. Although many western states are currently affected by drought, interest in nontraditional water supplies, efficiency, and conservation exists in other regions, including areas that experience periodic drought (e.g., southeastern states, Puerto Rico) or have limited available freshwater supplies for development (e.g., coastal Florida, insular areas). H.R. 2898 appears to largely limit its increased opportunities for alternative water supplies to western U.S. water reuse projects, whereas S. 1894 would apply more expansively to other U.S. regions. The new and expanded programs proposed in S. 1894 also would involve multiple federal agencies—DOI, EPA, and USDA—and in some cases authority outside an agency's existing expertise (e.g., Section 302's authorization of an EPA grant program to assist desalination projects).

Efforts to Streamline Environmental Compliance

Congress is currently considering legislative options to expedite federal agency decisionmaking on surface water supply projects. A range of factors affect the timing of these decisions, such as funding availability, project complexity, or the level of state or local support for the project. As Congress has done in legislation authorizing transportation programs and civil works projects, efforts to expedite project approvals in H.R. 2898 and S. 1894 would generally involve procedures or requirements intended to streamline the environmental compliance process. More specifically, those efforts generally would involve making some change to federal agency procedures implementing the National Environmental Policy Act (NEPA; 42 U.S.C. §§4321-4347).

Among other requirements, NEPA directs federal agencies to identify, analyze, and consider the environmental impacts of a proposed project before making a final decision about whether and how to proceed. With respect to water supply projects, actions subject to review under NEPA include decisions to approve a project on land administered by a federal agency or a project that requires authorization or financing from federal agencies. NEPA compliance for such projects generally will involve the preparation of an environmental impact statement (EIS) or environmental assessment (EA). An EIS or an EA would be prepared by the federal agency

responsible for approving or undertaking the project (known as the *lead agency*).[85] Under NEPA, and potentially under other laws, the lead agency must obtain input from any other federal agency that has legal jurisdiction or special expertise with respect to any impact involved in a proposed project (i.e., a *cooperating agency*). The lead agency generally also will consult with tribal or state agencies with jurisdiction over an affected resource.

Currently, all federal agencies implement NEPA in accordance with regulations promulgated by the Council on Environmental Quality (CEQ). Each federal agency has adopted the CEQ regulations and supplemented them as necessary to take into account that agency's authorities to approve certain projects. How a given agency documents and demonstrates compliance with NEPA may vary depending on the scope of an agency's authority to approve or fund certain projects. For example, Reclamation integrates its NEPA compliance process with its feasibility study process.

Many of the legislative options intended to accelerate project delivery pertain to cooperating-agency involvement in the NEPA process and in making decisions under other environmental laws. Broadly speaking, many of the provisions identified as environmental streamlining are intended to coordinate actions or input from federal cooperating agencies, especially with regard to any consultation, authorization, or approval the agency may be required to issue that could affect project development (e.g., FWS consultations required under ESA).

H.R. 2898

Provisions in H.R. 2898 aimed at streamlining environmental compliance are found primarily in Titles III, VII, and VIII. Section 302 in Title III ("Operational Flexibility in Times of Drought") specifies conditions under which the governor may request the Secretary of the Interior or Commerce to implement expedited procedures to make a final decision on a project that would provide additional water supplies during emergency drought conditions in California (as defined in the bill). The expedited procedures[86] would require the head of the agency responsible for the project to convene a final project decision meeting with other federal agencies authorized to make some decision regarding the project (presumably cooperating agencies). Within 10 days of that meeting, the agency responsible for the project would be required to issue a final decision on the project, with the conditions that the agency's approval must be for projects that do not otherwise require congressional authorization and must comply with applicable law. Under Section 305, the environmental reviews carried out under Title III must be done in accordance with emergency alternative compliance arrangements, developed in consultation with CEQ.[87]

H.R. 2898 would change certain federal decisionmaking processes pursuant to provisions in Titles VII and VIII under H.R. 2898. Title VII, cited as the Water Supply Permitting Act, would establish new procedures and requirements applicable to the projects undertaken by nonfederal entities (e.g., state agencies or private parties) in the Reclamation states[88] on lands administered by DOI or USDA.[89] Currently, such projects require the issuance of a special use permit or a

[85] For more information, see CRS Report RL33152, *The National Environmental Policy Act (NEPA): Background and Implementation*, by Linda Luther.

[86] See proposed Section 302(c)(2).

[87] Council on Environmental Quality regulations currently allow for alternative compliance arrangement in an emergency under 40 C.F.R. 1506.11.

[88] The Bureau of Reclamation serves 17 western states.

[89] Provisions in Title VII are largely similar to the Water Supply Permitting Coordination Act (H.R. 3980), introduced in the House on January 31, 2014. A hearing on H.R. 3980 and other legislation was held by the House Natural

federal right-of-way grant from the agency authorized to administer the land. Decisions on such approvals must be done in accordance with applicable law, such as the Federal Land Policy and Management Act (P.L. 94-579) or National Forest Management Act (P.L. 94-588). Further, those decisions are subject to review under NEPA. DOI and USDA have integrated their permit application process with their NEPA compliance process.

