



To: House Committee on Natural Resources Republican Members
From: Water, Oceans, and Wildlife Subcommittee Republican Staff; Kiel Weaver (Kiel.Weaver@mail.house.gov), Annick Miller (Annick.Miller@mail.house.gov), and Rob MacGregor (Robert.MacGregor@mail.house.gov)
Date: May 24, 2021
Subject: Oversight Hearing titled “The Status of Drought Conditions Throughout the Western United States”

The Subcommittee on Water, Oceans, and Wildlife will hold an oversight hearing titled, “The Status of Drought Conditions Throughout the Western United States,” on **Tuesday, May 25, 2021, at 1:00 p.m. (EDT)** online via Cisco WebEx.

Member offices are requested to notify Annick Miller (Annick.Miller@mail.house.gov) **no later than Monday, May 24, at 12:00 p.m. (EDT)**, if their Member intends to participate in person in the hearing room or remotely from his/her laptop from another location. Submissions for the hearing record must be submitted through the Committee’s electronic repository at HNRCDocs@mail.house.gov. Please contact David DeMarco (David.DeMarco@mail.house.gov) or Everett Winnick (EverettWinnick@mail.house.gov) should any technical difficulties arise.

I. KEY MESSAGES

- This hearing is a result of continued pressure from Republicans that the Democrats focus on current drought conditions:
 - Water, Oceans, and Wildlife Subcommittee Ranking Member Cliff Bentz (R-OR) has repeatedly requested the Majority to hold hearings on this issue.
 - On April 27, 2021, House Republican Leader Kevin McCarthy and the California Republican delegation sent a letter to the House Natural Resources Committee requesting its attention on this critical issue.¹
 - This hearing follows the May 19, 2021 House Republican Drought Forum, which included several Members and witnesses from across the West.
- As we head into the summer months, the drought conditions across the American West will continue worsening.

¹ <https://www.kget.com/news/state-news/valadao-asks-committee-to-hold-drought-hearing/>



- Droughts impact every aspect of our lives:
 - **Less Water:** a reduction in snowpack and rain events means inadequate water supplies for agriculture, fish, wildlife, and urban needs.
 - **Less Emissions-Free Electricity:** reduced water means less hydropower generation.
 - **Less Food:** farmers reduce planting; producers sell cattle.
 - **Fewer Jobs:** beyond the impacts to agriculture, reductions in water supply impact manufacturing facilities.
 - **Increased Fires:** prolonged dry conditions increase the risk of catastrophic wildfires, as dry brush, and forests act as tinderboxes for the smallest spark.

- Droughts can be mitigated with short, mid, and long-term solutions, including water storage. The administration can implement existing laws and Congress can enact measures to combat drought if there is a political will to do so.

II. WITNESSES

Panel I

- **Mr. Craig Foss**, State Forester and Division Administrator for Forestry and Fire for the Idaho Department of Lands, Coeur D’Alene, Idaho [*Republican witness*]
- **Ms. Elizabeth (Liz) Klein**, Senior Counselor to the Secretary, Department of the Interior, Washington, D.C.
- **Mr. Craig McLean**, Acting Chief Scientist, National Oceanic and Atmospheric Administration, Washington, D.C.
- **Mr. Joaquin Esquivel**, Chair, California State Water Resources Control Board, Sacramento, California
- **Ms. Amy Cordalis**, Counsel, Yurok Tribe and Principal, Ridges to Riffles Conservation Fund, Klamath, California

Panel II

- **Mr. Dan Keppen**, Executive Director, Family Farm Alliance, Klamath Falls, Oregon [*Republican witness*]
- **Mr. John Entsminger**, General Manager, Southern Nevada Water Authority, Las Vegas, Nevada
- **Mr. Michael R. Markus**, General Manager, Orange County Water District, Fountain Valley, California
- **Mr. Tom Collishaw**, President/CEO, Self-Help Enterprises, Visalia, California

III. BACKGROUND

Settling the West

The California Gold Rush of 1849, the Homestead Act of 1862 and other factors encouraged settlement of the western United States (West) throughout the 19th and parts of the 20th century.² However, much of the area was, and continues to be, semi-arid or arid, with very little precipitation during most of the year. Most of the natural water storage occurred in the form of snowpack in the mountainous regions. As the snow melted, large volumes of water rapidly flowed through river valleys in the spring, followed by dry riverbeds in the summer and early fall months.

