

**ADVANCING FEDERAL WATER AND
HYDROPOWER DEVELOPMENT:
A STAKEHOLDER'S PERSPECTIVE**

OVERSIGHT HEARING

BEFORE THE

SUBCOMMITTEE ON WATER, WILDLIFE AND
FISHERIES

OF THE

COMMITTEE ON NATURAL RESOURCES
U.S. HOUSE OF REPRESENTATIVES

ONE HUNDRED NINETEENTH CONGRESS

FIRST SESSION

Wednesday, April 30, 2025

Serial No. 119-21

Printed for the use of the Committee on Natural Resources



Available via the World Wide Web: <http://www.govinfo.gov>
or
Committee address: <http://naturalresources.house.gov>

U.S. GOVERNMENT PUBLISHING OFFICE

60-292 PDF

WASHINGTON : 2026

COMMITTEE ON NATURAL RESOURCES

BRUCE WESTERMAN, AR, *Chairman*
ROBERT J. WITTMAN, VA, *Vice Chairman*
JARED HUFFMAN, CA, *Ranking Member*

Robert J. Wittman, VA	Joe Neguse, CO
Tom McClintock, CA	Teresa Leger Fernández, NM
Paul Gosar, AZ	Melanie A. Stansbury, NM
Aumua Amata C. Radewagen, AS	Val T. Hoyle, OR
Doug LaMalfa, CA	Seth Magaziner, RI
Daniel Webster, FL	Jared Golden, ME
Russ Fulcher, ID	Dave Min, CA
Pete Stauber, MN	Maxine Dexter, OR
Tom Tiffany, WI	Pablo José Hernández, PR
Lauren Boebert, CO	Emily Randall, WA
Cliff Bentz, OR	Yassamin Ansari, AZ
Jen Kiggans, VA	Sarah Elfreth, MD
Wesley P. Hunt, TX	Adam Gray, CA
Mike Collins, GA	Luz Rivas, CA
Harriet M. Hageman, WY	Nydia M. Velázquez, NY
Mark Amodei, NV	Debbie Dingell, MI
Tim Walberg, MI	Darren Soto, FL
Mike Ezell, MS	Julia Brownley, CA
Celeste Maloy, UT	<i>Vacancy</i>
Addison McDowell, NC	
Jeff Crank, CO	
Nick Begich, AK	
Jeff Hurd, CO	
Mike Kennedy, UT	

Vivian Moeglein, *Staff Director*
William David, *Chief Counsel*
Ana Unruh Cohen, *Democratic Staff Director*
<http://naturalresources.house.gov>

SUBCOMMITTEE ON WATER, WILDLIFE AND FISHERIES

HARRIET M. HAGEMAN, WY, *Chair*
MIKE EZELL, MS, *Vice Chair*
VAL T. HOYLE, OR, *Ranking Member*

Robert J. Wittman, VA	Seth Magaziner, RI
Tom McClintock, CA	Debbie Dingell, MI
Aumua Amata C. Radewagen, AS	Melanie A. Stansbury, NM
Doug LaMalfa, CA	Jared Golden, ME
Daniel Webster, FL	Dave Min, CA
Lauren Boebert, CO	Sarah Elfreth, MD
Cliff Bentz, OR	Adam Gray, CA
Jen Kiggans, VA	Luz Rivas, CA
Tim Walberg, MI	Darren Soto, FL
Mike Ezell, MS	Julia Brownley, CA
Celeste Maloy, UT	Joe Neguse, CO
Addison McDowell, NC	Jared Huffman, CA, <i>ex officio</i>
Jeff Crank, CO	
Bruce Westerman, AR, <i>ex officio</i>	

CONTENTS

	Page
Hearing Memo	v
Hearing held on Wednesday, April 30, 2025	1
Statement of Members:	
Hoyle, Hon. Val, a Representative in Congress from the State of Oregon ..	1
Hageman, Hon. Harriet, a Representative in Congress from the State of Wyoming	2
Huffman, Hon. Jared, a Representative in Congress from the State of California	4
Statement of Witnesses:	
Webb, Jim, President and CEO, Lower Valley Energy, Afton, Wyoming	6
Prepared statement of	7
Bushman, Michelle, Deputy Director and General Counsel, Western States Water Council, Murray, Utah	10
Prepared statement of	12
Haswell, Jonathan, Chief Business Officer, Oceanwell LLC, Woodside, California	22
Prepared statement of	24
Sigl, Patrick, Director of Water and Natural Resources Law, Salt River Project, Phoenix, Arizona	27
Prepared statement of	28
Questions submitted for the record	34
Additional Materials Submitted for the Record:	
Submissions for the Record by Representative Bentz	
Prepared Statement of Michael Purdie, Director of Regulatory Affairs and Markets, on behalf of the National Hydropower Association	52
Submissions for the Record by Representative Hoyle	
American Whitewater, Letter	53



HOUSE COMMITTEE ON
NATURAL RESOURCES
CHAIRMAN BRUCE WESTERMAN

To: House Committee on Natural Resources Republican Members

From: Water, Wildlife and Fisheries Subcommittee staff: Annick Miller, (annick.miller@mail.house.gov), Doug Levine (doug.levine@mail.house.gov), Kirby Struhar (kirby.struhar@mail.house.gov), and Thomas Shipman (thomas.shipman@mail.house.gov) x58331

Date: April 28, 2025

Subject: Oversight Hearing on “*Advancing Federal Water and Hydropower Development: A Stakeholder’s Perspective*”

The Subcommittee on Water, Wildlife and Fisheries will hold an oversight hearing titled “Advancing Federal Water and Hydropower Development: A Stakeholder’s Perspective” on **Wednesday, April 30, 2025, at 10 a.m. (EDT) in 1324 Longworth House Office Building.**

Member offices are requested to notify Jackson Renfro (jackson.renfro@mail.house.gov) by 4:30 p.m. on Tuesday, April 29, 2025, if their Member intends to participate in the hearing.

I. KEY MESSAGES

- Congressional Republicans have made modernizing federal water infrastructure a priority of the 118th and 119th Congresses.
- America’s first renewable electricity source, hydropower, has been providing flexible, low-cost, and emission-free, baseload, renewable energy for more than 100 years.
- For generations, water resources projects have delivered multiple benefits to humans, fish, and wildlife.
- Examining the regulatory challenges that this infrastructure faces due to laws like the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), and the National Environmental Policy Act (NEPA) will help to inform solutions to safeguard this infrastructure, and ensure it delivers to communities for years to come.

II. WITNESSES

- **Mr. Jim Webb**, President and CEO, Lower Valley Energy, Afton, Wyoming
- **Mr. Jonathan Haswell**, Chief Business Officer, OceanWell LLC, Woodside, California
- **Mr. Patrick Sigl**, Director of Water and Natural Resources Law, Salt River Project, Phoenix, Arizona
- **Ms. Michelle Bushman**, Deputy Director and General Counsel, Western States Water Council, Murray, Utah (*Minority witness*)

III. BACKGROUND

Established in 1902, the U.S. Bureau of Reclamation (Reclamation) manages federal water projects for agricultural activities, municipal and industrial use, hydropower production, environmental purposes, and flood control and recreation for

millions of people in the 17 western states.¹ Through its 294 reservoirs, 490 dams, 53 hydroelectric power plants, and approximately 10,000 miles of canals, Reclamation delivers 10 trillion gallons of water to millions of people across the 17 western states and provides irrigation to 10 million acres of farmland.² Reclamation is the largest wholesale supplier of water in the United States, and the second largest producer of renewable, baseload, hydroelectric power, providing 14 percent of the nation's hydroelectric capacity and generation.³

Status of Water Infrastructure

Reclamation operates more than 180 projects, varying in size, scale, and scope.⁴ Most Reclamation projects were authorized before 1970, and several critical components throughout the Reclamation network are over 100 years old.

Aging Infrastructure

To address the challenges posed by Reclamation's aging infrastructure, the Omnibus Public Land Management Act of 2009 (P.L. 111-11) authorized Reclamation to establish a process to inspect project facilities,⁵ fund extraordinary maintenance (XM) work, and execute contracts for extended repayment of the reimbursable costs.⁶ Public Law 111-11 directed the Secretary of the Interior, acting through the Commissioner of Reclamation, to develop guidelines for the inspection of facilities "which could pose a risk to public safety or property damage if such project facilities were to fail,"⁷ and directed Reclamation to use the data and information gained from those inspections to provide recommendations to the operators of transferred works, determine inspection frequency, and provide additional information on potential risks to the areas surrounding project facilities.⁸ The statute also gave Reclamation the authority to provide technical assistance to the operating entity of transferred works or projects whose control Reclamation has transferred to a different entity.⁹

The statute also authorized Reclamation to receive congressional appropriations for maintenance activities "that the Secretary determines to be reasonably required to preserve the structural safety of the project facility."¹⁰ Water users repay these funds over a period up to 50 years.¹¹ The Secretary, or the operating entity in the case of transferred works, may "carry out any emergency extraordinary operation and maintenance work on a project facility that the Secretary determines to be necessary to minimize the risk of imminent harm to public health or safety, or property."¹² For projects owned and operated by Reclamation, funding to conduct this maintenance activity is allocated for the authorized project purposes and is repaid within 50 years of when the maintenance activity is complete.

This program was amended in 2020 when Congress established a special account within the Department of the Treasury known as the Aging Infrastructure Account to provide funds and the repayment of funds to conduct this maintenance activity. Public Law 116-260¹³ stated that projects eligible to receive funds under this account are those that qualify as extraordinary operation and maintenance, are classified as "major, non-recurring maintenance of a mission-critical asset,"¹⁴ or are projects that are ineligible to be funded under the Reclamation Safety of Dams Act of 1978.¹⁵

P.L. 116-260 also established funding application guidelines, including a description of the project, the funding level, non-federal funding source, and the repayment period requested, among other criteria.¹⁶

Dam Safety Program

In addition to Reclamation's aging infrastructure authorities, the Reclamation Safety of Dams Act of 1978 (P.L. 95-578), which was later amended through the Reclamation Safety of Dams Act Amendments of 1984 (P.L. 98-404), provided Reclamation with the authority to modify its dams to ensure safety.¹⁷ This created Reclamation's Dam Safety Program, which is comprised of two key components: the Safety of Dams Evaluation and Modification Program and the Department of the Interior (DOI) Dam Safety Program.¹⁸

Under these authorities, Reclamation takes several actions to protect its dams. First, Reclamation conducts a Safety Evaluation of Existing Dams (SEED).¹⁹ If an evaluation is conducted and identifies a risk at a facility, Reclamation can begin a study of potential corrective actions and alternatives.²⁰ Once a corrective action is identified, Reclamation submits a modification report to the Office of Management and Budget (OMB), and Congress for approval.²¹

By providing authorities and guidelines to Reclamation to examine potential vulnerabilities and safety concerns with its infrastructure, along with funding to make the necessary improvements and upgrades to respond to these concerns, protecting the communities and interests that rely on this infrastructure for water, power, and agriculture across the western United States.

The Infrastructure Investment and Jobs Act (IIJA) provided \$500 million for the Dam Safety Program and \$3.2 billion for aging infrastructure projects.²²

Title Transfer

Title transfer plays an important role within Reclamation by promoting local control and reducing the federal government's role in local water management and decision-making. Many of the dams, canals, and hydropower plants constructed by Reclamation since its establishment in 1902 have had all or part of their responsibility for operation, maintenance, and replacement transferred to local project beneficiaries.²³

In order for local management to be eligible for a title transfer, the transferee must: demonstrate the technical and financial capability to meet obligations; affirm that it has no plans to alter the maintenance or operation of the facility; affirm that there are no competing demands for the use of the facility; ensure that the transfer would not impact other contractors, stakeholders, and tribes; commit to abiding by existing contracts and agreements; assume all responsibility to commitments and agreements; and submit to a public comment period to address any ongoing issues within the facility.²⁴

These transfers traditionally require Congressional approval. However, the John D. Dingell Jr. Conservation, Management and Recreation Act (P.L. 116–9) enacted on March 12, 2019, provided Reclamation the authority to transfer titles of certain facilities without separate and individual acts of Congress.²⁵ However, that bill did not give Reclamation the authority to transfer so called “reserved works” without Congressional action. A reserved work is considered any infrastructure that is owned, operated, or maintained by Reclamation. This Act enabled Reclamation to transfer certain federal facilities provided that the transferee has completed payment of all capital costs.²⁶

Flexibility for transfers of Reclamation facilities allows for efficient operation of federal water infrastructure. Since Reclamation's first title transfer took place at the Rio Grande Project in 1996, Reclamation has transferred or partially transferred a total of 46 projects and facilities to local ownership.²⁷ Promoting title transfer of Reclamation facilities to local ownership was a priority of House Republicans in the 118th Congress. The Swanson and Hugh Butler Reservoirs Land Conveyances Act (P.L. 118–185) was signed into law on December 23, 2024,²⁸ and provided for the conveyance of Reclamation lands to Hitchcock and Frontier Counties in Nebraska. This resolved a dispute between local vendors, the counties, and Reclamation and ensured that local small businesses may continue to operate on the transferred lands without impacting local water management.²⁹

Construction Authorities

Traditionally, Reclamation's role in water project development has been limited to federally authorized water storage projects. For most of these, Reclamation has initially funded 100% of the costs for construction and has been repaid by project beneficiaries over a 40- to 50-year term.

Prior to 2016, Congress had not authorized significant new Reclamation water storage and conveyance projects since the late 1970s. In Section 4007 of the Water Infrastructure Improvements for the Nation (WIIN) Act, Congress enacted a new construction authority for Reclamation to build surface and groundwater storage and conveyance projects.³⁰

These provisions made significant changes to Reclamation's role in developing water infrastructure projects. The WIIN Act authorized maximum federal support of 50% of total costs for certain approved federal water storage projects, as well as a maximum of 25% federal support for approved non-federal surface and groundwater storage projects. The WIIN Act authorities have expired, but funding is available for qualifying projects approved before January 1, 2021.

Instead of reauthorizing the WIIN Act authorities, the Democrat-controlled 117th Congress enacted the Infrastructure Investment and Jobs Act (IIJA), which created a new authority for surface storage, groundwater storage, and conveyance projects. While this authority is not subject to any sunset, the language did not include the ability for future projects to be eligible for feasibility studies or construction. In effect, these authorities are unusable once the currently authorized projects are completed. Additionally, IIJA created a new small storage and groundwater storage authority that allows for grant funding for projects with a maximum storage capacity of 30,000 acre-feet. These authorities expire on November 15, 2026.

Currently, Reclamation lacks authorities to build water infrastructure projects not already approved.

Hydropower Development

During the 20th century, the federal government invested significantly in water infrastructure throughout the western United States to reduce flood risks to communities, provide reliable water supplies, and generate dependable, renewable hydropower. Reclamation is the second largest hydropower producer in the United States, and this renewable, baseload resource has played a critical role in achieving Reclamation’s mission to provide reliable, low-cost water and power to the arid west.³¹

The 53 hydroelectric power plants that Reclamation directly operates are critical to the electric grid across the 17 Reclamation states. Those plants generate roughly 40 million megawatt-hours (MWh) of electricity, or enough to power 3.8 million homes in the United States.³² According to the Energy Information Administration (EIA), hydropower accounts for nearly 27% of renewable electricity generation and about 6% of total U.S. electricity generation.³³ As a reliable, emissions-free, baseload power source, hydropower will play a critical role in meeting the United States’s future energy demand in the years and decades to come.

To carry out their energy production functions, Reclamation partners with the four Power Marketing Administrations (PMAs) operated by the Department of Energy. While Reclamation’s facilities generate electricity, the four PMAs—Bonneville Power Administration (BPA), Western Area Power Administration (WAPA), Southeastern Power Administration (SEPA), and Southwestern Power Administration (SWPA)—operate the transmission and distribution infrastructure that bring the power to homes, businesses, and communities across the west. While Reclamation operates in the 17 western states, the PMAs transmit electricity to 34 states.³⁴

The permitting process for non-federal hydropower development located within a Reclamation project falls under Reclamation’s Lease of Power Privilege (LOPP) contract, the Federal Energy Regulatory Commission (FERC) license, or, in some instances, both.³⁵ Unless specified in the law, Reclamation projects authorized for federal hydropower development are within the jurisdiction of Reclamation, requiring a LOPP for non-federal development. A LOPP is a contractual authorization issued by Reclamation to a non-federal entity to use a Reclamation facility for electric power generation consistent with Reclamation project purposes. However, if a Reclamation project is not authorized for federal hydropower development, under current law, that development is within the jurisdiction of FERC, requiring a FERC license for non-federal development. As of January 2025, 16 projects operate under the LOPP process for a total of nearly 58,000 kilowatts.³⁶

In December 2020, the Trump administration released the Hydropower Strategic Plan for Fiscal Year 2021–2026,³⁷ which had three key goals: ensuring that Reclamation-produced hydropower continues to be part of the United States energy portfolio; obtaining customer satisfaction in hydropower deliveries; and cultivating a skilled and strategic workforce.³⁸ In embracing the value of hydropower, one of the Plan’s goals was to “investigate new marketing strategies with Power Marketing Administration partners.”³⁹

Types of Hydropower Development

- Impoundment is the conventional and most common type of hydroelectric power plant, using dams to contain water in a reservoir. The contained water is released as needed, flowing through a turbine to generate electricity.
- A diversion, sometimes called a “run-of-river” facility, channels a portion of a river through a canal or a penstock to utilize the natural decline of the riverbed elevation to produce energy.⁴⁰
- Pumped storage hydropower facilities use water and gravity to create and store energy. Pumped storage acts like a battery, storing energy to release it when needed. Typically, it is a configuration of two water reservoirs at different elevations that can generate power as water moves down from one reservoir to the other.⁴¹
- Conduit hydropower involves retrofitting existing water-carrying structures (like canals, pipelines, and aqueducts) with electricity-generating equipment. There are opportunities to use more than double conduit hydropower in the United States, which has the largest resource potential in the western states.⁴² In 2013, the Bureau of Reclamation Small Conduit Hydropower Development and Rural Jobs Act was signed into law, helping to boost the development of small U.S. hydropower projects.

Harnessing New Technologies

Snowpack Measurements

Snowpack plays a vital role in keeping reservoirs full. Winter and spring snowpack typically melt gradually throughout the year, flowing into and refilling reservoirs. During most years, the maximum snow-water equivalent⁴³ (SWE) denotes the annual peak of surface water resources. SWE is a key index for forecasting stream and river flow timing and amount, and for a wide variety of water management decisions. Typically, these measurements are done manually by inserting a tube through the entire depth of the overlaying snow cover. However, new technologies have been developed to provide more accurate measurements.

For example, in 2012, the Turlock Irrigation District (TID) partnered with NASA to fly an airplane with light detection and ranging (LiDAR) technology over its entire watershed, taking millions of points of measurement to give a complete picture of the snowpack. This technology has allowed TID to manage its reservoirs better, saving water from being unnecessarily released due to poor models.⁴⁴

In December 2020, Congress authorized the Snow Water Supply Forecast Program (P.L. 116–260, Sec. 1111) to enhance snow monitoring and subsequent water supply forecasts. Under this program, Reclamation provides cost-share on a competitive basis for a broad range of participants to conduct snow monitoring and water supply forecasting projects.

Deep-sea Water Farms

As the need for water supply throughout the country increases, some are turning to the process of desalination to supplement existing infrastructure and traditional techniques of water management and conservation. Desalination is already a popular option in the Middle East in countries like Israel, the United Arab Emirates and Saudi Arabia.⁴⁵ This technology is not without its challenges. Desalinated water is typically significantly more expensive than stored water, building desalination plants is a costly barrier to entry, the desalination process is very energy intensive, and even the largest desalination plants can only replace a portion of consumption.⁴⁶

Recently, new water technologies have emerged aimed at developing deep-sea water farms that harness natural hydrostatic pressure at depths in excess of 400 meters (1,300 feet) to drive a high-pressure water purification method called reverse osmosis. In California, the Las Virgenes Municipal Water District has partnered with OceanWell, a water technology company, on a public/private partnership to research an approach that addresses water reliability through harvesting fresh water from the deep ocean.⁴⁷

Challenges for Infrastructure and Permitting Issues

Federal agencies play an important role in our ability to access and develop water and hydropower resources due to the various environmental laws passed by Congress. Laws such as the National Environmental Policy Act (NEPA) and Endangered Species Act (ESA) impact the construction and maintenance of water infrastructure and day-to-day operations. For example, species listings and administrative rulemakings under the ESA, and subsequent litigation, continue to profoundly impact federal activities such as federal dam operations, water deliveries, and access to water resources.

ESA challenges facing water and hydropower infrastructure include contentious and, in some cases, conflicting biological opinions (BiOps) for listed species, the cost of adhering to the BiOps, and issues surrounding the environmental baseline of existing projects. The intent of a BiOp is to ensure the project does not reduce the likelihood of survival and recovery of an ESA-listed species. However, radical environmental organizations have utilized the citizen suit provisions and the vague nature of the ESA to litigate against water and hydropower projects.

Another regulatory challenge for many of these projects, particularly in the Pacific Northwest, is provisions that govern the “take” of marine mammals under the Marine Mammal Protection Act (MMPA, P.L. 92–522). The MMPA, like the ESA, is administered by both the National Marine Fisheries Service (NMFS) and the Fish and Wildlife Service (FWS). One challenge that the Pacific Northwest and its hydropower facilities have faced is salmon predation by sea lions and other pinnipeds. These pinnipeds have long been a major threat to the salmon population in the Columbia River basin. In 2018, Congress passed, and President Trump signed into law, the Endangered Salmon Predation Prevention Act (P.L. 115–329), allowing the Secretary of Commerce to authorize the take of sea lions in the Columbia River.⁴⁸ Examining additional ways to make the MMPA work more effectively to combat these challenges is critical to safeguarding hydropower infrastructure going forward.

Over the course of the 118th and 119th Congresses, the Committee on Natural Resources has prioritized reform to the ESA, MMPA, and NEPA. In February of 2025, the Subcommittee on Water, Wildlife and Fisheries held an oversight hearing, “Evaluating the Implementation of the Marine Mammal Protection Act and the Endangered Species Act.” Information from that hearing can be found here: <https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=117865> and the hearing memo can be found here: <https://naturalresources.house.gov/calendar/eventsingle.aspx?EventID=416934>. More recently, in March 2025, Chairman Westerman introduced H.R. 1897, the “ESA Amendments Act of 2025”, which makes definitional changes to the ESA, focuses on species recovery, and seeks to streamline the permitting process, among other provisions. On March 25, 2025, the Committee held a legislative hearing on the bill; the hearing memo can be found here: https://naturalresources.house.gov/uploadedfiles/hearing_memo_-_sub_on_wwf_leg_hrg_on_4_bills_03.25.25.pdf and a title-by-title analysis of Chairman Westerman’s legislation can be found here: https://naturalresources.house.gov/uploadedfiles/esa_amendments_act_of_2025_title_by_title_119th_final.pdf

Finally, NEPA reform continues to be a significant priority for the Committee beginning with the work initiated in the 118th Congress through H.R. 1, the “Lower Energy Costs Act,” which included several key reforms to the NEPA process, including the One Federal Decision framework, establishing timeframes for NEPA reviews, and litigation reform.⁴⁹ Another successful legislative initiative during the 118th Congress was the Fiscal Responsibility Act of 2023, which was signed into law under President Biden in June 2023 and represented the first significant reform to NEPA in over forty years. It narrowed the scope of impacts considered under NEPA, encouraged the adoption of categorical exclusions, set completion timelines, and provided page limits for both environmental impact statements and environmental assessments.⁵⁰

Improving the implementation of these statutes, a key priority for Republicans this Congress, will provide certainty to many of the stakeholders involved in western water infrastructure, from hydropower developers to end water users.