Title VII would establish Reclamation as the lead agency responsible for coordinating all reviews, analyses, opinions, statements, permits, licenses, or other federal approvals required under federal law for new surface water storage projects. Provisions in Title VII would not change existing NEPA requirements associated with permit issuance but would require Reclamation to establish and implement procedures that would be largely similar to those implemented by DOI or USDA as part of their respective permitting processes. Without explicitly referring to NEPA, provisions in Sections 703, 704, and 705 would establish certain responsibilities and requirements for lead and cooperating agencies that would be largely similar to those established by CEQ in its regulations implementing NEPA. That is, it would appear to establish a new review process that Reclamation would coordinate, but would not eliminate the existing process. Each agency's interpretation and implementation of the directives in this title will likely determine whether or the extent to the agencies integrate the Reclamation-lead process and the existing process that DOI and USDA agencies are required to complete to comply with NEPA.

Additionally, provisions in Section 704 would require Reclamation to implement a coordination process that involves:

- instituting a new pre-application coordination process;
- preparing a unified environmental document that would serve as record on which all cooperating agencies shall base any project approval decisions;
- ensuring cooperating agencies make decisions on a given project within deadlines specified in Section 704; and
- appointing a project manager to facilitate the issuance of the relevant final approvals and to ensure fulfillment of any Reclamation responsibilities.

Section 706 would allow DOI to accept funds from a nonfederal project applicant to expedite the evaluation of a permit related to the project.

Title VIII, the Bureau of Reclamation Project Streamlining Act,[90] would apply to surface water projects undertaken, funded, or operated by Reclamation. According to the House report on H.R. 2898,[91] Title VIII is modeled after provisions in the Water Resources Reform and Development Act of 2014 (WRRDA 2014; P.L. 113-121). The provisions appear to be intended to expedite project completion by accelerating the completion of 1) feasibility studies and reports (pursuant to Sections 803 and 804), and 2) environmental reviews for projects that require a feasibility

Resources Committee's Subcommittee on Water and Power on February 5, 2014 (available at http://naturalresources.house.gov/calendar/eventsingle.aspx?EventID=368068).

[90] The provisions in Title VIII are largely similar to those in the Bureau of Reclamation Surface Water Storage Streamlining Act (H.R. 5412). The House Committee on Natural Resources, Subcommittee on Water and Power, held a hearing on that bill on February 5, 2014 (available at http://naturalresources.house.gov/calendar/eventsingle.aspx?EventID=368068).

[91] U.S. Congress, House Committee on Natural Resources, Western Water and American Food Security Act of 2015, committee print, 114th Cong., 1st sess., July 13, 2015.

study or an EIS (pursuant to Section 805).[92] Currently, Reclamation integrates its feasibility report process with the preparation of the required NEPA analysis (EIS or EA).

With respect to project acceleration, a number of provisions in Section 805 would codify existing regulations that implement NEPA. However, some provisions could add to or change preexisting agency practices or requirements used to demonstrate compliance with NEPA or change outside agencies' procedures for completing their respective decisionmaking processes, such as by establishing

- deadlines for comment on a draft EIS that would be shorter than current comment periods;
- deadlines for outside agencies to make decisions under other federal laws that, if missed, must be reported to Congress;
- reporting requirements to allow a project's status to be tracked;
- financial penalty provisions applicable to federal agencies with some jurisdiction over a project if the agencies fail to make a decision within certain deadlines; and
- a three-year statute of limitations on claims related to a completed project study.

S. 1894

Compared to H.R. 2898, the Senate bill has fewer provisions that involve streamlining environmental compliance. Provisions in Section 101(e) of the Senate bill are largely similar to those in the House bill that would create conditions under which the governor of California could request expedited procedures to make a final decision on a project. Also like the House bill, Section 102 of the Senate bill would allow for the implementation of emergency environmental reviews to address emergency drought conditions in California.

In addition, Section 313 of S. 1894 would require Reclamation to complete feasibility studies and environmental reviews for five explicitly identified CALFED storage projects by specific dates ranging from December 31, 2015, to December 31, 2017. Section 409 would authorize the Secretary of the Interior to allow states to assume the role of lead agency responsible for NEPA compliance. That authority could be assumed in accordance with terms specified in a memorandum of understanding. Any authority not assumed by the state would be retained by the Secretary.

Issues and Legislative Considerations

With respect to the potential for an expedited decisionmaking process for California drought projects, both the House and Senate bills would require a final decision on a proposed project within a certain deadline. The effect of such directives is difficult to determine as an agency might choose to deny the project request if it could not meet the 10-day deadline for a decision.[93] As noted, both bills include a limitation that the expedited decisionmaking process would not allow the responsible federal agency to approve a project that has not followed procedures required by applicable law. Given the relatively short time frame for a decision, it is possible that

[92] A discussion of each provision in Title VIII is beyond the scope of this report. However, analysis of the comparable provisions in the Water Resources Reform and Development Act of 2014 (WRRDA 2014; P.L. 113-121) is provided in the "Expediting Studies, Environmental Reviews, and Permits" section of CRS Report R43298, *Water Resources Reform and Development Act of 2014: Comparison of Select Provisions*, by Nicole T. Carter et al.

[93] See Section 302(c)(4) under H.R. 2898 and Section 101(e)(4) under S. 1894 for the 10 day deadline after a meeting is requested for making a final decision on reviews on federal projects or operations to increase water supplies.

a state would not request resolution for a project unless or until that project complies with applicable law.

