2021

ANNUAL REPORT

of the

WESTERN STATES WATER COUNCIL

56th Annual Report

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2021 ANNUAL REPORT
OF THE
WESTERN STATES WATER COUNCIL
INTRODUCTION

The first official meeting of the Western States Water Council (WSWC) was held on the south shore of Lake Tahoe, at Stateline, Nevada on August 3, 1965. The Western Governors' Conference approved the creation of the WSWC during meetings in Portland, Oregon on June 10-13, 1965. The Governors' resolution explicitly stated: "The future growth and prosperity of the western states depend upon the availability of adequate quantities of water of suitable quality." Further, the governors felt that a fair appraisal of future water needs, and the most equitable means of meeting such needs, demanded a regional effort. Water availability and interbasin transfers of water were important issues. Western states found themselves in an era of rapid federal water resources development, and regional or basinwide planning, without a sufficient voice in the use of their water resources. The WSWC has since provided a unified voice on behalf of western governors on water policy issues.

The WSWC is a government entity, and instrumentality of each and every participating state. The emphasis and focus of the WSWC has changed over the years as different water policy problems have evolved. However, the commitment toward reaching a regional consensus on issues of mutual concern has continued. The WSWC has proven to be a dynamic, flexible institution providing a forum for the free discussion and consideration of many water policies that are vital to the future welfare of the West. As envisioned by the Western Governors' Conference, it has succeeded as a continuing body, serving the governors in an expert advisory capacity. Over the years, the WSWC has sought to develop a regional consensus on westwide water policy and planning issues, particularly federal initiatives. The WSWC strives to protect western states' interests in water, while at the same time serving to coordinate and facilitate efforts to improve western water management.

WSWC membership and associate membership status is determined based on a request from the governor. Originally, WSWC membership consisted of eleven western states: **ARIZONA, CALIFORNIA, COLORADO, IDAHO, MONTANA, NEVADA, NEW MEXICO, OREGON, UTAH, WASHINGTON and WYOMING**. In 1978, **TEXAS** was admitted to membership, after many years of participation in WSWC activities in an "observer" status. **ALASKA** requested and received membership in 1984. **NORTH DAKOTA** and **SOUTH DAKOTA** both received membership in 1988 after a long association with the WSWC. **HAWAII** was a member from 1991-1999. In 1999, **OKLAHOMA** requested and received membership. In 2000, both **KANSAS** and **NEBRASKA** joined the WSWC at the request of their respective governors. WSWC membership is automatically open to all member states of the Western Governors' Association (WGA). Other states may be admitted by a unanimous vote of the member states.

Associate membership has also been granted states exploring the benefits of membership, experiencing financial hardship, or otherwise temporarily unable to maintain full membership.

Each member state's governor is an ex-officio WSWC member. The governor may appoint up to three Council members or representatives, and as many alternate members as deemed necessary. They serve at the governor's pleasure. (Associate member states are limited to two representatives and two alternates.)

WSWC officers, including the Chair, Vice-Chair, and Secretary-Treasurer, are elected from WSWC membership. State representatives are appointed to working committees, with one representative per state also appointed to an Executive Committee. The Executive Committee attends to internal WSWC matters with the assistance of a Management Subcommittee, which includes the WSWC officers, immediate past Chair, and Executive Director. The WSWC's working committees are the Legal Committee, the Water Quality Committee, and the Water Resources Committee. Each working committee is directed by a committee chair and vice-chair. Committee chairs, in turn, name special subcommittees and designate subcommittee chairs to study issues of particular concern.

Meetings of the WSWC are held on a regular basis, rotating among the member states, with state representatives hosting WSWC members and guests. In 2021, given COVID19 restrictions on travel and meetings, the Spring (195th) Meetings were hosted virtually by the State of Texas on March 23-25; the Summer Meetings (196th) were held in Cody, Wyoming on June 23-25; and the Fall Meetings (197th) were held in Deadwood, South Dakota on September 14-16. Guest speakers are scheduled according to the relevant subjects to be considered at each meeting. The WSWC meetings are open to the public. Information regarding future meeting locations and agenda items can be obtained by contacting the WSWC's office, or visiting our website. Included herein are reports on each of the WSWC meetings, positions and resolutions adopted by the WSWC, and a discussion of other important activities and events related to western water resources. Other information about the WSWC and its members is also included.

The WSWC relies almost exclusively on state dues for funding the organization. Dues are set by the Executive Committee and each state pays the same amount. The Executive Committee provides general oversight and authorizes regular reviews and audits of Council finances. A copy of the audit performed for the fiscal year ending June 30, 2021 can be obtained from the WSWC office.

During 2021, the WSWC staff was comprised of: Anthony G. (Tony) Willardson, Executive Director; Michelle Bushman, Assistant Director and General Counsel; Adel Abdallah, WaDE Program Manager; Ryan James, Data Analyst/Hydroinformatics Specialist; Jessica Reimer, Policy Analyst; Heather Hofmann (NRCS), who was selected to serve as the next WestFAST Federal Liaison replacing Deborah Lawler (USBR), who reitired; Cheryl Redding, Office Manager; and Julie Groat Administrative Assistant.

The Western States Water Council offices are located in the metropolitan Salt Lake City area:
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**Executive Committee Member
†Council members denoted by this symbol are listed by virtue of their office, pending receipt of a letter of appointment by their Governor.

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Thomas Buschatzke - Arizona
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Karla Nemeth - California
(Alternate)*
Becky Mitchell - Colorado
Jerry Rigby - Idaho
Earl Lewis - Kansas
Anna Pakenham Stevenson - Montana
Tom Riley - Nebraska
Micheline Fairbank - Nevada
Bradley Crowell - Nevada
(Alternate)*
Roland Westergard - Nevada
(Alternate)*
John D'Antonio - New Mexico
Andrea Travnicek - North Dakota
Jennifer Verleger - North Dakota
(Chair) (Alternate)*
Julie Cunningham - Oklahoma
Thomas Byler - Oregon
Hunter Roberts - South Dakota
Nakaila Steen- South Dakota
(Alternate)*
Jon Niermann - Texas
(Vice-Chair)
Candice Hasenyager - Utah
Mary Verner - Washington
Jeff Cowley - Wyoming

Ex-Officio Representatives
*For purposes of Committee rosters, the designation as an "alternate" only reflect the person's function on the Committee.

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Jennifer Verleger
(**Chair**)
Jon Niermann
(**Vice-Chair**)
John D'Antonio
(**Secretary/Treasurer**)
Tony Willardson
(**Executive Director**)
Jeanine Jones
(**Former Chair**)

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Vacant- Alaska
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Kelly Brown - Arizona
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Jeanine Jones - California
Kevin Rein - Colorado
Jerry Rigby - Idaho
John Simpson - Idaho
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Kenneth Titus - Kansas
Jay Weiner - Montana
Jim Macy - Nebraska
Micheline Fairbank - Nevada
James Bolotin - Nevada
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Greg Ridgley - New Mexico
Jennifer Verleger - North Dakota
Sara Gibson - Oklahoma
Thomas Byler - Oregon
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Hunter Roberts - South Dakota
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Jon Niermann - Texas
Norman Johnson - Utah
Alan Reichman - Washington
Chris Brown - Wyoming
(**Chair**)

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Jennifer Verleger - North Dakota

Non-Tribal Federal Water Needs Subcommittee

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David Schade - Alaska
Jay Weiner - Montana
Micheline Fairbank - Nevada
Adam Sullivan - Nevada
Greg Ridgley - New Mexico
Jennifer Verleger - North Dakota
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Kathy Alexander - Texas
Norm Johnson - Utah
Buck Smith - Washington
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Ronald McCormick
David Hu
Paula Cutillo
BOR - Arthur Coykendall
DOD - Lauren Dempsey
DOJ - Stephen Bartell
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Ed Harvey
USFWS - Michael Higgins
USGS - Timothy McHale
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Greg Ridgley - New Mexico
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Kathy Alexander - Texas

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Jon Niermann - Texas
Earl Lott - Texas
(Alternate)*
Kimberly Shelley - Utah
Erica Gaddis - Utah
(**Chair**) (Alternate)*
Mary Verner - Washington
Todd Parfitt - Wyoming

Clean Water Act Subcommittee

Trisha Oeth - Colorado
Barry Burnell - Idaho
Tom Stiles - Kansas
Jennifer Carr - Nevada
Greg Lovato - Nevada
Jennifer Verleger - North Dakota
Allison Woodall - Texas
Lauren Driscoll - Washington

Water Quality/Quantity Nexus Workgroup

Tom Stiles - Kansas

WATER RESOURCES COMMITTEE

Tom Barrett - Alaska
Thomas Buschatzke - Arizona
Amanda Long-Rodriguez - Arizona
(Alternate)*
Karla Nemeth - California
Jeanine Jones - California
(Alternate)*
Rebecca Mitchell - Colorado
John Simpson - Idaho
Jerry Rigby - Idaho
(Alternate)*
Chris Beightel - Kansas
Anna Pakenham Stevenson - Montana
Tom Riley - Nebraska
Adam Sullivan - Nevada
John D'Antonio - New Mexico
Andrea Travnicek - North Dakota
Julie Cunningham - Oklahoma
Thomas Byler - Oregon
Nakaila Steen - South Dakota
Eric Gronlund - South Dakota
(Alternate)*
Jon Niermann - Texas
Earl Lott - Texas
(Alternate)*
Candice Hasenyager - Utah
Mary Verner - Washington
(**Chair**)
Jeff Cowley - Wyoming

Climate Adaptation and Drought Subcommittee

Jeanine Jones - California (**Chair**)

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Corps - Rolf Olsen
NRCS - Mike Strobel

Water Information and Data Subcommittee (WIDS)

Lisa Williams - Arizona
Mathew Weaver - Idaho
Lane Letourneau - Kansas
Ginger Pugh - Kansas
Julie Cunningham - Oklahoma
Kent Wilkins - Oklahoma
Ken Stahr - Oregon
Kathy Alexander - Texas
Candice Hasenyager - Utah

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USBOR - Allison Danner
USEPA - Dwane Young
USGS - Nancy Barber
NASA - Brad Doorn
NOAA - DeWayne Cecil
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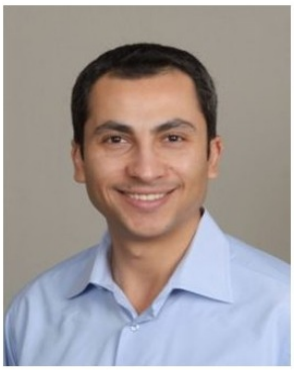

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Julie Groat
Administrative Assistant

Heather Hofman, NRCS
WestFAST Liaison
2021 - Current

COUNCIL MEMBERSHIP/STAFF CHANGES/NEWS

Arizona

In April, Governor Douglas Ducey appointed **Amanda Long-Rodriguez**, Management, Plans Coordinator, Arizona Department of Water Resources (AZ DWR) as an alternate member to the WSWC, replacing former WSWC member **Kyle Miller**. **Tom Buschatzke**, Director; **Ayesha Vohra**, Deputy Counsel; **Kelly Brown**, Deputy Counsel, AZ DWR (alternate); and **Trevor Baggiore**, Director, Water Quality Division, Arizona Department of Environmental Quality (AZ DEQ), will continue to serve as members.

California

In October, Governor Gavin Newsom appointed **Karla Nemeth**, Director, California Department of Water Resources (CA DWR) and **E. Joaquin Esquivel**, Chair, California State Water Resources Control Board (SWRCB) to the WSWC.

Kansas

In February, Governor Laura Kelly appointed **Earl Lewis**, Chief Engineer, Division of Water Resources, Kansas Department of Agriculture (KDA-DWR), and **Connie Owen**, Director, Kansas Water Office (KWO) to the WSWC. Governor Kelly also appointed **Cara Hendricks**, Assistant Director, KWO, to serve as an alternate member. **Kenneth Titus**, Chief Counsel, KDA; and alternate members, **Chris Beightel**, Water Management Services Program Manager, KDA-DWR; and **Tom Stiles**, Chief, Office of Watershed Planning, Kansas Department of Health and Environment (KDHE), will continue to serve on the WSWC.

Montana

In February, **Tim Davis**, WSWC Chair and Water Quality Division Administrator, Montana Department of Environmental Quality (MT DEQ) accepted a position as the Director, Division of Drinking Water, Utah Department of Environmental Quality (UT DEQ).

In December, Governor Greg Gianforte appointed **Anna Pakenham Stevenson**, Administrator, Water Resources Division, Department of Natural Resources and Conservation (MT DNRC), and **Amy Steinmetz**, Administrator, Water Quality Division, to the WSWC. **Jay Weiner**, Administrative Law Judge, MT DNRC, will continue to serve as alternate member.

Nevada

In July, the Nevada Department of Conservation and Natural Resources (NV DCNR) announced that WSWC member **Adam Sullivan** was appointed as the State Engineer and Administrator, Nevada Division of Water Resources (NV DWR).

New Mexico

WSWC Member **John D'Antonio** submitted his resignation in November and retired at the end of December. He cited a lack of financial support for the New Mexico Office of the State Engineer (OSE) to protect the state's water resources as a primary factor in his decision. Specifically, he noted ongoing staffing shortages, increased mandates, and a directive to submit a flat budget despite projected growth in state revenues. John was first appointed to the WSWC in July 2003 and served on the Executive and Water Resources Committees. Additionally, while with the U.S. Army Corps of Engineers (Corps), he served as the WestFAST/WSWC Liaison from January through February 2019.

North Dakota

In August, Governor Doug Burgum appointed **Andrea Travnicek**, Director of the North Dakota Department of Water Resources to the WSWC.

South Dakota

With the merger of the South Dakota Departments of Environment and Natural Resources and Agriculture to the new Department of Agriculture and Natural Resources (SDANR), in April, Governor Kristi Noem appointed **Nakaila Steen**, Natural Resources Engineer, and **Kelli Buscher**, Engineer Manager, Surface Water Quality, SDNAR (alternate) to the WSWC. **Hunter Roberts**, Secretary; **Jeanne Goodman**, Director, Division of Environmental Services (alternate); and **Eric Gronlund**, Chief Engineer, Water Rights Program, SDNAR (alternate) will continue to serve as members.

Texas

In August, Governor Gregg Abbott appointed **Brooke Paup**, Chairwoman, Texas Water Development Board to the WSWC.

Utah

In September, Governor Spencer Cox appointed **Erica Gaddis**, Director, Division of Water Quality, Utah DEQ, as a WSWC member and reappointed **Todd Adams**, Deputy Director, Utah Department of Natural Resources and **Norman Johnson**, Natural Resources Division Director, Utah Attorney General's Office. Former WSWC Chair **Tim Davis**, Director, Division of Drinking Water, UT DEQ, has been appointed as an alternate member.

In November, Governor Cox appointed **Candice Hasenyager**, Director, Division of Water Resources, Utah Department of Natural Resources (UT DNR), as a WSWC member replacing **Todd Adams**, who was previously appointed as Deputy Director of DNR.

Wyoming

In June, **Steve Wolff**, Interstate Streams Administrator, Wyoming State Engineer's Office, accepted a position with the State of Colorado as General Manager, Southwestern Water Conservation District. Steve was appointed to the WSWC in May 2018 and served on the Executive and Water Resources Committees.

In December, Governor Mark Gordon appointed **Jeff Cowley**, Administrator, Interstate Streams, Wyoming Office of the State Engineer, to the WSWC. He also appointed **Jennifer Zygmunt**, Interim Administrator, Water Quality Division, Wyoming Department of Environmental Quality (WY DEQ), as an alternate member. **Chris Brown**, Sr. Assistant Attorney General, Wyoming Attorney General's Office, and **Todd Parfitt**, Director, WY DEQ will continue to serve on the WSWC as full members.

COUNCIL MEETINGS

195th Council Meetings
Hosted Virtually by the State of Texas
March 23-25, 2021

The WSWC Spring Meetings (195th) were hosted virtually by the State of Texas on March 23-25. The WSWC revised and re-adopted six sunsetting positions that: (1) support Forecast Informed Reservoir Operations (FIRO) and innovations; (2) support weather station networks; (3) support water infrastructure funding; (4) regarding integrating water and energy planning and policy; (5) support federal research on climate adaptation; and (6) regarding state primacy over groundwater. Two new positions were adopted. The first relates to support for universal access to clean and safe drinking water for Federally Recognized Indian Tribes and Alaska Native Communities. The second supports updated, consistent national Probable Maximum Precipitation (PMP) standards for extreme rainfall that takes into account recent data, research, models and methodologies.

WSWC Chair Tim Davis left his position in Montana for one in Utah. An election was held with Jen Verleger (ND) elected as the new Chair, Jon Niermann (TX) Vice Chair, and John D'Antonio (NM) Secretary-Treasurer.

Texas, as the host state, provided an in-depth look at their regional water planning and infrastructure funding programs, an overview of their oil and gas National Pollutant Discharge Elimination System (NPDES) permitting program, desalination efforts, and a virtual Rio Grande field trip.

Kevin Moss, Policy Analyst, WGA, described WGA Policy Resolutions #2018-12, Water Quality in the West, and #2018-08, Water Resource Management in the West. WGA will reconsider both during their next virtual meeting on June 30-July 1. Members were encouraged to contact their governors' offices with any suggested changes.

During the Water Resources Committee, Camille Touton, Deputy Commissioner, Bureau of Reclamation (USBR) talked about the Administration's priorities related to climate and equity, mentioning the Navajo Utah tribal settlement, and Colorado River Tribes. She highlighted extremely low flows in the Klamath River Basin, noting 76% of the West is in drought, and the 5% water allocations for Central Valley Project (CVP) contractors.[1] USBR is considering next steps. She addressed creation of an Aging Water Infrastructure Account, and specifically noted dam safety needs. She mentioned WaterSMART programs, Open Water Data, Agrimet (weather stations), aerial snow observations (ASO), and FIRO.

Bill McCormick, President, Association of State Dam Safety Officials, emphasized the need to update hydrometeorological reports (HMRs), as some have not been updated since 1973, and the

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[1] *Western States Water*, #2443, March 12, 2021.

PMP standards. Extreme weather events and outdated HMRs and PMPs impact dam hazard ratings. Caroline Sevier, American Society of Civil Engineers (ASCE), addressed the reintroduced PRECIP[2] and FLOODS[3] Acts, and noted the recent ASCE infrastructure report card gave water a grade of C-.

Jeanine Jones, CA DWR talked about the National Oceanic and Atmospheric Administration's (NOAA) report to Congress on improving subseasonal to seasonal (S2S) forecasts, as required by the Weather Research and Forecasting Innovation Act of 2017.[4] NOAA recommended four S2S pilot projects, including one on winter precipitation in western states.

Aaron Snyder, Manager, Corps Water Infrastructure Financing Program (WIFP), talked about alternative financing, including public private partnerships (P3) and funding for non-federal dam maintenance and repairs under CWIFP.

Kathleen Ligon, Special Advisor, Texas Water Development Board (TWDB) talked about "State Water Planning, Financing and Infrastructure in Texas." Texas has developed a statewide Flood Viewer,[5] enhanced its mesonet,[6] and published a state flood assessment. She mentioned the destruction caused by Hurricanes Harvey and Katrina, then laid out Texas three pillars for flood risk management - mapping, planning and mitigation.

During the Water Quality Committee, Roger Gorke, Environmental Protection Agency's (EPA) Office of Water, spoke about the Administration priorities, with five EPA focus areas: (1) COVID relief and economic recovery; (2) equity and environmental justice; (3) harmonizing the Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA); (4) addressing water in the climate crisis; and (5) building the water sector workforce.

David Galindo, Director, Texas Commission on Environmental Quality (TCEQ) provided an overview of Texas' new NPDES program for oil and gas, with an eye toward using produced waters. The Committee also heard two presentations on desalination, from Wendy Ridderbusch, Executive Director, CalDesal, and James Golab, Hydrologist, TWDB.

Two roundtables discussed: (1) the Navigable Waters Protection Rule (NWPR); and (2) CWA §401 state certifications. States are working to fill in any gaps created with the NWPR definition of "waters of the United States" (WOTUS). Arizona has undertaken development of a pre-screening tool for whether a particular water is under federal jurisdiction. Idaho, New Mexico, Nevada, Utah and Washington also weighed in. Several states shared their experiences with the CWA §401 rule. Some expressed concern with the tighter decisionmaking timelines as well as the uncertainty around whether or not EPA will review the rule in a timely fashion. Members also discussed related challenges regarding the need to issue §401 water quality certifications for the

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[2]Providing Research and Estimates of Changes in Precipitation (PRECIP) Act, H.R. 1437 and S. 3053.
[3]Flood Level Observation, Operations, and Decision Support (FLOODS) Act, H.R. 1438 and S. 558.
[4]P.L. 115-25
[5]map.texasflood.org
[6]texmesonet.org

Corps proposed nationwide permits, prior to their finalization, and Corps' objections to "reopener" conditions.

During the Legal Committee, Bidtah Becker, Associate Attorney, Navajo Tribal Utility Authority; Anne Castle, Senior Fellow, Getches-Wilkinson Center, University of Colorado; and Rebecca Mitchell, Director, Colorado Water Conservation Board (CWCB) talked about the Colorado River Water and Tribes Initiative (CRWTI). To better understand the scope of the disproportionate impact of COVID19 on tribes without access to indoor plumbing and clean water, CRWTI surveyed all 30 tribes in the Colorado River basin. An upcoming report[7] will detail inequities and highlight existing federal programs in need of adequate funding and interagency coordination. CRWTI is interested in engaging with partners to find practical solutions working toward a whole-government approach.

Erin Chancellor, Director, Office of Legal Services, TCEQ, presented on the nuances of Texas water rights and impoundments. Texas groundwater is subject to the Rule of Capture, with local oversight, but permits are generally required to store, take, or divert surface water, including stormwater once it reaches a watercourse. There are some interesting exemptions for domestic and livestock uses.

A roundtable discussion focused on water conservation and the use of saved or salvaged water. Washington State irrigators are becoming more efficient, and they want to irrigate additional acres or use water for drought mitigation, rather than relinquishing it back to the State. Oregon's program requires a minimum 25% of the conserved water be converted to instream use. Oregon offers public funding to help with improvements and conservation; funding is tied to the percentage of water dedicated to instream use. Nevada is working on legislation to tie a program like Oregon's with a water banking program similar to Utah's. Utah is still in the pilot program stage. New Mexico has various tax incentives for water conservation, but they have found that the more efficient use of water actually increases plant consumption and does not result in water savings. North Dakota, Wyoming, and Montana also shared their limited experience with conservation and irrigation issues.

During the Full Council meeting, Tanya Trujillo, Principal Deputy Assistant Secretary, Water and Science, Department of the Interior (DOI), and former WSWC member, provided an update on the Administration's priorities and concerns. She highlighted World Water Week, the American Rescue Plan, which includes billions in spending for Native American tribes, and equity needs at both urban and rural levels. She noted efforts related to climate, science, infrastructure, interconnected energy and water policy and planning, as well as Open Water Data. She recognized WSWC's Water Data Exchange (WaDE), as well as our support for the Landsat program, OpenET, streamgages, and the National Water Assessment. She asked about recent state drought declarations and offered to convene a drought policy discussion. She spoke favorably about a Water Subcabinet, in some form, to continue promoting interagency coordination and federal-state consultation.

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[7]Universal Access to Clean Water for the Tribes in the Colorado River Basin, https://www.naturalresourcespolicy.org/docs/water-tribes/wti-full-report-4.21.pdf.

Weir Labatt, former WSWC Chair, presented on San Antonio's Vista Ridge Pipeline Project, a 60-inch conduit bringing up to 50,000 acre-feet per year of groundwater 142 miles from East Texas for 30 years. Weir highlighted P3 collaboration covering the funding, risk allocation, and permit processes (including Endangered Species Act review) it took to successfully complete the project. In Texas, groundwater is personal property. He stressed the unprecedented nature of the project, in which they were able to secure agreements with 513 private landowners to cross their property, paying a premium rather than use their power of eminent domain. None of the easements were litigated.

Pat Lambert, Western States Federal Agency Support Team (WestFAST) Chair, updated priorities for the coming year, including an interest in holding listening sessions with states to hear their water planning priorities, discuss ways to access federal resources and programs, and explore best collaboration practices.

196th Council Meetings
Cody, Wyoming
June 23-25, 2021

The WSWC Spring Meetings (196th) were hosted by the State of Wyoming on June 23-25, in Cody. Participants joined both virtually and in person. The WSWC revised and re-adopted three sunsetting positions that: (1) support rural water supply projects and infrastructure needs; (2) support water transfers without a need for NPDES Discharge Permits; and (3) regarding endangered species and state water rights.

Governor Mark Gordon virtually welcomed everyone to Wyoming. He noted the critical drought and wildfire concerns Wyoming and other western states are experiencing, as well as long-term infrastructure needs. In Wyoming, the 2019 collapse of the Goshen Irrigation District canal shut off water to more than 100 irrigators and 100,000 acres for most of the growing season. "The collapse has had long-standing effects on the Wyoming and Nebraska farmers whose livelihoods depend on the delivery of this water." The problems of aging infrastructure and need for new projects can't be ignored, and Wyoming is evaluating options to leverage state and federal resources. He expressed appreciation for the work of the WSWC on enhancing water data, advocating for state primacy, bolstering state and federal relationships, encouraging collaboration, and tackling CWA and ESA issues. He said he looked forward to hearing more about the progress the WSWC makes.

During the Water Resources Committee, Elizabeth Ossowski, NOAA, National Integrated Drought Information System (NIDIS) gave an overview of the U.S. Drought Monitor and their work to communicate and inform the public and decisionmakers on drought conditions, forecasts and impacts. They have been holding regular webinars, including one on the Western Drought Crisis, on July 20 (see drought.gov). Additionally, on Sept 13-15, NIDIS plans to host a Southwest Drought Virtual Forum on the longer-term perspective on drought. Kelsey Satalino, also with NIDIS, gave a demo of the new drought.gov website, which launched in late 2020. New features include: (1) data

at the city and zip code level; (2) data that is overlayed with different sector information, such as agricultural information and stream gages; and (3) maps of the impacts of drought on public health, including a layer with a social vulnerability index.

Cara McCarthy, National Water and Climate Center (NWCC), Snow Survey and Water Supply Forecasting Program, also provided an update on drought conditions westwide. Overall, the outlook was described colloquially as a "bummer." Forecasts indicate below to well below average streamflow for April-July in at least eight western states and drying conditions will continue. Total reservoir storage is above average only in Montana and Wyoming.

Tom Buschatzke, AZ DWR, gave a presentation on Arizona's efforts to prepare for the 512,000 acre-feet Colorado River shortage expected for the 2022 water year. They have developed a water delivery priority system that includes some mitigation for agricultural and other water loss through 2026; however, post-2026, there are currently no plans to mitigate the lost water. Collaboration and political will have been key factors in developing this plan.

Jeanine Jones, CA DWR, gave an overview of the WSWC's efforts to secure a Congressional appropriation for a S2S pilot program within NOAA's U.S. Weather Research program. NOAA recommended the development of four pilot projects in its 2020 report to Congress per the U.S. Weather Research Act,[8] with the winter and summer precipitation forecasting pilots of most relevant interest to WSWC member states. While the pilot is not expected to be funded in this budget cycle, discussions with Senators and Representatives have laid the groundwork for additional support going forward.[9]

Julie Gondzar, Wyoming Water Development Office, discussed Wyoming's Weather Modification/Cloud Seeding Program to enhance snowpack in the headwaters of the Colorado and Missouri Rivers. The program represents a collaboration between the State of Wyoming and partners that rely on Colorado River water, including the Central Arizona Project (CAP), the Southern Nevada Water Authority, the Colorado River Board of California, as well as mining interests that use a lot of water locally.

Vern Tharp, Western States Water Partnership, discussed their efforts to create public-private partnerships that address more complex issues surrounding water and water infrastructure development. He highlighted a current project that identified areas with radar gaps, such as in remote regions of the Rocky Mountains, and secured funding to install and maintain radar stations to improve forecasting and water supply estimation.

During the Water Quality Committee, David Waterstreet, WY DEQ gave a presentation on managing sediment and turbidity at Willwood Dam to protect fisheries downstream. In 2016, three stakeholder workgroups convened to tackle (1) controlled releases of sediment and debris clean-up,

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[8] P.L. 115-75

[9] *Western States Water*, #2437, January 29, 2021.

(2) long-term strategies for sediment dynamics and mangement, and (3) addressing sediment contributions to the Shoshone River.

Roger Gorke, Office of Water, EPA, provided updates on work regarding environmental justice, per- and poly-fluoroalkyl substances (PFAS), and the development of factsheets on ways to use State Revolving Funds (SRFs) for infrastructure projects. Additionally, Lauren Kasparek, EPA, gave a brief overview of the timeline regarding the redevelopment of the 2020 CWA §401 Certification Rule, and Whitney Beck, EPA, provided a timeline for upcoming action and outreach on the NWPR. EPA is planning to rescind the 2020 NWPR, and in conjunction with the Corps, will work to develop a durable definition of WOTUS.

The Committee then heard presentations from Trevor Baggiore, AZ DEQ, and Jennifer Carr, Nevada Department of Environmental Protection (NV DEP), on abandoned mine mitigation to ensure water quality. The Committee discussed a potential new position on abandon mines.

Chris Carlson, U.S. Forest Service (USFS) and Sheila Murphy, U.S. Geological Survey (USGS), gave a presentation on the federal response to wildfires and their impacts on water quality. They noted that many available resources address preparation and response efforts before and during fires rather than the post-fire aftermath, when water quality is most at risk from sedimentation and other contaminants. Jeremy Neustifter, Colorado Department of Public Health and Environment (CO DPHE), shared the collaborative stakeholder work being done at the state level. Colorado experienced the three largest wildfires on record in 2020, with expected long-term impacts of erosion, sedimentation, organic carbon, low dissolved oxygen, harmful algal blooms, and increased pathogens, bacteria, contaminants, and turbidity.

During the Legal Committee, retired USBR engineer Bill McCormick, together with Gary Boring, Keo Civil, LLC, gave a special historical presentation on repairing cavitation damage in the spillway tunnels at Glen Canyon Dam during the floods of 1983-84. Kenneth Titus, KDA, talked about *Audubon of Kansas v. DOI, et al.*, as well as the historic background of water rights administration and impairment of Quiviria National Wildlife Refuge water rights. Stephen Bartell, Natural Resources Section, U.S. Department of Justice (DOJ), provided a western water litigation update on cases with federal involvement. He noted that the water rights docket does not change much with changing Administrations.

The Legal Committee held a roundtable discussion on the administration of water rights during drought. Members raised concerns with conjunctive management of groundwater and surface water, using models to evaluate the connectedness of resources, data uncertainties, statutory or discretionary assessments of water resource impacts, making determinations of futile calls, post-curtailment recovery of aquifers and surface streams, water banking, and managing tributaries to adjudicated streams.

During the Full Council meeting, Erin White, Yellowstone National Park, National Park Service (NPS) presented several of the water resource management challenges that affect not only

the park, but the surrounding states and downstream users. Created in 1872, the park predates statehood for Idaho, Montana and Wyoming. While mostly managed as wilderness, she noted that later additions to the park included some active irrigation diversions that are allowed and maintained. She noted that under the CWA there are some impaired waters in the park. In 2018, the State of Montana removed Soda Butte Creek, which arises in the park, from the CWA §303(d) impaired water listing, marking the first Montana delisting of an impaired waterway following mine waste remediation efforts. Lastly, she mentioned Wild and Scenic River designations along the Snake River.

Peter Colohan, Internet of Water (IoW), provided updates on the collaborative water data project, building new technologies for modern water data management. He described work with the WSWC WaDE as critical to IoW, together with federal agencies, and other organizations and data hubs, to make existing water data more findable, assessible, interoperable and reuseable (FAIR).

197th Council Meetings
Deadwood, South Dakota
September 14-16, 2021

The WSWC Spring Meetings (197th) were hosted by the State of South Dakota on September 14-16, in Deadwood. Participants joined both virtually and in person. The WSWC revised and re-adopted six sunsetting positions regarding: (1) State CWA Section 401 Certification Authority; (2) CWA Jurisdiction; (3) Federal Water and Climate Data Collection and Analysis Programs; (4) Drought Preparedness, Prediction and Early Warning Programs; (5) the USBR Drought Response Program; and (6) States' Water Rights and Natural Flows. The WSWC also adopted a new position on Abandoned Hardrock Mines.

Hunter Roberts, Secretary of the newly merged South Dakota Department of Agriculture and Natural Resources (SD DANR), provided the host state presentation. He described many of South Dakota's natural resources and related industries, particularly agriculture, and the complex process of merging two departments to streamline regulatory programs, conservation, financial and technical assistance, and to become more efficient.

During the Water Resources Committee, speakers from several federal agencies offered updates on water and climate programs, as well as drought planning and response. Stephanie Santel, EPA Office of Water, talked about a guided decision support tool to quickly navigate a robust range of federal funding opportunities and financing programs based on water project needs, across multiple agencies. She talked about upcoming webinars focusing on building resilience for drinking water, wastewater, and stormwater utility owners and operators. She discussed recent efforts and tools to make their science and data more accessible to decisionmakers to support local action and form collaborative solutions.

Mike Strobel, Natural Resources Conservation Service (NRCS), U.S. Department of Agriculture (USDA), noted that H.R. 4356 includes $14.5 million for the snow survey and water

supply forecasting program, which represents a $5 million increase over the steady funding over the past decade. This could meet several program needs, such as expanding the number of sensors in the network, particularly at higher elevations lacking coverage, improving data accuracy, monitoring the precipitation transition from snow to rain, improving modeling and forecasting, collaborating on remote sensing (satellite and fixed wing), and improving communication and accessibility to data. NRCS has also been coordinating programs across agencies to put together a national soil moisture monitoring network.

Chris Carlson, USFS, talked about wildfire impacts and working with partners to develop a ten-year strategy to increase hazardous fuels treatments and reduce wildfire risk to communities and their water supply. They are developing national and regional climate vulnerability assessments; coordinating the work of the USDA climate hubs to connect resource managers with actionable climate and drought information; and establishing a collaborative stream improvement program.

Brad Doorn, National Aeronautics and Space Administration (NASA), talked about budget increases for S2S precipitation forecasting models and observations and the big push on addressing wildfire needs. He talked about various missions and coordinating across agencies on water-related data, including soil moisture and OpenET. The Landsat 9 launch was delayed, but he confirmed that it still has the infrared imagery so important to water data and consumptive use.

Mindy Dalton, USGS, provided an update on their integrated water science activities, including the selection of a fourth basin in the Pacific Northwest later this year for their Next Generation Water Observing System (NGWOS). They are working to improve our understanding of water availability and increasing water prediction capabilities, particularly when it comes to the onset, duration, and severity of droughts, and wildfire impacts on water quality.

Bob Wolf, USBR, mentioned Indian water rights settlements, rural water projects, and dam safety as budget priorities. He talked about drought on the Colorado River and across much of the West, the WaterSMART program, and the pilot program on FIRO to maximize the use of reservoirs for drought resilience. He also talked about funding for new storage reservoirs, desalination and water recycling projects, drought disaster mitigation, and cooperative watershed management. David Raff, USBR, talked about the status of reservoirs during this drought, with hydropower pools threatened and water shortage declarations. He noted that their basin study program is addressing climate change, from project planning to construction to operation and maintenance.

Veva Deheza, NOAA, talked about the NIDIS program and advancing research and developing innovative technologies and decision support tools to help water managers respond to drought. The Southwest Drought Virtual Forum was scheduled for September 21-22 and 28-29. She talked about whether these severe, long-term droughts are becoming the new normal in the West. She also talked about efforts to partner with tribes to improve drought resilience, and a partnership between NIDIS and NOAA's Climate Prediction Center to improve S2S outlook.

Roger Gorke, EPA, talked about the National Drought Resilience Partnership (NDRP) and efforts to address funding, regulatory barriers, and cross-agency collaboration on the federal side to better assist states, tribes, regional and local entities to build long-term drought resilience.

Lorraine Flint, Earth Knowledge, Inc. (USGS retired) gave an overview of the USGS Basin Characterization Model. It is a regional water balance model with unique capabilities to assess basin-wide conditions for water resource managers (e.g., aquifer recharge, soil moisture, runoff, snowpack, vegetation, evapotranspiration, seasonal streamflow, wildfires, and climatic water deficits).

Jim Schneider, Olsson (former Nebraska Department of Natural Resources Director), provided a presentation on Open Source, Inter-Connected, Cloud-Based Water Management. He noted that simply having data available doesn't necessarily answer water management questions. He talked about models and data that can automatically communicate in the cloud, and creating applications for managing water data beyond the old databases and emailed spreadsheets.

The Legal Committee held a Wild and Scenic Rivers Workshop with case studies from Idaho, Alaska, and Wyoming presented by Clive Strong, Conference of Western Attorneys General (CWAG); Kim Sager, Alaska Department of Natural Resources (AK DNR); and Sue Lowry, Interstate Council on Water Policy (ICWP).

Stephen Bartell, DOJ, talked about the resolution of water rights claims for wild and scenic rivers, and noted the critical importance of federal agencies and states working together. Roy Smith, Bureau of Land Management (BLM), shared presentations on: (1) river management standards and their implications for water rights; and (2) data analysis and scientific approaches to quantify reserved water rights. Mike Eberle, USFS, talked about the role of the Interagency Wild and Scenic Rivers Coordinating Council, and provided information about various useful tools and documents they have created over the years that are available on their website.

The Legal Committee then heard a presentation from Eric Gronlund, SD DANR, on how South Dakota manages and evaluates fully appropriated aquifers. Arianne Singer, New Mexico Interstate Stream Commission (NM ISC) spoke about some recent troubling interpretations of New Mexico water law and Congressionally-approved Indian water rights settlements in their state court of appeals.

During the Water Quality Committee, EPA Assistant Administrator Radhika Fox expressed appreciation for the work the state regulators do to support EPA programs. She talked about the priorities of water infrastructure, the rulemaking to define WOTUS, and changes to the CWA Section 401 state certification rule.

The Committee then heard a presentation from Trevor Baggiore, AZ DEQ, on Arizona's NPDES tools and the impact of the recent decision of the U.S. District Court of Arizona vacating and remanding the NWPR.

Roger Gorke provided updates on federal baseline water quality standards for tribes, as well as upcoming rulemaking on protecting tribal treaty reserved rights. Chris Carlson gave a presentation on an upcoming WestFAST Wildfire and Water Resources Webinar Series, and requested feedback from states.

During the Full Council meeting, Robyn Colosimo provided updates from the Office of the Assistant Secretary of the Army for Civil Works. She noted that the current iteration of the infrastructure bill presents unprecedented opportunities to advance Corps programs. They anticipate an upcoming rulemaking on the benefits formula for civil works projects, to include economic, environmental, and social benefits. She briefly addressed WOTUS rulemaking with EPA. She said they have no plans currently to advance a new iteration of the water supply rule, as they tried to address as much of the withdrawn rule using the Corps' existing authority and discretionary policy.[10]

[10]PowerPoint presentations given at the meetings are posted on the WSWC's website. See: http://www.westernstateswater.org/upcoming-meetings/past-meetings/.

OTHER MEETINGS

Western Governors' Association

Annual Meeting

On June 30, the WGA held the first session of its virtual annual meeting. Executive Director Jim Ogsbury opened the meeting and introduced each of the governors. WGA Chair Oregon Governor Kate Brown addressed the attendees and highlighted governors' commitment to "set aside our political difference to help the entire region succeed." She emphasized the collaborative and economic power of the WGA *Electric Vehicles Roadmap Initiative* and released a special report on the initiative. She also spoke about abandoned mines, strategic minerals and innovation in the energy sector.

In his remarks, Idaho Governor Brad Little, the incoming WGA Chair, declared: "There is nothing more essential to our way of life or Idaho's future than clean abundant water." He went on to talk about the importance of agriculture and water infrastructure. WGA's new Vice Chair, Colorado Governor Jared Polis, addressed the need for practical solutions for a more resilient future and developing resilient communities. He noted the "once in a generation" opportunity to make investments with federal stimulus spending and said one of Colorado's priorities is implementing the state water plan.

The virtual gathering included roundtable discussions with Energy Secretary Jennifer Granholm and DOI Secretary Deb Haaland. Granholm, a former Governor of Michigan, said that she could relate to the challenges governors face. She promoted the President's American Jobs Plan, proposing billions of dollars for clean energy, including efforts to cut solar and hydrogen energy costs. It included grants to states and tribes for clean energy, and proposed funding for new nuclear and carbon storage projects, as well as electrical transmission grid updates (specifically mentioning risks from fires and freezing temperatures). She stated: "You have been leading the charge as governors toward this clean energy transition. I've been watching as WGA governors have really moved the entire region forward…. You're demonstrating what is possible [and] can be done together, in a bipartisan way."

During a roundtable discussion, Utah Governor Spencer Cox, noted: "The process of permitting for transmissions lines on public lands, including to expand electric vehicle charging, is incredibly expensive and cumbersome. I'm hoping you can help us reconcile those goals and interests."

North Dakota Governor Doug Burgum declared: "The top line for North Dakota is the words innovation versus regulation…. [Innovation] requires research and development (R&D) dollars and with that, we think we can achieve the goals or even exceed goals that the nation has set. We think regulation will raise the cost and lessen the chance of us achieving those goals." Over-regulation is an obstacle to innovation, he said. North Dakota has the capacity to sequester/store all the nation's

carbon dioxide emissions for 50 years. He also noted that we need both power lines and pipelines to sustain our energy use. Burgum referred to the extreme drought conditions in his state, with some areas the driest recorded, and related wildfires consuming ten times the acreage lost in 2020. He highlighted the $870 million Fargo-Moorehead flood protection project and the related public private partnership involving the state and local interests, with the Corps, expediting its completion in 6 years, as opposed to 15 years. He added that WGA is an incredible and invaluable forum for exploring best practices and lessons learned.

Governor Polis and Governor Little both noted the need to streamline the environmental review process under the National Environmental Policy Act (NEPA), both for clean energy projects and the mining of strategic materials. Little added that Idaho is developing the first domestic cobalt mine in the United States.

Wyoming Governor Mark Gordon asserted that Wyoming and the West help power the nation. A next generation nuclear power plant demonstration project is being built on the site of coal fired plant, and the state will also host a carbon capture facility. Wyoming has a "boots on the ground, get things done attitude." He also mentioned the importance of wildlife migration corridors and protecting private property rights as well as recreational opportunities.

In prepared remarks, EPA Administrator Michael Regan declared: "I think we can all agree, whether its methane leaking from oil and gas wells, or dangerous pollutants reaching into waterways, we all have a stake in the health of our environment. We also all have a stake in our economy and the well-being of our communities. I believe these values will make for a successful partnership." He emphasized a commitment to cooperation between the Administration and States on environmental policy, stating that the federal-state partnership is critical to success. "I understand how EPA actions can help or hurt the federal state partnership," noting his experience as director of the North Carolina Department of Environmental Quality. He recognized the serious drought and wildfire season facing the West. He addressed water infrastructure stating that the Biden Administration has asked for $111 billion for water and wastewater projects and to remove lead pipes, making all of our systems more resilient. He specifically referred to a $560 million Water Infrastructure Finance and Innovation Act (WIFIA) loan for Fargo, North Dakota.

Regan stated that he was looking forward to strengthening state and tribal authority under Section 401 of the CWA, as well as working closely with states to address PFAS, confronting this issue head on, beginning with standards for P4 and P5. He did not mention revisiting the definition of WOTUS, nor the NWPR. He concluded, "We all have a stake in the health of our environment."

Governor Michelle Lujan Grisham introduced Secretary Haaland as a beloved New Mexican, and remarked that WGA is an effective bipartisan group interested in partnering with Interior to address public land challenges. Haaland noted the Administration's FY22 budget demonstrates a commitment to natural resources and the environment. The American Rescue Plan is still an important step with $4.2 billion for all Indian Affairs programs. She added the Administration is working towards building a clean energy economy and addressing drought and severe wildfire condition, saying that climate change contributes to historic drought. There is no easy fix, but

Interior is taking drought seriously and working closely with other agencies to get through this tough water year and beyond, with increases in funding for drought and other natural hazards. Haaland noted that wildfire does not always get the attention it deserves, adding that 20 million acres burned in 2020. The President's request includes $1.1 billion for DOI's wildland fire work. Haaland remarked that DOI is working alongside states to manage invasive species and co-chairs the National Invasive Species Council.

With respect to the President's American Jobs Plan, Haaland said that it includes much needed investments in a profitable and equitable clean energy economy, with significant steps to advance renewable energy opportunities on public and tribal lands thoughtfully, with clean energy and transmission projects. It also includes billions for plugging abandon wells. Interior is the steward of lands and waters that must sustain us and generations to come. She said that the Great American Outdoors Act will provide $1.9 billion for new climate-related investments. DOI is studying how best to build resilience. She mentioned the America the Beautiful 30x30 Initiative to protect 30% of U.S. lands and waters by 2030, and committed to an inclusive and collaborative process that addresses local, state and tribal interests. She shared that she comes from a family that farms and ranches and understands the challenges facing the West.

Governor Lujan Grisham thanked Haaland for "leaning in" on oil and gas leasing moratorium issues, noting governors were anxiously awaiting a related DOI report. She also praised the initiative for capping abandoned wells. Grisham has issued an executive order creating a state 30x30 initiative. Some governors remain wary of how terms in the initiative will be defined.

Colorado Governor Jared Polis declared that the location of the BLM in Grand Junction has been a great asset to have in the West. He said it is good for agency morale and retention, highlighting Colorado's great quality of life. He celebrated wolf reintroductions, with the first wolf cubs born in Colorado in 80 years. He also mentioned the addition of wolverines and black-footed ferrets, adding that experimental populations provide needed flexibility in wildlife management, while working together to restore threatened and endangered species populations and the environment.

Oklahoma Governor Kevin Stitt raised concern over the *McGirt v. Oklahoma* Supreme Court decision and tribal criminal jurisdiction on 1907 tribal reservations that were never dis-established. The decision impacts the sovereignty of the state and has created serious public safety concerns. Moreover, the State views *McGirt* as a very narrow criminal decision, but Interior is now recognizing tribal boundaries and jurisdiction over mining projects, leaving companies "confused." Stitt shared that he is a member of the Cherokee Nation, and that 1.5 million non-native Oklahoman's live within the newly recognized reservation boundaries, creating sovereignty questions and issues.

Haaland declared that the Office of Surface Mining will exercise jurisdiction over Indian lands, given current legal advice. "I know that is not what you want to hear and we have and will reach out." Interior is working with the Department of Justice to ensure consistency their actions are consistent with the Supreme Court decision. She also addressed Governor Polis stating that the

Biden Administration is committed to unleashing the science – regarding the Endangered Species Act, wildlife corridors, renewable energy, etc. "We are happy to work with you, and will be in touch on specifics. You have a partner here."

North Dakota Governor Doug Burgum referred to a May 6 WGA letter on the 30x30 Initiative that he characterized as an aspirational goal, adding the citizens of our states value clean air and clean water. The letter reads: "It is also critical to ensure that a conservation strategy does not disproportionately affect specific states or regions. A strategy that relies heavily on federal land would disproportionately affect western states, given the high percentage of western lands under federal ownership…. The 30 by 30 proposal has significant implications for state sovereignty and the lives of our constituents." WGA has called for close consultation with States as the Administration seeks to implement the initiative.

On July 1, day two of the meetings, USDA Secretary Tom Vilsack addressed the governors. He was introduced by Idaho Governor Brad Little, who highlighted USDA's Shared Stewardship Strategy calling for collaboration on land management practices and priorities. He also mentioned USDA's Rural Development Agency and its critical importance with the roll out of broadband in the West. Secretary Vilsack was also welcomed as a former governor of Iowa, and recognized for his earlier service as USDA Secretary in the Obama Administration. Vilsack addressed the pandemic damage to agriculture-based economies due, and USDA efforts to provide relief to different sectors or elements of agriculture and forestry. He mentioned opportunities to provide for the dairy industry, through a donation program to encourage some equity for dairy farmers with USDA purchased food boxes and cheese. USDA uses institutional/school lunch purchases of food to provide markets. There is some help for organic producers, as well as some compensation for livestock destroyed with no market during the pandemic. The focus is looking forward to Build Back Better, with expanded market opportunities for socially disadvantaged communities and to expand processing capacity for cattle so producers and processors can profit. He talked about bringing good paying jobs back, as well as achieving more flexibility with more small and mid-size producers and local/regional distributors.

Vilsack addressed Forest Service and wildfire questions. He noted expanded broadband is part of the American Jobs Plan, and he committed USDA resources necessary to develop rural areas. The Administration wants $100 billion to expand high speed broadband. The Secretary also mentioned bipartisan efforts led by Senators Mike Crapo (R-ID) and Michael Bennet (D-CO) to address immigration issues as they relate to jobs in agriculture. He remarked that there is a need to modernize the agricultural work force system and respect hard working farm workers. This issue has been "simmering" since 1988. USDA is providing technical assistance for producers with micro loans and through NRCS programs. USDA is also interested in promoting urban agriculture and is working on ten pilot scale projects.

Governor Burgum expressed gratitude for Vilsack's understanding of the role of the States. He stated that North Dakota is facing severe drought – the driest on record. It has contributed to grassland wildfires with over 1000 incidents, beginning first back in January near the entrance to

Theodore Roosevelt National Park. Thanks to USDA firefighters and local volunteers and great team work the town of Medora was saved. Across the state, dryland, row crops and livestock producers are all suffering. He called on USDA to open Conservation Reserve Program (CRP) lands for grazing, while waiting for late-season hay or alfalfa if we do get some rain. North Dakota is in the middle of waterfowl migration routes for many species, and he asked that USDA expand CRP use for wildlife. Understanding there are budget challenges, Burgum asked for expanding trail opportunities with local and USDA partnerships and funding. He referred to a constrained future and asked USDA to collaborate on carbon sink opportunities with farmers and ranchers, while keeping research and development (R&D) going forward as it relates to renewables, waste heat, greenhouse gases and uses of CO2. Crops grow 30-100% faster in greenhouses with enhanced CO2.

Secretary Vilsack said he was "fully aware" of drought, and suggested that a $10 million Wildfire and Hurricane Indemnity Program used in Klamath River area might be used in North Dakota. USDA's budget includes $40 million for Environmental Quality Improvement Program (EQIP) projects to mitigate drought with conservation practices. There are also Farm Service Agency (FSA) programs, and continuing R&D dollars. He added that national programs for addressing the impacts of hurricanes and floods are not effective for drought. Extended drought is the new normal. Regarding wildfire, Vilsack noted the need for additional forest treatment and upscaling pre-preparation activities. The American Jobs Plan addresses greening infrastructure, including forest treatment. He agreed that there are carbon capture opportunities for farmers and ranchers, as well as action to encourage individual farmers and aggregations of producers to adopt sustainable practices. Some opportunities may involve the transport of CO2 from ethanol productions.

Burgum said that North Dakota hit the geological jackpot with the Bakken formation that can be used to store CO2, adding that they already have a regulatory framework for sequestration. North Dakota has set a goal to be carbon neutral by 2030.

Governor Polis stated that it is hot again in Colorado with temperatures over 100 degrees. "We are all seeing the impact of climate change." He said that 40% of Colorado is USFS and BLM land, and that the federal government needs to "step up" on fire control with assistance, while pursuing opportunities to reimagine forest and land management. He referred to USFS land leased to ski resorts and sustainable recreation, while calling for opening access to public lands as a driver of local economies.

Colorado has established a new Agricultural Drought and Climate Resiliency Office, and noted improved land management is a big part of climate resilience that USDA can encourage resilience with incentives. Agriculture is part of the solution and not the problem. Polis highlighted USDA's work on industrial hemp rules adding there is a need for uniform federal rules.

Vilsack emphasized that shared stewardship efforts will continue and expand on past success. He highlighted the creation of a Conservation and Climate Corps (CCC) to help provide better opportunities for outdoor recreation, the use of the Great American Outdoors Act and funding for 500 projects through the reauthorized Land & Water Conservation Fund. He stressed the importance

of the fire treatment side of forest management, and the need for more markets for the wood we do produce, such as the use of structural cross-laminated timber that chars but doesn't burn.

As WGA's incoming chair, Governor Little talked about his Working Lands, Working Communities Initiative. He told Vilsack, "We want to be partners on the next Farm Bill." He added he hoped the next USFS Chief would emphasize cooperative programs and the Good Neighbor Initiative. It will take all states and federal government working together to minimize the impact of drought and climate change. He said we need to manage recreation lands and praised the Payette Forest employees that have done an incredible job on trails, with even handicapped access. He observed that timber markets have been unbelievable – depending on if you are buying or selling. There is a need to match supplies and demand off private, state and federal lands, as well as a need for new sawmills.

Vilsack stated, "My heart goes out to all those dealing with the consequences of a very very dry year. We lost 12 people last year, and a smoke jumper this year." We have to treat forest sustainably. He added infrastructure is more than bridges and roads, but also broadband and our forests.

The meeting also included messages from individual governors and an panel examining economic prosperity in western states, with U.S. Department of Commerce Secretary Gina Riamondo on the effects COVID has had on state and local economies, and steps states and the federal government can take to promote economic vitality throughout the West.

Winter Meeting

The Winter Meetings of the WGA were held at the Loews Coronado Bay Resort, California on December 9-10. WGA Chair Idaho Governor Brad Little (R) welcomed those attending and fellow governors including Arizona Governor Doug Ducey (R), Colorado Governor Jared Polis (D), Hawaii Governor David Ige (D), North Dakota Governor Doug Burgum (R), Oregon Governor Kate Brown (D), Utah Governor Spencer Cox (R) and Wyoming Governor Mark Gordon (R). WGA Executive Director Jim Ogsbury highlighted the fact that this was the first in-person meeting of the governors since the beginning of the Covid-19 pandemic. He declared, "At the point of the spear of COVID response, Governors have worked tirelessly to protect their people and economies. They have made life and death decisions."

Governor Little expressed delight in meeting in person. Even virtually, western governors continued to work collaboratively. "Covid has had us building the plane on the fly!" As Chair, Little's Working Lands, Working Communities Initiative recognizes of our interdependent relationship with federal land managers, and provides a forum for improving western communities, and forming the next Farm Bill.

The meetings included diverse conversations on: (1) the global computer chip supply shortage; (2) environmental justice and conservation; (3) the future of aviation and transportation;

(4) energy generation, transmission and security; (5) emergency preparedness, including for drought and wildfire; (5) as well as the changing public perception of politicians and the importance of communication.

The Governors adopted seven resolutions: (1) Energy in the West; (2) Air Quality Protection and Management; (3) Workforce Development; (4) Foreign Visitor Preclearance; (5) Cybersecurity; (6) Compensatory Mitigation; and (7) Physical and Behavioral Health Care.

Secretary of the DOI, Deb Haaland was a special guest. She observed: "The Department of the Interior and WGA have consistently worked together to address natural resource issues across the West…. Nature has a critical role to play in improving our resilience to climate change and creating a thriving economy.… Together we can make a lasting difference that our children and their children can be proud of." She declared, "The West is my.... ancestral home. Growing up in the high desert of New Mexico I am very familiar with water scarcity." She remembered hiking in the mountains and wading in the streams. "There is nothing like being in a place…. I learned how interconnected nature is."

She addressed drought, forest restoration, outdoor recreation and wildfire. "Wildfires hit home with many of us this year. The fire season these days last year-round." She emphasized the need to remain committed to wildfire preparedness and noted the impact of climate change and invasive species on forests and rangelands. DOI is making a $1.5 billion investment to provide the resources needed to expand restoration work, hire 500 seasonal employees permanently and raise federal fire fighters pay. There are also grants to states and tribes to restore lands and waters.

The Secretary highlighted the extensive drought and strained water supplies. Irrigators, tribes, large cities and rural communities have all been affected. She referred to work in the Klamath and Colorado River Basins. "Thanks for coming to the table with open hearts and open minds. I am proud of the collaborative work we are doing." She added that Bipartisan Infrastructure Law (BIL) included $8.3 billion for water and drought resilience, including the development of nature-based infrastructure. BIL provided $16 billion for legacy pollution clean-up with money to tackle abandoned mines and orphaned wells, close dangerous mine shafts and treat acid mine drainage.

Joining the governors, the Canadian Ambassador to the United States, Kirsten Hillman, emphasized the importance of bipartisan collaboration. "Canada is the largest and most diverse energy supplier for the U.S.," she said. "Our systems, companies, and workers are integrated. The strength of those connections will help us face the energy challenges of today and tomorrow." Further, she noted, "Canada has 13 of the 30 minerals that are deemed critical for defense and other applications. We are looking to partner with our closest neighbor and ally on these products that are deeply important. These products are critical for electric vehicle batteries. We want to be strong partners with the U.S. and your companies in getting these products to market."

Deanne Criswell, Administrator of the Federal Emergency Management Agency (FEMA), discussed the challenges facing our Nation and States in terms of planning for and responding to disasters such as wildfires and hurricanes, as well as public health emergencies like the COVID-19

pandemic. “It is our responsibility to empower local communities to implement these mitigation actions, practice preparedness year-round, and work together to implement climate mitigation plans that are equitable for all communities.”

Criswell addressed flooding related to atmospheric rivers, the Northwest heat dome, wildfires and burn scars with mud slides, and earthquakes. Governors face uncertain evolving climate situations. She noted in Washington State, near Mt. Vernon, the Skagit River flooding crested at 37 feet, the highest since 1990. A flood wall constructed in 2018 spared the community. Hawaii recently received 25 inches of rain, and a blizzard warning with a foot of snow for the Island’s peaks. She added, “You have seen crops of life-long farmer wither and die without water to save them.” She stated that “increasing wildfires are a direct result of climate change, with some 51,000 fires across 7 million acres, resulting in damages estimated in the billions. Every community is vulnerable to severe weather.”

Director Criswell observed the average 6-year old will see three times the devastating climate disasters as their grandparents. “What can we do now?” Without bold action future generations will face irreversible damages. She focused on advancing climate and community resilience, calling for an equitable distribution of resources and information. The BIL includes $6.8 billion for FEMA to help communities strengthen climate resiliency and reduce disaster damages. FEMA provides competitive Building Resilient Infrastructure and Communities (BRIC) grants as well as a Hazard Mitigation Grant Program (HMGP) grants that may be used to reduce or eliminate repetitive flooding, address dam safety, and the latter are authorized for Covid disaster-related relief. In Utah FEMA risk reduction grants have been used to rehabilitate masonry structures threatened by earthquakes. There is $1 billion available for BRIC grant, with $25 million set aside for tribes.

FEMA will be pro-active and deliver benefits to help underserved, disadvantage and vulnerable communities with grants and directed technical assistance. “It is our responsibility, with state and local leaders, to empower communities…” through investments and providing information needed for decisionmaking. Resilience is needed across the whole of government. Further, a FEMA 2020 survey found only 40% of families have a disaster plan. Too many fail to make plans until it is too late. Individual preparedness needs to be a common theme. She concluded, “This is a collaborative partnership. We can’t be successful without you. We need to act with purpose and solidarity.”

Governor Cox specifically raised the slow rolling nature of drought and recovery and questioned FEMA’s role. Criswell replied that while the Stafford Act lists drought as a national disaster, FEMA’s role is primarily through mitigation programs. Cox added some of the biggest problems with recovery from fires relates to drinking water and fish and wildlife impacts. “What can FEMA do?” Criswell said to take advantage of the HMGP and Fire Management Assistance Grant Program (FMAGP). The latter is intended to aid with the mitigation, management, and control of fires burning on publicly or privately owned forests or grasslands.