Hydropower Relicensing

Under the Federal Power Act (FPA), the Federal Energy Regulatory Commission (FERC) has the authority to license non-federal hydropower facilities. FERC currently issues approximately 1,030 active, non-federal hydropower licenses.⁵¹ While FERC itself is under the authorizing jurisdiction of the House Energy and Commerce Committee, the resource agencies under the jurisdiction of the House Committee on Natural Resources have imposed significant mandates on licenses and the process of granting them in the Federal Power Act and federal environmental statutes like the ESA.

Most licenses are valid for 30 to 50 years; however, the process to relicense facilities can be complex, expensive, lengthy, and uncertain.⁵² According to the National Hydropower Association, relicensing a hydropower facility takes seven to 10 years and nearly half of non-federal facilities are up for relicensing by 2035.⁵³ During licensing or re-licensing, FERC must consider the project’s power aspect but must also give equal consideration to energy conservation, fish and wildlife, recreational opportunities, and other federally mandated needs.⁵⁴

Consultations under the ESA also play a key role during the relicensing process. The so-called “environmental baseline” utilized during the ESA Section 7 consultation process is particularly important during the relicensing process. The FWS and NMFS (the Services) have often used the environmental baseline to create a hypothetical environment that ignores existing infrastructure. This complicates relicensing because the Services may utilize this flawed interpretation to justify a BiOp that the existing infrastructure in question jeopardizes the continued existence of a listed species. Any jeopardy BiOp could put the future operations of any facility at risk due to increased costs, time delays, and mitigation measures.

Conclusion

These dynamics taken together—the challenges facing western water infrastructure, the importance of hydropower as part of the United States’ electric grid, and the various permitting and regulatory requirements that these projects face from several different environmental statutes—require a robust examination of how to safeguard this critical infrastructure for the 21st century. Accomplishing this goal will achieve several objectives: enhancing American energy security by ensuring an all-of-the-above energy mix includes clean, renewable, baseload hydropower energy, and improving access to water resources for end users across the West.

- ¹ Bureau of Reclamation, Mission. <https://www.usbr.gov/main/about/mission.html>.
- ² Bureau of Reclamation, About Us – Fact Sheet. Last Updated January 19, 2024. <https://www.usbr.gov/main/about/fact.html>
- ³ *Id.*
- ⁴ Bureau of Reclamation, A Very Brief History. Last Updated August 15, 2018. <https://www.usbr.gov/history/shortist.html>
- ⁵ Omnibus Public Lands Management Act of 2009 (P.L. 111-11), Section 9602. <https://www.congress.gov/111/plaws/publ11/PLAW-111publ11.pdf>
- ⁶ Omnibus Public Lands Management Act of 2009 (P.L. 111-11), Section 9603. <https://www.congress.gov/111/plaws/publ11/PLAW-111publ11.pdf>
- ⁷ Omnibus Public Lands Management Act of 2009 (P.L. 111-11), Section 9602. <https://www.congress.gov/111/plaws/publ11/PLAW-111publ11.pdf>
- ⁸ *Id.*
- ⁹ *Id.*
- ¹⁰ *Id.*
- ¹¹ Congressional Research Service, Bureau of Reclamation Provisions in the Infrastructure Investment and Jobs Act (P.L. 117-58), March 21, 2024. <https://www.congress.gov/srs-product/R47032>
- ¹² Omnibus Public Lands Management Act of 2009 (P.L. 111-11), Section 9603. <https://www.congress.gov/111/plaws/publ11/PLAW-111publ11.pdf>
- ¹³ P.L. 116-260, Consolidated Appropriations Act, 2021. Enacted December 27, 2020. <https://www.congress.gov/116/plaws/publ260/PLAW-116publ260.pdf>
- ¹⁴ *Id.*
- ¹⁵ *Id.*
- ¹⁶ *Id.*
- ¹⁷ Congressional Research Service, The Bureau of Reclamation's Aging Infrastructure, March 30, 2011. https://www.eversysreport.com/files/20110330_RI-34166_0669078d5c9e3a2ab0935b411612a11P6e8731.pdf
- ¹⁸ *Id.*
- ¹⁹ Hydro Leader, An Insider's Look at the Bureau of Reclamation's Dam Safety Program. <https://hydroleadermagazine.com/an-insiders-look-at-the-bureau-of-reclamations-dam-safety-program/>
- ²⁰ *Id.*
- ²¹ *Id.*
- ²² P.L. 117-58, Infrastructure Investment and Jobs Act, November 15, 2021. <https://www.congress.gov/bills/117/congress-house-bill/3684/text>
- ²³ Bureau of Reclamation, Title Transfer. Last Updated September 26, 2023. <https://www.usbr.gov/title/>
- ²⁴ Bureau of Reclamation, Title Transfer Categorical Exclusion. Last updated September 26, 2023. <https://www.usbr.gov/title/ce.html>
- ²⁵ P.L. 116-9, John D. Dingell, Jr. Conservation, Management, and Recreation Act, Enacted March 12, 2019. <https://www.congress.gov/bills/116/congress-kennedy-bill/47/all-act/long>
- ²⁶ Bureau of Reclamation, Title Transfer for Reclamation Project Facilities. March 4, 2022. <https://www.usbr.gov/reclaim/cmp/smp/11-01.pdf>
- ²⁷ Bureau of Reclamation, Projects and Facilities Previously Transferred and Authorized. Last Updated April 8, 2025. <https://www.usbr.gov/title/transferred.html>
- ²⁸ P.L. 118-185, Swanson and Hugh Butler Reservoirs Land Conveyances Act, Enacted December 23, 2024. <https://www.congress.gov/bills/118/congress-house-bill/8413/all-info>
- ²⁹ *Id.*
- ³⁰ P.L. 114-322, Water Infrastructure Improvements for the Nation (WIN) Act, Enacted December 16, 2016. <https://www.congress.gov/114/plaws/publ322/PLAW-114publ322.pdf>
- ³¹ Bureau of Reclamation, Hydropower Strategic Plan, Fiscal Year 2021 – 2026, December 11, 2020. https://www.usbr.gov/power/Reclamation_Hydropower_Strategic_Plan_Fiscal_Year_2021-2026.pdf
- ³² Bureau of Reclamation, Hydropower Program. <https://www.usbr.gov/power/bho/whc.html>
- ³³ U.S. Energy Information Administration, Frequently Asked Questions (FAQs), What is U.S. electricity generation by energy source? Last updated, February 29, 2024. <https://www.eia.gov/tools/faqs/faq.php?id=427&t=3>
- ³⁴ U.S. Department of Energy, Power Marketing Administrations. <https://www.energy.gov/eo/power-marketing-administrations>
- ³⁵ Bureau of Reclamation, Lease of Power Privilege – Permitting Process Overview, May 2023. https://republicans-naturalresources.house.gov/uploads/Files/LOPP_USBR_SEI_5-2023.pdf
- ³⁶ Bureau of Reclamation, Lease of Power Privilege (LOPP) Projects, Revised January 2025. https://www.usbr.gov/power/LOPP/LOPP_Development_1_2025.pdf
- ³⁷ Bureau of Reclamation, Hydropower Strategic Plan Fiscal Year 2021-2026, December 11, 2020. https://www.usbr.gov/power/Reclamation_Hydropower_Strategic_Plan_Fiscal_Year_2021-2026.pdf
- ³⁸ *Id.*
- ³⁹ *Id.*
- ⁴⁰ Department of Energy, Water Power Technologies Office, Types of Hydropower Plants. <https://www.energy.gov/eere/water/types-hydropower-plants>
- ⁴¹ Department of Energy, Pumped Storage Hydropower. <https://www.energy.gov/eere/water/pumped-storage-hydropower>

⁴² Department of Energy, Water Power Technologies Office. March 1, 2023. "New Assessment Finds Opportunities for Conduit Hydropower Development Across the United States". <https://www.energy.gov/eero/water/articles/new-assessment-finds-opportunities-conduit-hydropower-development-across-untied>.

⁴³ Snow Water Equivalent is the amount of liquid water equivalent of a volume of snow.

⁴⁴ House Committee on Natural Resources. Testimony of Josh Weimer, Turlock Irrigation District. September 6, 2024. <https://docs.house.gov/meetings/1111/2024/09/06/117574/HMTG-118-111-CTF-Weimer-20240906.pdf>.

⁴⁵ E&E News. What's stopping desalination from going mainstream? E.A. Cruden. October 26, 2023. <https://www.eenews.net/articles/whats-stopping-desalination-from-going-mainstream/>.

⁴⁶ *Id.*

⁴⁷ OceanWell. "Las Virgenes Municipal Water District and OceanWell Pilot Innovative Subsea Water Farm Technology" March 25, 2025. <https://www.oceanwellwater.com/news/las-virgenes-municipal-water-district-and-oceanwell-pilot-innovative-subsea-water-farm-technology>.

⁴⁸ P.L. 115-329. Endangered Salmon Predation Prevention Act. Enacted December 18, 2018.

<https://www.congress.gov/115/statute/STATUTE-132/STATUTE-132-Pg4475.pdf>

⁴⁹ House Natural Resources Committee Republicans. The Transparency, Accountability, Permitting and Production of (TAPP) American Resources Act. https://www.majorityleader.gov/uploadedfiles/natural_resources_cover.pdf

⁵⁰ House Committee on Natural Resources. Westerman Applauds Permitting Provisions in Fiscal Responsibility Act. May 30, 2023. <https://naturalresources.house.gov/news/documentsmain.aspx?DocumentID=113361>

⁵¹ Federal Energy Regulatory Commission. Licensing. <https://www.ferc.gov/licensing>

⁵² Federal Energy Regulatory Commission. Hydropower Licensing—Get Involved: A Guide for the Public. <https://www.ferc.gov/sites/default/files/2020-04/hydro-guide.pdf>

⁵³ National Hydropower Association. The Importance of Streamlining Hydropower Licensing. June 5, 2023. <https://www.hydro.org/powerhouse/article/the-importance-of-streamlining-hydropower-licensing-reform/>

⁵⁴ *Id.*

**OVERSIGHT HEARING ON: ADVANCING
FEDERAL WATER AND HYDROPOWER
DEVELOPMENT: A STAKEHOLDER'S
PERSPECTIVE**

**Wednesday, April 30, 2025
U.S. House of Representatives
Subcommittee on Water, Wildlife and Fisheries
Committee on Natural Resources
Washington, DC**

The Subcommittee met, pursuant to notice, at 10:07 a.m. in Room 1324, Longworth House Office Building, Hon. Harriet Hageman [Chair of the Subcommittee] presiding.

Present: Representatives Hageman, McClintock, Bentz, Crank, Hoyle, Magaziner, Elfreth, Gray, Soto, and Huffman.

Mr. CRANK [presiding]. The Subcommittee on Water, Wildlife and Fisheries will come to order.

Good morning, everyone. I want to welcome members, witnesses, and our guests in the audience to today's hearing.

And without objection, the Chair is authorized to declare a recess of the Subcommittee at any time.

Under Committee rule 4(f), any oral opening statements at hearings are limited to the Chair and the Ranking Member. I therefore ask unanimous consent that all other members' opening statements be made part of the hearing record if they are submitted in accordance with Committee rule 3(o).

Without objection, so ordered.

We are here today to hold an oversight hearing entitled, "Advancing Federal Water and Hydropower Development: A Stakeholder Perspective."

I now recognize Ms. Hoyle for her opening statement.

**STATEMENT OF THE HON. VAL HOYLE, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF OREGON**

Ms. HOYLE. Thank you. Good morning, and thank you to the witnesses who traveled to be here. I look forward to hearing from you about how Congress can help address the challenges that you are facing. I expect that we will hear a lot of bipartisan agreement at this hearing. There is a lot that we can work on together.

Communities across the West are facing water challenges. There is not enough of it. Sometimes there is too much in different places. Droughts are getting longer and more severe, snowpacks are getting smaller, and everyone is having to adapt.

Hydropower, when done right, is an important part of the balanced energy system. However, the Administration and the DOGE effort has been haphazardly gutting Federal agencies so non-partisan civil servants can't do the work that everyone here agrees that we should do.

For example, I was happy to support the generational investments in our Western water infrastructure and drought resilience through the Bipartisan Infrastructure Law and the Inflation Reduction Act. These laws provided over \$15 billion to repair our aging infrastructure and modernize our water systems for the 21st century. That is something that everyone can agree that Federal tax dollars should be spent on, infrastructure. That funding has been at work updating our aging systems, supporting tribal water access, and boosting water efficiency and reuse. Despite that progress, the Administration has paused key water grants and fired the workers who have helped communities across the West access those funds. This chaos is preventing the Federal Government from supporting reliable waterpower deliveries across the West and also leaving contractors and workers in limbo as they have to stop the work that they were planning to do.

At the Bonneville Power Administration and other power marketing administrations, staffing cuts have targeted engineers and operations staffs, the people who keep the lights on. Power marketing administrations provide affordable power across the West at no cost to the taxpayer. So these cuts are not about government efficiency, because we as ratepayers pay for them.

These cuts are threatening our grid stability, especially in rural communities like the ones I represent. For example, I heard from a constituent that DOGE's mass firing at BPA meant there weren't enough linemen in central Oregon to repair a high voltage transmission line if it went down. They left us with one. That is not government efficiency.

There are real opportunities to improve efficiency in government, but cutting programs and staff across the board without thought or strategy is just creating chaos and hurting our economies.

We need well-staffed and well-funded Federal agencies to deliver safe, reliable water and electricity. And of course, everyone should want efficient use of those dollars and that work that is done. I look forward to hearing from today's witnesses on how we can make that happen.

Ms. HOYLE. Thank you. I yield back.

Ms. HAGEMAN. Thank you. I now recognize myself for a 5-minute opening statement.

I want to apologize for being a bit late today. I was at a press conference at the Department of Ag with some important announcements. So again, I am sorry. I know that your time is valuable and we want to be considerate of everyone in the room.

STATEMENT OF THE HON. HARRIET HAGEMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF WYOMING

Ms. HAGEMAN. Today the Subcommittee on Water, Wildlife and Fisheries will hear from stakeholders on how Congress may continue to advance and support Federal water resource and infrastructure management and hydropower development.

Water is the Interior West's most important resource. In my home State of Wyoming, access to water resources is crucial to our success. Whether water is used for irrigation, recreation, human consumption, manufacturing, or hydropower production, our rivers, lakes, reservoirs, dams, canals, laterals, siphons, headgates, and

tunnels are key to ensuring that we have an adequate water supply to meet the demands and needs of our citizens, ag producers, energy producers, small business owners, and manufacturers that operate across our State.

Since its creation in 1902, the Bureau of Reclamation has been the primary agency responsible for the construction and operation of the largest water infrastructure projects in the West, with the North Platte Project and Shoshone Project in Wyoming being the first two permitted and constructed in our country's history. The North Platte Project alone provides municipal water recreational opportunities, wildlife habitat, irrigates hundreds of thousands of acres in Wyoming and Nebraska, and is responsible for the creation of the Miracle Mile in central Wyoming, the number-one blue ribbon fishery in North America.

Without infrastructure such as Pathfinder Dam and Reservoir, Buffalo Bill Dam and Reservoir, the Flaming Gorge Reservoir, Lake Mead, and others and their related infrastructure, many of our western rivers and streams would be dry for a substantial portion of the year, thereby making it impossible to have the abundant wildlife, fisheries, habitat, and recreational opportunities that we all enjoy today.

As the largest wholesale supplier of water, Reclamation delivers approximately 10 trillion gallons of water to people across the 17 Reclamation States each year. In addition to being a water supplier, many Reclamation projects also produce affordable and reliable hydropower. The energy that this infrastructure generates serves as the backbone of our region's energy future, which is another important aspect that we will be examining today.

As a litigator, I fought for Wyoming's water rights and represented irrigation districts, municipalities, and farmers for decades. Nearly every major water project has been met with negativity and criticism by naysayers and academics, yet history has shown the tremendous environmental value and economic impact of these projects across the board.

As our witnesses will discuss today, we must continue investing in our Federal water and hydropower projects and development, continuing to support Reclamation's work maintaining the infrastructure that we have. And increasing our Nation's water storage and conveyance capacity means more food, more energy, and more prosperity for generations to come in Wyoming and across the United States.

But we cannot solely rely on the success of those who came before us. Like other hearings we have held at this Committee, we need to examine the steps that we need to take to chart a better path forward, one that safeguards the existing infrastructure and projects that Reclamation operates, but also allows for more hydropower production, more storage and conveyance capacity, and greater access to these resources for the communities that depend on them.

For one, aging infrastructure is a reality that every Reclamation project is facing. In Wyoming a few years ago we had a tunnel collapse that cut off water to tens of thousands of acres of productive farmland during the height of the irrigation season. We must do more to prevent critical failures in our infrastructure be-

cause those failures not only risk industries like farming, but also risk surrounding lands and the lives of our families. We must protect and maintain the infrastructure we have while continuing to build new storage projects. Future generations depend on our investment now.

Protecting and maintaining this infrastructure also means examining the various environmental statutes that impact the design, construction, operation, maintenance, and replacement of these projects. Statutes like the Endangered Species Act, the Marine Mammal Protection Act, and the National Environmental Policy Act have all been weaponized as barriers to the development and maintenance of Reclamation projects and water resources. Efforts to reform and modernize these statutes will similarly improve the management of our water resources, thereby providing benefits to every single person in this room, regardless of where you may call home.

I lastly want to thank my constituent, Jim Webb, for being here today, and for your willingness to testify before this Subcommittee. With that I want to take the time to thank all of our witnesses for being here, and I look forward to a robust conversation.

Ms. HAGEMAN. I now recognize Ranking Member Huffman for his opening statements.

STATEMENT OF THE HON. JARED HUFFMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

Mr. HUFFMAN. Thank you, Madam Chair, and I am glad we are having a hearing to talk about the reliability of our water and power systems, especially in the West. If Congress wants to do something about this, and I hope we do, on a bipartisan basis, the most important thing is to pick up where we left off two congresses ago. This is my thirteenth year in Congress. I have heard endless debates and endless politics and political theater over these subjects. But we took action. We made historic investments, and that is enabling us to face some really important realities when it comes to these issues.

Climate change is shrinking our snowpack. It is drying up many of our rivers. It is straining our water infrastructure, especially aging infrastructure. And we have to face the reality that we have less water than we would like right now. That is not just because of growing demand. Rising temperatures, shrinking snowpack, shifting precipitation patterns, all of this is cutting into supplies around the West. Communities are being squeezed harder and harder every year by climate change and prolonged drought. According to a Colorado College State of the Rockies poll, 77 percent of Western voters view climate change as a serious problem; 88 percent see inadequate water supply as a major concern.

But despite these clear mounting challenges, the Trump administration continues to claim that the climate crisis is fake news. And the real kicker is that they are not just denying this reality, they are actively working to make the crisis worse, including dismantling the very agencies that deliver water and power to millions of Americans. And under the guise of efficiency, of course, we know Elon and the DOGE folks have been pushing massive indiscriminate layoffs, gutting the Bureau of Reclamation

and the power marketing administrations, thousands of positions—engineers, dam operators, hydrologists, emergency operators—critical positions have been eliminated or left vacant, and these are literally the people who keep our taps running and the lights on for tens of millions of Americans.

And we are already seeing the consequences: lost institutional knowledge, fraying relationships with local agencies, critically important water resilience projects delayed or canceled, decades-old Federal local partnerships eroding before our eyes.

And the stakes are equally high with our energy grid. Indiscriminate cuts at the Energy Department's Power Marketing Administrations, including Bonneville and Western, are putting grid reliability at risk, raising real concerns about blackouts and system stability across the West.

Now, I don't know about you, but firing workers, rehiring them, and then maybe firing them again is not exactly a good plan for stability. It is volatile enough just trying to manage water and power resources. It is a high wire act on the good days. When you add in all of that chaos, and think about what that does to your goal of having a skilled professional workforce. It is a recipe for terrible morale, for vacancies that can cripple an agency's effectiveness, and ultimately for failure. President Trump wants to dismantle the Federal workforce, and then we get to the next shoe that will drop, to replace them, these experienced public servants, replace them with political loyalists.

So let me be clear. Our Federal workforce should reflect competence and dedication to public service, not just yes-men for Donald Trump and his billionaire friends. All of our government should reflect those values, but especially in the areas of water and power. Look, the bottom line is this Administration's actions show a dangerous failure to understand the complexity of our Nation's water and power systems, especially in the West.

Reliable infrastructure, strong working relationships, these things don't happen by accident. They require long-term investments and a professional, mission-driven workforce, not the hollowed-out shell that this Administration seems to be creating.

And let's remember that the entire scheme of this Federal workforce purge is overseen by a guy at the Office of Management and Budget who says on the record that he wants every Federal employee to feel traumatized, to feel miserable coming into work every day. That is a recipe for disaster across government, but especially when it comes to the water and power agencies that we are discussing here today. We need to do better.

Mr. HUFFMAN. With that I yield back.

Ms. HAGEMAN. I will now introduce our panel of witnesses.

Mr. Jim Webb, President and CEO at Lower Valley Energy in Afton, Wyoming.

Ms. Michelle Bushman, Deputy Director and General Counsel at Western States Water Council in Murray, Utah.

Mr. Jonathan Haswell, Chief Business Officer at OceanWell LLC in Woodside, California.

And Mr. Patrick Sigl, Director of Water and Natural Resource Law at Salt River Project in Phoenix, Arizona.

Let me remind the witnesses that, under Committee rules, they must limit their oral statements to 5 minutes, but their entire statement will appear in the hearing record.

To begin your testimony please press the button on the microphones. And we use timing lights. When you begin the light will turn green. When you have 1 minute remaining the light will turn yellow. And at the end of 5 minutes the light will turn red, and I will ask you to please complete your statement.

I will also allow all witnesses to testify before member questioning.

I now recognize Mr. Webb for 5 minutes.

STATEMENT OF JIM WEBB, PRESIDENT AND CEO, LOWER VALLEY ENERGY, AFTON, WYOMING

Mr. WEBB. Thank you, Chair Hageman, Ranking Member Hoyle, and members of the Subcommittee. Thank you for the opportunity to be here today. This is exciting.

My name is Jim Webb, and I serve as the President and CEO of Lower Valley Energy, a not-for-profit cooperative serving western Wyoming and southeastern Idaho. I am here today to highlight the importance of the Columbia River System and the Bonneville Power Administration not just to my community, but to the entire Western grid.

Hydropower is America's oldest and largest renewable resource, providing nearly 30 percent of all renewable generation. It is uniquely dispatchable, carbon free, affordable, and essential to maintaining grid reliability. At Lower Valley Energy about 85 percent of our power supply comes from hydropower, including two low-impact facilities that we operate. We are also exploring the opportunity to install a third system on an existing Federal dam that does not have generation now.

One of hydropower's greatest strengths is its operational flexibility. Hydro plants can quickly ramp up or down, provide critical grid services like frequency regulation, and have black start capabilities, meaning that they can restore power independently after a major outage. As we integrate more variable resources like wind and solar while demand continues to soar for electricity, hydropower's role as a flexible backbone becomes even more critical.