As water demand increased from agriculture and other uses, interest in storing water runoff for later use led to attempts at constructing water storage projects. Without water storage, settlers had limited farming opportunities in the summer months when river flows were at their lowest or did not exist.³ At that time, private and state-sponsored storage and irrigation ventures often failed because of the lack of financial resources and engineering skills.⁴

In 1901, U.S. Senators Henry Hansborough of North Dakota and Francis G. Newlands of Nevada proposed legislation to use money from the sale of public lands to fund water projects.⁵ The senators found an ally in President Theodore Roosevelt. On December 3, 1901, shortly after assuming the presidency, President Roosevelt sent a message to the Congress in which, among many topics discussed, he expressed support for the development of the West and the creation of a federal reclamation program; proclaiming “In the arid region it is water, not land, which measures production. The western half of the United States would sustain a population greater than that of our whole country today if the waters that now run to waste were saved and used for

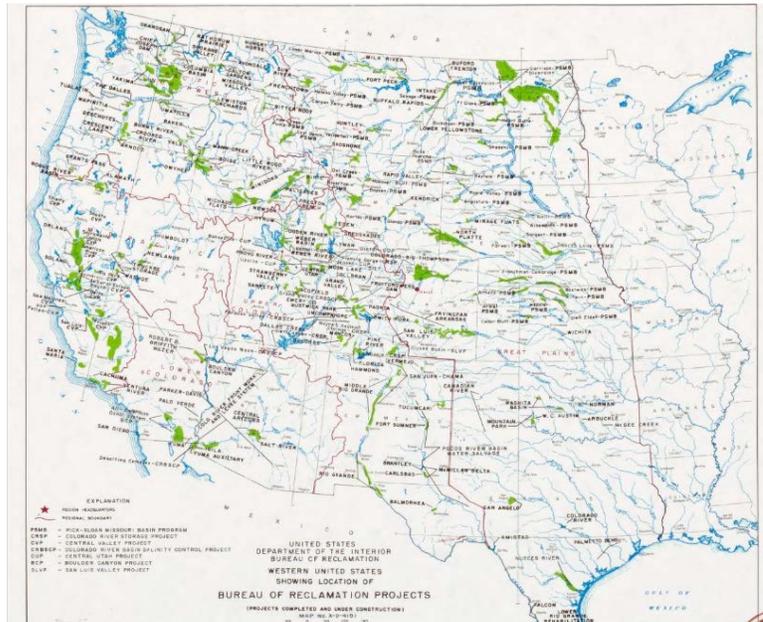


Figure 1: Bureau of Reclamation Projects
Source: Library of Congress

² <https://www.archives.gov/files/publications/prologue/2012/winter/homestead.pdf>

³ <https://www.usbr.gov/projects/pdf.php?id=183>

⁴ <https://www.usbr.gov/history/2011NEWBRIEFHISTORY.pdf>

⁵ <https://www.usbr.gov/projects/pdf.php?id=183>

irrigation.”⁶ A year later, Roosevelt signed what is known as the Reclamation Act of 1902 (Act) into law. The Act authorized federal efforts in the large-scale planning and construction of irrigation works for the storage, diversion, and development of waters in arid and semi-arid western states.⁷ Within a year, the federal Reclamation Service (now called the Bureau of Reclamation) administratively authorized five projects for construction and twenty-four projects by 1907.⁸

To date, there are more than 180 multi-purpose and single-purpose traditional federal water projects throughout the West (see Figure 1) authorized by Reclamation laws.⁹ In addition, the agency currently provides funding or technical assistance for five rural water supply projects,¹⁰ sixty-three water recycling projects,¹¹ and five desalination projects.¹² Most of the West’s largest cities – particularly those that benefit from Colorado River basin waters (Los Angeles, Phoenix, Las Vegas, Albuquerque and others) – owe their continued existence to the Bureau of Reclamation’s (Reclamation) multi-purpose projects.

Today, Reclamation is the nation’s largest wholesale water supplier, providing water to farmers that produce 60% of the nation’s vegetables and one quarter of its fresh fruit and nut crops.¹³ Additionally, Reclamation projects provide water to rural and urban water users and combine to make it the second largest producer of hydropower in the United States.¹⁴ Grand Coulee Dam, located in central Washington state, is the largest hydropower producing facility in the nation and is credited with helping win World War II (by providing electrical power to support construction at wartime shipyards and at aluminum smelters making the raw material for Boeing’s B-17 and B-29 aircraft production).¹⁵



Figure 2: John F. Kennedy dedication of San Luis Reservoir in 1962

Source: National Archives

⁶ Papers relating to the foreign relations of the United States, with the annual message of the President transmitted to Congress December 3, 1901.

⁷ 32 Stat. 388 (43 U.S.C. §391)

⁸ The Arid West - The Newlands Reclamation Act of 1902

⁹ <https://www.usbr.gov/history/2011NEWBRIEFHISTORY.pdf>

¹⁰ <https://crsreports.congress.gov/product/pdf/R/R46308>

¹¹ There are 6 active traditional Title XVI projects and 57 active Sec. 4007 Title XVI projects.