Other key provisions that appear intended to accelerate federal decisionmaking are included in Titles VII and VIII of H.R. 2898. Both titles would establish requirements that are primarily implemented by Reclamation. It is difficult to determine how Reclamation might implement the mandates in Title VII, the Water Supply Permitting Act. As noted, currently, if a water supply project is proposed for construction on land administered by a federal agency, that agency is required to issue a permit or other approval. A decision on whether to issue such an approval is subject to review under NEPA and must be made in accordance with requirements established under separate law (e.g., the Federal Land Policy and Management Act and other federal land management laws).

No provision in Title VII would explicitly waive existing NEPA requirements associated with the issuance of permits or grants of right-of-way for federal land. That is, the title would establish procedures that Reclamation must implement to coordinate the environmental compliance process, but it would not explicitly direct DOI or USDA to change their own procedures for implementing NEPA or for processing permit applications. Reclamation's interpretation of the directives in Title VII would determine how they may be integrated with existing DOI and other federal agency procedures; and how any new project coordination procedures would differ from the existing NEPA and permitting processes. However, Title VII does appear to include some requirements that would add steps to the project approval process (e.g., the requirements related to the pre-application process, preparation of a unified environmental document, and data monitoring and record keeping).

Title VIII establishes requirements applicable to projects that Reclamation is currently authorized to approve. As noted, many of the provisions in Section 805 of Title VIII would codify requirements that are similar to existing regulations to implement NEPA. How this would be implemented depends on how Reclamation would interpret the study and project acceleration provisions.

Whether or the extent to which the provisions in the House or Senate bills would expedite overall project delivery depends on the delay caused by the environmental review process. Expediting the environmental review process may expedite overall project delivery only if some element of the environmental review process represents a routine cause of project delay. While that may be the case for some projects, it may not be a routine cause of delay. In September 2014, DOI provided a statement for the record regarding the Bureau of Reclamation Surface Water Storage Streamlining Act. In that statement, the agency noted that the primary reasons for many projects being identified and/or authorized but not constructed related to individual project economics and the pricing and repayment challenges within the potential markets where projects would be built.[94]

Financing Provisions

Both bills contain provisions that would provide financial support from the federal government for new and augmented water supply projects through new financing mechanisms. Federal support for water supply projects historically has been provided through discretionary appropriations to Reclamation, the Corps, and USDA. However, demand for appropriations (both in the form of newly authorized federal projects and support by the federal government for

[94] See Statement for the Record, U.S. Department of the Interior, before the House Natural Resources Committee, Subcommittee on Water and Power, U.S. House of Representatives on Bureau of Reclamation Surface Water Storage Streamlining Act, September 10, 2014, available at http://www.usbr.gov/newsroom/testimony/detail.cfm?RecordID=2661.

nonfederal projects) typically exceeds the availability of appropriations for these agencies; each agency also has been noted to have large backlogs for maintenance and construction expenditures. Although some support increasing traditional forms of discretionary federal funding for some or all of these projects, federal fiscal constraints, earmark moratoria, and congressional budget caps have made it increasingly difficult to do so in recent years. As a result, some support congressional authorization of alternative means of project financing, such as leveraging of federal funds (e.g., grants, public-private partnerships, and credit [loan] programs) or direction of new or existing federal receipts toward specific project types (e.g., accelerated prepayment receipts and mandatory appropriations from the Reclamation Fund).

H.R. 2898

Repayment Receipts Directed to Surface Storage Account

Title IX of H.R. 2898 would authorize new discretionary funding for surface water storage projects, but it would maintain the traditional Reclamation financing model in which the federal government funds project costs and is repaid over 40-year or 50-year terms (without interest for the irrigation portion of project benefits). Specifically, Sections 901-902 would authorize prepayment by nonfederal Reclamation project users for certain project construction costs that are currently paid over 40-year or 50-year terms. It would allow for the conversion of water service contracts to repayment contracts and for subsequent accelerated repayment (in the form of a lump-sum payment or annual installments) of allocable construction costs for any repayment contract. This provision would allow contractors to forgo certain requirements (e.g., acreage and full-cost pricing limitations) under Reclamation laws (including the Reclamation Reform Act of 1982; P.L. 97-293) sooner than otherwise would be the case.[95]

Of the proceeds resulting from prepayment under these provisions, 50% would be available to fund projects in a new Surface Storage Account, which would fund the construction of surface water storage projects pursuant to traditional Reclamation project finance.[96] Federal and nonfederal surface water storage projects that may be authorized under Section 806 of H.R. 2898 would be among the projects eligible for this funding. The Congressional Budget Office (CBO) estimated that this title would make available approximately $360 million for these projects over the FY2016-FY2020 period; the spending would be available for expenditure subject to appropriations (i.e., discretionary funding).[97]

S. 1894

S. 1894 would authorize several new financing provisions and amend existing financing authorities to direct them to address drought. Together, these provisions could result in priority consideration for drought-related projects under EPA's state revolving fund (SRF) programs; federal funding for loans and credit assistance for certain "innovative" water supply projects in

[95] Under current law, once a repayment contract is paid out, the contractor is no longer subject to the 960-acre limit or other provisions of the Reclamation Reform Act of 1982 (P.L. 97-293) (e.g., full-cost pricing for water).