The Bonneville Power Administration is critical to our success. BPA markets power from 31 Federal hydro projects and operates a vast network of over 15,000 miles of transmission lines. Ratepayers cover BPA's operating costs, capital investments, and environmental responsibilities through its power and transmission sales revenues.

Stated more plainly, BPA ratepayers—not taxpayers, as was already mentioned—fund its workforce and programs without burdening the Federal budget. Because of this self-pay structure, staffing reductions at BPA and other PMAs do not yield Federal taxpayer savings. Instead, they impact BPA's ability to provide reliable service, maintain grid infrastructure, implement fish and wildlife mitigation programs, and carry out their public mission.

I do express concern over the December 14, 2023 MOU between the Federal Government, non-governmental organizations, and the

Six Sovereigns which paves the way for breaching of the four lower Snake River dams. This agreement was reached largely behind doors without meaningful input from public power utilities, agricultural communities, or many Tribes. Breaching these dams would have severe consequences. They provide around 3,000 megawatts of clean, flexible, and affordable power, and support several thousand megawatts of wind and solar generation. Removing them would compromise grid reliability, increase energy prices, and place additional strain on already congested transmission corridors.

The previous Trump administration completed a resource intensive environmental impact statement and NOAA biological opinion on the Snake River dams in 2020. These studies concluded that dam breaching is not a viable option. A more recent NOAA Fisheries rebuilding report ignores prior NOAA science, making a 180-degree turn largely to presume breaching the Snake River dams is the only viable path to rebuilding salmon populations without scientifically reliable data or analysis to back up its claims. In my opinion, we don't need to open the EIS and do more studies trying to come up with different results to fit somebody else's narrative.

We fully support fish and wildlife recovery. Approximately 25 percent of our monthly bills that we pay to BPA goes to support fish mitigation. Our investments are yielding great returns. Recent data shows that salmon returns have actually increased threefold since the first dams were built. We are doing our part. Now let's focus on other causes of salmon decline such as ocean conditions, habitat, predators, and climate change.

In closing, I urge Congress to protect the Columbia River System, ensure BPA has the tools to succeed, and keep energy affordable and reliable for millions of Americans.

Thank you for the opportunity to testify, and I welcome questions. Thank you.

[The prepared statement of Mr. Webb follows:]

PREPARED STATEMENT OF MR. JAMES R. WEBB, PRESIDENT AND CHIEF EXECUTIVE OFFICER, LOWER VALLEY ENERGY

Hydropower helped us electrify America and is essential to our nation's future. Chair Hageman, Ranking Member Hoyle, and Members of the Subcommittee, thank you for the opportunity to testify today. My name is Jim Webb, and I serve as the President and Chief Executive Officer of Lower Valley Energy (LVE). I am testifying today to provide my insights as a utility manager and to speak on behalf of stakeholders who rely on the power, reliability, and stewardship provided by the Columbia River System and the Bonneville Power Administration (BPA).

Lower Valley Energy (LVE), headquartered in Afton, Wyoming, exemplifies the benefits of the Columbia River System and BPA's services. As a member-owned, not-for-profit electric cooperative, LVE serves communities in western Wyoming and eastern Idaho, delivering some of the nation's most affordable and reliable electricity.

The Importance of Hydropower

Hydropower is the nation's oldest and largest source of renewable electricity, providing nearly 30% of all renewable generation in the U.S. It's in a class of its own, though, as it offers dispatchable, low-cost, carbon-free power and plays a unique and irreplaceable role in maintaining grid reliability.

The topic of today's hearing is critical to me because approximately 85% of LVE's power generation comes from hydropower. While most of this power is federal hydropower marketed by the Bonneville Power Administration, LVE operates two low-impact hydro facilities at Strawberry and Swift and is exploring additional power generation at another existing dam in our area.

One of the often-underappreciated strengths of hydropower is its operational versatility. Hydropower facilities have black start capability, meaning they can restore electricity to the grid in case of a total system shutdown, without requiring an external power source. This makes hydropower essential for national security and grid resilience. In addition, hydropower reservoirs provide an inherent form of energy storage. Water stored at elevation is potential energy that can be converted to electricity instantly, allowing these plants to ramp generation up or down to meet real-time demand rapidly. In fact, in periods of peak demand, many hydropower facilities can temporarily exceed their average or “base” output, sometimes significantly, for short durations to meet heightened or unexpected demands. This flexibility is indispensable as we add more intermittent wind and solar to the grid. It also stands as a quick-response defense should other generating sources experience unexpected shutdowns—hydro is capable of picking up that slack.

Hydropower also plays an integral role in providing frequency and voltage regulation, which helps keep the grid stable during sudden shifts in generation or load. Hydropower units can serve as a backup power supply which can respond within seconds to changes in demand, making them ideal for supporting grid reliability under dynamic conditions. Moreover, these hydro facilities are long-lived and durable; many have operated reliably for a century and are less vulnerable to cyberattacks or fuel supply disruptions that can be problematic for fossil-fueled plants.

As the nation wrestles with increasing electricity demands, it is crucial for Congress to recognize that hydropower is one of the only clean energy resources that offers both reliability and flexibility at scale. Without hydropower’s stabilizing influence, integration of variable resources like wind and solar will be more expensive, less efficient, and more reliant on fossil fuel backup. The Columbia River System is essential to achieving a clean, secure, and affordable energy future. That’s why it is often referred to as the backbone of our energy system in the West.

Federal Hydropower: A Critical National Asset

The Power Marketing Administrations (PMAs) conceptually were established during the New Deal era to bring electricity to rural and underserved parts of the country that investor-owned utilities had largely ignored. These agencies helped electrify America by harnessing federally built hydropower projects using local labor forces. When these projects became operational, they immediately made low-cost energy available to local, public, and cooperative utilities across a vast territory, changing citizens’ lives overnight. The basic concept known as “preference” for communities served by federal power came from the view that rivers are a public asset and therefore, the power generated from them ought to be sold to not-for-profit utilities. The Bonneville Power Administration (BPA), created in 1937, was instrumental in electrifying America. It delivered power from the Columbia River system to communities across Washington, Oregon, Idaho, and parts of Montana, Nevada, and Wyoming—fueling rural development, job creation, and industrial growth. In doing so, BPA and its sister PMAs expanded access to electricity and helped establish the foundation for the nation’s public power sector.

Today, BPA remains a vital force in the West, marketing power from 31 federal hydro projects and one nuclear power plant to over 140 public power customers, including municipalities, cooperatives, and tribal utilities. BPA also owns and operates a vast 15,000-mile high-voltage transmission network that enables regional energy reliability and the integration of renewables. The development of this critical infrastructure we entirely self-financed and did not rely on annual congressional appropriations. Ratepayers cover BPA’s operating costs, capital investments, and environmental responsibilities through its power and transmission sales revenues. Stated more plainly, BPA ratepayers—not taxpayers—fund its workforce and programs. This self-funding model ensures that BPA operates efficiently and with financial discipline while delivering immense public value without burdening the federal budget. BPA and its utility customers make money for the U.S. Treasury by paying off the investment originally made in the system, with interest, and has done so annually for 41 years. The most recent payment, for fiscal year 2024, was \$792 million. This amount included \$508 million in principal and \$231.9 million in interest. Additionally, \$52 million covered other costs, such as irrigation assistance payments that BPA provides to help irrigators repay their share of certain Bureau of Reclamation projects.

Because of this self-pay structure, staffing reductions at BPA and the other PMAs do not yield federal taxpayer savings. Instead, they impact the BPA’s ability to meet its statutory requirements to provide reliable service, maintain grid infrastructure, implement fish and wildlife mitigation programs, and carry out their public mission. We share the Trump Administration’s commitment to advancing American energy

dominance and appreciate the emphasis on enhancing grid reliability and keeping energy affordable for all Americans. As the Administration seeks to streamline permitting and accelerate infrastructure development, the PMA workforce remains essential to managing federal multi-purpose project expansions that drive energy growth and enhance system resilience. Preserving electric reliability depends on avoiding unintended consequences that could undermine these goals, like delays in transmission development, underinvestment in maintenance and modernization, and a loss of institutional knowledge critical to managing complex hydro systems. Protecting the capacity and expertise of BPA is not a matter of government spending—it's a matter of good governance, strategic planning, and energy security.

Investment in Fish Recovery

LVE takes our commitment to stewardship of the land and water very seriously. The Columbia River system is not just a power source but a living river with cultural and ecological significance. The federal government and BPA ratepayers have invested billions in fish recovery, habitat restoration, hatcheries, and dam modifications to support salmon and other species.

Approximately 25% of our power bill goes to support fish mitigation. These efforts are making a difference.

The Public Power Council (PPC), representing consumer-owned utilities across the Pacific Northwest, has highlighted significant developments in 2024 regarding salmon and steelhead returns in the Columbia River Basin. Notably, the region experienced a remarkable sockeye salmon run, with nearly 750,000 fish counted in the Columbia River alone—a substantial increase compared to previous years. In total, the number of salmon returning to the Columbia and Snake rivers has more than tripled since the first federal dams were built on these rivers.

While we are committed to supporting salmon recovery, it is essential to scrutinize the assumptions and methodologies underlying recent federal guidance, particularly the NOAA Fisheries 'Rebuilding' Report. This report presents a narrow and overly deterministic view of the region's salmon recovery options. The report ignores prior NOAA science, making a 180 degree turn to largely presume breaching the Lower Snake River dams is the only viable path to rebuilding salmon populations, without scientifically reliable data or analyses to back up its claims. Significant contributing factors such as ocean conditions, habitat degradation, predation, and climate change were not considered. Additionally, the report does not sufficiently address the energy, economic, and environmental trade-offs associated with dam removal, nor does it reflect the substantial investments and measurable progress already made through existing mitigation and restoration efforts. The previous Trump Administration completed a resource-intensive Environmental Impact Statement and NOAA Biological Opinion on the Lower Snake River Dams in 2020. These studies concluded that dam breaching is not a viable option, and that it would result in severe disruption to the power supply of the region. By abandoning its previous scientific principles, the NOAA report does not represent the collaborative, science-based, and regionally inclusive approach necessary for sustainable salmon recovery and long-term energy reliability.

The positive trends observed in 2024 demonstrate that meaningful progress in fish and wildlife conservation is achievable with sustained commitment and collaboration among federal agencies, states, tribes, and public power utilities. We must continue this work with a balanced, science-based approach that protects both the river's ecosystem and the lifeline it provides to millions of people. Collaborative, regionally supported solutions that integrate tribal perspectives, environmental stewardship, and system reliability should be the foundation of our path forward.

12/14 Agreement

As we look toward future challenges and consumer needs, it is vital that all stakeholders—including tribes, public power utilities, states, and federal agencies—work together to achieve balanced and lasting solutions. However, the recent Memorandum of Understanding announced on December 14, 2023, between the federal government, nongovernmental organizations, and the six sovereigns—comprising the States of Oregon and Washington and four Native American tribes—raises serious concerns regarding process, equity, and long-term impacts on the energy and economic stability of the region.

The agreement, reached largely behind closed doors and ignoring input from public power customers, utilities, agricultural communities, river users and other impacted stakeholders, outlines a federal commitment to support a path toward breaching the four Lower Snake River dams, citing the NOAA 'Rebuilding' report. The agreement pauses the ongoing litigation at the Federal District Court level in which nongovernmental organizations partnered with tribal nations to sue the fed-

eral government under the Endangered Species Act. The agreement to pause the litigation also required BPA to use ratepayer funds to pay \$100 million to the six sovereigns for fish restoration and \$200 million to U.S. Fish and Wildlife Services for hatchery modernization, upgrades and maintenance. An additional \$200 million of BPA ratepayer funds were dedicated to studying the reintroduction of specific salmon stocks in the upper Columbia River and methods to increase their abundance. Finally, the agreement required various studies that contemplate dam removal and building “replacement” intermittent power projects.

The language and accompanying commitments to study dam replacement and fund mitigation programs signal an intent to prepare for dam breaching by systematically dismantling the dams’ operational efficacy and economic viability. This has introduced tremendous uncertainty for utilities and BPA customers across the region, many of whom rely heavily on the clean, affordable, and dispatchable energy these dams provide. Many in our region believe this agreement drove a wedge between regional stakeholders and took us many steps backwards from a workable compromise.

The Lower Snake River dams are not marginal assets—they represent approximately 3,000 average megawatts of nameplate, emissions-free, flexible power, critical black start capability, and seasonal storage. Removing them would compromise grid reliability, increase energy prices, and place additional strain on already congested transmission corridors. Dam removal would also displace barge transportation of agricultural goods, increase transportation costs, put more trucks on road, increase emissions, and threaten livelihoods in inland communities, including farmers operating on already razor-thin margins.

The lack of comprehensive and inclusive dialogue makes this agreement especially problematic. Public power utilities, customers, and funders of BPA’s fish and wildlife mitigation programs were not meaningfully consulted before the agreement was announced. Neither were ratepayers, agricultural stakeholders, rural economic developers, or many tribal governments outside the four parties involved. The absence of transparency undermines public trust and, again, creates division rather than the unity we need to achieve real, durable solutions.

We fully support investing in salmon recovery, but we believe these goals can and must be pursued in a way that maintains energy reliability and protects the broader public interest. Regional solutions must be inclusive, science-based, and grounded in a complete understanding of trade-offs and alternatives, not driven by political agreements that preempt necessary debate.

In closing, the Columbia River System and the Bonneville Power Administration are models of multipurpose public infrastructure. They deliver enormous value—clean energy, flood protection, navigation, agriculture, and recreation—while helping stabilize energy prices and support grid resilience. As Congress considers the next phase of infrastructure investment and energy policy, I urge you to reinforce and modernize what is working, protect the integrity of our federal hydropower system, and ensure BPA has the tools and financial flexibility it needs to continue serving its public service mission.

Thank you for the opportunity to testify. I welcome your questions.

Ms. HAGEMAN. Thank you, Mr. Webb. I now recognize Ms. Bushman for 5 minutes.

**STATEMENT OF MICHELLE BUSHMAN, DEPUTY DIRECTOR
AND GENERAL COUNSEL, WESTERN STATES WATER COUNCIL,
MURRAY, UTAH**

Ms. BUSHMAN. Chairman Hageman and Ranking Member Hoyle, the Western States Water Council is a bipartisan government entity created by the Western governors. Our mission is to ensure that the West has an adequate, secure, and sustainable supply of water of suitable quality to meet its diverse economic and environmental needs now and in the future.

The Council has long supported Federal actions to authorize hydropower projects that enhance our electric generation capacity while appropriately protecting environmental resources and respecting States’ Clean Water Act section 401 certification

authority, as well as States' authority over water allocation, the obligations of interstate compacts, and the rights and preferences of existing water and power users.

The potential exists for further development of hydropower, including upgrading existing generators, developing small hydro and the power potential from low head hydro on existing man-made conduits and canals, and development of tidal power energy systems. Such development on existing infrastructure can often be undertaken with little impact on environmental and ecological resources. Permitting requirements may be appropriately minimized and streamlined to promote reasonable development while avoiding unnecessary costs.

Water is often a necessary component of energy development and production, which can present significant challenges in States where water resources are already scarce. Similarly, water management can be energy intensive, including desalination, recycling, and reuse of water resources. An integrated approach to water and energy is necessary to achieve a thriving and sustainable future for the West.

The West depends on an intricate system of infrastructure financed and maintained under a complex network of State, tribal, local, private, and Federal ownership. Federal dams, operated and maintained by the Bureau of Reclamation, the Army Corps of Engineers, and the Natural Resources Conservation Service, have largely exceeded their design life, with an estimated \$50 billion in needed repairs. The Council supports Federal actions to provide stable and continuous funding streams, and a coordination of State and Federal efforts to strengthen existing dam safety programs.

Many of our rural communities are struggling to meet existing and future water supply needs. These small systems, serving under 10,000 people, face limited technical expertise, sometimes contaminated water supplies, and lack of access to alternative water supplies. Regionalization of shareable technical, financial, and managerial resources across multiple small systems may present opportunities for small systems to make meaningful improvements. The Council supports the use of the Bureau of Reclamation's Rural Water Program to identify smaller-scale opportunities for small public water supply systems.

Under the Reclamation Act of 1902, the Reclamation Fund was envisioned as the principal means for financing future Federal Western water and power projects with revenues from Western resources. The unobligated balance of the Reclamation Fund continues to grow and is expected to exceed \$25 billion. However, the fund receipts are mostly spent elsewhere, contrary to Congress's original intent. The Council recommends that Congress investigate the advantages of converting the Reclamation Fund from a special account to a true revolving trust fund, with annual receipts to be appropriated for authorized purposes in the year following their deposit.

The Council has long supported the negotiated resolution of Indian water rights claims, which can achieve the final determination of unquantified reserved water rates for Tribes in a manner that is least disruptive to existing non-tribal water uses with younger priority dates. This leads to greater water security

across the West and an increased ability to plan for the future. These settlements have a regional impact and are not and should not be considered earmarks or community projects. The Council urges Congress to expand opportunities to provide funding for negotiated settlements and to ensure that authorized settlements will be funded.

Sound decision-making for water resource management requires accurate and timely data on precipitation, soil moisture, snow water content, droughts, and more. Water droughts and wildfires do not stop at State or tribal borders. Federal data at regional scales forms an integral component of our capacity to make meaningful and nuanced decisions about limited water resources. Recent Federal layoffs, massive staff reductions, and the closure of local Federal agency offices across the West have created uncertainty about the future of Federal support for water management and related disaster mitigation.

Thank you for the opportunity to testify.

[The prepared statement of Ms. Bushman follows:]

PREPARED STATEMENT OF MICHELLE BUSHMAN, DEPUTY DIRECTOR AND GENERAL COUNSEL FOR THE WESTERN STATES WATER COUNCIL

My name is Michelle Bushman, and I am the Deputy Director and General Counsel for the Western States Water Council (WSWC), a bi-partisan government entity created by Western Governors in 1965, representing 18 states. Our members are appointed by and serve at the pleasure of their respective Governors, advising them on water policy issues, working closely with the Western Governors' Association (WGA). Our mission is to ensure that the West has an adequate, secure, and sustainable supply of water of suitable quality to meet its diverse economic and environmental needs now and in the future.

Water is an increasingly scarce and precious resource and should continue to be a public policy priority. Western States have and will continue to face unique hydrologic, legal and infrastructure challenges. Population growth, competing economic and ecological demands, and changing social values have stressed surface and groundwater supplies in many areas. This has increased the number and complexity of conflicts among users and uses. A secure water future is becoming more costly and increasingly uncertain given our unpredictable climate, aging and often inadequate infrastructure, data limitations regarding water supplies and demands, competing or poorly defined water rights, and a constantly evolving regulatory landscape. Effectively addressing these challenges will require stronger collaboration and cooperation that transcends political and geographic boundaries between states, federal agencies, tribes, and local communities.

State Water Authority

Western states have primary authority and responsibility for the appropriation, allocation, development, conservation and protection of water resources, both groundwater and surface water, including protection of water quality, instream flows and aquatic species, while acknowledging international treaties, interstate agreements, and judicial decrees. States are primarily responsible and accountable for their own water development, management, and protection challenges, and are in the best position to identify, evaluate, and prioritize their needs and plan and implement strategies to meet those needs. Each Western State has developed comprehensive systems for the appropriation, use and distribution of water tailored to its unique physiographic, hydrologic and climatic conditions found within that state.

Congress has historically deferred to state water law as embodied in Section 8 of the Reclamation Act, Section 10 of the Federal Power Act, Section 101(g) and 101(b) of the Clean Water Act, and myriad other statutes. Federal deference to state water law is based on sound principles for the protection of private property rights and the collective public interest in managing our water resources and the environment. Western states value their partnerships with federal agencies as they operate under this established legal framework.

Federal water planning, policy development, regulation, protection, and management must recognize, defer to, and support state water laws, plans, policies,

programs, water rights administration, adjudication and regulation, compacts and settlements. Rather than attempt to dictate water policy, the federal government should engage states early in meaningful consultation and contribute funding to support implementation of state water planning and management, thus avoiding, or at least minimizing, the need for federal regulatory mandates.

Hydropower

The WSWC has long supported federal legislative and administrative actions to authorize and implement reasonable hydropower projects and programs that enhance our electric generation capacity and promote economic development, through efficient permitting processes, while appropriately protecting environmental resources and respecting States' Clean Water Act §401 certification authority, States' authority over water allocation within their borders, the obligations of interstate compacts, and the rights and preferences of existing water and power users.

Hydropower is a clean, efficient source of energy that is a vital part of meeting our present and future energy demands. It represents about 27% of total renewable electricity generation, with approximately 103.4 gigawatts of capacity and nearly 5.7% of total electricity generation. The potential exists for further public and private development of hydropower, including upgrading existing generators, developing small hydro and the power potential from low-head hydro on existing man-made conduits and canals, development of tidal power energy systems, as well as hydroelectric pumped storage projects. Aside from projects requiring review by the Federal Regulatory Commission (FERC), such development can often be undertaken with little impact on environmental and ecological resources, requiring minimal further environmental review. Permitting requirements may be appropriately minimized and streamlined to promote reasonable development while avoiding unnecessary costs.

WSWC supports the development and implementation of appropriate energy and water conservation programs at all levels to minimize demands placed on our natural resources and ecosystems.

Energy-Water Nexus

The West enjoys diverse and abundant renewable and non-renewable energy resources. Water is often a necessary component of energy development and production, which can present significant challenges in States where water resources are already scarce. Similarly, water management can be energy intensive, including the extraction or movement of water, or desalination, recycling, and reuse of water resources. An integrated approach to water and energy resource planning, development, diversification, management and protection is necessary to achieve a thriving and sustainable future for the West. This includes integrating water and energy policies to maximize effectiveness and efficiencies; supporting research and gathering data to improve our understanding of water-energy supplies and demands; ensuring that decisions related to the siting, construction, and operation of water and energy development projects include an evaluation and appropriate consideration of the interrelated impacts of such development; and that the use of alternative cooling technologies or other energy-related options are tailored to the availability of water and the related opportunity costs of other water uses.

Reclamation Fund

Under the Reclamation Act of 1902, the Reclamation Fund was envisioned as the principal means for financing federal western water and power projects with revenues from western resources. Reclamation Fund receipts are largely derived from water and power sales, project repayments, and receipts from public land sales and leases, as well as oil and mineral leasing and related royalties, from western lands adjacent to rural and tribal communities. The unobligated balance of the Reclamation Fund continues to grow and is expected to exceed \$25.2B. However, these receipts are only available for expenditure pursuant to annual appropriation acts, and the fund receipts are mostly spent elsewhere contrary to Congress' original intent.

WSWC recommends that Congress investigate the advantages of converting the Reclamation Fund from a special account to a true revolving trust fund with annual receipts to be appropriated for authorized purposes in the year following their deposit (similar to some other federal authorities and trust accounts).

WestFAST

The Western States Federal Agency Support Team (WestFAST) was formally organized in 2008 in response to the Western Governors' Association's recommendation to facilitate correlation of federal activities and to develop and enhance collaborative partnerships among state and federal agencies working on

priority water-resource issues. Today, WestFAST is a collaboration of more than 16 federal agencies with water management responsibilities in the West.