Richard Glick, Chairman of the Federal Energy Regulatory Commission (FERC) discussed the challenges States and the federal government face and opportunities to collaborate on protecting and enhancing the energy grid. "One of the challenges of this new energy transformation is that we now have a grid that's much more reliant on the weather. We need more flexible generation resources that can compensate for this dynamic." He mentioned last winter's Texas power outage, noting FERC has authority over interstate systems, but not Texas' intrastate generation and transmission system (under the Electric Reliability Council of Texas or ERCOT).

Glick noted that distributed generation – wind and solar – is also intermittent and raises questions of reliability, also depending on weather. Options to improve reliability include battery storage, pumped storage hydropower, and demand flexibility and compensation for interruptible energy supplies. He added, "Things are getting worse and the margins are getting tighter." Regional Transmission Organizations (RTOs) are one option to move energy from areas of surplus to areas of need. Some argue for mandating a western RTO, but that is not accepted by all states and state regulators, and further Federal Power Marketing Administrations are not under FERC's authority. There is also a need for more transmission capacity – new assets and market structures – regionally. "Incremental changes are happening but bold action is needed."

Joint Dialogue/EPA/CWA Section 401

On July 15, the Western Governors' and National Governors' Associations and WSWC staff joined a dialogue with the EPA on plans to revise the CWA Section 401 Rule. EPA's Casey Katims, Deputy Associate Administrator for Intergovernmental Relations, and John Goodin, Director of the Office of Wetlands, Oceans and Watersheds, spoke as well as Brian Frazer and Lauren Kasparek. WestFAST EPA representative Roger Gorke facilitated a June 23 listening session with WSWC members, and examples of the impact of the new rule from that meeting were shared.

EPA solicited written comments of the following key issues: (1) pre-filing meeting requests (40 CFR 121.4); (2) certification requests (40 CFR 121.5); (3) a reasonable period of time to act (40 CFR 121.6); (4) the scope of certification (40 CFR 121.2); (5) federal agency review of certification actions (40 CFR 121.7-121/9); (6) enforcement (40 CFR 121.11); (7) modifications of certification; (8) neighboring jurisdictions (40 CFR 121.12); (9) data and other information; and (10) coordination of implementation. Written feedback was accepted through August 2.[11]

Western States Water Council

CWA §401/EPA

On June 23, the WSWC hosted a listening session with the EPA regarding the CWA §401 Certification Rule. EPA announced its intention to reconsider and revise the 2020 Rule and is looking for input on several issues flagged during EPA's review.[12]

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[11]https://www.regulations.gov, Docket ID No. EPA-HQ-OW-2021-0302
[12]*Western States Water*, #2454, May 28, 2021.

States that provided substantive comments during the listening session about their concerns with the implementation of the 2020 Rule included: Colorado, Montana, Nebraska, Nevada, North Dakota, South Dakota, Utah, Washington and Wyoming. Other states joined to listen. EPA representatives asked that states also submit their comments in writing. They expressed appreciation for the states' input, improving their understanding the breadth of the issues states are facing with §401 certifications under the 2020 Rule.

Symposium on the Settlement of Indian Reserved Water Rights Claims

The Native American Rights Fund (NARF) and WSWC cosponsored their 17th biennial Symposium on the Settlement of Indian Reserved Water Rights Claims on August 24-25, held virtually for the first time due to COVID-19 concerns.

John Echohawk, NARF Executive Director, noted that NARF and WSWC have worked together since 1981 as part of an Ad Hoc Group on Indian water rights settlements. NARF started in 1970, coinciding with the end of the Termination Era that pushed tribes to assimilate and sought unsuccessfully to terminate the federal trust responsibility and a new beginning with greater Indian self-determination policies that brought tribal treaties to the forefront.

Echohawk provided a brief overview of *Winters v. U.S.*, 207 US 564 (1908), which held that when Indian reservations were set up by Congress, there was an implied reservation of water for the tribes sufficient for present and future uses. This gave the tribes in many cases a senior water right over most other uses of water in the West. NARF worked with tribes to file cases claiming their water rights held in trust by the federal government. This got the attention of the federal government as a trustee with the obligation to help the tribes protect and assert those rights, and also got the attention of the states. NARF and WSWC and others began talking about these long-term cases to quantify water rights with their priority dates, and the potential alternative of settlements. In the 1980s, tribes, states, private parties, and the federal government began the negotiation process for several settlements, and the DOI established the Secretary's Indian Water Rights Office. He said that NARF is pleased to be able to work with WSWC on this continuing issue, and that the symposia every two years offer an opportunity to get everyone together to talk about recent progress and what's ahead, and how we can work together to complete more settlements.

Tony Willardson, WSWC Executive Director, noted that between population growth and drought, we can see the stress on water resources in the West, "…and it is challenging to come together and find ways for all of our people to move forward." He said the partnership with NARF has been very productive and beneficial, and that WSWC looks forward to continuing these discussions.

Following longstanding tradition, tribal members offered prayers at the beginning of each day. The first day of the symposium offered an abbreviated schedule highlighting four settlements

authorized by the 116th Congress. The Consolidated Appropriations Act[13] contained provisions authorizing: (1) the Navajo Utah Water Rights Settlement; (2) the compact between the Confederated Salish and Kootenai Tribes and Montana; (3) the 611(g) Agreement modifications to the Aamodt settlement; and (4) the federal study of the multipurpose dam described in the Upper Delaware and Tributaries Watershed Plan to support the settlement of the Kickapoo Tribe's water rights claims in Kansas.

Speakers on the Navajo Nation-Utah panel included Stanley Pollack, Contract Attorney, Navajo Nation Department of Justice; Norman Johnson, Natural Resources Division Director, Utah Attorney General's Office; and Justin Record, Water Rights Coordinator, USBR. Pollack noted that the settlement resolves Navajo Nation water rights claims in the Upper Basin of the Colorado River. He shared a quote from Jerry Olds, the Utah State Engineer at the time of the first negotiation meeting with the Navajo Nation, which led to the 2003 Memorandum of Understanding: "Our goal in these negotiations is to ensure that the Navajo Nation obtains all the water it needs for a permanent homeland. When the Navajo Nation thrives and prospers on its reservation, the State thrives and prospers." The Navajo Nation and Utah initially envisioned a project-based settlement, and identified water infrastructure projects that would best serve the Navajo Nation. In 2014, the Navajo Nation Department of Water Resources prepared a white paper on the planning and design of those projects.

Record noted that between 2015 and 2017, this transitioned to a fund-based settlement. This required a value planning study to determine what projects would be feasible and the appropriate amount for a water development fund, and the Nation's technical experts were critical in this process. The Navajo Nation will decide in the future which projects need to be built to best meet its water needs in Utah.

Johnson explained that the settlement solved a significant Colorado River issue by quantifying a large number of claims in the Upper Basin and also provided certainty for existing water users in the Uintah Basin and on the San Juan and Price Rivers, as well as the Central Utah Project along the Wasatch Front. He emphasized that the most important lesson they learned in the lengthy settlement process was to communicate and educate. Other lessons included the need for patience, the importance of technicians, the ability to put things into context, the need to build trust and to focus on what matters, and the importance of protecting tribal, federal, and non-federal interests in order to reach a settlement agreement everyone could support.

The Confederated Salish and Kootenai Tribes-Montana panel included: Ryan Rusche and Rhonda Swaney, Attorneys, Confederated Salish and Kootenai Tribes; Jennifer Frozena, Attorney, Office of the Solicitor, DOI; and Jay Weiner, Administrative Law Judge, Montana Department of Natural Resources and Conservation. Rusche noted that the CSKT settlement had its roots in the tribes' longstanding reliance on fish and wildlife, and several decades with over 30 lawsuits, many of which pertained to the tribes' efforts to protect habitat, in particular for the bull trout, a staple for

[13]Pub. L. 116-260

subsistence purposes. The compact provides for instream flows to protect these fish and wildlife habitats. Improvements to the federal Flathead Indian Irrigation Project (FIIP) and its aging infrastructure were also a critical component of the settlement agreement. He added that FIIP is only about 40-50% efficient, so that 50-60% of the water that is diverted never actually waters crops, but returns to the Flathead River System in a much-degraded state. He said that all of the tribal water rights contained in the compact were a result of significant study and analysis by the tribes as well as the federal government. It also protects all the valid existing uses permitted by Montana prior to the compact.

Forzena explained that the federal government was well aware of FIIP deficiencies for many years, which influenced the federal perspective of the settlement. They had an Inspector General's report that had tracked the assessments paid by FIIP water users and indicated that assessments had not been raised sufficiently to address all the deferred infrastructure maintenance. From the federal perspective, significant improvements to the infrastructure and mitigation of project impacts was a huge component of the settlement. When the federal government assessed what it would cost to decommission the entire FIIP or to fund its improvements, the benefits and costs weighed in favor of funding the settlement.

Weiner described the process of compact approval by the Montana Legislature and Courts, allowing the compact to also bind third parties on the river system. He noted that the Montana Supreme Court views these compacts as consent decrees, with approval dependent upon: (1) whether the settlement was the result of arm's length negotiations between competently represented parties; and (2) whether anything in the compact is inconsistent with controlling law.

Rusche echoed the critical importance of educating folks on the finer details of the settlement, particularly for discussions among members of Congress that would take place without the tribal members in the room to answer questions.

Weiner noted that, from Montana's perspective, many of the supporters of the compact were those who make their living using the water, who saw the compact as striking a really good balance between recognizing the tribes' significant legal entitlements to the water and protecting existing users. Much of the vocal opposition was more ideological, with opposition to the Reserved Water Rights Doctrine or the existence of the tribes, or concerns that the compact represented a federal water grab. FIIP management was also an issue as most of the project irrigates allotted lands now owned by non-CSKT members.

Swaney the Flathead Reservation is a beautiful place with a lot of water resources, and it is a place that others have wanted to occupy. She noted that they consider all descendants of the tribes family, and federal law and policy, not the tribes, make a distinction based on bloodline ratios. As a community, everybody's needs for water must be addressed.

On the Aamodt panel, speakers included: Arianne Singer, General Counsel, New Mexico Office of the State Engineer; Alice Walker, Attorney for the Pueblo of Nambé; Richard Hughes,

Attorney for the Pueblo of Tesuque; Peter Chestnut, Attorney for the Pueblo of San Ildefonso; Jennifer Walters, Civil Engineer, USBR; and Josh Mann, Policy Analyst, Secretary's Indian Water Rights Office, DOI. The Aamodt settlement included New Mexico, the City and County of Santa Fe, the United States, individual claimants, and the four Peublos of Nambé, Pojoaque, San Ildefonso, and Tesuque. After 35 years of litigation, in 1999 the parties agreed to pursue a negotiated settlement. The initial 2009 cost sharing agreement, and the 2010 settlement approved by Congress in 2010, led to several more steps over the next decade before the court entered its final decree in 2017.

Construction on the Pojoaque Basin Regional Water System, a central component of the settlement, was set to begin in 2018, but funding issues caused delays. The original project design was only conceptual and substantially underestimated the true costs. Mann noted that the appraisal level study was insufficient, but that Reclamation lacked the necessary Congressional authority to do a feasibility study, which is much more expensive. When Reclamation made a detailed examination after the 2010 settlement authorization, the actual cost of the project design more than doubled. The settlement parties re-entered negotiations in 2018-2019. A Section 611(g) agreement covered additional financial contributions from the parties; reduced the initial water production and scope of the project; and extended the substantial completion deadline and made a major change in the definitions of substantial completion. Support from the Pueblos, the Administration (particularly the Office of Management and Budget), and other settlement partners (particularly Santa Fe County) was critical to getting Congress to approve an amendment to the settlement in 2020. In August 2020, Reclamation allowed limited construction to begin on the regional water system, while waiting for additional federal funding authorization.

The Pueblos noted some of the lessons they learned from the lengthy settlement process: (1) settlement projects require careful design, with competent cost figures; (2) if a settlement project must be fund-based, the tribes must take all steps to ensure sufficient funding for the project; and (3) tribes should insist on significant control over project design and contracting. Mann added that any project-based settlement really needs a feasibility study to get a good cost estimate, and those can take years to complete, delaying settlement. But the alternative of fund-based settlements means making sure that the tribe has enough funds to complete the projects they are considering building.

Singer said one of the lessons the state learned was that they needed to do a much better job of educating people about the benefits of the settlement, and engaging in public outreach early on. They also found that not everyone wanted to be a party to the settlement. In order to bind third parties, they had to create water district-specific rules under their Active Water Resource Management framework, which is an alternative form of administering priority water rights in New Mexico for various high priority stream systems. She said an important thing to consider in negotiating settlements is understanding how well it actually works on the ground and what the roles and responsibilities of the parties will be to minimize conflict during the implementation phase of the settlement. She said they are still learning as they go. She emphasized New Mexico's commitment to these important settlements, and noted the significance of the legislature's doubling the state's contribution toward the regional water system.

The Kickapoo-Kansas panel included: Kickapoo Chairman Lester Randall; David Barfield, Kansas Water Resources Consulting, LLC (and former Chief Engineer, Kansas Division of Water Resources); Scott Bergstrom, Assistant Solicitor, DOI; and Burke Griggs, Associate Professor, Washburn University School of Law. Chairman Randall expressed appreciation for the respectful and meaningful partnership that has been created between the Kickapoo Tribe and Kansas on water management in the Delaware River Basin, which has long-lasting value between both sovereigns. In December 2020, Congress approved legislation directing the NRCS to do a preliminary feasibility study on a water storage project on Plum Creek, a tributary to the Delaware River on the Kickapoo Reservation. The tribe has relied on a small dam and treatment plant, built back in the 1970s with a small federal grant, but both structures have required multiple repairs and they are inadequate to meet the tribe's current and future needs. They began planning for a larger water storage project in the 1980s, and the Plum Creek project was proposed back in the 1990s.

The proposed reservoir near the headwaters of the Delaware River Basin would provide a reliable supply of surface water in a region where groundwater resources are limited and droughts are common. The Kickapoo Tribe and Kansas quantified the amount of reservoir storage that could support the Tribe's direct flow needs, but the federal government needed to do a study, which required federal funding and authorization. The settlement agreement itself has not been approved by Congress, but the Kickapoo Tribe and Kansas have agreed to terms, including how the settlement will be implemented over time. The Kickapoo Tribe and Kansas signed the agreement in 2016, but the U.S. Departments of the Interior and Justice won't sign the agreement until it is approved by Congress, although they did participate in the negotiation process. The settlement includes a Memorandum of Agreement that establishes monitoring, communications, and action levels based on streamflows and storage levels in reservoirs to protect the tribal water right. The MOA includes a mechanism for annual reviews so that it remains current and relevant as the tribe develops storage.

Chairman Randall noted that the federal government has not offered much support in its role as a trustee to protect their water resources, and the Kickapoo Tribe is not the only tribe in that situation. "There really should have been started, decades ago, a serious federal program to protect and develop the water rights of the tribes. Decades later, most Western rivers are over-developed by our non-Indian neighbors, and it's harder with each passing day to protect tribal water rights without serious support from the federal government. Congress is paying more attention to national infrastructure these days, but once again the tribes will be lucky to get crumbs. I don't see it changing in my lifetime. Hopefully, hopefully down the road, we'll see some changes with some of these cases that are coming up. And I appreciate the people that spoke before us because the information was very valuable to me, and I'm sure to most of the people listening today."

Bergstrom explained the complicated position of the United States in litigation when it is both trustee for the tribes and has an obligation to vigorously defend the interests of the United States. This becomes particularly difficult where a tribe needs more affirmative and progressive action from the federal government, but there is a need to take a consistent position on sovereign immunity issues, the interpretation of the McCarran amendment, and even positions on the Administrative Procedure Act. It puts the United States in an awkward spot. The Departments of the

Interior and Justice were involved in the settlement process to offer guidance on the federal perspective, including ensuring that the tribe would get the benefits it needs, while meeting the requirements of the DOI 1990 Criteria and Procedures, and providing finality.

The second day of the virtual Symposium began with presentations on the Biden Administration's water settlement policy, and speakers included Elizabeth Klein, Senior Counselor to the Secretary of Interior, and Chair of the Working Group on Indian Water Settlements; Tanya Trujillo, Principal Deputy Assistant Secretary for Water and Science; and Pamela Williams, Director, Secretary's Indian Water Rights Office. Pam noted that the DOI has completed 38 Indian water rights settlements since 1978, with 34 of them Congressionally approved, and the other four Administratively approved. She discussed: (1) some of the incentives to settle from tribal, federal, and non-federal perspectives; (2) several factors that influence settlement negotiations; (3) important components of settlements; and (4) the federal settlement process, including the 1990 Criteria and Procedures. She talked about the roles of the settlement parties and of Congress. Also, she addressed the increasing costs of settlements over time and how those costs are funded.

Williams noted that there are four tribes with pending and anticipated settlement legislation in the 117th Congress. Legislation that has already been introduced includes: (1) the Gros Ventre and Assiniboine Tribes of the Fort Belknap Indian Community Water Rights Settlement Act (S. 1911); and (2) the Technical Correction to the Shoshone-Paiute Tribes of the Duck Valley Reservation Water Rights Settlement Act (S. 648/H.R. 1849). Pending legislation not yet introduced in this Congress includes: (3) the Hualapai Tribe Water Rights Settlement Act; and (4) an Amendment to the Navajo Gallup Water Supply Project. There is also pending litigation relating to the water rights of about 65 Indian tribes in 12 states, and more requests for federal litigation assistance is pending. "With over 200 Tribes in the West who need access to clean, reliable water and with extreme drought conditions in those States with these Tribes, it is inevitable that DOI will continue to see a growth in the number of Tribes who will assert their rights to the water on their reservations. Settlement requests will continue."

U.S. Representative Melanie Stansbury (D-NM) shared some remarks at the beginning of the Congressional panel, followed by presentations by and discussion with staff members from the House Natural Resources Subcommittee on Water, Oceans and Wildlife - Matthew Muirragui, Majority Staff Director; and Kiel Weaver, Senior Policy Advisor and Minority Staff Director. Muirragui explained some of the challenges to getting Congressional approval of settlements, including: (1) unreliable future funding streams with inadequate discretionary funds; (2) overly restrictive calculations of settlement benefits, which he noted are often deployed as a means of objecting to settlements or for other political leverage; and (3) the 10-year baseline cost assessments from the Congressional Budget Office. The current Congress is attempting to develop a bipartisan infrastructure framework and appropriate funding for existing settlements. Additional deposits into the Reclamation Water Settlement Fund would: (a) ensure a predictable, reliable funding stream for future settlements that is not subject to unpredictable annual appropriations; (b) help address frequent settlement negotiation challenges associated with uncertainty over future federal funding; and (c) alleviate pressure on the DOI's discretionary appropriations to implement Indian water rights

settlements. He noted that Reclamation's annual spending on settlements continues to increase as a percentage of the Water and Related Resources account.

Both Muirragui and Weaver emphasized the importance of tribal member presence on Capitol Hill to continuously educate new members of Congress. It is important to provide both historical context and how these settlements will meet the present and future water needs of the tribes. It is critical to have the support of the tribes, the state, the federal Administration, and other settlement parties.Broad support from other government entities and organizations can be meaningful as well. One thing that can derail the legislative process is when different constituents impacted by the settlement are reaching out to members of Congress with competing interests and inconsistent perspectives on the settlement. Getting through the legislative process requires persistence and patience, and a recognition that sometimes all the stars need to align to get settlements approved.

Communication with members of Congress that is often effective describes the importance of the settlements for tribal economic development, public health, long-term water supply reliability and certainty for western communities, support of treaty rights and tribal sovereignty, meeting federal trust responsibilities, and the net benefit for taxpayers.

The concluding presentation on Universal Access to Clean Water for Tribal Communities was offered by Bidtah Becker, Associate Attorney, Navajo Tribal Utility Authority, and Heather Tanana, Assistant Research Professor of Law, University of Utah. The COVID-19 pandemic underscored the consequences of a widespread lack of drinking water infrastructure for tribal communities, as well as the lack of funding for operation and maintenance of existing water systems. Several federal agencies have tribal drinking water programs, including the DOI's Indian Health Services, the EPA, the USBR, the USDA, and others. Unfortunately, these programs are not set up to coordinate and work together to meet the substantial needs in Indian communities. The Colorado River Water & Tribes Initiative is advocating a whole of government approach to get funding at a level sufficient to meet unmet needs by leveraging existing programs to improve access to reliable, clean drinking water. Legislation has been introduced in the Congress offering both funding for and coordination of several critical programs across multiple agencies.

CONGRESSIONAL TESTIMONY

House of Representatives

Appropriations Subcommittee on Agriculture Rural Development

Support for USDA Water Programs

On June 1, the WSWC submitted written testimony to the House Committee on Appropriations Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies. The testimony focused on general support for several water-focused programs within the USDA that benefit small, rural and tribal communities, as well as important data collection programs that inform water management. Tony Willardson, WSWC Executive Director, provided the following testimony.

Water is the lifeblood of the West. This is most apparent in the agricultural sector, which accounts for the predominant share of consumptive water use throughout Western states. Agriculture sustains many rural economies, provides important employment opportunities, and is a vital national industry. Federal funding is critically important for many agricultural communities, and USDA plays a crucial role in implementing programs that deliver assistance. USDA programs help to provide water and wastewater infrastructure, technical assistance, financial assistance, and conservation measures that ensure water is an available resource and that allow the agricultural industry to thrive.

The WSWC urges the Subcommittee to carefully consider the needs of small, rural, and tribal communities and businesses and provide or otherwise ensure they have access to financial and technical assistance sufficient to guarantee they can meet federal water quality and drinking water mandates, as well as achieve public health goals. The WSWC supports funding to implement rural water supply projects and programs that enhance water supplies and promote economic development, and the use of appropriate financing instruments, while protecting taxpayers.

The WSWC recognizes that increasing demands on often scarce water resources and periodic drought threaten the West and its agricultural base, as well as the communities built on that base. Much of the West is characterized by its aridity, and water availability is an ever-present constraint defining our economic and environmental wellbeing and quality of life. At present, severe to exceptional drought conditions afflict large parts of Arizona, California, Colorado, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, as well as parts of Idaho, Texas, Washington and Wyoming. The Sacramento and the Colorado River Basins have been hit particularly hard impacting tens of millions of people and millions of irrigated acres of farmland, as well as thousands of head of livestock.

Many small, rural, and tribal communities have experienced water supply shortages due to drought, declining streamflows and groundwater supplies, as well as inadequate infrastructure. Some communities still must haul water over substantial distances to satisfy their potable water needs. These communities also face challenges related to meeting increasingly stringent federal mandates

for drinking water and wastewater treatment, especially small rural communities struggling to meet future water supply and water quality needs. Often water supplies available to these communities are of poor quality and may be impaired by naturally occurring and man-made contaminants, including arsenic, copper, lead, and carcinogens, which impact communities' health. There is a federal responsibility to assist these communities in meeting related federal mandates to achieve water and wastewater public health goals.

USDA's water and wastewater grant and loan programs help provide financing for clean and reliable drinking water systems, sanitary sewage disposal, solid waste disposal and stormwater drainage. The beneficiaries are individual households, businesses, cooperatives, private non-profits, and state and local governmental entities and tribal communities, many of which do not have access to private, commercial credit on reasonable terms or other federal financial assistance.

USDA's Rural Development (RD) is a leader in helping rural communities with populations of 10,000 or less, including native Alaskan villages, tribal lands and colonias. RD's Water & Environmental Program (WEP) investments help rural communities improve their quality of life and increase economic opportunities through technical assistance and financing to develop safe drinking water, wastewater, and sanitary waste disposal systems. WEP provides water and waste disposal grants, loans, loan guarantees, predevelopment planning grants, revolving loan funds, technical assistance and training grants, emergency community water assistance grants, and a circuit rider program, as well as individual water and wastewater grants and household water well system grants. The circuit rider program has been especially important for delivering technical assistance to rural communities who otherwise would not have access to critical knowledge and resources.

USDA offers many other important programs supporting water resources and water quality that benefit agricultural and other communities in the West. The FSA, NRCS and its NWCC administer many water-related programs. The latter manages the Snow Survey and Water Supply Forecasting Program, which is instrumental in predicting snow melt runoff and water supplies for crop irrigation, stockwater and municipal drinking water supplies, as well as managing springtime flooding. USDA conservation programs also focus on conservation of ground and surface water resources, as well as reducing nonpoint source pollution, including nutrients, sediment, pesticides and salinity.

The WSWC supports the role of Conservation Title Programs in providing solutions to resolve water supply reliability, water quality impairments, groundwater recharge, and other water resource concerns facing agricultural water users and agricultural producers. These programs provide financial assistance that is particularly important to producers and rural communities, water users and water quality managers.

These programs include the CRP, EQIP and its Conservation Innovation Grants (CIG) and Colorado River Basin Salinity Control Program (CRBSCP), Conservation Reserve Enhancement Program (CREP), Conservation Stewardship Program (CSP), Emergency Watershed Protection Program (EWPP), and Regional Conservation Partnership Program (RCPP), as well as other watershed protection and planning programs. EQIP funding covers a number of important initiatives,

including the Drought, Ogallala Aquifer, National Water Quality, Resiliency to Climate Change, and initiatives that help communities plan for current and future needs.

Many agricultural producers in the West voluntarily participate in USDA programs to implement conservation practices that improve water use efficiency, water quality and wildlife habitat. The WSWC supports investment in voluntary, incentive-based conservation programs that are implemented in coordination with state and local governmental partners, while providing the maximum flexibility possible and opportunities for innovation to create efficiencies, coordinate funding and achieve real water savings.

The WSWC supports changes to Conservation Title programs that remove existing barriers for western users and producers, and make the Farm Bill's conservation title programs more accessible and relevant and effective as stretching limited water resources. Further, WSWC supports funding levels based on need rather than baseline budget targets. It also supports collaborative, targeted and voluntary conservation actions to address locally identified farm, range, forest and water resource concerns on private and public lands.

The WSWC also supports the development and implementation of appropriate soil, water and watershed conservation programs including regional cooperative agricultural programs such as EQIP, the CRBSCP, and the RCPP.

The WSWC supports USDA programs to promote secure water supplies, and improve water quality, wildfire resilience, wildlife habitat conservation and address invasive species threats.

Finally, the WSWC believes it is important that rural water project development and USDA conservation program implementation should recognize and ensure consistency with state water law and regulatory authority.

Thank you for considering our continued support for these important programs that benefit the West's rural and agricultural communities.

Committee on Science, Space and Technology

Future of Forecasting: Building a Weather-Ready Nation on all Fronts

On October 14, the House Committee on Science, Space and Technology held a hearing on The Future of Forecasting: Building a Weather-Ready Nation on all Fronts. NOAA's Weather Ready Nation effort has helped the U.S. be better prepared for managing impacts of short-term weather disasters. Better S2S forecasts would inform decision-making and help mitigate such losses. The WSWC submitted written testimony urging the Committee to encourage NWS to request the resources needed to start the western pilot project to improve S2S precipitation forecasting. Tony Willardson, WSWC Executive Director, provided the following testimony.

On behalf of the WSWC, a government entity advising the governors of eighteen states, we wish to express our appreciation for the Committee's leadership and our strong support for the U.S. Weather Research Program within the NOAA's Office of Oceanic and Atmospheric Research (OAR).

NOAA's Weather Ready Nation effort has helped the U.S. be better prepared for managing impacts of short-term weather disasters. We respectfully request that the Committee encourage NOAA to expand its efforts in helping the U.S. be better prepared for managing the impacts of longer-term weather disasters, particularly droughts. Time is critical in making water management decisions and water agencies need longer lead times to support drought response and preparedness. These longer lead times can only be achieved by improving the skill of sub-seasonal to seasonal (S2S) precipitation forecasts. NOAA's Precipitation Prediction Grand Challenge strategy recognizes the need to improve precipitation forecasting at all time scales, but a more focused effort is needed to make progress at the S2S time scale. The skill of the NWS Climate Prediction Center's precipitation forecasts and outlooks is not sufficient to support water management decision-making for drought response and preparedness.

The Weather Research and Forecasting Innovation Act of 2017 (Public Law 115-25), reauthorized in 2019, along with the NIDIS, directed NOAA to "collect and utilize information in order to make usable, reliable, and timely foundational forecasts of subseasonal and seasonal temperature and precipitation." The statute further required submission of a report to Congress that described "specific plans and goals for the continued development of the subseasonal and seasonal forecasts" and "an identification of research, monitoring, observing, and forecasting requirements" needed to meet the statutory goals.

In 2020, NWS submitted to Congress the report, Subseasonal and Seasonal Forecasting Innovation: Plans for the Twenty-First Century. Developed with input from federal, regional, state, tribal, and local government agencies, research institutions, and the private sector, the report outlines innovations needed to improve the skill of S2S precipitation forecasts. The report recommended four pilot projects for improving S2S forecasts, including one to improve winter precipitation forecasts (as snowpack in mountain areas sustains water supplies in the West), and one for summer precipitation forecasting in the Plains States. Given the exceptional continuing drought in the West, the winter precipitation pilot should be the first priority. The WSWC urges the Committee to encourage NOAA to request the resources needed to begin these pilot projects. This year over a dozen House members supported a $15 million increase in OAR's U.S. Weather Research program for the western pilot project.

As of October 12, nearly half (47.45%) of the lower 48 States are suffering from drought (drought.gov). Currently, all 17 western states are abnormally dry, with all recording pockets of moderate to severe drought and many suffering from severe to exceptional drought, the driest condition represented on the U.S. Drought Monitor scale. Agricultural interests are hit hardest as crops, feed, and forage deteriorate and rise in cost, threatening farmers, ranchers, and dairies.

In 2015, NOAA released its first-ever service assessment for drought, after California's third consecutive year of drought. NOAA assessments evaluate its performance after significant hydro-meteorological, oceanographic, or geologic events. The California drought assessment's top finding, given the input received from numerous stakeholders, emphasized the need for an improved seasonal prediction capability focused on cool-season mountain precipitation, both in California and in the Colorado River Basin. "A majority of the stakeholders interviewed for this assessment noted one of the best services NOAA could provide is improved seasonal predictions with increased confidence and better interpretation."

The international Colorado River Basin has experienced prolonged drought conditions, for over 20 years, resulting in declining reservoir elevations in Lake Mead and Lake Powell. Water agencies in the seven Colorado River Basin states have been taking unprecedented steps to manage the risk of shortage, including executing historic drought contingency plans (DCPs) with the DOI in 2019. Now, a first-ever Lower Basin shortage is expected in 2022. Arizona, Nevada, and the country of Mexico have already experienced cuts in 2021 as part of drought contingency planning. Drought risk management programs in the contingency plans cost money and/or water. Skillful seasonal precipitation forecasts would help support decision-making to balance costs and the risks of shortage.

Better S2S forecasts would inform decision-making and help mitigate such losses. Again, the Western States Water Council urges the Committee to encourage NWS to request the resources needed to start the western pilot project to improve S2S precipitation forecasting.

Natural Resources Subcommittee on Water, Oceans, and Wildlife

Various Bills

On November 4, the House Committee on Natural Resources Subcommittee on Water, Oceans, and Wildlife held a remote hearing on the following bills: (1) H. Res.320 recognizing the critical importance of access to reliable, clean drinking water for Native Americans and Alaska Natives and confirming the responsibility of the Federal Government to ensure such water access; (2) H.R. 4832 to establish the Open Access Evapotranspiration (OpenET) Data Program; (3) H.R. 5001 to authorize the Secretary of the Interior to continue to implement endangered fish recovery programs for the Upper Colorado and San Juan River Basin; and (4) H.R. 5345 to authorize the Director of the USGS to establish a regional program to assess, monitor, and benefit the hydrology of saline lakes in the Great Basin and the migratory birds and other wildlife dependent on those habitats.

Witnesses included Tanya Trujillo, Assistant Secretary for Water and Science, DOI; Bidtah Becker, Associate Attorney, Navajo Tribal Utility Authority; Rebecca Mitchell, Director, Colorado Water Conservation Board; Sara Porterfield, Water Policy Associate, Trout Unlimited; and Joel Ferry, Utah House of Representatives (Dist. 1).

The WSWC submitted the following testimony supporting various provisions of the bills.

The WSWC has long supported the negotiated settlement of Indian water rights claims.[14] Water in the West is a limited resource, and the unquantified water rights claims of federally-recognized tribes negatively impact tribes, states, and communities across the West. Negotiated settlements of Indian water rights are a means of ensuring the reliability of water supplies for both tribal and non-tribal communities, through well-defined water rights, and provide the certainty needed to help conserve water, address environmental needs, promote economic development, and create jobs on and off tribal lands.

Many of these water rights settlements include infrastructure commitments that are vital to bringing clean drinking water to tribal communities and ensuring tribes have access to water needed for agriculture and economic development. In addition to the projects included in these settlements, tribes across the U.S. face many challenges in addressing basic water needs. There are, for example, tribal communities across the West that do not have ready access to safe drinking and wastewater systems. Infrastructure built as part of these settlements is therefore vital for many tribal communities.

Settlements also fulfill long-neglected federal trust and treaty obligations to tribes, which until settled, expose taxpayers nation-wide to expensive litigation and possibly court decrees that may recognize tribal water rights, but may or may not provide tribes with the resources to develop that water. The cost of meeting those trust and treaty obligations increases as time passes.

However, water rights settlements may not be immediately resolved, due in part to the complex and significant issues typically involved in the adjudication or negotiated settlement of Indian water rights claims. The WSWC upholds the sovereignty of the States to administer and distribute the waters of each state, and Indian water rights claims are addressed through general state water rights adjudications, but the WSWC recognizes that final adjudication or settlement of those claims is not, and should not be, a prerequisite to providing reliable, safe drinking water infrastructure to federally recognized Indian Tribes and Alaska Native communities under federal trust and treaty obligations.

The WSWC supports universal access to reliable, clean drinking water for federally recognized Indian Tribes and Alaska Native communities.[15] Much of the language in our policy position is similar to the language of H. Res. 320, though with more of a western state perspective on water-related concerns.

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[14]https://westernstateswater.org/events/2021-symposium-on-the-settlement-of-indian-reserved-water-rights-claims/

[15]https://westernstateswater.org/wp-content/uploads/2021/04/465_Universal-Access-to-Clean-Drinking-Water_2021Mar25.pdf

The WSWC supports the provision of clean water to tribes to meet their domestic needs and recognizes that providing basic drinking water service is an essential component of the federal trust responsibility. Additionally, developing the technical, managerial, and financial capacity of tribes to operate and maintain that infrastructure is critical to the longevity of such an investment. Federal programs already exist to fulfill many of these needs, but are underfunded and cumbersome to navigate.[16]

The WSWC supports a coordinated approach across federal agencies and departments to leverage those programs in a meaningful way, and adequate funding from Congress to meet those needs. The WSWC further supports federal agency collaboration with tribes, states, and local jurisdictions to establish expedited planning, design, development, and operation of water infrastructure to meet the clean drinking water needs of tribes. Finally, the WSWC urges Congress to support, encourage, and fund the appropriate, expedited resolution of negotiated settlements and adjudications relating to Indian water rights claims.

H.R. 4832 - Open Access Evapotranspiration (Open ET) Data Act

The WSWC strongly supports efforts to enhance and expand the availability of and open access to consistent and comprehensive water supply, demand and water use data and information, such as through an Open Access Evapotranspiration (OpenET) data program and supports related federal authorizing legislation and appropriations. H.R. 4832 would authorize the creation of a software system and data platform by means of an operational use partnership that is crucial to improving access to data and information for more effective water management and use.

The WSWC particularly appreciates the fact that H.R. 4832 explicitly directs the Secretary of the Interior to "…coordinate data analyses, use, and collection efforts with other Federal agencies, States, and Tribal governments through existing coordinating organizations, such as - (A) the Western States Water Council; and (B) the Western States Federal Agency Support Team [WestFAST]." WestFAST was created a decade ago at the request of western governors to focus collaboration between federal and state agencies with water resources responsibilities. OpenET will involve partners from federal and state agencies, institution of higher education, private sector entities, and nongovernmental organizations using satellite and weather data to map consumptive water use/evapotranspiration (ET) at the individual field scale.

In the West, the predominant consumptive use of water is ET from irrigation. With this program, the DOI will be able to partner with the OpenET consortium and with a broad network of collaborators to refine, develop applications, and operationalize the use of OpenET, providing credible, transparent, automated, and easily accessible consumptive water use data across the West. No such system exists today. There is a need for developing new monitoring technologies such as OpenET that provide more timely data availability and more refined spatial coverage. Currently

[16]Universal Access to Clean Water for Tribes in the Colorado River Basin, is available at https://www.naturalresourcespolicy.org/docs/water-tribes/wti-full-report-4.21.pdf.

access to satellite and ET data is limited and expensive, keeping it out of the hands of many water users and decision-makers. OpenET will allow water managers to assess how much water is being used via a cost-effective and easy-to-use web-based platform, filling a critical water data management gap.

The WSWC has long supported the use of remote sensing technologies and data from Landsat missions to improve the measurement and monitoring of consumptive water use through a partnership between the NASA and USGS. The recent launch of Landsat 9 and ongoing efforts to define the next Landsat mission help ensure that the data necessary for an operational OpenET program are available. Similarly, the Council has supported the U.S. Bureau of Agrimet network of weather stations that provide data that serves as an important and efficient ground-truthing, calibration, and model validation tool for analysis of information products derived from satellite platforms such as OpenET. Agrimet provides basic data on precipitation, temperature, solar radiance, wind speed and humidity required to calculate reference ET and inform remote-sensing platforms. The Agrimet weather observing network suffers from the challenges of aging instrumentation infrastructure, deferred maintenance, need for technology upgrades, and funding that fails to keep up with these needs, making it difficult to maintain data continuity and coverage for users.

The WSWC urges the Subcommittee to favorably report H.R. 4832. The WSWC has and plans to continue to urge the Appropriations Committee to prioritize OpenET and Agrimet requests so as to allow these valuable tools to benefit federal, state and local policymakers, water managers and water users as the West continues to face water supply, use and management challenges exacerbated by drought.

H.R. 5001 - Upper Colorado and San Juan River Basins Recovery Act

The Endangered Species Act (ESA) (16 U.S. Code § 1531) includes Congressional findings and declarations of purposes and policy. The purposes are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved. Therefore, Congress declared that "…all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this chapter." In 1982, the WSWC had a hand in the addition of Section 2(c)(2), which reads: "It is further declared to be the policy of Congress that Federal agencies shall cooperate with State and local agencies to resolve water resource issues in concert with conservation of endangered species." This addition recognizes the complex past and present relationship in the West between the management and development of water resources and the conservation and protection of threatened and endangered species.

The Upper Colorado River Endangered Fish Recovery Program is an excellent example of the implementation of this policy declaration through the creation of a broad and diverse partnership that is working to successfully recover four species of endangered fish in the Colorado River and its tributaries in Colorado, Utah, and Wyoming, while water use and development continues to meet

human needs in compliance with interstate compacts and applicable federal and state laws. In addition to the States of Colorado, Utah and Wyoming, this partnership includes the Colorado River Energy Distributors Association, Colorado Water Congress, NPS, The Nature Conservancy, USBR, USFWS, Utah Water Users Association, Western Area Power Administration, Western Resource Advocates, and Wyoming Water Association.

On October 15, following a review of the best available science and requesting public comment, the USFWS announced that it has reclassified one of four target species, the humpback chub, from endangered to threatened status. In announcing the change, Matt Hogan, Acting Regional Director for the USFWS, declared: "Today's action is the result of the collaborative conservation that is needed to ensure the recovery of listed species. Reclassifying this distinctive fish from endangered to threatened is the result of many years of cooperative work by conservation partners in the Upper Colorado River Endangered Fish Recovery Program and the Glen Canyon Dam Adaptive Management Program. We thank everyone involved for their efforts as we look toward addressing the remaining challenges in the Colorado River Basin."

The Upper Basin Recovery Program's conservation and management actions have resulted in improved habitat and river flow conditions for the humpback chub over the past 15 years. H.R. 5001 will allow this important program work to continue uninterrupted.

The WSWC has called upon federal agencies to engage in a substantive discussion of past, present and future efforts to work in concert with State agencies to implement Congress' intent to resolve water and species protection issues.

H.R. 5345 - Saline Lake Ecosystems in the Great Basin States Program Act

The WSWC has not specifically addressed H.R. 5345. However, its provisions establishing a cooperative regional program to assess, monitor, and benefit the hydrology of saline lakes in the Great Basin and the migratory birds and other wildlife dependent on those habitats, consistent with valid and existing state water rights, and instate compacts and apportionments, are in harmony with other WSWC positions.

Moreover, at present, the WSWC is working with the USGS to make available data and information on state water rights and uses through the WSWC's WaDE Program. Eventually, the WSWC also intends to include state water quality and federal reserved water rights data and information. These ongoing efforts could help facilitate USGS achieving some of the objective of H.R. 5345.

WaDE and USGS are essential hubs that are part of a growing IoW that through close collaboration and engagement is designed to help partners modernize their water data infrastructure and facilitate effective water management decisions.[17]

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[17] internetofwater.org

We appreciate the Subcommittee's leadership and the opportunity to provide written testimony and information on behalf of our member states.

United States Senate

Appropriations Subcommittee on Commerce, Justice, and Science

NASA's Applied Earth Science Research Programs

On June 21, the WSWC submitted written testimony to the Senate Appropriations Committee's Subcommittee on Commerce, Justice, Science, and Related Agencies. The testimony addresses NASA's Applied Earth Science Research Programs. The WSWC strongly supports and works cooperatively to advance linkages between NASA's capabilities and water managers' needs, working with NASA/Jet Propulsion Laboratory's Western Water Applications Office (WWAO). Tony Willardson, WSWC Executive Director provided the following testimony.

The WSWC championed the placement of a thermal infrared (TIR) imager on Landsat 8 and the expedited construction and launch of Landsat 9 with TIR capabilities. We strongly support innovation to provide similar next generation National Land Imaging Program data - including thermal imaging capabilities - while exploring the potential for medium and longer-term advances in technology, design and future capabilities to meet existing and future uses. Landsat TIR data is used extensively by western states and others to measure and monitor agricultural and other outdoor water uses and needs. It is increasingly important for present and future management of our scarce water resources and is an excellent example of the application of basic science pioneered by the NASA.

In the West, the agricultural and water communities have benefited tremendously from the use of moderate resolution thermal satellite data to map out, measure and monitor consumptive water use. Agriculture is by far the largest consumer of water in the West, and better managing that use is an essential component of both water and food security, as well as sustainable economic development and environmental protection. Increasing demands for water related to growth and changing values are leading to more and more transfers of water from agriculture to other uses, with resulting challenges in maintaining viable rural agricultural communities. Many western states are using Landsat thermal data to protect water rights and manage water use.

NASA has identified the "water and energy cycle" and "water resources" as topics to support in the agency's research and applications programs respectively. The WSWC strongly supports and works cooperatively to advance linkages between NASA's capabilities and water managers' needs, working with NASA/JPL's WWAO. WWAO's mission is to "connect the drops" and improve how water is managed in the arid western United States by getting NASA science, data and technology into the hands of water managers and decision makers. Connection, data and innovation are at the heart of WWAO.

The WSWC urges the Congress to appropriate sufficient funds to support and enhance WWAO's and NASA's focus on research for water resources applications, as well as to promote long-term engagement with state and regional agencies in the western United States responsible for water management and water policy - so as to maximize benefits to the public from NASA's existing and future investments in Earth observations, Earth system models and systems engineering.

The WSWC also calls on the Congress to plan for and provide resources for long-term continuity of observations and the transition from research to operations (R2O), such as the use of Landsat TIR sensor data. The OpenET software system and data platform is another example of the use of NASA TIRs data through an operational use partnership.[18] OpenET is a collaboration involving scientists from federal agencies and academic institutions using satellite and weather data to map consumptive water use/evapotranspiration (ET) at the individual field scale. Interferometric synthetic aperture radar (InSAR) is another tool that NASA has used to measure land subsidence due to groundwater extraction, and its use has been demonstrated as part of NASA's Airborne Snow Observatory (ASO) for estimating snowpack conditions. Additional airborne and spaceborne remote sensing research and observations have the potential to provide information on varied temporal and spatial scales that could with sustained engagement focus on the R2O transition and ultimately be useful for water resources planning, management and decision-making.

NASA's work with the CA DWR on applications for use of remote sensing information has demonstrated that the potential exists for repurposing data collected from certain present NASA missions for water management applications, and that additional potential exists for research applications with sensors planned in future Decadal Survey missions such as the NASA-ISRO Synthetic Aperture Radar (NISAR), which is designed to observe and take measurements of the planet's crust and disturbances, including subsidence due to groundwater pumping. The successful transfer of technology from the research domain to the applications domain is dependent, in part, on continuing communication between researchers and those responsible for resource management and policy decisions and a long-term commitment to maintaining such communication.

Much of the West is currently experiencing unprecedented drought conditions. Currently, nearly all of our 18 member states are suffering from severe to exceptional drought, with half afflicted by the latter, the driest condition represented on the U.S. Drought Monitor scale.[19] Agricultural interests are hit hardest as crops, feed, and forage deteriorate and rise in cost, threatening farmers, ranchers, and dairies. In some cases, producers are culling herds. Municipal water shortages are also possible, particularly for rural communities. Dry, hot, and windy weather combined with dried out vegetation has wildfires on the rise. Western states are using NASA tools to monitor drought-related impacts and consumptive water uses and needs.

Thank you for the opportunity to express our support for various NASA programs and missions the application of which support western water management.

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[18] https://openetdata.org/
[19] www.drought.gov

NOAA and S2S Pilot Projects

On June 21, the WSWC submitted written testimony to the Senate Committee on Appropriations Subcommittee on Commerce, Justice, Science, and Related Agencies regarding the NOAA's NWS U.S. Weather Research Program appropriations. Tony Willardson, WSWC Executive Director, provided the following testimony.

On behalf of the WSWC, a government entity advising the governors of eighteen states, we wish to express our strong support for a $15 million increase in the U.S. Weather Research Program line item within the NOAA FY22 appropriation for the NWS, Office of Oceanic and Atmospheric Research (OAR) account.

The Weather Research and Forecasting Innovation Act of 2017 (Public Law 115-25), reauthorized in 2019 along with NIDIS, directed NOAA to "collect and utilize information in order to make usable, reliable, and timely foundational forecasts of subseasonal and seasonal [S2S] temperature and precipitation." The statute further required submission of a report to Congress that described "specific plans and goals for the continued development of the subseasonal and seasonal forecasts" and "an identification of research, monitoring, observing, and forecasting requirements" needed to meet the statutory goals.

In 2020, the NWS submitted to Congress the report, *Subseasonal and Seasonal Forecasting Innovation: Plans for the Twenty-First Century*. The report outlines current uses of NOAA S2S products and services, and how NOAA plans to improve the usability and transference of data, information, and forecasts. Developed with input from federal, regional, state, tribal, and local government agencies, research institutions, and the private sector, the report outlines innovations needed to achieve two goals for improving products and services: (1) improving the skill of foundational tools in order to improve the skill of the official S2S forecasts; and (2) enhancing the value of S2S products for stakeholders.

The report recommended a number of pilot projects, including one for improving forecasts of winter precipitation (which provides the snowpack sustaining water supplies in mountain areas) in the West, and one for spring/summer precipitation forecasts for agricultural water supply in the Plains States. Another was recommended for Artic sea ice and one for tropical cyclones.

The WSWC urges the Subcommittee to provide resources to start the western pilot project to improve S2S precipitation forecasting to support water management. In fiscal year 2021 NOAA's Weather Research Program line item was budgeted at $26.5 million. The FY22 President's Budget request is $26.7 million. A $15 million investment in S2S pilot projects would be on par with NOAA's successful Hurricane Forecast Improvement Project (HFIP).

Appropriations Subcommittee on Interior and Environment

Department of the Interior Appropriations

On June 24, the WSWC submitted written testimony to the Senate Appropriations Committee's Subcommittee on Interior, Environment, and Related Agencies. The testimony supports FY22 funding requests related to federal responsibilities for Indian water rights settlements, federal filings in State general stream adjudications, WaterSMART programs, and investments in USGS water data. Tony Willardson, WSWC Executive Director, provided the following testimony.

Indian Water Rights Settlements

The WSWC reiterates its support for encouraging negotiated settlements of disputed Indian water rights claims as the best solution to the critical problem of limited resources to fulfill tribal and non-tribal water needs that affects almost all of the Western States. We urge the Subcommittee to support Indian water rights settlements with a strong fiscal commitment for meaningful federal contributions that recognizes the trust obligations of the United States government. Indian water rights settlements are not and should not be defined as Congressional earmarks. Indian water rights settlements, once authorized by the Congress and approved by the President, should be funded without a corresponding offset, including cuts to some other tribal or essential Interior Department programs.

General State Stream Adjudications

The States are primarily responsible for the allocation, administration, management and protection of the water resources and rights to the use of water within their borders. The western states use general stream adjudications to determine and document the quantity and priority dates of water rights within basins, including rights to waters claimed by the United States under either state or federal law. General stream adjudications give certainty to water rights, provide the basis for water right administration, reduce conflict over water allocation and water usage, and incidentally facilitate important market transactions for western water rights. As a matter of policy, federal agencies should pay a fair share of the administrative costs associated with adjudicating their often-numerous claims in state court adjudications. Further, federal agencies should be given policy direction to ensure that federal claims filed in state court adjudications have a sound basis in fact and law. States continue to encounter questionable claims that can be very costly to evaluate, thus diverting limited state resources from completing general stream adjudications.

WaterSMART

Maintaining and delivering sufficient water supplies of suitable quality is key to the West's economic prosperity, environmental needs, and our quality of life, both now and in the future. As recognized in the Science and Engineering to Comprehensively Understand and Responsibly Enhance (SECURE) Water Act, "…States bear the primary responsibility and authority for managing

the water resources of the United States." Western water law and policy are based on the reality of scarcity and the need to use water wisely. Western states have made great strides in increasing efficiency and reducing water use, but continued investments and sacrifices are needed to maintain our quality of life and to protect our environment. The SECURE Water Act also recognizes that "the Federal Government should support the States, as well as regional, local and tribal governments…" and authorizes a number of important programs to provide this much-needed support. The WSWC supports technical and financial assistance to states, local watershed groups and water districts as an appropriate federal role, consistent with authorized federal programs. Section 9504 of the SECURE Water Act authorizes the Secretary of the Interior to provide grants or enter into cooperative agreements to assist states and other non-federal entities in carrying out a range of water use efficiency improvements to address crucial water supply issues, stretch limited water supplies, and improve water management.

U.S. Geological Survey

Real-time water resources data are critical for timely actions in response to droughts, flooding, and other extreme weather events. The lack of federal capital investments in water data programs has led to the discontinuance, disrepair, or obsolescence of vital equipment needed to maintain existing water data gathering activities. The lack of timely and accurate streamflow information threatens to put human life, health, welfare, property, and environmental and natural resources at a considerably greater risk of loss. The data is integral to water supply management decisions of states, utilities, reservoir operators and farmers. It is also essential for risk management, disaster mitigation, and drought and flood forecasting throughout the West.

Many WaterSMART programs have largely been underfunded or remain dependent on year-to-year appropriations. Section 9507 of the SECURE Water Act authorizes enhancements to the USGS's National Streamflow Information Program (NSIP) in order to provide an improved national backbone focused on national needs and interests. The Groundwater and Streamflow Information Program (GWSIP) and USGS' cooperative matching funds within the Water Availability and Use Science Program (WAUSP), together provide vital water data that States and other public and private entities and individuals rely on in making day-to-day planning and management decisions. Section 9508(c) authorizes the USGS to "provide grants to State water resource agencies to assist in developing water use and availability datasets" and has led to initiation of the Water-Use Data and Research (WUDR) program, in support of the Water Use Data for the Nation publication and the National Water Census. USGS' GWSIP, WAUSP, and WUDR together will provide vital water data that States and other public and private entities may rely on to make day-to-day planning and management decisions.

The WSWC expresses our strong support for implementation of the SECURE Water Act, and encourages the Subcommittee to ensure that the Act's authorized activities receive support and appropriations that are adequate to fulfill their stated purposes as a dedicated line item.

Water Resources Research Institutes

The USGS Water Resources Research Act program promotes, facilitates, and conducts research that helps resolve state and regional water problems, promotes technology transfer, facilitates dissemination and application of research, trains scientists through participation in research, and awards competitive grants. Water resources research, the dissemination and application of research results or research to operations (R2O) and technology transfer are increasingly important to meeting our present and future water needs. The Water Resources Research Act of 1964 authorizes a program that includes the establishment of state water resources research institutes (WRRIs) or centers in each state to address our water resources challenges. Today's institutes and centers provide a research infrastructure that uses the capabilities of universities to greatly assist and provide important support to western state water agencies in long-term planning, policy development, and management of the increasingly complex water challenges. These challenges are exacerbated by the uncertainty surrounding population growth, climate, and economic and environmental water demands.

The WSWC and its member states continue to work with the institutes/centers and the academic community to ensure research investments are relevant to our most pressing water problems and allow each state to use methods most appropriate for its own situation. The institutes/centers' outreach and information transfer services and activities are very valuable to the water communities in the various western states. This is a very worthwhile federal-state partnership that promotes collaboration, cooperation and the conservation of limited physical, financial and personnel resources. We urge the Subcommittee to maintain appropriate financial support for the state WRRIs.

EPA Appropriations

On June 24, the WSWC submitted written testimony to the Senate Committee on Appropriations Subcommittee on Interior, Environment, and Related Agencies. The testimony supports FY22 funding requests related to water and wastewater infrastructure, including Clean Water and Drinking Water SRFs, the Water Infrastructure Financing and Innovation Act (WIFIA), and State and Tribal Assistance Grants for ensuring communities have access to clean, safe and reliable drinking water and wastewater services. Tony Willardson, WSWC Executive Director, provided the following testimony

Federal-State Relations

Federal agencies' coordination and collaboration with States is a key element of the CWA's regulatory federalism. States are partners and not stakeholders. When it comes to protecting the Nation's water quality, we strongly urge continuing appropriations to support interagency coordination and consultation at the federal, state, and tribal levels.

States are primarily responsible for managing water resources and water quality within their borders, and most States employ delegated authority under the CWA. This state-federal relationship is especially important in light of the announced review of the CWA Section 401 Implementation Rule and the definition of WOTUS under the NWPR. While EPA outreach regarding NWPR development was unprecedented, similar involvement by States regarding implementation of State 401 Certification authority was lacking. The WSWC maintains that state engagement and meaningful state consultation regarding the review and implementation of these rules, and any potential changes to these rules, is critical.

The WSWC has been involved in a support role with EPA and the USGS in efforts to improve mapping of the Nation's waters and wetlands, and we urge the Subcommittee to provide the resources necessary to develop the data needed for decisionmaking. Some of the friction regarding WOTUS is due to the lack of common baseline data and definitions for the Nation's waters. We strongly support mapping efforts. We recognize the importance of science and the interconnected nature of surface water, groundwater, and wetlands, while also recognizing the Congress and Supreme Court have limited the scope of federal CWA jurisdiction. States have authority to protect all waters within the State. EPA support for state programs, delegated or otherwise, should not be affected by questions related to federal jurisdiction.

States maintain primacy over groundwater management and protection. As continued drought forces many States to rely more heavily on groundwater resources, the nexus between groundwater and surface water is becoming increasingly apparent and important. The WSWC asserts that any federal strategy to protect groundwater quality must recognize and respect state primacy and be built as a genuine federal/state partnership. States recognize the importance of effective groundwater management and are in the best position to protect groundwater quality, as well as allow for the orderly and rational allocation and administration of the resource through state laws and regulations that are specific to their individual circumstances. Working cooperatively with their federal partners, states have shown that they have the ability and authority to address federal needs regarding groundwater within existing legal frameworks.

Infrastructure

Water infrastructure improvements are a continuing chronic need across the country, and especially in rural and tribal areas across the West. Federal funding is critical for the Clean Water and Drinking Water SRFs, WIFIA, and State and Tribal Assistance Grants for ensuring communities have access to clean, safe and reliable drinking water and wastewater services. The WSWC supports adequate funding for these programs to carry out their intended purposes.

EPA's SRF programs provide states with capitalization grants that are leveraged with state contributions to offer financial assistance to cities, towns, communities, and others for the planning, design, construction and rehabilitation of built and green water and wastewater-related infrastructure to improve source and drinking water quality. These programs are one of the principal tools that states use to pursue the goals of the CWA and SDWA. The Nation's wastewater and drinking water

infrastructure is aging and in need of repair and replacement. To the extent federal law has established certain nationwide levels of treatment for drinking water and wastewater, the federal government has a corresponding obligation to provide states with the necessary financial and technical assistance needed to comply with such requirements, including the appropriation of adequate funding for SRF capitalization grants.

New competing water and wastewater infrastructure funding programs should not come at the expense of the SRFs, which are a proven model for addressing water and wastewater infrastructure needs. The WSWC urges the Subcommittee to ensure that stable and continuing federal appropriations are made for SRF capitalization grants, WIFIA loans and State and Tribal Assistance Grants at levels that are adequate to help States address their water infrastructure needs and protect public health and the environment for the benefit of the people.

Congress has approved several requirements on the states' management and use of SRFs, including but not limited to mandating the use of a percentage of appropriated funds for principal forgiveness, negative interest loans, grants, or a combination thereof. Funding is also set aside for green infrastructure, water or energy efficiency, or other environmentally innovative activities. These and other requirements, often well-intended, are generally aimed at advancing policy objectives that are unrelated or contrary to the SRFs' primary purpose of providing funding for basic water infrastructure. They also reduce the flexibility of the States to manage SRFs in a cost-effective manner and represent unfunded federal mandates that impose significant regulatory burdens, make state SRF programs less attractive to local entities, and reduce the capacity of a State to leverage their SRF programs and address infrastructure needs. SRF programs should allow States greater flexibility and require fewer restrictions.

Appropriations Subcommittee on Energy and Water Development

Bureau of Reclamation Appropriations

On June 24, the WSWC submitted written testimony to the Senate Committee on Appropriations Subcommittee on Energy and Water Development, and Related Agencies. The testimony supports FY22 funding requests related to rural water supply projects; dam safety; maintenance, repair, and rehabilitation needs; forecast informed reservoir reservations; Agrimet; OpenET; drought preparedness; hydropower projects; integration of energy and water planning; and full utilization of the Reclamation Fund for its intended purposes. Tony Willardson, WSWC Executive Director, provided the following testimony.

Reclamation Fund

Recognizing the critical importance of water in the development of the West, the Congress passed the Reclamation Act on June 17, 1902 and provided monies "reserved, set aside, and appropriated as a special fund in the Treasury to be known as the 'reclamation fund,' to be used in the examination and survey for and the construction and maintenance of irrigation works for the

storage, diversion, and development of water for the reclamation of arid and semiarid land..." in seventeen western states, to be continually invested and reinvested.

The WSWC requests that the Subcommittee recommend fully appropriating the receipts and collections accruing to the Reclamation Fund, pursuant to the Reclamation Act and other acts, for their intended purpose in the continuing conservation, development and wise use of western resources to meet western water-related needs. "Needs" may include Reclamation project dam safety costs, financing extraordinary maintenance and rehabilitation of aging infrastructure (including transferred works), funding authorized rural water supply projects, and the construction of Reclamation facilities incorporated as part of a Congressionally approved Indian water right settlements. We also support an investigation of converting the Reclamation Fund to a true revolving trust fund.

The Reclamation Fund was envisioned as the principal means to finance federal western water and power projects with revenues from western resources. Its receipts are derived from water and power sales, project repayments, certain receipts from public land sales, leases and rentals in the seventeen western states, as well as certain oil and mineral related royalties - but these receipts are only available for expenditure pursuant to annual appropriation acts. With receipts outpacing expenditures for authorized Reclamation purposes, the unobligated figure gets larger and larger, while the money is spent elsewhere for other federal purposes, contrary to the Congress' original intent. The actual unobligated balance at the start of FY20 was $17.668 billion, and was estimated to have been $17.689 billion at the beginning of FY21 and $17.794 billion at the beginning of FY22.