[96] *Surface water storage* under H.R. 2898 shall be made for the following purposes: increased municipal and industrial water supply; agricultural floodwater, erosion, and sedimentation reduction and drainage improvements; irrigation; increased recreation opportunities; reduced adverse impacts to fish and wildlife from water storage or diversion projects within the same watershed; and other purposes consistent with reclamation and federal laws. *Construction* is defined to include design and building of new and storage facilities and additions to existing facilities.

[97] Congressional Budget Office, *Cost Estimate of* H.R. 2898, *Western Water and American Food Security Act of 2015*, July 14, 2015, at https://www.cbo.gov/sites/default/files/114th-congress-2015-2016/costestimate/hr2898-2_0.pdf.

the western United States; and mandatory funding beginning in FY2026 for desalination and water reuse and recycling projects, among other project types.

State Revolving Funds

Section 103 addresses California's use of monies in its SRF programs that assist wastewater and drinking water infrastructure projects, pursuant to the federal Clean Water Act (CWA; P.L. 92-500) and the federal Safe Drinking Water Act (SDWA; P.L. 93-523), respectively. The SRFs provide loans and other types of financing assistance under specific terms set by states, including California. S. 1894 would add no new or supplemental funding for California's SRF programs. Rather, S. 1894 would direct the EPA Administrator, when allocating SRF funds, to require that the state of California review and give priority to projects that will "provide additional water supplies most expeditiously to areas that are at risk of having inadequate supply of water for public health and safety purposes or to improve resiliency to drought."

For projects in California that are awarded assistance pursuant to Section 103, the bill would direct the EPA Administrator to expedite review of Buy American waiver requests, if such requests are submitted. It also would authorize 40-year loan repayments to the SRFs. Under the CWA SRF program, loans are to be repaid to a state within 30 years. Under the SDWA SRF program, loans normally are to be repaid to a state within 20 years, but terms may be extended to 30 years in cases such as economically disadvantaged communities.

Finally, the bill provides that nothing in Section 103 would authorize EPA to modify existing state-by-state funding allocations, funding criteria, or other requirements related to the CWA and SDWA SRF programs for the state of California. For example, the bill does not appear to add new types of project eligibility under the SRF programs. Instead, it appears intended to direct the state's priorities when awarding assistance among projects that already are SRF-eligible. These projects could include water recycling programs (e.g., recycled water treatment works and recycled water distribution systems) and water conservation measures, which currently are eligible under the state's Clean Water SRF program. They also could include source water and water storage projects that address the state's public health priorities, which are eligible under California's drinking water SRF program.

Furthermore, the California agencies that administer the SRF programs have well-established procedures for identifying projects eligible for assistance, and the bill would not alter these procedures. Intended Use Plans are prepared annually and are open to public participation. Moreover, these agencies already have authority to give priority to projects that would provide additional water supplies or meet other priority objectives of the state. Although the apparent intention of this section of S. 1894 is to provide funds expeditiously, it is unclear how quickly this could occur in light of the state's existing priorities.

Under Section 124 of the bill, the authority under Section 103 would expire when a state-declared drought declaration is suspended by the governor or on September 30, 2017, whichever is later.

Reclamation Infrastructure Finance and Innovation Act

Title IV, Subtitle A (§§401-412) of S. 1894, the Reclamation Infrastructure Finance and Innovation Act (RIFIA) would authorize a new federal financing mechanism for certain water supply projects. Specifically, Subtitle A would authorize $200 million in total through FY2020 to be appropriated for secured loans or loan guarantees under RIFIA, which could fund up to 49% of the costs of certain Reclamation water projects. Under the legislation, projects eligible for funding would be limited to those projects costing a minimum of $20 million that are in the 17 western states, Alaska, Hawaii, and other states where Reclamation is authorized to provide

assistance. Eligible project types would include federally authorized water recycling and reuse projects; new water infrastructure (including conduits, pipelines, canals, pumping, and associated facilities); repair and replacement of aging water distribution facilities; brackish or seawater desalination projects; and any water infrastructure project not specifically authorized by law that the Secretary of the Interior determines would "contribute to a safe, adequate water supply for domestic, agricultural, environmental, or municipal and industrial use." Priority would be given to areas facing water resource challenges, but the legislation also lays out other considerations.

The RIFIA provisions of S. 1894 are similar, but not identical, to the Water Infrastructure Finance and Innovation Act (WIFIA) enacted in Title V of WRRDA 2014, which created a financing program for EPA and the Corps.[98] The WIFIA program, in turn, was modeled after a similar program for transportation projects, the Transportation Infrastructure Finance and Innovation Act program (23 U.S.C. 601 et seq.). Similar authority for Reclamation has been proposed in other legislation in the 114th Congress (e.g., S. 176, H.R. 291, S. 1837, and H.R. 2983).

Although some aspects of WIFIA and RIFIA are similar—for example, both can provide no more than 49% of eligible project costs—their authorities differ in important ways. Among other things, RIFIA is narrower in scope than WIFIA; whereas projects in all states are eligible for assistance under WIFIA, only a subset of states (i.e., the 17 western states; Hawaii and Alaska; and states where Reclamation is authorized to provide assistance) and projects that meet a narrower set of conditions (i.e., areas facing water resource challenges) would be authorized to receive assistance under RIFIA.[99] Additionally, irrigation districts and other similar entities that are not eligible under WIFIA could receive assistance under RIFIA. RIFIA also would allow states to serve as the lead entity for the purposes of NEPA permitting for RIFIA projects (a provision not provided for in WIFIA).[100] Finally, WRRDA 2014 authorized WIFIA as a five-year pilot program, whereas S. 1894 does not include a similar time limitation for RIFIA. However, despite the apparent differences between the two authorities, it appears that many projects that would be eligible for support under WIFIA also would be eligible for funding under RIFIA.