¹² P.L. 116-94 made funding available for the Doheny Ocean Desalination Project, the Kay Bailey Hutchison Desalination Plant, the North Pleasant Valley Desalter Facility, and the Mission Basin Groundwater Purification Facility Well Expansion and Brine Minimization. P.L. 116-133 made funding available for the Doheny Ocean Desalination Project, the North Pleasant Valley Desalter Facility, and the Energy-Efficient Brackish Groundwater Desalination Project.

¹³ <https://www.usbr.gov/main/about/fact.html>

¹⁴ Id.

¹⁵ BPA powered the industry that helped win World War II

Reclamation projects continued to be built well into the 1960's. In fact, President John F. Kennedy dedicated the San Luis Reservoir in the San Joaquin Valley, California in 1962 (see Figure 2). In his remarks, Kennedy said, "This is a fast trip, but if it had no other benefit than to permit us to look at this valley and others like it across the country, where we can see the greenest and richest earth producing the greatest and richest crops in the country, and then a mile away see the same earth and see it brown and dusty and useless, and all because there's water in one place and there isn't in another. I know of no better trip for any President or any Member of the House or Senate, or indeed any citizen, particularly those of us who live in the East, where water is everywhere and is a burden, to realize how very precious it is here in the western United States."¹⁶

Multi-purpose Reclamation projects include the Central Valley Project (CVP) in California, the Colorado River Storage Project, the Pick-Sloan Missouri Basin Program, the Central Arizona Project, the Central Utah Project, and the Columbia Basin Project in Washington state (See Figure 1).

Current Drought Conditions

On March 18, 2021, the National Oceanic and Atmospheric Administration (NOAA) released its U.S. Spring Outlook which projected warmer-than-normal temperatures and below-normal precipitation throughout the West. Specifically, the agency indicated that the drier conditions are the "contributing factors to the development and intensification of what represents the most significant U.S. spring drought since 2013, which will impact approximately 74 million people."¹⁷

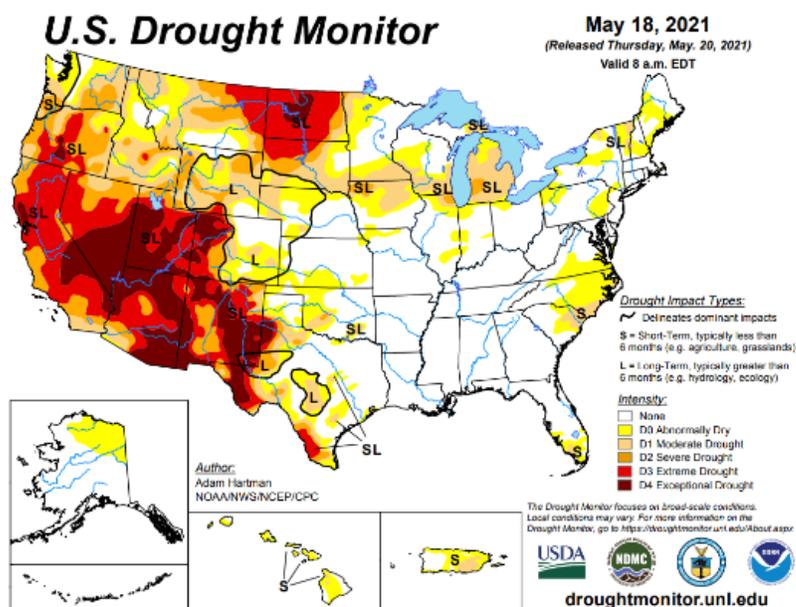


Figure 3: U.S. Drought Monitor – Released May 20, 2021.
 Source: National Drought Mitigation Center, University of Nebraska - Lincoln

The most current U.S. Drought Monitor map, released May 20, 2021, shows the west-wide impacts. The map uses five classifications: abnormally dry (D0), showing areas that may be going into or are coming out of drought, and four levels of drought: moderate (D1), severe

¹⁶ <https://www.presidency.ucsb.edu/documents/remarks-los-banos-california-the-ground-breaking-ceremonies-for-the-san-luis-dam>

¹⁷ [Spring Outlook: Drought to persist, expand in U.S. West and High Plains](#)

(D2), extreme (D3) and exceptional (D4). Currently, over 25% of the West is experiencing exceptional drought conditions.¹⁸

In addition, the widespread warm and dry conditions since have led to rapid snowmelt across the West. In California, this season ties as the 5th earliest snow melt since the U.S. Department of Agriculture's Natural Resources Conservation Service records began in 1981.¹⁹ The poor snowpack and rapid snowmelt have left areas of the West with not just low snow water equivalent (SWE) compared to normal for this date, but almost no SWE at all. Currently, California is at just 6% of normal SWE levels and the Lower Colorado at just 4% of normal.²⁰ Dry soils have absorbed much of the snowmelt, resulting in less water making it into rivers and streams, and ultimately reservoirs capturing that runoff. As a result, many key western reservoirs are currently at critically low water levels.