Rural Water Supply Projects

The WSWC strongly supports funding to expedite construction of long-authorized Reclamation rural water supply projects in a timely manner, including projects that meet tribal trust and other federal responsibilities, while recognizing and continuing to defer to the primacy of western water laws and tribal settlements in allocating water among users. There are six authorized and active rural water projects located in Montana, New Mexico, North Dakota, and South Dakota, of which five have yet to be completed at an estimated federal cost of around $898 million. Construction costs continue to increase due to delays, inflation and the rising costs of materials and labor. At current levels of funding, completion of some projects could be delayed by decades. There is a Federal responsibility to complete authorized rural water projects, particularly those intended to fulfill in part a solemn Federal promise and trust responsibility to compensate States and Tribes for lost resources as a result of the construction of federal flood control projects and other actions.

Project Maintenance, Repair, and Rehabilitation

The average age of USBR dams is 70 years, with most requiring maintenance, repair, and rehabilitation (MR&R) estimated at $2.9 billion. We support federal investments and collaborative efforts in water-related infrastructure projects and programs that deliver adequate supplies of suitable quality water, and provide jobs and economic security, while protecting the environment. We also

support dedicated federal water infrastructure funding. Reclamation operates hundreds of dams, reservoirs, and related infrastructure in the West, supplying water and power to millions of people, irrigating millions of acres for food and fiber, providing flood control and recreation, and supporting wildlife and habitat. The importance of these projects cannot be overstated.

Many of Reclamation's facilities are nearing, or have already exceeded, their original design lives and are in need of MR&R, in order to minimize risk to public safety and continue to serve their authorized purposes. MR&R needs refer to both maintenance that has been deferred and future projections or anticipated maintenance, repair and rehabilitation work. Reclamation's existing funding, and the funding from non-federal partners, which operates two-thirds of Reclamation's infrastructure under contract, are not sufficient to address all MR&R needs. We support stable and continuous funding streams for maintenance, rehabilitation and repair of Reclamation dams and related infrastructure, as well as updated evaluations of priority needs.

Dam Safety

The Reclamation Safety of Dams Act of 1978 provides Reclamation with authority to preserve and maintain the structural safety of dams under its stewardship. The WSWC supports ongoing coordination of state and federal efforts to strengthen dam safety programs. We support actions that provide stable and continuous federal funding streams for Reclamation dam safety work and related infrastructure.

Forecast Informed Reservoir Operations

The WSWC supports the use of innovative FIRO by USBR and other public and private entities at all levels. This would help to maximize the effective and efficient use of our existing and future infrastructure to benefit our myriad and growing economic uses of water, while at the same time balancing and protecting our need for public health and safety, as well as a resilient and healthy environment.

OpenET

In the West, the predominant consumptive use of water is evapotranspiration (ET) from irrigation. The WSWC supports a $5 million request under Reclamation's WaterSMART program for development of an Open Evapotranspiration (OpenET) software system and data platform through an operational use partnership (https://openetdata.org/). OpenET involves scientists from federal agencies and academic institutions using satellite and weather data to map evapotranspiration at the individual field scale. With these funds, Reclamation would be able to partner with the OpenET consortium and with a broad network of collaborators to refine, develop applications, and operationalize the use of OpenET, providing credible, transparent, automated, and easily accessible consumptive water use data across the West. No such system exists today. There is a need for developing new monitoring technologies that provide more timely data availability and more refined spatial coverage.

Currently, access to satellite and ET data is limited and expensive, keeping it out of the hands of many water users and decision-makers. OpenET will allow water managers to assess how much water is being used via a cost-effective and easy-to-use web-based platform, filling a critical water data management gap.

Agrimet

We also support $1 million in funding for Reclamation's Agrimet network of weather stations that provide data that serves as an important and efficient ground-truthing, calibration, and model validation tool for analysis of information products derived from satellite platforms such as OpenET. Agrimet provides basic data on precipitation, temperature, solar radiance, wind speed and humidity required to calculate reference ET and inform remote-sensing platforms. The Agrimet weather observing network suffers from the challenges of aging instrumentation infrastructure, deferred maintenance, need for technology upgrades, and funding that fails to keep up with these needs, making it difficult to maintain data continuity and coverage for users.

Drought

As the Subcommittee members are aware, much of the West is again in the grip of severe to exceptional drought. We support Reclamation's Drought Response Program, authorized under the Water Sustain and Manage America's Resources for Tomorrow (WaterSMART) program and the Science and Engineering to Comprehensively Understand and Responsibly Enhance (SECURE) Water Act, and urge the Subcommittee to provide funding for a comprehensive and coordinated national drought preparedness and response program on par with federal efforts to address other natural disasters.

Hydropower

We support reasonable hydropower projects and programs that enhance our electric generation capacity and promote economic development through streamlined permitting processes, while appropriately protecting environmental resources, consistent with States' laws and certification authority under the CWA Section 401.

Energy and Water Planning

Finally, we support integrating water and energy program and project planning, including improved data on water and energy supply and demand, that promotes conservation and use efficiency while seeking to minimize economic, environmental, and other costs.

WATER DATA EXCHANGE

In 2021, progress with the Water Data Exchange (WaDE) Program focused on five specific areas: (1) WaDE Management Activities and Plans; (2) Technical Activities; (3) Financial Activities; (4) Summary of the Existing WaDE Data System Resources; and (5) Key Outreach and Coordination Activities.

1. WaDE Management Activities and Plans

We drafted a 5-year work plan for the years 2021-2026 for the WaDE Program. The work plan consists of seven main tasks that are presented in detail as 45 sub-tasks. We plan to solicit feedback and suggestions to improve the work plan and better align it with the interests of our member states, federal partners, and philanthropic organizations.[20]

The summer Water Information and Data Subcommittee (WIDS) meeting was held on August 16, 2021. The primary purpose of WIDS is to provide advice on present and future WSWC data-related efforts, including the WaDE Program. WIDS also provides a forum for WSWC member state Information technology specialists to learn, share, and exchange ideas specific to water information and data management. The virtual summer meeting was attended by 41 representatives from across the Western States and many federal agencies and non-governmental organizations. Members of the Data Science Committee of ICWP joined this meeting. The WSWC and WaDE staff presented an update on WaDE and a draft 5-year work plan. Justin Huntington, Desert Research Institute (DRI) shared an update on OpenET and its upcoming public unveiling event in September. He also provided an overview of the NASA's Research Opportunities in Space and Earth Science (ROSES) proposal to operationalize OpenET for the use of state agencies and integrate it with WaDE data services. Justin and WSWC staff answered questions and ended with an agreement to create an OpenET workgroup within the WIDS membership for those who are interested in engaging with the NASA ROSES proposal and the project afterward.[21]

We drafted a persona use case document that describes the potential use and benefits of WaDE and the Western States Water Data Access and Analysis Tool (WestDAAT) dashboard for six distinct fictional personas, each of whom represents a variety of users (e.g., governor, state engineer, farmer, etc.). The document is the basis for upcoming focus group discussions on how WestDAAT will help our member states and others.[22]

WSWC partnered with the OpenET team on a collaborative proposal to the NASA ROSES program to operationalize OpenET and integrate its data services with water rights in WaDE. Our first stage proposal that DRI submitted in May 2021 was successful and we were encouraged to

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[20]https://westernstateswater.org/wade-updates/2021/wade-5-year-work-plan-2022-2026/
[21]https://westernstateswater.org/wids
[22]https://westernstateswater.org/wade-updates/2021/westdaat-use-cases-and-personas/

apply for an extended second stage proposal due in September 2021. The proposed project seeks to accomplish the following: (1) take OpenET consumptive water use estimates with field boundaries and aggregate them to different spatial hydrologic or administrative spatial data layers as needed by our member states for their water budget models; (2) allow comparisons between water rights and estimated consumptive use in a watershed through the WaDE dashboard; and (3) allow states to share consumptive use estimates with the USGS Water Use Research Program through WaDE.

The OpenET project[23] has developed an operational system for mapping evapotranspiration (ET) and consumptive use for the 17 western states of a field scale. OpenET provides daily, monthly, and annual ET data at a spatial resolution of 30 m x 30 m (0.22 acres) using an ensemble of well-established satellite-driven ET models implemented on the Google Earth Engine cloud computing platform.[24] This allows for interoperability across different datasets, massive parallel processing, storage, and scalability in time and space, and automated operational updates with new observations that would otherwise be very costly and burdensome for state and federal agencies to develop, operate and maintain. We have drafted a document that summaries the activities that we will undertake and have shared it with our IT contractor so they can estimate the cost of implementing the design additions to the WaDE dashboard. We expect a decision on this grant application towards the end of 2021.

2. Technical Activities

We continued to work with the USGS Water Availability and Use Science Program team on a water use data sharing pilot based on the WaDE 2.0 data dictionary. States share data through WaDE using any data service technology available to them. The WaDE team maps states' data into the WaDE database which then becomes available to USGS in a consistent data dictionary structure across participating states. The pilot now includes Utah, Texas, and California. We have imported reported municipal and industrial water supply data from the three states into the WaDE database. The USGS team is evaluating the new design changes we implemented this past Spring to import these three states' data into their national water census database.[25]

We continued to import water data to the WaDE database and have created a summary Tableau dashboard that interactively shows the number and types of imported datasets in each of our member states (Figure 1). The current WaDE 2.0 Data System focuses on sharing ten unique datasets from the following four major types of water data: (1) Water Rights data, including Points of Diversions (POD) and Places of Use (POU); (2) Regulatory spatial data, such as areas closed to new water uses; (3) Site-Specific time-series data, such as reservoir levels, stream gages, and water use reports; and (4) Aggregated Water Budget data: Consumptive use, Delivered Water Use, Demand, Supply, and Withdrawal. Some states do not produce one or many of these datasets within the four data types, or they do not have such data publicly available yet.

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[23] https://openetdata.org/
[24] https://earthengine.google.com/
[25] https://westernstateswater.org/wade-updates/2021/wade-2-0-data-dictionary/

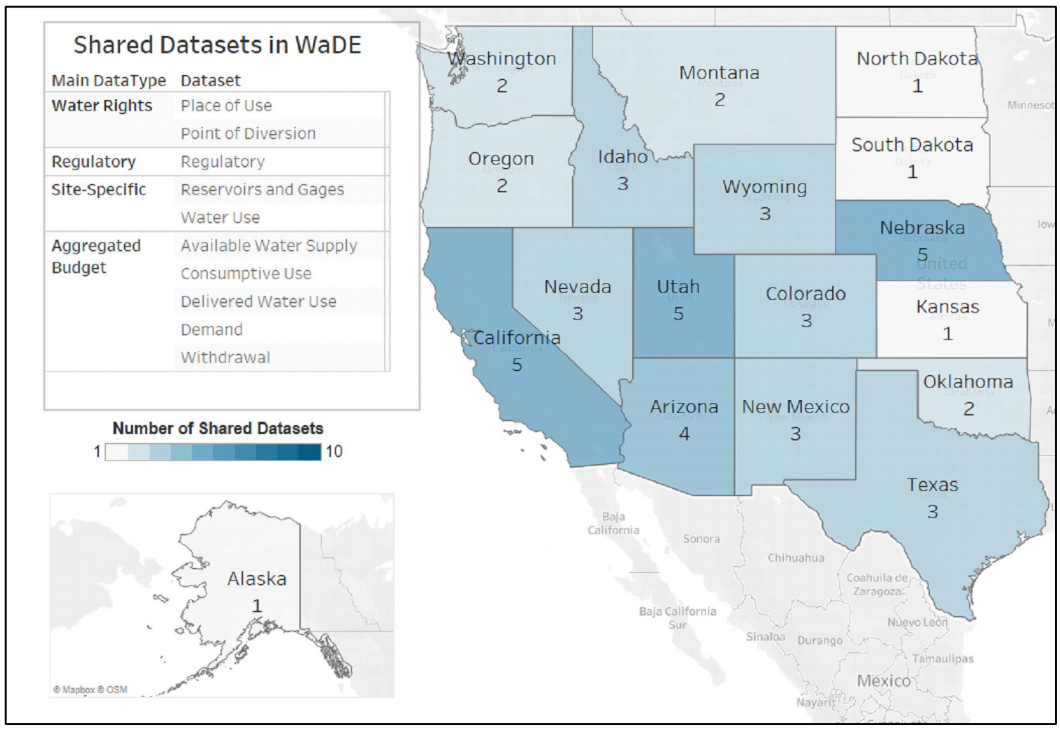

Figure1: Number of shared datasets through the WaDE Data System across the western eighteen states. States can share up to ten datasets within the four major data types that WaDE focuses on.[26]

We continued to coordinate with the IoW organization staff about connecting WaDE with the Geoconnex project to make WaDE data interoperable with USGS, EPA, and USBR data. Geoconnex is establishing a common metadata framework based on landing pages with persistent identifiers for real-world environmental features that will link disparate water datasets and enable users to search data across data systems. This architecture would allow water data providers to publish metadata about common environmental features using standardized approaches amenable to automated aggregation and inference of relationships between the underlying datasets without the need for centralized data governance and storage. We are working with the Geoconnex team to index all the WaDE data including POU and POD water allocation sites and aggregate watersheds into the Geoconnex system. A unique web browser landing page will be created for each WaDE site (with embedded site metadata), which will allow data crawlers (such as Google) to search it and create better public access to the site metadata information. In addition, we will also index the WaDE water allocation sites with the NHDPlus network as part of the Hydro-Network Linked Data Index (NLDI) framework.[27] The NLDI is a system that can index spatial information and river network-linked data together with site metadata, which allows users to navigate the river network (upstream and downstream) for the discovery of related indexed site information. Users can use this approach to better understand the relationship between a single monitoring location and the broader

[26]An interactive Tableau dashboard is available here: https://public.tableau.com/app/profile/wswc/viz/WaDE2_0_Shared_Datasets/ShraedDatasets_dash?publish=yes
[27]https://labs.waterdata.usgs.gov/about-nldi/index.html

world of available water metadata. This feature will be part of the planned WaDE dashboard, WestDAAT.

3. Financial Activities

The current WaDE funding from the Moore Foundation through the IOW organization grant through September 15, 2021, was just recently extended by one year. IOW has secured another major corporate philanthropic commitment that will include another grant to partially support WaDE for the next five years. In addition, we have worked hard on securing future funding to sustain the WaDE Program from other sources. Below is a list of proposals that we have already submitted to further support the WaDE program and develop its WestDAAT dashboard.

We are very excited to share that our WaterSMART proposal to the USBR Applied Science Program that we applied for in April 2021 was selected for funding. The grant is for $200,000 and extends for two years. We will work with Reclamation to finalize the funding process by November. The actual release of the grant money is expected thereafter in 2022. Reclamation awarded 20 projects with a total of $3.1 million.

In August, the Walton Foundation signaled an intention to fund three WaDE development activities to further the development of the program and its dashboard for the next 18 months. We submitted a Concept Note to them in May 2021 to fund one or many of seven WaDE activities which will collectively launch our third phase to operationalize WaDE data services and its online data dashboard query and analysis tool (i.e., the WestDAAT dashboard). The proposed activities also align with the Environment Initiatives in the 2025 Walton Family Foundation Strategy by providing new streamlined access to different types of regional water data that is expected to drive innovation in sustainable water management and inform market-based water transfers in the western United States.

As mentioned in the first section, we have partnered with the OpenET team on integrating their consumptive use data with WaDE water rights at the watershed level. We are submitting the second stage proposal on September 24th. Potential funds from this grant will support WSWC staff time working on this integration and outreach to our member states. The funds will also cover our IT contractor costs to build the additional proposed features to query and visualize OpenET data along with water rights data in the WaDE dashboard.

4. Summary of the Existing WaDE Data System Resources

- WaDE Website
  https://westernstateswater.org/wade/
- WaDE Application Programming Interface (API)
  https://app.swaggerhub.com/apis/WesternStatesWater/WaDE2.0/1.0.0
- GitHub for WaDE Data System Open-Source code and documentation
  https://github.com/WSWCWaterDataExchange
- WaDE Schema Diagrams

https://schema.westernstateswater.org/diagrams/index.html

- WaDE Controlled Vocabularies
  http://vocabulary.westernstateswater.org/
- Western Water Data Access and Analysis Tool (WestDAAT) proof-of-concept prototype
  https://wade-mapbox-prototype.azureedge.net/
- WestDAAT Mockup for the planned final design
  https://xd.adobe.com/view/6ac0d60f-f506-4489-82e9-438e1f8f7c65-3f93/screen/e3fa1efb-c1a2-4958-a96e-fc886afecd53?fullscreen

WESTERN STATES FEDERAL AGENCY SUPPORT TEAM

The Western States Federal Agency Support Team (WestFAST) promotes collaboration between the WSWC and twelve federal agencies with water resource management responsibilities in the West. WestFAST was established pursuant to a request by the WGA and a recommendation in the WGA's 2008 report titled: Water Needs and Strategies for a Sustainable Future: Next Steps (Next Steps Report). Specifically, WestFAST was formed to promote cooperation and coordination between federal agencies, and between states and federal agencies. WestFAST was intended to help the WSWC implement recommendations and collaborative efforts outlined in the Next Steps Report.

Since its inception over 12 years ago, WestFAST has grown to 23 members, with an Executive Council that meets weekly with the Liaison. WestFAST's member agencies include: USDA USFS and NRCS; Corps; U.S. Department of Defense (DOD); EPA; the DOI's - Bureau of Land Management (BLM), USBR, National Parks Service (NPS), U.S. Fish and Wildlife Service (USFWS), and USGS; NASA; and NOAA. The DOJ participates as an affiliate member to the WestFAST. The current WestFAST/WSWC Federal Liaison Officer is Heather Hofman (NRCS).

In 2021, WestFAST's priorities included enhancing communication and proactive collaboration to develop effective state-federal partnerships. Key areas of focus included supporting state water planning, drought resilience, infrastructure, and the impacts of wildfire on water resources. WestFAST was also working to better understand how water managers utilize federal assets and data. To support this, a survey and listening sessions were launched in coordination with the WSWC to identify successes and challenges in areas such as wildfire mitigation, the healthy watersheds program, and the use of SRFs for forest remediation.

Furthermore, the WestFAST team organized several special topic webinars, which were very well attended. Topics included the Southwest Oklahoma Water Supply Action Plan; updates on the uses of the Reclamation Fund; NRCS's next generation seasonal water supply forecasts using machine learning and prediction analytics; NASA's Crop-CASMA tool for high resolution soil moisture data; the Forest Resilience Bond, leveraging public-private partnerships to finance and accelerate landscape-scale forest restoration; extensive database with the Intermountain and Great Plains aquatic inventory; USBR's findings from the SECURE Water Act report to Congress and the accompanying West-Wide Climate and Hydrology Assessment; a detailed walk through of NOAA's redesigned Drought.gov website; the role of beaver dams in wildfire resilience; and Denver Water's post-fire recovery and proactive watershed investment lessons learned.

OTHER IMPORTANT ACTIVITIES AND EVENTS

Western States Water

Since the first issue in 1974, the WSWC's weekly newsletter, ***Western States Water***, has been one of its most visible and well received products. Its primary purpose is to provide governors, members and others with accurate and timely information with respect to important events and trends. It is intended as an aid to help achieve better federal, state, and local decisionmaking and problem solving, improve intergovernmental relations, promote western states' rights and interests, and highlight issues. Further, it covers WSWC meetings, changes in WSWC membership, and other WSWC business. The newsletter is provided as a free service.

The following is a summary of significant activities and events in 2021 primarily taken from the newsletter. However, this does not represent an exclusive listing of all WSWC activities, or other important events. Rather, it seeks to highlight specific topics.

Western Governors' State of the State Addresses

Beginning in January, Governors delivered their State of the State addresses to their legislatures and the public. As expected, Governors' highlighted their state responses to COVID 19, the public health challenges they have had and are currently working through, including vaccine distribution, and the impacts on the states' economy and government. A theme of hope was apparent in many speeches, with Governors outlining plans to move forward as the country emerges from the pandemic in the coming year.

Alaska Governor Mike Dunleavy focused his address on Alaska's pandemic response, "recently recognized as the best in the nation," and the economic impacts that have followed. He highlighted the vulnerabilities that Alaska faces in terms of access to larger markets. "As a result, I charged my administration with researching how Alaskans can become more self-reliant within the framework of federalism. Part of becoming a truly self-reliant sovereign starts with the basics: food, security, energy, and medicine. My administration has embarked upon a process to strengthen our agricultural sector. We're going to start by making it easier for farmers to secure land with fewer regulations. We're going to support the growth of our agricultural sector and allow farmers to prosper."

He also talked about meeting the state's energy needs. "If Alaska is to survive on its own, we must prioritize energy independence. For too long, our economy has been held back by the extreme cost of energy in many parts of our state. Alaska is surrounded by abundant sources of energy, both traditional and renewable, yet our energy costs are the second-highest in the nation…. We can start by harnessing the incredible renewable energy resources within Alaska itself. Alaska possesses more tidal energy than the rest of the nation combined. Our potential for wind, geothermal, in-shore and pumped hydro is practically unlimited."

Arizona Governor Doug Ducey delivered his address in a live broadcast to the opening session of the 55th Arizona State legislature. He focused on the impacts of COVID and the decisions

Arizona made in response, including not implementing a lock-down. He went on to say, "Among other agenda items requiring our attention, let's work on broadband expansion…greater access to telemedicine …better roads and bridges…continuing to be a global leader on water innovation…better equipment and training for law enforcement…criminal justice reform…and guarding against wildfires, so we stay on top of that ever-present risk."

California Governor Gavin Newsom delivered his address from Dodger Stadium, one of the country's largest vaccination sites. He primarily highlighted California's response to the pandemic, education, and addressing homelessness. He also discussed the impacts of climate change and California's historic wildfire season. "In 2020, we simultaneously faced two once-in-a-generation crises when we combated the worst wildfire season in our state's history in the middle of the pandemic. The fact is, the hots are getting hotter, the dries are getting drier, and not just here in California, but all across the globe…. Just consider last summer's heat dome on the West Coast of the United States, which led to world-record breaking temperatures here at home. And in just one 24-hour period last August, 12,000 lightning strikes sparked 560 wildfires, requiring heroic efforts by our firefighters and national guard, who landed helicopters into flames to save fellow Californians. This year, we are budgeting more than $1 billion for fire prevention, including fuel breaks, forest health, and home hardening. We forged a historic partnership with the U.S. Forest Service to radically ramp up forest management efforts."

Colorado Governor Jared Polis highlighted several issues in his address to the Colorado legislature, including "building back stronger than before the pandemic, creating jobs, tax relief, helping small businesses, saving people money on health care, taking bold climate action, achieving 100% renewable energy, and building an economy that works for all."

He also highlighted the importance of public lands and addressing climate change. "Addressing climate change isn't just essential to protecting our health and building our economy. It's an essential part of protecting Colorado's iconic public lands, which - as we've weathered this pandemic - we have learned to appreciate even more for the sanctuary they provide…. Our public lands are a treasure we must never take for granted, and always work to nurture and protect."

Idaho Governor Brad Little revealed his "Building Idaho's Future" plan. After highlighting the 2020 challenges that COVID 19 brought, he described his plan, which focuses on education, a strong economy, and strategic investments that support rural communities, small businesses, sustainable transportation planning, public health and safety.

"My 'Building Idaho's Future' plan also invests in needed projects for agriculture and water infrastructure to aid in the economic vitality of rural Idaho. In Idaho, agriculture remains a way of life…. Agriculture – and our economic future – hinge on safe and dependable water sources. Water is truly the source of life. My plan makes $60 million in strategic investments in long-term water projects and safe water systems for our communities."

Kansas Governor Laura Kelly highlighted her Framework for Growth, a roadmap for a thriving economy that focuses on small businesses, infrastructure, new job creation, agriculture, and broadband. "The tough, pragmatic budget choices we have made to this point have given us flexibility to protect our core services – like education, infrastructure, and economic development

tools – from COVID-related cuts, and have been an historically potent tool we have to recruit businesses to Kansas. As we recover from the economic damage caused by effects of this virus, we must continue to prioritize strategic and inclusive economic policies…."

Montana Governor Greg Gianforte delivered his first state of the state address to a joint session of the Montana legislature. He focused on the economy of the state, the need to improve Montana's competitiveness to attract business, and the role of regulations in improving that competitiveness. "To make Montana more competitive, we also need to get a better handle on our regulatory scheme. Burdensome, unnecessary red tape ties up our small businesses, farms, and ranches. These regulations cost time and money... I have charged the [Red Tape Relief] task force to complete a comprehensive, top-to-bottom review of regulations in every single state agency. They are to leave no stone unturned as they identify excessive, outdated, and unnecessary regulations."

He also highlighted his team of cabinet members, including Amanda Kaster at the Department of Natural Resources and Conservation (DNRC). "I have charged [Kaster] at DNRC to bring more federal lands into active forest management to prevent catastrophic wildfires, have healthier forests, improve wildlife habitat, and bring back some of our good-paying Montana timber jobs."

Nebraska Governor Pete Ricketts started his address focused on state pandemic response: "As this session begins, I know that many are excited to turn the page on 2020; however, I believe that when we look back on the last year we will see a year that brought out the best in Nebraskans. We began with high hopes of moving forward as we recovered from the historic floods of 2019. But 2020 was interrupted by a new and unforeseen challenge: the coronavirus pandemic. Nebraskans took on this new challenge in the same spirit we have for generations: We rolled up our sleeves and put our grit, tenacity, and determination to work the Nebraska Way."

He highlighted the legislature's work: "This body is to be congratulated for the work it accomplished in the 2020 session despite the circumstances of the pandemic. Even with these challenges, you were able to pass property tax relief, incentive renewal and reform, veterans tax relief, flood relief, pandemic relief, relief for the tunnel collapse in the Panhandle…." Looking forward, Ricketts focused on priorities for the 2021 session, including property tax issues, maintaining the strength of public schools, health care licensing reform, public safety and broadband access.

Nevada Governor Steve Sisolak delivered a virtual address due to COVID 19 precautions. Governor Sisolak outlined five initiatives to propel Nevada forward, including: (1) the new energy economy, with a focus on all aspects of clean energy to create jobs and help address climate change; (2) the creation of Innovation Zones; (3) preparing the workforce for the new Nevada economy; (4) building infrastructure; and (5) making government work better.

"Infrastructure creates real jobs for real people, and it will allow us to put hundreds of millions of dollars into our economy. Capital projects not only create high-paying construction and development jobs now, but those infrastructure improvements serve as the building blocks for our State's economic expansion for decades to come. The budget I unveiled yesterday includes $75

million for future capital improvement projects that will be used to launch the State Infrastructure Bank, so we can leverage outside capital to fund important infrastructure projects like rural broadband, renewable energy, and road improvements. I am also calling on state agencies and local governments to fast-track billions of dollars of infrastructure projects that haven't been started."

He acknowledged: "The COVID-19 pandemic and the unknown economic impact required State employees to do more with less, including required furloughs for the second half of Fiscal Year 2021. My recommended budget will not include a continuation of furloughs into the next biennium. My budget also prioritizes the health and well-being of state employees and their health benefits in a time when health is wealth."

New Mexico Governor Michelle Lujan Grisham delivered her address virtually. She acknowledged the challenges of the pandemic, but was confident in the State's response to get New Mexico's economy back to where it was when the pandemic hit. "I have all the confidence in our state because I have seen that in two years, even while facing the greatest public health emergency in a century, we can change the narrative. There's progress all around us, even if the pandemic has made it a bit harder to see – economic progress, environmental progress, quality of life progress."

Lujan Grisham highlighted the importance of improved access to broadband, hundreds of infrastructure projects, and job creation for helping to bring the economy back. "The Department of Transportation is at work on more than 200 infrastructure projects statewide, including priority roadway improvements in the southeast. New Mexico is creating new jobs in the outdoor recreation industry 10 times faster than the national average, with more than a billion now in total annual income for New Mexicans. We issued 42,000 construction permits last year; we completed 120 miles of stream protection along the Rio Costilla, safeguarding the Rio Grande cutthroat trout…. We can be aggressive in recruiting new workers and creating new jobs all across our state – in tourism and hospitality, in construction and agriculture, in energy and aerospace and outdoor recreation."

She noted the importance of the environment to economic progress. "The sanctity of our natural environment – our clean air, our water, our beautiful mesas and forests and mountains – is non-negotiable. We know that protecting our environment can also mean giving ourselves a leg up economically, and that's what we will continue to do. By taking swift action, New Mexico will once again be a model for the country."

North Dakota Governor Doug Burgum addressed a joint session of the 67th Legislative Assembly. He described the past year of flooding, drought, pandemic, market crashes, and rapid economic contractions that have tested the resiliency of North Dakotans, adding that the State is well-positioned to rebound. He noted that drought has crept across the State in recent months. "A year ago at this time, there was no part of North Dakota that was considered abnormally dry. Today the entire state is at least that dry – abnormally dry – or dryer. Sixteen percent of the state is rated abnormally dry, 24% is in moderate drought, 53% of our state is in severe drought, and 7% is in extreme drought…. We'll be closely watching these conditions as spring nears and, just as we were in 2017, we'll be ready to support our farmers and ranchers, no matter what nature brings."

He talked about the importance of streamlining processes to provide better support, and announced the Unified Spill Reporting System. "A working group led by the North Dakota Department of Emergency Services and including the Department of Ag, the Department of Environmental Quality and the Department of Mineral Resources, began planning for the Unified Spill Reporting System back in 2018. The result, launched Friday, is a simplified one-stop reporting system for hazardous materials spills, eliminating the need for producers and the public to report spills to sometimes three or four different state agencies…. Through increased collaboration and unified reporting, our state agencies are now better prepared to protect North Dakota's water, air and soil."

He pointed to low interest rates and said North Dakota had a historic opportunity to create a $700 million revolving loan fund to take advantage of those rates and invest in the future with smart, efficient, modern infrastructure, instead of waiting for years to pay cash for aging infrastructure. "And with a flexible $700 million revolving loan fund, we can support strategic high-dollar infrastructure projects while creating room in our DOT budget and the Resources Trust Fund to support many other smaller yet essential water and road projects in every corner of the state…. At the same time, we have an opportunity to create a distribution formula for the Legacy Fund earnings to support projects that will have a lasting impact beyond our current generation; that have a regional, state and national impact; that leverage other financial support and partnership for a high return on investment for our taxpayers; that they're one-time projects that don't grow government, and yet they create a positive impact for our economy, our workforce and our communities."

He said North Dakota ranks sixth in the nation for total energy production thanks to their "all-of-the-above approach that embraces oil, gas, coal, hydroelectric, biofuels, wind, and solar." He described a rising opportunity to use wastewater to produce carbon-neutral power through electrolysis. "But the scale required to make hydrogen-produced energy work requires massive amounts of storage. Thanks to the work of the Energy & Environmental Research Center in Grand Forks, we now know that our western North Dakota geology has three salt beds more than a mile underground that show promise for creating salt caverns. These caverns would generate revenue for landowners while safely storing gases or liquids that are injected into them. This opportunity isn't just limited to hydrogen storage, but also could be used for strategic natural gas storage or essential infrastructure for attracting a $10B petrochemical facility. We have a great opportunity to complement our natural resources, but this opportunity is only possible through continued innovation and a stable tax and regulatory environment."

Oklahoma Governor Kevin Stitt discussed his administration's response to the pandemic, economic growth, and improved transparency, accountability and efficiency of state government. He presented his legislative plan, "The People's Agenda" with three main pillars: (1) make Oklahoma a Top Ten state for business; (2) deliver taxpayers more for their money; and (3) invest in Oklahomans.

He also discussed "the most pressing issue for our state's future," how the recent Supreme Court ruling, *McGirt v. Oklahoma*, affects the sovereignty and jurisdiction of the state of Oklahoma, including how water, agriculture, energy and zoning will be regulated. The ruling "overturned the conviction of a [criminal] on the grounds that the Creek Nation's reservation was never

disestablished for criminal jurisdiction. State courts no longer have the authority to prosecute crimes committed by or against Oklahomans who are also tribal members." It called into question state authority on tribal lands that have been considered state lands for the past 115 years.

Oregon Governor Kate Brown delivered a virtual address that focused on systemic racism; improving the health care and educational systems on a limited state budget; expanding broadband access, including a $100 million investment statewide; managing wildfire risk; ensuring housing for every Oregonian; and protecting the right to vote.

Regarding wildfires, Governor Brown said: "This year, the West was also disproportionately impacted by one of the consequences of climate change – wildfire. In a historic event, hot, dry, winds brought on a wildfire emergency that our state has never seen before…. There is much work left to do in order to have a full recovery. At the same time, we must continue to prepare our communities and our landscapes for these more challenging fire seasons. That starts with creating fire-adapted communities to protect our people and the houses they live in…. Second, we must respond safely and effectively to active fires. This means putting more boots on the ground and investing in new technology, like the next generation of air tankers. Third, we must prevent fire by creating healthier landscapes. That means coordinating thinning and controlled burning during our wet season to reduce fire risk and increase the odds for firefighters. While climate change, population growth, and record fuel levels combine to create a growing wildfire debt, an immediate response to mitigate fire risks is required."

South Dakota Governor Kristi Noem said: "We continue to get good news about South Dakota's revenue situation. Ongoing general fund revenues are up tens of millions of dollars through December, compared to last fiscal year." She said that blizzards and flooding decreased agricultural production in 2019, but that USDA forecasts indicate record yields for 2021. She said the agriculture industry is critically important in South Dakota, and discussed reforms her administration has made to standardize and streamline permitting processes to create a more competitive and attractive environment for agricultural businesses. She noted the merger of the Department of Agriculture and the Department of Environment and Natural Resources, and proposed several further investments in her budget.

Texas Governor Greg Abbott delivered his address virtually. He focused on the state's response to the COVID-19 pandemic, the strength of the Texas economy, funding education, expanding telehealth, ensuring public safety, protecting personal freedoms guaranteed by the Constitution, and regulatory review. "Opportunity is what Texas is all about. No doubt, we faced hard times this past year. But as Texans, we never shy away from challenges. Instead we can embrace them…. Just as Texans have united and put their differences aside to support one another through the pandemic, we in the capitol must also come together to work on their behalf. We must seize this opportunity to make our state healthier, safer, freer, and more prosperous for all who call Texas home."

Newly elected Utah Governor Spencer Cox gave his first and what he deemed "the shortest State of the State speech in Utah history." Cox focused on the "foundational cracks" that need to be addressed in Utah – equity in education, sustainable development in urban and rural areas, job

training, tax reform and investments in infrastructure. In reference to the unique opportunity of the current legislative session, he said: "By providing an $80 million tax cut targeted at senior citizens and Utah families, we can improve the quality of life for scores of Utahns, while simultaneously investing significant new funding for transportation, water, recreation and broadband infrastructure that will benefit every Utahn on and off the Wasatch Front for generations to come."

Cox referenced his One Utah Roadmap, a Plan for the First 500 Days of the Cox-Henderson Administration. Within the Rural Matters strategic priority, Rural Infrastructure and Natural Resources, Energy, Agriculture and Public Lands are highlighted as strategies for improving the economic future of Utah. They included supporting the Lake Powell Pipeline, Bear River water project, and the San Juan County water and transportation project, and advocating for "expansion of the Watershed Restoration Initiative, the Shared Stewardship Agreement, and additional areas of successful cooperation with federal land management agencies."

Washington Governor Jay Inslee delivered his state of the state address virtually, with a focus on the impacts of the pandemic, growing forward to address issues around equality and justice, and addressing the challenges of public health and climate change. "We cannot let the short-term crisis of COVID-19 blind us to the long-term health cataclysm that is climate change. Pollution and climate change also hurt our health, from respiratory disease to new infectious vectors, to threats from natural disasters directly linked to a changing planet. There was no shortage of evidence for that in 2020. It was one of our worst wildfire seasons on record, fueled by blazes of an intensity previously unseen by our firefighters…. Both the virus and climate change have fatal results. Both can be solved through science and ingenuity. We can - and we will - pursue solutions to both at the same time.

"Washington's roaring economy of the last eight years was built on innovation in technology, aviation, agriculture and clean energy. But climate change threatens to unmake the state we know and love, from the growing number and intensity of our wildfires to the acidification of our waters and the evaporation of our snowpack, which can hit our communities with the double whammy of flooding early in the year followed by drought. Climate change is creating extremes that cannot be denied or ignored if we are going to continue to prosper."

Wyoming Governor Mark Gordon highlighted the need to maintain a balanced budget despite challenging times, and emphasized a broad energy portfolio that includes both traditional and renewable fuels. "I say this with both confidence and conviction, to achieve meaningful climate goals, and provide a resilient affordable energy supply, fossil fuels, coupled with a commitment to improving the ways we utilize them, must remain a substantial supply option. As Governor, my position remains clear and firm. I will continue to fight for our state's future, and defend the right to responsibly develop all of our resources." He added the importance of agriculture to the Wyoming economy. "Agriculture will play an ever more significant role in our economic revival. The experience of this past year has laid bare the food insecurity that plagues our entire country. Wyoming is not immune to those issues."

Agriculture

Environmental Quality Incentives Program

On June 10, the USDA announced $41.8 million in assistance through the EQIP to help agricultural producers in drought-stricken Arizona, California, Colorado, and Oregon. USDA's NRCS will make this funding available through Conservation Incentive Contracts, a new option available through EQIP under the 2018 Farm Bill. The new contracts address high-priority conservation and natural resource concerns, including recovering from drought and wildfires, building resiliency, and mitigating climate change impacts.

The 5- to 10-year contracts are only available in select pilot states in FY21, but after refining the implementation process, the contracts are expected to be available nationwide in FY22. The NRCS will set aside $11.8 million specifically for drought-related practices, including forest management, grazing and stock water systems, wildlife habitat, and cover crops. Applications were due July 12.

Emergency Assistance for Livestock

On December 1, 20 Senators sent a bi-partisan letter to USDA's Farm Services Agency Administrator Zach Ducheneaux calling on him to address a gap in federal assistance for "farmers and ranchers affected by this year's widespread and devastating drought...." The Emergency Assistance for Livestock program "plays a critical role in assisting producers who face losses due to adverse weather events like the severe drought across the country this year. We appreciate USDA's recent efforts to improve...coverage by reimbursing producers for a portion of their feed transportation costs and by lowering the threshold for assistance for water transportation costs.... [W]e continue to hear from producers who have...incurred costs related to transporting their livestock to feed sources instead of hauling feed to their livestock. Under current regulations, these producers are not eligible for...transportation assistance. We respectfully request that FSA exercise its authority..." to expand payments to cover a portion of such costs.

Western Senators signing the letter included: John Barrasso (R-WY): Kevin Cramer (R-ND); Mike Crapo (R-ID); Steve Daines (R-MT); Deb Fischer (R-NE); John Hickenlooper (D-CO); John Hoeven (R-ND); Mike Lee (R-UT); Cynthia Lummis (R-WY); Roger Marshall (R-KS); Jerry Moran (R-KS); Patty Murray (D-WA); Jim Risch (R-ID); Mitt Romney (R-UT); Mike Rounds (R-SD); Kyrsten Sinema (D-AZ); Jon Tester (D-MT); and John Thune (R-SD).

Bureau of Reclamation

Federal Irrigation Facilities

On January 8, the DOI's USBR finalized the transfer of ownership of federal irrigation facilities and supporting lands to two local irrigation districts, Minidoka Irrigation District and A&B Irrigation District, that currently operate and maintain a portion of southeastern Idaho's Minidoka Project. These transfers were the fourth and fifth such transfers under the 2019 John D. Dingell, Jr. Conservation, Management and Recreation Act (P.L. 116-9).

Idaho Governor Brad Little said: "The signing of these title transfers is a historic event because they are the first in Idaho under the 2019 Dingell Act. Thank you to the Trump Administration and Idaho's congressional delegation for streamlining the title transfer process to give Idaho water users control over managing these water systems for future generations."

The Minidoka Irrigation District, located in Minidoka and Cassia Counties, will take ownership of approximately 403 acres of land and the facilities that serve 77,214 acres of irrigable private land, which it has been operating and maintaining since 1916. This will support the Minidoka Project's Gravity Division. The A&B Irrigation District, located near the City of Rupert, will take ownership of 1020 acres and the facilities that serve 82,600 acres of irrigable land, which it has been operating and maintaining since 1966. This will support the Minidoka Project's North Side Pumping Division.

Secretary of the Interior David L. Bernhardt said: "Both irrigation districts have operated, maintained and paid for these facilities for decades, and the transfers will decrease federal operating costs and liability – a win for the American taxpayer. By taking these actions, the Trump Administration continues to streamline bureaucratic processes, empower local ownership and facilitate infrastructure investment from non-federal sources."

USBR Commissioner Brenda Burman said: "Through collaborative efforts in the local communities, these title transfers give greater control to the irrigation districts who have managed these facilities for generations."

SECURE Water Act

Report to Congress

On January 22, the USBR issued its *Water Reliability in the West – 2021 SECURE Water Act Report* to Congress. The 60-page report summarized the findings from a more detailed 2021 West-Wide Climate and Hydrology Assessment, which became available in April. Reclamation noted that the Congressionally-mandated report "…provides an assessment of climate change impacts to water uses in the West and adds a new set of West-wide information based in paleohydrology. This report describes our collaborative actions taken to increase the reliability of water and power deliveries since 2016, including: science and research, planning, infrastructure sustainability, efficient hydropower production, and on-the-ground actions to meet needs for irrigation, municipalities, power, Tribes, and the environment."

The report covers the eight major USBR river basins identified in the SECURE Water Act, and assesses the impact of changing conditions on temperatures, precipitation, snowpack, streamflow, droughts, water demands, and groundwater. "Understanding how these changing conditions impact water uses that are central to Reclamation's mission helps us develop innovative approaches to meet these challenges." The report provided a discussion of potential climate impacts on the water supply and delivery systems, and collaborative innovations and strategies to maintain reliable water and power deliveries as conditions change over time. It included a discussion of uncertainties associated with climate change projections, but noted: "[A]verage temperatures are

projected to increase across the West and annual precipitation is projected to increase in the Northwest, particularly in the Columbia and Missouri River Basins, and decline in the Southwest. In most river basins, snowpack is projected to decline as more winter precipitation falls as rain and warmer temperatures melt snow sooner. In some high elevation regions, snowpack may increase due to a projected increase in winter precipitation. Throughout the West, seasonal streamflow is projected to occur earlier in the year…."

USBR noted that they have initiated 27 WaterSMART basin studies in fifteen Western States, with seventeen completed and ten studies still underway. "Non-Federal partners cost-share to evaluate the impacts of climate change and identify a broad range of potential strategies to address current and future shortages…. These strong relationships with non-Federal entities across the West have built a technical foundation that directly contributes to many collaborative follow-on efforts, including eight water management pilots, two basin study updates, and many other efforts." One example given is the Colorado River Basin, where recent collaborative efforts have resulted in partner water contributions to increase the water elevation in Lake Mead by 35 feet, staving off water shortage actions for the immediate future.

West-Wide Climate and Hydrology Assessment

On April 5, the USBR released the 2021 West-Wide Climate and Hydrology Assessment, the 421-page technical report that supports its *Water Reliability in the West - 2021 SECURE Water Act Report* submitted to Congress in January. The Executive Summary said: "The 2021 Assessment investigates changes in climate and hydrology across the West using approaches that align with Reclamation's 2011 and 2016 SECURE Water Act Reports and new techniques, data, and analyses that provide a broader assessment of future hydroclimate changes to support water management in the West." The 2021 Assessment includes additional data, including paleohydrology and refined models for future projections. It offers an analysis of hydroclimate projections in eight major Reclamation river basins, quantifies climate risks to five USBR reservoirs, and synthesizes climate impacts on groundwater recharge and discharge. It also provides a discussion on the uncertainties in the analyses.

In a press release, USBR Deputy Commissioner Camille Calimlim Touton said: "Western water supply and delivery systems are affected by changing hydrologic conditions and competing demands. These reports highlight Reclamation's effort to use the best-available science to meet its mission while also collaborating with its water and power customers, states and local agencies, and tribes to address critical western water management issues."[28]

WaterSMART

On March 17, USBR announced $42.4 million in WaterSMART grants for 55 projects in 13 states that conserve and use water more efficiently. USBR noted that the projects are anticipated to conserve 98,000 acre-feet of water per year. "The selected projects are in Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, New Mexico, Oregon, Texas, Utah, Washington and

[28]https://www.usbr.gov/climate/

Wyoming. Projects include canal lining and piping to reduce seepage losses; installation of advanced metering, automated gates, and Supervisory Control and Data Acquisition systems to improve water management; and programs in urban areas to install residential water meters."

On March 25, USBR announced $2.1 million in WaterSMART grants for 11 collaborative watershed management projects in Arizona, California, Colorado, Idaho, Oklahoma, Oregon and Washington. The press release said: "These projects have been developed by groups of stakeholders working together to address critical water supply needs and water quality concerns. They help water users meet competing demands and avoid conflicts over water."

USBR has also announced two funding opportunities open to projects eligible under the Water Infrastructure Improvements for the Nation (WIIN) Act.[29] One is available to sponsors of seawater or brackish desalination projects eligible under WIIN Act §4009(a), and the other is available to sponsors of water reclamation and reuse projects eligible under WIIN Act §4009(c).[30]

WaterSMART Access for Tribes Act

On December 9, Rep. Melanie Stansbury (D-NM) introduced the WaterSMART Access for Tribes Act (H.R. 6238). The bill authorizes the Secretary of the Interior to reduce cost-share requirements to implement drought and water projects if the Secretary determines that the tribe does not have sufficient funds to pay their share. Stansbury's press release noted that "fewer than five percent of the projects funded under WaterSMART since its inception in 2010 have been led by Tribes or Pueblos." Western co-sponsors of the bill include Representatives Ruben Gallego (D-AZ), Jim Costa (D-CA), Jared Huffman (D-CA), Grace Napolitano (D-CA), Joe Neguse (D-CO), Steven Horsford (D-NV), Teresa Leger Fernandez (D-NV), and Tom Cole (R-OK). The WSWC submitted a letter of support.

Stansbury said: "For far too long, federal programs like the WaterSMART program have included cost-share requirements that have acted as a barrier to Tribes accessing crucial water infrastructure dollars. This bill addresses those barriers, and along with funding in the bipartisan infrastructure law and Build Back Better Act, will help unlock millions of dollars to support Tribal water needs. Addressing these needs is crucial to responding to drought and the lasting impacts of climate change and decades of underinvestment in Tribal water needs." Cole said: "Abundant, safe and reliable supplies of water are critical to quality of life for tribal communities. By removing certain financial barriers, tribes will have more opportunities for improving water infrastructure and conservation practices. These WaterSMART initiatives will not only ensure access to clean drinking water but greatly improve the lives and health of current and future generations."[31]

San Juan-Chama Project

On March 25, the USBR celebrated the 50th anniversary of the San Juan-Chama Project, a regional water transfer project that crosses two states and two major river basins. The project delivers

[29]PL 114-322
[30]https://www.usbr.gov/watersmart/
[31]https://stansbury.house.gov/media

part of New Mexico's share of Colorado River water to New Mexico from Colorado, within the Rio Grande basin, primarily benefitting Albuquerque, Santa Fe, and those served by the Middle Rio Grande Conservancy District (MRGCD). Other entities that receive portions of the supply include several tribes and smaller municipalities throughout New Mexico.

The press release stated, "The San Juan-Chama Project consists of a series of three diversion dams and three tunnels that divert water from the Navajo, Little Navajo, and Rio Blanco in southern Colorado to Heron Reservoir in northern New Mexico.... The storage feature of the project is Heron Reservoir, just off the Rio Chama upstream from El Vado Reservoir, in northern New Mexico." Reclamation has released 750,000 acre-feet of water over the past 20 years to supplement flows to the Middle Rio Grande. Jennifer Faler, USBR Albuquerque Area Manager, said: "At times during the summers of 2018 and 2020, water from this project made up the majority of the water flowing through the Rio Grande in Albuquerque.... As drought continues to grip the Southwest, this supplemental water supply is ever more important."

Drought

Drought Contingency Plans

On April 21, the USBR announced a cost-matching award of financial assistance to five entities in California, Nebraska, and Utah to develop or update DCPs. The $808,912 was made available through the WaterSMART Drought Response Program. The California entities include: (1) the City of Burbank in Los Angeles County ($175,000 to address drought and increased water demands); (2) East Valley Water District in Highland ($200,000 to increase water supply reliability and improve management of declining local groundwater and imported water supplies); and (3) Pala Band of Mission Indians near Temecula ($111,000 to identify drought mitigation and response actions to help with reoccurring drought episodes). The Nebraska Department of Water Resources will receive $200,000 and partner with the Platte Basin Coalition to develop a DCP for the Upper Platte River Basin to improve resiliency and water supply reliability. The Washington County Water Conservation District in Utah will receive $122,912 to prepare a DCP together with local communities for the Virgin River Watershed.[32]

Addressing Drought Across the West Web Portal

On July 29, the USBR launched a new web portal to provide real-time drought information. Addressing Drought Across the West includes tabs for collaboration, drought actions, current conditions, and climate change. "The features of the interactive multi-page platform highlight Reclamation's efforts and investments to mitigate drought impacts, increase drought resiliency, reduce reliance on declining water sources, and increase the efficiency of water deliveries. The portal is user friendly and provides easy-to-understand features, explanations and current information on cutting-edge science, drought actions, current conditions and climate change visualizations that will help the public understand the complex drought conditions in the West."

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[32]https://www.usbr.gov/newsroom/#/news-release/3832

Deputy Commissioner Camille Calimlim Touton said: "Reclamation recognizes the 2021 water year is a historically difficult year for the 17 Western states and for Tribes, fisheries, wildlife, farmers and ranchers, and communities. We hope this tool will be a helpful resource for viewing real-time updates on drought conditions and learn more about what's being done to combat this challenging drought situation. Users of this web portal will be able to explore data-driven mapping visualizations and delve into the new science and forecasting tools used to conduct water supply planning and optimization of water reservoir operations."[33]

FY22 Budget Request

On May 24, the House Committee on Appropriations, Subcommittee on Energy and Water Development, held a hearing on the FY22 Budget Request for the USBR and Corps. Witnesses included David Palumbo, USBR Deputy Commissioner of Operations; Jaime Pinkham, Acting Assistant Secretary, Army (Civil Works); and Lieutenant General Scott Spellmon, Corps Chief of Engineers and Commanding General.

Palumbo's written testimony noted that: "Reclamation's activities, including recreation benefits, support economic activity valued at $66.63 billion, and support approximately 472,000 jobs. Reclamation delivers 10 trillion gallons of water to more than 31 million people each year, and provides water for irrigation of 10 million acres, which yields approximately 25 percent of the Nation's fruit and nut crops, and 60 percent of the vegetable harvest." He said the FY22 budget addressed: "Water management, improving and modernizing infrastructure, using sound science to support critical decision-making, finding opportunities to expand capacity, reducing conflict, and meeting environmental responsibilities…"

Palumbo said USBR's budget supports prioritization of Indian water rights settlements and funding projects to meet tribal trust and treaty obligations. "The FY2022 budget request includes funding for Indian water rights settlements consistent with settlement dates required by statute. In addition to requesting discretionary funding, these settlements will draw on available mandatory funding to support current settlement implementation activities." He added that funding for the Native American Affairs program would improve the capacity to support tribes in resolving water rights claims and other water related technical activities. "This funding will also strengthen Department-wide capabilities to achieve an integrated and systematic approach to Indian water rights negotiations to consider the full range of economic, legal, and technical attributes of proposed settlements." USBR is also establishing and rebuilding clean water infrastructure through its Rural Water Program.

Palumbo acknowledged the general impacts of drought, including decreased snowpack and early spring runoff, and specific measures that have been taken this year when every state west of the 100th meridian is experiencing drought. WaterSMART program funding enables Reclamation to "improve water conservation and energy efficiency as well as proactive efforts to provide sound climate science, research and development, and clean energy. We will continue to seek to optimize non-Federal contributions to accomplish more with our Federal dollars…. Projects funded through

[33]https://www.usbr.gov/newsroom/#/news-release/3927

WaterSMART since 2010, including WaterSMART Grants and Title XVI projects, are expected to save more than one million acre-feet of water each year, once completed." He also said funding would focus on innovation strategies needed to address hydrologic changes, and briefly discussed the Desalination Program and the Science and Technology Program.

He emphasized the need to modernize and maintain water infrastructure. "Reclamation's dams and reservoirs, water conveyance systems, and power generating facilities serve as the water and power infrastructure backbone of the American West…. Funding is provided for dam safety and Extraordinary Maintenance of Reclamation facilities. Reclamation manages 491 dams throughout the 17 Western States. Reclamation's Dam Safety Program has identified 364 high and significant hazard dams." He noted that Reclamation's 78 hydroelectric power plants generate about 40 million megawatt hours of electricity, produce $1B in revenues, and displace over 18 million tons of CO2 that would otherwise be emitted by traditional fossil fuel power plants. The FY22 budget includes funds to support energy initiatives for additional value and revenue, and to reduce project operating costs, facilitating non-federal hydropower development on Reclamation projects.

Pinkham said: "The President's topline discretionary funding request for FY2022 includes $6.8B for the Army Civil Works program to develop, manage, restore, and protect water resources primarily through the construction, operation and maintenance, and study of water-related infrastructure projects, as well as to regulate development in waters of the United States, and to work with other Federal agencies to help communities respond to, and recover from, floods and other natural disasters. This funding request is the highest annual Budget ever requested for the Civil Works program. It supports significant investments to improve the condition of existing water infrastructure, including U.S. coastal ports, while incorporating climate resilience efforts into the commercial navigation, flood and storm damage reduction, and aquatic ecosystem restoration work…" During the hearing, he responded to questions about coordination between the Corps leadership and the different levels of the Civil Works program, noting that they are working together to improve communication and coordination of policy and decisionmaking.

Spellmon briefly addressed various Corps programs, including: investigations; construction; operations and maintenance; protecting the Nation's waters by regulating wetlands; and assisting other federal agencies, state, and tribal governments through its Interagency and International Services Reimbursable Program, providing technical oversight and management of engineering, environmental, and construction projects. Throughout the hearing he responded to questions about specific projects in need of funding and expedited completion, and about the environmental expertise of the Corps.

Applied Science Grants

On September 2, the USBR announced the selection of 20 projects to share $3.1 million in applied science grants to develop tools and information to support water management decisions. These projects include improved water data, modeling and forecasting capabilities. The WSWC was selected for a $200,000 grant to continue developing its Western Water Rights and Aggregate Water Use Data Access and Analysis Tool (WestDAAT), moving it from a prototype to full functionality.

The other selected projects and anticipated grants are as follows: (1) $155,015 for the Salt River Project Agricultural Improvement and Power District to develop a real time reservoir operations model for the Salt and Verde Rivers in Arizona; (2) $200,000 for the California Water Data Consortium to enhance and expand an open-source water accounting platform to serve as a baseline groundwater accounting and tracking tool available to groundwater sustainability agencies across California; (3) $200,000 for the Lawrence Livermore National Laboratory to improve recharge monitoring for enhanced conjunctive management of ground and surface water in California; (4) $200,000 for the Grand Mesa Water Users Association to produce digitized capacity surveys for 50 reservoirs in Colorado; (5) $97,822 for the University of Kansas to develop a procedure for incorporating climate uncertainty into the water allocation process; (6) $119,009 for the Montana Department of Natural Resources and Conservation to develop a modern hydrologic toolset to forecast water supply conditions, enhance water management decisionmaking, and inform drought planning efforts; (7) $200,000 for the Nebraska Department of Natural Resources to implement the fourth phase of the development for Platte River Decision Support System (DSS) to better utilize unappropriated water given increasing climate variability; (8) $199,985 for the Southern Nevada Water Authority to create a Quantitative Microbial Risk Assessment (QMRA) model that pathogen exposure in municipal drinking water; and (9) $195,050 for the New Mexico Bureau of Geology to improve water data access in the middle Rio Grande region of New Mexico.

The remaining projects and funding include: (10) $154,781 for the Norman Utilities Authority to develop a Predictive Lake Level Optimization Tool (PLOT) for the Lake Thunderbird watershed in Oklahoma; (11) $135,469 for Oklahoma State University to quantify agricultural water use across the Upper Red River Basin by combining geospatial analyses, remote sensing techniques, and ground truthing; (12) $48,000 for the Big Bend Conservation Alliance to establish a common data management software platform in the region enabling them to share data on shared aquifers and to provide for better coordination of region-wide water management goals in Texas; (13) $107,497 for Texas A&M University-Kingsville to develop an intuitive web-based tool for efficient simulation of post-wildfire hydrologic changes by integrating remotely sensed data in a hydrologic model; (14) $199,656 for the University of Texas at Arlington to adapt and assess ensemble forecast products from the NWS to support operational decisions at a system of reservoirs in the Brazos River Basin; (15) $134,518 for the Utah Geological Survey to establish a network of high-quality eddy covariance flux stations in Utah, including new and existing stations to provide ground-based evapotranspiration estimates; and (16) $129,675 for the Utah State University to develop an improved seasonal forecast that will be disseminated via a web interface supported by the Utah Climate Center;(17) $199,977 to Social and Environmental Entrepreneurs, a nonprofit organization that sponsors the California Data Collaborative, to develop the California Urban Water Efficiency Data Platform in collaboration with its member agencies, which include local and regional municipal water suppliers; (18) $58,000 for the Stockton East Water District, Eastside Groundwater Use Measurement Project, to develop groundwater pumping and recharge volumes using proven, remote sensing techniques, based on evapotranspiration (ET) estimation from NASA's Landsat satellite imagery; and (19) $200,000 for the Southwest Research Institute, located in San Antonio, Texas, to work with the Middle Pecos Groundwater Conservation District and Reeves County Groundwater Conservation District to conduct a geochemical and statistical analysis to improve understanding of the hydrology of two interconnected spring systems in west Texas, the San Solomon Springs in Balmorhea, and Comanche Springs in Fort Stockton.[34]

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[34]www.usbr.gov/watersmart/appliedscience/docs/2021/fy21-applied-science-grants-project-descriptions.pdf

Title Transfer

On November 8, the USBR transferred title to part of the Middle Rio Grande Project to the MRGCD, following congressional review. USBR's news release indicated that phase one of the transfer includes "the vast majority of MRGCD Project Works - facilities and lands - located between the southern boundary of the Pueblo of Isleta to the northern boundary of the Bosque del Apache National Wildlife Refuge…. Reclamation will continue to have limited ownership within phase one of a few facilities and lands. Reclamation will also continue to fulfill its federal obligations throughout the project to conduct river channel maintenance to ensure efficient downstream water deliveries. MRGCD will continue to manage, use, and maintain the project for the same purposes as before title transfer, including habitat restoration sites within the Phase 1 area."

MRGCD Board Chair Karen Dunning said: "This is a major milestone for the district as receipt of full title will help provide cost-share as we begin rebuilding 42 miles of levees to achieve 100-year flood protection for constituents' properties from Mountain View to Jarales. Having title free of federal ownership provides for the district to leverage federal funding to continually invest in improving system efficiencies as we face future water supply shortages."[35]

Clean Water Act/Environmental Protection Agency

Water Infrastructure Financing and Innovation Act

Water Infrastructure Projects

On January 12, the EPA announced their list of 55 water infrastructure projects that are invited to apply for loans as part of the Water Infrastructure Financing and Innovation Act (WIFIA) program for FY20. Of the 55 invited, 29 of those projects are in WSWC member states. These include 20 in California, three in Kansas, three in Oregon, and one each in Colorado, Texas and Utah. Three projects were also invited to apply for the State WIFIA (SWIFIA) program, authorized in America's Water Infrastructure Act (AWIA) of 2018 (PL 115-270), including the California State Water Resources Board.