State and Local Drought Solutions Fund

S. 1894 also includes future mandatory funding for certain alternative water supply projects. Title IV, Subtitle D (§§441-447) would create a new fund that is not subject to annual appropriations, the Federal Support for State and Local Drought Solutions Fund. The new fund would receive surplus receipts in the Reclamation Fund beginning in FY2026 and would be authorized at a level of $150 million per year for 25 years, without further appropriation (i.e., mandatory funding). Starting in 2026, it would fund authorizations under other parts of the bill, including $75 million per year for desalination projects under Section 301(c); $40 million per year for Title XVI projects (which are proposed to receive programmatic authority under Section 431); and $35 million per year for innovative finance projects under the new RIFIA authority (Title IV, subtitle A).

[98] For information on the Water Infrastructure Finance and Innovation Act, see CRS Report R43315, *Water Infrastructure Financing: The Water Infrastructure Finance and Innovation Act (WIFIA) Program*, by Claudia Copeland.

[99] The potential exception appears to be the Reclamation Infrastructure Finance and Innovation Act (RIFIA) authority for the Secretary to fund projects that "contribute to a safe, adequate water supply for domestic, agricultural, environmental, or municipal and industrial use." The scope of projects that the Secretary might choose to pursue under this language remains unclear.

[100] For additional information, see section on "Efforts to Streamline Environmental Compliance" in this report.

Issues and Legislative Considerations

The proposed approaches in each bill bring up a number of issues for Congress. The overall magnitude of spending to finance new water projects, and whether this spending is being offset by other changes, is an initial question that Congress may want to consider. H.R. 2898 likely would authorize fewer new programs and expenditures for these purposes, but those that it would authorize would adhere to the previous funding model for Reclamation projects. By contrast, S. 1894 would authorize new appropriations and several financing sources, but by authorizing a federal cost-share of 50% for these projects it would decrease the magnitude of the federal role in financing each new project.[101]

The question of whether any of this funding should be offset (and to what extent) highlights a fundamentally different approach between the bills. H.R. 2898 would accelerate current revenue streams by authorizing prepayment of construction costs, and it would use this funding to establish an account to fund water project construction expenses (which would remain subject to discretionary appropriations). By contrast, the new financing sources in S. 1894 that potentially would be made available through RIFIA and the State and Local Drought Solutions Fund would not be offset by changes to federal revenues. Supporters of one or both of these approaches note that these bills have other advantages that might balance out concerns. For instance, RIFIA would leverage a relatively small federal appropriation, and the State and Local Drought Solutions Fund would tap into future balances in the Reclamation fund that many argue Congress intended to use on water resources projects.[102]

Other issues for Congress may involve the type of projects and financing supported. H.R. 2898 would authorize appropriations for project types that traditionally have been the primary focus of Reclamation (i.e., new or enhanced surface water storage). For its part, S. 1894 would provide financing support for "alternative" types of supplies, such as desalination and water reuse and recycling projects, while also attempting to alter the requirements for some existing financing sources (e.g., EPA state revolving funds) to give priority consideration to drought projects. It also would provide for new types of financing (e.g., credit financing and mandatory funding) that differ in structure from the traditional Reclamation model.

An additional and related question may involve the extent to which state and local entities should share in the financing for proposed drought projects. H.R. 2898 largely would maintain the traditional Reclamation law approach to financing newly authorized projects (i.e., 50-year repayment by project beneficiaries without interest for certain agricultural irrigators), with discretionary appropriations required for these projects and provided as up-front costs. Under this model, beneficiaries would be responsible for repaying their allocated portions of project costs. The Administration has opposed such an approach because of its potential to "perpetuate the historical subsidy" of Reclamation projects. This approach may be contrasted with the financing support that would be authorized in S. 1894. That bill would authorize federal support of 50% and 25% for federal and nonfederal water storage projects, respectively. The RIFIA approach in S. 1894 also would shift a larger share of costs to nonfederal interests: it would authorize low-interest loans to fund half of the costs of qualifying projects, but the other half would be financed on the private market.

[101] Historically the federal government has financed Reclamation projects by initially funding 100% of project costs, with project beneficiaries repaying their allocated portion of these costs 40-50 year terms (without interest for agricultural irrigation beneficiaries).

[102] For more information, see CRS In Focus IF10042, *The Reclamation Fund*, by Charles V. Stern.