WestFAST works closely with the Western States Water Council striving to accomplish effective cooperation among western states, and their partners, in the understanding, conservation, development and management of water resources. The WestFAST federal agencies form a dynamic, flexible team that provides the opportunity for interaction initiated by WSWC, individual states, or the federal government. WestFAST supports a continued commitment on the part of federal and state organizations to work with local, tribal, and other stakeholders to improve the effectiveness of collaboration and seek solutions to water issues across Western States. Federal layoffs, massive staff reductions, and the closure of local federal agency offices across the West, have created uncertainty about the future of federal support for water management and related disaster mitigation.

Water Data

All levels of government must prioritize the collection, analysis and open sharing of reliable data regarding water availability, quality, and usage given its importance to research for sound science and data driven decisionmaking. This includes actions related to hydropower development and Forecast Informed Reservoir Operations (FIRO). Sound decisionmaking for water resource management requires accurate and timely data on precipitation, streamflow, evapotranspiration, soil moisture, snow depth, snow water content, droughts, and water quality. In addition to state, tribal, and local data, many federal programs provide critical data.

For example, the U.S. Geological Survey's (USGS) Groundwater and Streamflow Information Program (GWSIP) and National Streamflow Network provide data on water supply availability and water levels. Landsat thermal data is archived and distributed by the USGS. The former National Hydrography Dataset (NHD) and 3D Hydrography Program (3DHP) provide map locations of water features and streamgages. The National Water Information System (NWIS) provides surface water data.

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) provides water supply data through the Snow Survey and Water Supply Forecasting Program, based primarily on data from SNOTEL weather stations that measure snowpack through winter and early spring. The National Water and Climate Center (NWCC) provides soil moisture data through the Soil and Climate Analysis Network (SCAN). The USDA's National Agriculture Imagery Program (NAIP) is used in water right transactions (e.g., water right transfers, instream leases) to confirm or support assertions of beneficial use of water on subject lands.

The National Atmospheric and Space Administration (NASA) and its water-related missions provide remotely-sensed data, and WGA has specifically expressed support for the Landsat program and its use of thermal infrared imagery for monitoring water use.

The National Oceanic and Atmospheric Administration's (NOAA) National Weather Service, Climate Programs Office, Office of Atmospheric Research (OAR), National Environmental Satellite Data and Information Service (NESDIS), National Centers for Environmental Information (NCEI), and National Integrated Drought Information System (NIDIS), another program specifically supported by WGA, all conduct research and provide forecasting data, supporting water management and preparation for the extremes of drought and flooding.

The Bureau of Reclamation's (USBR) Agrimet system is an agricultural weather station network that collects site-specific data that, among other things, is often used to ground truth and calibrate remotely sensed satellite data. It also provides data for improving agricultural water planning and water use efficiency, conserving water, improving crop yields, reducing pesticide and fertilizer application, and reducing energy costs for growers.

The Environmental Protection Agency's National Environmental Information Exchange Network (NEIEN) facilitates environmental data sharing among state, federal, tribal, and local governments to improve timeliness for decisionmaking.

Many of these programs operate very efficiently on lean budgets, yielding public safety and water supply benefits much greater than the cost of their operation. WSWC recently asked our Western states how they are using some of these federal datasets. While not all of these responses will be specifically relevant to this Subcommittee, nor is this an exhaustive list, the complexity of the responses below underscores the many critical roles that federal data play in water management across the West:

California has a long history of collecting its own data to meet its water needs, but also relies on federal data to make informed water management decisions.

Following the 2016 Open and Transparent Water Data Act, California's Department of Water Resources created an integrated water data platform, which includes water and ecological data related to California water supply and management held by USBR, USGS, NOAA, U.S. Forest Service, and the U.S. Fish and Wildlife Service. The NWS watches and warnings support emergency responders in preparing to issue evacuation warnings and orders, such as the high wind and extreme fire risk warnings leading up to and through the recent 2025 LA fires, and the 2023 flood warnings during the atmospheric river events prior to the breach of levees on the Pajaro River. The recent loss of federal employees at USBR has created some difficulty for state staff working on permits.

Colorado's Water Conservation Board uses NRCS SNOTEL and streamgage data to conserve, develop, protect, and manage Colorado's water. Many federal data programs are even more beneficial in the long term (decadal scale) as they provide robust statistical information through variable climate conditions. Discontinuing these data programs can disrupt the long-term benefits.

Kansas uses USGS streamgage data for water rights administration, and reservoir data for reservoir operations. Landsat and OpenET data provide information for irrigated acreage analysis. They use USGS Real Time Water Quality Sensors to monitor ambient water quality and for tracking plumes and relating pollutant levels to stream flows. USACE and USBR reservoir data enables them to manage reservoir release decisions for mitigating instream water quality impacts from harmful algal blooms (HABs). USACE reservoir data provides information on drought or low flow operations and informs interstate water compact compliance. USACE Missouri River data and projections help determine the impacts to Kansas reservoir operations. USACE water quality data supplement state data for TMDL analysis and development. EPA water quality data supplements state data for water quality planning and evaluation. The NOAA-NIDIS drought monitor is used to determine gubernatorial declarations of drought emergencies. The USDA Risk Management Agency (RMA) supports the PRISM project that Kansas uses to update the Republican River Compact Administration groundwater model, and to do other historical analyses with its gridded precipitation and temperature data.

Idaho's Department of Water Resources relies extensively on the USGS stream gaging program for water resource management, to carry out the priority administration of surface water (Snake River, Bear River, Big Lost River, Big Wood River, Payette River, and Upper Salmon River), for dam operations (Priest Lake Outlet), and to ensure compliance with interstate compacts (Upper Snake and Bear River) and tribal water rights settlements (Nez Perce and Shoshone—Bannock). Idaho also relies on the USGS Landsat program for the remote sensing of evapotranspiration data across the Snake River Plain and tributary basins. Landsat data is used to map irrigated lands and to calculate data needed both annually and in real-time to carry out conjunctive surface and groundwater administration; to calibrate and validate groundwater models; to evaluate and approve new water appropriations via permitting, licensing, transfers, and water supply bank transactions; and to recommend historical water use in adjudication processes. Idaho relies on NRCS SNOTEL data for water supply forecasting, tracking the state's water resources, and informing management decisions. These data allow IDWR and water users to plan for potential water shortages. SNOTEL forecasts allow Idaho to maintain statutorily prescribed water levels in Priest Lake, and to determine whether summer flows will meet the hydropower minimum streamflow requirements in the Swan Falls Settlement Agreement. The Idaho NRCS office manages 119 of the 900 national SNOTEL sites. The NRCS State Snow offices have 27 of 71 positions vacant, and the Idaho office has 4 of 10 positions vacant due to recent federal terminations, threatening SNOTEL network maintenance and forecasting capabilities.

Montana's Department of Natural Resources and Conservation relies on several federal water datasets to actively manage the water resources. As a headwaters state, Montana relies heavily on streamgage data, SNOTEL data, and weather data that are used daily during the winter and spring to forecast anticipated runoff and water availability for their state reservoir management, flood risk assessment, and water compact agreements including international, interstate, tribal and federal compacts.

New Mexico heavily relies on water data developed by or in consultation with federal agencies for several different purposes collaboratively integrates several sources of federal and non-federal water data under the authority of New Mexico's Water Data Act, NMSA 72-4B-1, et seq.. New Mexico and other states rely on federal water data to track reservoir levels, gauging and stream flow measurements, and forecasts for water management operations in intrastate and interstate basins. For example, in connection with the current severe drought conditions, New Mexico

has utilized the NRCS monthly SNOTEL data and current and historic precipitation data, NOAA monthly soil moisture measurements, NIDIS interactive drought maps, and the U.S. Drought Monitor, and Climate Assessment for the Southwest (CLIMAS), an interdisciplinary NOAA program that is a collaboration between the University of Arizona and New Mexico State University. Federal water data is also useful in connection with implementation of the technical elements of interstate and Indian Water Rights Settlement Agreements. Federal water data also has been utilized recently in New Mexico in connection with coordinated responses across several agencies to flooding and channel capacity constraints.

In Nevada, the NRCS water supply forecasts, based primarily on SNOTEL data, are the principal indicator used by irrigators in the Walker River Basin to set pumping thresholds to prevent chronic groundwater depletions. Such local efforts to manage groundwater use for the benefit of the community helps prevent the need for state-mandated curtailments of water rights by priority date. During record-breaking precipitation in the winter and spring of 2023, Nevada relied on those monthly forecasts to notify dam owners of potential runoff volumes that could exceed dam spillway capacity. They relied on NOAA weather predictions to determine flood control reservoir releases during a near-failure event at the Echo Canyon Dam in 2023; two of the three subsurface grade check structures in the downstream outlet channel were breached by headcutting, and the third and final structure held up. USDA's RMA PRISM Climate Data is an extremely valuable gridded geodatabase to estimate climate parameters in the many remote regions of Nevada where there is little ground-based weather data. It is commonly used for hydrologic modeling to estimate water budgets and groundwater availability. They widely rely on the U.S. Drought Monitor to gauge drought severity, which is easily communicated and often drives water conservation efforts at the local level.

North Dakota relies heavily on precipitation data provided through NOAA and NRCS. NOAA's Atlas 14 program was a gargantuan shift on the understanding of precipitation patterns and statistical probability of those patterns. The recent development of Atlas 15, a spatially continuous national precipitation frequency atlas, is expected to be an equivalent leap forward in understanding when, where, and how much precipitation is to be expected. NRCS precipitation distribution publications, such as Technical Papers 40 (1961) and 49 (1964) (then-U.S. Soil Conservation Service) help in the construction of water-related infrastructure. Data from Atlas 15 will help North Dakota to ensure that its water infrastructure projects are designed accurately and efficiently, making the most efficient use of taxpayer dollars.

Oregon uses federal data for almost all major functions for characterizing and managing surface and groundwater, including water distribution, forecasting, monitoring, modeling, allocation, regulation, management, public safety, water right transactions (permits, transfers, evidence of beneficial use, forfeiture of non-use), reservoir monitoring, basin studies, municipal water supply planning, agricultural water supply needs, and meeting the needs of ESA-listed aquatic species. Data include USGS NWIS groundwater monitoring network, streamgage network, water chemistry, and maps; USBR Hydromet and Agrimet; U.S. Fish and Wildlife Service threatened and endangered aquatic species lists; NOAA precipitation data; USDA soil surveys, NRCS snow surveys, CREP-enrolled lands, and Ag Census.

South Dakota's Department of Agriculture and Natural Resources relies heavily on USGS stream flow, Mesonet datasets, and other USGS and NOAA publications when investigating water right or water quality permit applications. These data are also used during droughts, floods, responding to pollution spill situations, and to verify hydrologic modeling for dam spillway sizing. On the water quality side, streamflow gages are critical in determining allowable pollutant discharges. Federal water chemistry data impact water quality permit decisions. Mesonet data help inform their beneficial use analysis of waterbodies. On the water resources side, streamflow data informs decisions about bypass requirements and water shut off orders. The state dam safety program is waiting for NOAA to complete its updated probable maximum precipitation (PMP) study (last completed in the 1970s) to provide updated numbers for designing and rehabilitating dams. NOAA's Atlas 15 is needed to update the National Precipitation Frequency Standards for designing infrastructure to the best available information and current storm data.

Utah's Department of Natural Resources relies heavily on USGS streamgages for accurate real-time flow measurements and historical data that inform decisions about diversions, withdrawals and compliance for the fair and transparent allocation of water rights. Streamflow data help optimize reservoir operations, groundwater management, and other water projects. This can lead to more efficient water use, reduced conflicts, and better environmental outcomes. Accurate data allows for complex Great Salt Lake management, from flow modeling to salinity forecasting. Streamgage data supports early warning systems and informs

emergency response strategies. Having access to near real-time conditions aids in flood forecasting, drought planning, informing agricultural decisions, minimizing risks to communities and infrastructure, and supports recreational and ecological needs. Historical records enable trend analysis, helping detect changes in flow regimes over time, which helps with modeling and state planning efforts. Such insights guide policy development, water resources planning, and future infrastructure investments.

Washington's Department of Ecology relies on NOAA and USGS flood forecasts for predicting peak flood elevations, severity, and inundation areas days in advance, which helps identify potential road closures or evacuations before flood events occur. NOAA's precipitation gauges and cameras in wildfire-affected areas help monitor and predict post-wildfire debris flows and flood risks, improving responses and mitigation efforts. The staff of NRCS's regional Snow Survey and Water Supply Forecasting Program has been decimated—only 5 of 12 staff remain to cover both Washington and Oregon, and the northwest SNOTEL system will not be maintained without sufficient staff, and is expected to fail as soon as this summer. The U.S. General Services Administration has proposed canceling the lease for the NRCS facility that houses the SNOTEL equipment, and listed the vehicles and supplies used to maintain the monitoring network as potentially being put up for sale as soon as June. Without snowpack data, Ecology will not be able to accurately forecast water supplies, and may not be able to issue timely drought declarations. This means that farmers and water managers will not be able to plan for and mitigate drought impacts. The Bureau of Reclamation's determinations regarding Yakima basin water allocation rely on NRCS data. Ecology's Office of Chehalis Basin noted that without the integrated federal system for collecting, analyzing, and reporting data, every aspect of the work they do and fund would be impaired or impossible. Their Flood Warning System relies on a combination of federal, state, and local funding to build, upgrade, and maintain the system. The system includes data from USGS gages, NOAA's GOES satellite system, NWS weather forecasts, and NOAA's River Forecast Center—all of those elements need to be working and communicating with one another for the flood warning system to operate. The system provided thousands of residents with advance notice of a major flood event in 2022, enabling them to protect lives and property. NIDIS is the sole source of collaboration between Washington and other states on drought response and resilience. The NIDIS data analysis is in a format that is accessible to the public and allows Ecology and other water managers to evaluate drought conditions, including the impacts on irrigation districts in the Yakima Basin. Ecology is concerned about proposed cuts to OAR where NIDIS is housed; the data collected and analyzed there is critical to their understanding of and forecasts for seasonal climate trends, including drought. USGS gages and historical weather data are essential in creating and operating the hydrologic and hydraulic models used for reducing flood damage and protecting aquatic species, and to assess the potential impact of future infrastructure and conveyance improvements.

Examples of recent billion-dollar disasters in the West include: flooding and mudslides, severe weather and wildfires (2023); extensive West and Midwest drought, heatwave, and wildfires, as well as severe Central weather and North Central and South Central hail (2022); Western drought, heatwave and wildfires, with California flooding, as well as Central and South Central severe storms and cold wave (2021); continued drought, heatwave, wildfires, as well as severe storms and hail (2020); Missouri River and northern Great Plains flooding (2019); Colorado hail storms (multiple years), drought in the southern Great Plains (2018); California and Nevada flooding (2017); severe multi-year drought in California and much of the West (2012–16); Texas and Oklahoma flooding (2015); and flooding in Texas resulting from Hurricane Harvey (2017); drought across the southern Great Plains (2011); Missouri River and northern Great Plains flooding (2011). Such disasters are not isolated occurrences in the West and are likely to continue.

WSWC urges Congress to prioritize the appropriation of sufficient funds to maintain, modernize, expand, and improve these federal data programs, ensuring that they remain accessible to a growing and diffuse number of decisionmakers and stakeholders. The erosion or loss of these programs and the disruption of data may have significantly adverse consequence for our economic and environmental future.

WSWC further urges Congress to invest in additional research and data sharing to help resolve state and regional water problems, including support for water resources research institutes and the Water Resources Research Act program, transitioning from research to operations and technology transfers, forecast informed reservoir operations, hydroclimate data collection, and seasonal to subseasonal forecasting.

Water Infrastructure

A secure and sustainable water future will be determined by our ability to maintain, replace, expand and make the most efficient use of critical water infrastructure. We must preserve and improve existing infrastructure, as well as encourage and support innovative water supply strategies and new storage options to better balance supplies with demands.

The West depends on an intricate and aging system of weirs, diversions, dams, reservoirs, pipelines, aqueducts, pumps, canals, laterals, drains, levees, wells, stormwater channels, and water and wastewater treatment and hydroelectric power plants. These systems are financed and maintained under a complex network of state, tribal, local, private, and federal ownership, benefiting a broad segment of water users and other stakeholders.

Aging federal water infrastructure has deteriorated due to underfunded and deferred maintenance, repair, and replacement needs. In many cases, this infrastructure had exceeded its designed lifespan, raising public safety issues. Other authorized federal infrastructure projects have not been started or remain incomplete for decades due to inconsistent, incremental, or insufficient appropriations; permitting and licensing backlogs; and oversight by multiple federal agencies with inadequate interagency coordination.

Maintaining and delivering sufficient supplies of water of suitable quality is key to maintaining the West's economic prosperity, meeting our environmental needs, and sustaining our quality of life, both now and in the future. Appropriate water-related infrastructure investments ensure our continued ability to store, manage, conserve, and control water during both floods and droughts, as well as protect and treat our water resources. Existing and new infrastructure is critical to meet drinking water, wastewater treatment, irrigation, hydropower, flood control, interstate compact, tribal and international treaty, fish and wildlife habitat needs.

The WSWC supports collaboration and leadership at all levels of government and within the private sector to address the nation's infrastructure needs, including hydropower. WSWC urges Congress to work with the Administration to ensure adequate appropriations for constructing, maintaining, and replacing critical federal water projects and to assist states and local governments as they address their water infrastructure needs. The WSWC encourages Congress to work with the Administration and with States to streamline permitting processes and coordinate environmental and other regulatory reviews to eliminate duplicative procedures. WSWC urges Congress further to develop a method of budget scoring that considers the unique timing of the costs and benefits of water infrastructure investments and accounts for long-term public health and safety, economic and environmental benefits, with fair and appropriated discounting.

Rural Water Systems

Many of our rural communities are struggling to meet existing and future water supply needs and compliance with present regulatory mandates. Over 90% of the public water supply systems in the United States are small systems serving 10,000 or fewer people. These small systems face unique challenges, including financial constraints, aging infrastructure, limited technical operations and managerial administrative expertise, reduced or contaminated water supplies, and lack of access to alternative water supplies. Small system infrastructure consolidation poses significant challenges, particularly for geographically isolated communities. However, regionalization of sharable technical, financial, and managerial resources across multiple small systems may present opportunities for small systems to make meaningful improvements.

For nearly 20 years, the Bureau of Reclamation's Rural Water Program has been focused on the completion of authorized rural water projects that have long been needed in Montana, New Mexico, North Dakota, and South Dakota. The program is also authorized to work with rural communities, states, and tribes to assess potable water supply needs, and to undertake additional appraisal investigations or feasibility studies for new rural water projects. The WSWC supports the use of this program to identify smaller scale opportunities for small public water supply systems, including the appropriation of sufficient funds directed toward that effort.

WSWC also supports the work done by USDA Rural Development to bring clean, safe drinking water and sanitation to rural communities.

Indian Water Rights Settlements

WSWC has long supported the negotiated resolution of Indian water rights claims, which can achieve the final determination unquantified reserved water rights for tribes in a manner that is the least disruptive to existing water uses with younger priority dates. This leads to greater water security across the West and an

increased ability to plan for the future. Some advantages of negotiated settlements include: (i) the ability to be flexible and to tailor solutions to the unique circumstances of each situation; (ii) the ability to promote conservation and sound water management practices; and (iii) the ability to establish the basis for cooperative partnerships between Indian and non-Indian communities. The successful resolution of certain claims may require “physical solutions,” such as development of federal water projects and improved water delivery and application techniques. The federal government has trust obligations toward tribes, and water rights settlements often involve a waiver of some portion of tribal water right claims and breach of trust claims that could otherwise result in court-ordered judgments and increased costs for federal taxpayers. These settlements have a regional impact and are not and should not be considered earmarks or community projects. WSWC urges Congress to expand opportunities to provide funding for settlements, and to ensure that authorized settlements will be funded without a corresponding offset to other essential tribal or Department of Interior programs.

An integrated, collaborative, and grassroots approach to water resources management is critical to the environmentally sound and efficient use of our water resources. States, federal agencies, tribes, and local communities should work together to identify water problems and develop optimal solutions at the lowest appropriate level. Striving for cooperation rather than litigation, we must recognize and respect national, state, regional, local and tribal differences in values related to water resources.

Thank you for the opportunity testify.

FORMALLY ADOPTED POSITIONS OF THE WESTERN STATES WATER COUNCIL

2025

- [Position #531](#) – Regarding Clean Water Act Jurisdiction (4/25/25)
- [Position #530](#) – Supporting Migratory Birds and the Management of State Water Rights and Resources (4/25/25)
- [Position #529](#) – Supporting Renewable Hydropower Development (4/25/25)
- [Position #528](#) – Supporting Rural Water Infrastructure Needs & Projects (4/25/25)
- [Position #527](#) – Regarding the Extension of NPDES Permit Terms (4/25/25)

2024

- [Position #526](#) – Regarding Abandoned Hardrock Mine Cleanup (10/23/24)
- [Position #525](#) – Regarding States' Water Rights and Natural Flows (10/23/24)
- [Position #524](#) – Regarding Bureau of Reclamation Drought Response Program (10/23/24)
- [Position #523](#) – Regarding Drought Preparedness, Prediction and Early Warning Programs (10/23/24)
- [Position #522](#) – Regarding Federal Water and Climate Data Collection and Analysis Programs (10/23/24)
- [Position #521](#) – Supporting State Clean Water Act Section 401 Certification Authority (10/23/24)
- [Position #520](#) – Regarding the Endangered Species and State Water Rights (7/26/24)
- [Position #519](#) – Supporting Water Transfers and NPDES Discharge Permits (7/26/24)
- [Position #518](#) – Supporting Rural Water Supply Project/Infrastructure Needs (7/26/24)
- [Position #517](#) – Regarding State Nutrient Reduction Strategies (7/26/24)
- [Position #516](#) – Supporting the *Dividing the Waters* program for judges (March 14, 2024)
- [Position #515](#) – State Primacy over Groundwater (3/14/24)
- [Position #514](#) – Access to Reliable, Clean Drinking Water for Federally Recognized Indian Tribes (3/14/24)
- [Position #513](#) – Supporting Federal Research on Climate Adaptation (3/14/24)
- [Position #512](#) – Regarding Integrating Water and Energy Planning and Policy (3/14/24)
- [Position #511](#) – Supporting Water Infrastructure Funding (3/14/24)
- [Position #510](#) – Supporting Weather Station Networks (3/14/24)

- [Position #509](#) – Supporting the use of Forecast Informed Reservoir Operations and Innovations (3/14/24)
- [Position #508](#) – Regarding Probable Maximum Precipitation Standards Position (3/14/24)

2023

- [Position #507](#) – Actions Federal Agencies Should Take to Expedite State General Stream Adjudications (9/14/23)
- [Position #506](#) – Asserting State Primacy on Protecting Ground Water Quality (9/14/23)
- [Position #505](#) – Supporting USDA Conservation Programs and Water Resources (9/14/23)
- [Position #504](#) – Supporting Indian Water Rights Settlements (9/14/23)
- [Position #503](#) – Regarding Water-Related Federal Rules, Regulations, Directives, Orders and Policies (5/24/23)
- [Position #502](#) – Supporting the Water Resources Research Institutes and USGS Water Resources Research Act Program (5/24/23)
- [Position #501](#) – Regarding the Reclamation Fund (5/24/23)
- [Position #500](#) – Supporting NOAA Data, Forecasting, and Research Programs (5/24/23)
- [Position #499](#) – Regarding Preemption of State Law in Federal Legislation (5/24/23)
- [Position #498](#) – Supporting National Dam Safety Programs (5/24/23)
- [Position #497](#) – Regarding Rural Water and Wastewater Project/Infrastructure Needs and USDA Programs (5/24/23)
- [Position #496](#) – Regarding the Clean and Drinking Water State Revolving Funds and State and Tribal Assistance Grants (5/24/23)
- [Position #495](#) – Regarding the National Levee Safety Act of 2007 and Levee and Canal Structures (5/24/23)
- [Position #494](#) – Regarding the Transfer of Federal Water and Power Projects and Related Facilities (5/24/23)
- [Position #493](#) – Regarding the Reclamation Safety of Dams Act of 1978 (5/24/23)
- [Position #492](#) – Regarding Bureau of Reclamation Maintenance, Repair and Rehabilitation Needs (5/24/23)
- [Position #491](#) – Supporting Subseasonal to Seasonal Weather Research, Forecasting, and Innovation (5/24/23)
- [Position #490](#) – Regarding Water Quality and Federal Reserved Treaty Rights for Tribes (5/24/23)

2022

- [Position #489](#) – supporting legislation requiring the federal government to pay state filing fees in state general stream adjudications (10/21/22)
- [Position #488](#) – expressing support for implementation of the SECURE Water Act (10/21/22)
- [Position #487](#) – urges the Administration and NASA to enhance focus on research for water resources applications and promote long term engagement with the WSWC (10/21/22)
- [Position #486](#) – related to EPA exercise of authority under Section 404(c) of the Clean Water Act (10/21/22)
- [Position #485](#) – supports Water Research and Development Programs at the Department of Energy National Laboratories (8/5/22)
- [Position #484](#) – regarding Hydraulic Fracturing (8/5/22)
- [Position #483](#) – strengthening the Resiliency of Our Nation to the Impacts of Extreme Weather Events (8/5/22)
- [Position #482](#) – regarding Radio Frequencies Bandwidth (8/5/22)
- [Position #481](#) – regarding Clean Water Act Jurisdiction (4/6/22)
- [Position #480](#) – supporting Migratory Birds and the Management of State Water Rights and Resources (4/6/22)
- [Position #479](#) – supporting Renewable Hydropower Development (4/6/22)
- [Position #478](#) – supporting Rural Water Infrastructure Needs & Projects (4/6/22)

Ms. HAGEMAN. Thank you, Ms. Bushman. I now recognize Mr. Haswell for 5 minutes.