The projects range in loan amount from $11 million to $500 million. They address issues relating to groundwater storage; expanding surface water storage; wastewater treatment system improvements; pipeline infrastructure repair and replacement; water quality improvements related to lead, copper and per- and poly-fluoroalkyl substances (PFAS); recycled water and aquifer storage recovery; increasing potable water production capacity; stormwater and sewer improvements; and modernization upgrades for treatment and delivery.

Administrator Andrew Wheeler said: "EPA built one of the greatest financing tools for investing in America's water infrastructure in history when it stood up the WIFIA program in 2018. These 55 new projects will facilitate $12 billion in water infrastructure to help address some of the most pressing challenges faced by water systems across this country."[36]

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[35]https://www.usbr.gov/newsroom/#/news-release/4026
[36]https://www.epa.gov/wifia

On April 27, EPA Administrator Regan announced a new round of WIFIA and SWIFIA funding. Regan said: "EPA's $6.5B in water infrastructure funding will provide more than $13B in water infrastructure projects while creating more than 40,000 jobs. Today's announcement illustrates the multiple benefits of investing in water infrastructure – better public health and environmental protection, job creation, and economic development."

The WIFIA program will make $5.5 billion available to support $11 billion in water infrastructure projects that prioritizes five areas: (1) supporting economically-stressed communities; (2) protecting water infrastructure against the impacts of climate change; (3) reducing exposure to lead and addressing emerging contaminants; (4) updating aging infrastructure; and (5) implementing new or innovative approaches including cybersecurity and green infrastructure.

The SWIFIA program, created by the 2018 AWIA, offers low-interest loans to state water infrastructure programs that help finance community projects. SWIFIA will offer $1 billion in loans to support $2 billion in water infrastructure projects. EPA requests letters of interest from prospective borrowers by June 25 for SWIFIA and July 23 for WIFIA. All projects must submit a letter of interest and then be invited to apply.

On December 3, EPA named 39 new projects across 24 states invited to apply for WIFIA loans. EPA has $6.7 billion for WIFIA loans to help finance over $15 billion in water infrastructure. EPA invited two states, Indiana and New Jersey, to apply for $472 million in loans through EPA's SWIFIA program. State entities authorized to carry out the Clean Water and Drinking Water SRFs are eligible borrowers. "These programs will combine state resources, annual capitalization grants, and the low-cost, flexible SWIFIA loans to accelerate investment in drinking water and wastewater infrastructure to modernize aging systems and tackle new contaminants."

EPA received 50 letters of interest from public and private entities, and from state infrastructure financing authorities, in response to the 2021 notices of funding availability. Of the 39 projects accepted as eligible to apply, 21 of them are located in western states. Projects proposed in California include: (1) $68 million for microgrid and system improvements at Rialto Water Service LLC; (2) $618 million for wastewater capital plan resilience projects at the San Francisco Public Utilities Commission; (3) $575 million for the Pacheco Reservoir Expansion Project at the Santa Clara Valley Water District; (4) $80 million for the Safe, Clean Water and Natural Flood Protection Program at the Santa Clara Valley Water District; (5) $22 million for recycled water conversion at the Santa Margarita Water District; (6) $52 million for the Santa Felicia Safety Improvement Project at the United Water Conservation District; (7) $177 million for the Watershed Connect project at the Upper Santa Ana River Watershed Infrastructure Financing Authority; (8) $164 million for the Santa Cruz Water Program; (9) $16 million for the Drinking Water Reliability Project at the Helix Water District; and (10) $11 million for the Marin Municipal Water District. Colorado projects include: (11) $130 million for the Water2025 Project in the City of Westminster; and (12) $39 million for the Ridgway Water Treatment Plant at the Project 7 Water Authority. In Kansas, (13) $181 million for the Wastewater Reclamation Facilities Biological Nutrient Removal Improvements Project in the City of Wichita. In Idaho, (14) $272 million for water renewal services capital investments projects in the City of Boise. Proposed projects in Oregon include: (15) $36 million for a 7 million gallons/day water treatment plant in the City of Ashland; (16) $12M for water

rehabilitation, resiliency and improvement projects in Oregon City; (17) $76 million for the Lake Oswego Wastewater Treatment Replacement Project at the EPCOR Foothills Water Project Inc.; and (18) $16 million for the Water System Upgrades Program at the Tualatin Valley Water District. In Washington, (19) $136 million for the Post Point Resource Recovery Plant Biosolids Project in the City of Bellingham; and (20) a $287 million Master Agreement in King County. In Texas, (21) $14 million for Sharyland Water Supply Corporation Water System infrastructure improvements. Another four proposed projects have been added to the wait list, including Colorado ($464 million for the Northern Integrated Supply Project - Glade Reservoir Complex), Utah ($893 million for the Utah Lake Restoration Project), and South Dakota ($20 million for the Sioux City Biosolids to Fertilizer Project).

Litigation/Navigable Water Protection Rule

CWA §401 Certification Rule

On May 27, the EPA announced its intent "...to reconsider and revise the 2020 CWA §401 Certification Rule to restore the balance of state, Tribal, and federal authorities while retaining elements that support efficient and effective implementation of §401. Congress provided authority to states and Tribes under CWA §401 to protect the quality of their waters from adverse impacts resulting from federally licensed or permitted projects. Under §401, a federal agency may not issue a license or permit to conduct any activity that may result in any discharge into navigable waters unless the affected state or Tribe certifies that the discharge is in compliance with the Clean Water Act and state law, or waives certification."

The pre-publication version of the review announcement said, "EPA has completed its initial review of the 401 Certification Rule and determined that it will propose revisions to the rule through a new rulemaking effort. The agency has considered the following factors in making this determination, including but not limited to: the text of CWA §401; Congressional intent and the cooperative federalism framework of CWA §401; concerns raised by stakeholders about the 401 Certification Rule, including implementation related feedback; the principles outlined in Executive Order [13990]; and issues raised in ongoing litigation challenges to the 401 Certification Rule."

EPA Administrator Michael Regan said: "We have serious water challenges to address as a nation and as EPA Administrator, I will not hesitate to correct decisions that weakened the authority of states and Tribes to protect their waters. We need all state, Tribal, local, and federal partners working in collaboration to protect clean water, which underpins sustainable economic development and vibrant communities. Today, we take an important step to realize this commitment and reaffirm the authority of states and Tribes."

EPA is not going to revert back to the former rule, originally published in 1971, but is considering specific provisions within the 2020 rule for revision. These include: (1) the effectiveness of pre-filing meeting requests; (2) constraints associated with certification requests and if they limit the ability of the state to get the necessary information to make a certification decision; (3) provisions around defining a "reasonable period of time" for states to certify; (4) the scope of certification; (5) certification actions and the federal agency review process; (6) enforcement; (7) the

lack of ability to modify certifications if the certifying authority, federal agency and EPA agree; (8) the timeframe for notifying and receiving feedback from neighboring jurisdictions; (9) the general impacts of the rule on the certification process and project development; and (10) coordinating implementation of rule revisions and whether other relevant federal agencies, such as the Army Corps of Engineers, should propose and finalize concomitant regulatory changes for consistency.

EPA opened an ongoing dialogue with states and tribal partners, with initial listening sessions for certifying authorities on June 14, 23 and 24.[37]

WestFAST EPA representative Roger Gorke facilitated a June 23 listening session with WSWC members, and examples of the impact of the new rule from that meeting were shared.

On July 15, the WGA, National Governors' Association and WSWC staff joined a dialogue with the EPA on plans to revise the CWA Section 401 Rule. EPA's Casey Katims, Deputy Associate Administrator for Intergovernmental Relations, and John Goodin, Director of the Office of Wetlands, Oceans and Watersheds, spoke as well as Brian Frazer and Lauren Kasparek.

EPA was soliciting written comments of the following key issues: (1) pre-filing meeting requests (40 CFR 121.4); (2) certification requests (40 CFR 121.5); (3) a reasonable period of time to act (40 CFR 121.6); (4) the scope of certification (40 CFR 121.2); (5) federal agency review of certification actions (40 CFR 121.7-121/9); (6) enforcement (40 CFR 121.11); (7) modifications of certification; (8) neighboring jurisdictions (40 CFR 121.12); (9) data and other information; and (10) coordination of implementation. Comments were due by August 2.

State Comments

On August 2, EPA closed the comment period for its intention to reconsider and revise the CWA Section 401 Certification Rule (86FR29541). EPA's notice of intent indicated that its revisions would be done "in a manner that is well informed by stakeholder input on the rule's substantive and procedural components; is better aligned with the cooperative federalism principles that have been central to the effective implementation of the Clean Water Act; and is responsive to the national objectives outlined in President Biden's Executive Order 13990." The EPA received nearly 3,000 comments.

The WSWC submitted a transcript of the listening session between its members and EPA, and WGA submitted its "list of potential process improvements to ensure the efficient and effective administration of this vital state authority." Governor Mark Gordon (R-WY) noted that the single listening session with WGA on July 15 does not suffice for rule revisions where states are co-regulators. "To craft a revised rule that envisions thoughtful consideration for the principles of cooperative federalism, we need in-person, productive discussions in order to ensure that a revised rule would be well informed by stakeholder input."

[37]www.regulations.gov under Docket No. EPA-HQ-OW-2021-0302.

Several states noted that the pre-filing meeting requests, while important and useful for large projects, may be unnecessarily burdensome for small projects with minimal impacts, or emergency projects that need expedited approval. Many states recommended adding a provision that enables the certifying authority to waive or reduce the 30-day pre-filing period as appropriate. Additionally, some states noted that the pre-filing meeting can be confusing or ineffective for applicants that haven't submitted any project information yet, and may be entirely unnecessary, e.g., where the activity is already covered by a nationwide permit.

Alaska, Nebraska, Oklahoma, South Dakota, and Wyoming supported the current limited scope of review to water quality concerns, while California, Colorado, Idaho, Nevada, Oregon, Utah, and Washington assert that the scope is too narrow to effectively protect the environment and public health. Alaska recommended that the 401 certification should focus more narrowly on the impacts of dredge and fill activities under CWA 404 permits, and suggested that "associated activities" should not be leveraged to regulate impacts beyond a state's enacted water quality standards. Nevada argued that the scope of review must include consideration of the project activity as a whole in order for the project to comply with federal and state water quality requirements.

Several states pointed out that the 2020 rule's list of information for a complete application is too narrow to evaluate water quality impacts, and that the list needs to be flexible to ensure that states can determine when an application is complete. California pointed out that the list "is missing key elements, such as any reference to compensatory mitigation plans, restoration plans for temporary impacts, analysis of long-term operational water quality impacts, drought contingency planning, an analysis of a 'no project' scenario for re-licensing of long-term projects, and in-water work plans…."

Some states supported the narrowed deadlines for certifications to less than one year, and many states agreed that for simple projects, the shorter timeframes were sufficient. However, many states noted that for larger, more complex projects, extensions are necessary to complete the certification process in a way that protects water quality. Some states argued that the limited timeframe was unlawful under the federal statute. Utah noted that the new rule interferes with its public outreach and notice practices and is inconsistent with Utah statutory requirements. South Dakota argued that Congress granted the one-year maximum reasonable period of time to states, not to federal agencies. Oklahoma believes the statutory one-year limitation is reasonable, and that states should not unreasonably withhold a determination on certification. Given the short review timeline, some state may deny certification.

Additionally, federal requirements throw a wrench in the ability of states to complete certifications in a timely manner. Alaska cited problems with federal agencies raising issues late in the process and expecting state agencies to conduct an antidegradation assessment at high levels of protection in the "11th hour." Idaho noted that for individual permits and licenses, federal baseline requirements are an important step in evaluating a project and issuing protective and defensible certifications. The 2020 rule "mistimes" the certification request and the federal process. Idaho added the rule should be amended "so that the certification process starts when the certifying authority verifies in writing that it has all information necessary to proceed with a certification decision." South Dakota recommended that certification requests either come from the federal

agency or that the project proponent submit their application to the state after the federal agency has deemed the application to be complete, which "…should reduce the amount of altered, cancelled, or stalled certification requests while the project proponent is working with the federal agency."

Many of our states objected to federal oversight of the certifications, both the authority to review state denials and certification conditions, as well as the authority to enforce state conditions. They noted that states are in the best position to understand local water quality impacts and the need to set and enforce conditions to protect water quality under state and federal law.

Several states pointed out the need for states to be able to modify permits and make use of "reopener" clauses. California said the regulations should clearly establish the state authority to reopen and modify certification provisions to ensure continued compliance with updated water quality standards for long-term permits and licenses. Colorado commented that the 'reasonable assurance' standard, or an alternative that makes room for adaptive management to address future unforeseeable impacts, should be reinstated. States emphasized the fact that project changes after certification should allow for the state to reopen and reconsider the updated plans and projected impacts.

Several states noted that the 30-day requirement to seek input from neighboring jurisdictions seems ineffective due to federal agency backlog, imposing an additional delay to projects without obtaining meaningful input. Idaho also encouraged EPA to coordinate its revisions of the 401 regulations with planned revisions to Waters of the United States.[38]

Suspension of State Certifications

On November 4, the Corps provided informal notification that they were suspending final permit decisions that rely on CWA§401 state certifications or waivers: "Due to the decision of the United States District Court for the Northern District of California on October 21, 2021 to remand EPA's 2020 401 [Water Quality Certification (WQC)] rule with vacatur, the Corps of Engineers is not finalizing permit decisions that rely on a 401 WQC or waiver under EPA's 2020 rule at this time. The Corps is working to provide more refined guidance that provides a way forward that allows us to finalize permit decisions."[39]

EPA's website noted that the court's nationwide order "requires a temporary return to EPA's 1971 Rule until EPA finalizes a new certification rule. EPA's own review of the 2020 Rule identified substantial concerns with a number of provisions that relate to cooperative federalism principles and CWA §401's goal of ensuring that states and Tribes are empowered to protect water resources that are essential to public health, ecosystems, and economic opportunity. The agency has already begun working on a regulatory effort to address those concerns." On June 1, EPA invited feedback on its intention to reconsider and revise the rule,[40] eliciting over 3,000 comments. Over the summer, EPA also held several stakeholder and co-regulator listening sessions.

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[38]For a copy of the comment letters to EPA see: https://westernstateswater.org/policy-letters/2021/clean-water-act-section-401-certification-rule/.
[39]www.spk.usace.army.mil/Missions/Regulatory/
[40]86 FR 29541

Montana and Wyoming v. Washington

On May 25, the United States filed a brief in opposition to the bill of complaint filed by Montana and Wyoming against Washington (#22O152, U.S. Supreme Court). The Supreme Court invited the Acting Solicitor General to express the views of the U.S. last October. The U.S. brief noted that the complaint challenges Washington's denial of the Millennium Bulk Terminal application for Clean Water Act §401 Certification, a prerequisite to building a new coal-export terminal on the Columbia River. Millennium has since filed for bankruptcy and divested itself of any interest in the property in question. The U.S. argued: "Accordingly, this suit would not redress Montana and Wyoming's asserted injury from the denial of certification under Section 401. Because no Article III case or controversy exists, the motion for leave to file a complaint should be denied."

On June 7, Montana and Wyoming submitted a supplemental brief, arguing that the case is not moot merely "…because Washington successfully bankrupted one terminal developer," nor is the issue "solely whether Washington must grant a specific terminal developer a permit." The two plaintiff States noted that their interests are broader: "Montana and Wyoming are challenging Washington's longstanding discrimination against two landlocked States' sovereign interests in getting one of their most important commodities to market. Montana and Wyoming still have an abundance of low-sulfur, cleaner burning coal, and foreign markets want it. The terminal in Longview remains an ideal site to export that coal to Asian and other foreign markets. And Montana and Wyoming still have no other export option, besides an already over-burdened Canadian port. Washington's hostility to coal exports also remains unchanged. This is not a case where a party voluntarily ends an unconstitutional policy to avoid review. Washington has changed nothing and will continue to block Powder River Basin coal exports based on coal's end use in foreign markets and to protect Washington's own agricultural interests." Montana and Wyoming concluded with the argument that only the Supreme Court can decide whether Washington's policy violates the Commerce Clause, and the states have raised an important issue that goes directly to their sovereign interests. The Supreme Court scheduled a conference to consider the matter on June 24.[41]

On June 28, the U.S. Supreme Court denied Montana and Wyoming's motion to file a complaint regarding whether Washington's denial of CWA §401 certification and port access to ship Montana and Wyoming coal to foreign markets violates the commerce clause.

Waters of the United States

California et al. v. Wheeler et al.

On January 19, just prior to the change in Administrations, the Department of Justice, Environment and Natural Resources Division (DOJ-ENDR) filed a response and cross-motion for summary judgment in *California et al. v. Wheeler et al.* (U.S. District Court for the Northern District of California, #20-cv-3005). California and other states filed their motion for summary judgment on November 23, 2020. The Plaintiff states and cities challenged the narrowed jurisdiction of the NWPR, which excluded ephemeral streams, wetlands without surface connections to covered waters,

[41] *Western States Water*, #2389, February 28, 2020; and #2408, July 10, 2020.

and made interstate waters an independent category. They argued that the Corps and EPA's NWPR is flawed because: (1) they failed to examine important factors in their effort to balance water quality and federalism, such as "how excluding all ephemeral streams and countless wetlands will impact water quality or state rights and responsibilities;" (2) they ignored prior factual findings of the agencies under the previous Administration about the impact that ephemeral streams and wetlands have on downstream waters, and the "typical year" evaluation of flow is vague; and (3) they failed to examine the extent to which states and cities "have relied on prior long-standing definitions of 'waters of the United States' that included those streams and wetlands." The Plaintiffs also argued that the NWPR interpretation of the CWA conflicts with precedents in previous Supreme Court decisions.

The DOJ-ENRD responded that the NWPR "brought decades of debate regarding the jurisdictional limits of the [CWA] to a close. Under prior regulatory regimes, CWA jurisdiction often turned on an administratively burdensome and case-specific analysis. This analysis looked at whether certain wetlands and other waters had a "significant nexus" to traditionally navigable waters – a case-by-case analysis merely intended to be a stopgap absent more specific regulations by the Agencies." They argued that under the NWPR, the "regulated public can better anticipate whether a CWA permit may be required to discharge pollutants to a particular water or wetland."

The Defendants argued: "While jurisdiction is fundamentally a legal inquiry, the Agencies did consider the science, as well as other factors relevant to their reasoned decisionmaking. The Agencies' analysis and discussion span more than 1,500 pages across the rule's preamble, the Response to Comments, the Resource and Programmatic Assessment, and the Economic Analysis." They disagreed with the Plaintiffs that shifting "regulation of certain waters and wetlands exclusively to state and tribal authorities automatically spells environmental catastrophe. But the Agencies' balancing of the CWA's objective and policy consistent with the CWA's cooperative federalism framework is reasoned. The NWPR is consistent with the CWA, is well-supported by the administrative record, and is a lawfully promulgated regulation entitled to *Chevron* deference." They also argued that the NWPR is entitled to deference as a reasonable interpretation of the ambiguous phrase "waters of the United States," both because earlier precedent is not directly applicable to the current rule, and because prior judicial construction of a statute only trumps an agency construction where the term is unambiguous with no room for agency discretion.

On February 17, several Democratic members of Congress filed a motion to submit an amicus brief in *California v. Wheeler*. The arguments support the Plaintiff states' position in their motion for summary judgment regarding the inadequacies and violations alleged in the NWPR, defining WOTUS under the Clean Water Act CWA. Western members of Congress joining the brief included: Representatives Raúl M. Grijalva (AZ), Nanette Diaz Barragán (CA), Julia Brownley (CA), Mark DeSaulnier (CA), Jared Huffman (CA); Barbara Lee (CA), Zoe Lofgren (CA), Doris Matsui (CA), Grace Napolitano (CA), Juan Vargas (CA), Suzanne Bonamici (OR), Peter DeFazio (OR); and Senators Dianne Feinstein (CA) and Martin Heinrich (NM).

The brief noted their interest is in providing the Court "…with an understanding of the text, structure, and goals of the [CWA] our predecessors enacted in 1972 – along with its subsequent amendment in 1977, which further confirmed Congress' intent – and with an understanding of the

ways in which the so-called 'Navigable Waters Protection Rule' (NWPR) dishonors that intent." The brief argued that the NPWR decreaseds water protection. "Where Congress called for science-based decision-making, the NWPR largely ignores the science of clean water. And where Congress called for a collaborative, comprehensive, and mandatory federal and state cleanup of the nation's waters…" the federal agencies based their rule on "fallacious notions about [CWA] federalism." They also argued that the NPWR undermines statutory mandates and that the Environmental Protection Agency (EPA) and Corps of Engineers (Corps) failed to provide Congress "with basic information about the environmental consequences" of the rule.

Federalism is important, "But the Congresses that crafted the [CWA]… chose to enlist the states in a mandatory and nationwide project of improving water quality, and to give states discretion to add extra layers of water quality protection if they chose to do so. It chose cooperative federalism over deregulatory federalism. Nothing about Congress's vision supports using environmentally irrelevant jurisdictional boundaries to carve out huge geographic areas where the addition of pollutants to waters would be unregulated."

Regarding CWA §101(b), "This language clearly emphasizes the importance of states. But it says nothing about jurisdictional boundaries. Instead, it speaks of 'water resources' generally, drawing no distinctions within that broad category. This language therefore expresses Congress's desire for the states to be heavily involved in protecting waters that are subject to [CWA] jurisdiction. It says nothing about excluding a class of aquatic features from that protection." Section 101 "also indicates that the purpose of state involvement was to restrain water pollution, not to authorize it," and §101(a) emphasized the objective to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Taken together, the text clarifies the goal: "Congress was enlisting the states in pursuit of the crucial national goal of protecting water quality. It was not trying to limit the scope of the [CWA's] coverage."

The brief argued that the NWPR actually undermines state authority and principles of federalism. "[CWA] implementation has honored Congress's blueprint for substantial state roles in advancing water quality, while also preserving states' ability to be partners in water quality protection and to manage land and water resources…. In practice, states do take the lead in implementing nearly every key part of the statute. They adopt water quality standards. They draft water pollution budgets and engage in continuing planning processes. Nearly every state holds delegated authority to issue NPDES permits. And while only two states (New Jersey and Michigan) have elected to hold delegated authority to issue §404 permits, states influence those permits in a variety of ways. Using their authority under §401, states routinely work with the Corps' district offices to craft the terms of section 404 permits, and they also work with the Corps to implement compensatory mitigation programs. State involvement, in short, pervades every key part of [CWA] implementation, and state implementation of that authority is often intertwined with and supported by federal efforts and contingent upon waters falling within [CWA] jurisdiction. Consequently, unless states enact new legislation and appropriate additional funds, many of these state programs would actually shrink if [CWA] jurisdiction is narrowed."

Further, the brief argued that federal and state authority routinely coexist under the CWA as intended. "Even if a waterway is subject to federal jurisdiction, states still retain primary responsibility for allocating water rights in that waterway. If the waterway is navigable-in-fact – and

thus unquestionably subject to [CWA] jurisdiction – the state in which it is located still owns its streambed. Similarly, so long as streams or wetlands are not on federally-owned land, states and local governments retain their land use authority over those streams and wetlands and surrounding uplands. Nor is there de facto preemption of that authority. If states or local governments want to authorize development in areas with jurisdictional aquatic features, they generally can, and they routinely do so; the Corps issues tens of thousands of fill permits every year, and permit denials are exceedingly rare."

Colorado v. EPA et al.

On February 2, the DOJ-ENRD filed a motion to stay the proceedings in the 10th Circuit Appeal over the 2020 NWPR. The judge in the underlying case *Colorado v. EPA et al.* (U.S. District Court for Colorado, 20-cv-01461) issued a preliminary injunction last June, making Colorado the only state where the 2020 NWPR has not taken effect. Several parties appealed the preliminary injunction, and the 10th Circuit heard oral arguments last November, but has not issued a decision. The District Court case is on hold pending a decision on the consolidated appeals.

The DOJ-ENRD noted the change in Administrations. In conformance with the EO 13990, the EPA and Corps are reviewing the NWPR. The EO also provides that the DOJ may provide notice of the EO and may "request that the court stay or otherwise dispose of litigation, or seek other appropriate relief consistent with this order, until the completion of the processes described in this order."

The DOJ-ENRD argued: "The Agencies ask the Court to hold the consolidated appeals in abeyance for 60 days in order to allow the Agencies to review the NWPR and assess potential next steps in this litigation. Because the appeals have been briefed and argued, the Agencies are asking the Court to hold off on issuing a ruling. The Agencies will make another filing before the end of the 60 days updating the Court on the status of the Agencies' review and will propose that the Court continue or end the abeyance or that the Court take some other action…. While this is the only pending challenge to the NWPR in a court of appeals, the Agencies are also seeking abeyances or stays in the many pending district court challenges to the NWPR."

Revisions to the Definition of WOTUS

On June 9, EPA and the Corps announced their intent to revise the definition of WOTUS to better protect water quality and water resources across the country. The decision was based on the agencies' review of the NWPR, pursuant to President Biden's Executive Order #13990, which found "that the rule is significantly reducing clean water protections." Additionally, the Department of Justice (DOJ) filed a motion for remand of the NWPR in the District Court of Massachusetts.[42] DOJ intends to file similar motions to remand in the several other lawsuits challenging the NWPR.

EPA Administrator Michael Regan said: "After reviewing the Navigable Waters Protection Rule as directed by President Biden, the EPA and Department of the Army have determined that this

[42] *Conservation Law Foundation et al. v. EPA* (#20-cv-10820), *Western States Water*, #2398, May 1, 2020.

rule is leading to significant environmental degradation. We are committed to establishing a durable definition of 'waters of the United States' based on Supreme Court precedent and drawing from the lessons learned from the current and previous regulations, as well as input from a wide array of stakeholders, so we can better protect our nation's waters, foster economic growth, and support thriving communities."

Acting Assistant Secretary of the Army for Civil Works Jaime Pinkham said: "Communities deserve to have our nation's waters protected. However, the Navigable Waters Protection Rule has resulted in a 25 percentage point reduction in determinations of waters that would otherwise be afforded protection. Together, the Department of the Army and EPA will develop a rule that is informed by our technical expertise, is straightforward to implement by our agencies and our state and Tribal co-regulators, and is shaped by the lived experience of local communities."

On June 9, Radhika Fox, Acting Assistant Administrator for the EPA Office of Water, and Pinkham held a call with representatives from states to discuss the announcement. Fox reiterated the agencies' determination that the NWPR's definition of WOTUS was causing significant, ongoing environmental damage inconsistent with the Biden-Harris Administration's priorities. She also stated that they would work to re-establish the protections in place prior to the 2015 Clean Water Rule and develop a new, durable definition of WOTUS. Pinkham highlighted the importance of creating a rule that was implementable and straightforward. During the call Q&A, several states and state organizations asked about the timeline going forward, whether any implementation changes would occur immediately, and how this rulemaking process would be different than the past in terms of overcoming obstacles. Fox said that additional information on the upcoming rulemaking and engagement will be announced later this summer, and that for now the NWPR remains in place. She also agreed with commenters who pointed out that states are co-regulators and any proposed rule should be developed in tandem with states prior to publication of the proposed rule.

On August 3, the EPA and Corps published their Request for Recommendations on WOTUS. The notice outlines the agencies' intention to initiate two new rulemakings, one to restore pre-2015 regulations, and a second one that will build on that regulatory foundation (86 FR 41911). The agencies are seeking written feedback on: (1) co-regulator and stakeholder experiences on implementation under the different regulatory regimes in recent years; (2) actions taken by states in response to changes in the jurisdictional scope; (3) science updates since EPA's 2015 connectivity report; (4) environmental justice concerns; (5) climate implications; and (6) the appropriate jurisdictional scope of tributaries, ditches, and adjacent waters. Comments were due by September 3, regulations docket #EPA-HQ-OW-2021-0328-0001. The agencies are hosting a series of public meetings in August. The agencies also intend to host a series of dialogues with state and tribal coregulators this fall to discuss both rulemakings.

State Comments

On September 3, the public comment period closed on the EPA's Request for Recommendations. EPA received over 23,000 written comments, in addition to feedback from various public meetings.

The Alaska Department of Environmental Conservation wrote that, in the 15 months they've been implementing the NWPR, they have little to offer in terms of negative consequences. They expressed concerns about federal overreach, particularly in terms of regulating permafrost wetlands. As a large percentage of Alaska's lands are categorized as wetlands, there is a need for regulatory efficiency and certainty in project permitting. Given the potential for criminal and civil sanctions, "…it is essential that any refinement of the definition of WOTUS provide clarity to states and the regulated community." The 12-page letter included recommendations.

Colorado Governor Jared Polis and Attorney General Philip Weiser submitted a 17-page letter, accompanied by an appendix on ephemeral and intermittent streams, another on the science of tributaries, a white paper on dredge and fill issues, and a summary of a discussion with stakeholders on protecting gap waters not covered by the NWPR or current Colorado laws. They expressed concern over the lack of federal protection under the NWPR for the large number of intermittent and ephemeral streams, placing new, extensive regulatory burdens on Colorado.

With half of Colorado's acreage dedicated to agriculture, farmers and ranchers must have certainty about whether their lands include jurisdictional waters in order to make the most responsible and productive decisions. "Unfortunately, over the last decade, we have operated in a period of considerable uncertainty, as efforts to revisit the regime in place under the 2008 Guidance led to significant revisions in 2015 and 2020. Therefore, Colorado supports objective, clear, and recognizable limits on the extent of CWA jurisdiction and a reinforcement and clarification of the scope of existing agricultural exceptions, as discussed below. In short, we believe a recommitment to an approach along the lines of the 2008 Guidance would promise an end to the ongoing uncertainty and litigation we have witnessed over the last decade."

Colorado expressed a preference for a rule consistent with Justice Kennedy's concurrence in *Rapanos v. U.S.,* one that: (1) is based on science rather than arbitrary categories; (2)is flexible enough to acknowledge the biological and hydrological conditions of western streams and wetlands; (3) considers the cumulative impacts of tributaries on downstream navigable waters; (4) preserves the NWPR's agricultural exemptions; (5) continues the previous WOTUS rules' consistency with CWA §101(g) and recognition of states' authority to manage water quantity; and (6) provides clarity regarding the application of the significant nexus test, by establishing criteria or factors to be considered.

Nebraska Governor Pete Ricketts and the Nebraska Departments of Environment and Energy, Agriculture, and Natural Resources, noted that the scope of the WOTUS definition has a "direct and meaningful impact on Nebraska farmers, ranchers, industries, developers, homebuilders, and others whose proposed projects or developments may be required to obtain permits and approval from federal agencies." They added that water quality is important to Nebraska, and that their regulatory agencies "have clear authority and are well equipped to protect waters of the state." They expressed concern over "an expanded definition of WOTUS similar to what was adopted in 2015, both because of its extensive reach into waters already regulated by the State as well as the increased difficulty in determining what waters might be considered WOTUS. This is why Nebraska joined several states to legally challenge that rule on both procedural and substantive fronts. We continue to be committed to preserving our authority to protect Nebraska's water resources."

Nebraska's preferred approach to CWA jurisdiction is based on Justice Scalia's plurality opinion in *Rapanos* and limited to "relatively permanent streams and wetlands with a direct surface connection," with a clear and predictable standard for state and federal agencies, such as the NWPR with explicit descriptions of waters covered and excluded, and a definition that allows for regionalized approaches.

The TCEQ requested durable regulatory certainty so that states can implement and administer CWA programs in a clear and transparent manner. "Extensive litigation and continuous rulemakings have contributed to the uncertainty and confusion of the WOTUS definition. States have dedicated time and resources toward maintaining situational awareness of the status of jurisdiction in a particular state or region, a difficult task due to the patchwork of litigation and rulemakings initiated from 2015-2021." TCEQ requested regional flexibility, noting that Texas experiences drought and floods with regularity and that national benchmarks or thresholds may be problematic to implement in certain regions. "Various physical indicators that integrate long-term changes in environmental conditions (such as the ordinary high water mark) may most appropriately capture long-term environmental changes and account for regional differences." Finally, TCEQ requested ample opportunities for co-regulator coordination, as states have a unique role in protecting water quality. They asked that regional roundtables referenced in the Federal Register notice "be planned and announced with sufficient advance notice to state co-regulators."

Wyoming Governor Mark Gordon took issue with the suggestion that a ack of federal justification justified revisiting the WOTUS rulemaking, except in order to "restore longstanding protections," as if regulation of water bodies were entirely revoked by the NWPR. "The question of WOTUS jurisdiction is in fact much more complex." He questioned how the recent federal court decision in Arizona vacating the NWPR, will affect the WOTUS rulemaking. Meanwhile, Wyoming remains engaged in litigation over the 2015 Clean Water Rule. He said the 2020 NWPR "was mindful of the limits Congress set in the CWA," adding "Wyoming appreciated the great care that was taken to gather meaningful feedback from states during consultation for [the NWPR]," which included "multiple in-person meetings that went beyond merely providing on-way information to the public. It entailed robust dialogue between the federal agencies and state co-regulators, which is the kind of consultation that should be conducted…during a new rulemaking."

Governor Gordon expressed a preference for an appropriately narrow rule that excludes man-made features, and takes into account regional variations and unique hydrologic regimes, such as the arid and snowmelt-driven regions in Wyoming, which has a bearing on intermittent and ephemeral waters. His 25-page letter included a copy of his 2019 comments, and also referenced a separate letter from the Wyoming Department of Environmental Quality (WDEQ).

WDEQ recommended revising rather than repealing the NWPR, and noted that implementation of the NWPR has been straightforward and effective in Wyoming. They described recent efforts to develop a permitting process based on the Wyoming Environmental Quality Act to cover dredged and fill discharges to non-WOTUS waters. They supported the integration of the most relevant science, within regulatory constraints, and expressed concerns about the use of WOTUS to address environmental justice and climate concerns. They supported the development, through federal-state partnerships, of publicly-available national geospatial mapping tools. "Though technical

and procedural challenges exist, phased-development of a national WOTUS map is certainly feasible. Mapping traditional navigable waters, territorial seas, and many of the excluded waters would be a large step forward, followed by the more complex jurisdictional waters such as tributaries, lakes and ponds, and finally adjacent wetlands. Such maps would improve regulatory certainty, consistency and transparency, and also recognize and embrace cooperative federalism. These maps should be periodically updated (e.g., every 5 years to be consistent with the effective duration of jurisdictional determinations) using the latest scientific data to reflect long-term changes in the hydrology of the nation's waters."[43]

According to EPA's website, "The Environmental Protection Agency and U.S. Army Corps of Engineers (the agencies) are in receipt of the U.S. District Court for the District of Arizona's August 30, 2021, order vacating and remanding the Navigable Waters Protection Rule in the case of *Pascua Yaqui Tribe v. U.S. Environmental Protection Agency*. In light of this order, the agencies have halted implementation of the Navigable Waters Protection Rule and are interpreting 'waters of the United States' consistent with the pre-2015 regulatory regime until further notice. The agencies continue to review the order and consider next steps. This includes working expeditiously to move forward with the rulemakings announced on June 9, 2021...."[44]

Consultation With States

On October 4, the WSWC sent a letter to the EPA and Army (Civil Works) expressing the need for more robust and ongoing consultation with states on the development of a new rule defining the jurisdictional scope of "waters of the United States." The letter said: "The WSWC urges the agencies to provide opportunities for a representative number of states across different regions with diverse perspectives to actively engage in the rule development process with the agencies, to provide direct and effective feedback on the implementability of concepts or language that might be considered in a proposed rule. A one-size-fits-all national approach does not recognize specific conditions and needs in the West, where water can be scarce and a variety of unique waterbodies exist. A rule that is more regional in nature, or that allows flexibility in implementation, appears more appropriate. As co-regulators, the states would like to work together with the agencies to develop and implement a rule that seeks to strike a balance between the critical importance of protecting the quality of the nation's waters and preserving the sovereignty of states over their land and water resources."

The letter also noted the importance of: (1) ongoing technical and financial assistance to states under existing programs "to address point and non-point source pollution through state regulatory and voluntary programs tailored to fit unique state needs;" (2) joint federal-state efforts to develop geospatial datasets for mapping jurisdictional waters, including the identification of the most up-to-date data and tools, as well as funding for field verification of map accuracy and ongoing map maintenance; (3) involving states in the rulemaking process to help end regulatory whiplash;

[43]https://westernstateswater.org/policy-letters/2021/state-wotus-recommendations/
[44]https://www.epa.gov/wotus/current-implementation-waters-united-states

and (4) establishing a clear process for resolving differences of opinion over federal and non-federal jurisdiction, as well as jurisdictional disputes between different states and tribes.[45]

Dialogue With State Coregulators

On October 20, the EPA and U.S. Department of the Army hosted a western regional dialogue with state coregulators regarding forthcoming rulemaking on revisions to the definition of "waters of the United States." Previous meetings were held for eastern (September 29) and central (October 6) states. The federal agencies provided a brief overview of the rulemaking, then listened to states as they shared their experiences implementing different regulatory regimes.

The first proposed rule to reinstate a modified version of the pre-2015 guidance was sent to the Office of Management and Budget last week, and the agencies anticipate that state feedback may inform modifications before the first proposed rule is published in the *Federal Register* for public comment. The second, separate rulemaking process will build on this regulatory foundation and offer further opportunities for engagement with coregulators and stakeholders.

Discussion topics included: (1) concerns with implementation of or support for the "significant nexus" approach, including the need for criteria to provide clarity and consistency, and concerns with the appropriateness of the 2014 water connectivity report; (2) the need for mapping, tools for implementation and training on how to use those tools, transparency in the reasoning behind jurisdictional determinations, and opportunities for states to review and ensure the accuracy of data input into various tools; (3) the potential for a more regional approach to implementation of the rule, taking into consideration the diverse hydrology, geology, and microclimates among states, including a potential minimum national standard and opt-in provisions for states with regional concerns, or regional implementation manuals; (4) concerns with including or excluding wetlands and subsurface groundwater flow; and (5) the potential merits of the "typical year" approach, but lack of necessary antecedent precipitation tools to implement that approach. Several states provided concrete examples of challenges they have faced under the different regulatory regimes, and the practical impact of those problems. Invariably, each state noted that the uncertainty of regulatory whiplash needed to end.

The federal agencies express appreciation for the back-and-forth discussion among the states on approaches that worked or didn't, noting that the discussion was very illuminating and helpful, including the differences and similarities between the states' primary concerns. They indicated that they were open to further opportunities for coregulator consultation and receiving written information from the states, as this was information the agencies need to make decisions about the pending rulemakings.

[45]https://westernstateswater.org/policy-letters/2021/wotus-letter-to-epa-and-corps/

Proposed Rule/Pre-2015 Definition

On November 18, the EPA and Corps announced their proposed rule to re-establish the pre-2015 definition of "waters of the United States" (WOTUS), updated and informed by Supreme Court decisions. The proposed rule would maintain the longstanding exclusions of the pre-2015 regulations including agricultural exemptions and exclusions in the CWA. Categories of waters such as tributaries and wetlands would be included as WOTUS if they have a relatively permanent connection or a significant nexus to traditionally navigable, interstate, or other categories of waters. The proposed rule will be available for public comment for 60 days once published in the *Federal Register*.

EPA and the Corps hosted a brief WOTUS call with intergovernmental organizations and their members, notifying them of the proposed rule. They will host three public hearings in January, as well as the regional roundtables to discuss the pre-2015 proposed rule.

On December 7, EPA and the Corps published their proposed rule, Revised Definition of the "Waters of the United States" (WOTUS) in the *Federal Register*.[46] Public comments are due February 7, 2022. "In this proposed rule the agencies are exercising their discretionary authority to interpret [WOTUS] to mean the waters defined by the longstanding 1986 regulations, with amendments to certain parts of those rules to reflect the agencies' interpretation of the statutory limits on the scope of [WOTUS] and informed by Supreme Court case law. Thus, in the proposed rule, the agencies interpret the term 'waters of the United States' to include: Traditional navigable waters, interstate waters, and the territorial seas, and their adjacent wetlands; most impoundments of 'waters of the United States'; tributaries to traditional navigable waters, interstate waters, the territorial seas, and impoundments that meet either the relatively permanent standard or the significant nexus standard; wetlands adjacent to impoundments and tributaries, that meet either the relatively permanent standard or the significant nexus standard; and 'other waters' that meet either the relatively permanent standard or the significant nexus standard."

The proposed rule adds, "The 'relatively permanent standard' means waters that are relatively permanent, standing or continuously flowing and waters with a continuous surface connection to such waters. The 'significant nexus standard' means waters that either alone or in combination with similarly situated waters in the region, significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas (the 'foundational waters'). With these amendments to the 1986 regulations, the proposed rule is within the proper scope of the agencies' statutory authority and would restore and maintain the chemical, physical, and biological integrity of the nation's waters."

The proposed rule would replace the NWPR, vacated by a federal district court on August 30. The agencies found that the NWPR's test for jurisdiction on the basis of the "relatively permanent" standard "did not adequately address the impacts of degradation of upstream waters on downstream waters," and while easier to administer, did not meet the Clean Water Act's objectives. "The proposed rule's limits appropriately draw the boundary of waters subject to federal protection

[46] 86 FR 69372

by ensuring that where upstream waters significantly affect the integrity of waters and the federal interest is indisputable – the traditional navigable waters, interstate waters, and territorial seas – Clean Water Act programs would apply to ensure that those downstream waters are protected. And where they do not, the agencies would leave regulation to the states and tribes. The proposed rule's relatively permanent and significant nexus limitations are thus based on the agencies' conclusion that together, those standards are consistent with the statutory text, advance the objective of the Act, are supported by the scientific record and Supreme Court case law, and appropriately consider the policies of the Act. In addition, because the proposed rule reflects consideration of the agencies' experience and expertise, as well as updates in implementation tools and resources, it is familiar and implementable."

Water Reuse Action Plan

On April 15, the EPA released its latest quarterly update on the Water Reuse Action Plan (WRAP), documenting activities from January through March 2021. As noted in their update, February 2021 marked WRAP's one-year anniversary. Since its release, more than 100 action leaders and collaborating partners have collectively completed 165 out of 359 implementation milestones.

Notably, three new WRAP actions were introduced this quarter: (1) Action 1.5: Develop Case Studies of Successful Low-Input Water Reuse Solutions to Meet Local Water Needs (led by the Environmental Council of the States); (2) Action 4.7: Evaluate and Optimize Low-Input Treatment Methods to Remove Pharmaceutical Residues from Treated Wastewater Used for Irrigation (USDA); and (3) Action 5.5: Quantify the National Volumes of Water Potentially Available for Reuse for Municipal Wastewater and One Additional Source of Water (led by EPA, WateReuse and the Water Environment Federation). There is also one new proposed action, Action 7.7: Life-Cycle Analysis to Support Cost-Effective Enhanced Aquifer Recharge, which would fund research through the EPA Science to Achieve Results (STAR) Program.[47]

Council on PFAS

On April 27, EPA Administrator Michael Regan released a memo requesting the creation of the EPA Council on PFAS (ECP), per-and polyfluoroalkyl substances. He called on Principal Deputy Assistant Administrator Fox and Acting Regional Administrator for Region 1, Deb Szaro "to convene and lead a council of senior EPA career officials from across the agency to strategize the best way to use the EPA's authorities, expertise, and partnerships to mitigate and reduce PFAS pollution and protect public health and the environment." He said the ECP "will collaborate on cross-cutting strategies; advance new science; develop coordinated policies, regulations, and communications; and engage with affected states, tribes, communities, and stakeholders…. The ECP will strive to build on and significantly enhance our capabilities through comprehensive, coordinated and results-driven multi-media actions."

[47]https://www.epa.gov/waterreuse/national-water-reuse-action-plan-quarterly-update

The ECP will build on the 2019 EPA PFAS Action Plan. Regan outlined four tasks to direct the first actions taken by the ECP: (1) Develop a four-year strategy to deliver critical public health protections addressing PFAS and provide recommendations within 100 days of establishment; (2) continue close interagency coordination on place-based and cross-media PFAS issues to assist states, tribes and local communities; (3) work with national program offices and regions to maximize the impact of PFAS funding and financing; and (4) expand engagement with states, tribes and federal partners to ensure consistent communication, exchange information, and identify collaborative solutions.

Corps of Engineers

Nationwide Permits

On January 13, the Corps published their final rule regarding the Reissuance and Modification of Nationwide Permits (NWPs) in the *Federal Register*.[48] The rule finalizes 16 NWPs, 32 general conditions and associated definitions. These include 12 existing NWPs and four new NWPs, including new NWP 58 that addresses utility line activities including for water. An additional 40 NWPs are not being reissued or modified, and will be in effect under the January 6, 2017 final rule along with associated general conditions and definitions until their expiration in March 2022.

WSWC members' primary concerns were with: (1) the removal of the Pre-Construction Notice (PCN) requirements for all federal agencies and federal permittees; (2) the removal of the 300 linear-foot limit for losses of streambed and replacement with a half-acre limit within ten NWPs; and (3) the need for states to authorize the proposed NWPs, rather than the final NWPs, due to the deadline for blanket CWA Section 401 Water Quality certifications (WQC).[49]

The Corps decided to keep the PCN requirements for federal and non-federal agency permittees. As stated in the final rule, "After reviewing the comments received in response to this aspect of the proposal, the Corps agrees that there is no substantive basis for establishing different PCN requirements for federal and non-federal permittees. The Corps is thus retaining the existing PCN requirements for federal permittees." PCNs require a permittee to submit a proposal to the Corps district engineer prior to construction to ensure the proposed activities comply with the terms and conditions of the NWP. At this stage, the district engineers often work with states to review that the activities will meet state water quality standards and ensure the individual and cumulative impacts do not have more than minimal environmental impacts, as required by the NWPs.

As proposed, the Corps removed the 300 linear foot limit for losses of streambed in ten of the NWPs. In the rule, the Corps cited reasons for removing this limit, including: (1) retaining the half-acre limit for losses of non-jurisdictional waters and wetlands will help further Congressional intent with respect to Section 404(e) of the CWA; (2) this provides equivalent quantitative limits for

[48] 86 FR 2744
[49] *Western States Water*, #2431 Special Report, March 29, 2019.

all categories of non-tidal jurisdictional waters, which will continue to be subjected to the half-acre limit for losses; (3) it will increase administrative efficiencies; and (4) it provides more accurate accounting of the impacts of activities authorized by the ten NWPs. The Corps also noted that, in conjunction with PCN requirements and review by district engineers, regional conditions and activity-specific conditions can be added. This change will ensure no more than minimal environmental impacts.

The rule states, "Quantifying losses of streambed in acres or square feet will be more accurate, provide a more substantial and defensible basis for decision-making by district engineers on PCNs for these activities, and provide more accurate data for the Corps to track cumulative impacts of the activities authorized by these NWPs."

In response to concerns over the removal of the 300 linear foot limit, the Corps implemented a 3/100-acre threshold for compensatory mitigation in paragraph (d) of General Condition 23 (mitigation general condition). The proposed rule added a 1/10-acre threshold for streambed losses, similar to the existing 1/10-acre threshold for compensatory mitigation for wetland losses. The final rule states, "As explained in the discussion of general condition 23, this change in the stream mitigation threshold aligns with current practice for stream mitigation requirements in the NWP program, and the recommendations for the stream mitigation threshold provided by commenters."

Regarding concerns from states who needed to submit blanket Section 401 WQC for the NWPs prior to the final rule, the Corps stated, "Section 401 of the Clean Water Act states that no permit shall be issued until water quality certification has been obtained or waived. Therefore, the water quality certification process must be completed before the final NWPs are issued…. The water quality certification regulations issued by EPA this year also state that water quality certification requests are made for proposed general permits, not the final general permits." It goes on to state, "The Corps acknowledges that the water quality certification process for the 2020 Proposal is a departure from past practice; however, it is consistent with section 401 and EPA's final certification regulation at 40 CFR part 121. In the 16 NWPs issued in this final rule, there were no substantive changes that trigger a requirement for the Corps to submit new certification requests for NWPs."[50]

Nationwide Permit 12

On May 3, a complaint for declaratory and injunctive relief was filed against Lieutenant General Scott A. Spellmon, in his official capacity at the Corps regarding the 2021 issuance of Nationwide Permit 12 (NWP 12), a general permit issued for oil and gas pipeline projects pursuant to Section 404(e) of the CWA.[51] The lawsuit states, "The Corps violated the Endangered Species Act [ESA], the National Environmental Policy Act [NEPA], the Clean Water Act [CWA], and the Administrative Procedure Act [APA] by issuing NWP 12 without adequately assessing its significant direct, indirect, and cumulative environmental effects."

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[50] www.federalregister.gov, Document Number 2021-00102.

[51] *Center for Biological Diversity et al. v Lieutenant General Scott A. Spellmon*, No. 4:21-cv-00047-BMM, District of Montana.

The lawsuit alleges the Corps did not fulfill its responsibilities in relation to ESA Section 7 consultation with the National Marine Fisheries Service (NMFS) and the USFWS, despite court orders from a previous lawsuit regarding NWP 12 consultation issued in 2017.[52] It also takes issue with the fact that in reissuing NWP 12 in 2021, the Corps did not "make any meaningful changes to its CWA or NEPA analyses, even though this Court anticipated the Corps would do so on remand [of Northern Plains]." Specifically it states, "The Corps allows oil and gas pipelines to use NWP 12 repeatedly for each water crossing along a project's length, with no limit to the number of times a pipeline can use NWP 12 or the total number of acres of wetlands that a project can impact. NWP 12 thereby allows the Corps to artificially treat large interstate pipeline projects as hundreds or even thousands of separate 'single and complete projects' to avoid the more transparent and thorough individual permit process required by Section 404, which includes public notice and comment and an analysis of the project's overall impacts and alternatives pursuant to NEPA and the CWA. This use of NWP 12 causes more than minimal direct and cumulative adverse environmental effects in violation of CWA Section 404(e)."

Finally, the lawsuit challenges the Corps' environmental analysis (EA). "The Corps' EA violated NEPA by failing to adequately evaluate the environmental impacts of pipeline projects permitted by NWP 12. The EA fails to adequately analyze the direct, indirect, and cumulative impacts associated with approving major oil pipelines under NWP 12, such as the effects of numerous water crossings, impacts from the creation of pipeline rights-of-way (including the removal of high-quality forested wetlands), or the pipelines' contribution to climate change. And the EA does not evaluate the specific risks or impacts of oil spills into waterways from pipelines at all. In fact, the analysis in the NWP 12 EA is the same boilerplate language contained verbatim in the decision documents for each of the other NWPs. The Corps has therefore failed to take the "hard look" at the environmental impacts of NWP 12 activities, as NEPA requires."

Denials of CWA §401 Certifications of NWPs

On May 11, Attorneys General (AGs) from the States of California, New Mexico, Oregon, Washington, Connecticut and Maryland, along with the California SWRCB, sent a letter to the Corps expressing concern about recent Corps denials of State CWA §401 certifications of NWPs. The Corps based their decisions on implementation of the new EPA §401 Certification Rule that went into effect September 11, 2020.[53]

The AGs stated, "We mince no words: the Corps' actions will cost jobs, millions of dollars in unnecessary delays, and will allow some projects to go forward without any conditions to protect state water quality, resulting in significant environmental degradation. Moreover, these actions are purportedly based on the [§401 Rule] that: (1) is subject to review and potential rescission or significant revision pursuant to Executive Order 13990; and (2) even as written, the Corps is misapplying the rule. It is not too late to correct these issues and repair the longstanding cooperative relationship between the States and the Corps in the implementation of the [CWA]. In fact, the

[52] *Northern Plains Resource Council et al. v. U.S. Army Corps of Engineers*, No. 4:19-cv-00044 (D. Mont.), appeal pending, No. 20-35412 (9th Cir.).
[53] 85 FR 42210

impacts of these actions are wholly avoidable, and both the States and EPA have proposed ways in which this situation can be remedied."

The letter noted two unprecedented Corps actions: (1) issuing "decline to rely" letters to States that included certain language that was interpreted by the Corps as "re-opener" provisions in their certifications; and (2) waiver determinations for several of the States' NWP §401 certifications for alleged failure to provide written explanations and legal citations for the conditions imposed on their certifications, per the new §401 Rule.

The AGs wrote that the "decline to rely" letters "are both illegal and unfounded." Language within the CWA requires federal agencies to accept the conditions a state puts on federal projects through §401 authority, regardless of consistency with agency policy. Additionally, "even if these 'decline to rely' letters were procedurally valid, the Corps is incorrect in concluding that the certifications include 're-opener' provisions." States were asked to certify the NWPs with draft regional permit conditions, not final conditions. "For that reason, the States' §401 certification decisions included provisions allowing them to revisit their certification to address final [NWP] conditions that differ from the draft permit conditions." This type of language had long been used in prior certifications, qualifying that projects that do not meet NWP coverage may need to obtain individual §401 certifications.

Regarding waiver determinations, "The federal government's authority to declare a waiver based on federal procedural requirements is - at best - highly questionable. In drafting this provision of the §401 rule, EPA cited no authority for this position. Indeed, this portion of the rule flies in the face of congressional intent, applicable case law, and the foundation of 'cooperative federalism' upon which the [CWA] is built." The AGs said the Corps has been unreasonable in the application of the CWA provision that allows them to establish a "reasonable period of time (which shall not exceed one year)" for states to submit certifications. The Corps has not extended the arbitrary 60-day timeframe to allow States to remedy concerns the Corps has with certification provisions, despite the authority to do so.

The AGs concluded: "In summary, the Corps must change course and engage with the States to find solutions to the current [NWP] situation - a situation that is the direct result of the Corps' misapplication of an already haphazard §401 rule that may be rescinded or significantly revised in coming months. Refusal to rectify the situation will result in significant harm to the environment, regulated parties, impacted industries and impacted states."[54]

Memorandum to EPA Regional Administrators

On August 19, EPA Assistant Administrator Radhika Fox and Acting Assistant Secretary of the Army (Civil Works) Jaime Pinkham issued a memorandum to EPA Regional Administrators in Regions 1-10, addressing implementation of the 2020 CWA Section 401 Certification Rule.[55] "States, tribes and stakeholders have expressed significant concerns over implementation of the 2020

[54]https://oag.ca.gov/system/files/attachments/press-docs/USACOE%20Letter.pdf
[55]85 FR 42210

Rule as applied to the Corps' Section 404 permits, including but not limited to: the length of the reasonable period of time; procedural deficiencies identified in federal agency review; and the length of the neighboring jurisdiction process. Additionally, EPA and Army have highlighted a need for national direction on various implementation topics and challenges."

The memorandum focuses on concerns related to nationwide permits (NWPs). With regard to the 41 NWPs proposed in September 2020 and not yet finalized, "…the Corps will extend the reasonable period of time to the one-year statutory maximum for certification on the remaining 41 NWPs. Although the Corps' regulatory default 60-day reasonable period of time has passed…neither the Corps' nor EPA's regulations limit the Corps to granting extensions only before the end of the regulatory default reasonable period of time."

The Corps will send notifications to certifying authorities with the new certification deadline, anticipating that the extension will provide further opportunities for cooperation. "During the extended reasonable period of time, certifying authorities may clarify conditions and/or remedy any procedural deficiencies in their certifications previously identified by the Corps that might have resulted in a waiver of a condition(s) or the certification itself, or a determination to decline to rely on the certification by the Corps. Certifying authorities that do not want to take the opportunity to issue a new or revised certification during the extended reasonable period of time may confirm their earlier certification affirmatively by sending confirmation to the Corps prior to the expiration of the extended reasonable period of time. The previous certification decisions will govern in the absence of an updated certification or affirmative confirmation; inaction will not waive certification."

The memorandum acknowledges prior implementation issues with the application of 33 CFR 330.4(c)(2), and notes that Corps field staff should contact Corps headquarters, which "will coordinate any issues which require policy-level decisions or interpretations with Army and EPA HQ."

Engineer Circular/Levee Safety Program

On February 22, the Corps released its revised draft guidance Engineer Circular (EC) No. 1165-2-218, Engineering and Design: USACE Levee Safety Program. "This document establishes the policies for implementing the [Corps] Levee Safety Program, and describes [Corps] activities, roles and responsibilities for federally authorized levees. This document also describes activities that sponsors are required to conduct or participate in consistent with their project agreements." The Corps EC attempts to use more plain language. It also incorporates past suggestions such as "an appeals process for risk assessment findings, a flexible inspection process that recognize one size doesn't fit all for frequency of inspections, and a much greater focus on partnership and relationships with our non-federal sponsors." ECs typically establish internal agency policy, and are temporary, unless converted to an Engineer Regulation that does not expire.

The EC outlines a comprehensive process for ensuring levee safety and identifies the required and optional activities for both the Corps and local levee sponsors. It includes: (1) levee site visits and inspections a minimum of every five years; (2) risk assessments that evaluate hazard and the levee itself every ten years; (3) how operations, maintenance, repair, replacement and rehabilitation

activities, typically undertaken by the sponsor are determined and prioritized; (4) goals for communicating the condition of the levee to local agencies and decision-makers, and how the Corps and local sponsors wil share information and communicate with outside agencies; (5) upkeep of the National Levee Database (NLD) and development of a Levee System Summary for each levee in the NLD; and (6) requirements for personnel and program management plans, as well as monitoring, and internal and external audits.

Coordination with local sponsors is emphasized. The Corps is required to review information about inspections, site visits, and risk assessments with sponsors, and to work with the sponsors to develop a prioritized list of recommendations and a management plan for the levees based on these assessments.

The EC appendices provide further details, including how the Corps chose a risk-informed approach for dam and levee safety. "The use of risk assessments resulted in more transparency in both the safety evaluations and the resulting decisions. In addition, risk assessment allowed for the evaluation of how levees could fail that do not fit within deterministic criteria-based analysis or a pure comparison to design standards – [the Corps] now focuses its analyses around potential failure modes." For example, piping and internal erosion of soil embankments or foundations; stability of embankments and flood walls; and interactions between concrete structures and embankments. This approach enables transparency and the flexibility to put resources where they are most needed, "reducing expenditures on activities which do little to reduce risk." It also improves flood fighting plans and communications with emergency management agencies, including FEMA. It discusses how the data and information gleaned from the inspections and risk assessments can be used to determine eligibility for the Corps' P.L. 84-99 Rehabilitation Program and FEMA's National Flood Insurance Program.

The EC concludes, "Regularly checking in and being comfortable having frank discussions are key to a strong relationship and the basis for understanding and solving levee-related challenges together. [The Corps} will work with levee sponsors to ensure they are included in all Levee Safety Program activities. At a minimum, district Levee Safety Program Managers will work with levee sponsors to ensure they are aware of and invited to participate in all Levee Safety Program activities; Obtain, verify, and update information about levees; Provide access to information about their levee in the National Levee Database; Make clear which information will be publicly available on the National Levee Database and review that information together prior to sharing it; Discuss risk information about their levee and how it can be used; Agree to a strategy for sharing levee condition and performance information that aligns with authorities and responsibilities; Regularly coordinate, particularly for communication related activities; Share levee information with others." The final EC was expected on May 21

National Levee Safety Program

The Corps and FEMA have initiated a partnership to develop a new National Levee Safety Program and to lead a national discussion and develop an integrated framework for managing reliable levee systems and improving community resiliency in areas behind all levees throughout the Nation. According to Phoebe Percell, Chief of the Corps' Dam and Levee Safety Branch, "Over the

next two years as we develop the major components of this program, collaboration with stakeholders will be key to the program's continued success. The list of stakeholders for this program is long and includes states, tribes, local communities, emergency managers, and flood plain managers. The goals for our stakeholder engagement process include: (1) understanding the needs of the stakeholders; (2) providing opportunities for meaningful input to shape decisions and outcomes on program design, components, and products; and (3) ensuring that the unique challenges of disadvantaged communities and tribes are well understood and incorporated into solutions."