Droughts are a contributing factor to wildfires. Dry weather, combined with a buildup of hazardous fuels, can increase the probability of large-scale wildfires. Much of the West's water supply comes from the rain and snow that falls in mountain headwaters, most of which are managed by the U.S. Bureau of Land Management or the U.S. Forest Service. Post-fire sediment and debris can threaten the integrity of water and power infrastructure, as well as habitat for fish and wildlife. A Republican witness, the Idaho State Forester, will discuss the relationship between drought, wildfires, and forest health.

Regulatory Issues

With the enactment of federal environmental laws such as the National Environmental Policy Act (42 U.S.C 4321 et seq.) and the Endangered Species Act (16 U.S.C. 1531 et seq., ESA) in the 1970's, many of Reclamation's project operations and other agency activities on federal lands and elsewhere changed to account for analyses, costs, and regulations created by these and other laws. In particular, administrative actions and species listing under the ESA, and subsequent litigation continue to have a profound impact on federal activities such as federal dam operations and water deliveries.

Droughts also have serious negative impacts on land-based species. Both the greater sage grouse (GSG) and the lesser prairie chicken (LPC) are heavily dependent on precipitation for survival. Drought can adversely affect the GSG population recruitment²¹ such that chick survival is negatively influenced by water scarcity²² and at small numbers, populations are less capable of recovering and more prone to extirpation. According to reports completed by the U.S. Geological Survey, GSG population abundance appears to

¹⁸ <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?West>

¹⁹ <https://www.drought.gov/drought-status-updates/snow-drought-current-conditions-and-impacts-west-3>

²⁰ Id.

²¹ Blomberg, E.J., Sedinger, J.S., Atamian, M.T., and Nonne, D.V., 2012, Characteristics of climate and landscape disturbance influence the dynamics of greater sage-grouse populations: *Ecosphere*, v. 3, no. 6, p. 1–20, <https://doi.org/10.1890/ES11-00304.1>.

²² Gibson, D., Blomberg, E.J., Atamian, M.T., and Sedinger, J.S., 2017, Weather, habitat composition, and female behavior interact to modify offspring survival in greater sage-grouse: *Ecological Applications*, v. 27, no. 1, p. 168–181, <https://doi.org/10.1002/eap.1427>.

correspond to years of drought dating back 60 years.²³ In fact, scientific model estimates show a major reduction in abundance range-wide, which appeared to correspond to a widespread drought that spanned the western United States from 1986 through 2016.²⁴ As mentioned previously, drought also can lead to catastrophic wildfires, which alone have destroyed 20% of priority sage grouse habitat across the Great Basin since 2000.²⁵ Drought also has severe impacts on the LPC and can affect forage production which may decrease vegetative cover resulting in declining numbers for the LPC.²⁶

These impacts could allow the current administration to take advantage of the situation by listing both the LPC and GSG, resulting in increased restrictions to farmers, ranchers, energy producers and others across the West. Listing these species would not only be devastating, but could jeopardize ongoing significant conservation efforts and investments. For example, 20 new mitigation projects, totaling roughly \$3.5 million, were conducted for the LPC in 2020 alone.²⁷ The U.S. Fish and Wildlife Service recently announced that it will issue a 12-month finding this spring to decide the LPC's status under the ESA.²⁸ Additionally, recent reports²⁹ highlighting declining numbers for the GSG has been used by environmental groups as justification for the removal of a Fiscal Year 2014 Appropriations provision that prevents a GSG listing under the ESA.³⁰ The Department of the Interior announced earlier this month that it will reopen, and potentially revise, GSG conservation plans covering tens of millions of acres of federal lands across the West.³¹ These actions could lead to increased regulations and restrictions for western landowners and others.

Case Studies

Although the scope of this hearing is west-wide drought, much of the discussion will be focused on drought matters specific to three case studies related to water supply impacts in California and nearby.

²³ U.S. Geological Survey, Range-wide Greater Sage-Grouse Hierarchical Monitoring Framework: Implications for Defining Population Boundaries, Trend Estimation, and a Targeted Annual Warning System, 2020. <https://pubs.usgs.gov/of/2020/1154/ofr20201154.pdf>, at.89.

²⁴ Piechota, T., Timilsena, J., Tootle, G., and Hidalgo, H., 2004, The western U.S. drought—How bad is it?: Washington, D.C., *Eos*, v. 85, no. 32, p. 301–304, <https://doi.org/10.1029/2004EO320001>. And Williams, A.P., Cook, E.R., Smerdon, J.E., Cook, B.I., Abatzoglou, J.T., Bolles, K., Baek, S.H., Badger, A.M., and Livneh, B., 2020, Large contribution from anthropogenic warming to an emerging North American megadrought: *Science*, v. 368, no. 6488, p. 314–318, <https://doi.org/10.1126/science.aaz9600>.