The use of the RIFIA approach itself brings up a number of other issues. Several issues that arose during debate on the WIFIA provisions of WRRDA 2014 could come up in connection with consideration of the RIFIA provisions of S. 1894, including the role of states; whether state water infrastructure financing agencies should be eligible to receive RIFIA assistance; and whether a portion of the RIFIA assistance should be set aside for projects in small communities.[103]

The RIFIA provisions also raise federal budgetary and revenue issues. CBO typically scores legislation reported by congressional committees for its effects on discretionary and mandatory, or direct, spending. The Joint Committee on Taxation (JCT) typically scores such legislation for its effects on revenue. Revenue loss to the U.S. Treasury is subject to pay-as-you-go procedures.[104] The JCT estimated that the WIFIA provisions of WRRDA 2014 would reduce revenues because states would be expected to issue tax-exempt bonds for project costs not covered by WIFIA assistance. To avoid the pay-as-you-go problem, Congress included in WRRDA 2014 a provision prohibiting recipients of WIFIA assistance from issuing tax-exempt bonds for the non-WIFIA portions of project costs. However, in the Fixing America's Surface Transportation (FAST) Act (P.L. 114-94), Congress repealed this restriction, in response to criticism by stakeholder groups.[105] The proposed RIFIA provisions would not bar the use of municipal tax-exempt bonds to finance the nonfederal share of projects. However, S. 1894 states that RIFIA may not provide assistance unless sufficient funds have been appropriated to offset any decrease in federal revenue resulting from the use by a state or local government of municipal tax-exempt bonds or specified tax credit bonds for the nonfederal portions of a project. The bill does not identify legislative offsets for any such decrease in federal revenue. A potential issue for Congress is how the offset requirement in S. 1894 might affect the legislation or implementation of the proposed RIFIA program.

Broader Issues for Congress

This section discusses broader or crosscutting issues for Congress that the bills pose. Some of these issues have been featured prominently in the debate over the two bills.

Implementation of the Endangered Species Act

H.R. 2898 and S. 1894 contain provisions that could alter the implementation of the ESA and, in some cases, potentially set a precedent for how federal agencies address endangered and threatened species listed under the ESA. This section summarizes some of these provisions and discusses their potential implications for the ESA.

The broader implication for ESA under both bills is that agencies would be managing water supplies to the maximum extent possible (according to varying standards set in each bill) for users. It could be interpreted that water needs for Delta smelt and salmon will just be met according to parameters set in the bills. This approach to addressing the resource needs of species listed under ESA could set a precedent for how other listed species are managed with respect to

[103] See CRS Report R43315, *Water Infrastructure Financing: The Water Infrastructure Finance and Innovation Act (WIFIA) Program*, by Claudia Copeland.

[104] *Pay-as-you-go*, or *PAYGO*, is a budget rule requiring that, relative to current law, any tax cuts or entitlement and other mandatory spending increases must be paid for by a tax increase or a cut in mandatory spending. See CRS Report RL31943, *Budget Enforcement Procedures: The Senate Pay-As-You-Go (PAYGO) Rule*, by Bill Heniff Jr.

[105] See CRS Insight IN10410, *The WIFIA "Fix" in H.R. 22, the Fixing America's Surface Transportation (FAST) Act*, by Claudia Copeland.

limited resources. This perspective is tempered by proponents of the bills who state that these provisions would support the implementation of ESA and that neither bill would amend ESA.[106]

Both bills contain provisions that could limit the discretion of a federal agency to manage water resources to conserve and recover listed species under the ESA. For example, the bills would authorize the approval of projects and activities that aim to maximize water supplies while remaining consistent with existing laws and regulations. This provision might be interpreted to limit agencies' discretion when operating the CVP by directing them to maximize water supplies. This provision could make anticipating and responding to the water needs of species, especially in anticipation of long-term effects on the species, a challenge for federal agencies managing water. For example, maximizing water supplies in the present could have future consequences for species that might not be detected immediately or cannot be addressed before the effects on the population are realized. Furthermore, maximizing water supplies for users might not allow for a buffer to guard against unforeseen environmental circumstances that could affect listed species.[107] This possibility could be countered, in part, by real-time monitoring of species populations, which would be authorized in both bills.[108]

Both bills would authorize an increase in data collection and monitoring of Delta smelt and salmon, which would likely improve the scientific understanding of how water operations affect these species. H.R. 2898 would authorize several activities to increase the real-time monitoring of listed species and measure the effects of water operations on the species' populations. In several cases, the data from these activities could be used to alter water operations to increase either water for users or water for species. Proponents of these provisions contend that they will increase scientific support and transparency for water operations. Although critical of several provisions in H.R. 2898 regarding modifications to the implementation of the BiOps, DOI stated that provisions would improve data gathering, monitoring, and scientific analyses that would benefit real-time monitoring and provide a framework for discussion.[109] This could support adaptive management efforts to manage fish in the Delta, and reflect efforts to incorporate adaptive management in other ecosystems where endangered species are located (e.g., the Lower Colorado River).

Provisions under H.R. 2898 that would alter some aspects of the Delta smelt BiOp and change the implementation of the salmon BiOp have caused some to contend that H.R. 2898, if passed, would set a new precedent for how ESA is implemented, put listed species in peril, and politicize the implementation of ESA.[110] Others note that H.R. 2898 would create conflicting directives because some sections would be implemented in a manner consistent with ESA and other sections would direct implementation of operations beyond those allowed under current ESA BiOps (e.g., specifying pumping rates and other activities not currently allowed), potentially causing harm to

[106] U.S. Congress, House Committee on Natural Resources, *Western Water and American Food Security Act of 2015*, committee print, 114th Cong., 1st sess., July 13, 2015.

[107] For example, in November 2015, it was reported that rapid temperature increases in the Shasta Reservoir could negatively affect the viability of juvenile salmon. This trend illustrates the fine line that water managers need to navigate to provide sufficient levels of water to species while maximizing water for users.

[108] For example, see §203(a) of S. 1894 and §202(f) and (i) of H.R. 2898.