USACE and FEMA will be seeking feedback from stakeholders at various phases of the program's development over the next 2-3 years. Phase 1 is starting during the Winter of 2021 with a focus on gathering initial input on the purpose and scope of each of the components of the National Levee Safety Program to better understand the needs and priorities of the public. Phase 2 is anticipated to occur during the Summer of 2022 with a focus on soliciting feedback on priorities and options identified during Phase 1 (scoping). Phase 3 is anticipated to occur during the Fall of 2023 with a focus on soliciting feedback on draft program implementation products. During each phase, stakeholders will be able to submit comments through a variety of methods. Each phase will have an open comment period under docket number COE-2021-0007. This is an opportunity to make progress in promoting consistent national approaches for flood risk management across the country.[56]

Tribal Consultation/Approved Jurisdictional Determinations

On April 20, Acting Assistant Secretary of the Army for Civil Works, Jaime Pinkham, issued a memorandum with the subject line "Rescission of Previous Guidance – Tribal Consultation Associated With Approved Jurisdictional Determinations (AJD)." The memo rescinded guidance issued January 4, 2020 by former Assistant Secretary R.D. James that directed Corps districts not to consult with tribes on AJDs, regarding WOTUS. Pinkham issued the memo to comply with President Joe Biden's January 26, 2020 memorandum, Tribal Consultation and Strengthening Nation-to-Nation Relationships.

Pinkham's memo states, "[President Biden's] memorandum directs all Federal agencies to engage in regular, meaningful, and robust consultation with Tribal Nations. The Army's Civil Works program has a long history of productive consultation with Tribal Nations on its projects, rules, and regulatory permit actions, and the Army Civil Works program is committed to maintaining and enhancing its record on consultation." He added, "Among my first priorities are to review the existing USACE Tribal Consultation Policy to ensure it is consistent with, and fulfills, the commitments announced in the President's January 26th memorandum. I will ensure any consultative requirements associated with the review and issuance of Approved Jurisdictional Determinations are included in a revised and updated policy."

[56]www.leveesafety.org

Drought

National Climate Task Force

On April 21, National Climate Advisor Gina McCarthy convened the third meeting of President Biden's National Climate Task Force, with a key focus on the severe drought occurring in the West. The Task Force was briefed by Commerce Secretary Gina Raimondo and NOAA Senior Scientist Dr. Roger Pulwarty. The White House readout stated, "In areas like the Klamath Basin in southern Oregon and northern California, lake levels today are lower than occurred during the Dust Bowl. As has been shown in previous years, severe drought conditions can set the stage for worsening wildfire seasons, which in 2020 alone caused $16.6 billion in damages. The early, severe drought situation is just the latest manifestation of the pervasive and pernicious impacts that climate change is having on American communities."

"In response, [McCarthy] requested that Secretary of Agriculture Tom Vilsack and Secretary of the Interior Deb Haaland form an Interagency Working Group to address the needs of drought impacted communities. The Working Group also will explore opportunities to improve our nation's resilience to droughts and other severe climate impacts that are upending Americans' lives and economic livelihoods."

In an April 21, press release from the Department of the Interior, Secretary Haaland stated: "Water is a sacred resource. This Interagency Working Group will deliver a much-needed proactive approach to providing drought assistance to U.S. communities, including efforts to build long-term resiliency to water shortages. We are committed to using every resource available to our bureaus to ensure that Tribes, irrigators and the adjoining communities receive adequate assistance and support." Secretary Vilsak said: "In the United States, intense droughts threaten major economic drivers in rural communities such as agriculture and recreation, disrupts food systems and water supplies, endangers public health, jeopardizes the integrity of critical infrastructure, and exacerbates wildfires and floods. With our interagency Working Group, we will collaborate with Tribes, agricultural producers, landowners, and rural communities to build regional resilience to drought."

The task force also discussed the role of conservation in addressing climate change, with several actions taken by cabinet secretaries. Notably, Vilsack announced he would reopen enrollment in the Conservation Reserve Program (CRP), one of the world's largest voluntary conservation programs. As stated in White House readout, he noted there will be "higher payment rates, new incentives, and a more targeted focus on the program's role in climate change mitigation – devoting $300M or more annually to this effort." USDA has a goal to enroll an additional four million acres into the program. Vilsack also announced $330 million will be invested in 85 Regional Conservation Partnership Program (RCPP) projects and $25 million for On-Farm Conservation Innovation Trials.

Haaland announced $78 million in grants have been approved by the Migratory Bird Conservation Commission, which will aid in restoring and conserving nearly 500,000 acres of wetlands or associated upland habitats important for birds.

On July 14, the USBR distributed $15 million in drought relief funds to irrigators in Oregon and California affected by the drought in the Klamath Basin. Earlier in the year, Reclamation awarded $15 million for 18 drought resilience projects; $42.4 million for 55 water efficiency projects throughout 13 states through its WaterSMART program; and $800,000 to support development of local drought contingency plans.

Department of the Interior/Colorado Drought

Secretary of the Interior Deb Haaland was in Denver, Colorado, on July 22, to discuss the worsening drought conditions in the West and highlight Interior's efforts to support farmers, tribes, and communities impacted by ongoing water shortages during a roundtable at Denver Water's offices. "Drought doesn't just impact one community – it affects all of us, from farmers and ranchers to city dwellers and Tribes," said Haaland. "The Biden-Harris administration is taking action to provide relief to impacted communities now, while also making important investments that will help us wisely manage our shared resources across the West."

Secretary Haaland also highlighted the Biden Administration's whole-of-government approach to addressing the drought and confronting climate change. The Interagency Working Group is also developing longer-term measures to respond to climate change and build more resilient communities while protecting the environment. She noted the bipartisan infrastructure framework, now working its way through the Senate, includes important investments that will provide much-needed funding for the western drought crisis by investing in water efficiency and recycling programs, tribal water settlements, and dam safety.

Assistant Secretary for Water and Science Tanya Trujillo joined Haaland. Trujillo had been crisscrossing the state of Colorado to hear directly from water users, irrigators, farmers, scientists and local leaders about how the federal government can support them. "We look forward to working closely with our partners in Colorado to address the many challenges we face, ranging from severe drought conditions on the Western Slope to landslides that have resulted from last year's wildfire…. Our shared priority is to support efforts to build resilient communities and protect our water supplies for people and the natural environment."

The President's FY2022 budget proposal includes a $1.5 billion investment in the Bureau of Reclamation, with $54 million for WaterSMART programs, working cooperatively with states, tribes, and local communities as they plan for and implement actions to increase water supply.

Jim Lochhead, Denver Water's CEO/Manager, welcomed Haaland and Trujillo to the utility's administration building, which itself is a model of urban water efficiency. The group also included Governor Jared Polis (D), Rep. Diana DeGette (D-CO), Rebecca Mitchell, Director of the Colorado Water Conservation Board, and Colorado Commissioner of Agriculture Kate Greenberg.

Lochhead noted investments Denver Water is making in watershed health, through its From Forests to Faucets program that includes partners at the state and federal level, as well as water conservation, resiliency and sustainability. "The infrastructure that supplies our system isn't just the reservoirs and the treatment plants – it's the watersheds, forests, rivers and streams. And if those

aren't healthy and vibrant and sustainable, then we can't meet our mission of supplying the 1.5 million people who live within our service area," he said.

With one-third of Colorado experiencing severe drought conditions, DeGette observed, "We're in a desperate situation in many places in the West and it's going to take collaboration that we've had for a long time between our state, local and federal partners to get something done." Greenburg stated, "It's important to make sure that agriculture is supported and remains foundational to our state and that we are bringing tools here to Colorado, to our producers, to help them meet the challenges ahead." Mitchell added that climate change and drought conditions are not limited to Colorado but affect the entire Colorado River Basin. "The only way we'll find success for the future of water is if we do it in a collaborative sense, and it's so important that the highest levels of the administration have come here to discuss that. We appreciate that and I'm confident that we'll be able to work together for all."

Governor Jared Polis (CO) participated in the roundtable discussion, with other Colorado water leaders. Last month, at the recommendation of Colorado Department of Natural Resources and State Drought Task Force, the Governor declared a drought emergency for western Colorado counties experiencing impacts from severe (D2), extreme (D3), and exceptional (D4) drought conditions. The State Drought Task Force continues to monitor evolving conditions and unmet and urgent needs from communities and regional liaisons. Further, an Agricultural Impact Task Force and a Municipal Water Task Force continue to meet as needed to recommend opportunities for incident mitigation to minimize potential impacts. The need for additional task forces, such as energy or wildlife response teams, are evaluated, as conditions evolve, through identified agency representatives.

FEMA Drought Disaster

On August 15, ten western governors wrote President Joe Biden requesting he declare a Federal Emergency Management Agency (FEMA) drought disaster, as provided under the Stafford Act, allowing access to additional federal resources to "help protect America's family farmers, ranchers, and fishers" weather the "twin challenges of our extreme drought and catastrophic wildfires." While continuing to do "what is within our power, including working with our state legislatures and local governments to mitigate the immediate impacts of the drought, …the situation is now beyond our capacity as states or a region to manage without additional federal assistance." The governors provided recommendations for immediate additional assistance the federal government can provide.

The letter was signed by Governors Kate Brown (D-OR), Doug Burgum (R-ND), Spencer Cox (R-UT), Greg Gianforte (R-MT), Michelle Lujan Grisham (D-NM), Jay Inslee (D-WA), Brad Little (R-ID), Jared Polis (D-CO), Gavin Newsom (D-CA), and Steve Sisolak (D-NV). It addressed the current crisis stating: "Thousands of farmers in our states are experiencing devastating impacts from our ongoing drought…. Hay prices have skyrocketed, ranchers are selling off their livestock and others are considering selling prime agricultural lands for development. At this point there is little to no animal feed across much of the West, requiring farmers to import feed from out of state. Without substantial assistance, rural economies in our states that rely heavily on agriculture and natural resources will take years to recover from the effects of this devastating drought." The letter

expressed appreciation for the funding available from the U.S. Department of Agriculture's (USDA's) Farm Service Agency (FSA) and other sources, but notes local FSA offices are "overburdened with requests and unable to help on the scale we need."

The letter continued: "Beyond the impact on those industries and communities, the drought will have serious downstream impacts on the security of our food, fiber and energy production, both regionally and nationally. Those impacts include low or dried up reservoirs, increased algal blooms, a decrease in hydroelectric power and the potential of shuttering hydroelectric dams because of low water levels. Some drought-impacted communities are already running out of drinking water, a situation that could become much more widespread with prolonged drought. Additional impacts are being felt by local economies reliant on the recreational economies developed around large reservoirs in our states. These economies have already suffered lost revenues due to the COVID-19 pandemic and are now being devastated below water levels that preclude access and recreation on these waters."

The governors noted, "The latest U.S. Drought Monitor report indicates 99% of the West is in a declared drought compared with 63% this time one year ago. Focusing on the top two intensity ratings (D3-D4), nearly 60% of the West is experiencing extreme or exceptional drought conditions. One year ago, the percent of the area in D3-D4 was less than 2.5%. Historic drought levels threaten to eliminate entire crops, depress yields and harbor extreme levels of pests and disease that add to the cumulative loss. It is estimated 59.2 million Americans live in drought areas. These historic dry conditions have been exacerbated and accelerated by recent record-setting temperatures throughout the region. The NWS recently reported that 67 weather stations in the West recorded their hottest temperatures ever. With temperatures reaching over 40 degrees above seasonal averages, agriculture commodities sustained a significant loss. As harvest continues and impacts are realized, the rapid evaporation of what little moisture was present and the exposure to intense heat and sun has devastated entire types of commodities."

The letter addressed wildfires that continue to grow in number and intensity, stating, "…wildfires' direct and indirect impacts act as a force multiplier in the severity of hardships agriculture producers are experiencing. The heroic efforts of our wildland firefighters protect lives and property from devastation, but their capacity to mitigate all threats is limited.... Drought and wildfire impacts are also being felt by our wildlife resources. Species are not only being displaced by fire but are also suffering from limited water for survival. These impacts could have long term effects on species population numbers and their status under the Endangered Species Act. As you know, listing under the Act can have broad economic and social impacts that are significant to local rural economies."

The governors emphasized, "We are eager to have additional conversations with you and your Administration about longer term strategies to make the West more resilient to drought, wildfires and climate change. However, at this time we are requesting that you immediately declare a FEMA drought disaster in our states, allowing our agriculture communities to access funding beyond what is available through existing emergency programs. We recognize that using FEMA funding for a drought is not common, but the Stafford Act specifically references drought as an eligible category of disaster."

Further, the governors asked that the Secretaries of Agriculture and Interior "evaluate grazing grounds and livestock feed opportunities that could be made available for emergency situations where lands can support the additional use. The drought and pest pressures have forced livestock ranchers and producers to relocate herds, open winter grazing grounds or reduce herd sizes due to the lack of available forage and feed. While USDA has utilized Conservation Reserve Program (CRP) lands, as livestock producers experience prolonged drought conditions and the residual impacts, these lands will exhaust their capacity."

The governors' expressed their gratitude and concluded, "We encourage the White House to consider and work with Congressional leadership for emergency assistance, including the possibility of allowing states to utilize existing American Rescue Plan funds for drought- and fire-related needs. To this end, we look forward to working closely with your Administration to discuss agency-specific actions and opportunities to leverage all federal and state resources to respond to the immediate impacts of natural disasters."

On September 15, Gina McCarthy, White House National Climate Advisor, wrote Utah Governor Spencer Cox in response to the August 15 letter from ten western governors asking President Biden to declare a FEMA drought disaster. She outlined several programs under the DOI and USDA as "the best avenue for delivering near-term federal assistance to your states." McCarthy noted that the Stafford Act requires individual states to submit detailed preliminary damage assessments to FEMA. "Because the Stafford Act is geared toward responding to discrete events that overwhelm a state's capacity to respond quickly, and not for multi-year chronic conditions, it can be difficult for states to meet established regulatory thresholds. Other federal agencies are typically in a better position to offer assistance and expertise that more readily addresses the types of damages and unmet needs that accompany severe drought conditions, both short and long-term."

Among the programs and efforts mentioned were: (1) $15 million from USDA and $18 million from USBR to assist irrigators and tribal projects in the Klamath Basin; (2) a USDA emergency assistance program for livestock, bees, and fish (ELAP); (3) flexible fee deadlines for the USDA's Risk Management Agency; (4) $41.8 million in conservation incentive contracts through the USDA's EQIP), targeted in Arizona, California, Colorado, and Oregon; (5) $100 million of reprogrammed USBR funds to support drought response actions (resiliency, water recycling, wildland fire mitigation and prevention); and (6) USBR's WaterSMART program that invested $73.2 million across 217 projects in western states. "In addition, [DOI] recently confirmed to Congress its ability to utilize $205M for specific storage projects in California, $30M for additional water recycling projects, and $12M for desalination projects."

"[T]he Administration is working through the Drought Resilience Interagency Working Group, which is co-chaired by Secretaries Vilsack [USDA] and Haaland [DOI], to leverage multiple agency programs and funding opportunities to support communities suffering from the impacts of this year's historic drought. And, notably, the Administration is working with Congress on the infrastructure package to fund new, multi-billion dollar investments in longer-term needs for water storage, water recycling and reuse, and water efficiency." She added that there are two FEMA programs available to address long-term drought mitigation and resilience needs: (1) the Building Resilient Infrastructure and Communities (BRIC) program launched in 2020, with $1B available for

grants to states to proactively reduce vulnerabilities to natural hazard events; and (2) FEMA's Hazard Mitigation Grant Program to reduce the impacts of climate change. Also, every state that received a major disaster declaration in response to the COVID-19 pandemic is eligible to receive 4% of those disaster costs to invest in mitigation projects that reduce risks from natural disasters, including wildfires and drought.

"President Biden recognizes the devastating intersection of drought, extreme heat, and wildfires in the West, and supports bold and urgent action to address these and other impacts of climate change…. Know that we are united in our efforts to address the serious drought-related needs in your states. Needless to say, because of the extent and severity of the drought, we are not treating the drought – or the other severe heat, wildfire, and other climate impacts that our country is experiencing – as 'business as usual.' Indeed, we need to deal not only with the impacts on the ground today, but also work with Congress to fund more climate-resilient water and other infrastructure we need for the long term. In that spirit, we would be pleased to arrange for a meeting with your chiefs of staff (or whomever you think appropriate) and key federal staff to explore additional ways that we can work together to address the immediate and longer-term drought-related needs in your states."

NOAA Drought Task Force

On September 21, the NOAA Drought Task Force published a report on the exceptional drought for the states of Arizona, California, Colorado, Nevada, New Mexico, and Utah between January 2020 and August 2021. The low precipitation and high temperatures imposed an unprecedented and costly drought amid a two-decade period of persistently warm and dry conditions. The 20-page report looked at how bad the current drought is relative to the instrumental and paleoclimate records, the natural variations in precipitation and human-caused warming that contributed to the drought, and how long the drought is likely to continue despite the late season monsoon rains in 2021.

The NOAA Task Force is actively researching answers to additional questions through the Modeling Analysis Predictions and Projections (MAPP) program with support from the National Integrated Drought Information System (NIDIS), including: (1) What accounts for the forecast errors in seasonal precipitation and temperature in Summer 2020 and other seasons? (2) Has warming affected the dynamics or circulation that controls regional and seasonal precipitation, such as through land–atmosphere feedbacks? (3) What was more important in accounting for the severity of this drought, the exceptionally low precipitation or the exceptionally warm temperatures? (4) What impact will the forecast 2021–22 La Niña have on precipitation and temperature and, more generally, how are natural modes of seasonal to decadal climate variability impacting Southwest U.S. climate? (5) What effect will precipitation in Winter 2022 have on the water resources in 2022 over the Southwest? (6) How will drought monitoring and management change in the presence of Southwestern U.S. aridification? (7) How do warming effects on snowpack influence water availability in the Spring and Summer? (8) What are the major sources of uncertainty in regional and seasonal precipitation trends in the U.S. Southwest, and how can they be constrained for more certain projections?

The report notes that many governors took steps to prepare water districts and citizens for water limitations. Arizona reissued its drought state of emergency, which has been in place since 1999. California Governor Gavin Newsom declared three separate states of emergency for the Russian River basin, the Sacramento-San Joaquin river basin, and in the Central Valley the Klamath and Tulare Lake basins, and (3) another declaration in July, asking for voluntary water use reductions of 15%. In June, Colorado declared a state of emergency for 21 western counties due to the drought and the state was in its highest drought mitigation activation level (Phase 3). Nevada imposed use restrictions, while New Mexico and Utah both issued drought emergency declarations. Of note, on October 19, Governor Newsom issued a proclamation extending the drought emergency statewide and further urging Californians to step up their water conservation efforts.[57]

Senate Energy and Natural Resources Subcommittee on Water and Power

On October 6, the Senate Energy and Natural Resources Subcommittee on Water and Power held a hearing to examine the status and management of drought in the western United States. Witnesses included: Tanya Trujillo, Assistant Secretary for Water and Science, DOI; Tom Buschatzke, Director, AZ DWR; Julie Schaff Ellingson, Executive Vice President, North Dakota Stockmen's Association; and Jennifer Pitt, Colorado River Program Director, National Audubon Society.

Trujillo provided an overview of current reservoir conditions, with 93% of the western United States in drought or abnormally dry conditions. "In California and in the Colorado River Basin, certain reservoirs have reached 30-year storage lows, and Lake Powell and lake Mead – the two largest reservoirs in the United States – are currently at historically low levels. Although the Rio Grande and Pecos basins and parts of Arizona received some monsoonal rainfall this summer, the temporary relief has not reversed the more than two-decade drought impacting the region, with Elephant Butte Reservoir, for example, currently at only 5 percent of its total capacity. Collectively, a very challenging water supply situation is unfolding in much of the West…. Colorado River system reservoirs sit at just 39 percent, the lowest levels since they began to fill. Over the 22-year drought period in the Colorado Basin, combined hydropower generation has declined 13 percent to an annual average of 10.5 million [megawatt hours] MWh. Declining storage levels due to ongoing drought have resulted in reduced hydropower generation efficiency and concerns about approaching minimum power pool at Glen Canyon Dam, below which no power can be produced."

Trujillo discussed the implications of the first shortage declaration in the Lower Colorado River Basin. "NOAA's Climate Prediction Center recently forecasted an increased likelihood of a La Nina Winter this year and the continuation of high temperatures and below-average precipitation reaching into December 2022. Many of Reclamation's projects will begin the 2022 water year with below-average carryover water storage. We have had to make difficult choices this year, and together we will have to make more difficult decisions if it continues to remain dry next year."

She talked about interagency coordination to "marshal existing resources and work in partnership with state, local, and Tribal governments to address the needs of communities suffering

[57]https://www.drought.gov/documents/noaa-drought-task-force-report-2020-2021-southwestern-us-drought

from drought-related impacts; identify and disburse immediate financial and technical assistance, and develop longer-term measures to respond to climate change, including building more resilient communities and protecting the natural environment." She offered a timeline of 227 projects funded with $73.2 million in WaterSMART grants across the western states, as well as other investments made by DOI and the USDA over the summer of 2021.

She concluded: "No amount of funding can offset the severe shortfalls in precipitation being experienced this year across the American West. We will experience unavoidable reductions in farm water supplies and hydropower generation, ecosystem degradation, and urban areas will need to conserve water. The Department and state and local partners have planned for this by being proactive and fully using the tools we have. We appreciate Congress' attention to the severity of drought and welcome your input on new tools and approaches to help the communities we all serve."

Buschatzke talked about groundwater storage and management, wastewater reuse, desalination, augmentation and artificial recharge, water exchanges and leveraging water infrastructure, forest and watershed health and the dangers of wildfires, efforts to protect water levels in Lake Mead under the DCP, and funding from various sources and collaboration to stretch water supplies. He said: "Arizona and the other western states face serious challenges as we grapple with drought and the anticipated hotter and drier future attendant to climate change. Meeting those challenges requires vigilance in monitoring the hydrologic conditions, watershed health and reservoir contents to create programs and implement actions that not only respond to those conditions but reduce the likelihood that more onerous water supply reductions will occur. Arizona has a history of meeting challenges both on its own and in concert with other water users in the Colorado River Basin and Mexico. Arizona recognizes that it cannot be successful solely on its own, particularly given the challenges we face today. Collaboration with the Basin States and Mexico is the only realistic pathway to achieve success. Likewise, the water users, Tribes and other stakeholders throughout the Basin must be engaged and provide input into actions to protect the Colorado River System. Arizona has embraced that philosophy in the creation of the DCP, the 1030' [Lake Mead elevation triggering] consultation and post-2026 discussions."

He added: "Partnering with the Department of the Interior and the Bureau of Reclamation is also a crucial factor in managing the current conditions of the Colorado River and will be key in managing our future. Reclamation's data and modeling capabilities represent the best available science in providing a baseline for hydrologic conditions and projections to inform decision-making for future actions. Interior and Reclamation have other key resources that can be deployed to enhance the sustainability of the Colorado River system. Moving forward, transparency and inclusiveness are imperative. Arizona benefited by following those tenets in the creation of its DCP Implementation Plan that set the stage for approval of the Seven Basin States' DCP Agreements. Arizona is following those tenets as it continues its internal discussion and as it works with the Basin States, Mexico, the United States and stakeholders on the Colorado River."

House Natural Resources Committee's Subcommittee on Water, Oceans, and Wildlife

On October 15, the House Natural Resources Committee's Subcommittee on Water, Oceans, and Wildlife held an oversight hearing titled, "Colorado River Drought Conditions and Response

Measures – Day One." The first panel included: Tanya Trujillo, Assistant Secretary for Water and Science, DOI; Daryl Vigil, Jicarilla Apache Water Administrator and Co-Facilitator of the Water and Tribes Initiative in the Colorado River Basin; and Amelia Flores, Chairwoman, Colorado Indian River Tribes.

Trujillo testified that the "…period from 2000 through 2021 has been the driest 22-year period recorded in more than 100 years of record-keeping. The reservoir system was 95 percent full in 2000, but as of September 28th, Colorado River system reservoirs sit at just 39 percent, the lowest levels since they began to fill…. Declining storage levels due to ongoing drought have resulted in reduced hydropower generation efficiency and concerns about approaching minimum power pool at Glen Canyon Dam, below which no power can be produced."

Trujillo added, "The Department participates in several points of coordination…to optimize federal drought response - including the National Climate Task Force, the Interagency Drought Relief Working Group, the National Drought Resilience Partnership, the Water Subcabinet, and works directly with federal entities including the Western Area Power Administration. Each…encompass both immediate drought relief as well as long-term drought resilience efforts geared at responding to ongoing climate threats." Through collaborative action, [DOI] can marshal existing resources and work in partnership with state, local, and Tribal governments to address the needs of communities suffering from drought-related impacts; identify and disburse immediate financial and technical assistance, and develop longer-term measures to respond to climate change, including building more resilient communities and protecting the natural environment." She referred to the Climate Task Force Director's September 15 letter outlining federal drought relief efforts in response to the August 15 inquiry from ten western governors.

Vigil said, "My remarks speak to the past, present, and future role of tribes in Colorado River governance. My key message is that as sovereigns in the basin, tribes – along with federal and state governments – need to be at the decision-making table. Tribes have senior water rights to at least 25% of the current natural flow of the Colorado River but have historically been excluded from decision-making or 'consulted' only after decisions have been made…. It is time to create a new paradigm for governing the use of the Colorado River – one that integrates best available science and indigenous knowledge of the basin...one that involves tribes as active partners in problem-solving, decision-making, and governance."

Flores stated, "Our reservation is separated by more than 70 miles of the Colorado River running through our lands located in both California and Arizona. Since time immemorial, the River has sustained us. I am here today to tell you that we are committed to helping to support the River that has provided for us. The Colorado River is suffering not only from drought but climate change that is forcing all of us to change our relationship with its water. We must use its water more efficiently, and ensure that each drop provides maximum benefits so that others are not cut off entirely."

A second panel of state witnesses included: Tom Buschatzke, Director, Arizona Department of Water Resources; Peter Nelson, Chairman, Colorado River Board of California; John Entsminger, General Manager, Southern Nevada Water Authority; Rebecca Mitchell, Director, Colorado Water

Conservation Board; John D'Antonio, New Mexico State Engineer; Gene Shawcroft, General Manager, Central Utah Water Conservancy District; and Pat Tyrrell, Wyoming's Upper Colorado River Commissioner.

Buschatzke testified, "Arizona has been under an emergency drought declaration since 1999...pursuant to a recommendation from the Governor's Drought Interagency Coordinating Group. The declaration relates to local conditions 'on the ground' in Arizona as well as drought impacts to water supplies…. Water managers have been cognizant of the risks to the water supplies provided by the River for decades and have taken numerous actions to address these risks." He described development of Arizona's groundwater law and recharge efforts, the Lower Basin Drought Contingency Plan (DCP), and the creation of intentional created surplus (ICS) water through conservation. He observed, "Natural flows in the Colorado River have decreased from the long-term average of 14.8 million acre-feet per year to an average of 13.3 million acre-feet per year over the last 30 years. Future flows of the Colorado River are predicted to be even less." In 2022, DCP Tier I reductions mean "…Nevada will leave 21,000 acre-feet in Lake Mead; Mexico will leave 80,000 acre-feet in Lake Mead; and Arizona will leave 512,000 acre-feet in Lake Mead. These are significant reductions for our water users."

Nelson called this a "millennium drought," one of the worst in 1200 years. "Over the past several decades, the Basin has experienced a noticeable shift to hotter, drier conditions, which are straining an already over allocated system…. While direct causality of increasing temperatures and reduced water supply in the Basin may not always be clear, the implications of the available climate-change science and data can no longer be ignored." He summarized California's long history of development and use of Colorado River water since 1870, adding "…collaboration and cooperation have been the primary tools utilized by the Basin states" to address basin challenges. He noted, "California Governor Newsom's Administration has prioritized water management as crucial to the State's economic, ecological, and social well-being." Of note, on October 19, Governor Newsom issued a proclamation extending the drought emergency statewide and further urging Californians to step up their water conservation efforts.

Entsminger observed, "The math problem we face is quite simple. If we rely on the promises of the 1920s and 1940s, there are legal entitlements to use 17.5 million acre-feet of water each year. Today, use is approximately 14.0 million acre-feet per year. Over the last 20 years, the river has given us an average of 12.3 million acre-feet per year. Despite the fervent warnings…, the river community is far from consensus about how dry of a future to plan for…. We must develop additional supplies, pursue aggressive conservation, and make investments in technologies and tools that show promise helping us do both. It is well known that agriculture uses approximately 80 percent of the river's flow. The remaining goes to municipal users. As we have learned from supply chain disruptions over the last 18 months, agricultural and urban sectors must work together to reduce water use…."

Mitchell testified, "The Basin States negotiated the 1922 Colorado River Compact to: (a) provide for greater certainty and security for all states who rely on the water; (b) eliminate pressures to race to develop uses; (c) allow Upper Basin States to develop supplies at their own pace and safeguard water for future uses; (d) allow the states to determine how the water would be divided

and apportioned amongst themselves in perpetuity; (e) maintain state autonomy; and (f) promote interstate comity and remove causes of present and future controversies…. In this context, it is important to understand the significant differences between the operations and systems in the Lower Basin States (Arizona, California, and Nevada) and the Upper Basin States (Colorado, New Mexico, Utah, and Wyoming). Lakes Mead and Powell both sit above all Lower Basin water uses and below the Upper Basin uses. Having these large reservoirs above them has meant that the Lower Basin States have had certainty and security in their water deliveries…. In contrast, water users in the Upper Basin States have taken shortages nearly every year for over twenty years…. Upper Basin water users are reliant upon current runoff from snowpack and water users are only able to use water from that snowpack in that particular year. Upper Basin water users frequently do not received the full amount of water to which they are legally entitled…. Multiple years of shortages have resulted in many Coloradans facing heartbreaking decisions."

D'Antonio added, "One of the original intents of the 1956 Colorado River Storage Project Act was to allow the Upper Division States to fully develop their apportionment. To date, however, the Upper Division States have not fully developed their apportionment due, in part, to the fact that water users in the Upper Basin seldom have sufficient water to fully use their water rights in any given year. New Mexico's Upper Basin water use is currently about half of its apportionment. Most of New Mexico's future development plans in the Upper Basin are for tribal water development pursuant to Indian water rights settlements…. Those communities have been hit particularly hard by the drought and COVID-19 pandemic." He suggested that prolonged dry periods will be punctuated by wet periods and called for "…retaining the flexibility for the States to develop their authorized amounts, particularly during the good years. Striking such a desired balance, however, will be no easy task."

Shawcroft observed, "Utah and the other Upper Division States have watched our available water supplies dwindle as the prolonged drought has continued. North facing mountains used to store snow through late summer keeping our mountain streams flowing year-round. Today the mountains are bare and many streams flow at a trickle…. The District has aggressively pursued dozens of water efficiency projects and today we conserve nearly 140,000 acre-feet per year…achieved at a combined local and federal cost of nearly $230 million in both agricultural and municipal projects. This 140,000 acre feet of conserved water annually is 30,000 acre-feet more than the [Central Utah Water Conservancy District] total trans-basin diversion from the Colorado River of 101,900 4 acre-feet per year. Without this conservation effort over the past 30 years, Utah would be severely handicapped."

Tyrrell testified, "Water users in Wyoming continue to experience significant water shortages due to the extremely dry conditions. Currently, all of Wyoming's Colorado River Basin is suffering from either severe or extreme drought…. Drought response operations are a first line of defense to protect critical elevations at Lake Powell. But that existing storage is not infinite and cannot protect Lake Powell under many of the dry scenarios now being projected. If dry conditions persist or worsen as many project, existing storage will diminish or be inadequate, and the Upper Basin may ultimately need to reduce its uses to comply with the 1922 Compact…. The effects of these conditions are not limited to an isolated region but extend across the entirety of the Basin. Drought response measures must equally stretch across the entirety of the Basin. It is also imperative to recognize that not all the actions can be implemented uniformly across the Basin. Success will

require development and implementation across federal agencies in cooperation and partnership with the Basin States, Tribes, water users, and other stakeholders."[58]

Indian Water Rights

Shoshone-Paiute Tribes of the Duck Valley Reservation Water Rights Settlement Act

On October 6, the Senate Indian Affairs Committee held a hearing on the Technical Correction to the Shoshone-Paiute Tribes of the Duck Valley Reservation Water Rights Settlement Act (S.648) and the Gros Ventre and Assiniboine Tribes of the Fort Belknap Indian Community Water Rights Settlement Act (S. 1911). Witnesses were: Bryan Todd Newland, Assistant Secretary Indian Affairs, Department of the Interior; Chairman Brian Thomas of the Shoshone-Paiute of the Duck Valley Reservation; and President Andrew Werk of the Fort Belknap Indian Community. Chairman Thomas said S. 648 appropriates money from settlement trust funds to enable the tribe to construct and rehabilitate critical water supply projects to make use of their water right and achieve the Duck Valley Reservation's economic potential.

President Werk observed: "The Fort Belknap Indian Community (FBIC) has been negotiating our water rights settlement with its trustee for the past 30 years. The pace…is excruciatingly slow. [T]here seems to have been this silent shift away from the commitments of the 20th Century to protect and preserve Indian water rights…and, in particular, its responsibilities to tribal water projects funded at a level that supports full Tribal water rights' development that will support economic opportunities on reservations such as ours. We played by the rules. But our effort to complete our water rights settlement with the federal government over the past two decades has been stymied by a series of past Administrations who have, without explanation, seemed to take political aim at the PIA [practical irrigable acreage]-based size and scope of our agreed upon Indian reserved water rights…and denying the scope of our damages claim that address the federal government's failure to build the water delivery infrastructure required to protect and preserve our water rights and put them to use – the purpose of which is to create our permanent homeland through the development of a stable agricultural economy. We fear that this recent policy trend seems to focus on an Indian water settlement funding policy that is based on the size of the reservation and tribal population, for which there is no legal basis, instead of a policy based on the PIA quantification standard…. The promise…when we ceded millions of acres of land, was a permanent, livable homeland and assistance in the development and use of our reserved water rights. The United States has a continuing trust obligation and programmatic responsibility to provide the Fort Belknap Indian Community a permanent and economically sustainable homeland."

Werk concluded: "Our Indian water settlement is structured to promote economic efficiency on our Reservation and our Tribal self-sufficiency. It is an agricultural infrastructure plan; includes the development of clean and safe drinking water; provides for the FBIC to administer, manage, and enforce its reserved water rights; with additional economic projects that will allow us to develop our Indian reserved water rights and improve the poor economic condition of our members on the

[58]https://naturalresources.house.gov/

Reservation. [W]e are the Winters Tribes with a recognized Indian reserved water right since 1908, and we are the last tribes in Montana to achieve our water settlement with the United States."

Newland said Interior supports S. 648, but has concerns with S. 1911. "This Administration strongly supports the resolution of Indian water rights claims through negotiated settlements. Indian water settlements help ensure that Tribal Nations have safe, reliable water supplies; improve environmental and health concerns…; enable economic growth; promote Tribal sovereignty and self-sufficiency; and help fulfill the United States' trust responsibility to Tribes....[W]ater rights settlements have the potential to end decades of controversy and contention among Tribal Nations and neighboring communities and promote cooperation in the management of water resources. Congress plays an important role…and we stand ready to work with this Committee and Members of Congress to advance Indian water rights settlements."

Regarding S. 648, Newland said: "The provision in the Duck Valley Settlement Act prohibiting investment until an enforceability date is reached is not common in Indian water rights settlements. It appears in the Duck Valley settlement and other settlements enacted in 2009-2010, including the Crow Tribe Water Rights Settlement Act…the Taos Pueblo Indian Water Rights Settlement Act…the Aamodt Litigation Settlement Act…and the Navajo-Gallup Water Supply Project and Navajo Nation Water Rights…. In each of these settlements, funds were inadvertently invested and were returned to Treasury. In total for the five settlements, over $11 million was returned to the Federal Treasury. The Department supports S. 648 and, as a matter of equity, would support similar legislation to resolve this same issue in the four other Indian water rights settlements approved by Congress in 2009 and 2010."

DOI's concerns over S. 1911 included: (1) the ability of the Tribes to unilaterally modify the authorized uses of the $593.11 million Trust Fund established by the bill; and (2) the open-ended funding authorized for the mitigation of impacts to junior non-Indian and Milk River Project water users, including the construction of a proposed dam and reservoir. "The Department believes that the uses of the Trust Fund should be governed by statutory provisions, as has been the case in other Indian water rights settlements, and that funds should be targeted to developing water resources and expanding access to water on the Reservation." Open-ended funding unlocks the door to unknown federal obligations and costs, he said.

Colorado River Indian Tribes Water Resiliency Act

On December 2, Senator Mark Kelly (D-AZ) introduced the Colorado River Indian Tribes (CRIT) Water Resiliency Act (S. 3308). The Arizona-specific bill would authorize CRIT, subject to the approval of the Secretary of the Interior, to enter into water lease, exchange, or storage agreements of less than 100 years for Colorado River water allocated to CRIT. Any person entering into an agreement would be subject to applicable state and federal laws. Section 5 of the bill addresses storage agreements, and authorizes entities such as the Arizona Water Banking Authority to store water at underground facilities located within the Lower Colorado River Basin in the State of Arizona. According to CRIT, it was established in 1865 and has senior rights to 717,000 acre-feet of water from the Colorado River.

Gila River Indian Community (GRIC) Governor Stephen Roe Lewis said he intends to work with the Arizona delegation and other tribes to include more than just CRIT in S. 3308. Separately, on December 10, Lewis signed an agreement with the USBR for $72 million to accelerate the construction of GRIC's irrigation project. The project was approved by Congress in 2004 as part of GRIC's water rights settlement, and received increased funding in the BIL.

Infrastructure

Aging Western Water Infrastructure

On January 12, a national coalition of over 200 agricultural organizations and rural and urban water districts urged President Biden and congressional leadership to "address aging Western water infrastructure in any potential infrastructure or economic package." Led by the Family Farm Alliance, the California Farm Bureau, Western Growers, National Water Resources Association, and the Association of California Water Agencies, the coalition included signatories from 15 western states, including Arizona, California, Colorado, Hawaii, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, Utah, Washington, and Wyoming.

A press release stated the coalition "encouraged the federal government to invest in a diversified water management portfolio that enhances water supply and quality for urban and environmental uses while keeping water flowing to Western farms." Specific recommendations included: (1) water conservation; (2) water recycling, reuse and desalination projects; (3) new water storage facilities (surface and groundwater); (4) watershed management, fish passage and recovery and habitat restoration; (5) federal financing mechanisms for water projects; (6) loans for local districts operating and maintaining federally-owned irrigation projects; and (7) water quality improvements for rural communities.

The coalition also asked for "timely construction of water projects by streamlining the regulation and permitting processes," and to "encourage federal agencies to implement a more cooperative approach toward achieving multiple goals under existing environmental laws and regulations."[59]

Water Affordability, Transparency, Equity, and Reliability Act

On February 25, Representative Deborah Lawrence (D-MI), together with 72 Democratic co-sponsors, introduced the Water Affordability, Transparency, Equity, and Reliability (WATER) Act as a starting point for discussions on a water infrastructure package. The proposal is based on assessments from EPA on drinking water and clean water infrastructure needs. The bill introduction coincided with Senator Bernie Sanders' (D-VT) announcement of a strong push for "massive investments" in water infrastructure with an emphasis on environmental justice in the next round of budget reconciliation.

[59]https://www.wga.com/press-releases/national-coalition-pushes-investment-aging-water-infrastructure

Specifically, the bill creates the WATER Trust Fund with up to $35 billion per year, derived from a 3.5% increase (from 21% to 24.5%) in the corporate tax rate. Funds would be allocated by the EPA Administrator and Secretary of Agriculture, with 45% of the amount available for the fiscal year towards the Clean Water State Revolving Fund (CWSRF) and 43.5% to the Drinking Water State Revolving Fund (DWSRF). The remaining amount would go towards other established clean and drinking water programs, such as nonpoint source and water quality grants.

The bill expands the use of SRF funds to allow recipients to purchase private water treatment works from "willing or unwilling sellers" or apply them to expenses related to cancelling contracts with operators of publicly owned treatment works not adequately managing facilities or operations. It also requires recipients of both the CWSRF and DWSRF to enter into agreements authorized under section 8(f) of the National Labor Relations Act ("project labor agreements").

The bill proposes several amendments to the DWSRF program. To the extent there are sufficient loan applications, at least 50% of the fiscal year capitalization grant amount must be awarded to disadvantaged communities. DWSRF funds could be used to replace lead service lines on private property and update public treatment systems or household wells to address challenges related to per- and polyfluoroalkyl substances (PFAS). It increases funding for addressing lead service lines in schools to $1 billion per year until 2024 (up from $5 million per year), and doubles the amount of funding (from 1.5% to 3%) from the DWSRF that can go towards tribes that have not received other grants under the program. Finally, it permanently codifies the use of American iron and steel products for projects that receive DWSRF funding.

Additionally, the bill increases funding for technical assistance to rural and tribal communities to $175 million per year for FY2021-2026 (up from $25 million per year). It also creates grant funding for residential onsite sewage disposal systems and significantly increases annual funding for household water well systems ($350 million per year ongoing).

Finally, the bill includes a study of water and sewer services, including assessments of affordability (rates and potential rate increases, water disconnections due to lack of payment, and the effectiveness of the CWA and SDWA funding); discriminatory practices and violations by water and sewer providers; public participation in efforts to regionalize public water and sewer systems; and data availability and methodology related to water and sewer service and discrimination. The study will result in a report due to Congress within one year with findings and recommendations for utility companies, federal agencies, and states.

America's Infrastructure

On March 3, the American Society of Civil Engineers (ASCE) released their 2021 Report Card for America's Infrastructure. Cumulatively, the nation earned a "C-," up from a "D+" given in the 2017 report. The report assessed the state of infrastructure across 17 categories, including dams, levees, stormwater, wastewater, and drinking water. Each assessment examined the infrastructure category based on the condition and capacity of existing infrastructure, funding and future need, operations and maintenance, public safety and resilience, and innovation within the sector. They also provided specific recommendations to raise the grade of each category.

"The most recent analysis reveals that while we've made incremental immediate gains in some of the infrastructure categories, our long-term investment gap continues to grow. We're still just paying about half of our infrastructure bill – and the total investment gap has gone from $2.1 trillion over 10 years to nearly $2.59 trillion over 10 years."

"While we grade 17 categories individually, our infrastructure is a system of systems and more connected than ever before. As we look at the low grades and analyze the data behind them, there are three trends worth noting: (1) Maintenance backlogs continue to be an issue, but asset management helps prioritize limited funding…; (2) State and local governments have made progress. Increased federal investment or reform has also positively impacted certain categories…; and (3) There are still infrastructure sectors where data is scarce or unreliable...." Sectors include levees and stormwater that "suffer from a lack of robust condition information or inventory of assets."

Dams, levees and stormwater infrastructure all received a "D" grade, wastewater infrastructure received a "D+," and drinking water infrastructure received a "C-." Though these grades are low, the report acknowledges that funding has improved for some categories, like drinking water infrastructure. However, a consistent recommendation across all water categories is to fully fund the authorized federal programs that provide funding to local communities that often operate and maintain this infrastructure and to address maintenance backlogs that have built up over several decades. The report estimated the total combined need for drinking water/wastewater/stormwater infrastructure at $1.05 trillion, with a $434 billion funding gap; $93.4 billion for dam infrastructure, with a $81 billion funding gap; and $80 billion for levee infrastructure, with a $70 billion funding gap.

"Importantly, the COVID-19 pandemic's impacts on infrastructure revenue streams threaten to derail the modest progress we've made over the past four years. In addition, many sectors and infrastructure owners are learning what it will take to make our communities climate resilient as we grapple with more severe weather. Meanwhile, many of our legacy transportation and water resource systems are still in the D range. These infrastructure networks suffer from chronic under investment and are in poor condition. We're headed in the right direction, but a lot of work remains."[60]

Water for Conservation and Farming Act

On March 23, Senators Ron Wyden (D-OR) and Jeff Merkley (D-OR) introduced the Water for Conservation and Farming Act "…to provide for drought preparedness and improved water supply reliability." The bill has two titles focused on infrastructure development and ecosystem protection and restoration.

The legislation: (1) creates a Bureau of Reclamation Infrastructure Fund with $300 million to support water recycling projects, water-use efficiency projects and dam safety projects; (2) establishes a grant program for any Reclamation States and others to complete habitat restoration projects that improve watershed health and mitigate climate change; (3) expands the WaterSMART program to increase water supply reliability by funding infrastructure and conservation projects that

[60]https://infrastructurereportcard.org/asce-2021-infrastructure-report-card-gives-u-s-c-grade/

conserve water, increase efficiency and improve the condition of natural water recharge infrastructure; (4) establishes a $3.5 million waterbird and shorebird habitat program to provide incentives to farmers to create temporary habitat for bird migration; (5) authorizes $40 million for the Department of the Interior's Cooperative Watershed Management Program for water and conservation projects that support disadvantaged communities and generate environmental benefits to fisheries, wildlife and habitats; (6) improves drought preparedness by requiring federal agency plans to sustain critically important fisheries during drought; and (7) authorizes $25 million through 2027 for projects under the Fisheries Restoration and Irrigation Mitigation Act (P.L. 106-502) to support voluntary fish screen and passage projects in Idaho, California, Montana, Oregon, and Washington.

On March 24, during a Senate Committee on Energy and Natural Resources' Subcommittee on Water and Power hearing on water infrastructure, Senator Wyden said: "My legislation instructs the Bureau of Reclamation to start expanding their tool box…. The Bureau of Reclamation has to be creative using natural infrastructure to reduce water conflicts, prioritize projects with multiple benefits - water, recreation, habitat; and the bill creates new ways for the Bureau to work with farmers to plan irrigation seasons and also address issues like migratory birds and endangered fish." He went on to say, "Investing in water conservation infrastructure will pay dividends in reducing the demand for water, improving biodiversity and helping farmers and ranchers better plan and prepare for droughts."[61]

American Jobs Plan

On March 31, President Biden released his $2 trillion American Jobs Plan to improve the nation's infrastructure. The White House press release and fact sheet said: "The United States of America is the wealthiest country in the world, yet we rank 13th when it comes to the overall quality of our infrastructure. After decades of disinvestment, our roads, bridges, and water systems are crumbling." The plan calls on Congress "…to invest an additional $17B in inland waterways, coastal ports, land ports of entry, and ferries, which are all essential to our nation's freight." The plan includes investments in rural and tribal communities.

President Biden's plan invests $111 billion to: (1) replace 100% of the nation's lead pipes and service lines – with $45 billion for the EPA's DWSRF and WIIN Act grants; and (2) upgrade and modernize America's drinking water, wastewater, and stormwater systems. It will tackle new contaminants, support clean water infrastructure across rural America, and scale up existing successful programs, with $56 billion in grants and low-cost flexible loans to states, tribes, territories, and disadvantaged communities across the country. Another $10 billion is for monitoring and remediating PFAS in drinking water and to invest in rural small water systems and household well and wastewater systems, including drainage fields.

The plan addresses concerns with infrastructure affected by natural disasters. "In 2020, the United States endured 22 separate billion-dollar weather and climate disasters, costing $95 billion in damages to homes, businesses, and public infrastructure. In Louisiana, Hurricane Laura caused

[61] https://www.wyden.senate.gov

$19 billion of damage, resulting in broken water systems and a severely damaged electrical grid that impeded a quick recovery. Building back better requires that the investments in this historic plan make our infrastructure more resilient in the face of increasingly severe floods, wildfires, hurricanes, and other risks."

The plan includes funds to help with water and lands impacted by abandoned mines. "Hundreds of thousands of former orphan oil and gas wells and abandoned mines pose serious safety hazards, while also causing ongoing air, water, and other environmental damage. Many of these old wells and mines are located in rural communities that have suffered from years of disinvestment." The plan includes $16 billion toward jobs "plugging oil and gas wells and restoring and reclaiming abandoned coal, hardrock, and uranium mines."

The plan also includes building and protecting various forms of infrastructure to improve water resource resilience. "President Biden's plan will protect and, where necessary, restore nature-based infrastructure – our lands, forests, wetlands, watersheds, and coastal and ocean resources. Families and businesses throughout the United States rely on this infrastructure for their lives and livelihoods. President Biden is calling on Congress to invest in protection from extreme wildfires, coastal resilience to sea-level rise and hurricanes, support for agricultural resources management and climate-smart technologies, and the protection and restoration of major land and water.... Additionally, the President's plan provides funding for the western drought crisis by investing in water efficiency and recycling programs, Tribal Water Settlements, and dam safety. President Biden's plan will empower local leaders to shape these restoration and resilience project funds in line with the Outdoor Restoration Force Act."

Senator Michael Bennet (D-CO) introduced the Outdoor Restoration Force Act (S. 5015) at the end of the 116th Congress. It had not yet been reintroduced, but Bennet said: "I'm especially pleased the president's plan includes my outdoor restoration bill, which will create jobs by supporting locally-led forest health and watershed restoration projects. This legislation was written in partnership with Coloradans. Just like our roads and bridges, our natural infrastructure is vital to our economy in Colorado and across the West." The former bill would have created a fund for collaborative restoration and resilience projects that address wildfires, natural disasters, and abandoned mines.[62]

Drinking Water and Wastewater Infrastructure Act

On April 29, the Senate passed the Drinking Water and Wastewater Infrastructure Act of 2021 (S. 914) with a bipartisan vote of 89-2. It authorizes a variety programs through FY26, including reauthorizing the CWSRF and DWSRF collectively at nearly $30 billion, with an additional $6 billion in grant funding.

A Senate Committee on Environment and Public Works summary states: "This legislation: (1) Prioritizes environmental justice by targeting grant programs and technical assistance to small,

[62]www.bennet.senate.gov/public/index.cfm/2021/3/bennet-welcomes-biden-s-american-jobs-plan-applauds-inclusion-of-his-outdoor-restoration-proposal

disadvantaged, rural, and tribal communities; (2) Empowers states with increased funding and program flexibilities to invest in community water projects that address aging infrastructure and improve water quality; (3) Tackles lead contamination in drinking water through increased funding for lead pipe replacement and technical assistance; (4) Authorizes funding to connect households to water services, install decentralized wastewater systems, and improve sanitation in Alaska rural and Native Villages; (5) Supports climate-resilient water projects to address the worsening impacts of climate change on drinking water and wastewater infrastructure; (6) Invests in the drinking water and wastewater needs of tribal communities; and (7) Fosters the development and deployment of emerging technologies that result in cleaner, safer, and more reliable water."

The CWSRF will grow to $3.25 billion annually over the next five years for a total reauthorization of $14.65 billion. It requires a State to use 10-30 percent of its capitalization grant to provide assistance to disadvantaged communities. It also reauthorizes the DWSRF at the same funding level as the CWSRF for the first time, increases the minimum dedicated to disadvantaged communities from six percent to 12 percent, and allows up to 35 percent of DWSRF grants to be allocated to disadvantaged communities.

The bill provides $500 million for water infrastructure resiliency and sustainability grant programs to prepare communities to respond to natural hazards, such as drought, flooding and other extreme weather events. This includes $25 million annually for the Drinking Water Infrastructure Resilience and Sustainability program for small and disadvantaged communities (five times the size of the current program), and also creates a new program for medium and large systems funded at $50 million annually. It creates a new $25 million/year Clean Water Infrastructure Resiliency and Sustainability program open to all communities, providing grants to fortify wastewater systems from climate change impacts.

The Tribal Drinking Water Program is authorized at $50 million annually, with 50 percent of the funds to be used by tribes nationally, while the rest must be used to fund 50 projects equally distributed between the Missouri River Basin, Upper Rio Grande River Basin, Colorado River Basin, Lower Colorado River Basin and the Arkansas-White-Red River Basin. States may reserve 2% of CWSRF funds to provide technical assistance to small, rural and tribal publicly-owned treatment works, and authorizes $230 million for Alaska Native Villages.

The bill increases existing Assistance for Small and Disadvantaged Communities grant program funding, creates a new competitive program based on the prevalence of underserved communities, and requires a water services affordability study and subsequent assistance program. It also authorizes $710 million for addressing lead contamination in drinking water through several existing programs. Finally, the bill provides $300 million over five years for new grant programs to deploy new and emerging technologies.

Wastewater Infrastructure Improvement Act

On May 13, Rep. David Rouzer (R-NC) introduced the Wastewater Infrastructure Improvement Act (H.R. 3218). The press release stated the bill will "help states and local communities – including small and rural communities – address their wastewater infrastructure

needs. The bill improves the wastewater infrastructure permitting process and provides flexibility communities often need to take on complex projects." Rouzer said, "In many communities...water and wastewater infrastructure is long past its design life and in need of urgent repair, replacement, and upgrading. This is especially the case for many of our small and rural communities."

The legislation would reauthorize the CWSRF for the first time since 1994 at $14 billion to be spent over the next five years. It would allow States to use up to 2% of their CWSRF funds to provide technical assistance to small and rural communities, and up to 0.5% of their annual capitalization grant to promote workforce development and utility worker training and education programs. Additionally, it modifies §104(g) of the CWA to require the EPA Administrator to report to Congress on the current and future workforce needs of public wastewater treatment utilities and on actions, including federal investments, that be taken to promote workforce development.

It reauthorizes CWA §106 for EPA to provide grants to states to assist them in implementing state water quality improvement programs ($1.3 billion over 5 years), and sewer overflow and stormwater management projects ($1.2 billion over 5 years). The legislation expands the type of projects eligible to receive funding under CWA §220 to include projects that reclaim or recycle wastewater and stormwater, and also requires that utilities that receiving CWSRF funds consider projects that promote energy and water use efficiency. It also extends the permit duration for NPDES permits from five years to 10 years.

The bill would codify provisions from annual congressional appropriations legislation that direct how the EPA is to use the annual reservation of funds from the CWSRF for grants for project and technical assistance to tribes.

Co-sponsor Rep. Don Young (R-AK) said, "The [CWSRF] program is critical for securing funding for water, sewage, and solid waste system upgrades in Alaska and across the country. The COVID-19 pandemic has highlighted the importance of this issue; without reliable water infrastructure, it is that much harder to promote public sanitation and keep families healthy."[63]

Rural and Tribal Water Projects

On May 27, the WSWC, together with the Native American Rights Fund (NARF), and the National Congress of American Indians (NCAI) sent a letter to congressional committees expressing strong support for construction, operation, and maintenance of critical water infrastructure, particularly in tribal and rural regions of the West. The letter was sent to the Senate Committees on Energy and Natural Resources and Indian Affairs; House Committee on Natural Resources; and Appropriations Subcommittees on Agriculture and Rural Development, Energy and Water Development, and Interior and Environment.

The letter notes that many existing water infrastructure projects have long been authorized by Congress but lack adequate appropriations to complete construction. Examples include infrastructure projects authorized as part of Indian water rights settlements and rural water projects.

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[63] https://rouzer.house.gov/press-releases

"For example, the Fort Peck Reservation/Dry Prairie Rural Water System (Montana) was authorized in 2000 (P.L. 106-382) but has only been 75% funded with a balance remaining of $85M as of 2020. The Rocky Boy's/North Central Montana Rural Water System, authorized in 2002 (P.L. 107-331), has only been 35% funded, with a balance remaining of $266.2M in 2020. Appropriations for these projects has trickled in at around $10M per fiscal year, with recent increases to $30M per fiscal year. Other rural water projects lacking a specific tribal component in New Mexico, North Dakota, and South Dakota have likewise been delayed." These numbers have since been updated with the release of the FY2022 Budget.

The letter also points out that existing programs in multiple federal agencies have been authorized by Congress "to support drinking water infrastructure for tribal communities, but lack adequate funding and coordinated interagency effort. These neglected projects and programs have contributed to the disproportionate impact of the pandemic on tribal communities." The letter concluded: "We urge you to prioritize federal funding to meet these urgent needs, especially as Congress is considering potential infrastructure packages."

WSWC positions attached in support of the letter included: No. 465, Universal Access to Reliable, Clean Drinking Water for Federally Recognized Indian Tribes and Alaska Native Communities; No. 454, Indian Water Rights Settlements; and No. 447, Rural Water and Wastewater Project/Infrastructure Needs and USDA Programs.[64]

Water Quality Protection and Job Creation Act

On June 9, the House Committee on Transportation and Infrastructure ordered reported H.R. 1915, the Water Quality Protection and Job Creation Act by a vote of 42-25. The legislation would authorize significant funding for water infrastructure, Clean Water State Revolving Funds (CWSRF), and several other programs.

Over the next five years, the legislation authorizes: (1) $50 billion to address wastewater infrastructure and water quality challenges; (2) $40 billion for the CWSRF; (3) $2 billion for municipalities for sewer overflow and stormwater reuse grants; (4) $2.5 billion for states' water pollution control programs; (5) $1 billion for pilot projects related to watershed discharge management, stormwater management, nonpoint source pollution, integrated water resources plans and improving treatment works resilience to natural disasters; (6) $1 billion in grants for alternative source water projects; (7) $1 billion in grants to implement treatment standards for PFAS and other emerging contaminants; and (8) $2.5 billion in wastewater infrastructure assistance for tribes.

The bill also creates a Water Reuse Interagency Working Group "to develop and coordinate actions, tools, and resources to encourage water reuse across the United States, including through the implementation of the National Water Reuse Action Plan, consistent with the mission of each Federal agency that is a member of the working group."

[64]https://westernstateswater.org/policy-letters/2021/rural-and-tribal-water-infrastructure/

The $50 billion for wastewater infrastructure was added through an amendment. Several other amendments from Republican sponsors were considered, but none received enough votes. Committee Chair Peter DeFazio (D-OR) expressed interest in working through concerns in a future conference committee to reconcile the House and Senate (S. 914) versions of the bill.

In his opening statement, DeFazio said: "This bill represents a renewal of the federal commitment to invest in our wastewater infrastructure and address local water quality challenges, and it's long overdue. This amendment authorizes the largest investment in wastewater infrastructure since the advent of the federal Clean Water programs…. This funding will go a long way toward getting our systems into a state of good repair, but we will still need to continue aggressive investments in our infrastructure if we want to ensure it is resilient to the impacts of climate change."

Rural Water Projects/Tribal Water Right Settlements

On June 24, Senator Jon Tester (D-MT) introduced the Western Water, Jobs, and Infrastructure Act (S. 2286). Title I of the bill establishes the Reclamation Rural Water Project Construction Fund, with $200 million authorized for each of FY2022-2026, to remain available without further appropriation until the end of FY2036. The funds are directed to complete authorized rural water projects, with priorities set for: (1) urgent and compelling need for potable water supplies in rural and tribal communities; (2) the project status of current stages of completion; (3) the financial needs of rural and tribal communities; (4) the potential economic benefits; (5) the project's ability to address regional and watershed-level water supply needs; (6) the project's ability to minimize water and energy consumption and encourage renewable energy resources; and (7) the project's ability to address the needs of tribes and other community needs or interests. The funds may not be used for operation and maintenance, and they are intended to supplement, not supplant, other amounts appropriated for authorized rural water projects.

Title II of the bill establishes the Indian Water Rights Settlement Completion Fund, with $400 million a year from FY2022-2026, to remain available through FY2036 to implement Congressionally-approved Indian water rights settlement agreements. The funding is limited to settlement agreements or legislation that requires the Bureau of Reclamation or the Bureau of Indian Affairs to provide financial assistance for, or plan, design, and construct water supply infrastructure, or a project to rehabilitate a water delivery system to conserve water, or a project to restore fish and wildlife or improve environmental conditions in the same river basin as a federal reclamation project.