²⁵ U.S. Geological Survey, Sagebrush Conservation Strategy—Challenges to Sagebrush Conservation, <https://pubs.usgs.gov/of/2020/1125/ofr20201125.pdf>. P. xxxii.

²⁶ Western Association of Fish and Wildlife Agencies, 2020 Annual Report for the Range-wide Oil and Gas Candidate Conservation Agreement with Assurances for the Lesser Prairie-Chicken, 2021, p. 15.

²⁷ *Id.* at 7.

²⁸ Hausman, Alyssa B. “Re: Embargoed: FWS Seeks Public Comment on Lesser Prairie-Chicken Habitat Conservation Plan for Renewable Energy Development in Great Plains.” 12 April 2021. E-mail.

²⁹ U.S. Geological Survey, Range-wide Greater Sage-Grouse Hierarchical Monitoring Framework: Implications for Defining Population Boundaries, Trend Estimation, and a Targeted Annual Warning System, 2020. <https://pubs.usgs.gov/of/2020/1154/ofr20201154.pdf>, and U.S. Geological Survey, Sagebrush Conservation Strategy—Challenges to Sagebrush Conservation, <https://pubs.usgs.gov/of/2020/1125/ofr20201125.pdf>.

³⁰ Sierra Club et al, Re: Please Exclude the Greater Sage-Grouse Rider from the FY 2022 Interior and Environment Appropriations Bill, https://www.eenews.net/assets/2021/05/05/document_daily_01.pdf, 5.4.21.

³¹ MacDougall, Sean A. “Re: FYI - BLM Statement re: Sage-Grouse Plans.” 11 May 2021. E-mail.

California's Central Valley and State Water Projects

For decades, the CVP (federal) and the State Water Project (State of California) operations have been managed in a coordinated manner to deliver water to cities, communities, and farms. The CVP's operations have been subject to several controversies and litigation, especially over ESA. Some federal water projects, such as the CVP, are subject to biological opinions (BiOps) issued by the National Marine Fisheries Service (NMFS) and/or the U.S. Fish and Wildlife Service (FWS) over ESA-listed species. The intent of a BiOp is to ensure the project does not reduce the likelihood of survival and recovery of an ESA-listed species. The CVP has two BiOps which subject operations and water deliveries to flow requirements for the endangered three-inch Delta smelt (regulated by FWS) and endangered and threatened salmon species (regulated by NMFS) with some water requirements for each conflicting with the other. In both cases, however, federal requirements for these fish can divert water that would have been destined for communities and farms.³² Combined with other federal water requirements under the federal Central Valley Project Improvement Act, the State of California's water quality standards and the lack of integrated new water storage, the CVP and the State Water Project's operations have changed dramatically over the last forty years and is heavily litigated.³³

For example, in late 2019 and early 2020, the Natural Resources Defense Council and the State of California, respectively, filed two lawsuits against the Trump administration's updated CVP BiOps alleging that the plans violated the federal and state ESA laws³⁴ In addition, California Governor Gavin Newsom's (D) administration unilaterally issued a new state Incidental Take Permit for the State Water Project, prompting criticism from the Trump administration and water users.³⁵ Since both the CVP and State Water Project are intended to be managed in a coordinated manner, these actions created conflict and uncertainty.



Figure 4: Food line in the San Joaquin Valley, 2014. California annually produces 80-90% of the nation's carrots, but in 2014 local communities had to import carrots from China to feed farmworkers and others in need.

Source: Private citizen

While the BiOps flow regimes are not currently in effect due to low water conditions, the State of California has water quality standards currently in place that impact water

³² <https://www.usbr.gov/mp/bdo/lto/biop.html>

³³ <https://crsreports.congress.gov/product/pdf/R/R45342>

³⁴ <https://www.nrdc.org/media/2020/200512-0>

³⁵ <https://www.doi.gov/pressreleases/governor-newsom-continues-recklessly-jeopardize-water-supply-and-security-millions>

deliveries. On May 10, 2021, Governor Newsom directed the State’s Water Board to “consider modifying requirements for reservoir releases or diversion limitations...to conserve water upstream later in the year to protect cold water pools for salmon and steelhead, improve water quality protect carry over storage, or ensure minimum health and safety water supplies.”³⁶ The Chair of the State Water Resources Control Board will testify at this hearing.