STATEMENT OF JONATHAN HASWELL, CHIEF BUSINESS OFFICER, OCEANWELL LLC, WOODSIDE, CALIFORNIA

Mr. HASWELL. Good morning, Chair Hageman, Ranking Member Hoyle, and members of the Committee. On behalf of OceanWell, thank you for the opportunity to be here today and to discuss advancing water development.

My name is Jonathan Haswell, and I serve as Chief Operating Officer of OceanWell, a water technology company that was born

and bred in California and whose goal is tackling global water scarcity through a novel offshore deep ocean desalination system. I am here today because our innovation offers a scalable, sustainable way to strengthen U.S. water resilience, and presents a modular, faster deploy alternative to traditional resource-intensive infrastructure projects.

In short, technology can and must be part of the modern water scarcity toolkit. Producing abundant, affordable, environmentally-friendly water at scale is now within reach. And perhaps most importantly, with OceanWell, one community's water security no longer must come at another community's expense. Guilt-free water at large scale is now possible.

The challenge of water scarcity is not new, and neither are the limitations of traditional solutions. Traditional forms of desalination have been deployed internationally to bridge water gaps, but at a steep cost. High energy consumption, intensive chemical pre-treatment, marine life mortality, massive land requirements, and the challenge of managing brine discharges, these economic and environmental burdens have historically limited desalination's use within the United States.

OceanWell was founded to fundamentally rethink desalination, and specifically solve for these costs and impact challenges. Like onshore desalination, OceanWell proposes to use reverse osmosis technology to separate salts from seawater. However, rather than operating from the shore, we relocate the process to the deep ocean, approximately 1,500 feet below the surface, where naturally occurring hydrostatic pressure provides the force needed to drive reverse osmosis without energy.

In this aphotic zone of the ocean, where less than 1 percent of sunlight penetrates, the water is colder, cleaner, and near limitless. As a result, we eliminate the need for chemical pre-treatment and avoid the energy costs associated with pumping and pressurization onshore.

OceanWell's modular sub-sea pods each produce 1 million gallons per day of fresh, potable supply, and are engineered for a 30-year life span. This approach delivers water with dramatically lower energy consumption, no marine life mortality, no need for large onshore treatment plants, and a minimal brine discharge impact.

OceanWell's modular nature allows for quick capacity growth to address the needs of an expanding community. By shifting where and how desalination occurs, OceanWell offers a scalable, energy-efficient, and responsible solution.

Recognizing the need to support water-scarce communities in the United States, OceanWell is planning to deploy its first water farm in Southern California, and is projected to deliver approximately 50 million gallons per day of fresh water to the region. To advance this effort we have established a workgroup of 26 California water agencies led by Las Virgenes Municipal Water District.

Water is foundational to every aspect of America's economy and national security. Yet unlike energy or transportation, it is often taken for granted. Most people rarely think about where their water comes from until it is not there. Water security is economic security. It is national security. And it demands the same urgency

and innovation we apply to every other critical infrastructure need and challenge.

A reliable water supply directly strengthens a community's ability to prosper. Moreover, safeguarding water supply strengthens national security by protecting military bases, ports, and disaster-prone regions. Every storm, wildfire and flood elevates the vulnerability of land-based water infrastructure. OceanWell's sub-sea water farms operate below the surface and have a critical layer of protection.

Water resources have historically been overlooked for investment compared to other essential utilities. We are proud to collaborate with public partners such as Las Virgenes Municipal Water District, as well as the Bureau of Reclamation and the Metropolitan Water District of Southern California. We are also fortunate to work with private partners like Kubota Corporation and to participate in Imagine H2O's Global Innovation Ecosystem and the XPRIZE Water Scarcity Challenge, initiatives that recognize and accelerate high-potential solutions for global water supply and resilience.

Layering public and private investment is critical to developing, advancing, and deploying next-generation water technologies at scale. Congress plays an essential role in this effort by incentivizing the development and adoption of innovative water technologies, and by strengthening support for public-private partnerships that can deliver resilient new supplies. OceanWell will continue to work with our public and private partners, and together we can create an affordable, abundant, reliable source of fresh, guilt-free water.

Thank you again for having me today, and for your time and consideration.

[The prepared statement of Mr. Haswell follows:]

PREPARED STATEMENT OF MR. HASWELL, CHIEF OPERATING OFFICER OF OCEANWELL

Good morning, Chair Hageman, Ranking Member Hoyle, and Members of the Committee. On behalf of OceanWell, thank you for the opportunity to be here today to discuss advancing water development.

My name is Jonathan Haswell, and I serve as Chief Operating Officer of OceanWell—a water technology company, that was born and bred in California, and whose goal is tackling global water scarcity through a novel offshore, deep-ocean desalination system.

I'm here today because our innovation offers a scalable, sustainable way to strengthen U.S. water resilience—and presents a modular, fast-to-deploy alternative to traditional resource-intensive infrastructure projects.

In short: technology can—and must—be part of the modern water scarcity toolkit. Producing abundant, affordable, environmentally friendly water at scale is now within reach. And perhaps most importantly, with OceanWell, one community's water security no longer must come at another community's expense. Guilt-free water at large scale is possible.

The Problem—Water Scarcity and the Historical Limits of Desalination

The challenge of water scarcity is not new—and neither are the limitations of traditional solutions. Globally, only about 1% of Earth's water is drinkable, and nearly half the world's population faces water stress today. In the United States, this pressure is felt most acutely in the West, where prolonged droughts, shrinking reservoirs, population growth, and natural disasters have severely strained available supplies.

Traditional forms of desalination have been deployed internationally to bridge water gaps, but at a steep cost: high energy consumption, intensive chemical pretreatment, marine life mortality, massive land requirements, and the persistent

environmental challenge of managing concentrated brine discharges. Traditional plants draw from surface-level seawater—warmer, biologically active, and rich in organic material—requiring expensive, often chemical-heavy treatment to protect membranes and maintain performance. Meanwhile, the need for energy-intensive high-pressure pumps has made desalinated water one of the costliest potable supplies available. These economic and environmental burdens have historically limited desalination's use within the United States. Further, traditional infrastructure is built to address the capacity needs of today and the predicted population of the future, however the numbers do not always pan out exactly as initially calculated and can create an issue if the plant's capacity cannot be altered. OceanWell's modular, scalable nature allows for quick capacity growth to address the needs of an expanding community.

OceanWell was founded to fundamentally rethink desalination and specifically solve for these cost and impact challenges. Like onshore desalination, OceanWell proposes to use reverse osmosis technology to separate salts from freshwater. Rather than operating from the shore, we relocate the process to the deep ocean—approximately 400 meters below the surface—where naturally occurring hydrostatic pressure provides the force needed to drive reverse osmosis without mechanical pumps. In this aphotic zone, where less than 1% of sunlight penetrates, the water is colder, cleaner, and limitless. As a result, we eliminate the need for chemical pretreatment and avoid the energy costs associated with pumping and pressurization onshore. The 40-foot-long OceanWell Pod leverages the naturally occurring hydrostatic pressure of the water column above to drive the reverse osmosis process, limiting the energy use to the conveyance back to shore rather than the treatment.

OceanWell's modular subsea Pods each produce 1 million gallons per day (MGD) of fresh potable supply. Just 50 Pods would be sufficient to meet the entire daily water needs of 100,000 households. This approach delivers cold, clean water with dramatically lower energy consumption, no marine life mortality, no need for a large onshore treatment plant, and minimal brine discharge impacts. Each Pod operates for a 30-year lifespan and anchors securely to the ocean floor with a small environmental footprint.

By shifting where and how desalination occurs, OceanWell offers a scalable, energy-efficient, and responsible solution—exactly the kind of new water supply needed to secure the future of the Western United States.

Partnership with Las Virgenes Municipal Water District

Recognizing the urgent need to support water-scarce communities in the United States, OceanWell is planning to deploy its first Water Farm in Southern California—a region facing some of the nation's most critical water challenges.

To advance this effort, we have established a California work group of 26 California water agencies, led by Las Virgenes Municipal Water District (LVMWD). LVMWD provides potable water, wastewater treatment, recycled water, and biosolids composting services to approximately 75,000 residents across Agoura Hills, Calabasas, Hidden Hills, Westlake Village, and adjacent unincorporated areas of Los Angeles County, spanning a service area of 122 square miles. The broader working group extends across key districts throughout Southern California, representing millions of residents across drought-prone regions.

LVMWD faces significant water supply challenges due to its limited local resources and heavy reliance—approximately 84%—on imported water. Severe droughts, including the 2022 drought that caused a 73% supply shortage, have compounded these risks. Geological and environmental constraints limit ground-water development, making innovative solutions like desalination and advanced water recycling not just desirable, but essential. LVMWD is already pursuing advanced projects such as the Pure Water Project Las Virgenes-Triunfo and is now working to pioneer OceanWell's Water Farm technology.

LVMWD has spearheaded the formation of six Southern California public agencies to advance the first OceanWell Water Farm. In addition to LVMWD, key partner agencies include: Los Angeles Department of Water and Power (LADWP), Calleguas Municipal Water District, Los Angeles County Public Works District 29, Burbank Department of Water and Power, Upper San Gabriel Valley Municipal Water District, and Santa Clarita Valley Water Agency.

The first Water Farm is projected to deliver 57 million gallons per day (MGD) of fresh water to the region—representing a major step forward in drought resilience.

On March 21, 2025, OceanWell and LVMWD successfully deployed a prototype Pod into the Las Virgenes Reservoir, which exceeds 100 feet in depth and holds approximately 9,500 acre-feet of water. The deployment will allow OceanWell to rigorously stress-test its filtration systems under real-world conditions as we advance toward full-scale operations.

Water Security Is Economic and National Security

Water is foundational to every aspect of America's economy and national defense—yet, unlike energy or transportation, it is often taken for granted. Most people rarely think about where their water comes from until it is not there. But the reality is clear: reliable water supplies are under growing pressure, especially across the Western United States.

Las Virgenes Municipal Water District and its coalition partners recognize what many overlook—that securing new, dependable water sources is not just a local responsibility; it is a strategic imperative. Without reliable water, industries stall, agriculture contracts, military readiness is compromised, and communities are left vulnerable. Every sector that drives economic strength—from energy to manufacturing to technology—depends on stable water supplies.

Simply put, water security is economic security. It is national security. And it demands the same urgency and innovation we apply to every other critical infrastructure need and challenge.

A clean, reliable water supply directly strengthens a community's ability to grow—powering industry, agriculture, commerce, and household prosperity. Moreover, safeguarding water supplies strengthens national security by protecting critical infrastructure like military bases, ports, energy producers, manufacturers, mining operations, and disaster-prone regions. Natural disasters already cost the United States the productive use of an average of 4.7 million acres annually from wildfires alone—with most damage concentrated in the West, but risks growing nationwide. Every storm, wildfire, and flood elevates the vulnerability of land-based water infrastructure—and degrades water quality when communities can least afford it.

OceanWell's subsea Water Farms, operating 400 meters below the surface, offer a critical layer of protection. Shielded from surface risks, our water farms deliver secure, reliable supply—strengthening both local economies and America's broader national security.

Water resources have historically been overlooked for investment compared to other essential utilities. OceanWell is working to change that—advancing water supply innovation through strong public-private partnerships and global innovation platforms.

We are proud to collaborate with public partners such as Las Virgenes Municipal Water District, as well as the Department of the Interior's Bureau of Reclamation, and the Metropolitan Water District of Southern California, both of whom have provided key grant support to advance our early development. We are also fortunate to work with private partners like Kubota Corporation, and to participate in Imagine H2O's global innovation ecosystem and the XPRIZE \$119m Water Scarcity Challenge—initiatives that recognize and accelerate high-potential solutions for global water supply and resilience.

Layering public and private investment is critical to developing, advancing, and deploying next-generation water technologies at scale.

Congress plays an essential role in this effort—by incentivizing the development and adoption of innovative water technologies and by strengthening support for public-private partnerships that can deliver resilient new supplies.

Additionally, Congress can further accelerate deployment by streamlining federal permitting processes to make them more efficient, predictable, and aligned with the urgent timelines water-scarce communities face.

Conclusion

One key to strengthening and diversifying water supplies is protected, scalable sub-sea technology that will produce clean, cold water without causing harm to the ocean. This innovative system will continue to advance water security and thereby add to the strength of our economic and national security. To accomplish this, OceanWell will continue to work with our public and private partners including LVMWD and the U.S. Government. Together, we can create an affordable, abundant, reliable source of fresh guilt-free water.

Thank you again for having me today and for your time and consideration. I welcome your questions.

Ms. HAGEMAN. Thank you, Mr. Haswell, very interesting. I have actually been talking about this for quite some time. It is imperative that we increase the water supply in California, and I think that this has great promise. So thank you.

Mr. HASWELL. Thank you.

Ms. HAGEMAN. And I now recognize Mr. Sigl for 5 minutes.

Am I saying your name correctly?

Mr. SIGL. Yes, that is great.

**STATEMENT OF PATRICK SIGL, DIRECTOR OF WATER AND
NATURAL RESOURCES LAW, SALT RIVER PROJECT, PHOENIX,
ARIZONA**

Mr. SIGL. Thank you very much, and good morning, Chair Hageman, Ranking Member Hoyle, and members of the Subcommittee, my name is Patrick Sigl, and I am the Director of Water and Natural Resources Law at the Salt River Project. Thank you for the opportunity to testify today to provide SRP's perspective on advancing Federal water and hydropower development.

SRP is responsible for the care, operation, and maintenance of the Salt River Federal Reclamation Project in central Arizona, one of the Nation's first Reclamation projects built under the Reclamation Act of 1902. SRP has a 120-year history of collaborating with the United States and regional partners to develop reliable and affordable water and power resources for our growing communities in the desert Southwest. Our accomplishments over the years are the legacy of the early visionaries, including President Theodore Roosevelt and congressional leaders who championed the passage of the Reclamation Act for the purpose of developing communities and economies in the Western United States.

SRP was formed in 1903 by a group of farmers who put their land up for collateral to contract with the United States to pay back the cost of the construction of Roosevelt Dam. Shortly after the United States finished building Roosevelt Dam, Secretary of the Interior Franklin Lane turned over operations to these local farmers. Secretary Lane was a visionary who recognized the value of delegating management decisions and operations to local interests who are most familiar with on-the-ground project conditions. He also provided the association with the financial resources through the power revenues to get the job done.

Currently, SRP manages seven dams and reservoirs which can store approximately 2.3 million acre-feet of water. SRP is the largest raw water provider in the Phoenix metropolitan area, delivering about 800,000 acre-feet annually to our shareholders and contractors. SRP is the largest not-for-profit, community-based public power provider in the country, with a nameplate generation capacity of approximately 15,000 megawatts, including a portfolio of sources including hydropower, natural gas, baseload coal, nuclear, geothermal, solar, wind, and batteries, serving electricity to nearly 3 million people.

The project was built to address water and power challenges in the extreme desert environment, where precipitation can vary from year to year, and summer temperatures often exceed 110 degrees Fahrenheit. The next 100 years are expected to bring even greater demands for water and power to the valley. SRP, through continued collaboration with the United States and regional partners, is developing multiple additions to the Reclamation project to meet

these challenges for the next century. I would like to highlight a couple of those projects for you today.

First, on the power side, our increased energy demand is driven in part by rapid expansion of large energy customers such as data centers and advanced manufacturing facilities. SRP is exploring opportunities to use pumped storage hydropower to make intermittent and low-cost renewable resources such as solar more reliable. The project would act as a large battery and allow SRP to use power generation during the day to pump water to the upper reservoir and then release the water in the afternoon and evenings to generate hydropower to meet peak loads. SRP is uniquely situated with the topography and water supply to support the project. The resource could provide up to 2,000 megawatts of power for 10 hours, enough for up to 500,000 homes.

On the water supply side, over the next 100 years the Verde River watershed is expected to experience increased precipitation variability, resulting in less frequent but greater inflows into Bartlett and Horseshoe Reservoirs. Currently, these reservoirs lack the capacity to fully capture flood flows off the watershed, in part due to the loss of about 50,000 acre-feet of storage capacity due to sediment accumulation since they were built in the 1930s and 1940s.

In response, SRP, Reclamation, and a group of 23 water providers are partnering to complete a Federal feasibility study to analyze options to address these challenges. Through the Verde Reservoir Sediment Mitigation Project, the partners are studying the feasibility of, among other options, enlarging Bartlett Dam and Reservoir, which could more than double existing capacity, adding 350,000 acre-feet of storage capacity, enough to support 1 million American homes.

In conclusion, SRP has a long history of collaborating with the United States and regional partners to develop reliable and affordable water and power resources to serve our growing communities in the desert Southwest. Such collaboration has produced numerous accomplishments over the decades. The support of Congress, Federal agencies, and regional partners will be key to meeting the challenges of the next century and to continue to fulfill the aspirations of the early visionaries of the Reclamation program to build strong and resilient communities.

Thank you, Chair Hageman, Ranking Member Hoyle, and members of the Subcommittee for the opportunity to testify today. I look forward to answering any questions you may have.

[The prepared statement of Mr. Sigl follows:]

PREPARED STATEMENT OF MR. PATRICK B. SIGL, DIRECTOR WATER AND NATURAL
RESOURCES LAW, SALT RIVER PROJECT

Chairman Hageman, Ranking Member Hoyle and members of the Subcommittee, my name is Patrick Sigl and I am the Director of Water and Natural Resources Law at the Salt River Project (SRP). Thank you for the opportunity to testify today to provide SRP's perspective on advancing federal water and hydropower development. SRP is responsible for the care, operation, and maintenance of the Salt River Federal Reclamation Project in Central Arizona (Reclamation Project), one of the Nation's First reclamation projects authorized and constructed under the Reclamation Act of 1902. SRP has a long history of collaborating with the United States and regional partners to develop reliable and cost-effective water and power resources to our flourishing communities in the desert Southwest. SRP is the third largest not-

for-profit community based public power entity in the country, providing reliable, affordable, and sustainable electricity to nearly 3,000,000 people in Arizona. SRP is also the largest raw water provider in the Phoenix Metropolitan area. These accomplishments are the legacy of the early visionaries including President Theodore Roosevelt and Congressional leaders, including those on this Committee, who championed the passage of the Reclamation Act for the purpose of developing communities in the arid western United States.

I. The Salt River Project: The First 120 years

A. Introduction

The Salt and Verde Rivers presented significant reliability challenges to Salt River Valley farmers in the 1890's. These challenges centered around inconsistent weather patterns, periods of drought, followed by flashy floods, followed again by drought. An abundance of snowmelt and precipitation in the spring could inundate crops and destroy diversion works. A subsequent dry period resulted in water shortages when water was most needed for irrigation. These early Salt River Valley irrigators, along with other western farmers, sought assistance from Congress through the establishment of a Reclamation Program to build water storage infrastructure, so water could be stored when the system produced it, and used when it was needed.

Recognizing the need, Congress authorized the Secretary of the Interior (Secretary) to construct the Salt River Federal Reclamation Project as one of the first projects under the Reclamation Act of June 17, 1902. The Salt River Valley Water Users' Association (Association), an Arizona Territorial corporation, was organized by landowners in the Salt River Valley to contract with the federal government for the construction of Theodore Roosevelt Dam on the Salt River, located some 80 miles northeast of Phoenix. In 1903, the United States Government approved the Salt River reclamation project and agreed to finance and build Roosevelt Dam for the Salt River Valley landowners. The dam would create storage of water for irrigation of the Salt River Valley lands. In exchange for pledging their land as collateral for the federal loans to construct Roosevelt Dam, which loans have long since been fully repaid, the Salt River Valley landowners received the right to water stored behind the dam. The scope of the project was expanded by acquiring the Arizona Water Company's canal system and constructing the Granite Reef Diversion Dam below the confluence of the Verde and Salt rivers. This provided a complete water delivery system from Roosevelt Dam to the Salt River Valley farmlands.

Shortly after passing the Reclamation Act, Congress continued to refine the authorities for reclamation projects to ensure their success. In 1906, Congress enacted the Townsite Act that authorized the Secretary to contract for the sale or lease of power generated by federal reclamation projects. The receipts from the power contracts would be deposited in the reclamation fund and credited toward the repayment of the project from which the power was generated. Then, in 1914, Congress amended the Reclamation Act to authorize the Secretary to transfer to a local water users' association the care, operation, and maintenance of all or any part of a federal reclamation project works, subject to rules and regulations prescribed by the Secretary.

Under the direction of Secretary Franklin Lane, the United States used these authorities to execute an agreement with the Association dated September 6, 1917 (the 1917 Agreement), wherein the United States turned over and vested in the Association the authority over and responsibility for the care, operation and maintenance of the Reclamation Project, including the water storage reservoirs and water delivery system, all water rights and power privileges, and the right to receive all income from such power privileges arising from its operation of the Reclamation Project. Through the 1917 Agreement, the United States also conveyed to the Association its standing authorities under the 1902 Reclamation Act, the 1906 Townsite Act and the 1914 Reclamation Extension Act to construct additional Reclamation Project works, at its own cost, so long as such works do not impair or diminish project efficiency, project adequacy or project purposes. The United States continues to hold title to all Reclamation Project facilities and maintains a supervisory role and regulatory authority over those facilities.