Title III of the bill authorizes $200 million for FY2022 to carry out Milk River Project rehabilitation, including replacement of aging or damaged infrastructure, improving efficiency, protecting fish and wildlife, and protecting municipal, agricultural, and tribal water supplies. The bill sets the federal cost share at 100%, but also authorizes voluntary contributions from non-Federal partners.

Energy Infrastructure Act

On July 14, the Senate Energy and Natural Resources Committee, by a 13-7 vote, reported the Energy Infrastructure Act after approving 48 bi-partisan amendments. The draft bill addresses

grid infrastructure resilience and reliability, cybersecurity, clean energy technologies and supply chains, fuels and technology infrastructure investments (including carbon capture, carbon dioxide transportation and carbon storage, hydrogen research and development, nuclear energy and hydropower). There are hydroelectric production and efficiency incentives, as well as integration of pumped storage hydropower, wind and solar for system reliability initiatives.

As reported, the bill would authorize over $11 billion for deposit into the Abandoned Mine Land Reclamation Fund to be used as "expeditiously as practicable" for annual grants to states and tribes for abandoned mine land and water reclamation projects. It revises past abandoned mine reclamation fees, and includes an unprecedented $3 billion authorization to clean up hardrock mines. The money would be split evenly between Interior and grants to States and Tribes. While tonnage fees from private companies have funded reclamation of abandoned coal mines since 1977, there has been no such program to address the thousands of abandoned copper, gold and other hardrock operations. Senators Martin Heinrich (D-NM), Steve Daines (R-MT) and Mark Kelly (D-AZ) provided bipartisan support for the amendment. Priority is to be given to reclaim mines "based on conditions including need, public safety and health, potential environmental harm, and other land use priorities."

Heinrich said, "Communities across the West deserve water that does not make them sick and land that is free from toxic waste. Establishing this new program will help clean up abandoned hardrock mines that are still polluting our lands and waters and harming our communities." He added that there are at least 140,000 abandoned hardrock mine features across the western U.S., with at least 22,500 known to pose an environmental hazard.

Tribal Access to Clean Water Act

On July 15, Senators Michael Bennet (D-CO) and Martin Heinrich (D-NM) introduced the Tribal Access to Clean Water Act (S. 2369). The bill would increase funding for water infrastructure programs under the U.S. Department of Agriculture (USDA), the Bureau of Reclamation (USBR), the Environmental Protection Agency, and Indian Health Service. The bill directs the agencies to consult with Indian Health Services regarding interagency collaboration, prioritization, staffing needs, and ensuring the funds are effectively used to promote access to water and sanitation.

The bill's section on Congressional findings notes that: "[I]n the United States, access to reliable, clean, and drinkable water has long been a significant problem in many Native communities, such that nearly half of all households in those communities do not have access to reliable water sources, clean drinking water, or basic sanitation, and are significantly more likely than White households to lack indoor plumbing."

The bill goes on to say: "[T]he trust responsibility of the Federal Government to Indian Tribes requires the Federal Government to ensure the survival and welfare of Indian Tribes, and the failure to provide basic water service cannot be reconciled with that trust responsibility."

It authorizes $500 million for USDA grants (7 U.S.C. 1926c, 1926d) for the extension or improvement of existing water supply systems for eligible entities, sets priorities for funding, and does not require matching funds or a demonstration of inability to finance proposed projects.

The bill reauthorizes the USBR's Water Supply Program through 2031, and establishes a competitive grant program for tribal clean water access projects. The bill authorizes $2 billion for rural water supply projects, with half going toward the projects described in the 2014 report, "Assessment of Reclamation's Rural Water Activities and Other Federal Programs That Provide Support on Potable Water Supplies to Rural Communities in the Western United States." The other half would go toward the new competitive grant program. Priority is given to projects that: (1) provide potable water supplies to communities or households on tribal land without running water; (2) address urgent and compelling public health or safety concerns; (3) are shovel-ready or in progress; (4) utilize Bureau of Reclamation expertise and take advantage of economies of scale; (5) utilize local or regional partnerships, and complement related efforts by and resources of tribal, state, or federal agencies to enhance access to drinking water or water sanitation services on tribal lands; (6) provide multiple benefits, including water supply reliability, public health, ecosystem benefits, groundwater management and enhancements, and water quality improvements. The bill further provides $90 million for Reclamation's Native American Affairs Technical Assistance Program.

The bill authorizes $100 million for CWA §518(c)(3) tribal assistance grants and $100 million for SDWA §1452(I) SRFs. The bill authorizes up to $5 million of those amounts to provide training, technical assistance, and educational programs to tribes operating and maintaining treatment works and public water systems. The bill also directs EPA to increase efforts to promote access to drinking water and wastewater services, by increasing direct communication with communities to assess their needs, providing clear information on funding availability, and providing the option to receive direct grants in coordination with the Indian Health Service.

The bill authorizes $3.41 billion for all Indian Health Care Improvement Act §302(b)(1) activities, including the planning, design, construction, modernization, improvement, and renovation of water, sewer, and solid waste sanitation facilities. An additional $150 million is authorized for technical assistance under §302(b)(2). For operation and maintenance of water facilities serving tribal communities, the bill authorizes $500 million, with priority given to those most in need of assistance.

Infrastructure Legislation and Spending/SRFs

In a September 7 letter to House Speaker Nancy Pelosi and Minority Leader Kevin McCarthy and Senate Majority Leader Charles (Chuck) Schumer and Minority Leader Mitch McConnell, five interstate organizations expressed both support and concern related to infrastructure legislation and spending. "The Association of State Drinking Water Administrators (ASDWA), the Association of Clean Water Administrators (ACWA), the Environmental Council of the States (ECOS), the Council of Infrastructure Financing Authorities (CIFA), and the Western States Water Council (WSWC), which represent state agencies and programs, strongly support the funding for the Clean Water and Drinking Water State Revolving Funds (SRFs) in the Infrastructure Investment and Jobs Act (H.R. 3684). Increased funding for drinking water, wastewater and stormwater infrastructure will increase

protection for public health and the environment – saving lives and safeguarding finite water resources for generations to come."

The letter continued, "However, the requirement for state cash match on appropriations in the bill jeopardizes the ability of states to quickly and efficiently access this federal funding for water infrastructure projects. When combined with cash match requirements for annual appropriations, the Infrastructure Investment and Jobs Act significantly increases cash match requirements for states." The cash match requirement would be 10% for Fiscal Years (FY) 2022 and 2023, rising to 20% for FY2024-2026. "Combined, state cash match requirements are likely to exceed $6.629 billion over the next five years, more than double the amount required over [the] last five years. For reference, the American Recovery and Reinvestment Act didn't require any cash match for appropriations for the Clean Water and Drinking Water SRFs. Under federal law, cash match must be deposited into the SRFs before states can draw down the first dollar of federal funds. States that are unable to deposit cash match into their SRFs during the fiscal year the funding is appropriated, or the next fiscal year, will lose their funding (essentially within two fiscal years)."

The letter explains, "States face different challenges based on how cash match is generated, either through state appropriations or through interagency loans and bonds that depend on interest payments from SRF loans to repay debt…. Uncertainty about the pandemic and economic recovery, along with constraints from balanced budget requirements, are likely to force state legislatures to make difficult decisions about funding important programs. States that have experienced catastrophic natural disasters, such as Hurricane Ida, flooding, tornados, or wildfires, will face even greater challenges…. Some states make interagency loans or issue bonds to fund cash match. These loans and bonds are secured and repaid using interest payments on SRF subsidized loans, which are provided at below market interest rates. Very low interest rates and federally mandated additional subsidy (requirements to provide federal funds as grants instead of subsidized loans) have significantly eroded this source of revenue for cash match…. Alaska's Clean Water and Drinking Water SRFs couldn't meet cash match requirements for funding provided in the 2019 Additional Supplemental Appropriation for Disaster Relieve Act (ASADRA) and ultimately lost those federal funds. With such significant increases in cash match requirements, it's likely that more states will face similar circumstances."

The organizations suggest legislative alternatives to: (1) eliminate the state cash match for federal appropriations in the Infrastructure Act; (2) in the short term allow States to use State and Local Fiscal Recovery Funds from the American Rescue Plan Act for cash match; (3) eliminate the match on the additional federally mandated subsidy in the bill, which would cut the match requirement by almost half, and prevent states from going into debt to match funds that must be given away as grants and grant-equivalents; or (4) eliminate the mandate for additional subsidy and thereby increase the revenue states would have available to meet future cash match requirements, which is a sustainable solution that will help states meet the cash match over the long-term.

The letter concludes, "Thank you for your consideration of these recommendations. On behalf of our members, thank you for leadership in investing in America's infrastructure, especially water infrastructure which is so critical to healthy lives and livelihoods." Chair Jen Verleger (ND) signed the letter on behalf of the WSWC, following review by a select number of Water Quality

Committee members. Others signing were ACWA President Andrew Gavin (Susquehanna River Basin Commission), ASDWA President Cathy Tucker-Vogel (KS), CIFA President James McGoff (IN), and ECOS President Patrick McDonnell (PA).

Forecasting

Subseasonal and Seasonal (S2S)

NOAA/Report to Congress

The NOAA released its 2020 report to Congress titled "Subseasonal and Seasonal (S2S) Forecasting Innovation: Plans for the Twenty-First Century." The report outlines NOAA's existing use of S2S products and services, and "how NOAA plans to improve the usability and transference of data, information, and forecasts." The 37-page report was developed in response to Section 201 of the Weather Research and Forecasting Innovation Act of 2017.[65] The report lists 17 major S2S products developed since the 1990s, and 11 S2S-relevant climate monitoring products. It then discusses NOAA's plans to improve the skill of S2S predictive guidance, and goals to enhance the value of S2S products for stakeholders. The report describes needs for increased computing capability, increased observations and monitoring networks, and more research and development to understand physical processes incorporated into algorithms.

Of particular interest for western states, Section IV G discusses four regional projects to accelerate the improvement of S2S predictive skills, one of which addresses winter precipitation forecasts for water management in the western U.S. "The dominant fraction of the annual mean precipitation along the west coast of the United States and in the mountain regions west of the Mississippi River occurs from October through April. In many regions, this precipitation falls as snow, and the mountains act as a natural reservoir. Key science challenges to improving these forecasts include: inadequate model resolution (horizontal and vertical) to resolve the mountainous terrain, which influences the intensity of precipitation and the relative fraction of precipitation that falls as rain versus snow; improved fidelity in modeling of the atmospheric boundary layer in mountainous regions; and an inability to predict periods of blocked versus unblocked flow over the eastern North Pacific Ocean and western U.S."

The second regional project addresses spring and summer precipitation forecasts for agriculture in the central U.S. "The dominant share of precipitation in the central U.S. falls during the spring and summer. This rainfall is critical for farmers and ranchers. When drought occurs, it can have devastating consequences as seen with the 2017 flash drought that occurred in South Dakota, Montana, and North Dakota. Key science challenges for improving these forecasts include: lack of observations and inaccurate modeling of the land surface and hydrologic cycle, especially soil moisture and the processes leading to flash drought; improved fidelity in modeling of warm season precipitation processes; and understanding and prediction of large-scale upper-level dynamical flow anomalies that occur in this region at this time of year."

[65]P.L. 115-25

The other regional S2S projects include accurate forecasts of Arctic sea ice ("critical for stakeholders from the national defense, mineral extraction, environmental stewardship, and tourism communities"), and forecasts of tropical cyclone activity.

The report notes that the four regional projects "were chosen based on the existence of major climate phenomena that have huge economic impacts and for which current S2S predictive skill is too low to be effectively used by many stakeholders." One deficiency the pilot projects aim to improve is the ability to forecast tropical convection beyond a few days. "[A] significant fraction of the predictable part of mid-latitude variability is driven by tropical convection, which causes slowly evolving changes in the upper level steering flow, i.e. the jet stream. Therefore, a key aspect to improving S2S predictive skill for each of the pilot projects is improving the forecast skill for tropical convection and its associated teleconnections to other regions in the NOAA unified global model." NOAA anticipates that improving the predictive skill in these regions will improve skill for other regions also.[66]

S2S Appropriations

The WSWC has been actively working, in coordination with former WSWC Chair Jeanine Jones, to garner support for appropriating funds for the Western Winter S2S precipitation forecasting pilot program, as recommended in the NOAA's 2020 report to Congress under Public Law 115-25. Forecasts at S2S time scales (weeks to a year or more) are needed to support water project operations, drought preparedness and response, and innovative water management strategies such as forecast-informed reservoir operations.

The WSWC is requesting a $15 million increase for the U.S. Weather Research Program within NOAA's Office of Oceanic and Atmospheric Research appropriations account. Through the end of May, WSWC sent letters to 25 Senators and 12 House Representatives, along with formal appropriations requests to 13 Senators and 9 Representatives. Follow-up on those letters led to virtual meetings with 8 Senators and 4 Representatives. Several WSWC members joined calls/Zoom meetings with key members that included Senators Jerry Moran (KS) and Jeff Merkley (OR), members of the Senate Commerce, Justice, Science and Related Agencies (CJS) Appropriations Subcommittee, as well as Rep. Mike Garcia who is on the House CJS Appropriations Subcommittee.

Representative Grace Napolitano (D-CA) circulated a Dear Colleague letter in the House of Representatives, gathering 12 signatures from Democrats. Additionally, partners throughout the West have submitted letters of support for the S2S appropriation request. These include the Association of California Water Agencies, California Chamber of Commerce, Central Utah Water Conservancy District, Interstate Council on Water Policy, Salt River Project, Six Agency Committee (California's Colorado River contractors), Truckee Meadows Water Authority, Upper Colorado River Commission, and the Wyoming State Engineer's Office.

[66]https://repository.library.noaa.gov/view/noaa/27408

House Science Space and Technology Committee/NWS

On October 14, the House Science, Space and Technology Committee, Chaired by Rep. Eddie Bernice Johnson (D-TX) held a hearing on the Future of Forecasting: Building a Weather-Ready Nation. In her opening remarks she noted the stark differences in NWS tornado forecasting between 2011 and 2019 that reduced lives lost. The ability of forecasters to communicate risks to communities is called Impact-Based Decision Support Services (IDSS). She added that NWS built important relationships with emergency managers, academia, the private sector, and state, local, and tribal governments to provide the public with critical and actionable weather and climate information. The hearing examined how to best position NWS to provide robust IDSS across the country and what additional resources NWS needed.

Dr. Louis Uccellini said the NWS mission to save lives and property and enhance the national economy is critical at a time of extreme weather and water events. NWS provides weather, water, and climate information, forecasts, and warnings to enable informed decisions on a range of issues. He quoted a June 1993 Allan H. Murphy article in *Weather and Forecasting*: "'First, it should be understood that forecasts possess no intrinsic value. They acquire value through their ability to influence the decisions made by users of the forecasts.' It was true then and it is still true today." He referred to the vision codified in the Weather Research and Forecast Innovation Act of 2017, and stated: "We are excited about the ideas and actions generated [to] implement the directives of the Weather Act, and continuously improve the NWS as we connect our forecasts and warnings to decision makers at every government level…. We are improving an integrated weather-water approach to advance environmental predictions, especially along our coasts, so we can continue supporting an active and engaged collaboration across the entire weather, water, and climate enterprise."

Uccellini said, "Much of the NWS success comes from scientific and technological breakthroughs made by [National Oceanic and Atmospheric Administration] NOAA and external research that spans across disciplines, time, and space scales. The dynamic systems of this planet are interconnected in rich and complex ways, and success in forecast improvement comes by looking broadly across those linkages. NWS has evolved to provide more than just short-term weather forecasts and warnings…. The NWS achieves this by applying both the physical and social sciences to the provision of forecasts, warnings and IDSS. We use an Earth systems approach that examines the atmosphere, oceans, land, ice, and space."

He added that precipitation forecasts have come a long way since the foundation of the Weather Research Program established in the 1990s under the Weather Act, but extreme rainfall rates and impacts from climate change pose enormous forecasting challenges. This points to the need "for additional research in both the physical and social sciences to improve our understanding, related precipitation forecast process, and the provision of IDSS in the face of these increasingly severe and frequent extreme weather and water events." Precipitation forecasts support NOAA's testbed activities. "To accelerate progress, NOAA has developed a strategy – the Precipitation Prediction Grand Challenge. While there is no silver bullet to dramatically improve precipitation prediction for the 21st Century climate, we can deliver a portfolio of coordinated efforts across the value chain – scientific understanding, observations, models, forecasters, services, social science,

user engagement – culminating in improved IDSS and people understanding the potential impacts and taking appropriate action."

He concluded, "The NWS mission has never been more crucial.... It all starts with a commitment to enhance environmental observations; research and improve forecasts and warnings; increase IDSS delivered through a robust dissemination system; and support our people – forecasters, modelers, technicians and managers. The end state is a Weather-Ready Nation in which businesses, governments, and the public are prepared to use forecasts to mitigate impacts."

Extreme Weather Events/Floods/Precipitation

Flood Level Observation, Operations, and Decision Support Act

On March 3, Senator Roger Wicker (R-MS) introduced the Flood Level Observation, Operations, and Decision Support Act, or FLOODS Act (S. 558) to improve NOAA forecasting and communication related to flood, tornado, and hurricane events. Among other provisions, the bill directs NOAA to establish a National Integrated Flood Information System (NIFIS) to better inform and provide more timely decision-making to reduce flood-related effects and costs, emulating the NIDIS. One September 30, the Senate passed S. 558 with an amendment by unanimous consent. The bill is currently held at the desk on the House side.

S.558 would: (1) establish partnerships with institutions of higher education and federal agencies to improve total water predictions; (2) designate a service coordination hydrologist at each NWS River Forecast Center (RFC) to increase impact-based decision support services at the state and local level; (3) require NOAA to evaluate and improve flood watches and warnings and communication to support preparation and responses to floods; (4) ensure that the tornado warning improvement and extension program periodically examines the value of incorporating innovative observations, such as acoustic or infrasonic measurements, observations from phased array radars, and observations from mesonets; (5) require NOAA to estimate and communicate the frequency of precipitation; (6) establish an Interagency Committee on Water Management and Infrastructure to ensure that federal agencies with joint or overlapping responsibilities engage and work together on water-related matters, including water storage and supplies, water quality and restoration activities, water infrastructure, transportation on rivers and inland waterways, and water forecasting; and (7) direct NOAA to conduct an analysis of gaps in the availability of snow-related data to assess and predict floods and flood impacts.

On the House side, in February, Rep. Mikie Sherrill (D-NJ) introduced the PRECIP (H.R. 1437) and FLOODS (H.R. 1438) bills to require NOAA, no less than every five years, to update precipitation frequency estimates and make publicly available certain studies, and together with the National Academies study the state of practice and research needs for precipitation estimation. NOAA is also directed to consult with relevant partners on the development of a plan to update probable maximum precipitation (PMP) estimates, and develop guidance that: (1) provides best practices for federal and state regulatory agencies, private meteorological consultants, and other users; (2) considers the recommendations provided in the National Academies study; (3) facilitates review of probable maximum precipitation studies by regulatory agencies; and (4) provides

confidence in regional and site-specific probable maximum precipitation estimates. No hearings have been scheduled.

"Flooding can be devastating for homeowners, business owners, and communities across the country," said Rep. Sherrill. "The FLOODS Act and the PRECIP Act will help the federal government improve forecasting and communication of flood, tornado, and hurricane events to better serve communities at risk for flooding events." It would establish a National Integrated Flood Information System (NIFIS) to coordinate and integrate NOAA flood research, and partner with institutions of higher education to improve total water predictions and establish a committee to ensure coordination of federal departments. It would also improve flood risk communications, including flood watches and warnings.

The Association of State Dam Safety Officials (ASDSO), Association of State Floodplain Management (ASFPM), American Society of Civil Engineers (ASCE), American Public Works Association (APWA), and others, have supported the FLOODS Act. H.R. 1438 currently has 14 Democrat and 2 Republican co-sponsors, including Representatives Grace Napolitano (D-CA), Sharice Davids (D-KS), and Eddie Bernice Johnson (D-TX). H.R. 1437 similarly has 15 Democrat and 1 Republican co-sponsors, including Representatives Napolitano and Johnson.

Regarding the PRECIP and FLOODS acts, the Council has consistently supported federal legislation and appropriations to enhance and expand the availability of and access to consistent and comprehensive water data (Position #473). The Council has highlighted the "serious need for adequate and consistent federal funding to maintain, restore, modernize, and upgrade federal water, weather and climate observation programs, not only to avoid the loss or further erosion of critical information and data, but also to address new emerging needs, with a primary focus on coordinated data collection and dissemination." The objective is to make "…information available to decisionmakers in natural resources and emergency management, and thus better protect the public safety, welfare and the environment," recognizing the "demands for water and related climate data continue to increase, and this information is used by federal, state, tribal, and local government agencies, as well as private entities and individuals to: (1) forecast flooding, drought and other climate-related events; (2) project future water supplies for agricultural, municipal, and industrial uses; (3) estimate streamflows for hydropower production, recreation, and environmental purposes, such as for fish and wildlife management, including endangered species needs; and (4) facilitate water management and administration of water rights, decrees, and interstate compacts."

Providing Research and Estimates of Changes in Precipitation (PRECIP) Act

On October 22, Senators Cory Booker (D-NJ) and Roger Wicker (R-MS) introduced the Providing Research and Estimates of Changes in Precipitation (PRECIP) Act (S. 3052) to update precipitation data in the U.S. and provide NOAA with funding and guidance to conduct future research. The PRECIP Act would direct NOAA to study ongoing changes in precipitation that will help communities better prepare for extreme weather and flooding events. NOAA is to work with the National Academies of Science, Engineering, and Medicine to complete a consensus study on the best practices for estimating precipitation. S. 3052 was referred to the Commerce, Science, and Transportation Committee.

"We must take every step possible to protect our communities from the increasing frequency of disasters like the historic flooding and rainfall New Jersey experienced this summer from the remnants of Hurricane Ida," said Booker. "This bipartisan bill would provide NOAA with vital funding to consult with partner organizations and conduct studies to modernize and improve our nation's precipitation data, which is needed now more than ever as communities in New Jersey and across the country face the realities of climate change and extreme weather. The new data will be especially useful as we invest in climate-resilient infrastructure to strengthen and safeguard our communities."[67]

"Flooding regularly puts American lives and property at risk, resulting in billions of dollars in economic losses each year," said Wicker. "One threat from flooding is dam failure, and in Mississippi there are hundreds of state-regulated dams with a high hazard potential. Forty-two of these dams have failed and nine others have been drained. We need better data to help flood control managers improve dam safety and to update methods used to estimate the risk of failure."

The PRECIP Act is supported by the American Society of Civil Engineers, Association of State Dam Safety Officials, Association of State Floodplain Managers, American Public Works Association and others.

The WSWC supports NOAA leading federal efforts toward developing 21st century national PMP standards for estimating extreme rainfall in order to provide consistent requirements for ensuring public safety; and has recommended the Congress address this issue and authorize and fund necessary steps to update federal PMP standards, including a National Academies of Science, Engineering and Medicine (NASEM) study of the current state of the practice and options for extreme rainfall estimation, in order to provide NOAA clear direction toward development of 21st century national standards for estimating extreme rainfall (including PMP).

River Basins

Colorado River

Utah Legislation

On February 3, the Utah House and Senate leadership introduced the Colorado River Amendments (H.B. 297) to create a new authority to manage Utah's interests in the Colorado River. The six-member authority includes the Utah Division of Water Resources Director, the Utah Department of Natural Resources' Executive Director, and the Colorado River Commissioner. The legislation states, "The authority may advise, support, gather information, and provide input to the river commissioner. The mission of the authority is to protect, conserve, use, and develop Utah's waters of the Colorado River system. The authority may develop a management plan to ensure that Utah can protect and develop the Colorado River system and to work to ensure that Utah can live within the state's apportionment of the Colorado River system." The legislation also outlines the duties of the river commissioner of the Colorado River and allows the commissioner to also be a

[67] www.booker.senate.gov/news/press

member of the authority as the chair. It states, "The river commissioner shall act for the state and the Utah Colorado River users in consultations or negotiations with: (1) the Upper Colorado Commission; (2) the states in the Colorado River Compact; and (3) the government of the United States." It would also enable the river commissioner to make and enter into compacts between Utah and the other Colorado River Basin States.[68]

The Future of the Colorado River Project

On February 5, researchers at Utah State University released a report as part of The Future of the Colorado River Project, titled "Alternative Management Paradigms for the Future of the Colorado and Green Rivers." As stated by the authors, "The objective of the White Paper is to encourage wide-ranging and innovative thinking about how to sustainably manage the water supply, while simultaneously encouraging the negotiators of new agreements to consider their effects on ecosystems."

The report described 24 alternative management paradigms, and assessed five of these using the USBR's Colorado River Simulation System modeling tool and, when appropriate, a reservoir temperature release model. The authors intentionally developed a wide range of approaches "that some might consider radical due to existing and assumed physical or management constraints" in order to "provoke new ways of thinking and identify innovative solutions to meet the challenges associated with current and future water supply and consumptive use in the Colorado River Basin." The approaches are grouped into three categories: (1) changes in the rules of water-supply allocation and/or accounting; (2) changes in the operating rules of existing infrastructure; and (3) changes in infrastructure.

The authors simulated future conditions based on three historical, severe drought events recorded in tree rings. They then developed hydrologic scenarios based on climate change projections from the International Panel on Climate Change. These were combined in various ways to examine the sustainability of the river under various consumptive use scenarios.

The authors also proposed the use of a new metric – total water stored in Lake Powell and Lake Mead – to focus attention on the availability of the stored water supply. "While this approach may challenge existing perspectives of Compact obligations between the Upper and Lower Division States, it recognizes that all water which enters the Lake Powell and Lake Mead system is effectively used for the same purpose – supplying water to the Lower Basin...."

The report found, "The Colorado River can be sustainably managed only if consumptive water uses are matched to available supplies, which will require Upper Basin limitations and substantially larger Lower Basin reductions than are currently envisaged." They also suggest that "in the case of reasonable and probable climate change conditions, aggressive commitments to water conservation by both the Upper and Lower Basins will become critical in the next 25 years to maintain the combined reservoir storage greater than 15 million acre-feet...." Policies prioritizing storage in Lake Powell or Lake Mead do not make significant impacts on downstream water supply

[68]https://le.utah.gov/~2021/bills/static/HB0297

security, and a Compact Call would place the Upper Basin states at substantial risk under decreasing water supplies and increasing consumptive use. Finally, the report demonstrates that "reoperation of Glen Canyon Dam to better match the natural pattern of spring snowmelt flood is possible, but the reliability of stable hydropower generation would be significantly affected."[69]

Water and Tribes Initiative

On April 28, the Water and Tribes Initiative (WTI) released its report, *Universal Access to Clean Water for Tribes in the Colorado River Basin*. The WTI "launched the Universal Access to Clean Water project to raise awareness and understanding about the lack of water security in Native American communities within the Colorado River Basin (CRB), and to engage leaders to solve the problem. As part of that initiative, WTI commissioned this report to describe current conditions among CRB Tribes, examine existing federal assistance programs, and develop policy recommendations to address Tribal community water needs." The pandemic highlighted the disparities in tribal access to running water, and the report documents those deficiencies in infrastructure, operation and maintenance, water quality and water service. The report addresses federal treaty and trust responsibilities to the tribes. It discusses existing programs and efforts to provide clean water to tribes within the Indian Health Service, the EPA, the USDA, and the Bureau of Reclamation.

Despite existing federal programs, the report points to several barriers that hinder access to clean water for tribes, including lack of tribal consultation and interagency coordination; statutory and regulatory barriers to tribal participation; and lack of tribal capacity. The report makes recommendations to overcome these barriers, including a "whole of government" approach. "The federal government's current approach to provide drinking water and sanitation to Tribes is haphazard and inefficient. Currently, at least seven different federal agencies with 23 different programs provide some type of drinking water or sanitation funding for Tribes. These programs have different eligibility requirements, funding cycles, points of contact, and deadlines. Typically, Tribes do not receive significant amounts of funding under some of these programs, thus requiring large-scale projects to be broken up into stages that ultimately results in additional cost and significantly more time to complete." The report recommends pooling and optimizing funding from federal programs to allow the greatest possible benefit for tribal water projects.

The report notes that the federal government, under the direction of the State Department, has already created an Interagency Water Working Group to "develop and implement a coordinated, coherent strategy to provide more people with access to drinking water and sanitation internationally." A similar approach is needed domestically for American Indian and Alaska Native communities.[70]

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[69]https://qcnr.usu.edu/coloradoriver/futures

[70]http://www.naturalresourcespolicy.org/ projects/ water-tribes-colorado-river-basin/

Drought-Related Water Management Challenges

Over 700 viewers participated in a virtual briefing on April 29, addressing the unprecedented, drought-related water management challenges facing Arizona and the entire Colorado River system. Tom Buschatzke, AZ DWR Director, Ted Cooke, General Manager of the CAP, and Dan Bunk, USBR described the situation. "The reason we're meeting today is that Lake Mead is 38 percent full," said Cooke. "And only five feet above the Tier 1 shortage trigger elevation." Given the extraordinarily dry 2020-2021 winter and persistent drought conditions, by the end of 2021, water levels at the reservoir are projected to fall to a point (1075 feet) that trigger 2022 reduced deliveries of Colorado River water. In 2000, the elevation of Lake Mead was over 1210 feet.

The "Tier" system was adopted by the Seven Basin States and the DOI Basin States as part of a shortage sharing agreement that Mexico also signed. An official shortage determination will not be made until August, but Reclamation determined in April that Tier 1 cuts appeared likely. The reductions would constitute about 30 percent of CAP's normal supply; about 18 percent of Arizona's Colorado River supply; and less than 8 percent of Arizona's total water use. Arizona's usual 2.8 million acre-foot share, delivered through the 336-mile CAP canal system, will be cut by 512,000 acre-feet, absorbed by CAP customers, mainly agriculture in central and south-central Arizona. Despite mitigation efforts, some farmers may have to reduce irrigated acreage by 30-40 percent.

Municipal and industrial users and Tribes will receive their full supply, though Buschatzke observed individual communities' drought plans may impose water use restrictions. "There may be some cities who during the shortage decide, 'we may want to start preparing. The drought might last for another 20 years.'" Some transfers between urban and agricultural users are expected. In lieu of recharging Colorado River water for credit under the States' water banking system, Arizona will offer the same credit if municipalities allow that water to go to agricultural users. The State is also providing tens of millions of dollars toward mitigation efforts.

Buschatzke explained, in detail, the decades-long effort by Arizona to prepare for water supply cuts, noting the 2019 DCP successfully helped delay Lake Mead's descent to dangerously low levels. "DCP was not meant to eliminate the chance of shortage overall. DCP is a success. We likely would already be in Tier 2 without the DCP." The Lower Basin DCP among Arizona, California and Nevada expanded on the shortage-sharing agreements put in place by the Colorado River States in 2007. In a process known as "reconsultation," the USBR and the Basin States are preparing now for negotiations on a new set of operational rules that will take effect at the end of 2026. Buschatzke said, "We need folks to be educated about the real risks, the real challenges and where we have plans in place and actions in place that are going to minimize those risks."[71]

Reservoir Water Levels

On May 14, 2021, the USBR released its monthly 24-Month Study estimating the elevation of Lake Powell will drop to 3,525.57 feet as early as March 2022 under their most probable hydrology forecast. The Lake is currently at an elevation of 3,560.60 feet and is approaching its

[71]https://new.azwater.gov/news/articles/2021-06-0

lowest recorded level since the reservoir began filling in the early 1960s. Maintaining Lake Powell above 3,525 feet is a key to Colorado River Compact compliance by the Upper Basin States of Colorado, New Mexico, Utah, and Wyoming, as well as preserving hydropower production at Glen Canyon Dam.

Under the 2019 Drought Response Operations Agreement, Reclamation and States will begin to development a plan that would first consider operational flexibilities at Lake Powell, consistent with existing legal and operational constraints, followed by releases of water to Lake Powell from some or all of the upstream reservoirs of Flaming Gorge, Blue Mesa, and Navajo. Any plan would not be final until Reclamation's monthly 24-month forecast shows Lake Powell falling below 3,525 feet or below within a 12-month period and after consultation with the States of Arizona, California, and Nevada. The Secretary of the Interior may then take emergency action after consulting with the Colorado River Basin States to protect lake levels.

On August 16, the USBR announced the 2022 operating conditions for Lake Powell and Lake Mead. The August 24-month study projects that Lake Powell's January 2022 elevation will be 3,535.40 feet, and will operate in the Mid-Elevation Release Tier (releasing 7.48 million acre-feet) in water year 2022 (October 1, 2021 through September 30, 2022), with the potential for a mid-year adjustment in April 2022.

In July 2021, drought operations to protect Lake Powell were implemented under the Upper Basin Drought Response Operations Agreement releasing up to an additional 181,000-acre feet of water from upstream units of the Colorado River Storage Project to Lake Powell.

Lake Mead is projected to reach elevation 1,065.85 feet, about nine feet below the Lower Basin shortage determination trigger of 1,075 feet, and about 24 feet below the DCP trigger of 1,090 feet. Lake Mead will operate in its first-ever Level 1 Shortage Condition in calendar year 2022 (January 1, 2022 through December 31, 2022). The required shortage reductions include: (1) 512,000 acre-feet for Arizona (18%); (2) 21,000 acre-feet for Nevada (7%); and (3) 80,000 acre-feet for Mexico (5%).

The Upper Basin experienced an exceptionally dry spring in 2021, with April to July runoff into Lake Powell totaling just 26% of average despite near-average snowfall last winter. Total Colorado River system storage today is 40% of capacity, down from 49% at this time last year.

Assistant Secretary for Water and Science Tanya Trujillo said: "Like much of the West, and across our connected basins, the Colorado River is facing unprecedented and accelerating challenges. The only way to address these challenges and climate change is to utilize the best available science and to work cooperatively across the landscapes and communities that rely on the Colorado River. That is precisely the focus of the White House Interagency Drought Working Group – a multi-agency partnership created to collaborate with States, Tribes, farmers and communities impacted by drought and climate change to build and enhance regional resilience."

USBR Deputy Commissioner Camille Touton said: "Today's announcement of a Level 1 Shortage Condition at Lake Mead underscores the value of the collaborative agreements we have in

place with the seven basin states, Tribes, water users and Mexico in the management of water in the Colorado River Basin. While these agreements and actions have reduced the risk, we have not eliminated the potential for continued decline of these critically important reservoirs. Reclamation is committed to working with all of our partners in the basin and with Mexico in continuing to implement these agreements and the ongoing work ahead."[72]

Colorado River Basin Tribes

On November 15, thirty Colorado River Basin tribes sent a letter to Secretary of the Interior Deb Haaland and the Governors of the Seven Basin States, emphasizing the essential role of the tribes in developing the next framework for the long-term management of the Colorado River system, replacing the 2007 Interim Guidelines. The letter said: "Basin Tribes hold water rights to approximately 3 million acre-feet of Colorado River water, which equates to about 25% of the river's current average annual flow. This percentage will only increase as climate change continues to diminish overall runoff amounts and reduces the amount of water available to lower priority users."

The letter acknowledges the first-ever shortage declaration in the basin, and the decreasing elevations of water in the Lake Mead and Lake Powell Reservoirs, and the need to adapt system management to changing climate conditions. "Basin Tribes are aware of ongoing efforts by the Bureau of Reclamation and the seven basin states to adapt the Drought Contingency Plans to the existing and emerging hydrologic conditions, and seek to be involved in these discussions and decisions. Basin Tribes' involvement in these ongoing decisions, as well as the process of developing the Next Framework, is a necessity with regard to, and in recognition of, the impacts to Basin Tribes of the continuing drought and looming basin-wide shortages."

The tribes note that although the 2007 Interim Guidelines don't expire until 2026, the time for meaningful input from tribes is much sooner. "We believe that the most significant parts of the substantive negotiations are likely to unfold over the next 2-2 ½ years in order to have enough time to finish the NEPA process and seek the necessary Congressional approvals ahead of the expiration of the 2007 Interim Guidelines…."

The tribes formed the Colorado River Basin Tribal Coalition, and they refined a set of guiding principles that best represent the position of the coalition. They said the federal trust responsibility requires that the United States include the tribes in the development and implementation of policies on the river system's management. The coalition expects a commitment from the Biden Administration to protect the tribes' water rights and resources, to provide technical assistance to evaluate the impacts of any proposals, to meaningfully include tribes in deliberations, consultations, and negotiations.

The coalition further said: "We recognize the needs and interests of tribes to develop and use their currently unused and undeveloped water rights may conflict with basin-wide efforts to reduce overall water use. However, the United States should support the full utilization of presently unused or under-used tribal water rights, and the Next Framework must provide operationally functional and

[72]https://www.usbr.gov/newsroom/#/news-release/3950

flexible tools to accommodate the interests of tribes in fully utilizing their water rights while simultaneously recognizing the Basin-wide needs to reduce overall consumptive use. Such tools could include, but are not limited to: (a) compensated forbearance of tribal water rights; (b) off-reservation marketing for all Basin Tribes; and (c) allowing Basin Tribes to dedicate currently unused water to compensated system conservation programs."

Columbia River Basin

Lower Snake River Dams

On February 7, Representative Mike Simpson (R-ID) released his "Energy and Salmon Concept" that lays out a comprehensive, $34 billion framework for addressing the persistent problems associated with the interaction of energy, the economy and salmon recovery in the Pacific Northwest. The press release stated, "For the last three years, [Simpson] and his staff have held over 300 meetings with stakeholders, tribes, elected representatives and other interests trying to understand and break down the complex issues related to the ongoing litigation, studies, appeals, biological opinions, spill and other issues creating regional uncertainty related to salmon recovery, dams, energy and transportation."

Central to the framework is breaching the earthen portions of the four Lower Snake River Dams to allow salmon to more easily return to their natal streams in Idaho, Oregon and Washington. In each of the stakeholder meetings Simpson and his staff held, they asked: (1) How would your group be affected by breaching the dams?; (2) Could the benefits you currently receive from the dams be replaced so that you could continue operations with certainty and security on your own terms?; and (3) How expensive might it be to replace those benefits?

The framework acknowledges the many benefits provided by the dams, and that it would be very expensive to replace them. It also acknowledges that salmon are not doing well, for several reasons, despite spending $17 billion on salmon recovery and management. It concludes that breaching the dams is the most viable option for ensuring that salmon runs recover to healthy populations..

The proposal would distribute federal funds across all sectors through a new Columbia Basin Fund. It includes $10 billion to replace the energy generation, $2 billion on grid resiliency, $2 billion on salmon spill energy replacement, $1 billion on a dam mitigation and indemnification program, 35-year extensions for Columbia Basin dams, and a 35-year moratorium on litigation related to salmon and the dams. States would become co-equal and primary northwest fish managers alongside the regional tribes through a new Northwest State and Tribal Fish and Wildlife Council, and would receive an increase to $123 million in annual block grants (3 times the current $40 million/year cap). It provides $3 billion for watershed partnerships to address issues in the agricultural sector, $1.6 billion for animal waste management incentives, and $1.5 billion for barge grain transportation. It also includes funding to study and increase transportation along the Columbia and Lower Snake Rivers, and development to promote tourism in affected communities. It would establish the Snake River Center for Advanced Energy Storage and the Pacific Northwest National Laboratory.

Simpson said, "The Northwest has been caught in an unsustainable cycle of conflicts over salmon and energy. For over thirty years, lawsuits, appeals, salmon management directives and endless spending have prevailed, while salmon, energy, agriculture and transportation interests continue to suffer. What I am releasing today is a proposal to break that cycle and deliver certainty and security to the Northwest without picking winners and losers." Simpson has not yet drafted legislation, but is beginning discussions with the Northwest Delegation, states, tribes, governors, and other stakeholders to craft a solution that can help shape the vision of the Northwest in coming decades.[73]

Missouri River Headwaters Basin Study

On August 26, the USBR released the Missouri River Headwaters Basin Study as part of the WaterSMART Program. The study was conducted in coordination with the MT DNRC, the USGS, and with input and communication from water districts, the Blackfeet Tribe Water Resources Director, and others. The study provides options to meet the increased water demand and change in the timing of snowmelt runoff in the Missouri River Basin above Fort Peck Reservoir. Reclamation Chief Engineer David Raff said: "In a large basin such as the Missouri, there are many challenges to consider in planning for a sustainable future. The basin study provides the foundation for the stakeholders and Reclamation to work together and improve drought resiliency."

The study identified several water supply challenges, including: (1) increasing annual water supply compared to recent history, particularly in the Rocky Mountain region; (2) earlier snowmelt-driven runoff; (3) more flooding during the winter and spring seasons and water supply shortages later in the irrigation season due to the shift in runoff; (4) increasing water demand due to a warming climate, with expanded irrigation and population growth; and (5) decreasing rain in the summer, increasing the reliance on reservoir storage.

The study notes that he Missouri River basin upstream of Great Falls has been closed to new water appropriations since 1993, with some exceptions for groundwater and water storage. The greatest demand in the study area is for irrigation, comprising about 87% of the total consumptive water demand. Reservoir evaporation accounts for about 12% and all other uses about 1%. The hydropower facilities on the Missouri River have some of the most senior water rights, and rivers throughout the study area hold instream flow rights to support endangered species. Use by senior water rights holders and instream flow needs leave little flexibility for junior water rights holders to divert water in many parts of the study area. Irrigators in this region have already experienced water shortages. Rapid population growth is expected to continue and will require additional water for municipal water supplies mostly concentrated in southwestern Montana.

The study also identified some potential water supply solutions to help water managers plan for the future. Those strategies included: (1) providing water for future uses through water from Canyon Ferry Reservoir and Lake Elwell; (2) providing water for future municipal, domestic, and industrial uses in the Gallatin Valley; (3) increasing canal and on-farm irrigation efficiencies; (4) releasing ecological flows from Canyon Ferry Reservoir and Lake Elwell; (5) changes to water

[73]https://simpson.house.gov/news/documentsingle.aspx?DocumentID=399149

management strategies in the Sun River Basin; (6) creating new off-stream storage in the Lower Musselshell River Basin; and (7) developing water management strategies for increased drought resilience.[74]

Bear River Basin

Alternative High-Runoff Management Operations

On December 22, a technical report titled, "Impacts on Bear Lake Storage under Alternative High-Runoff Management Operations" was published, examining whether adjusting flood control operations could increase the amount of water stored in Bear Lake. The States of Idaho and Utah together with Pacificorp worked with researchers at the University of Colorado to develop a new model, the Joint Bear River Planning Model, that would ensure they are all using the same data for operations and management planning and modeling. Wyoming will also be able to use the model for planning purposes. Pacificorp owns and operates the Bear River Project, a series of dams and water infrastructure that provide recreation, irrigation, flood control, and hydroelectricity benefits. As noted in the press release on the report, this is likely the first of several studies that the model will be used for in the Bear River Basin.

The press release stated, "The study found that changes to flood operations at Bear Lake could increase reservoir storage in the lake, especially, at the beginning of a drought cycle. The study indicated that the additional storage gained would be roughly equal to the amount of water released from Bear Lake and used for irrigation in one year. In addition to increasing storage, the proposed changes would also increase lake levels. To increase storage in Bear Lake, it would be necessary to accommodate increased flows through flood-prone sections of the Bear River like Gentile Valley."

David Hoekema, lead hydrologist for Idaho on the modeling effort, said: "We understand the concerns of the property owners in flood-prone areas. It's critical that we solve the problem of accommodating increased flows through these parts of the river for the project to go forward." Jake Serago, senior engineer with the Utah Division of Water Resources, said: "The Joint Bear River Planning Model will increase our ability to study ways to improve the health of Great Salt Lake. Increasing upstream storage could affect the lake and we need to find that balance of upstream and downstream needs. One of the ways to keep lake levels up is water conservation. As people reduce water use, more water can stay in streams and lakes."

Bear Lake operations are not currently changing, but the States and Pacificorp will work together to determine how to best manage the Bear River System.[75]

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[74]https://www.usbr.gov/watersmart/bsp/completed.html
[75]https://water.utah.gov/wp-content/uploads/2020/12/BearLakeReport.pdf

Water Deliveries

On January 12-14, under the Rio Grande Compact, the USBR released about 730 acre-feet from El Vado Reservoir, which connects to the Rio Grande via the Rio Chama. New Mexico is working toward fulfilling its delivery obligations to Texas despite continuing drought conditions. Drought in 2020 contributed to several complications in international, interstate, and intrastate water deliveries along the Rio Grande, and drought conditions have not abated.[76]

Under the terms of the Rio Grande Compact, New Mexico must deliver water to Elephant Butte Reservoir based on the quantity collected the previous year. Because 2019 was a relatively wet year, New Mexico started 2020 with a 60,000 acre-foot delivery obligation to Texas. This debt grew over the summer when Texas and Colorado agreed to an emergency release of 36,000 acre-feet of the debit water in El Vado Reservoir, in order to extend the summer water supply along the dry Rio Grande in New Mexico. Texas has since requested that New Mexico release all the water it can spare into the Rio Grande to replenish the depleted Elephant Butte Reservoir.[77]

Texas and New Mexico are involved in ongoing litigation over the applicability of the Rio Grande Compact to groundwater pumping in *New Mexico, Texas v. New Mexico* (U.S. Supreme Court, #22O141). On November 5, 2020, both Texas and New Mexico, as well as the USBR as an intervenor, filed motions for partial summary judgment. A hearing before a Special Master will be held on the motions in March 2021. The trial is currently scheduled for Summer 2021.

Apart from the Rio Grande, the two States have also been involved in litigation to resolve a question of water deliveries under the Pecos River Compact. *In Texas v. New Mexico* (U.S. Supreme Court, #22O65), Texas objected to the River Master's accounting of evaporative losses at Brantley Reservoir in New Mexico. Following Tropical Storm Odile in 2014, Texas and New Mexico were inundated. Water was held back to prevent further disaster. Although Texas was prepared to receive its compact delivery by March 2015, New Mexico's infrastructure was still damaged, and water releases would have caused further catastrophe. The water remained in the reservoir through the hot summer, where significant evaporative losses occurred. The water was finally released in August 2015. At issue is whether the River Master clearly erred in calculating New Mexico's delivery credit for evaporation, and appropriately entertained New Mexico's request for delivery credit.

The Supreme Court heard arguments on October 5, 2020, and on December 14, issued its decision. Referring to section C.5 of the River Master's Manual, the court concluded: "The water was stored in New Mexico at the request of Texas. Some of the water then evaporated before it was released to Texas. Under those circumstances, as the River Master correctly concluded, New Mexico

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[76]https://www.usbr.gov/uc/albuq/water/SanJuanChama/Reservoirs/elvado_indx.html, and WSW #2424 #2420, #2415, #2398

[77]*Santa Fe New Mexican News*, 1/14/21.

is entitled to delivery credit for the evaporated water. That result is both legally accurate and entirely fair. We deny Texas's motion for review."

Texas v. New Mexico

On May 21, the Special Master issued a ruling on several summary judgment issues in *Texas v. New Mexico and Colorado* (#22O141, U.S. Supreme Court), leaving the remaining issues for a trial scheduled to begin on September 13. Texas filed the lawsuit in 2013 alleging violations of the 1938 Rio Grande Compact. The primary issue is the impact of groundwater pumping on return flows to the Rio Grande. The Supreme Court allowed the United States to intervene due to the impact on the Bureau of Reclamation's Rio Grande Project. The Special Master noted that, while a fair amount of evidence appears to be undisputed, the different reasonable inferences that can be drawn from the evidence about Compact interpretation and course of performance abound, due to the States and Reclamation operating with incomplete information about one another's practices, requiring a trial to sort through many of those matters.

The Special Master ruled that the 1938 Compact unambiguously establishes that New Mexico receives part of its apportionment above and part below the Elephant Butte Reservoir, with the downstream portion delivered exclusively by Reclamation's Rio Grande Project. He ruled that the groundwater and surface water downstream of the Reservoir are hydrologically interconnected to a sufficient degree that groundwater pumping generally reduces return flows and affects Rio Grande surface water flows, resulting in indirect capture of Rio Grande Compact water. New Mexico has a Compact-level duty to avoid material interference with Reclamation's delivery of Compact water to Texas, including groundwater pumping that captures Rio Grande surface water "to the extent that the overall impact of such capture is inconsistent with Compact water deliveries to Texas or interferes with long-term operation of the Project."

The Compact protects the Rio Grande Project, its water supply, and the baseline operating condition – however, there are "material factual disputes concerning the baseline condition and the full scope of the effect of New Mexican pumping on Project operations." New Mexico admits that groundwater pumping beyond disputed limits affects surface water supplies, but disputes the extent of the interference and the extent to which interference rises to the level of a Compact violation.

Several other nuanced Compact interpretation details were partially addressed and left for trial. The Special Master denied the United States' request for injunctive relief against New Mexico, noting that the propriety of that relief "remains to be determined based on the detailed resolution of issues identified above and based on proof of damages taking into account as of yet unresolved issues including: acquiescence, equitable defenses, and any offsetting harm a state's own actions have caused. It is anticipated any such relief, if proven necessary, will be directed against a state as a whole but hopefully will include sufficiently specific requirements to ensure immediate and practical relief to the prevailing party."[78]

[78] *Western States Water*, #2201 July 22, 2016; and #2436, January 22, 2021.

States

Arizona

Water Conservation Legislation

On February 18, Governor Doug Ducey (R-AZ) signed H.B. 2056/S.B. 1368, which amends surface water laws to allow water conservation as a sufficient cause for nonuse, provided the person entitled to the water rights files a water conservation plan with the AZ DWR. The bill specifies that "water included in a water conservation plan does not constitute abandonment or forfeiture of the water conserved." The bill also prohibits a person from accruing long-term storage credits for conserved water within a water conservation plan.

The plan must include: (1) the identity and contact information of the person entitled to the use of water specified in the conservation plan; (2) description of all water rights and claims included in the plan; (3) the place and purpose of the use of the identified water rights and claims and the historical and current water use; (4) a description of the water conservation measures to be implemented; (5) a statement that the conservation plan is temporary and voluntary in nature; (6) a statement that the plan is intended to result in the temporary reduction of use or diversion of water; (7) a statement that the activities described in the plan will contribute to the practical and economical management, conservation, and use of Arizona surface water; and (8) a statement that the water right holder does not intend to abandon the water right during the term of the plan.

The plan can designate a duration of up to 10 years and allows subsequent notice, if filed prior to the expiration date, for additional one or more periods of up to 10 years. Finally, the bill declares the legislature's intent that it only applies prospectively and that water conservation contributes to Arizona's water management goals without affecting associated water rights or claims.[79]

California

Forecast-Informed Reservoir Operations

On February 4, a collaborative multi-agency steering committee issued its Final Viability Assessment for FIRO at Lake Mendocino. The participating state and federal agencies include the CA DWR, Sonoma Water, Scripps Institution of Oceanography, Corps, NOAA, and the USBR. The report assesses a six-year effort to demonstrate the viability of flexible water management using "data from watershed monitoring and improved weather and hydrologic forecasting to help water managers selectively retain or release water from reservoirs in a manner that can adapt to weather extremes and that leverages advancements in the science of meteorological and hydrologic forecasting." The report supports the Corps' "approval and adoption of FIRO-based operations in the Lake Mendocino Water Control Manual (WCM)."

[79]https://www.azleg.gov/legtext/55leg/1R/summary/S.2056-1368NREW_ASENACTED.pdf

Advances in understanding atmospheric rivers and their role in flood events in California has led to improved forecasting tools and optimization of water resources. The press release explained: "Many dams in the West are strictly regulated by [Corps] issued water control manuals based on historical long-term averages of winter storms and spring runoff. These manuals do not rely on forecasts and have traditionally operated on directives to 'manage water on the ground' and typically specify lower reservoir levels in the fall to make room to prevent winter storm runoff floods and raise levels in the late spring. The variability of when rainfall occurs from year to year is not directly considered. Many water control manuals were developed prior to modern technology such as satellites, radar, and numerical models that have led to significant improvements in forecasting skill." The pilot demonstration project leveraged modern data and tools to enable proactive, adaptive adjustments to variable weather conditions. It established "an approach that could be tested at suitable additional reservoirs elsewhere in California and other regions where water supply can vary widely." During the demonstration period, Lake Mendocino experienced both wet and dry years, and operators were able to increase water supply benefits with a 19% increase in water storage and still managed flood risks, with "significant regional benefits for people, the environment, and the economy."[80]

Drought Proclamation

On May 10, California Governor Gavin Newsom issued an emergency drought proclamation covering 41 counties. The press release noted that warm temperatures, early snow melt, low soil moisture, and early withdrawals have contributed to a drastic reduction in water supply, affecting farmers, fish, and wildlife in the affected counties. "The Governor's proclamation directs the State Water Board to consider modifying requirements for reservoir releases and diversion limitations to conserve water upstream later in the year to maintain water supply, improve water quality and protect cold water pools for salmon and steelhead. The state of emergency also enables flexibilities in regulatory requirements and procurement processes to mitigate drought impacts and directs state water officials to expedite the review and processing of voluntary transfers of water from one water right holder to another, enabling available water to flow where it is needed most."

The proclamation proposed a $5.1 billion spending package to address emergency drought needs and long-term resilience. Newsom said: "Shoring up our water resilience, especially in small and disadvantaged communities, is imperative to safeguarding the future of our state in the face of devastating climate change impacts that are intensifying drought conditions and threatening our communities, the economy and the environment. This package of bold investments will equip the state with the tools we need to tackle the drought emergency head-on while addressing long-standing water challenges and helping to secure vital and limited water supplies to sustain our state into the future."

He proposed: $1.3 billion for drinking water and wastewater infrastructure; $150 million for groundwater cleanup and water recycling projects; $300 millon for Sustainable Groundwater Management Act implementation to improve water supply security, water quality and water

[80]https://scripps.ucsd.edu/news/new-report-confirms-benefits-forecast-informed-reservoir-operations-lake-mendocino

reliability; $200 million for water conveyance improvements to repair major water delivery systems damaged by subsidence; $500 million for multi-benefit land repurposing to provide long-term, flexible support for water users; $230 million for wildlife corridor and fish passage projects to improve the ability of wildlife to migrate safely; $200 million for habitat restoration to support tidal wetland, floodplain, and multi-benefit flood-risk reduction projects; $91 million for critical data collection to repair and augment the state's water data infrastructure to improve forecasting, monitoring, and assessment of hydrologic conditions; $60 million for State Water Efficiency and Enhancement Program grants to help farmers reduce irrigation water use and greenhouse gas emissions from agricultural pumping; $33 million for fisheries and wildlife support; and $27 million for emergency and permanent solutions to drinking water drought emergencies.[81]

Governor Newsom declared a regional state of emergency in the Russian River watershed on April 21, including two counties where reservoir water levels are at record lows. He directed state agencies "to take immediate action to bolster drought resilience and prepare for impacts on communities, businesses and ecosystems if dry conditions extend to a third year."

PFAS/Groundwater

On June 30, the Orange County Water District (OCWD) and the City of Fullerton announced that they had begun operation of their first wellhead filtration treatment plant to remove perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS) from local well water. In 2020, several OCWD wells "were removed from service after the state of California lowered the Response Level advisories of PFOA and PFOS. This drove local water suppliers to rely on imported water from Northern California and the Colorado River to meet the needs of their customers." Beginning in November 2020, they constructed a treatment facility to remove PFOA and PFOS to meet state and federal drinking water standards. The new treatment plant "uses an ion exchange treatment system made of highly porous resin that acts like powerful magnets that adsorb and hold onto contaminants." OCWD Director and Fullerton Mayor Bruce Whitaker said: "Bringing this treatment facility online is very important. It means Fullerton can increase its use of local groundwater, which is less expensive and more reliable than imported water." OCWD and public water agencies "filed a lawsuit against the manufacturers of PFAS, seeking to protect ratepayers and ensure that the associated costs, including but not limited to treatment and replacement water, are borne by the companies that developed and manufactured PFAS."[82]

State Water Project Supplies

On December 1, the CA DWR notified the 29 water agencies that contract for State Water Project (SWP) supplies that 2022 water deliveries would not be allocated through the typical process until they had a clearer picture of hydrologic conditions for the spring. The SWP is a multi-purpose water storage and delivery system of reservoirs, canals, and pipelines that extends through two-thirds of the state. About 30% of the water is used for irrigation, and 70% for residential, municipal, and industrial use. The annual allocation is based on available water storage and projected water supply

[81]https://www.gov.ca.gov/newsroom/
[82]https://www.ocwd.com/media/9906/kimberly-pfas-treatment-facility.pdf

demands, and is updated monthly through the winter and spring. In its news release, CDWR said it "is focused on prioritizing water supply in four categories: water for health and safety needs and Delta salinity control; water for endangered species; water to reserve in storage; and water for additional supply allocations if the hydrology allows."

CA DWR Director Karla Nemeth said: "Despite a wet start to the water year, conditions have dried out since that first storm and we are still planning for a below-average water year. That means we need to prepare now for a dry winter and severe drought conditions to continue through 2022. We will be working with our federal partners and SWP contractors to take a conservative planning approach to balance limited water supplies with the needs of residents, businesses, and the environment."

Kansas

Local Enhanced Management Area

On January 4, the KDA-DWR announced Chief Engineer Earl Lewis approved the Local Enhanced Management Area (LEMA) plan for the portion of Wichita County within the boundaries of Western Kansas Groundwater Management District No. 1 (GMD 1). The LEMA plan "calls for reductions in water use in specified areas" to address groundwater pumping and extend the usable life of the Ogallala Aquifer.

The KDA press release noted: "One of the guiding principles of the state's Water Vision is that locally driven solutions have the highest opportunity for long-term success, and LEMAs were created to give local stakeholders a tool to act on their shared commitment to ensure a reliable water supply. The Wichita County LEMA will be the third LEMA in Kansas, and was motivated by local users' desire to conserve water and ensure continued economic viability of the region. This LEMA follows the notable successes achieved by the LEMA plans in northwest Kansas. Results from the state's other two LEMAs show that the reduction in water use slowed the rate of groundwater level decline and extended the life of the aquifer with little to no economic harm caused by the reduction during the same period."[83]

Quivira National Wildlife Refuge

On January 15, the Audubon of Kansas (AOK) sued the DOI, the USFWS, the KDA, and the Chief Engineer of the KDA-DWR, over water resources for the Quivira National Wildlife Refuge (QNWR). The FWS holds a 1957 priority water right to protect the wetlands at the refuge, but groundwater pumping by neighboring junior water users has impacted the water levels at the refuge. The FWS spent decades working with Kansas trying to resolve its water right impairment concerns before filing a formal complaint with KDA-DWR in 2013. The DWR's investigation found that the QNWR's water rights were impaired by groundwater pumping. The Big Bend Groundwater Management District No. 5 (GMD5) sought to reduce water use and address declining streamflows through a Local Enhanced Management Area (LEMA) plan, but it was rejected as inadequate. In

[83]https://www.agriculture.ks.gov/news-events

2019 DWR prepared to reduce the water use of the junior water rights. Senator Jerry Moran (R-KS) and then-Representative Roger Marshall (R-KS) brokered an agreement between the USFWS, KDA, and GMD5 to postpone administration of water rights to allow more time to seek a remedy to the impairment. AOK alleged violations of the National Wildlife Refuge System Improvement Act, the Administrative Procedures Act, the Endangered Species Act, and the National Environmental Policy Act. AOK asserted that the FWS must obtain water supplies through the federal reserved water rights doctrine with a 1955 priority date that coincides with the creation of the QNWR, plus additional state-law water rights to ensure adequate water supplies for the QNWR. AOK sought orders requiring FWS to obtain court injunctions that require the long-term curtailment of junior groundwater rights, and to request "the full administration of all water rights in the Rattlesnake Creek sub-basin that have impaired and are impairing the Refuge Water Right...."[84]

On October 20, the U.S. District Court for Kansas granted the defendants' separate motions to dismiss *Audubon of Kansas v. Department of Interior et al.* (Case No. 2:21-cv-2025). The plaintiff challenged the KDA, KDA-DWR and the USFWS for violations of federal statutes, regulations, and doctrines regarding the water rights of the Quivira National Wildlife Refuge.