In the meantime, much of California’s Central Valley may be entering the worst drought on record.³⁷ California experienced a similar drought, exacerbated by federal and state environmental regulations, in 2012-2015. In 2015 alone, California’s farmers fallowed an estimated 540,000 acres and there were 21,000 unemployed due to a lack of water.³⁸ Unemployment reached over 40% in parts of the San Joaquin Valley, prompting massive food lines (see Figure 4) for many of the farmworkers who were once employed in fields full of produce.³⁹ During the Republican drought forum on May 19, 2021, several of the California House Republican Members and witnesses expressed concern that this scenario could occur again this year.⁴⁰

Klamath River Basin

Reclamation’s Klamath Project in northern California and southern Oregon irrigates approximately 200,000 acres and is the regional hub for agricultural food production and wildlife refuge habitat for waterfowl. In addition, tribal nations upstream and downstream within the Klamath watershed depend on water, although their needs may vary depending on their location. Like the CVP, BiOps control the project operations. These BiOps cover three different endangered species, the Lost River and shortnose suckers (regulated by FWS), and the Coho salmon (regulated by NMFS). The BiOps for the sucker fish mandate that the surface elevation of Upper Klamath Lake remain at least 4,138 feet above sea level in order to maintain that habitat.⁴¹ In addition, Reclamation must also produce a spring flushing flow to benefit salmon. The Upper Klamath Lake, the main reservoir for the Klamath project, is 54% full, with a surface elevation is 4,140.38 feet or two feet above the BiOp requirements. Federal biologists, however, maintain that the lake level will lower substantially throughout the summer months.⁴²

On May 12, 2021 Reclamation announced that the project’s “A” Canal will remain closed for the 2021 irrigation season, meaning that many of the nearby Klamath project irrigators will get a zero water allocation for the first time in the history of the project.⁴³ A witness representing the Family Farm Alliance, which is based in Klamath Falls, Oregon, will testify about the water shut-off. In addition, a representative from the Yurok Tribe, which is downstream from the Klamath project, will testify on water needs for her Tribe.

³⁶ <https://www.gov.ca.gov/wp-content/uploads/2021/05/5.10.2021-Drought-Proclamation.pdf>, at 2

³⁷ <https://www.drought.gov/states/california>

³⁸ https://watershed.ucdavis.edu/files/biblio/Final_Drought%20Report_08182015_Full_Report_WithAppendices.pdf

³⁹ <https://www.bloomberg.com/news/articles/2014-02-14/california-drought-threatens-50-farm-town-unemployment>

⁴⁰ <https://republicans-naturalresources.house.gov/calendar/eventsingle.aspx?EventID=409716>

⁴¹ <https://www.usbr.gov/mp/kbao/docs/klamath-2020-ba.pdf>

⁴² <https://www.usbr.gov/pn/hydromet/klamath/teacup.html>

⁴³ <https://www.usbr.gov/newsroom/#/news-release/3850>

Colorado River Basin

The Colorado River Basin (see Figure 5) covers seven states (Wyoming, Colorado, Utah, New Mexico, Arizona, Nevada, and California) and Mexico. The basin has faced a decade-long drought. In 2019, Reclamation and all the basin states transmitted to Congress what are called the “drought contingency plans” (DCPs) to address the basin’s water supplies. In April 2019, Congress authorized the DCPs in the Colorado River Drought Contingency Plan Authorization Act (P.L. 116-14). Among other things, the DCPs obligate the Lower Basin states (Arizona, Nevada and California) to reduce water deliveries within their states, commit Reclamation to additional water conservation efforts, and institute plans to coordinate Upper Basin (Wyoming, Colorado, Utah and New Mexico) operations to protect Lake Powell storage levels and hydropower generation.

Under the Lower Basin DCP, Nevada and Arizona would start to experience reductions to their water supplies if Lake Mead’s surface elevation drops below 1,090 feet. Additional reductions would be implemented if the surface elevation drops below 1,075 feet, and reaching the maximums when reservoir levels drop below 1,045 feet.⁴⁴ If Lake Mead’s elevation drops below 1,045 feet, California also



Figure 5: Colorado River Basin map.

Source: Glen Canyon Dam Adaptive Management Program.

would see reductions to its water deliveries.⁴⁵ Lake Mead’s elevation is currently 1,075.86 feet. Given the severity of this year’s hydrology, it is possible that the Lower Basin DCP could be triggered.⁴⁶ Arizona could be significantly impacted by this since it gets an estimated 36% of its water from the Colorado River, a large portion of which is for cities, farms and tribal lands.⁴⁷ Witnesses from urban water utilities in southern California and Nevada will testify about the Colorado River drought and other matters.

Potential Solutions

⁴⁴ <https://usbr.gov/dcp/docs/DroughtContingencyPlansBasinStates-TransmittalLetter-508-DOL.pdf>

⁴⁵ Id.