Secretary Lane was a forward-thinking visionary who recognized the value of delegating the decision making and implementation of operations and maintenance of the Reclamation Project to local interests, who are most familiar with on-the-ground Project conditions and can best and most expeditiously make management and financial decisions. The Reclamation Act already provided those landowners with the foundation for constructing the infrastructure and acquiring and utilizing the water rights. Secretary Lane took the revolutionary step of providing land-

owners with the financial tools to succeed, namely the power revenues. Using the authorities provided to it under the 1917 Agreement, including the authority to add water and power facilities to the Reclamation Project at its own cost, and without the consent of the government, SRP was empowered to manage both water and power resources for the benefit of its shareholders, the Salt River Valley, and Arizona more broadly.

To meet the water demands of Association shareholders and other entities, SRP conjunctively manages six dams and reservoirs on the Salt and Verde Rivers in the Gila River Basin, one dam and reservoir on East Clear Creek in the Little Colorado River Basin, and 1,300 miles of canals, laterals, ditches and pipelines to deliver water to approximately 400 square miles of land in the greater Phoenix area. The dam and reservoir system can store approximately 2.3 million acre-feet of water runoff from the Salt and Verde River and East Clear creek systems, making SRP the largest raw water provider in the Phoenix Metropolitan area. The Association also operates over 270 wells located within Reservoir District boundaries to develop underground water supplies for the benefit of its shareholders.

Currently, SRP reservoirs supply water to more than 2 million people in the cities of Phoenix, Mesa, Chandler, Tempe, Glendale, Gilbert, Scottsdale, Tolleson, Peoria, and Avondale. SRP reservoirs also provide water to irrigate agricultural lands, and for other uses within the SRRD. In addition, SRP delivers water stored in Reclamation Project reservoirs to the Salt River Pima-Maricopa Indian Community (SRPMIC), Fort McDowell Yavapai Nation (FMYN), and Gila River Indian Community (GRIC) under the terms of their respective water rights settlement agreements. Additional users of the reservoir water are Buckeye Irrigation Company, Roosevelt Irrigation District, Roosevelt Water Conservation District, and others.

Over the last 120 years, SRP grew not only to be the largest raw water provider in Central Arizona, but developed a public power utility to provide reliable, affordable, and sustainable power. In 1937, the Salt River Project Agricultural Improvement and Power District (District) was organized under Arizona law for the purpose, in part, of financially supporting the Association. The District assumed the obligations of the 1917 Agreement pursuant to a 1937 contract between District and the Association. The District and the Association continue to collaboratively operate the Reclamation Project with the District leading on electrical energy generation, transmission and distribution. Through the District, SRP has become the third largest not-for-profit community based public power utility in the country providing electricity to nearly 3 million people in Arizona. SRP has a diverse energy portfolio that includes nuclear, solar, wind, natural gas, battery storage, coal, geothermal, and hydropower.

B. Construction of Reclamation Project Reservoirs and Hydroelectric Power Generating Facilities

The United States, through the Reclamation Service (the predecessor of the Bureau of Reclamation (Reclamation)) and SRP collaborated to develop the Reclamation Project water storage reservoirs and associated hydroelectric power facilities. These hydroelectric power facilities were the cornerstone of SRP's energy portfolio and served the power needs of the Phoenix metropolitan area and beyond. Roosevelt Dam is located at the confluence of Tonto Creek and the Salt River about 80 miles northeast of Phoenix in Gila and Maricopa counties. Construction of Roosevelt Dam, the first in the Reclamation Project and the largest masonry dam in the world, began in 1903 and concluded in 1911. Water was first stored behind the dam in 1910. In addition to water storage, the project included a hydroelectric plant, transmission lines, groundwater pumping stations, two concrete diversion dams, over a hundred miles of roads, two miles of tunnels, bridges, buildings, levees, telephone lines, and many miles of Valley canals purchased from private companies.

The generation of hydroelectric power made possible by the completion of Roosevelt Dam was critical to the continued viability and success of the Reclamation Project. As the 1917 Agreement had contemplated, hydropower was the first and most essential tool developed by the Association to meet its repayment obligations to the government. And the Association's development of hydropower was crucial to the economic development and viability of the Salt River Valley more generally. Between 1900 and 1910, Phoenix's population doubled to 11,000 residents. The Valley's urban center continued to develop commercially. Copper mines, newspapers, laundries, hotels, flour mills, meat packers, machine and lumber companies, processing plants, and other businesses associated with agriculture continued to locate in the Valley. All required electrical power. Accordingly, the Association looked to expand the Project's hydroelectric power generation capacity.

In 1922, C.C. Cragin, Chief Engineer of the Association, and others completed a detailed study, titled, "Report on Proposed Additional Hydro-Electric Power

Development of the Salt River” (the Cragin Report). Among other recommendations, the Cragin Report proposed that the Association build a series of dams below Roosevelt to be used for hydroelectric power production. Following the recommendations of the Cragin Report, and pursuant to the authority conferred on SRP to fund and construct additional Project works under the 1917 Agreement, SRP built three additional dams in the 1920s on the Salt River below Roosevelt Dam—Mormon Flat Dam (Canyon Lake), Horse Mesa Dam (Apache Lake), and Stewart Mountain Dam (Saguaro Lake). These dams increased the water supply available to SRP and, as envisioned by the Cragin Report, provided additional hydropower production.

In response to increasing power demands in the late 1960s and early 1970s, SRP made a significant investment to expand and upgrade these Salt River reservoir hydropower generation facilities. Beginning in the early 1940s, the Association realized that twenty-five cycle electrical power (compared to sixty cycle) was becoming obsolete. Twenty-five cycle power produced a perceptible flicker in lighting and cost the consumer more in electrical equipment. In response, SRP implemented its Hydro Expansion and Frequency Unification Project (HEFU) from 1969 to 1973. Through the HEFU Project, SRP, at its own cost, upgraded the Mormon Flat, Roosevelt, and Horse Mesa generation facilities to sixty cycle electrical power and installed pump back hydroelectric power. These upgrades increased the hydroelectric capabilities by providing a more dependable power load.

In addition to the Salt River, the Secretary withdrew land from the public domain along the Verde River in 1903 and 1904 for the purpose of constructing irrigation facilities for SRP. Using this withdrawn land, Bartlett Dam was constructed in the 1930s and Horseshoe Dam, upstream from Bartlett, was completed early in 1946. Both dams represent a commitment by the Reclamation Project to develop water supplies for use by both SRP shareholders and non-SRP shareholders, including the Salt River Pima Maricopa Indian Community, the City of Phoenix, and regional mining interests. Another dam, C.C. Cragin Dam and Reservoir, was added to the system Reclamation Project by the Arizona Water Settlements Act of 2004 (Public Law 108-451). C.C. Cragin Reservoir is located on upper East Clear Creek in the Little Colorado River watershed and has a capacity of 15,000 AF. Water stored in C.C. Cragin Reservoir is pumped over the Mogollon Rim into the East Verde River. Since the completion of the dams, SRP’s reservoirs have continuously provided water and hydropower for use by Association shareholders and contractors in the Salt River Valley.

Roosevelt remains the cornerstone of SRP’s storage system. The storage capacity in Roosevelt (1,653,043 AF) represents 71 percent of the total SRP surface water storage. As originally constructed, Roosevelt Dam was 280 feet high and had a water storage capacity of 1,284,205 AF. Capacity slightly increased and decreased over time as the spillway was modified and silt accumulated. As part of the United States work to complete the Central Arizona Project, from 1989 through early 1996, Reclamation undertook a \$430 million modification, raising Roosevelt Dam 77 feet in elevation and creating three distinct storage pools. The modification increased the water conservation storage capacity by 20%, added 556,000 AF of dedicated flood control space (FCS), and 1,220,000 AF of Safety of Dams (SOD) surcharge capacity to address dam safety concerns. The new conservation space was dedicated to storage capacity for regional cities who appropriated water rights under state law to use outside the Reservoir District boundaries.

Raising Roosevelt Dam also necessitated a key environmental compliance commitment by SRP. Once construction of Roosevelt Dam was complete, environmental conservation groups raised concerns that SRP’s operations of the modified reservoir were impacting threatened and endangered species protected under the Endangered Species Act (ESA). In response, SRP worked with the U.S. Fish and Wildlife Service (FWS) to develop a habitat conservation plan and received an incidental take permit under Section 10 of the ESA to mitigate the impacts of reservoir operation and maintenance activities on protected species. Section 10 of the ESA provides nonfederal actors with the legal means of avoiding unauthorized “take” of listed species while implementing protective species conservation measures. Pursuant to the 1917 Agreement, SRP, a nonfederal entity, is vested with the authority and responsibility for care, operation and maintenance of the Reclamation Project works, including project reservoirs. In approving SRP’s Roosevelt Habitat Conservation Plan and issuing the associated incidental take permit, the FWS and Reclamation both recognized that SRP was responsible for Roosevelt operations and, ultimately, for species effects, including “take”, associated with those operations. SRP also obtained such ESA Section 10 “take” coverage for its operations and maintenance activities for the Verde River Reservoirs.

II. Salt River Project Today and through the Next 100 Years

SRP and other reclamation projects were built to provide reliable water and power resources in arid areas of the United States—but the need for such resources is more profound today than it was in 1902 when Congress created the Reclamation program. The visionary C.C. Cragin Plan that SRP implemented in the 1920s enabled SRP to develop the hydroelectric power resources that led to the success of the Reclamation Project over the last century. Development of water storage infrastructure on the system helped meet demand for SRP’s shareholders and regional partners. The next 100 years are anticipated to bring even greater demands for water and power in the Salt River Valley. SRP, in collaboration with the United States and regional partners, is developing multiple infrastructure projects to meet these challenges for the next century.

A. Salt River Pumped Storage Project

SRP’s power resource challenges are significant. SRP’s system is located within the Western Interconnection where current resource plans—including SRP’s own Integrated System Plan—forecast unprecedented load growth over the next decade, driven in part by rapid expansion of large energy customers, such as data centers and advanced manufacturing facilities. Temperatures in SRP’s service area routinely exceed 110° F in the summer. These conditions produce SRP’s highest annual system demand. For instance, last year SRP set a new system peak record, over 8,200 MW on August 4, 2024. SRP’s peak demand is expected to grow to nearly 8,500 MW for the upcoming summer 2025 and to more than 11,000 MWs by the summer of 2030. To meet these demands, SRP is making transformative changes to its power generation resource portfolios and its capacity to store energy for long periods of time. Pumped-storage hydroelectricity is such a resource, providing 10+ hours of energy storage by moving water between two reservoirs at different elevations.

Pumped-storage hydro generation allows water to be pumped by hydropower turbines from a lower reservoir during times when power supplies are in excess and stored for later use. When power demand is high, the water is released from the upper reservoir through hydropower turbines on its way back to the lower reservoir, thereby generating electricity. Pumped storage facilities act as large batteries, taking advantage of excess power, water supplies, and elevation differences to meet peak demand. SRP is uniquely situated to use its water and infrastructure resources to take advantage of an abundant local natural resource—sunshine—to meet its increasing power demands.

The proposed Salt River Pumped Storage Project would expand SRP’s current hydroelectric generation capacity by adding a new upper reservoir to pair with Apache Lake, in eastern Arizona, as an existing lower reservoir. The upper reservoir and associated power generation infrastructure, including powerhouse, tunnels, and transmission facilities could provide up to 2000 MWs of long duration energy storage, enough power for up to nearly 500,000 homes. The long asset life of 100 years, low degree of major replacement and upgrades over the course of its useful life, and the relatively low operating and maintenance costs (taking advantage of low-cost solar power), combined with operating flexibility for supporting grid reliability, make pumped storage a compelling option to add to SRP’s resource portfolio.

Developing additional pumped storage technology brings the Salt River Project full circle. The purpose of the Reclamation Act was to develop infrastructure to make water supplies from western river systems more reliable—i.e. store water when mother nature provides it for later use when its needed. Pumped Storage technology fulfills the same purpose for power resources—i.e. such technology allows the operator to store power when mother nature provides it through sunshine and wind for later use when its needed. The technology to meet those two purposes, over 100 years apart, is the same, and SRP is uniquely situated to deploy it.

B. Verde Reservoirs Sediment Mitigation Project

Over the next one hundred years, the Verde River watershed is expected to experience increased precipitation variability and higher temperatures resulting in less frequent but greater inflow volumes into Bartlett and Horseshoe reservoirs (Verde River reservoirs). Currently, the Verde River reservoirs are undersized in capacity to fully capture flood flows off the Verde River watershed. In 2023, SRP had to release water from Bartlett as the reservoir reached capacity due to heavy winter precipitation in the Verde watershed. The water SRP released from the Verde River reservoirs during that period could have supplied over 1 million households with water for an entire year. In addition to the changing precipitation regime, SRP must contend with the sediment impact of over eight decades of Verde River reservoirs operation. In flows from the Verde River watershed carry significant sediment loads

that have accumulated in the reservoirs reducing the maximum water conservation capacity (by approximately a 36,000 acre-feet (AF) in Horseshoe Reservoir and approximately 15,000 AF in Bartlett). These impacts will continue in the future.

The reduction in inflow frequency and loss of Verde River reservoirs' storage capacity create challenges for SRP to manage these water supplies for central Arizona. The carryover storage capacity in SRP's reservoirs will be critical to successfully adapting water management practices to prepare for the future. Recognizing this, SRP, along with a group of 23 water providers, including tribal, agricultural, and municipal organizations, have partnered with Reclamation to explore solutions through a federal feasibility study, the Verde Reservoirs Sediment Mitigation Project (VRSMP). The purpose of the VRSMP is to study the feasibility of increasing surface water yield from the Verde River reservoir system by, in part, constructing an enlarged Bartlett Dam and Reservoir that would restore lost storage capacity from sediment accumulation at Horseshoe Reservoir and provide additional, new storage space. The feasibility study is also examining approaches for mitigating future reservoir sediment accumulation. The VRSMP, if approved by the Congress at the conclusion of the study, would aid significantly in ensuring future water supply resiliency for the region.

An expanded Bartlett Dam and Reservoir is one proposed alternative that will be evaluated through the feasibility study. The enlarged Bartlett Reservoir would increase the current total water storage capacity on the Verde River by about 350,000 AF, enough to support an additional 1 million Arizona homes, and more than double existing capacity.

Central Arizona water users primarily rely on surface water from the Salt, Verde, and lower Colorado rivers, groundwater, and treated effluent. Changes or variations in the availability of lower Colorado River water supplies and groundwater resulting from, among other things, extended drought highlight the need for maintaining the resiliency of the water supplies from the Verde River. Constructing a larger storage facility on the Verde River would benefit Arizona water users through the provision of additional water supplies, where dam safety, flood control, recreation, fish, and wildlife are potential incidental benefits.

C. SRP-CAP Interconnection Facility

SRP and CAP, along with 12 municipal water providers, are exploring the potential for an interconnection project that would allow non-SRP shareholder water stored in Reclamation Project reservoirs and underground storage facilities to be transported into the Central Arizona Project canal and delivered to water users outside the Salt River Reservoir District. The proposed SRP-CAP Interconnection Facility (SCIF) would mirror the existing interconnection between the CAP and SRP systems that enables CAP water to be transported into SRP's canal system for delivery. The SCIF would permit certain non-SRP shareholder supplies to be transported into the CAP canal and enable innovative exchange opportunities with downstream CAP water users. The proposed interconnection would also enable strategic recharge and direct delivery opportunities for SRP generating stations located in Pinal County.

The SCIF would increase the use of existing infrastructure, including the CAP, and provide additional flexibility for coordinated operations between two of the largest water providers in the state. Above all, the facility provides resiliency for municipal providers in central Arizona during periods of severe shortage in the Colorado River basin.

D. Planned Deviation to the Modified Roosevelt Water Control Manual

Expected increased temperatures and higher precipitation variability on the Salt and Verde River watersheds—resulting in drier dry periods and wetter wet periods. Successful water management of these watersheds will require that operations of existing water infrastructure to be adaptable to changing drought and precipitation patterns to meet the water resource needs of Central Arizona.

When the United States raised Roosevelt Dam on the Reclamation Project in the mid-1990s, 24 feet of the dam raise was dedicated to flood control under the Flood Control Act of 1944 under the jurisdiction of the U.S. Army Corps of Engineers (USACE). SRP, USACE, and Reclamation developed an agreement and water control plan in 1996 where SRP agreed to evacuate water entering the flood control space within 20 days of it entering such space to protect downstream lands and infrastructure from flooding. Such agreement allowed for future planned deviations from the water control plan.

As a water management measure, SRP, along with other water users on the Salt River, sought such a planned deviation to evacuate the water over a longer time period, while maintaining the safety of Roosevelt Dam and downstream

communities. In June, 2024, the USACE approved SRP's proposal to temporarily extend the amount of time SRP must evacuate water from a portion of the Flood Control Space from 20 days to 120 days. The plan, which would authorize the temporary extension to occur once a year for three out of the next five years, will allow farms and communities downstream to use the water and reduce releases of flood water from Roosevelt Dam into the normally dry Salt River. The Plan could allow SRP to deliver up to 109,000 acre-feet per year in those 3 years to water users that have rights to such water and could support about 330,000 households in the Phoenix metropolitan area for a year. The supplies made available during flood periods will help reduce groundwater use and supplement supplies for communities impacted by Colorado River shortages.

The USACE and Reclamation determined the plan would have no adverse impact on the safety of Roosevelt Dam or downstream communities. The proposal is the result of a collaborative effort between SRP, Reclamation, USACE, FWS, the Forest Service, and a consortium of local cities, tribes, and agricultural districts. Over the five-year period, SRP and partners will review the value of the revised operation to determine if requesting a permanent change to flood operations is warranted.

III. Conclusion

SRP has a long history of collaborating with the United States and regional partners to develop reliable and cost-effective water and power resources for our growing communities in the desert Southwest. Such collaboration has resulted in numerous accomplishments over the decades. The challenges ahead are significant. SRP is located in one of the hottest and driest parts of the United States. Our community is fortunate to have a robust economy that drives growth and demand for water and power. The support of Congress, the federal agencies, and regional partners will be key to meet the challenges of the next century which will include collaborating to develop new water and power infrastructure. Based on Federal workforce resources and capabilities, it would be very helpful to empower SRP to timely proceed with development, including design, construction, environmental and cultural reviews and permitting. We look forward to meeting the expectations set by the early visionaries of the Reclamation program to build strong and resilient communities.

QUESTIONS SUBMITTED FOR THE RECORD TO PATRICK SIGL, DIRECTOR OF WATER AND
NATURAL RESOURCES LAW, SALT RIVER PROJECT

Questions Submitted by Representative Maloy

Question 1. Can you explain the importance of maintaining and enhancing Glen Canyon Dam generation to SRP?

Answer. Dear Congresswoman Maloy: Thank you for your service on the House Natural Resources Subcommittee on Water, Wildlife and Fisheries and for your question following the April 30, 2025, "Advancing Federal Water and Hydropower Development: A Stakeholder Perspective" hearing. We appreciate the opportunity to provide Salt River Project's (SRP) perspective and elaborate on the importance of maintaining and enhancing Glen Canyon Dam hydropower generation.

SRP receives hydropower from Glen Canyon Dam under two agreements. First, SRP holds a preference power contract under the Colorado River Storage Project Act of 1956 (CRSP Act). In addition, SRP is entitled to hydropower generated at Glen Canyon Dam under a power exchange agreement with the Western Area Power Authority (WAPA). In the 1960s, SRP and Reclamation collaborated on an innovative power exchange agreement that helped SRP meet increasing power demands in the Salt River Valley and Reclamation to meet power delivery responsibilities under the CRSP Act. Congress enacted the CRSP Act to authorize construction of a series of dams, reservoirs, and hydroelectric power plants to store water and generate hydropower for use across the Upper Colorado River Basin (Colorado, New Mexico, Utah, and Wyoming). Reclamation was responsible for constructing the reservoirs and electric transmission systems to deliver the electricity to the intended beneficiaries. Under the exchange, SRP, in collaboration with other utilities, built power generation facilities in Colorado and New Mexico to deliver power to intended CRSP Project beneficiaries in exchange for receiving hydropower generated at Glen Canyon Dam. The innovative exchange saved Reclamation the expense of building additional power transmission systems in the Upper Basin to serve CRSP Project beneficiaries. Congress established WAPA in 1977 which took over implementation of the exchange with SRP. Under these

authorities, SRP is entitled to 350 MW of hydropower directly from Glen Canyon Dam and over 600 MW pending the availability of transmission capacity. SRP is one of over 170 entities that receive hydropower from facilities constructed under the CRSP Act, including Glen Canyon Dam. These entities include electric cooperatives, municipalities, irrigation districts, publicly owned facilities, state and federal agencies, and tribes.

Hydropower generation from Glen Canyon Dam is an important resource for SRP to meet summer peak capacity, a key driver of SRP resource needs. SRP's system is located within the Western Interconnection where current resource plans—including SRP's own Integrated System Plan—forecast unprecedented load growth over the next decade, driven in part by rapid expansion of large energy customers, such as data centers and advanced manufacturing facilities. Temperatures in SRP's service area routinely exceed 110°F in the summer. These conditions produce SRP's highest annual system demand. For instance, last year SRP set a new system peak record, over 8,200 MW on August 4, 2024. SRP's peak demand is expected to grow to nearly 8,500 MW for the upcoming summer 2025 and to more than 11,000 MWs by the summer of 2030. Without maintaining and enhancing the Glen Canyon hydropower resource, there is a risk that the power exchange resources could become stranded in Colorado, resulting in significant reliability and financial risks to more than 3 million SRP customers in central Arizona.

Glen Canyon hydropower also plays an integral role in grid reliability. Hydrogeneration is one of the system's most reliable power sources, with the least exposure to non-policy availability disruptions, including weather events, fuels disruption, and auxiliary system issues. Particularly in high-demand times of the year, hydropower from Glen Canyon can also materially influence regional power market dynamics, and any decrease or absence thereof may challenge SRP and others to procure adequate capacity for emergency system needs, at significant added expense, on the day-ahead or real-time markets. Hydropower generation at Glen Canyon Dam is a clean and renewable dispatchable resource that reliably generates power during these difficult hours. Moreover, Glen Canyon hydropower complements the increasing amount of solar generation on the system as it produces energy in the critical late afternoon and evening hours when solar generation fades. Such dispatchability is critical to preserve during Glen Canyon Dam bypass operations. There is a cost to SRP customers during any such curtailments, but even more importantly, the risk to grid reliability greatly increases during these critical hours.

Concurrently, the generation resource needs of SRP and the western power grid at large are increasing at an extraordinary rate, and the grid currently lacks surplus capacity due to load growth, resource retirements, and delays in replacement resources created by supply chain and other challenges. Arizona and the Desert Southwest continue to attract and support emerging industries vital to national security and self-sufficiency, including domestic semiconductor manufacturing, data centers, and critical mineral resources, largely due to its reputation for power grid reliability. Glen Canyon Dam hydrogeneration is part of a diverse and dynamic regional power portfolio that will allow the United States to maintain its strategic edge in the 21st century.