[109] See letter from Michael Connor, Assistant Director of the Department of Interior, to Hon. Rob Bishop, Chairman, House Committee on Natural Resources, July 7, 2015.

[110] U.S. Congress, Senate Committee on Energy and Natural Resources, *Hearing to Receive Testimony on Pending Legislation*, Testimony of Richard M. Frank, Director of California Environmental Law and Policy Center, 114th Cong., 1st sess., October 8, 2015. and American Rivers, California League of Conservation Voters, and Center for Biological Diversity, et al., *Please Oppose* H.R. 2898, American Rivers, July 8, 2015, and Earth Justice, Defenders of Wildlife, and Natural Resources Defense Council, H.R. 2898 *(Valadao): Key Environmental Threats*, July 8, 2015.

listed species.[111] These contentions could have nationwide implications for how species are treated under BiOps. For example, some might refer to H.R. 2898, if passed, as a precedent for proposing exceptions to BiOps created under ESA guidelines on a species-by-species basis. Proponents of H.R. 2898 contend that provisions addressing Delta smelt and salmon would be implemented within the framework of the existing BiOps. Further, they assert that H.R. 2898 would not amend ESA.[112]

Other examples of provisions in H.R. 2898 that would alter the implementation of the BiOps include creating a new standard for measuring the effects of projects and activities on listed species,[113] not adhering to seasonally based triggers mandating variable flow rates for salmon under the RPAs of the salmon BiOp,[114] and authorizing a new method to calculate incidental take for Delta smelt.[115] Supporters of the bill contend that changes proposed under H.R. 2898 are needed to update the BiOps with new data, science, and increased monitoring to maximize water supplies for users.[116] Critics argue that these changes would override existing BiOps and increase stress on fish populations that have been steadily declining in the last few years. They also claim that these provisions could have broad implications for other listed species.[117]

The overall approach to addressing the needs of Delta smelt and salmon under H.R. 2898 would contrast with the approach taken by the Delta smelt and salmon BiOps. Under the current BiOps, the consultation process determines if a project will affect the species or its critical habitat. If the project will do so, the Secretary will suggest reasonable and prudent alternatives that would not jeopardize the continued existence of the species or result in the destruction or adverse modification of its habitat.[118] H.R. 2898 would set a baseline level for flows to maximize water supplies to CVP and SWP water contractors and then work from that baseline to determine if the flows are harming listed species. This method would require changing flow parameters under the BiOps and creating a new approach to measuring the effects of flows on species. This approach could be interpreted as shifting the responsibility for determining the effects of water operations on species to water managers on a continual basis, rather than relying on analyses done in preparation of the BiOps, which could be based on outdated science. This shift would allow for more operational flexibility for water supply purposes and would increase the data collected on species that could be considered for setting operations. Proponents of this approach state that these proposed changes are within the framework of the existing BiOps.[119]

Critics of this approach state that the baseline level of flows proposed under H.R. 2898 is higher than that mandated under the BiOps and could have unknown short- and long-term environmental

[111] Letter from Michael Connor, Assistant Director of the Department of Interior, to Hon. Rob Bishop, Chairman, House Committee on Natural Resources, July 7, 2015.

[112] U.S. Congress, House Committee on Natural Resources, *Western Water and American Food Security Act of 2015*, committee print, 114th Cong., 1st sess., July 13, 2015.

[113] §3(5) of H.R. 2898.

[114] §202(i) of H.R. 2898.

[115] §102 of H.R. 2898.

[116] Congressman David Valadao, "The Western Water and American Food Security Act: Major Provisions," press release, June 2015, at http://valadao.house.gov/information/westernwateramericanfoodsecurity/.

[117] Letter from Elizabeth Ruther, Northwest Representative, Defenders of Wildlife, et al. to Honorable Patty Murray and Honorable Maria Cantwell, U.S. Senate, "Re: Please Safeguard Washington's Southern Resident Orcas by Opposing any Legislation That Would Undermine Protections for Chinook Salmon," October 1, 2015.

[118] §7(b) of the ESA.

[119] U.S. Congress, House Committee on Natural Resources, *Western Water and American Food Security Act of 2015*, committee print, 114th Cong., 1st sess., July 13, 2015.

consequences for species. Further, they contend that this approach could create situations in which the effect of water flows on species might not be realized until after the species has been harmed. DOI also has stated that the approach proposed under H.R. 2898 would include specific operations that appear to be inconsistent with ESA and result in conditions that would be detrimental to species.[120]

Maximizing Water Supplies for Users

The objective of both bills appears to be to increase water deliveries and reliability for water contractors, in particular water users south of the Delta. Neither bill contains assurances for delivering a certain amount of water or quantifies an amount of additional water to be generated by activities authorized in the bill. Based on this uncertainty, some may question how much more water might be delivered to users by each bill, if enacted. Both bills contain broad language that would direct agencies to maximize water supplies. It is uncertain how much water could be delivered to users from specified projects authorized under each bill and other existing projects. Both bills would provide federal agencies with broad discretion to conduct operations that would maximize water use while still adhering to state and federal laws and regulations. It is unclear how agencies would provide the "maximum quantity of water supplies possible" to CVP and other contractors and, relatedly, how they would make such a determination consistent with laws and regulations.