⁴⁶ <https://www.usbr.gov/lc/region/g4000/hourly/lcTeacups.bmp>

⁴⁷ <https://www.azcentral.com/story/news/local/arizona-environment/2021/04/30/arizona-preparing-cutbacks-colorado-river-water-amid-drought/7401706002/>

In response to worsening drought conditions, the White House’s National Climate Advisor, Gina McCarthy, recently directed the Secretary of Agriculture and the Secretary of the Interior to lead a drought relief Interagency Working Group.⁴⁸ No details have been released on the working group. This hearing will serve as an opportunity to ask the administration’s witness about the working group.

The West has experienced drought through millennia and will continue to cope with such circumstances, regardless of the potential increase in severity. Throughout our nation’s history, our engineering forefathers designed and built infrastructure designed to capture water in “wet” years to use later in “normal” and “dry” years in to overcome drought. Reclamation, the U.S. Army Corps of Engineers, states, and other entities have led the way in constructing such water storage and delivery facilities.⁴⁹

But, for now, the West must cope with the current severe drought. Congress and the Biden Administration cannot make it rain or snow in the next few months, but there are authorities that can help mitigate some of the impacts in the near term.

At the federal level, the Stafford Act gives the President the authority to declare a major disaster for any natural event, including drought.⁵⁰ A major disaster declaration provides a wide range of federal assistance programs for individuals and public infrastructure, including funds for both emergency and permanent work. Reclamation and agencies within the U.S. Department of Agriculture also have the ability to fund or re-program existing federal funding to help farmers, ranchers, and communities. For example, such efforts may be underway in the Klamath basin to help provide some relief in the impacted communities.⁵¹

Water districts in certain parts of the West also have the ability to purchase water from other sources and then transport that water through Reclamation’s canals.⁵² However, this option can be economically problematic for the local community which is exporting the water and there can be environmental regulations stemming from the ESA and other laws that prohibit or delay such transfers.⁵³

States have assistance measures as well. For example, after prodding from the House of Representatives California Republican delegation,⁵⁴ California’s Governor recently expanded a drought emergency declaration to include much of the state.⁵⁵ In addition, some

⁴⁸ <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/21/readout-of-the-third-national-climate-task-force-meeting/>

⁴⁹ <https://www.usbr.gov/history/2011NEWBRIEFHISTORY.pdf> at 2.

⁵⁰ Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121 et seq., signed into law November 23, 1988; amended the Disaster Relief Act of 1974, PL 93-288.

⁵¹ <https://www.kdrv.com/content/news/Feds-announce-aid-funding-for-Klamath-Basin-farmers-amid-unprecedented-drought-574204641.html>

⁵² <https://cawaterlibrary.net/document/central-valley-project-cvp-water-transfer-program-fact-sheet/>

⁵³ <https://www.nap.edu/read/1803/chapter/12#225>

⁵⁴ <https://fox40.com/news/california-connection/lawmakers-urge-newsom-to-declare-drought-related-state-of-emergency/>

⁵⁵ <https://www.sacbee.com/news/california/water-and-drought/article251298968.html>

states have the ability to allow for increased temporary groundwater pumping to supplement surface water shortages. Further, a state such as California has the ability to waive water quality requirements in order to keep more water in reservoirs or deliver the water to human needs instead of using the water to reduce salinity in tidal parts of its bays and rivers.⁵⁶

While the above short-term measures can help, they are by no means a multi-year solution. During the Republican drought forum, witnesses focused on the need for active forest and rangeland management as one way to provide more water given the direct relationship between land management and watershed health, water quantity and quality. For example, New Mexico's Sierra County Commissioner Travis Day shared that "As land managers and policy makers, we need to take an in depth look at the management of our watersheds. The drought coupled with a history of mismanagement of our forests have resulted in catastrophic wildfires, loss of premier wildlife habitat, and no water recharge of our aquifers."⁵⁷

In addition, many irrigation districts have focused on conserving existing water supplies by concrete-lining or piping canals to avoid water loss through seepage or evaporation.⁵⁸ These conservation practices extend to on-farm use of water, as highlighted by Mr. Royce Fast, President of the Board of Directors of the Bakersfield, California-based Kern County Water Agency, during the Republican drought forum. Fast stated that "our growers employ the most advanced water conservation techniques including micro-drip irrigation, recycling of produced water from oil wells for agricultural use, K-12 water conservation education programs and public outreach campaigns highlighting water conservation messages through various social media platforms."⁵⁹ Mr. Todd Neves, a 4th generation California farmer in the San Joaquin Valley, shared at the Republican drought forum that over "the last 15 years I have spent twice what I paid for my ranch on water conservation systems. I have installed 100% drip irrigation, installed new underground pipes to convey water throughout my ranch, without evaporation or seepage loss of water, and installed new, more efficient groundwater wells."⁶⁰

Some communities actively recycle their wastewater and use such wastewater for groundwater recharge or for immediate consumptive use.⁶¹ Other communities have focused on brackish or ocean water desalination facilities to provide supplemental water