The Court found that the state defendants were entitled to immunity under the Eleventh Amendment, as the plaintiff had not demonstrated a violation of federal law. KDA-DWR was not a party to the 2020 memorandum of agreement (MOA) between the USFWS and the local water district, and the allegations of KDA-DWR inaction were not supported by the complaint. "As State Defendants point out, the Chief Engineer of KDA-DWR is required to initiate an investigation upon a complaint that a water right is impaired. Audubon acknowledges that this occurred, and the Impairment Report was issued. But at that point, further action under state law is only required if there is a request to secure water. The [FWS] did make some requests initially. But the most recent one was withdrawn, and the [FWS] has opted not to make further requests to secure water owing to the 2020 MOA. Without a request to secure water, State Defendants have nothing to act on. Thus, there is no current obligation of State Defendants to act under state law."

The claims against the federal defendants of both action and inaction under the APA were also dismissed. The Court held that the 2020 MOA was not a final agency action, nor was it a "major federal action," under the NEPA. "The Tenth Circuit has held that this type of 'general agreement for state and federal agencies to work together in the future on specific projects…is not final agency action.'" The Court added that under the plaintiff's logic, every day of an ongoing decision-making process would become a final agency action. "It's clear that Audubon passionately disagrees with the path chosen by the [FWS] in this case to address the Refuge Water Right. But the APA does not provide private parties with general oversight of federal agency decision-making." Audubon also claimed that the USFWS violated the APA when it failed to protect and secure water rights for the refuge. The Court noted that none of the federal statutes cited include a specific mandate requiring the FWS to carry out specific actions to meet the refuge goals.

Audubon further alleged the improper disposal of property, a portion of the Quivera Refuge's water right, without the approval of Congress. "The Court notes that the complaint is silent as to

[84] *Western States Water*, #2360, August 9, 2019.

what precise cause of action is asserted on this point, what legal basis Audubon has to sue the [FWS] (or anyone) for this action, or what standing Audubon has to challenge the alleged wrongful disposition of federal property." The federal defendants argued that they continue to hold the water right. Audubon argued that the FWS surrendered its priority to use the water under its water right. The Court construed this as an APA claim as well, and dismissed it for the same reason, that it was not a final agency action. The complaint was dismissed without prejudice.

State Water Plan

On August 17, the Kansas Water Authority (KWA) voted to release a new draft of the Kansas Water Plan for public comment for 30 days. Kansas updates its water plan every five years, and the KWA is tasked with approving any changes proposed by the KWO after considering public input. KWA then submits the plan to the Governor and the Legislature.

The KWO's website notes that it has coordinated with local, state, federal and interstate partners to develop the update. "The Kansas Water Plan is one of the primary tools used by the State of Kansas to address current water resources issues and to plan for future needs. Statutory authority and basic guidance for formulating the Kansas Water Plan is contained in the State Water Resources Planning Act. The Kansas Water Plan Update will incorporate the Vision for the Future of Water Supply in Kansas (the Vision). The hard work put into the Vision and the goals created through the Vision process will not be forgotten. The Kansas Water Plan will now serve as the implementation plan for the Vision, providing measurements of success towards achieving the goals addressed in the Vision, as well as the other water related issues facing Kansans."[85]

Non-Point Source/Nutrients

On June 30, Governor Laura Kelley (D-KS) and the EPA announced the award of $750,000 to the KDHE. The Farmer to Farmer grant funding helps develop innovative practices within farming communities that benefit the health and productivity of the Gulf of Mexico downstream, including collaborative efforts to reduce nutrient pollution from nonpoint sources. The KDHE project "supports improving water quality, habitat, resilience, and peer-to-peer information exchange among farmers to benefit people and ecosystems."

Governor Kelly said: "This $750,000 in grants will help our agriculture community improve water quality and protect our environment. I want to thank the EPA for their partnership, and KDHE for working with our communities to distribute these funds." Acting EPA Region 7 Administrator Edward Chu said: "It is critically important that we work with states, nonprofits, the private sector, and farmers to reduce agriculture-related nutrients in our waters. The Farmer to Farmer program generates ideas and action by targeting funds on local solutions where we can make the greatest difference. I'm pleased that this funding will go to educate and empower farmers to implement best practices in their operations to reduce nutrient loads and improve water quality in local watersheds."

[85] www.kwo.ks.gov/water-vision-water-plan/water-plan

Montana

Water Quality Certification

On January 4, the MT DEQ issued a CWA §401 Water Quality Certification for the Corps approval of the Keystone XL Pipeline project. The pipeline would run through the eastern part of the state and requires a §401 certification due to crossing 201 wetland and water features that are regulated under the CWA.

As stated in a press release, "The conditions of the issuance include protections such as spill prevention and a reopener clause, which allows the certification to be reopened and modified to ensure ongoing compliance with applicable water quality standards. The conditions also set forth an oversight role for the Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation Office of Environmental Protection to enable the Tribes to ensure compliance with their applicable water quality standards."

Due to strict deadlines set by the Corps, MT DEQ acknowledged they were not able to fully complete their public review process. After receiving a complete application from the applicant in June and issuing a 67-day public comment period, MT DEQ received 650 comments. They requested multiple deadline extensions in order to meaningfully respond to and consider all of the comments as required by state law prior to issuing the certification. However, after receiving extensions only until Jan 5, 2021 and Jan 11, 2021, MT DEQ realized they were at risk of waiving certification if they completed their public process, and decided to issue a certification.

MT DEQ Director Shaun McGrath said: "Public participation is an important part of the certification process under Montana law. DEQ was not given adequate time to meaningfully review the comments before the decision was due to the U.S. Army Corps of Engineers. However, if Montana were to miss the deadline, that could be considered a waiver of certification. In order to ensure Montana's water quality is protected, DEQ decided to issue a certification with conditions that address at least some of the public's concerns."

In June 2020, the Corps finalized a new CWA §401 Certification Rule to "…implement the water quality certification process consistent with the text and structure of the Clean Water Act."[86] One of the concerns voiced by States has been the potential impacts of changes to the timeline they have for issuing certifications for projects that could impact state water quality.[87]

Nebraska

Water Sustainability Fund

On January 21, the Nebraska Natural Resources Commission (NRC) and NE-DNR announced a new story map that details the projects that have received support from the Water

[86]Western States Water, #2403, June 5, 2020.
[87]http://deq.mt.gov/Public/PressRelease

Sustainability Fund (WSF) since it was enacted in 2015 (Neb. Rev. Stat. §2-1506). NE-DNR initially reviews the applications received each July to ensure they meet minimum statutory requirements, then forwards them on to the NRC for scoring, ranking, and awards. Priority is given to projects that are the result of federal mandates. From 2015-2019, 60 projects received $61.7 million.

The WSF provides financial assistance, often in the form of grants and loans, to eligible projects, programs or activities that support sustainability of Nebraska's water resources. Examples include activities that: (1) increase aquifer recharge, reduce aquifer depletion, and increase streamflow; (2) remediate or mitigate threats to drinking water; (3) promote the goals and objectives of approved integrated management plans or ground water management plans; (4) contribute to multiple water supply management goals including flood control, reducing threats to property damage, agricultural uses, municipal and industrial uses, recreational benefits, wildlife habitat, conservation, and preservation of water resources; (5) assist municipalities with the cost of constructing, upgrading, developing, and replacing sewer infrastructure facilities as part of a combined sewer overflow project; (6) provide increased water productivity and enhanced water quality; (7) improve research, data, and modeling; (8) rehabilitate or restore water supply infrastructure, build new water supply infrastructure, or water supply infrastructure maintenance or flood prevention for protection of critical infrastructure; (9) improve conjunctive management, storage, and integrated management of groundwater and surface water; (10) use the most cost-effective solutions available; and (11) comply with interstate compacts, decrees, other state contracts and agreements, and federal law. "Of the annual funding appropriated by the Nebraska Legislature, ten percent is designated by statute for projects separating storm and sewer water. The NRC also reserves ten percent for projects requesting $250,000 or less."

The story map spotlights the results of several projects involving Airborne Electromagnetic surveys to provide a three-dimensional framework of the glaciated aquifer in eastern Nebraska. It also provides an interactive map that highlights information about twelve of the WSF projects located around the state.[88]

Nevada

Adjudications

On March 3, the Nevada Supreme Court held a hearing to consider the creation of a Commission to Study the Adjudication of Water Law Cases in Nevada's Courts (Commission). The proposed Commission would consider the creation of water courts in Nevada, with judges trained and assigned to work specifically on adjudicating water law cases.

The petition was filed by Nevada Chief Justice James Hardesty, who said: "Water law is a unique and complex area of the law and judicial review of water cases frequently involves, among other matters, an assessment of lengthy records, geologic and hydrologic concepts, conflicting expert

[88]https://nrc.nebraska.gov/water-sustainability-fund-0

testimony, and years of relevant Nevada history. And just as frequently, water cases take years to adjudicate, which adversely delays water law decisions in our state."

The petition appendix includes a memorandum from Deputy Administrator Micheline Fairbank, NV-DWR, NV-DCNR, with a summary of different state approaches to adjudicating water law cases. Chief Justice Hardesty took particular interest in Colorado, Idaho, Montana, and New Mexico. "As the Summary shows, four of the sixteen western states surveyed have implemented some form of specialized water court, including three states by rules adopted by their supreme court. The fourth state, Colorado, provides for the appointment of water judges and staff by its supreme court, and all of the states that have implemented water courts have provided for specialized education and training for judges to serve on water cases."

Chief Justice Hardesty recommended that the Commission include representatives from a broad group of entities with interests in water, including municipal and rural water interests; agriculture, mining, and environmental organizations; as well as NV-DWR. At the hearing, Acting State Engineer Adam Sullivan added that the Commission should also include representation of the interests of Tribal Nations.

Sullivan said: "Decisions of the state engineer are often highly technical and specialized. Our division recognizes the need for the study to provide expedient judicial review of water cases, well into the future."[89]

Water Banking and Conservation

On April 5, the Nevada Legislature Assembly Committee on Natural Resources held hearings on the Nevada Water Banking Act (AB354) and a bill to create a Program for the Conservation of Water (AB356). The banking bill, which is similar to Utah's program, proposes to "(1) promote the optimal use of water in [Nevada]; (2) promote transparency and provide access to water markets; (3) provide an innovative method of administering water rights and distributing water; (4) support the agricultural economy in [Nevada]; (5) facilitate robust and sustainable agricultural production while meeting the growing demands for municipal and industrial water use; and (6) promote water quality standards and facilitate a healthy and resilient natural environment."

The conservation bill, similar to Oregon, would create a "voluntary program for water conservation which allows certain persons holding perfected water rights that are used for irrigation to apply to the State Engineer for an allocation of conserved water based on conservation measures implemented by the person which allow the person to conserve water. The conserved water will be allocated between the applicant and the source of the water to create a reserve of water in each basin."

[89]https://www.nevadacurrent.com/blog/proposal-to-create-state-water-court-gets-broad-support/

New Mexico

Gold King Mine

On January 13, New Mexico announced an $11 million settlement in the U.S. District Court case *New Mexico v. EPA, et al.* (1:16-cv-00465). The funds will be paid to New Mexico by defendants Sunnyside Gold Corporation and its parent companies. Sunnyside oversaw the construction of bulkheads that caused the Gold King mine to fill with acidic mine water in 2015. The settlement includes $10 million for environmental responses costs and lost tax revenue, and $1 million goes to the New Mexico Office of the Natural Resources Trustee for injuries to the state's natural resources. The lawsuit against EPA will continue.

Governor Michelle Lujan Grisham said: "Thanks to unprecedented levels of collaboration between state, tribal and local governments, the Animas and San Juan rivers are healthy and clean again – supporting agricultural, recreational and cultural uses. But that does not change the fact that the Gold King Mine disaster harmed New Mexicans, harmed our environment, and continues to harm our economy. We have won this battle, but we will continue to fight as we hold the U.S. EPA responsible for this terrible incident."[90]

Legislation/Water Bills

On January 19, New Mexico's 55th Legislature opened its first session with several water-related bills already pre-filed for consideration. Proposed legislation included: (1) amendments to the Produced Water Act of 2019, to offer more protections against spills for people and the environment; (2) a state constitutional amendment to provide environmental rights for residents; (3) a fracking bill to halt permits while studies are conducted to determine the impacts on water resources, agriculture, and the environment; (4) a bill to amend the provisions of water leasing legislation, limiting the ability of the State Engineer's Office to grant preliminary or temporary approval for water leasing until the application has been presented to the public for comment and has been finally approved; and (5) a bill to create a statewide environmental database, to house all information about groundwater quality, surface water resources, impaired waters under the Clean Water Act, locations of National Pollutant Discharge Elimination System (NPDES) permits, floodplains and wetlands, Superfund sites, active mines, oil and gas well locations, and other environmental data in a single location.[91]

North Dakota

Drought

On April 1, North Dakota Governor Doug Burgum declared a statewide drought disaster. The executive order (EO) notes that North Dakota is experiencing its worst drought on record since 2000, with drought conditions expected to expand through the growing season. The 2021 fire season has

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[90] www.env.nm.gov/wp-content/uploads/2021/01/2021-01-13-State-reaches-11-million-settlement-over-Gold-King-Mine-disaster.pdf

[91] https://nmpoliticalreport.com/2021/01/15/environmental-bills-for-the-2021-legislative-session/

been unprecedented, with large fires beginning in January. The reported acreage burned already tripled that of 2020. Deficient snow, dry conditions, high temperatures, and wildfires have impacted communities, farmers, ranchers, crops, livestock, and the economy. The EO activated the State Emergency Operations Plan to assist local and tribal officials with response, recovery, mitigation, and restoration of services and infrastructure.

Oklahoma

Water Quality Standards

On January 7, the Oklahoma Water Resources Board (OWRB) held a public hearing on the revisions to the total phosphorus criterion for the Illinois River watershed, located in northeastern Oklahoma and northwestern Arkansas. Oklahoma's Water Quality Standards (WQS) designate the following beneficial uses: public water supply, aquatic life, aesthetics, body contact recreation, and agriculture. Within the watershed, the Illinois River, Flint Creek, and Barren Fork Creek are protected as Scenic Rivers by the Oklahoma 1970 Scenic Rivers Act.[92]

Oklahoma and Arkansas entered into their Second Statement of Joint Principles and Actions in February 2013, and completed a joint study between 2014-2016. The study report recommended draft criterion language: "The total phosphorus six month rolling average of 0.037 mg/L shall not be exceeded more than once in a one-year period and not more than three times in a five-year period."

The report also introduced a new term, "critical condition," defined as "conditions where surface runoff is not the dominant influence of total flow and stream ecosystem processes." OWRB noted: "Implementing this new term would limit the data used for assessment of the aesthetics beneficial use to those data values collected when the critical condition was satisfied. This is a transition away from the present inclusive use of data for beneficial use assessment." The new term was translated into an operational definition that could be consistently implemented by multiple agencies across both states: "The critical condition is when baseflow is fifty-five percent (55%) or greater of the total daily average flow calculated by the USGS hydrograph separation method sliding-interval. Measurements of total daily average flow must be obtained from a permanent continuous streamflow gage."

Oklahoma's public comment period continued through February 15. OWRB expects to take action on the proposed rule in March, followed by review by Oklahoma's legislature and Governor Kevin Stitt (R-OK). OWRB anticipates submitting the rule to EPA for final review and approval sometime in Fall 2021.[93]

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[92] 82 O.S. §§1451-1471

[93] https://www.owrb.ok.gov/rules/wqs/revisions/totalphosphorous.php

State Revolving Fund

On January 7, the South Dakota Department of Environment and Natural Resources announced approval of $8.7 million for drinking water, recycling, and solid waste projects. The funding includes loans for water tower construction and drinking water system improvements, with $7.5 million to the Minnehaha Community Water Corporation (MCWC), and $637,000 (plus $160,000 in principal loan forgiveness) to Edgemont.

The MCWC project includes construction of approximately 8.2 miles of 12-inch water transmission main, a 250,000-gallon water tower located near Humboldt, a 750,000-gallon water tower located near Brandon, and a control valve station allowing MCWC to increase storage capacity in two separate areas of its distribution system.

The Edgemont project previously received funding in 2015, 2017, and 2019, to complete multi-year system improvements that included well rehabilitation, a new well, a water treatment facility, an elevated storage tank and water main installation. Edgemont will use the additional funding to design and install a pretreatment system to reduce iron levels in the raw water supply.

South Dakota and the EPA contribute to the Drinking Water SRF, which provides low-interest loans for public drinking water system projects. Principal forgiveness is a subsidy option that results in a reduced loan payment amount for the borrower.[94]

Infrastructure

On December 7, Governor Krisi Noem (R-SD) addressed the state legislature with her budget recommendations for FY22 and FY23. She noted that general fund receipts are up 11.4% over last year's historic numbers and that there are $215.5 million in one-time dollars for FY22 and $157.6 million in ongoing general funds. The state also has American Rescue Plan (ARPA) funds available. "To the fullest extent that we can, we are going to put those funds to work for our state, to address our state's most pressing needs, to make fiscally responsible, one-time expenditures that will not grow the government, but that will save our people money in the long run."

She emphasized the importance of building and maintaining infrastructure for the future. "As our state continues to grow, so does our need for access to clean, quality water. Thankfully, we now have the resources to make a $660M, once-in-a-generation investment in water projects across the state. With our combined resources, including state, federal, and local dollars, these projects could yield a landmark $1.5B investment. This necessary work will ensure rural towns have clean drinking water; it will update existing water treatment facilities; replace outdated water systems in our older communities; and construct drainage projects for new communities…. Routing this money through existing programs at the Department of Agriculture and Natural Resources, we will ensure a fair, objective, and impartial process that makes the best use of taxpayers' dollars."

[94]https://denr.sd.gov/dfta/info/info.aspx

She also addressed the need for repairs to dams and flooded areas. "Dams are one of the most essential forms of infrastructure – especially for a state that has the Mighty Missouri running through it. We need dams that are strong and built to last. Unfortunately, the Richmond Dam near Aberdeen is over 80 years old. Due to the risk of loss of life and property, repairing it is a top priority for Commissioner Ryan Brunner of School and Public Lands. I am recommending $6.5M in funding to repair this critical infrastructure. This will build on the investments we made in our dam infrastructure over the past year. Additionally, I am recommending $5.6 million to repair public recreation areas damaged by the 2019 floods. In the case of Lake Alvin, that project is estimated to cost about $3M and is at risk of failure. We have the money available to get these crucial projects done – so let's do it."

Texas

NPDES Program Delegation

On February 12, the EPA published a notice that, as of January 15, the State of Texas had been approved to assume partial NPDES program delegation for discharges from produced water, hydrostatic test water and gas plant effluent (oil and gas discharges) within the state and three miles offshore (86 FR 9332). The program will be administered by the TCEQ. The program application was submitted by Governor Greg Abbott (R-TX) in October 2020. The Texas Legislature passed H.B. 2771 in 2019, which amended the Texas Water Code to transfer jurisdiction of oil and gas discharges from the Railroad Commission of Texas to TCEQ following EPA approval.

In a press release, TCEQ Commissioner Emily Lindley said, "TCEQ looks forward to working on permits pursuant to this program delegation. For the past year and a half, staff worked tirelessly to make sure our application was complete and accurate. This delegation will serve Texans well." EPA Regional Administrator Ken McQueen said, "After a rigorous review process, we are pleased to announce that the state of Texas will take responsibility for this Clean Water Act program. This action will help Texas administer a process for the regulated community without unnecessary and duplicative permitting processes and ensure the best environmental and economic outcomes."[95]

Drought Disaster Declaration

On April 15, Texas Governor Greg Abbott issued a disaster declaration for 73 counties experiencing exceptional drought conditions and the threat of wildfires as well as other threats to public health, property, and the economy. Parts of Texas experienced severe storms and flash flooding during the last week of April, but on May 7, the disaster declaration was renewed for 54 counties still in exceptional drought.

Surface Water Rights

The Texas Supreme Court received a petition to review whether TCEQ has exclusive jurisdiction to determine disputes over private property ownership of surface water rights. (*Pape*

[95]https://www.tceq.texas.gov/news/releases/tceq-to-administer-clean-water-program-epa-announces

Partners, Ltd. et al. v. DRR Family Properties, LP, et al., No. 21-0049.) Several amicus briefs were filed, including by TCEQ, supporting the petition to overturn the ruling of the lower courts as disruptive to established law on water rights ownership.

In the underlying case, the petitioners filed suit for a determination of private property interests in water rights acquired with the purchase of a farm. The respondents moved to dismiss for lack of subject matter jurisdiction, arguing that TCEQ has exclusive jurisdiction to adjudicate the ownership of water rights among private parties. The trial court granted the motion, and the court of appeals affirmed, "....concluding that the pervasive scheme under the Texas Water Code for regulating and permitting water usage also evinced the legislature's intent to grant [TCEQ] exclusive jurisdiction to adjudicate ownership of water rights conveyed between private parties."

TCEQ argued in its brief that the district court had proper jurisdiction of the case, and that Texas statutes do not provide TCEQ with a mechanism to determine such disputes. TCEQ's role is an administrative, record-keeping function, and water rights disputes are adjudicated in the courts as any other property dispute. "Surface water in Texas is owned by the State and held in trust for Texas citizens. Through a system of water rights prioritization, the State grants the right to use water to individuals or entities such as ranchers, farmers, cities, or industries. [TCEQ] has an important role to play in issuing and recording those grants. However, [TCEQ's] authority does not extend to adjudicating private disputes simply because they involve water rights. Once a water permit is issued and vested in the holder, it can be bought and sold like any other property. And, like any disagreement about the ownership of property, a dispute about who owns the water rights is properly adjudicated in court."

TCEQ's brief goes on to describe the history of the Irrigation Act of 1917, which was struck down as unconstitutional for violating the doctrine of separation of powers. The Irrigation Act authorized the Board of Water Engineers (TCEQ's predecessor) to determine property rights, and the Texas Supreme Court held that this power could not be delegated outside of the courts.

The subsequent Water Rights Adjudication Act of 1967 provided a mechanism to quantify and categorize the rights of water users in Texas, which were "a bit of a jumble, with Texans holding rights derived from a variety of sources (some dating to Spanish land grants), taking different forms, and memorialized in different ways (sometimes recorded in the county deed records, sometimes not)." TCEQ accepted all required statements claiming water rights, made preliminary determinations based on the evidence, held hearings for contested determinations, then made final determinations to present to the court with all of the evidence. "At the completion of the judicial process, the court issued its final decrees, and the [TCEQ] recognized the terms of the final decree through an issuance of a certificate of adjudication…. Once perfected in the courts, those water rights became a vested property interest that can be conveyed and assigned through conveyance instruments such as deeds. When presented with deed(s) establishing a chain of title, [TCEQ] updates its records to note the change in ownership. The Texas Supreme Court has long recognized that the jurisdiction to determine disputes in private property rights is inherently a judicial function – one that under the doctrine of separation of powers [TCEQ] does not have jurisdiction to determine."

The Texas Supreme Court later had occasion to review the constitutionality of the Water Rights Adjudication Act of 1967. TCEQ said: "The Court made specific note of section 11.320 of

the Adjudication Act and explained that this judicial review provision is what separates the act from the constitutionality issues that plagued the earlier Irrigation Act…. Under the Adjudication Act, [TCEQ] does not make the final determination. There is a two-step procedure. [TCEQ] makes its determination, which is followed by a mandatory and automatic judicial review."

Utah

Infrastructure

On December 7, Utah Governor Spence Cox released his FY2023 Budget Recommendations, which included an investment of $500 million in water infrastructure, planning, and wise stewardship and management. The budget document reads: "Our water resources are becoming more important as our growing population drives increased demand for water and agricultural production. As population outpaces investment, our state becomes more susceptible to drought and other water-related challenges." The Governor recommended a "…generational investment in water infrastructure, including optimizing our current water supplies and investing in productive agriculture, vibrant communities, and healthy watersheds to protect this key natural resource into the future."

In addition to $100 million in 2021 American Rescue Plan Act (ARPA) funds appropriated for water in the Utah Legislature's First Special Session, Governor Cox recommended investing another $400 million of ARPA funds in water conservation, restoration, preservation, and infrastructure to "proactively respond to drought challenges, degrading infrastructure, and to meet the needs of future growth."

The funding would also benefit the Great Salt Lake, one of the State's most important ecosystems. "We are committed to protecting and preserving this key resource. Annually, the Great Salt Lake contributes more than $1.3 billion in total economic impact, hosts upwards of 10 million migratory birds, and is a recreation asset serving numerous boaters, hunters, and wildlife watchers. During summer 2021, the lake reached the lowest levels on record-threatening wildlife habitat, air quality, local communities, human health, industries that depend on the lake, and even Utah's world-famous snow." To ensure responsible future management and surrounding wetlands, the Governor recommended $600,000 in restricted funds to update a comprehensive resource management plan.

In addition, Governor Cox recommended directing $45 million toward Great Salt Lake preservation efforts on top of $5 million already appropriated to enhance inflows, restore and preserve wetlands and upland habitat, and integrate the Great Salt Lake into water and land use planning. Similarly, $25 million is recommended to rehabilitate Utah Lake and improve its water quality.

Utah's Agricultural Water Optimization program has demonstrated conservation strategies that optimize water use without compromising agricultural yields. Once all current projects are completed, an estimated 43,800 acre-feet of water (the equivalent of a small reservoir) will be available every year. The Governor proposed establishing a statewide water cooperative action plan that prioritizes conservation, storage, agriculture preservation, and use optimization. He recommended an additional $50 million on top of an already appropriated $20 million to further

advance agriculture-related water conservation efforts. Moreover, a $5 million infusion to the Agriculture Resource Development Loan Fund would increase producers' ability to implement future water conservation projects.

Investing in infrastructure for high-quality drinking water is another priority. It requires significant planning and investment before any water reaches our taps. "Dedicated professionals continually ensure our water meets the high standards we expect. The state has a role to play in ensuring access to clean drinking water for communities across the state." The budget calls for collaborative partnerships, and recommends $75 million on top of $25 million previously appropriated. The spending will bring clean water for the first time to Westwater from nearby Blanding and improve drinking water systems in other small rural communities across the State.

Additionally, the Department of Environmental Quality will use $890,000 from water fees to assist local communities in maintaining drinking water standards. The Governor recommended $100 million for the Local Match Program to help communities fund additional water infrastructure.

"Historic investments in Utah's reservoirs by past generations prevented even more dire outcomes during 2021 drought conditions. Today, our population growth has outpaced our investment in water development. We must address this problem." Governor Cox recommended $500,000 to begin planning and developing future water storage solutions. Further, effective water storage requires healthy watersheds. "We can maximize existing storage by increasing yields through proper watershed and groundwater management." In addition to continued water storage planning and development, the Governor recommended adding $4 million to the Watershed Restoration Initiative and $1.5 million to the Shared Stewardship Initiative as part of a broad strategy to improve watershed conditions, increase water yields, and reduce catastrophic wildfires. The Governor also recommended $1 million toward pre-fire mitigation under a Catastrophic Wildfire Reduction Strategy and $2.5 million to restore fire-ravaged landscapes to protect drinking water quality and mitigate the impacts of sediment pollution in streams and reservoirs.

Washington

Flooding

On December 3, Governor Jay Inslee (D-WA) sent a letter to Administrator Deanne Criswell at the Federal Emergency Management Agency (FEMA), requesting swift consideration of his request for federal assistance with severe flooding damage under the Stafford Act. "Since these severe rainstorms first began on November 12, I have met with flood victims in Whatcom County and have had ongoing conversations with local elected officials, tribal government leaders, emergency response personnel, and community stakeholders from around Northwestern Washington. Through these engagements, one thing I have heard consistently is collective shock in the magnitude of these atmospheric events, causing historic water levels and damage in impacted communities. The record-breaking storms have included flooding, landslides, mudslides, and straight-line winds, causing evacuations, displacement, road and highway closures, and significant power outages. These have had a tremendous impact on people, businesses, agriculture, transportation systems, and the economy of Washington." He noted several cities experienced their "wettest meteorological fall season (September 30-November1) on record." Inslee issued a severe weather emergency

proclamation for fourteen counties on November 15, expanding the proclamation on November 19, and again on December 1, to authorize further assistance from state agencies and add another county.[96]

Water Data

NASA/Satellite data

On January 8, the WSWC wrote a letter to NASA Earth Science Division Director Karen St. Germain, expressing support for the continuing operations of the ECOsystem Spaceborne Thermal Radiometer Experiment on Space Station (ECOSTRESS). ECOSTRESS is a multi-sensor instrument on the International Space Station (ISS) that monitors land surface temperatures, radiance, evapotranspiration and evaporative stress, and improves understanding diurnal cycles of plant water use. It also adds the value of more frequent overflights with a thermal imager.

The letter describes the benefits of satellite data, in particular thermal imagery, to western states and communities with water management concerns. "The Council strongly supports a sustained National Land Imaging Program, including existing thermal imaging capabilities, and has expressed its strong support for the expedited construction and launch of Landsat 9 while exploring the potential for medium and longer-term advances in technology, design and future capabilities to meet existing and future uses. Maintaining the ECOSTRESS thermal system on ISS is one practical and economic option. Several water consumption (evapotranspiration) models have been developed with ECOSTRESS data that are currently in use."

Finally, the letter also recognizes a thermal infrared element to the Surface Biology and Geology (SBG) Designated Observable mission, which was recommended by the NASA decadal survey, and notes: "Both [ECOSTRESS and the SBG mission] can complement existing and extensively used Landsat thermal data acquisition. We encourage a strong commitment to both of these missions, with commensurate budget support."

NOAA/Global Forecast System

On March 22, NOAA released a new version of their flagship global weather model, the Global Forecast System (GFS), with significant upgrades. These include: (1) improved modeling for snowfall location; (2) heavy rainfall forecasts; (3) hurricane genesis forecasting; and (4) better overall model performance.

In a press release, NOAA's NWS Director Louis Uccellini said the upgrades to supercomputing capacity would advance weather forecasting and establish "a strong foundation for further planned enhancements that will allow for the assimilation of even more data into the model." Vijay Tallapragada, Chief, Modeling and Data Assimilation Branch, NOAA's Environmental Modeling Center, highlighted the model's advances for extreme weather. He said the model predicted a "significant weather event" one to two days in advance of the operational model and

[96]https://www.governor.wa.gov/news-media/inslee-letter-fema-requests-swift-consideration-flood-aid

modeled more precise information on the location, magnitude, density and timing of snow forecasts.[97] It was also able to outperform other models (from Canada, Europe, Britain, U.S. Navy, and other NOAA models) for eight days in a row during the last 31 days.

NOAA is also modernizing the Global Data Assimilation System (GDAS), which will allow the model to take in more data from geostationary and polar-orbiting satellites, as well as flight-level wind, temperature and moisture observations from aircraft.[98]

OpenET

OpenET Data Act

On July 29, Senator Catherine Cortez Masto (D-NV) introduced the Open Access Evapotranspiration (OpenET) Data Act (S. 2568) to authorize $14 million/year through FY26 for the Secretary of the Interior, acting through the USGS, to establish a program to advance the quantification of evaporation and consumptive water use data. OpenET involves the delivery of satellite-based evapotranspiration data, as well as providing users with field-scale estimates of ET across large landscapes over time. Cosponsors include Senators Kirsten Gillibrand (D- NY); Ben Ray Lujan (D-NM), Richard Blumenthal (D-CN), Alex Padilla (D-CA), Bernie Sanders (I-VT), Edward Markey (D-MA), Amy Klobuchar (D-MN), Elizabeth Warren (D-MA), Jeff Merkley (D-OR), Cory Booker (D-NJ), Tammy Baldwin (D-WI) and Richard Durbin (D-IL).

In introducing the bill, Senator Masto said: "With Nevada and states across the West facing drought, we need to make it as easy as possible for our communities to conserve water and for farmers and ranchers to effectively manage their water use. My legislation will help accomplish that goal by equipping Nevadans with this critical water data. This data will help us protect our water resources and ensure our crops, livestock, and wildlife have water access, and passing this bill would mark a significant step in our plan for a more sustainable future."

The Secretary of the Interior is directed to coordinate and consult with the heads of other relevant Federal agencies, including: (i) the Commissioner of USBR; (ii) the Administrator of the NASA; (iii) the Administrator of the NOAA; (iv) the Administrator of the Agricultural Research Service; and (v) the Chief of the NRCE; as well as program partners such as a State (or state agency), institution of higher education, non-governmental organization, private sector entity, or any other entity determined to be appropriate.

The proposed bill states that the Congress finds: (1) evapotranspiration is the second largest component of the water budget, which is an accounting of the allocation of water resources to various water uses; (2) evapotranspiration is a measure of the water that is consumed and lost from a water system, removed from available supplies, and unavailable for other uses within a watershed; (3) accurate information on evapotranspiration is required to balance water supply and water demand in a watershed and ensure that adequate water supplies for beneficial uses are available over time;

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[97] E&E News, 3/23/21.

[98] https://www.noaa.gov/media-release/noaa-upgrades-flagship-us-global-weather-model

(4) water users and managers lack access to consistent, affordable and comprehensive water use data for effective and efficient decisionmaking; and (5) evapotranspiration data may be applied to: (a) assist users and decisionmakers to better manage resources and protect financial viability of farm operations during drought; (b) develop more accurate water budgets and innovative management programs to better promote conservation and sustainability efforts; and (c) employ greater groundwater management practices and understand impacts of consumptive water use.

The Secretary of the Interior is directed to carry out activities that: (1) support the development and maintenance of evapotranspiration data and software systems and associated research and development in a manner that ensures that program data are reflective of the best available science, as well as provide support to program partners and coordinate with other programs within the Department of the Interior, that have developed and are maintaining evapotranspiration software systems and datasets; (2) demonstrate or test new and existing evapotranspiration measurement technology; (3) improve evapotranspiration measurement science and technology; and (4) develop or refine the application of satellite-based evapotranspiration data available to federal agencies, States, and Indian Tribes, including the integration of program data into (a) the Water Availability and Use Science Program, the National Water Census, and Integrated Water Availability Assessments by the United States Geological Survey; and (b) activities under the WaterSMART program authorized by subtitle F of title IX of the Omnibus Public Land Management Act of 2009.[99]

The bill specifically calls for the Secretary to coordinate on data analyses, use, and collection efforts with other Federal agencies, States, and Tribal governments through existing coordinating organizations, such as (1) the WSWC; and (2) the WestFAST. The Secretary may provide information collected and analyzed (under the program) to program partners through appropriate mechanisms, including through interagency agreements with federal agencies, States (including state agencies), or Indian Tribes, or leases, contracts, cooperative agreements, grants, loans, and memoranda of understanding. The Secretary shall also enter into cooperative agreements with program partners to provide for the efficient and cost-effective administration of the program, including through cost-sharing or by providing additional in-kind resources necessary to carry out the program; and provide non-reimbursable matching funding for programmatic and operational activities, in consultation with program partners.

Bipartisan companion legislation is expected to be introduced in the House sponsored by Representatives Susie Lee (D-NV), Chris Stewart (R-UT), and Jared Huffman (D-CA). "The West faces a historic drought that demands action and innovation," said Rep. Lee. "All of Nevada is currently in drought, and the entirety of my district, Nevada's Third District, is in exceptional drought, the highest classification. In order to solve our water crisis, we need to better understand how much water is available and how much water is being used. With this program, we will have credible, transparent and easily accessible data on our consumptive water use so that we can make better water management decisions in Nevada and across the West."

"Water is the lifeblood of the American West, and the ongoing drought is taking a toll on everyone," declared Rep. Stewart. "It's absolutely necessary that we get the most use out of the water

[99]42 U.S.C. 10361 et seq.

we already have. That starts with giving states more consistent, accessible, and accurate data. This legislation will allow us to be more prudent with our current resources and plan for the future of our communities."

"Extreme drought fueled by climate change has become a dire challenge in the western United States, and it's critical for us to operate with the best information and data possible as we manage this increasingly limited resource," declared Rep. Huffman, Chair of the House Natural Resources Committee's Subcommittee on Water, Oceans and Wildlife. "Knowing key water metrics like evaporation rates is incredibly valuable for folks across all sectors, and I'm glad to join Representatives Lee and Stewart and Senator Cortez Masto in this bill to help farmers, water utilities, regulators, and governments alike all make well-informed water management decisions."

"The Nevada Division of Water Resources strongly supports the continued development and public accessibility of OpenET," said Adam Sullivan, State Engineer, Nevada Division of Water Resources. "This outstanding program directly benefits water users throughout Nevada and the West who strive to improve efficiency and conserve water. Public access to these data will be increasingly vital to support water users and responsible water management needs into the future."

OpenET/Online Platform

On October 21, the OpenET project announced the launch of a new online platform that uses satellite data to estimate water consumed by crops. The platform makes the data for the 17 western states widely available for the first time. The data for the current year and previous five years is available at no charge, and is accessible down to the field scale.

The OpenET project is a public-private collaboration led by the Desert Research Institute, Environmental Defense Fund (EDF), Habitat Seven, and the NASA, with additional participation from Google, the USGS, the USDA, and various universities, with both government and private funding. The core objective is to provide farmers and local water managers with free ET data, with revenue generated from organizations interested in large-scale access to the data beginning in 2022.

Forrest Melton, NASA Western Water Applications Office, said: "OpenET addresses one of the biggest data gaps in water management in the western United States. This easy-to-use online platform provides scientifically robust data that are invaluable for water management at all scales, from an individual agricultural field to an entire river basin." Gabrial Senay, USGS, said: "In some parts of the arid West, more than 70% of irrigation water ends up as evapotranspiration. By automating calculations for this highly important water data, OpenET will enable the USGS and water managers to more easily create water budgets at the watershed scale, which is an essential first step toward proactive water management." Richard Allen, University of Idaho, said: "As someone who has worked on evapotranspiration for more than 40 years, I am thrilled to see multiple, independent models for estimating ET come together on a single, easy-to-navigate platform."

Water Supply Outlook

On February 25, the USDA's NRCS Water Supply Outlook reported: "Much of the West continues to experience drought conditions through the winter and as spring approaches. Currently,

79% of the region is categorized in moderate-drought-or-drier conditions. Most of the drought is long term, with fall and winter precipitation lagging normal water year amounts. Exceptional-drought designations were expanded in central Nevada this week." The month of February brought record-breaking cold temperatures and significant precipitation to many of the western states. NRCS reported: "Ample Pacific moisture and storms dropped decent amounts of precipitation on the Northwest, especially Washington, Oregon, northern California, Idaho, western Montana, and western Wyoming, with lesser amounts across northern Nevada, central Utah, northern and southern Colorado, and parts of New Mexico."

On March 4, USDA's NRCS reported that parts of Texas, the northern Rocky Mountains, and the Pacific Northwest had received considerable rain and snow. For the Pacific Northwest in particular: "Individual SNOTEL stations reported snow water equivalent (SWE) increases of over 500% of normal for the month at many stations…. The heavy snowpack has improved the water supply outlook to above normal for the spring and summer river flows."

However, much of the West remains in moderate to exceptional drought, in part due to the lack of monsoon precipitation from Summer 2020. "The light precipitation in New Mexico and eastern Arizona was not enough for any improvements…."

On April 8, the USDA's NRCS reported widespread dry conditions in the West and the potential for a severe 2021 wildfire season. More than half of the large wildfires are in Oklahoma, and North Dakota declared a state of emergency due to wildfires and wildfire risk. The National Interagency Fire Center reported large fires are also burning in Arizona, Colorado, Montana, and Texas. The U.S. Drought Monitor shows 58.4% of the U.S. is at least "abnormally dry," with 37.6% in moderate to exceptional drought. NRCS noted that most western mountain snowpacks are near peak accumulation, with many southwest regions reporting below normal snowpack on top of persistent drought conditions from last year. "The lowest snowpack percentage is in Arizona and New Mexico, where conditions are much below normal. In contrast, the Cascade Mountains of northern Oregon and Washington, and some areas of the Eastern Rockies, register above-normal snow conditions. Most of central and southern Alaska is also reporting an above-normal snowpack."

On December 23, the USDA's NRCS Water and Climate Update reported significant December precipitation along the West Coast and inland to the Rocky Mountains, with the Sierra Nevada expected to receive up to 114" of snow. While most of the western states are in moderate to exceptional drought, conditions have improved slightly in some areas, particularly the Northwest. Many large reservoirs remain well-below 50% full.

NOAA Forecasting

On March 9, NOAA announced publication of a new study on forecasts of multi-year El Niño and La Niña events, funded in part through its Climate Program Office and NIDIS. The study was published under the title "Two-year Dynamical Predictions of ENSO Event Duration during 1954–2015," in the Journal of Climate in February. The authors used the Community Earth System Model, version 1 (CESM1), finding that the model worked well at predicting the duration of these events between 6 and 25 months. The press release notes: "Forecasts using November initial conditions, near the first peak of El Niño or La Niña, can skillfully predict whether the event

continues through the second year with 1-year lead time. In addition, [the authors] found that the occurrence of multi-year La Niña events can be predicted even earlier with lead times up to 25 months, especially when they are preceded by strong El Niño…. This study highlights the benefit of extending the forecasts, even for selected models and selected initialization months. Multi-year El Niño and La Niña forecasts will provide a new basis for predictions of prolonged climate impacts, such as persistent drought in the southern United States…."

RESOLUTIONS AND POLICY POSITIONS

From time to time, the WSWC adopts policy positions and resolutions, many of which address proposed federal laws, rules and regulations or other matters affecting the planning, conservation, development, management, and protection of western water resources. Policy positions sunset after three years, and are then reconsidered, reaffirmed, revised and readopted, or allowed to expire. All WSWC positions are also vetted through WGA.

In 2021, the WSWC adopted three new positions (No. 459, 465, and 477) and revised and re-adopted numerous sunsetting positions:

Position No. 459, supports updated, consistent National PMP Standards for extreme rainfall that takes into account recent data, research, models and methodologies.

Position No. 460, supports FIRO and innovations.

Position No. 461, supports weather station networks.

Position No. 462, supports water infrastructure funding.

Position No. 463, regarding integrating water and energy planning and policy

Position No. 464, supports federal research on climate adaptation.

Position No. 465, support for universal access to clean and safe drinking water for Federally Recognized Indian Tribes and Alaska Native Communities.

Position No. 466, regarding state primacy over groundwater.

Position No. 467, supports and strongly encourages judges, masters and referees who adjudicate or preside over water litigation in the member states to participate in the Dividing the Waters Program.

Position No. 468, supports rural water supply projects and infrastructure needs.

Position No. 469, support water transfers without a need for NPDES Discharge Permits.

Position No. 470, regarding endangered species and state water rights.

Position No. 471, supports State CWA Section 401 Certification Authority.

Position No. 472, regarding CWA Jurisdiction.

Position No. 473, regarding Federal Water and Climate Data Collection and Analysis Programs.

Position No. 474, regarding Drought Preparedness, Prediction and Early Warning Programs.

Position No. 475, regarding the USBR Drought Response Program.

Position No. 476, regarding States' Water Rights and Natural Flows.

Position No. 477, regarding Abandoned Hardrock Mine Cleanup.

Position No. 459

POSITION
of the
WESTERN STATES WATER COUNCIL
regarding
PROBABLE MAXIMUM PRECIPITATION STANDARDS

Texas Hosted Spring Virtual Meetings
March 25, 2021

WHEREAS, National Probable Maximum Precipitation (PMP) standards for extreme rainfall have long been used for the design and regulation of infrastructure including dams, roads and bridges, as well as thermal power facilities; and are used to promote consistency between federal and state agencies, as well as the private sector professional design community; and

WHEREAS, the National Oceanic and Atmospheric Administration (NOAA), National Weather Service (NWS) first developed methodologies for estimating PMP standards in the 1940s, using historic data available at that time, and applied them across the United States through hydrologic and hydrometeorological studies and reports between 1961 and 1999; and

WHEREAS, Federal leadership is again needed to update these standards; and

WHEREAS, state dam safety programs have developed statutes, rules and guidance documents for the design of facilities that are typically based on these federal standards and studies; and

WHEREAS, while some states have changed their statutes to allow for the use of new methodologies provided by entities outside the federal government, many state dam and safety programs continue to use these outdated reports and standards, finding the change too difficult to attempt; and

WHEREAS, decades of storm event data (the basis for calculating the standards) have been recorded since the existing standards were published, but these have never been officially updated to include new methods, technologies, and more recent storm data; and

WHEREAS, inconsistencies between minimum design criteria of adjacent states and between federal and state design/performance expectations within states are increasing; and

WHEREAS, it has recently been reported that there are nearly 1,700 high-hazard potential dams currently in need of repair across the country, a percentage of which need spillway system improvements; and

WHEREAS, consistent and standardized PMPs and modern methodologies are needed for the design and repair of spillways at high-hazard potential dams rated unsatisfactory in order to ensure the highest level of public safety; and

WHEREAS, the recent Colorado-New Mexico Regional Extreme Precipitation Study (REPS) included state-of-the-practice updates to existing methodologies using NOAA research and high-resolution operational tools for prediction of extreme rainfall; and

WHEREAS, the REPS study - reviewed by a board of subject matter experts from numerous federal agencies - demonstrated possible approaches to updating extreme precipitation estimates at a national scale and also included research and recommendations for climate change considerations.

NOW, THEREFORE, BE IT RESOLVED, that the WSWC supports NOAA leading federal efforts toward developing 21st century national PMP standards for estimating extreme rainfall in order to provide consistent requirements for ensuring public safety; and

BE IT FURTHER RESOLVED, that the WSWC recommends Congress address this issue and authorize and fund necessary steps to update federal PMP standards, including a National Academies of Science, Engineering and Medicine (NASEM) study of the current state of the practice and options for extreme rainfall estimation, in order to provide NOAA clear direction toward development of 21st century national standards for estimating extreme rainfall (including PMP).

Position No. 460

RESOLUTION
of the
WESTERN STATES WATER COUNCIL
to Support the Use of
FORECAST INFORMED RESERVOIR OPERATIONS and INNOVATIONS

Texas Hosted Spring Virtual Meetings
March 25, 2021

WHEREAS, Western States experience great variability in precipitation, with serious impacts and consequences for the operation of water projects, particularly aging water infrastructure, as well as water supply and emergency planning and management, drought and flood preparedness and response, and other public and private decisions; and

WHEREAS, decisions to operate water projects to protect life and property by reducing flood risks, while at the same time maximizing water supply storage, including carryover storage, impact billions of dollars of economic investments in the West to maintain and protect municipal and industrial centers, agriculture, hydropower generation, and fisheries; and

WHEREAS, these investments depend on our ability to observe, understand, model, predict, and adapt to precipitation variability on operational time scales ranging from hours to days, weeks and months, seasons and longer; and

WHEREAS, observations, modeling, high-performance computing capabilities, research, and demonstration projects are essential to significantly improving operational forecasting of precipitation to maximize the use of our existing water storage projects to reduce flood damages, mitigate economic and environmental damages, and maximize water storage and water use efficiently; and

WHEREAS, operating aging water infrastructure effectively in the face of growing and often competing water supply and water management and flood protection demands requires that state, federal, tribal, and local agencies optimize operations and seek innovative alternative strategies to support their decision-making; and

WHEREAS, project operations and alternatives may include, but are not limited to, using enhanced forecasting capabilities to better inform reservoir operators, operations, and actions - to dynamically determine reservoir levels to improve storage opportunities, and to alter static reservoir operating rule curves and requirements based on updated hydrologic information; and

WHEREAS, FY20 appropriations legislation directed the U.S. Army Corps of Engineers (Corps) to develop a comprehensive list of water control manuals at Corps-owned projects located in states where a Reclamation project is also located, including a prioritized list of needed updates of those manuals; and

WHEREAS, Section 1222 of WRDA 2018 directed than one year after the date of completion of the Forecast Informed Reservoir Operations (FIRO) research pilot program at Coyote Valley Dam in California, the Secretary shall issue a report to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Environment and Public Works of the Senate that among other things provides an assessment of the viability of using FIRO at other dams owned or operated by the Secretary. In addition, the report will provide an identification of other dams owned or operated by the Secretary where FIRO may assist the Secretary in optimization of future reservoir operations as well as any additional areas for future study of FIRO.

NOW, THEREFORE, BE IT RESOLVED that the Western States Water Council supports the use of innovative and forecast informed reservoir operations by public and private entities at all levels to maximize the effective and efficient use of our existing and future infrastructure to benefit our myriad and growing economic uses of water, while at the same time balancing and protecting our need for public health and safety, as well as a resilient and healthy environment.

(*see former Position No. 417, March 14, 2018*)

Position No. 461

RESOLUTION
of the
WESTERN STATES WATER COUNCIL
in support of
WEATHER STATION NETWORKS

Texas Hosted Spring Virtual Meetings
March 25, 2021

WHEREAS, Western States experience great variability in precipitation, with serious impacts and consequences for water supply planning and management, drought and flood preparedness and response, water rights and water market administration, operation of water projects, and irrigation management; and

WHEREAS, sound decision-making to protect life and property and to inform decisions involving billions of dollars of economic activity involving urban centers, agricultural production, and fisheries depends on our ability to observe, understand, model, predict and adapt to precipitation variability; and

WHEREAS, data made available by weather station networks of all kinds operated by federal and state agencies, local interests, volunteer private observers, and universities that span the West is critical for sound decision-making; and

WHEREAS, at the local scale the National Weather Service's (NWS) Cooperative Observer Program - the nation's oldest and largest weather network - collects critical information on precipitation intensity that supports design of community flood control infrastructure and planning for flood hazard mitigation, especially in rural areas; and

WHEREAS, at the global scale NWS geostationary and polar-orbiting weather satellites capture the data needed to make hourly to two-week forecasts, and issue public safety warning and watches; and

WHEREAS, the U.S. Bureau of Reclamation's Agrimet network is an example of an agroclimate network of weather stations whose data can be used for improving water planning and water use efficiency in the agricultural sector, conserving water, improving crop yields, reducing pesticide and fertilizer application, and reducing energy costs for growers; and

WHEREAS, weather station network data serve as an important and efficient ground-truthing, calibration, and model validation tool for analysis of information products derived from satellite and remote-sensing platforms such as Landsat and others; and

WHEREAS, network observations can provide near real-time information for estimation of vegetation evapotranspiration (ET) and in-the-field crop water use, that can be used to optimize

production and increase the efficiency of irrigation, estimate crop water shortages, and are used extensively by irrigation districts, farmers, resource conservation agencies, municipal and state entities, and agricultural consultants; and

WHEREAS, agricultural water use is the largest consumptive use of water in the West, and weather stations and other observing systems that aid in water conservation and more efficient use of water will be a critical tool for meeting future water supply and water quality challenges posed by growing needs for food and fiber; and

WHEREAS, many of the nation's weather observing networks suffer from the challenges of aging instrumentation infrastructure, deferred maintenance, need for technology upgrades, and budgets that fail to keep up with observing system needs, making it difficult to maintain data continuity for users; and

WHEREAS, weather station networks operate very efficiently and yield public safety and water supply benefits that are much greater than the cost of their operation providing significant value to their users.

NOW, THEREFORE, BE IT RESOLVED that the Western States Water Council expresses its continuing support for critical weather station network observations and programs and urges the Administration, Congress, and supporting partners at all levels, to give a high priority to the allocation and appropriation of funds for their continued operation and expansion.

(see former Position No. 418, March 14, 2018)

Position No. 462

RESOLUTION
of the
WESTERN STATES WATER COUNCIL
in support of
WATER INFRASTRUCTURE FUNDING

Texas Hosted Spring Virtual Meetings
March 25, 2021

WHEREAS, maintaining and delivering sufficient water supplies of suitable quality is key to the West's economic prosperity, environmental needs, and our quality of life, both now and in the future; and

WHEREAS, 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; and

WHEREAS, existing and new infrastructure is critical to meet drinking water, municipal and industrial, wastewater treatment, irrigation, hydropower, flood control, interstate compact, tribal settlement, international treaty, and fish and wildlife habitat needs; and

WHEREAS, 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; and

WHEREAS, water infrastructure in the West is financed and maintained under a complex network of state, tribal, local, private, and federal ownership, benefitting a broad segment of water users and other stakeholders;

WHEREAS, inconsistent, inadequate, and untimely funding increases project construction and financing costs, as well as risk, including the failure of critical infrastructure; and

WHEREAS, substantial and sustained investments in water project construction, maintenance, rehabilitation and replacement is necessary and pays long-term dividends to the economy, public health and safety, and the environment; and

WHEREAS, water infrastructure systems require ongoing, thoughtful investments to account for life-cycle costs, and should be managed with planned retirement or replacement in mind; and

WHEREAS, existing federal, state and local programs to publicly finance water-related infrastructure projects are crucial, but insufficient to meet water quality and water resources management challenges related to future growth, including municipal, industrial, agricultural, environmental, and energy needs; and

WHEREAS, the federal government has a significant role to play in financing and cost-sharing for water-related infrastructure given federal economic and environmental objectives, federal tribal trust and treaty obligations, other past commitments, and federal regulatory mandates; and

WHEREAS, aging federal water infrastructure has deteriorated - due to underfunded and deferred maintenance, repair, and replacement needs - and in many cases has exceeded its useful lifespan, raising public health and safety issues, risking loss of life and threatening public and private property; and

WHEREAS, federal financial resources are limited and many authorized federal water infrastructure projects have not been started or remain incomplete for decades due to inconsistent, incremental, or insufficient appropriations; permitting and licensing backlogs; duplicative environmental reviews; litigation delays; and oversight by multiple federal agencies without adequate interagency coordination; and

WHEREAS, current federal budget scoring guidelines assess the full cost of infrastructure investments up front, while disproportionately discounting long-term economic, public health and safety, and environmental benefits - sometimes making new water project investments challenging to justify financially; and

WHEREAS, local water district and state agency investments, private capital markets, performance-based contracting, and other alternatives offer help to close the federal funding, delivery, and maintenance gaps, and meet some of our national water infrastructure needs in partnership with federal agencies; and

WHEREAS, such partnerships have the potential to reduce overall project development costs and risks associated with such capital investments, expedite project delivery and associated water resource benefits, improve efficiencies and cost effectiveness, and maximize the respective strengths of the public and private sectors; and

WHEREAS, opportunities exist to leverage federal and non-federal funding through grants, loans and credit enhancements, as well as provide greater access to private sources of financing; and

WHEREAS, there is no one-size-fits-all program, but several federal financial and technical assistance programs, grants, loans, cost-share programs, and federal-state-local or public-private partnerships have proven beneficial to the timely completion and ongoing maintenance of infrastructure projects at all scales; and

WHEREAS, federal agencies often lack legislative authority to dedicate a sustained revenue stream to assure non-federal investors are fairly compensated for the costs and risks of constructing or maintaining federal water projects, sometimes requiring approval through an act of Congress to proceed.

NOW, THEREFORE, BE IT RESOLVED that the Council supports collaboration and leadership at all government levels - federal, state, tribal, and local - and the private sector - to address the Nation's infrastructure needs and establish water infrastructure improvements as a public policy priority.

BE IT FURTHER RESOLVED, that the Council supports appropriate federal investments in water-related infrastructure projects and programs that provide jobs and economic security, while protecting the environment.

BE IT FURTHER RESOLVED, that the Administration and Congress should work together to ensure adequate, stable, and continuing federal appropriations for constructing, maintaining, and replacing critical federal water projects and to assist States and local governments as they address their water infrastructure needs.

BE IT FURTHER RESOLVED, that the Council encourage Congress and the Administration to continue to work together and with States to streamline permitting processes and coordinate environmental and other regulatory reviews to eliminate duplicative procedures, reduce costs of compliance and construction, and ensure timely completion, maintenance, or relicensing of authorized infrastructure projects so vital to the West and the Nation.

BE IT FURTHER RESOLVED, that the Council supports the creation and maintenance of dedicated water infrastructure funding through special accounts with dedicated receipts to be promptly appropriated for authorized purposes following their deposit, as well as a variety of grant, loan, credit enhancement and other financial incentive programs to help meet diverse needs at all scales.

BE IT FURTHER RESOLVED, that the Council supports appropriate infrastructure asset management and capital budgeting.

BE IT FURTHER RESOLVED, that the Council supports a method of congressional 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 appropriate discounting.

(see former Position No. 419, March 14, 2018)

POSITION
of the
WESTERN STATES WATER COUNCIL
regarding
INTEGRATING WATER AND ENERGY PLANNING AND POLICY

Texas Hosted Spring Virtual Meetings
March 25, 2021

WHEREAS, the West enjoys diverse and abundant energy resources, including renewable and non-renewable resources, but water is scarce in much of the region and may or may not be sufficient for all proposed uses; and

WHEREAS, power plant cooling and other energy resource development and related water requirements can be significant on state, local and westwide scales; and

WHEREAS, the West is a leader in the planning, development, diversification, management and protection of the Nation's water and energy resources; and

WHEREAS, in the West, maintaining adequate and sustainable supplies of clean water and energy present interrelated challenges given a growing population, increasing water and energy demands, and an uncertain climate subject to multi-year drought and other extremes; and

WHEREAS, 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; and

WHEREAS, effectively planning for the future requires gathering and integrating data and information on past, present and future water and energy supplies and demands, including embedded demands by different sectors/uses and users; and

WHEREAS, in general, current water use data (especially consumptive water use data) are not sufficient for detailed and comprehensive analyses to support many water/energy decisions and policymakers' needs; and

WHEREAS, the Western Governors' Association, Western States Water Council, Department of Energy, Sandia National Laboratories (and other DOE laboratories), Western Interstate Energy Board, Western Electric Coordinating Council, Electric Reliability Council of Texas and others have worked collaboratively to develop a better understanding of water and energy supplies and demands; and

WHEREAS, public-private partnerships are increasingly important in addressing our future water and energy challenges; and

WHEREAS, there is a continuing need for federal and state water and energy resource agencies, public utility commissions, and other planners, regulators and policymakers to better define and consider the nexus between water and energy resources in their respective areas of jurisdiction; and

WHEREAS, continuing water and energy nexus research and development is needed to further our understanding and evaluate the effectiveness of different policies and programs given various future scenarios;

NOW, THEREFORE, BE IT RESOLVED, that western water and energy planners, policymakers, managers and regulators should consider the following:

(1) integrating water and energy policies and engaging water and energy planners to maximize program and project effectiveness and efficiencies;
(2) supporting new and continuing data gathering, analyses and research related to better understanding water and energy supplies and demands, and related science;
(3) promoting integrated water and energy conservation and use efficiency;
(4) seeking to minimize economic, environmental and other costs of providing adequate, reliable and sustainable supplies of water and energy;
(5) expanding public education, engagement and outreach to highlight the importance, vulnerability and interrelated nature of our water and energy resources;
(6) ensuring 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;
(7) tailoring the use of alternative cooling technologies and other energy-related options to the availability of water, and the related opportunity costs related to other water uses;
(8) seeking to develop a diversified portfolio of water and energy resources and assets to maximize reliability and flexibility;
(9) taking advantage of synergies and economies of scale related to integrating water and energy conservation, development and protection programs and projects;
(10) evaluating and integrating life-cycle costs related to water and energy supply development, conveyance and transmission;
(11) integrating short and long-range water and energy supply planning;
(12) promoting the development and use of "smart" technologies for management of water and energy demands and production; and
(13) ensuring that the West maintains sustainable, reliable and robust infrastructure systems necessary to deliver adequate supplies of clean water and energy to meet present and future needs.