SRP appreciates continued Congressional efforts to support the pragmatic balancing of Glen Canyon hydrogeneration with compliance needs for sensitive fish species downstream, displayed in H.R. 1001 and reflected in the Basin Fund Preservation Act (S. 887) cosponsored by Senators Lee and Curtis. Interior's ability to strike a well-informed balance and mitigate associated impacts to Glen Canyon hydropower and the Upper Colorado River Basin Fund is vitally important. The Glen Canyon Dam Adaptive Management Program makes recommendations to the Interior Secretary, who retains decision-making authority for experimental dam releases; the stated goal of Glen Canyon's Long-Term Experimental and Management Plan (LTEMP) relating to the hydropower resource is to "maintain or increase Glen Canyon Dam electric energy generation . . . to the greatest extent practicable."¹ It is vitally important that the United States maintains and enhances hydropower generation at Glen Canyon Dam, both for SRP and the broader region.

Thank you again for the opportunity to participate in this hearing and provide insights into this important matter. Please reach out to me if you desire any further information.

¹Record of Decision for the Glen Canyon Dam Long-Term Experimental and Management Plan, Final Environmental Impact Statement, Attachment A: Objectives and Resource Goals of the LTEMP, Page A-2.

Ms. HAGEMAN. Thank you. I would encourage you to look at the pathfinder enlargement that was done several years ago, in order to reclaim the capacity lost to sedimentation there. I believe it was 56,000 acre-feet that was reclaimed just by increasing the height of that dam. So there are definitely some other projects out there where that has worked.

I want to thank all of the witnesses for your testimony, and I will now recognize members for 5 minutes each for questioning. I am going to begin with myself.

Mr. Webb, as you can imagine, I want to talk to you about what is going on in our area. And in your testimony you highlighted the importance of the Columbia River System as an energy source in the Pacific Northwest. One specific issue you raise is the debate around the Lower Snake River dams. Last Congress many of our members were involved in oversight efforts to push back on the Biden administration's efforts to undermine this important resource. What can Congress do as we move forward to ensure that these dams are protected?

Mr. WEBB. Thank you, Chair, and Congress is the key. You guys hold the keys to whether or not dams are removed. You authorize dams being put in. So nothing can be done unless it is authorized by Congress. So our hope is that Congress will be on our side and we won't tear out dams. It is critical that we hang together and we do that.

We can support salmon, and that is very important to me, but we can also have the dams and electricity, and both can co-exist.

Ms. HAGEMAN. I would imagine that Spain, Portugal, and France really wish they had hydropower backup right now in light of what has been demonstrated this week with the fallacy of wind and solar. So I agree with you about the importance of these resources.

You also referenced the 2020 biological opinion that was completed in President Trump's first term, which concluded that breaching these four dams was not an option, and noted that the dams are managed to benefit fish populations in the basin. Can you share your perspective on how this existing infrastructure and salmon populations can co-exist?

Mr. WEBB. They can, and a lot is done to protect the salmon. The most important probably is the flow regime. So water is released—or we call it spill—to allow the small smelt to get down the river and make the trip quicker. And a higher survival technology is used for weirs and for the blades to make them more fish friendly, ladders are there. So significant investments been made to protect the salmon. And like I mentioned, the runs, especially this last year, are threefold what they were before the dam.

So we are having success. There is more we need to do, but we also need to focus on the non-dam-related issues with salmon like the predators, like the ocean conditions. And so there is a lot that we need to look to, but we are very committed to protect the salmon. That is very important to us.

Ms. HAGEMAN. OK. Thank you, Mr. Webb.

And Mr. Haswell, I was fascinated to look at the information that you are providing. I think that this has great promise to be able to meet the demand of the State of California. California has the same water infrastructure in place today with 40 million people

as it had in the 1960s with 16 million people. It is clear that the leadership out there has failed to provide the water infrastructure necessary to meet the demand of those citizens.

And we know that demand for water and power resources is expected to surge in the coming years. In fact, we demand more electricity every day than we did the day before. We need more energy every single day than we need the day than we needed the day before. And we know that there are new technologies and new approaches that are available, and they are going to be key to meeting that demand. Can you talk about the opportunity that new technologies like OceanWell can help increase water reliability across the West?

Mr. HASWELL. Certainly. Thank you for the question.

OceanWell is able to generate a new source supply that comes from the ocean, comes from regions not currently tapped, and which avoid a lot of the challenges of drought, drought resilience and the other hazards that prevent existing supplies. It is modular, scalable. Nature also means that we can expand the volume and production that comes from a water farm, as we describe it, as demands prevail and increase for those given communities.

Ms. HAGEMAN. Are you doing a pilot project right now?

Mr. HASWELL. We are. We are doing a pilot project in Las Virgenes Municipal Water District, actually in an inland body of water in their reservoir. And the reason for that is simply that that water is dirtier, and so a more taxing test on our intake systems and our self-cleaning systems.

Ms. HAGEMAN. I would love to come and visit that. I would like to see that.

Mr. HASWELL. We would love to host you.

Ms. HAGEMAN. Thank you. And you mentioned in your testimony that Congress could further support public-private partnerships like yours by streamlining the Federal permitting processes. Can you expand on the importance of permitting reform to solving some of these issues?

Mr. HASWELL. Absolutely. We have permitting experts within our organization. I would love to have them supplement our testimony to speak specifically to that.

But as a general point, ensuring anything, any programs that envisage traditional desalination also envisage and factor for new technologies, and specifically deep ocean desalination, would be enormously helpful for our ability to bring this technology on stream and provide new supplies.

Ms. HAGEMAN. Well, I am out of time for my questioning. We definitely will follow up in terms of working with you on this permitting reform. It is a priority of Chairman Westerman's. It is a priority of many of the people on this Committee. I think it is critical to the future of being able to provide water and energy to the citizens of this country. So thank you.

The Chair now recognizes Mr. Huffman for 5 minutes of questioning.

Mr. HUFFMAN. Thank you, Madam Chair, and I appreciate the fact that several of our witnesses got us into a really interesting conversation about innovation and how that can lead us forward in places like California, especially. I appreciated the witness from

Salt River talking about the pump storage and other innovative strategies you have been pursuing and your leadership there.

And we have got some things that we can disagree about Lower Snake River and other matters, but I want to talk with you, Mr. Haswell, about this intriguing technology that you are working on, because I have been working on desalination and the challenges to cost-effective, scalable desal for a long time, going back to my time in the California legislature. And I remember many years ago working with Long Beach on using maybe offshore drilling platforms, especially as they were decommissioned, but as the infrastructure for something exactly like what you are talking about, going down far enough that the hydrostatic pressure would solve the energy challenge of desal, 40 percent of the cost. That would be fantastic if we could do that at scale.

And the technology that you showed us and talked about seems pretty exciting. But I have seen so many of these things come and go, and never quite make it out of the valley of death. Tell me why yours might be an exception to that.

And I noted in your testimony that public-private partnerships including with Las Virgenes and some of the others you have mentioned, but also the Bureau of Reclamation and some grant funding from the Federal Government, which I presume came from the historic Western water infrastructure investments we put in place a few years ago. Talk about why that is really important for your ability to make it out of the valley of death.

Mr. HASWELL. Thank you, Congressman, for that question.

In one word, collaboration. We recognize the technical challenges, which over the last 7 years we have worked pretty hard to answer the challenges of conventional desalination. But we have also engaged all stakeholders very early on. About 4 years ago we started a fairly extensive outreach program to surface any questions, challenges, or issues of deploying this technology. And so far we have been met with a generally positive response that this solves the needs that conventional desalination may not always meet, and so is a viable new pathway.

Mr. HUFFMAN. Does your technology use, like, abandoned rigs or things like that, or do you have your own standalone infrastructure?

Mr. HASWELL. So the intention is to build our own standalone infrastructure in what we describe as a water farm. There is a possibility to use pre-existing infrastructure, especially insofar as there may be pre-existing shore crossings or sub-sea electrical systems that are already at distance to depth. Those we look at on a case-by-case basis.

Mr. HUFFMAN. Could you use offshore wind infrastructure, for example?

Mr. HASWELL. Potentially.

Mr. HUFFMAN. They are floating on the West Coast, I know, so it is complicated.

Mr. HASWELL. Yes, there is a technical challenge in that windmills or turbines are at the surface. We are 1,500 feet below, so you need a dynamic umbilical. But it is solvable by engineering. So conceivably, yes.

Mr. HUFFMAN. Fifteen hundred feet is the point at which you have got the hydrostatic pressure you need?

Mr. HASWELL. That is correct.

Mr. HUFFMAN. I assume it is a very low volume intake, so entrainment and impingement would not be an issue?

Mr. HASWELL. Correct. We have an entire subsystem which makes up a large amount of our intellectual property, which is labeled our LifeSafe crossflow intake, which is tasked entirely with bringing in water without damage to the marine environment.

Mr. HUFFMAN. Have you done any studies on sort of the outfall side at the top? It looked like in your technology, the brine concentration.

Mr. HASWELL. The design of the system has been informed by what we call low recovery brine outfall targets, so a conventional desalination system will target a recovery rate of fresh potable water at 50 percent. Ours is 15 percent, and the reason for that is because we exist where we do in the deep ocean, we have unlimited free source water and pressure, so we don't need to optimize for recovery rates. We can optimize for minimal brine impact, and so our outfall is slightly a benign brine, in essence.

Mr. HUFFMAN. Super interesting. I would love to learn more about it, and I appreciate your testimony.

I yield back.

Mr. HASWELL. Thank you for your question.

Ms. HAGEMAN. Thank you, and the Chair now recognizes Mr. McClintock for 5 minutes of questioning.

Mr. MCCLINTOCK. Thank you, Madam Chairman.

In 1959 the California legislature passed the Burns-Porter Act. It included a water bond of \$1.75 billion. Inflation adjusted, that would be about \$19 billion in today's dollars. And with that we built 10 storage dams, 11 auxiliary dams that store 7 million acre-feet of water and generate 3,000 megawatts of electricity. And with what was left over we built the entire California Aqueduct.

Now, since 2000 California voters have approved not \$19 billion of water bonds, but \$37 billion of water bonds, all promising to enhance California's water supply. And yet not a single major reservoir of over a million acre-feet has been constructed in California. One of the most water-abundant regions of our country now suffers from chronic water shortages, even in years of record rainfall. In fact, water bonds approved by voters with the promise they would be used for new water storage have instead been used to tear down existing dams.

Now, I listened to the Ranking Member's comments about the need to invest in bureaucracy. Not once did he mention the need to build new reservoirs and aqueducts, because, of course, he and his cohorts have blocked their construction in California for decades.

Merely completing the Shasta Dam would mean another 9 million acre-feet of water storage. Completion of the abandoned Auburn Dam would mean another 2.3 million acre-feet of water storage, 800 megawatts of hydroelectric power, 400-year flood protection for the Sacramento Delta, and a major new recreational lake serving the entire region. But the Ranking Member has instead proposed withdrawing Federal authorization for that dam.

Now, you add the Sites, Temperance Flats, Los Vaqueros, that would add several million acre-feet more of additional water storage. In the case of Temperance Flats, additional flood control that is desperately needed for the Central Valley.

Mr. Webb, isn't it obvious that our now chronic water shortages in the West are not because of a shortage of water, or a shortage of money, or a shortage of dam sites? So what is the problem?

Mr. WEBB. Well, thank you. And I think it is a matter of being innovative and making the right investments. Everything we do has an environmental impact, but we have to balance that with making new investments.

In our small cooperative, we have tried to do things. We put in our own facility on a dam that was existing on a creek, and we produce power there now. We are actively trying to, on another Federal dam, install hydroelectric there. But I think it is a matter of investment, being innovative.

Mr. MCCLINTOCK. But investment that makes sense.

Mr. WEBB. Yes.

Mr. MCCLINTOCK. That actually stores additional water.

Mr. Sigl, what are your thoughts? Is this a shortage of money, dam sites, or water, or is it a shortage of political will to build the kind of projects that we rely upon still today for our water supply?

Mr. SIGL. No, thank you for the question. And the Salt River Project, we have been developing infrastructure and water for 120 years in hydropower. And it has been a commitment of both the Federal Government, the Salt River Project as the local operator, and various regional partners all along the way. So I think you are right, making those common-sense investments, having the will to proceed with them, analyzing the environmental risks that go with them in the modern era are very important for all of us to collaborate as we meet these challenges in the future.

Mr. MCCLINTOCK. Ultimately, doesn't this come down to a question of abundance and shortage, and that the politicians who have had their way over our water policy for the last generation have deliberately chosen shortage?

Mr. WEBB. Again, I think there is different perspectives in the different regions that you look at. I know, from the Salt River Project's perspective, we have been able to develop the infrastructure over the years. And as I highlighted in my testimony, we are working on raising Bartlett Dam.

Mr. MCCLINTOCK. You haven't had to deal with the kind of lunacy in public policy that we just heard from the Ranking Member.

Do you think it would be helpful to streamline the process for new dam construction, put the Bureau of Reclamation in charge of all Federal permitting agencies, require the permitting process to run concurrently, not consecutively, and put a 2-year time limit on that process?

Mr. WEBB. If you are referring to some of the amendments in the Fiscal Responsibility Act to NEPA, yes, we are very supportive of those. We have got several NEPA processes that we are embarking on. Typically, on our reclamation project, Reclamation is the lead agency, and I think some of those streamlining effects will be very helpful as we proceed with our projects.

Mr. MCCLINTOCK. I see my time has expired. Thank you.

Ms. HAGEMAN. Thank you, Mr. McClintock, and the Chair now recognizes Ms. Hoyle, the Ranking Member, for 5 minutes of questioning.

Ms. HOYLE. Thank you, Madam Chair.

First of all, Mr. Sigl, I was very happy to hear you talk about the opportunities that we have with pumped storage for energy production. Our local and international plumbers and pipefitters unions are really leaning in on this. These are good jobs. It is clean energy. And it is, again, the type of public-private partnership and innovation that we should be investing in. So thank you for that.

For Ms. Bushman, the Bureau of Reclamation, the power marketing administrations, and NOAA are essential for providing water to communities, keeping the power grid reliable, and forecasting weather conditions across the West which are critical for our farmers, for our fishermen, and certainly for wildfire management. How has staffing and funding instability affected their ability to deliver on these vital services, from your perspective?

And what long-term challenges could these disruptions create for maintaining critical public services across the West?

I know what I have heard in my town halls from my local fishermen and foresters and Tribes, but from your perspective.

Ms. BUSHMAN. Thank you.

Our States are still at the beginning of this experience. So I think that, as the experience goes on, that the problems are going to be compounded. Initially, a lot of these programs and offices are run on shoestring budgets, as it is. A lot of them are understaffed. And reducing the staffing and closing the local offices is going to decrease their ability to engage with the States and provide the data that is needed in order to make decisions both in terms of seasonal droughts, as well as disaster responses for wildfires and other issues.

Ms. HOYLE. Yes, the biggest thing we are concerned about is disaster response. And again, our fishermen put their lives on the line when they go out. And if they don't have access to what kind of weather is going to be happening, people die. And we feed the world from the West Coast, our fishermen feed the world. And we need to do whatever we can to get them the data to be safe.

Mr. Webb, you talked about BPA. And as we both pointed out, BPA is funded by ratepayers. Now, I know what we have seen in Oregon, literally leaving us with one lineman in central Oregon who would not be able to handle any kind of a disaster or downed power line because you need two linemen for that type of energy. And again, you cannot say that this is about government efficiency or saving taxpayer dollars because we pay for that, as ratepayers. So what have you seen with cuts to BPA's staffing, and what do you think the effects of that are going to be long term?

Mr. WEBB. I personally had a project that I had been working on to partner with BPA that would save BPA about \$300 million a year. The key staff that was working with me, top staff, they took the early retirement, basically put my project on hold or possibly killed it. And we were trying to partner to save BPA money and reduce their cost and better serve us. So just an example of how

we need the employees there, we need their staff, and it is critical to what they do for us.

Ms. HOYLE. And again, this does nothing to bring down the national debt because this is not taxpayer dollars, it is ratepayer dollars. And in your case it actually will cost our ratepayers more, correct?

Mr. WEBB. Yes, that would be correct if my project would have been able to be built.

Ms. HOYLE. Right, then it would have saved ratepayer dollars. Thank you.

I think we should all want government efficiency. And anyone that thinks that there aren't savings or efficiencies to have in government isn't paying attention. However, when we make these across-the-board cuts and gut agencies without looking at which staff are actually critical, when we stop projects right in the middle of them happening, when we are making cuts that really don't make any sense for what DOGE is supposed to be doing, there has got to be a different agenda or just utter incompetence.

But either way, I am glad that you spoke up, and it should be a bipartisan issue—because our rural communities are affected most—to ensure that we ratepayers have, again, government investment and operations that work for all the ratepayers across all of these States. And thank you.

Ms. HAGEMAN. The Chair now recognizes Mr. Bentz for 5 minutes of questioning.

Mr. BENTZ. Thank you, Madam Chair.

So Mr. Webb, the remarks you were making about the Snake River dams are of great interest to me. And so perhaps you can share with everyone—you made reference to NMFS's report, which appears to be made up of whole cloth and ignoring the 5-year exercise and putting together the BiOp that emerged not long ago. Can you share with us your thoughts on where that standard that is in that NMFS document—the so-called abundant fish standard, I guess you would call it—any idea where that came from, and what it was based upon?

Mr. WEBB. Thank you, sir. And I am just a lowly cooperative manager, but in my opinion on both sides it seems like we try to find the science that tells us what we want to hear, not just be independent and give the truth. So I think it is searching to answer questions and keep looking until you get the answer you want, I guess, would be my opinion.

Mr. BENTZ. It would seem to me that, in preparing for the hearing that this Committee held up in Kennewick, I think, we had some 400 or 500 people attend. And all of them, it appeared to me, were opposed to removing the dams and opposed to the types of structure that were being debated.

One of the concepts that came up in a memo—I am not sure how valid it is—was that the dams wouldn't be removed, they would simply be regulated out of power generation. Is that rumor still floating about, that a Federal judge might say: you don't have to take the dams out because that would require, well, Congress, but make it that you have to let the water run through the dams, we can do that administratively. Is that concept still out there?

Mr. WEBB. That is still out there, and that is one of our worries. We don't want to make them uneconomical or unusable, so that is still out there. And hopefully, that won't happen.

Mr. BENTZ. One of the concepts that came up with a biologist that has studied the river for many, many years was that there is about 50 percent mortality in the fish making their way from the top of the drainages down to the ocean. And then, when the 50 percent that remained went into the ocean, about 1 percent came back. And so the question in my mind had been, well, why in the world aren't we focusing on what is going on in the ocean to try to figure out how to further reduce mortality?

Because my understanding is the billions, literally, of dollars that we put into those dams have reduced dramatically the impact they have had upon the movement of fish. I think he was using the river up in Canada, has no dams on it, and it too had the 50 percent mortality on the way to the ocean. Your thoughts on that? What have you guys done, if anything, as I have done, because I have met personally with NMFS and said, "You need to start focusing on the ocean" What do you folks think should be done in that space?

Mr. WEBB. Yes, I think on the rivers we have done everything we can. We have invested. Like I said, 25 percent of our monthly bill goes to fish mitigation. I agree with you that the focus needs to be on the ocean, the conditions there, on the predators that eat the fish coming in and out of the ocean into the river, and we need to focus there.

And so we need to really study what is causing the decline in the ocean, and that is where the losses are.

Mr. BENTZ. And to go back again, the thought had been if you could reduce the loss before the fish get to the ocean from 50 percent to, let's say 40 percent, that would still mean you would still get, like, 1 percent back. So it just seemed to make so little sense for us to continue to throw those billions of dollars into reforming or refitting or tearing dams out and throwing them away, when in point of fact you are not going to improve significantly the returns of fish. Why is this argument so panned by environmental organizations?

Mr. WEBB. I don't know. It seems to me we should all work together, focus on the big threats which would be the ocean, and try to find solutions to that. I would agree with you.

Mr. BENTZ. Yes, we all agree. But thank goodness at this particular point my understanding is that steps are being taken to reverse some of the steps that were being taken to spend another half a billion dollars on various alternative power generation. And in anticipation of removing the dams, I am hopeful that is going to go away and we can shift our investments to a more productive purpose.

But thank you all for being here, and I yield back.

Ms. HAGEMAN. Thank you. The Chair now recognizes Mr. Gray from California.

Mr. GRAY. Thank you, Madam Chair and Ranking Member, for holding this hearing, and thank you to the witnesses for your participation here today.

Some of my colleagues have spoken about the landmark legislation that provided hundreds of millions of dollars, frankly for water infrastructure and storage in the San Joaquin Valley, which I represent, the heartland of California and the largest agricultural valley in the world. We specifically have a \$500 million allocation for San Luis Reservoir, which is currently, I think, paused by the Trump administration. Hopefully, we are going to see some change there and be able to move forward with both upgrading the facility there and new construction.

There are opportunities up and down the valley in California to develop additional water and power projects necessary to increase drought resilience and meet growing demand for power across my district. Affordable, clean power, by the way, that we should develop a lot more of on the West Coast. This includes some investments in major traditional above-ground storage like Sites Reservoir, which is a product of the bipartisan water bond that we did when I was in the State legislature. I was a co-author of the effort, and it will be the first major reservoir built in California in half a century.

The Federal Government has a responsibility—I want to underscore that—in helping to fund these type of projects. And I think some of the efforts back here in Washington to cap the Federal cost share and other things that have gone on are inappropriate. We probably need to look at those and re-examine them. I would hope that my colleagues across the aisle would join me in those efforts. But I welcome and support efforts that would bring us new water and hydropower development.

But it is also crucial that we make sure that protecting existing projects that can continue to deliver both affordable water but also energy, and my understanding is in the next 10 years we are going to see nearly 300 hydropower projects that will need re-licensing by FERC, and those projects will expire.

I continue to hear constantly about hydropower projects being held up by Federal agencies imposing fish passage and species protections, as well as, in some cases, using this bureaucratic process to leverage more water out of the existing systems in tandem with State regulation causes hydropower owners and electric customers to address issues way beyond the actual effects of the project. It both increases the cost of energy, but also limits the availability of water, which is critical when you are feeding the world out of California. Two-thirds of the fresh fruits and vegetables come out of our valley. We do more dairy in one county of the five counties I represent than entire States in this country. So for those that don't appreciate the magnitude and the scope of California agriculture this is absolutely a critical issue.

So Mr. Webb, what impacts can regulatory uncertainty have on production and management of hydropower facilities?

And what actions could this Committee take to streamline these processes and avoid these inappropriate two bites at the apple opportunities that State agencies as well as Federal agencies are taking on these facilities as it relates to both water and power?

Mr. WEBB. Thank you, sir, for the question.

And I am involved in a re-license project right now for a small project that we built in 1942—I wasn't there, but in 1942—and this

is our third license. It takes about 5 years, and each time there are things added, like you mentioned, that devalue the project. We are asked to do things that don't actually have anything to do with the project. We are required to do expensive studies that on a small project is a big bite. It really adds to the cost.

So I think streamlining things, if we could be more focused on the impacts of that project and not other things in the surrounding area, looking at it as a deep pocket that, hey, if you are going to re-license this, we want you to do these other things. I think it needs to be focused on the project and streamlined, and it is very lengthy and it is very costly.

Mr. GRAY. I appreciate that, thank you.

Madam Chair, I hope to work with colleagues on both sides of the aisle to find solutions that bring certainty to the operators during this process, ultimately delivering water and generating hydropower. We need to find these workable solutions with the Federal agencies and stop this double dipping and really streamline the process. So I appreciate the time today.