⁵⁶ <https://www.kqed.org/science/13416/california-drought-loosens-some-environmental-rules>

⁵⁷ https://republicans-naturalresources.house.gov/uploadedfiles/day_testimony_2021-05-19_wow_western_drought_forum.pdf

⁵⁸ <https://www.northkernwsd.com/projects/>

⁵⁹ https://republicans-naturalresources.house.gov/uploadedfiles/fast_testimony_2021-05-19_wow_western_drought_forum.pdf

⁶⁰ https://republicans-naturalresources.house.gov/uploadedfiles/neves_testimony_2021-05-19_wow_western_drought_forum.pdf

⁶¹ <https://www.watereducation.org/aquapedia/water-recycling#:~:text=Man%2Dmade%20water%20recycling%2C%20also,of%20wastewater%2C%20and%20save%20energy.>

sources although the cost for these technologies can be relatively higher and there can be permitting and brine-disposal issues.⁶²

Most experts agree that it takes a host of measures to help drought-proof a community and that water conservation cannot solve a water crisis in the long-term. Many have pointed out that increased water storage can play a significant long-term role in providing water for multi-parties.

One example is the CVP in California, where many of its reservoirs were in flood control operation for two years because storage capacity was full. Most of the released water was not captured for later use.⁶³ During the Republican drought forum, it was made clear that had there been more federal water storage in California at the time, this current drought could have been mitigated with that stored water.⁶⁴ Creating new or expanding reservoirs in California has been at the forefront of the policy debate for decades.⁶⁵

Feasibility studies for many of these facilities were initiated in the 1990's and early 2000's, yet the studies languished until the Trump administration, which used new authorities under Subtitle J of the Water Infrastructure Improvements for the Nation (WIIN) Act, P.L. 114-322, to expedite these and other studies in order to proceed to potential dam construction or expansion. The last administration finished the studies for storage projects in California, Idaho, and Washington state.⁶⁶

The WIIN Act provisions, which were negotiated by U.S. Senator Dianne Feinstein (D-CA) and western House Republicans and signed into law by President Barack Obama, provided a five-year effort to streamline and jump-start new western water storage projects, employ water supply innovation technologies such as water recycling and desalination, fund multiple environmental restoration projects, and used science to provide for fish protections and specific water operations in California.

Overall, the WIIN Act expedited the design, planning or construction ten storage projects in California, Washington and Idaho,⁶⁷ fifty-seven water recycling projects,⁶⁸ five

⁶²<https://e360.yale.edu/features/as-water-scarcity-increases-desalination-plants-are-on-the-rise>

⁶³<https://www.redding.com/story/news/local/2019/04/04/more-rain-means-more-water-being-released-lake-shasta/3365047002/>

⁶⁴https://republicans-naturalresources.house.gov/uploadedfiles/sutton_testimony_2021-05-19_wow_western_drought_forum.pdf

⁶⁵https://www.bakersfield.com/news/momentum-builds-for-public-investment-in-california-water-storage-projects/article_195ea028-41ca-11e9-ae20-1f8d5cf520f2.html

⁶⁶<https://www.usbr.gov/newsroom/newsroomold/newsrelease/detail.cfm?RecordID=73365>

⁶⁷ These were the Shasta Dam and Reservoir Enlargement Project, the Friant-Kern Canal Capacity Correction Resulting from Subsidence, the Boise River Basin Anderson Ranch Dam Raise, the North-of-the-Delta Off Stream Storage (Sites Reservoir Project), the Los Vaqueros Reservoir Phase 2 Expansion Project, the Cle Elum Pool Raise (Yakima), the Delta Mendota Canal Subsidence Correction, the Del Puerto Water District, the San Luis Low Point Improvement Project, and the Sacramento Regional Water Bank.

⁶⁸https://republicans-naturalresources.house.gov/UploadedFiles/Title_XVI_Backlog_Calculation_2021.pdf

desalination projects,⁶⁹ and over twenty-five environmental restoration projects.⁷⁰ Since these authorities expire on December 16, 2021, legislation has been introduced to help modernize water infrastructure and drought-proof parts of the West.⁷¹

⁶⁹ P.L. 116-94 made funding available for the Doheny Ocean Desalination Project, the Kay Bailey Hutchison Desalination Plant, the North Pleasant Valley Desalter Facility, and the Mission Basin Groundwater Purification Facility Well Expansion and Brine Minimization. P.L. 116-133 made funding available for the Doheny Ocean Desalination Project, the North Pleasant Valley Desalter Facility, and the Energy-Efficient Brackish Groundwater Desalination Project.

⁷⁰ FY2018, FY2019, FY2020, FY2021 - under “Environmental Restoration or Compliance - WIIN (Section 4001 & 4010)”

⁷¹ H.R. 737 (Valadao) and H.R. 1563 (Garcia)