Implementation of the maximizing water supplies provision could be difficult and possibly contentious. For example, agencies and water users may not agree that particular actions would provide maximum water quantities. Notably, under the status quo, some observers already believe that the agencies are maximizing water supplies to the detriment of species, whereas others contend that the agencies are not doing enough to maximize water supplies within the parameters of existing laws and regulations.

Some may question if the actions that would result from these bills and the broad direction to maximize water supplies for users might have unintended or long-term consequences for species and ecosystem factors in the Bay-Delta. Some contend that if managers were required to maximize water supplies in implementing projects, their discretionary flexibility to make decisions would be narrower. Therefore, maximizing water supplies would aim to benefit water users under drought conditions; however, the long-term effects of these actions on other factors, such as species viability, recreation, and water quality would be unclear.

Federal-State Leadership and Coordination

A major issue underlying many of the recent proposals to alleviate the effects of drought involves the role of the federal government. Questions related to the federal role may focus on the prominence and substance of the federal role when it comes to drought and related water resources challenges. To date, outside of federal agricultural assistance programs, much of the work on drought preparedness and response has occurred at the state and local level; thus, major alterations to this division of responsibility could entail a significant policy change.

Some have proposed that such a change is warranted. They argue that the federal government should focus on strengthening its drought-related activities in specific areas, such as by

[120] Letter from Michael Connor, Assistant Director of the Department of Interior, to Hon. Rob Bishop, Chairman, House Committee on Natural Resources, July 7, 2015.

encouraging alternative water supplies by investing in new Title XVI water reuse and recycling projects or by increasing capital investments in existing or new federal water infrastructure.

Others see the federal role as supporting and refining ongoing state investments, such as through planning and technical assistance for major state projects. Still others argue that the federal government's role should be reduced or eliminated. This approach appears to prevail in several of the provisions in H.R. 2898, which would increase the nonfederal role in permitting and potentially would transfer some projects to the state.[121]

Finally, some argue that various "traditional" federal roles should be fundamentally altered. For example, Section 312 of S. 1894 would authorize support to a wide range of projects but would set a nonfederal cost share of 75% for nonfederal projects and 50% for federal projects. Such a requirement would be in notable contrast to past policies, in which the federal government has funded 100% of the construction costs for federally authorized water projects but has required that project beneficiaries repay their shares of the federal investment for these projects over 50-year periods (sometimes without interest).

Coordination among federal and state governments (as well as other interests) also may be of interest to Congress. For example, coordinated operations between the federal and state governments are extremely important in determining water deliveries in California's CVP, as well as in other drought-stricken areas. Issues associated with addressing federal, state, and local coordination, including the extent to which the federal government can or should defer to state and local laws and decisions, may receive consideration in drought-related legislation. The federal government also has the ability to directly or indirectly affect drought-related decisionmaking by authorizing governance structures and institutional feedback mechanisms under which some or all stakeholders have input to these matters.

Funding

Issues related to funding, including the magnitude and type of federal funding to be provided for drought-related and water provisions and whether this funding must be offset or repaid, also may be a consideration for Congress. The two bills provide examples of the variety of potential approaches to funding. H.R. 2898 would authorize only limited new discretionary appropriations, and those would be derived from half of the additional repayment revenues that would accrue to the Treasury under other provisions authorized in the bill (and thus would offset in the short term). This funding would need to be repaid by project beneficiaries in accordance with laws governing Reclamation projects. For its part, S. 1894 would authorize significant new discretionary and mandatory funding in various programmatic areas; some of these funds would not have to be repaid. Additionally, a portion of the discretionary funding that would be authorized under that legislation would provide partial federal credit support for some projects, which would have to be repaid but would allow for the leveraging of significant federal funds at relatively low interest rates.

Another funding question may be the extent to which nonfederal entities can contribute or accelerate funding for federal studies and projects by funding these efforts themselves. In many cases, acceptance of funds for these purposes would require additional congressional authority.

[121] For example, §606 of H.R. 2898 would initiate a process that could lead to the transfer of the New Melones Unit of the CVP to interested beneficiaries.

Scope of Legislation

As Congress considers legislative proposals associated with drought and related water infrastructure management and supply in drought-affected areas, discussion may arise regarding the geographic scope of federal actions and assistance. Although some of the recent legislative proposals have focused on those states and federal projects that are currently experiencing or have recently experienced severe drought conditions, other provisions apply throughout the West and a few are national in scope. A broad policy question is whether the issue that Congress is addressing is the current Western drought, drought in arid regions, drought in any part of the United States, or gaps in water supply and demand.

Much of the recent legislation has focused on attempting to augment the supply of water during drought. As Congress considers legislative options and proposals for addressing water issues associated with drought, numerous other factors and forces may influence the future consequences of drought. Many of these are related to demographic, development, and water demand trends and actions of state, local, and private entities. That is, the impacts of the next drought will be shaped by the surface water and groundwater supplies that are available and how they are managed before and during the drought; how agricultural, municipal, and industrial consumers use water; the incentives and ability to increase water efficiency and conservation; and the types of assistance available to prepare for and mitigate the economic, social, and environmental consequences of drought. Therefore, discussions of the extent to which federal assistance and programs are promoting drought preparedness and mitigation may expand the legislative debate beyond the augmentation of water supply and operations of federal water infrastructure.[122]

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[122] For more information on drought policy, see CRS In Focus IF10196, *Drought Policy, Response, and Preparedness*, by Nicole T. Carter and Betsy A. Cody.

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