I want to close by just saying both the Tuolumne River and the Merced River in my district are currently engaged in discussions with State of California, trying to find a path forward through a negotiated process on water. And what is happening with these hydropower projects is having a really detrimental effect to the availability of water to the farms that really need it. So I appreciate the Committee's consideration in this hearing today.

And I will yield back the rest of my time.

Ms. HAGEMAN. Well, I appreciate that.

We have a couple of other folks who are trying to get here, and we have got a lot of Committee hearings and markups going on today, which is why you are seeing people come in and out. There is a couple of points that I think are well worth making in light of our discussion and in light of the importance of this issue.

Mr. Gray, I want to thank you for your comments and your efforts to try to streamline this.

We are going to do a second round of questioning, just because we are waiting for the next folks to come in here.

So Mr. Gray, you will have an opportunity, if you want to, after I have taken my time here.

It seems to me, Mr. Webb, that these agencies are attempting to impose what I would describe as unconstitutional conditions. In other words, they cannot condition approval of a permit or a project based upon requiring you to do something that is unrelated to that project or that is not part of the necessity of that project. So I would encourage you to look into that.

I also cannot understand why existing projects are not already considered part of the baseline, and why every 5 to 10 years or 25 years we are having to go back in and entirely redo our permitting process. That makes absolutely no sense to me.

A good friend of mine who used to be on this Committee from California, John, used to say that we could be either champions of abundance or lords of scarcity. I am tired of the lords of scarcity. I am tired of the people who believe that we have to try to find some way to prevent us from building, operating, and using these

resources that we have. And that is why it was important to have all of you in here today.

Mr. Sigl, in your testimony you talked about the importance of the timeliness of these environmental reviews and efficient permitting. Do you have any thoughts on specific steps that Congress could take to improve the Federal permitting process?

And I am going to ask every one of you that same question.

Mr. SIGL. Thank you very much for the question, Chair.

And we have been operating the Reclamation project over many, many years prior to the National Environmental Policy Act, the Endangered Species Act, and Clean Water Act. And we have adapted to that under the Endangered Species Act, in particular. We have sought out incidental take permits and habitat conservation plans for our operations. There is plenty of opportunity, I think, to streamline the regulatory process in developing and operating these projects. And we want to work closely with anybody, including you in this Committee, to help work through those.

Ms. HAGEMAN. Well, if you have those ideas, we would ask you to get them to us because we are very interested.

Ms. Bushman, what could we do? What are your ideas for streamlining the permitting process so we can actually build hard infrastructure?

I am not talking about endless studies. I am not talking about going out and studying the smelt for the seventeen-thousandth time. I am talking about what do we do to streamline the permitting process so we can build infrastructure to meet the demands of the citizens of this country.

Ms. BUSHMAN. One thing we can do is have our Federal agencies work closely together with our State agencies so that that environmental review that is required on both sides can happen at the same time and be coordinated. That doesn't always work because they have different requirements. Sometimes State legislatures have required certain things, and the Federal agencies have to meet certain Federal mandates, as well.

But to the extent that we can coordinate those so that you only have to do the same environmental review once, and do it early, coordinate early rather than having States tacked on as an afterthought, would streamline that and speed up that process significantly.

Ms. HAGEMAN. I like that idea. Don't you agree that California needs to build additional water infrastructure to meet the demands of its citizens and agriculture?

Ms. BUSHMAN. Yes, we are dealing with less water, and when water comes it comes with more intensity. And the only way to manage that in the West is with greater infrastructure.

Ms. HAGEMAN. I don't think we are dealing with less water. We have had obstruction for so long to building infrastructure that we are making a lot of excuses for this. But we need to build the infrastructure to meet these demands. Don't you agree?

Ms. BUSHMAN. Agreed.

Ms. HAGEMAN. OK, Mr. Webb, what do you think we could do to streamline this process?

Mr. WEBB. Well, my perspective is, obviously, from a small project, two small projects. But it seems like if we knew ahead of

time what the clear requirements were, but it seems like personal agendas and mission creep come into play, and so it is kind of a moving target. So from my perspective on our small projects, being very clear up front what is required would help us.

Ms. HAGEMAN. OK. Are they still on the way? I think that they should be here any minute.

Mr. Gray, if you have additional questioning, why don't we go ahead and go with you?

Mr. GRAY. Well, I appreciate that. I am going to pick up where I left off, talking about the Tuolumne River, specifically. I am going to highlight this because we can have real win-win situations when Federal agencies work constructively with operators. And in the case of the Tuolumne River, the Modesto and Turlock Irrigation Districts worked with the Fish and Wildlife Service during their FERC re-licensing process to develop a plan accelerating \$80 million in habitat and other improvements that will benefit wildlife species and ensure that Don Pedro Reservoir can continue to deliver reliable water and power supply.

We have other examples with floodplain restoration projects in California. We did about \$50 million of those projects in the last 5 years out of the State legislature. Of course, I am going to underscore again the point, Madam Chair, that the Federal Government could pick up the tab on a major investment in that space, as well. And I think if we take an all-of-the-above approach, we could actually really move the needle on the available water in California for both habitat and for farming communities.

But I want to open the question up again on how do we ensure Federal agencies work with operators so existing hydropower infrastructure can continue to operate? And I heard a comment that the coordination between the State and the Federal agencies could be improved, or could be an opportunity. But it also can be a hindrance because, in some cases, these agencies are using a duplicative process to get two bites at the apple for more water out of a certain project or making the voluntary agreement or the negotiated agreement unattainable.

So I certainly want to hear how we ensure the Federal agencies work with the operators and with locals, but we avoid these duplicative requirements, I guess. What can the Federal Government do to ensure that we don't have that situation?

Ms. BUSHMAN. Is that for me?

Mr. GRAY. It certainly can be.

[Laughter.]

Ms. BUSHMAN. OK.

Mr. GRAY. That is an all-takers question.

Ms. BUSHMAN. I would say that there is room for improvement on both the Federal and the State side. I think that often the States are tacked on as an afterthought, and then they have to do their environmental reviews that are required by their State legislatures. In doing that, some of that does become duplicative. And it doesn't have to be that way. That is going to require some federalism engagement. That means the State agencies and the Federal agencies are going to have to work together and improve that process.

So there is that room for improvement. We haven't really engaged in that up to this point, so encouraging that, and Congress may have a role in encouraging that opportunity, but also ensuring that the environmental reviews that we are doing are relevant to the projects that need to be done.

Mr. GRAY. I would certainly like to see Congress encourage that, and I will say one other example, somewhat unrelated, but related. Different States categorize hydroelectricity as clean and renewable power, and other States don't.

And there might be a role for some Federal leadership, Madam Chair, in trying to establish that as a Federal goal across the board in all States, because I think these projects are invaluable both for the cheap and affordable energy, as well as the important delivery of our water resources.

I yield back my time.

Ms. HAGEMAN. Thank you. The Chair now recognizes Mr. Crank for 5 minutes of questioning.

Mr. CRANK. Thank you, Madam Chair, and I apologize. I had to preside over the House. And as usual, they have us doing 40 things here at one time.

Water infrastructure maintained by Reclamation and local operators, from storage facilities to canals to hydropower, provides critical benefit to all types of water users, from agriculture, municipalities, and recreation. And for example, Reclamation is the second largest producer of hydroelectric power in the country, owning 77 facilities and directly operating 53 of them, and that generates 15,000 megawatts of power that benefit Coloradans and others across the West.

Of course, aging infrastructure is a growing challenge for communities, and many of these assets are now well beyond their original life expectancy. The 2024 State of the Infrastructure Report from the Army Corps and Reclamation found "Dams built over 50 years ago are operating at reduced capacity to comply with current safety design and construction standards." And then the report says, "Water storage capacity in some reservoirs has decreased due to sediment accumulation, reducing both water supply and power generation. Pipes that have been in service for 25 to 60 years are starting to fail." And we have gone from decades of build, build, build to decades of maintain, maintain, maintain, and now we are at a turning point. And Congress needs to begin planning how to replace aging infrastructure efficiently and responsibly.

But here is the problem: Dumping billions of dollars into Reclamation or other agencies alone isn't enough because projects still face slow, outdated, and often duplicative Federal permitting processes. Streamlining permitting is key. It is not just about faster projects; it is about unleashing not only American energy, but American infrastructure.

And I want to thank the Chairwoman for making the point on how important permitting reform really is.

In your testimony you noted that SRP's integrated system plan anticipates significant load growth on the grid in the coming decade, with a record peak last August of 8,200 megawatts. We also know that energy demand is projected to surge across the U.S. in

the years ahead. Given this outlook, how important is it that we continue investing in hydropower, including the upgrades SRP is pursuing, Mr. Sigl?

Mr. SIGL. Well, thank you for the question, Congressman. As you noted, our integrated system plan projected various load growths that we could anticipate, and it seems like what we are experiencing is the highest load growth in our service area.

Hydropower is very important. As I noted in my testimony, we are talking about a pumped storage project to make some renewable sources more reliable.

I think everybody on the planet has to look at what resources that they have available and develop them as fully as possible to meet their purposes, and that is an opportunity for us.

We have sort of an all-of-the-above approach to meeting our electricity demand. Even increasing from a pipeline capacity to support some of the natural gas plants that we are going to need in the future is also important for us.

But hydropower is an important component. And interestingly, it was what got us in the power business in the first place. The original Roosevelt Dam had hydropower generators on it, and then we constructed three additional dams for the purpose of producing more hydropower on the project. And that was our early experience, and now it is almost like we are going full circle to develop more hydropower on the Salt River Project.

Mr. CRANK. Well, thank you. And as this Committee continues examining aging infrastructure and water issues across the West, I want to point out the Transportation and Infrastructure Committee already operates on a 2-year cycle to authorize Army Corps projects, and it is time that this Committee explores a more regular, predictable path for authorizing Reclamation projects so we can begin to address this backlog in needs for Western communities.

And finally, I would just say Colorado is in kind of a unique place, my home State. We don't have rivers that flow into Colorado. All of our rivers flow out of Colorado. So if we don't build storage, we are in particularly tough shape.

Thank you, Madam Chair.

Ms. HAGEMAN. Thank you, and the Chair now recognizes Mr. Soto for 5 minutes of questioning.

Mr. SOTO. Thank you so much.

With the extreme weather, it really makes some of this stuff tricky. We on the East Coast in Florida have hurricanes but even a drought right now. Hopefully not for long. We are getting into our rain season in Florida, but we even see up the East Coast drought conditions in what is otherwise a very ample water supply area.

We saw in the Infrastructure Act, as well as in the IRA, there was \$15 billion in Western water funding to help improve supply, even as we are working on trying to maintain hydropower as a critical part of our renewable portfolio.

Ms. Bushman, how do you think it is going so far with the \$15 billion allocation and the work being done out West?

Ms. BUSHMAN. I can't speak to that directly because I don't know where each and every one of those dollars is going. But I do know

that there have been improvements in the recent past to our infrastructure. But there is a long way to go. Just with the Federal dams alone, there is \$50 billion worth of safety needs that need to be addressed, and that \$15 billion is a small drop in that bucket. But it is significant and it is helpful, and we do need that infrastructure in order to manage our water in the West.

Mr. SOTO. Now, we see a possibility of the funds being rescinded through a reconciliation package coming up. What do you think that would mean for Western water supply?

Ms. BUSHMAN. The need still exists. It doesn't go away.

Mr. SOTO. I wanted to pose a question to the whole council. We are seeing tariffs now in place that are affecting a lot of equipment, both in telecommunications, the hearing I was just at, and in electrical equipment. It would be great to hear from each of you whether it is affecting you all or not, or what do you expect over the next couple of months. And we will start with Mr. Webb, Mr. Haswell, then Mr. Sigl.

Mr. WEBB. Yes, well, we have seen the lead time on a lot of our equipment—transformers, wire, other things—has been pushed out a little bit, so we have to do a little bit better planning when we are looking at projects, to make sure the equipment is going to be here on time. And so I think it does make the supply chain a little bit stretched. But yes, that would just be my perspective.

Mr. SOTO. Sure. Mr. Haswell, what are you seeing?

Mr. HASWELL. So far, no direct impacts. We have sufficient time in our construction roadmap to adjust. But there may be impacts for our sub-sea electrical systems, but that is the only area on our horizon right now.

Mr. SOTO. OK. Mr. Sigl?

Mr. SIGL. Yes, the projects that I mentioned that we are working on developing are still in the development stage, so we haven't really gotten into the supply chain aspect yet.

Mr. SOTO. My next question is we see as negative growth this first quarter, unfortunately, something we are hoping to see turn around. But if not, we could be in a recession over the next 3 months. It would be great to know. Are you seeing any pullback in investment?

We will start with Mr. Webb, and then we will go across again.

Are you seeing any pullback, Mr. Webb, in access to capital?

Mr. WEBB. In our area, we are a small electric cooperative and natural gas cooperative, and we have not seen a pullback, and our area continues to grow. And so we haven't seen the impact.

Mr. SOTO. Ms. Bushman, have you seen in your area any pullback in investment so far?

Ms. BUSHMAN. I don't know about pullback in investments, but there are matching programs that are State and Federal and the State matches there, and the Federal has been pulling back in terms of grants or financing, other forms of financial assistance. And so that money is still there waiting, and the projects have been postponed until that funding appears again.

Mr. SOTO. Mr. Haswell, have you seen any difference in access to capital lately?

Mr. HASWELL. Zero at this point. The capital that we access, certainly in the private sector, tends to think in decades. So the quarter-to-quarter fluctuations have no impact.

Mr. SOTO. OK. And Mr. Sigl?

Mr. SIGL. I am not aware of any.

Mr. SOTO. OK. Thank you so much, and I yield back.

Ms. HAGEMAN. Thank you. And again, I want to thank the witnesses for your valuable testimony and the members for their questions.

The members of the Committee may have some additional questions for the witnesses, and we will ask for you to respond to those in writing.

And as I indicated a moment ago, if you have ideas in which we can streamline permitting, please provide those to the Committee so that we can start acting upon them.

Under Committee rule 3, members of the Committee must submit questions to the Subcommittee clerk by 5 p.m. Eastern on Monday, May 5. The hearing record will be held open for 10 business days for these responses.

Without objection, the Subcommittee stands adjourned.

[Whereupon, at 11:33 a.m., the Subcommittee was adjourned.]

[ADDITIONAL MATERIALS SUBMITTED FOR THE RECORD]

Submissions for the Record by Rep. Bentz

PREPARED STATEMENT OF MICHAEL PURDIE, DIRECTOR OF REGULATORY AFFAIRS AND MARKETS, ON BEHALF OF THE NATIONAL HYDROPOWER ASSOCIATION

Chairwoman Hageman, Ranking Member Hoyle, and Members of the Subcommittee—thank you for hosting this hearing. On behalf of the National Hydropower Association, I appreciate the opportunity to supplement the record with written testimony.

Hydropower and pumped storage are uniquely situated technologies to ensure a reliable electric grid for the 21st century. Hydropower technologies not only function as baseload resources, but they're also capable of being dispatched up and down to meet the needs of the grid. Grid operators also rely on hydropower technologies provide essential grid services such as frequency control and spinning reserves. Finally, if the grid suffers a major outage as we just saw in Spain and Portugal, hydropower provides 40% of the black start capability in the United States. No other technology provides all these services in an emission-free manner. Not only does hydropower provide all of these services, communities rely on hydropower infrastructure for recreation, food control, irrigation, and navigation.

Therefore, it is imperative that we improve the permitting process in the United States to not only maintain the existing feet of resources but expand our base. The need to do so exists today. We cannot wait.

Approximately half of the feet is regulated by the Federal Energy Regulatory Commission (FERC) and the other half is owned by the federal government (Tennessee Valley Authority, U.S. Army Corps of Engineers, and U.S. Bureau of Reclamation) with much of it marketed by the four Power Marketing Administrations. Currently, there are nearly 200 applications for new or original licenses at the FERC. There are approximately 50,000 MWs for new resources either in the FERC licensing process or those who have received preliminary permits. These applications go through a review process that spreads across 11 different agencies and can take nearly a decade to review after they're fled at the FERC.

The federal feet is also threatened by those entities who advocate for removal of dam infrastructure even though those facilities provide unique benefits to the grid and their communities. Between protecting communities in the Tennessee valley during Hurricane Helene in the fall of 2024 or ensuring the lights stay on in the Pacific Northwest during Martin Luther King Jr. weekend in 2024, the federal feet continues to serve its communities with low-cost hydropower.

On behalf of the hydropower industry, I suggest the following reforms at the Departments of Interior, Commerce, etc. to improve the standing of hydropower in the United States.

- Pass H.R. 1897—ESA Amendments Act of 2025.
- Modify the Federal Power Act (FPA) to ensure that mandatory conditions submitted under FPA Section 4(e) (16 U.S.C. § 797(e)) are limited to provisions that mitigate future, direct effects of the project and balance all uses of federal lands that occur over the license term.
- Reform the FPA to ensure that fishway prescriptions under FPA Section 18 (16 U.S.C. § 811) are justified through a cost-benefit analysis, that demonstrates direct, substantial, and quantifiable improvements to fish populations, and are limited to provisions that mitigate future, direct effects of the project occurring over the license term.
- Improve the trial-type hearing process by establishing that the Secretary concerned bears the burden of proof by a preponderance of the evidence for any condition or prescription fled with FERC by the Secretary concerned or their designee under FPA sections 4(e), 18, or 33 (16 U.S.C. § 823d); and establishing that a Secretary concerned shall not include in their submission of modified conditions or fishway prescriptions any new requirement that was absent in their preliminary prescriptions.

These simple, yet important process improvements would ensure that the licensing process for hydropower, where the Secretaries of Interior, Commerce, Agriculture, or Army are involved, is materially enhanced. I urge Congress to take up and pass these important reforms so that we can ensure hydropower and pumped storage can enable American energy dominance now and into the future.

Submissions for the Record by Rep. Hoyle**American Whitewater
Springfield, OR**

April 30, 2025

Hon. Harriet Hageman, Chair
Hon. Val Hoyle, Ranking Member
House Natural Resources Committee
Subcommittee on Water, Wildlife and Fisheries
1324 Longworth House Office Building
Washington, DC 20515

RE: Advancing Federal Water and Hydropower Development: A Stakeholder Perspective

Dear Chair Hageman and Ranking Member Hoyle:

American Whitewater is pleased to offer this testimony on the Oversight Hearing titled “Advancing Federal Water and Hydropower Development: A Stakeholder’s Perspective” held by the Subcommittee on Water, Wildlife and Fisheries on Wednesday, April 30, 2025. We write today to respectfully share that the current regulatory limits on hydropower development and operations are essential to protecting important values that Americans care deeply about. It would not be in the public interest to reduce or eliminate those limits in order to favor hydropower development or generation.

American Whitewater is a national non-profit 501(c)(3) river conservation organization founded in 1954 with approximately 50,000 supporters, 6,000 dues-paying members, and 100 local-based affiliate clubs, representing whitewater enthusiasts across the nation. American Whitewater’s mission is to protect and restore America’s whitewater rivers and to enhance opportunities to enjoy them safely. The organization is the primary advocate for the preservation and protection of whitewater rivers throughout the United States, and connects the interests of human-powered recreational river users with ecological and science-based data to achieve the goals within its mission. American Whitewater has many decades of experience engaging in the relicensing of well over 100 Federal Energy Regulatory Commission regulated dams, as well as the operation of numerous federal dams that directly impact the public’s use and enjoyment of our public waterways.

The National Environmental Policy Act (NEPA) and the Federal Energy Regulatory Commission (FERC) dam relicensing process provide the forum for the public, and organizations like ours, to share what matters to them with regulators, and for regulators to weigh those interests against others. It ensures the public has a meaningful role in protecting and restoring the rivers that flow through their communities and that are impacted by hydropower projects. Businesses and community leaders can highlight economically important outdoor recreation resources.

Scientists and citizens can raise the needs of fisheries that are important biologically, economically, and culturally. Farmers and municipalities can explain the need for good water quality and quantity. Tribal governments have an opportunity to highlight cultural connections to waterways that have sustained them since time immemorial. Collectively these voices and interests, given regulatory weight and opportunity, result in good, balanced outcomes that are in the public interest. Power companies and the federal government cannot be expected to know what river-based communities need to flourish. Rather, it is almost always perspectives from the public that lead to the efficient and meaningful protection and enhancement of outdoor recreation, quality of life, and local river-based economies through the public engagement opportunities afforded by NEPA and the FERC licensing process. Protecting the role of the public is vital to ensuring fair and positive outcomes for communities.

Like our wise commitment to public participation in decision-making, our nation is rightly and legislatively committed to protecting threatened and endangered species from extinction. These species include numerous runs of salmon and steelhead in the western United States that are economically, culturally, and ecologically vital to the region’s future. Scientists, including those from the U.S. Forest Service and National Marine Fisheries Service, are in the best position to understand how to ensure those species are recovered, and their ability to meaning-

fully engage in hydropower development and operation decisions is essential to the continuation of imperiled species. Ensuring these species persist is a legacy we owe to current and future generations.

The timeline for hydropower licensing is neither excessively long nor burdensome; it is appropriate given the significant public interest in the multifaceted values of our rivers that must be carefully balanced. The Integrated Licensing Process (ILP), established in 2003, was designed with clear timelines and deliverables for the Federal Energy Regulatory Commission (FERC), licensees, resource agencies, and other stakeholders. A 2021 assessment by the Department of Energy (DOE) concluded that the ILP offers the shortest and most consistent timeline among available processes.¹ On average, licensing under the ILP takes 5.9 years, closely aligning with the expected 5.5-year timeframe specified in regulations. Importantly, the DOE found that the choice of licensing process significantly influences the issuance timeline.

Alternative and Traditional processes, chosen by licensees in some cases, tend to prolong the licensing period compared to the ILP. The DOE's assessment identifies incomplete or inadequate information, provided by licensees, as a primary factor contributing to extended timelines. Addressing these informational gaps, and requiring licensees to provide required information to regulatory agencies in a more timely fashion could streamline the process and enhance efficiency across all licensing pathways.

As a general matter, 5.5 years is an appropriate duration for the hydropower licensing process. Breaking the ILP timeline down, stakeholders have a year to develop study plans, two years to conduct studies and for the licensee to file a license application, and then two years for FERC to take the study information, release a draft and final environmental document and finally issue a new license. The idea that the completion of the licensing process is unnecessarily long is a narrative perpetuated by those with little knowledge of the process.

We respectfully urge you to look beyond the regulations shaping hydropower development and consider the people those rules protect: the rafting outfitter whose livelihood depends on reliable dam releases, the families who rely on salmon and steelhead for food and income, and the countless others who depend on healthy, functioning rivers. Loosening these safeguards to accelerate hydropower growth would come at a real cost to nearly every other river-dependent community. The NEPA process and FERC relicensing already provide a framework where hydropower operators can generate power while balancing the broader public interest. We welcome continued dialogue with the Committee and strongly support oversight that ensures all stakeholders—especially those directly affected—are heard in shaping the future of our rivers.

Thank you for considering this testimony.

Sincerely,

KEVIN R. COLBURN,
National Stewardship Director



¹NREL, An Examination of the Hydropower Licensing and Federal Authorization Process (2021). Available at: <<https://www.nrel.gov/docs/fy22osti/79242.pdf>>.