(see former Position No. 420, March 14, 2018)

Position No. 464

RESOLUTION
of the
WESTERN STATES WATER COUNCIL
supporting
FEDERAL RESEARCH ON CLIMATE ADAPTATION

Texas Hosted Spring Virtual Meetings
March 25, 2021

WHEREAS, climate variability has serious potential consequences for water supply availability, water resources planning and management, water rights administration, flood management, and water quality management; and

WHEREAS, much of the West's water infrastructure was designed and constructed prior to our current understanding of climate variability, often from short hydrologic records from the first half of the 20th century; and

WHEREAS, the impacts of climate variability can include increased frequency and intensity of severe weather (droughts and floods), reduction of mountain snowpacks, changes in timing and amount of snowmelt runoff, and changes in plant and crop evapotranspiration resulting in changed water demand patterns; and

WHEREAS, climate variability is an additional stressor on western water resources, which are already challenged by population growth, competition for scarce resources, increasingly stringent environmental regulations, and other factors; and

WHEREAS, water resources planning and management at all levels of government and sound future decision-making depend on our ability to understand, monitor, predict, and adapt to climate variability; and

WHEREAS, the Council has over the years co-sponsored several workshops to gather input on climate adaptation and research needs, including research on extreme events; and

WHEREAS, these workshops and various federal reports have helped in identifying knowledge gaps, research needs, opportunities to improve planning capabilities, and other activities that would assist in climate adaptation, including those that could impact water quality and thus, available water supply; and

WHEREAS, applied research needs and improvements to water resources planning capabilities include subjects such as evaluation of modifications to reservoir flood control rule curves, evaluation of the adequacy of existing federal hydroclimate monitoring networks, improvements to extreme precipitation observing networks and forecasting capabilities, development

and improvement of applications for remote sensing data (satellite imagery), preparation of reconstructed paleoclimate datasets for drought analyses, and development of new guidelines for estimation of flood flow frequencies;

NOW, THEREFORE, BE IT RESOLVED that the Western States Water Council supports state and federal applied research and hydroclimate data collection programs that would assist water agencies at all levels of government in adapting to climate variability and making sound scientific decisions.

(see former Position No. 421, March 14, 2018)

Position No. 465

RESOLUTION
of the
WESTERN STATES WATER COUNCIL
in support of
UNIVERSAL ACCESS TO RELIABLE, CLEAN DRINKING WATER FOR FEDERALLY RECOGNIZED INDIAN TRIBES AND ALASKA NATIVE COMMUNITIES

Texas Hosted Spring Virtual Meetings
March 25, 2021

WHEREAS, access to reliable, clean drinking water is an essential human need that is critical to the public health, well-being, educational attainment, and economic development of all communities in the United States; and

WHEREAS, lack of access to reliable, clean drinking water has long been a significant problem for many federally recognized Indian Tribes and Alaska Native communities such that nearly half of all households still do not have access to reliable, clean drinking water, and are significantly more likely than non-Native households to lack indoor plumbing; and

WHEREAS, reliable, clean drinking water may be unavailable to households in federally recognized Indian Tribes and Alaska Native communities for a number of reasons, including because

(1) there is no piped water system connecting to the house;
(2) the water available to the household does not meet minimum standards protective of human health;
(3) the water and sanitation infrastructure is deteriorating, insufficient or non-existent; or
(4) federally recognized Indian Tribes and Alaska Native communities are unable to support the operation and maintenance needs of existing water and sanitation infrastructure; and

WHEREAS, federal programs administered through the Department of the Interior, Indian Health Service of the Department of Health and Human Services, the Environmental Protection Agency, the Department of Agriculture, and other federal and state agencies have been not been fully successful in developing and/or maintaining the infrastructure necessary to provide reliable, clean drinking water in some federally recognized Indian Tribes and Alaska Native communities; and

WHEREAS, many federally recognized Indian Tribes and Alaska Native communities have unresolved Indian water rights claims, which may not be immediately resolved, due in part to the complex and significant issues typically involved in the adjudication or negotiated settlement of Indian water rights claims; and

WHEREAS, the Western States Water Council recognizes the sovereignty of the states to administer and distribute the waters of each state and that adjudication of Indian water rights claims occur through state water rights adjudications, and strongly supports the negotiated settlement of Indian water rights claims; and

WHEREAS the development of drinking water infrastructure for federally recognized Indian Tribes and Alaska Native communities is often included in the settlement of Indian water rights claims, but the Western States Water Council recognizes that because of the length of time it takes to successfully adjudicate or negotiate settlement of Indian water rights claims, an alternative means for immediate action is needed to provide funding to develop drinking water infrastructure for federally recognized Indian Tribes and Alaska Native communities; and

WHEREAS, the trust responsibility of the Federal Government to ensure the survival and welfare of federally recognized Indian tribes and Alaska Native communities includes the provision of safe and reliable drinking water infrastructure for basic water services; and

WHEREAS, the ongoing COVID-19 pandemic has had a disproportionate impact on federally recognized Indian Tribes and Alaska Native communities due to multiple factors including lack of access to running water, and has provided a stark reminder that access to reliable, clean drinking water to support basic personal hygiene practices is a matter of life or death for all citizens of the United States.

NOW, THEREFORE, BE IT RESOLVED that the Western States Water Council supports the provision of reliable, clean drinking water to meet the domestic needs of federally recognized Indian Tribes and Alaska Native communities and recognizes that providing access to reliable, clean drinking water through water infrastructure, coupled with developing the technical, managerial, and financial capacity to operate and maintain that infrastructure, is an essential component of the Federal trust responsibility to Native Americans; and

BE IT FURTHER RESOLVED, that while recognizing that adjudication or negotiated settlement of Indian water right claims is critically important, and that the provision of reliable, clean drinking water and related infrastructure is frequently an important component of adjudications and settlements, the Western States Water Council believes that a final adjudication or settlement is not and should not be a prerequisite to providing reliable, safe drinking water infrastructure to federally recognized Indian Tribes and Alaska Native communities; and

BE IT FURTHER RESOLVED, that the Western States Water Council urges the Administration and Congress to support, encourage, and fund the appropriate, expedited resolution of negotiated settlements and adjudications relating to Indian water rights claims; and

BE IT FURTHER RESOLVED, that the Western States Water Council urges the Administration to employ a coordinated approach working across departmental and agency boundaries in collaboration with Tribal governments; and

BE IT FURTHER RESOLVED, that the Western States Water Council also urges Federal agencies and Tribal governments to coordinate and work collaboratively with appropriate State and local jurisdictions to establish expedited planning, design, development, and operation of infrastructure necessary to provide reliable, affordable, and clean drinking water for federally recognized Indian Tribes and Alaska Native communities in accordance with applicable law.

Position No. 466

RESOLUTION
of the
WESTERN STATES WATER COUNCIL
on
STATE PRIMACY OVER GROUNDWATER

Texas Hosted Spring Virtual Meetings
March 25, 2021

WHEREAS, groundwater is a critically important natural resource that is vital to the economy and environment of the arid West;

WHEREAS, the Desert Land Act of 1877 and the United States Supreme Court in *California Oregon Power Co. v. Beaver Portland Cement Co.*, 295 U.S. 142 (1935) recognize States have exclusive authority over the allocation and administration of rights to the use of the groundwater within their borders and States and their political subdivisions are primarily responsible for the protection, control and management of the resource;

WHEREAS, the Congress has created and the U.S. Supreme Court has recognized federal reserved rights to surface water, but no federal statute has addressed any federal property or other rights related to groundwater; and

WHEREAS, the regulatory reach of federal statutes and regulations, including but not limited to the Clean Water Act, Endangered Species Act, Multiple-Use Sustained-Yield Act, National Environmental Policy Act, Organic Administration Act (USFS), Reclamation Act of 1902, Safe Drinking Water Act, Wild and Scenic Rivers Act, Wilderness Act and the Comprehensive Environmental Response, Compensation, and Liability Act, were never intended to infringe upon state or private ownership or control over groundwater; and

WHEREAS, States recognize the importance of effective groundwater management and are in the best position to protect groundwater quality and allow for the orderly and rational allocation and administration of the resource through state laws and regulations that are specific to their individual circumstances; and

WHEREAS, working cooperatively with their federal partners, states have shown that they have the ability and authority to address federal needs regarding groundwater within existing legal frameworks, including but not limited to memoranda of understanding, water rights compacts, stipulations, and other methods; and

WHEREAS, the conditions affecting groundwater supplies, demands, and impairments vary considerably across the West and within individual states; and

WHEREAS, statutory restrictions on obtaining general state permits for federal remediation projects, such as CERCLA §121(e)(1) (42 U.S. Code § 9621), should not apply to the withdrawal and use of limited water resources; and

WHEREAS, federal efforts to exert control over or ownership interests related to groundwater or otherwise infringe upon or supersede state rights to the use of groundwater or state groundwater management laws and authorities are contrary to federal law and threaten effective groundwater management and protection.

NOW, THEREFORE, BE IT RESOLVED, states have exclusive authority over the allocation and administration of rights to the use of the groundwater located within their borders and are primarily responsible for allocating, protecting, managing and otherwise controlling the resource; and

BE IT FURTHER RESOLVED, that the Western States Water Council opposes any and all efforts that would establish a federal ownership interest in groundwater not otherwise recognized or allowed under state law, or diminish the primary and exclusive authority of States over groundwater; and

BE IT FURTHER RESOLVED, that federal agencies should work cooperatively with appropriate state agencies and officials to address federal needs involving groundwater through state laws and authorities; and

BE IT FURTHER RESOLVED, nothing stated in this position is intended to apply to the interpretation or application of any interstate compact, court decrees, international treaty or tribal settlement agreement.

(see former Position No. 422, March 14, 2018)

Position No. 467

RESOLUTION
of the
WESTERN STATES WATER COUNCIL
regarding
THE DIVIDING THE WATERS PROGRAM

Texas Hosted Spring Virtual Meetings
March 25, 2021

WHEREAS, the Dividing the Waters Program of the National Judicial College has served western judges overseeing complex water litigation for more than 20 years, providing information and training resources on water law and water conflicts to state, tribal, and federal judges; and

WHEREAS, five judicial officers with extensive experience in water adjudication lead Dividing the Waters for the benefit of their colleagues in the judiciary, making it a program by judges for judges; and

WHEREAS, the Program includes participating judicial officers from 12 western states who adjudicate a wide range of water cases, from statewide water right adjudications to conflicts over endangered species and water quality; and

WHEREAS, Dividing the Waters has received funding from public interest foundations for 22 years but foundation funding for education programs has dwindled in recent years; and

WHEREAS, it is in the interest of the executive branch water agencies of the western states to ensure that the judicial officers who adjudicate water cases in their states have an understanding of the fundamentals of western water law and the latest information on water adjudication; and

WHEREAS, many states have limited funding for judicial branch education, particularly for water and related natural resource topics; and

WHEREAS, Dividing the Waters provides a critical link between the executive branch water agencies and the judicial branch that adjudicates water conflicts in the western states;

NOW, THEREFORE, BE IT RESOLVED, that the Western States Water Council supports Dividing the Waters and urges public interest foundations and other interested entities to provide funding for the program; and

BE IT FURTHER RESOLVED, that the Western States Water Council supports and strongly encourages judges, masters and referees who adjudicate or preside over water litigation in the member states to participate in the Dividing the Waters Program; and

BE IT FURTHER RESOLVED, that the Western States Water Council supports consideration by member states of support for the Dividing the Waters Program through funding or other means that supports judicial education on water resource management disputes.

(see former Positions No. 374, October 10, 2014; No. 415, October 20, 2017; and No. 457, October 15, 2020)

Position No. 468

RESOLUTION
of the
WESTERN STATES WATER COUNCIL
regarding the
RURAL WATER SUPPLY PROJECT/INFRASTRUCTURE NEEDS

Cody, Wyoming
June 25, 2021

WHEREAS, in the West, water is indeed our "life blood," a vital and scarce resource the availability of which has and continues to circumscribe growth, development, our economic and environmental well-being and quality of life; and

WHEREAS, across the West, rural and tribal communities are experiencing water supply shortages due to drought, declining streamflows and groundwater supplies, and inadequate infrastructure, with some communities hauling water over substantial distances to satisfy their potable water needs; and

WHEREAS, often water supplies that are available to these communities are of poor quality and may be impaired by naturally occurring and man-made contaminants, including arsenic and carcinogens, which impact communities' health and their ability to comply with increasingly stringent federal water quality and drinking water mandates; and

WHEREAS, at the same time, many rural and tribal communities in the West are suffering from significant levels of unemployment and simply lack the financial capacity and expertise to finance and construct needed drinking water system improvements; and

WHEREAS, there are six authorized and active rural water projects located in Montana, New Mexico, North Dakota, and South Dakota of which five have yet to be completed at an estimated federal cost of around $898 million - while costs continue to increase due to delays, inflation and the rising costs of materials and labor - and at current levels of funding completion of some project could be delayed by decades; and

WHEREAS, there is a Federal responsibility to complete authorized rural water projects, particularly those intended to fulfill in part a solemn Federal promise and trust responsibility to compensate States and federally recognized Indian Tribes for lost resources as a result of the construction of Federal flood control projects and other actions; and

WHEREAS, recognizing Federal budget constraints, a modest increase in Federal expenditures would expedite completion of authorized projects and in the long run save taxpayer money while inadequate funding levels, and untimely appropriations only increase delays and Federal costs and perpetuates rural and tribal communities' hardships; and

WHEREAS, authorizing the increased use of Reclamation Fund revenues to expedite completion of these projects fulfills both financial and moral obligations that some beneficiaries have waited decades to see honored; and

WHEREAS, the Congress enacted the Rural Water Supply Act of 2006 (P. L. 109-451) and established the Bureau of Reclamation's Rural Water Supply Program authorizing the agency to work with rural communities, states and tribes, to assess potable water supply needs and identify options to address those needs through appraisal investigations and feasibility studies; and

WHEREAS, federal expenditures for rural water projects actually generate significant returns on the investment through increased national and local economic benefits, as well as improvements in quality of life; and

WHEREAS, 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; and

WHEREAS, western States are committed to continuing to work cooperatively with the Department of Interior and Bureau of Reclamation to meet rural water needs in the West for present and future generations, within the framework of state water law, as envisioned in the Reclamation Act of 1902; and

WHEREAS, 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 - but these receipts are only available for expenditure pursuant to annual appropriation acts; and

WHEREAS, with growing receipts -- in part due to energy development across the rural West -- and limited federal appropriations for Reclamation Act purposes, the unobligated balance grows larger and larger (and is expected to soon exceed $18 billion), while the money is actually spent elsewhere for other federal purposes contrary to the Congress' original intent; and

WHEREAS, the Western States Water Council (WSWC) has a long-standing policy in support of using receipts accruing to the Reclamation Fund for authorized projects, including rural and tribal water supply projects.

NOW, THEREFORE, BE IT RESOLVED, that the WSWC strongly supports Administrative and Congressional action to expedite construction of authorized rural water supply projects in a timely manner, including projects that meet tribal trust and other federal responsibilities -- recognizing and continuing to defer to the primacy of western water laws and tribal settlements in allocating water among users.

BE IT FURTHER RESOLVED, that the WSWC recommend that the Administration and the 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).

(see former Position No. 343, June 8, 2012; No. 381, July 10, 2015; and No. 423, August 3, 2018)

Position No. 469

RESOLUTION
of the
WESTERN STATES WATER COUNCIL
regarding
WATER TRANSFERS
and
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
DISCHARGE PERMITS
Cody, Wyoming
June 25, 2021

WHEREAS, the Western States Water Council has long declared its position that the transport of water through constructed conveyances to supply beneficial uses should not trigger federal National Pollutant Discharge Elimination System (NPDES) permit requirements, simply because the transported water contains different chemical concentrations and physical constituents; and

WHEREAS, the Western States Water Council supports the ability of each Western State to use available authorities to place appropriate conditions on water transfers to protect water quality; and

WHEREAS, the Environmental Protection Agency (EPA) published 40 CFR Part 122.3(i), expressly excluding water transfers from regulation under the NPDES permitting program, and defining water transfers as an activity that conveys or connects waters of the United States to another water of the United States without subjecting the water to intervening industrial, municipal, or commercial use; and

WHEREAS, the final rule relies on EPA's interpretation of the federal Clean Water Act and does not limit any ability of a State to use any available authority, including authority regarding nonpoint sources of pollution, to protect the water quality of the receiving water body in a water transfer;

WHEREAS, water transfers and water quality are essential to the social, economic and environmental well-being of the Western States; and

WHEREAS, the United States Court of Appeals, in the cases of Friends of the Everglades v. South Florida Water Management Dist., 570 F.3d 1210 (11th Cir. 2009), and New York State et al. v. Environmental Protection Agency, 846 F.3d 492 (2nd Cir. 2017), upheld EPA's Water Transfer Rule, holding it to be a reasonable construction of the Clean Water Act and therefore entitled to deference by the Federal Courts and on which decisions the United States Supreme Court subsequently denied Petitions for Writ of Certiorari.

NOW, THEREFORE, BE IT RESOLVED that the Western States Water Council generally supports EPA's amendment to its Clean Water Act regulations as codified in 40 CFR 122.3(i).

BE IT FURTHER RESOLVED, that the Western States Water Council supports the use by a State of available authorities to protect the water quality of the receiving water body in a water transfer.

BE IT FURTHER RESOLVED, that the Western States Water Council supports the codification of 40 CFR 122.3(i) into statute by the Congress.

(See also former No. 424, August 13. 2018; No. 382, July 10, 2015; No. 342, June 8, 2012; No. 316, July 17, 2009, and No. 278, July 21, 2006)

Position No. 470

RESOLUTION
of the
WESTERN STATES WATER COUNCIL
regarding
ENDANGERED SPECIES AND STATE WATER RIGHTS

Cody, Wyoming
June 25, 2021

WHEREAS, Section 2(c)(2) of the Endangered Species Act declares it is the policy of Congress that Federal agencies shall cooperate with State and local agencies to resolve water resource issues in concert with conservation of endangered species (16 U.S.C. 1531); and

WHEREAS, water in the West is often a scarce resource critical for both a healthy economy and healthy environment, including protected endangered and threatened species; and

WHEREAS, water is both a public and a private resource, with some uses reserved for the public good, while others are recognized as protected private property rights; and

WHEREAS, the States are primarily responsible for the allocation, administration, management, and protection of the water resources and rights to the use of water within their borders, as well as the management and protection of diverse fish and wildlife species and the aquatic and terrestrial environments upon which they depend; and

WHEREAS, many, if not most, of the senior state granted rights to the use of waters in western rivers and streams predate federal environmental protections by decades, and the certainty provided by early water rights continues to be the foundation for past, present and future investments; and

WHEREAS, the West and its flora and fauna, including protected species, are part of a unique and unparalleled heritage reflecting the Nation's value for wild and open spaces, as well as a western conservation ethic; and

WHEREAS, western States and many western water uses are also committed to the preservation of western species through reasonable, transparent and effective regulatory protections and restrictions, as well as conservation incentives for private property owners; and

WHEREAS, opportunities exist for greater collaboration and cooperation to conserve threatened and endangered species, while recognizing state granted water rights and addressing western water issues, without unmitigated or uncompensated "takings" of either water rights or threatened and endangered species where provided for under state or federal law.

NOW, THEREFORE, BE IT RESOLVED, that the Council calls upon federal agencies to engage in a substantive discussion of past, present and future efforts to work in concert with State agencies to implement Congress' intent to resolve water and species protection issues.

(see also former Position No. 425, August 3, 2018)

Position No. 471

RESOLUTION
of the
WESTERN STATES WATER COUNCIL
in support of
STATE CWA SECTION 401 CERTIFICATION AUTHORITY

Deadwood, South Dakota
September 16, 2021

WHEREAS, States have responsibly exercised their delegated authority under the Clean Water Act (CWA) Section 401 and under state water quality statutes to protect water quality, and must consider proposed activities and discharges in light of the states' designated water uses and related water quality standards; and

WHEREAS, the Council supports a balanced and integrated approach to achieve water and energy policy goals that plans for the future in sustainable ways, and recognizes legitimate state water and water quality management, protection and planning authorities to balance competing water uses; and

WHEREAS, the western states strongly support the planning and development of critical infrastructure and streamlined permitting processes, but such efforts should not come at the expense of states' authority to allocate, manage, and protect their water resources; and

WHEREAS, the development of hydropower and other federally permitted and licensed projects involving activities that may impact states' water quality standards should be appropriately undertaken in compliance with substantive and procedural state water law and delegated authority under CWA Section 401; and

WHEREAS, CWA Section 101(b) supports the states' critical role in protecting water quality by stating: "It is the policy of Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution."; and

WHEREAS, CWA Section 101(g) of the CWA further provides that it is the primary and exclusive authority of each state to "allocate quantities of water within its jurisdiction shall not be superseded, abrogated, or otherwise impaired by this Act"; and

WHEREAS, Section 27 of the Federal Power Act declares: "That nothing herein contained shall be construed as affecting or intending to affect or in any way to interfere with the laws of the respective States relating to the control, appropriation, use, or distribution of water used in irrigation or for municipal or other uses, or any vested right acquired therein."; and

WHEREAS, the Supreme Court has narrowly interpreted the Federal Power Act (16 U.S.C. 791a et seq.) reading Section 27 (16 U.S.C. 821) to limit state authority to set streamflow requirements on federally permitted and licensed projects, holding in *First Iowa Hydro-Electric Cooperative v. Federal Power Commission*, 328 U.S. 152 (1946) and in *California v. FERC*, 495 U.S. 490 (1990) that federal requirements preempted any state requirements, including efforts to establish minimum stream flows, noting that "…Congress remains free to alter what we have done"; and

WHEREAS, these rulings eroded state authority over state resources, and the Council has supported federal legislation to restore states' primary authority for regulating streamflows and water use and clarifying Congressional intent under the Federal Power Act; and

WHEREAS, in P.U.D. No. 1 of *Jefferson County v. Washington Department of Ecology*, 511 U.S. 700 (1994), the Supreme Court upheld a state's delegated authority to impose minimum stream flow conditions under the CWA Section 401 certification process where necessary to protect a designated use for fish habitat, expressly rejecting any implied limitations on Section 401 certifications based on the First Iowa interpretation of the Federal Power Act; and

WHEREAS, an overly narrow reading of Section 401 would deprive the states of the ability to maintain the very beneficial uses that the Clean Water Act was designed to protect, and threaten the existing partnership between states and federal agencies based on cooperative federalism; and

WHEREAS, the vast majority of Section 401 certification requests are processed within 90 days, well within the one year allowed by current law, with relatively little if any backlog of certification actions; and

WHEREAS, most delays are typically due to submission of an incomplete application, applicants' non-responsiveness to requests for additional information, the completion of necessary study requirements, the size and complexity of some projects (and related impacts), substantive changes to the proposed project requiring further review, or constraints on state resources; and

WHEREAS, CWA Section 401 certification denials by states are rare and carefully considered, and are not examples of the failure of the system, as the process has been historically well-understood, reliable and supported by case law that provides certainty for both the states, federal agencies, and the regulated community; and

WHEREAS, recent actions taken by the federal government under the 2020 CWA Section 401 Certification Rule have caused some western states to issue an increased number of denials, due to inflexible deadlines that do not accommodate state public engagement laws or allow sufficient time to gather adequate information on project impacts; and

WHEREAS, the rule revision has also recently led to federal agencies waiving reopener conditions in nationwide permits imposed on federal projects by states under CWA Section 401, inconsistent with CWA Sections 101(b) and 101(g), Section 27 of the Federal Power Act, and the

Supreme Court ruling under P.U.D. No. 1 of *Jefferson County v. Washington Department of Ecology*; and

WHEREAS, substantial and recurring changes to regulatory definitions, policies, and programs between federal Administrations create uncertainty for co-regulators and the regulated community, often leading to unreliable results, indecision, inconsistency, and lawsuits.

NOW, THEREFORE, BE IT RESOLVED that the Western States Water Council supports any changes that strengthen the deference to state water laws and do not diminish the primary state authority and responsibility for the appropriation, allocation, development, conservation, and protection of their water resources, including minimum streamflows, and the protection of water quality and designated uses.

BE IT FURTHER RESOLVED, that the Western States Water Council strongly supports early state engagement in federal permitting and licensing actions and the coordination of state and federal environmental requirements and review processes for critical infrastructure without diminishing state authority.

BE IT FURTHER RESOLVED, that the Western States Water Council supports a mechanism in any rule development process for a representative number of states, as co-regulators with diverse perspectives and regions, to engage actively with EPA staff to provide direct and effective feedback on the implementability of a proposed rule.

(see former Position No. 426, October 26, 2018)

Position No. 472

RESOLUTION
of the
WESTERN STATES WATER COUNCIL
regarding
CLEAN WATER ACT JURISDICTION

Deadwood, South Dakota
September 16, 2021

WHEREAS, the Clean Water Act (CWA) is built upon the principle of cooperative federalism in which Congress intended the states, the Environmental Protection Agency (EPA), and the U.S. Army Corps of Engineers to implement the CWA as partners, delegating co-regulator authority to the states;

WHEREAS, the CWA's cooperative federalism framework has resulted in significant water quality improvements since the law's enactment in 1972, and western states have made great strides in protecting water quality and coordinating water quality and water quantity decisions; and

WHEREAS, EPA has actively sought meaningful state consultation, engagement and participation in its review and development of a new proposed rule to define Waters of the United States; and

WHEREAS, States are best positioned to manage the water within their borders because of their on-the-ground knowledge of the unique aspects of their hydrology, geology, and legal frameworks; and

WHEREAS, States have both state statutory and constitutional authority pursuant to their "waters of the state" jurisdiction to protect the quality of waters within their borders and such jurisdiction generally extends beyond the limits of federal jurisdiction under the CWA; and

WHEREAS, CWA Section 101(b) supports the states' critical role in protecting water quality by stating: "It is the policy of Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution;" and

WHEREAS, CWA Section 101(g) further provides that the primary and exclusive authority of each state to "allocate quantities of water within its jurisdiction shall not be superseded, abrogated, or otherwise impaired by this Act;" and

WHEREAS, a one-size-fits-all national approach to federal regulations, guidance, and programs pertaining to the CWA does not recognize specific conditions and needs in the West, where water can be scarce and a variety of unique waterbodies exist, including but not limited to small ephemeral washes and arroyos, snow dependent intermittent streams, effluent dependent and

dominated streams, prairie potholes, playa lakes, and terminal lakes, as well as numerous man-made reservoirs, impoundments, and water and stormwater conveyance structures; and

WHEREAS, physical, biological, and chemical differences between waters, and hydrologic differences, both spatially and temporally, as well as considerable differences in legal doctrines that govern water in western states, mean that any federal effort to clarify CWA jurisdiction will inevitably impact each State differently, thus underscoring the need to thoroughly involve states in developing and implementing any rule so as to clearly respect and avoid conflict with state authority over the regulation of water quality and the allocation of waters and water rights within their respective borders; and

WHEREAS, any efforts to redefine or clarify CWA jurisdiction have, on their face, numerous federalism implications that have the potential to significantly impact states and alter the distribution of power and responsibilities among the states and the federal government; and

WHEREAS, as co-regulators, States are separate and apart from the general public, and have a unique role with the federal government in the development and implementation of any rule to clarify or redefine CWA jurisdiction; and

WHEREAS, information-sharing does not equate to meaningful consultation, and the uncertainty and differences of opinion that exist regarding CWA jurisdiction requires EPA and the Corps to develop and implement federal CWA jurisdiction efforts in authentic partnership with the states; and

WHEREAS, uncertainty and differences of opinion have and continue to exist regarding CWA jurisdiction among States, and challenge EPA and the Corps to develop and implement any new rule in cooperation with the States, based on principles of cooperative federalism, and together to provide greater certainty and a clearer definition of the limits of federal jurisdiction; and

WHEREAS, perennial streams with a relatively permanent surface water connection to navigable waters are presumptively considered to be under federal CWA jurisdiction consistent with Rapanos; and

WHEREAS, substantial and recurring changes to regulatory definitions, policies, and programs between federal Administrations create uncertainty for co-regulators and the regulated community, often leading to unreliable results, indecision, inconsistency, and lawsuits.

NOW, THEREFORE, BE IT RESOLVED, that Congress and the Administration should ensure that any federal effort to clarify or define CWA jurisdiction and define Waters of the United States:

1. Creates a more enduring and broadly supported definition.
2. Gives as much weight and deference as possible to state needs, priorities, and concerns.
3. Includes robust and meaningful state participation and consultation in the development and implementation of any rule, acknowledging the inherent federalism implications.

4. Gives full force and effect to Congress' intent and the purposes of CWA Sections 101(b) and 101(g).
5. Appropriately considers that Justice Kennedy's "significant nexus" test in Rapanos requires a connection between waters that is more than speculative or insubstantial to establish jurisdiction. Federal CWA jurisdiction efforts should also quantify "significance" to ensure that the term's usage does not extend jurisdiction to waters with a de minimis connection to jurisdictional waters, applied to individual waters on a case-by-case and not watershed basis.
6. Complies with the limits set by Congress and appropriately considers the limits the U.S. Supreme Court has placed on CWA jurisdiction, expressed through the plurality opinion authored by Justice Scalia in Rapanos.
7. Specifically excludes waters and features outside the scope of the CWA jurisdiction including but not limited to groundwater.
8. Acknowledges that states have authority to protect all "waters of the state," and that excluding waters from federal jurisdiction does not mean that they will be exempt from state regulation and protection.
9. Continues to provide access to appropriate technical and financial assistance to the States to protect and improve water quality under existing EPA programs without regard to jurisdictional determinations.
10. Provides a clearly delineated process for resolving differences of opinion over federal and non-federal jurisdiction, and jurisdiction between different States and Tribes (treated as States).
11. Provides for mapping of jurisdictional waters as a joint federal/state/tribal effort employing the best available data and tools, with appropriate provisions and processes for map maintenance.
12. Includes an appropriate delay in the effective date of any new rule or otherwise allows for a transition enabling States to take such actions as may be necessary to address any gaps in state law, regulation and protection, and to ensure sufficient time for tools to be developed by federal agencies, in collaboration with states, that facilitate implementation of the new rule,
13. Recognizes the unique landscapes and flow regimes in various regions of the Nation and the need for flexibility in implementation or define a regional nature of the rule.
14. Provides, in the rule development process, a representative number of states, as co-regulators, with diverse perspectives and regions to engage actively in an integrated way with EPA and USACE staff to provide direct and effective feedback on the implementability of a proposed rule.

(see former Position No. 427, October 26, 2018; No. 410, June 29, 2017; and No. 369. July 18, 2014)

Position No. 473

POSITION
of the
WESTERN STATES WATER COUNCIL
regarding
FEDERAL WATER AND CLIMATE DATA COLLECTION
AND ANALYSIS PROGRAMS

Deadwood, South Dakota
September 16, 2021

WHEREAS, the Western States Water Council is a policy advisory body representing eighteen states, and has long been involved in western water conservation, development, protection, and management issues, and the member states and political subdivisions have long been partners in cooperative federal water and climate data collection and analysis programs; and

WHEREAS, in the West, water is a critical, vital resource and sound decision-making demands accurate and timely data on precipitation, temperature, evapotranspiration, soil moisture, snow depth, snow water content, streamflow, groundwater, water quality and similar information; and

WHEREAS, the demands for water and related climate data continue to increase, and this information is used by federal, state, tribal, and local government agencies, as well as private entities and individuals to: (1) forecast flooding, drought and other climate-related events; (2) project future water supplies for agricultural, municipal, and industrial uses; (3) estimate streamflows for hydropower production, recreation, and environmental purposes, such as for fish and wildlife management, including endangered species needs; and (4) facilitate water management and administration of water rights, decrees, and interstate compacts; and

WHEREAS, without timely and accurate information, human life, health, welfare, property, and environmental and natural resources are at considerably greater risk of loss; and

WHEREAS, critical and vital information is gathered and disseminated through a number of important federal programs including, but not limited to: (1) the Snow Survey and Water Supply Forecasting Program, administered by the National Water and Climate Center (NWCC) in Portland, Oregon, and funded through USDA's Natural Resources Conservation Service (NRCS); (2) NWCC's Soil and Climate Analysis Network (SCAN); (3) the U.S. Geological Survey's (USGS) Groundwater and Streamflow Information Program (GWSIP) and National Streamflow Network, which are funded through the Department of Interior; (4) Landsat thermal data, archived and distributed by the USGS, and other remotely-sensed data acquired through the National Atmospheric and Space Administration (NASA) and its water-related missions; (5) the National Oceanic and Atmospheric Administration's (NOAA) National Weather Service and Climate Programs Office; (6) the Environmental Protection Agency's National Environmental Information Exchange Network

(NEIEN); and (7) the Bureau of Reclamation's Agrimet System and similar weather station networks; and

WHEREAS, state-of-the-art technology has been developed to provide real or near real-time data in formats that can be shared and used by different computer programs with the potential to vastly improve the water-related information available to decisionmakers in natural resources and emergency management, and thus better protect the public safety, welfare and the environment; and

WHEREAS, these federal programs and newly proposed projects and programs provide useful products to assist in visualizing and interpreting data on water and snow, water use, evapotranspiration and other parameters making water supply, demand and availability information more accessible and easy to interpret; and

WHEREAS, over a number of years, the lack of capital investments in water data programs has led to the discontinuance, disrepair, or obsolescence of vital equipment needed to maintain existing water resources related data gathering activities; and

WHEREAS, there is a serious need for adequate and consistent federal funding to maintain, restore, modernize, and upgrade federal water, weather and climate observation programs, not only to avoid the loss or further erosion of critical information and data, but also to address new emerging needs, with a primary focus on coordinated data collection and dissemination; and

WHEREAS, wildfires, floods, and other natural disasters have led to the significant loss of monitoring capabilities and require timely action to restore, maintain, and upgrade sensors and observing systems and networks.

NOW, THEREFORE, BE IT RESOLVED, that the Western States Water Council urge the Administration and the Congress to give a high priority to the allocation and appropriation of sufficient funds for these critical, vital programs, which benefit so many, yet have been or are being allowed to erode to the point that it threatens the quantity and quality of basic data provided to a myriad, growing and diffuse number of decisionmakers and stakeholders, with significantly adverse consequences.

BE IT FURTHER RESOLVED, that the Western States Water Council supports efforts to enhance and expand the availability of and access to consistent and comprehensive water supply, demand and water use data and information, such as, but not limited to, the Open Access Evapotranspiration (OpenET) data program and related federal authorizing legislation and appropriations.

(See also former Position No. 428, 385, 345, 320, 284, 256, and 235)
Adopted as revised September 16, 2021

Position No. 474

POSITION
of the
WESTERN STATES WATER COUNCIL
regarding
DROUGHT PREPAREDNESS, PREDICTION AND EARLY WARNING PROGRAMS

Deadwood, South Dakota
September 16, 2021

WHEREAS, the Western States Water Council is a policy advisory body representing eighteen states, and has long been involved in western water conservation, development, protection, and management issues, and western states have a long history of promoting drought preparedness, planning and response programs, in cooperation with federal agencies; and

WHEREAS, in the West, water is often scarce even in "wet" years and drought is a recurring threat to our environment, economy and way of life - affecting not only the West, but also the Nation; and

WHEREAS, according to the National Centers for Environmental Information (NCEI), from 1980-2020, there have been 28 drought events costing over $1B/event with total economic losses of $258.9B due to drought, or an average of $9.2B/event, also leading to an average of 95 deaths/year, with drought contributing to another $102.3B in wildfire losses, and 10 deaths/year, and NCEI noting a rise in vulnerability to drought and wildfire in the western states;[100] and

WHEREAS, continuing exceptional, extreme and severe drought conditions afflict the West and elsewhere, highlighting the need for greater attention to developing more comprehensive and coordinated drought prediction, preparedness, planning and response programs at all levels; and

WHEREAS, there is a need for maintaining and improving existing monitoring networks that help provide drought early warning signals, as well as for tracking the impacts of drought; and

WHEREAS, there is a continuing need for developing new monitoring technologies, such as remote sensing, that provide more timely data on water availability and better spatial coverage for assessing drought impacts; and

WHEREAS, early drought warning systems facilitate early drought assessment and mitigation efforts to minimize drought impacts; and

[100]https://www.climate.gov/disasters2020

WHEREAS, there is a need for continuing federal research to develop new predictive capability for precipitation at subseasonal to seasonal time scales as described in the report to Congress prepared by NOAA pursuant to Title II of PL 115-25; and

WHEREAS, there is a continuing need for a permanent federal role in coordination of research programs related to drought early warning and prediction; and

WHEREAS, the collection and monitoring of basic data on streamflow, snow pack, groundwater levels, and weather and climate data are essential to understanding water availability and interpreting the early signs of drought.

NOW, THEREFORE, BE IT RESOLVED, that the Western States Water Council urges the Administration and the Congress to support federal programs including but not limited to the National Integrated Drought Information System (NIDIS), under the National Oceanic and Atmospheric Administration (NOAA), and other efforts designed to improve our forecasting and response capabilities.

Position No. 475

POSITION
of the
WESTERN STATES WATER COUNCIL
regarding
BUREAU OF RECLAMATION DROUGHT RESPONSE PROGRAM

Deadwood, South Dakota
September 16, 2021

WHEREAS, the Western States Water Council is a policy advisory body representing eighteen states and since its inception the Council has been actively involved in national drought preparedness, planning and response, as well as related policy and program development and implementation; and

WHEREAS, in the West, water is often scarce and drought is a recurring threat; and

WHEREAS, according to the National Centers for Environmental Information (NCEI), from 1980-2020, there have been 28 drought events costing over $1B/event with total economic losses of $258.9B due to drought, or an average of $9.2B/event, also leading to an average of 95 deaths/year, with drought contributing to another $102.3B in wildfire losses, and 10 deaths/year, and NCEI noting a rise in vulnerability to drought and wildfire in the western states;[101] and

WHEREAS, the Reclamation States Emergency Drought Relief Act of 1991 (43 U.S.C. 2214(c)) and subsequent reauthorizations, under Title I, provide only temporary authority for some critical Reclamation actions; and

WHEREAS, Reclamation's current Drought Response Program supports a proactive approach to drought and provides financial assistance to water managers and users via its WaterSMART program to: (1) develop drought contingency plans; (2) implement drought resiliency projects to build the capacity of communities to mitigate and respond to drought - increasing the reliability of water supplies, improving water management and operational flexibility, facilitating voluntary sales, transfers or exchanges of water, and providing benefits for fish and wildlife and the environment; and (3) undertake emergency actions to minimize losses due to drought through temporary construction activities and other activities, including water purchases and the use of Reclamation facilities to convey and store water; and

WHEREAS, there is a continuing need for making permanent the temporary authority allowing Reclamation the flexibility to continue delivering water to meet authorized project purposes, meet environmental requirements, respect state water rights, work with all stakeholders, and provide leadership, innovation, and assistance.

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[101] https://www.climate.gov/disasters2020

NOW, THEREFORE, BE IT RESOLVED, that the Western States Water Council strongly supports legislation to permanently authorize Title I activities under the Reclamation States Emergency Drought Relief Act, and provide for adequate appropriations to meet priority needs and continue the Reclamation Drought Response Program.

BE IT FURTHER RESOLVED, that the Council urges and encourages the Administration and the Congress to assess and consider the need for a comprehensive national drought preparedness and response program on par with federal efforts to address other natural disasters such as hurricanes, tornadoes and similar extreme events.

(see former Position No. 430, October 26, 2018;
No. 387, October 9, 2015; and No. 347, October 12, 2012)

POSITION
of the
WESTERN STATES WATER COUNCIL
regarding
STATES' WATER RIGHTS AND NATURAL FLOWS
Deadwood, South Dakota
September 16, 2021

WHEREAS, the Western States Water Council strongly supports preservation of the States' inherent right to develop, use, control, and distribute water; and

WHEREAS, States have exclusive authority over the allocation and administration of rights to the use of surface water located within their borders and are primarily responsible for protecting, managing and otherwise controlling the resource; and

WHEREAS, States are in the best position to protect and allow for the orderly and rational allocation and administration of the resource through state laws and regulations that are specific to their individual circumstances; and

WHEREAS, the Flood Control Act of 1944 specifically declared the policy of Congress to recognize the interests and rights of the Missouri River Basin States in determining the development of the watersheds within their borders and likewise their interests and rights in water use and control, and to preserve and protect to the fullest extent established and potential uses of the rivers' natural flows, those flows being the natural flows that would pass through the states in the absence of the U.S. Army Corps of Engineers dams; and

WHEREAS, the federal government has long recognized the right to use water as determined under the laws of the various states; and

WHEREAS, the various states have the authority and duty to manage permitting of stored water to supplement natural flows; and

WHEREAS, federal agencies in the western states, such as the Bureau of Reclamation, generally recognize western water laws and natural flows through reservoir operations, with releases from storage that supplement natural flows, and water service contracts that supplement natural flow; and

WHEREAS, representatives of the U.S. Army Corps of Engineers have indicated that all waters entering its Missouri River mainstem reservoirs are stored waters to be allocated and controlled by the U.S. Army Corps of Engineers without recognition of the States' rights to natural flows being separate from the captured floodwaters stored within those reservoirs; and

NOW, THEREFORE, BE IT RESOLVED, that the Western States Water Council urges the U.S. Army Corps of Engineers to recognize and proceed in conformity with State law related to the development, use, control, appropriation, storage, and distribution of the States' surface waters, including natural flows.

BE IT FURTHER RESOLVED, that the Western States Water Council supports legislation to require the U.S. Army Corps of Engineers to comply with substantive and procedural state law as it relates to development, use, control, appropriation, storage, and distribution of the States' surface waters, including natural flows, similar to the U.S. Bureau of Reclamation.

BE IT FURTHER RESOLVED, that any policy of the U.S. Army Corps of Engineers to require storage contracts to access natural flows within a reservoir boundary would be a violation of the States' rights to develop, use, control, and distribute surface water.

BE IT FURTHER RESOLVED, that the Western States Water Council opposes any and all efforts that would diminish the primary and exclusive authority of States over the allocation of surface water.

(formerly Position No. 431, October 26, 2018;
No. 388, October 9, 2015; and No. 348, October 12, 2012)

Position No. 477

RESOLUTION
of the
WESTERN STATES WATER COUNCIL
regarding
Abandoned Hardrock Mine Cleanup

Deadwood, South Dakota
September 16, 2021

WHEREAS, the General Mining Act of 1872 allowed individuals to obtain exclusive rights to valuable hardrock mineral deposits on land belonging to the United States without requirements to reclaim the land until the 1970s; and

WHEREAS, hardrock mining has a long history in the West, which is rich in hardrock minerals like gold, silver, and copper; and

WHEREAS, as part of this past, the West contains historically mined and abandoned hardrock mines on public and private land, which were abandoned prior to present day regulation and have no responsible or solvent party to perform the needed cleanup and reclamation; and

WHEREAS, a recent report from the Government Accountability Office (GAO-20-238) found that the United States has at least 140,000 abandoned hardrock mine features on federal land of which 22,500 pose or may pose environmental hazards, including adverse effects to water quality; and

WHEREAS, most of these sites are in many western states with a significant portion located wholly or partially on public land managed by the U.S. Forest Service or the U.S. Bureau of Land Management; and

WHEREAS, significant hardrock mining has also occurred on tribal lands; and

WHEREAS, there could be more than 390,000 additional abandoned hardrock mine features on federal land that have not yet been characterized; and

WHEREAS, many of the abandoned hardrock mines are co-located on public and private land; therefore, consideration should be given to the private land component as well when assessing full mine site cleanup; and

WHEREAS, many states have agencies that administer the CWA, regulate and require financial assurance for reclamation of hardrock mines, remediate impacted waters, and implement abandoned mine programs that are used to identify state-specific priorities with respect to abandoned hardrock mining issues; and

WHEREAS, there are numerous economic, environmental, and social benefits from remediating and reclaiming lands and waters impaired by abandoned hardrock mines; and

WHEREAS, water quality impacts can be severe, with water quality conditions resulting in impacts to drinking water supplies, aquatic life, recreational uses, agriculture and livestock; and

WHEREAS, the U.S. Environmental Protection Agency (EPA) has identified developing alternative industrial development projects that are bonded for future cleanup on abandoned hardrock mine sites as an innovative solution to generate benefits and return abandoned mine lands to productivity while considering economic, environmental and social effects; and

WHEREAS, establishing a productive post-mining land use is an important safety and quality of life issue for states, especially where abandoned hardrock mine sites exist with encroaching development, have an increased prevalence of outdoor recreation opportunities such as off highway vehicle usage, or where the sites can meet the growing demand for renewable energy development and storage; and

WHEREAS, the cleanup of abandoned hardrock mines is hampered by two issues - (1) insufficient state and federal resources and (2) concerns about liability, compounded by complex land and mineral ownership patterns in mining districts and the operational histories associated with a given site; and

WHEREAS, Bureau of Land Management officials estimated that with the agency's current abandoned mine budget and staff resources, it could take up to 500 years just to confirm the presence of physical or environmental hazards present at the approximately 66,000 hardrock mines identified and the estimated 380,000 features not yet captured in its database (GAO-20-238); and

WHEREAS, states, tribes, municipalities, federal agencies, volunteer citizen groups, and private parties that have no liability or responsibility for the sites (referred to as Good Samaritans in this resolution) have engaged in or are interested in voluntary restoration work at abandoned hardrock mines; and

WHEREAS, Good Samaritans currently have potential liability for their voluntary cleanup under the Clean Water Act (CWA), Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Resource Conservation and Recovery Act (RCRA) despite the fact that they did not previously operate or own the mine. Such Good Samaritans have expressed interest in voluntarily bearing the costs of the cleanup, and they could provide numerous benefits if they were able to remediate the abandoned mine, but are dissuaded by liability concerns; and

WHEREAS, liability concerns also prevent other active modern mining companies from re-mining or voluntarily cleaning up abandoned mines; and

WHEREAS, "Good Samaritan" bills have been introduced in Congress over the years to protect non-liable entities that are willing to voluntarily clean up these sites from legal liability under CERCLA and CWA; and

WHEREAS, in 2020 the EPA created a new office, the Office of Mountains, Deserts, and Plains, to promote Good Samaritan cleanup efforts and foster partnerships with states, tribes, local communities and other stakeholders to ensure more efficient cleanup of both Superfund and non-Superfund sites in the West, including abandoned mines; and

WHEREAS, in many western states, abandoned hardrock mine cleanup projects on public and private lands can be led by state agency project managers in states with established abandoned hardrock mine lands programs if sufficient funding were available, and allowing deferral of project leads to states on pilot programs can facilitate improved cleanup response times.

NOW, THEREFORE, BE IT RESOLVED, that the Western States Water Council (WSWC) supports increased federal funding and workforce resources dedicated to addressing the backlog of abandoned hardrock mine inventory through both federal and state programs, with a priority on those sites that are contributing to CWA 303(d) impaired waters or have been otherwise prioritized by states.

BE IT FURTHER RESOLVED, that increased federal funding appropriated by Congress should not be used to offset or otherwise reduce existing resources allocated to states to work on abandoned hardrock mine issues and should be delivered to state and federal agencies through a clear, transparent, and efficient manner that maximizes project implementation work at sites prioritized by states.

BE IT FURTHER RESOLVED, that the WSWC supports a rapid and extensive inventory and characterization of environmental hazards and impacts, including water quality, caused by abandoned hardrock mines on federal, state, tribal, and private land across western states and working collaboratively with states and tribes, relying on their expertise to prioritize sites for cleanup.

BE IT FURTHER RESOLVED, that the WSWC supports efforts by the EPA Office of Mountains, Deserts, and Plains to advance and resolve states' priority abandoned mine issues by helping states to leverage federal programs and enhance collaboration across federal agencies, states, regional, local, non-profit, and private partnerships to create an "all-hands" approach to finding creative solutions, including mining actions identified in EO 14017, for the cleanup of abandoned hardrock mine sites and to accelerate remedial efforts using the most advanced technology solutions.

BE IT FURTHER RESOLVED, that the WSWC supports exploration of new ideas for moving projects forward, such as using Brownfields' Bona Fide Prospective Purchaser protections or other methods of promoting liability protections until such time that a Good Samaritan program can be established.

BE IT FURTHER RESOLVED, that the WSWC supports legislation to amend the Clean Water Act to protect Good Samaritans and States from inheriting perpetual liability for the site and to include flexibility and mechanisms for States to implement creative approaches to remediation (e.g., use of Supplemental Environmental Projects obtained through settlements).

BE IT FURTHER RESOLVED, the WSWC supports legislation establishing pilot projects, including pilot projects under state-led programs, to address liability issues for Good Samaritans at individual sites to help pave the way for comprehensive legislation, if comprehensive legislation addressing these issues is not possible in the short term.

BE IT FURTHER RESOLVED, the WSWC calls on Congress and federal agencies to develop legislative and administrative remedies to address potential CERCLA, CWA and RCRA liabilities for Good Samaritans, while the federal government should also develop remedies for liabilities associated with re-mining, which deter those best-equipped with technology and expertise (i.e., state and local governments, non-governmental entities, and the mining industry) from improving conditions at abandoned mines.

RULES OF ORGANIZATION

Preamble

The Western States Water Council is a government entity, an instrumentality of each and every participating state, established to fulfill a number of governmental purposes on behalf of those states, including advising the governors on planning, conservation, development, management and protection of their water resources. As outlined herein, Council membership is comprised of States with member representatives appointed by the Governors of each participating State. The activities of the Council are subject to the control and supervision of the Governors of member States through their appointed representatives. The Council is funded by dues from member States, set by an Executive Committee, which also controls expenditures.

Article I - Name

The name of this organization shall be "THE WESTERN STATES WATER COUNCIL."

Article II - Purpose

The purpose of the Western States Water Council shall be to accomplish effective cooperation among western states in matters relating to the planning, conservation, development, management, and protection of their water resources, in order to ensure that the West has an adequate, sustainable supply of water of suitable quality to meet its diverse economic and environmental needs now and in the future.

Article III - Interstate Water Transfer Principles

Except as otherwise provided by existing compacts, the planning of western water resources development on a regional basis will be predicated upon the following principles for protection of states of origin:

(1) All water-related needs of the states of origin, including but not limited to irrigation, municipal and industrial water, flood control, power, navigation, recreation, water quality control, and fish and wildlife preservation and enhancement shall be considered in formulating the plan.

(2) The rights of states to water derived from the interbasin transfers shall be subordinate to needs within the states of origin.

(3) The cost of water development to the states of origin shall not be greater, but may be less, than would have been the case had there never been an export from those states under any such plan.

Article IV - Functions

The functions of the Western States Water Council shall be to:

(1) Undertake continuing review of all large-scale interstate and interbasin plans and projects for development, control or utilization of water resources in the Western States, and submit recommendations to the Governors regarding the compatibility of such projects and plans with an orderly and optimum development of water resources in the Western States.

(2) Investigate and review water related matters of interest to the Western States, and advise Council member states and governors as appropriate.

(3) Express policy positions regarding proposed federal laws, rules and regulations and other matters affecting the planning, conservation, development, management, and protection of water resources in Western States.

(4) Sponsor and encourage activities to enhance exchange of ideas and information and to promote dialogue regarding optimum management of western water resources.

(5) Authorize preparation of amicus briefs to assist western states in presenting positions on issues of common interest in cases before federal and state courts.

(6) Encourage collaboration among federal, state, tribal and local governments, public and private water resources associations and water-related non-governmental organizations.

Article V - State Membership and Member State Representatives

(1) The Council shall consist of the states of Alaska, Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming. Member states of the WGA, which are not members of the Council, shall be added to membership if their respective Governors so request. The Executive Committee may, upon unanimous vote, confer membership upon other western states, which are not members of the WGA, if their respective Governor so requests. The Executive Committee may also confer Associate Member status on states as described in section (4) below. Any state may withdraw from membership upon written notice by its Governor.

(2) Member state Governors may appoint not more than three member state representatives to the Council, but may name any number of standing alternate representatives.

(3) Member state representatives (members) and alternate representatives (alternates) so appointed may designate other individuals to represent them and participate in Council meetings and other activities provided that such designations are made in writing prior to the event by letter or email.

(4) Associate Membership may be granted for a period of up to three years, during which time a state's appointed representatives may participate as observers in Council activities and receive all information disbursed by the Council. However, Associate Member states shall have no vote in Council matters.

(5) If any state fails to pay the appropriate level of dues established by the Executive Committee of the Council, the privileges afforded by virtue of its membership to participate in Council activities and to receive all information dispersed by the Council may be withheld pending the payment of dues, beginning at the start of the fiscal year following the delinquency.

Article VI - Ex-Officio Members

The Governors of the member states shall be ex-officio members and shall be in addition to the regularly appointed members from each state.

Article VII - Officers

The officers of the Council shall be the Chair, Vice-Chair and Secretary-Treasurer. They shall be selected in the manner provided in Article VIII.

Article VIII - Selection of Officers

The Chair, Vice-Chair and Secretary-Treasurer, who shall be from different states, shall be elected from the Council by a majority vote at the annual regular summer meeting to be held each year. These officers shall serve one-year terms. However, the Chair and Vice-Chair may not be elected to serve more than two terms consecutively in any one office. In the event that a vacancy occurs in any of these offices, it shall be filled by an election to be held at the next scheduled regular Council meeting.

Article IX - Executive Committee

(1) Each Governor may designate one representative to serve on an Executive Committee which shall have such authority as may be conferred on it by these Rules of Organization, or by action of the Council. In the absence of such a designation by the Governor, representatives of each state shall designate one of their members to serve on the Executive Committee. Any Executive Committee member may designate in writing by letter or email an alternate to temporarily act on his/her behalf in his/her absence.

(2) The Executive Committee shall determine whether or not States are eligible for participation as members or associate members of the Council.

(3) The Executive Committee of the Council shall set annual dues for Council participation and may, by unanimous vote, confer the status of Associate Member of the Council upon states it deems eligible. The Executive Committee shall, through regular Council voting procedures, establish the

appropriate level of dues for Associate Member states. In addition to determinations concerning Associate Member states, the Executive Committee may, when appropriate, authorize and establish fees for participation in Council activities by non-member states and non-member state representatives (non-members).

(4) The Executive Committee shall annually adopt a budget and oversee all Council expenditures and activities.

(5) The Executive Committee may establish other committees, subcommittees and work groups which shall have such authority as may be conferred upon them by action of the Council.

Article X - Voting and Policy Development

(1) Each state shall have one vote. Since state delegations consist of more than one person, but each state has only one vote, the Executive Committee member for each state shall be responsible as an internal state matter for coordinating and communicating the official position of the state relative to voting on proposed policy positions. An email message is sufficient to meet this requirement. Whenever a person who is not a Council representative is attending on behalf of a Council representative at a regular or special meeting, either in person or via conference call, a written notification to this effect must be provided to the Council offices to assure that the person is serving in the appropriate capacity.

(2) A quorum shall consist of a majority of the member states (excluding associate member states).

(3) No recommendation may be issued or position taken by the Council except by an affirmative vote of at least two-thirds of all member states, with the exception of the following:

(a) Recommendations and external policy positions concerning out-of-basin interstate transfers require a unanimous vote of all member states; and

(b) Action may be taken by a majority vote of all member states on all internal administrative matters.

(4) In any matter put before the Council for a vote, other than election of officers, any member state may upon request obtain one automatic delay in the voting until the next regular meeting of the Council. Further delays in voting on such matters may be obtained only by majority vote.

(5) The Council shall consider external policy positions for adoption at its three regular meetings held each year. No external policy matter may be brought before the Council for a vote unless advance notice of such matter has been mailed or emailed to each member of the Council at least 30 days prior to one of the Council's regular meetings.

(6) At the discretion of the Chair, in those instances where circumstances warrant consideration of an external policy position outside of the regular meetings, the Executive Committee may adopt

positions at special meetings (including by conference call) provided that proposed positions are mailed or emailed to each member of the Executive Committee at least 10 days prior to the special meeting or conference call.

(7) Any proposed external policy positions can be added to the agenda of a regular or special meeting by unanimous consent of those states represented at the meeting provided that a quorum exists.

Article XI - Policy Coordination and Deactivation

With regard to external positions adopted at special meetings or added to the agenda of a meeting by unanimous consent, such external policy positions shall be communicated to the member governors of the WGA and the WGA Executive Director for review. If after 10 days no objection is raised by the governors, then the policy position may be distributed to appropriate parties. In extraordinary cases, these procedures may be suspended by the WGA Executive Director, who will consult with the appropriate WGA lead governors before doing so.

Policy positions will be deactivated three years after their adoption. The Executive Committee will review prior to each regular meeting those policy statements or positions due for sunsetting. If a majority of the Executive Committee members recommend that the position be readopted by the Council, then such position shall be subject to the same rules and procedures with regard to new positions that are proposed for Council adoption.

Article XII - Conduct of Meetings

Except as otherwise provided herein, meetings shall be conducted under Robert's Rules of Order, Revised. A ruling by the Chair to the effect that the matter under consideration does not concern an out-of-basin transfer is an appealable ruling, and in the event an appeal is made, such ruling to be effective must be sustained by an affirmative vote of at least 2/3 of the member states.

Article XIII - Meetings

The Council shall hold regular meetings three times each year at times and places to be decided by the Chair, upon 30 days written notice. Special meetings may be called by the Chair, upon 10 days written notice.

Article XIV - Limitations

The work of the Council shall in no way defer or delay authorization or construction of any projects now before Congress for either authorization or appropriation.

Article XV - Dissolution

In the event of the dissolution of the Council, to the extent practical the assets of the Council shall be liquidated in a timely manner and evenly divided among those member states in good standing, at the time of the dissolution.

Article XVI - Amendment

These articles may be amended at any meeting of the Council by unanimous vote of the member states represented at the meeting. The substance of the proposed amendment shall be included in the call of such meetings.

Glossary of Acronyms

ANPRUM Advance Notice of Proposed Rulemaking

ACWA Association of Clean Water Administrators

ASDWA Association of State Drinking Water Administrators

BIA Bureau of Indian Affairs

BLM Bureau of Land Management

CDWR California Department of Water Resources

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

CIG Conservation Innovation Grants

Corps Army Corps of Engineers

CPC Climate Prediction Center

CRBSCP Colorado River Basin Salinity Control Program

CREP Conservation Reserve Enhancement Program

CRP Conservation Reserve Program

CSP Conservation Stewardship Program

CWA Clean Water Act

CWMP Cooperative Watershed Management Program

DOI Department of the Interior (also known as "Interior")

EPA Environmental Protection Agency

EPW Senate Environment and Public Works Committee

EQIP Environmental Quality Improvement Program

ESA Endangered Species Act

EWPP	Emergency Watershed Protection Program
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FWS	Fish and Wildlife Service
GWPC	Ground Water Protection Council
NARF	Native American Rights Fund
NASA	National Aeronautics and Space Administration
NEPA	National Environmental Policy Act
NDRP	National Drought Resilience Partnership
NIDIS	National Integrated Drought Information System
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NWS	National Weather Service
OMB	Office of Management and Budget
RCPP	Regional Conservation Partnership Program
RCRA	Resource Conservation and Recovery Act
SDWA	Safe Drinking Water Act
SRF	State Revolving Funds
STAG	State and Tribal Assistance Grants
TAS	Treatment as States
TMDL	Total Maximum Daily Load
USBR	Bureau of Reclamation (also known as “Reclamation”)

USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USGS	U.S. Geological Survey
WaDE	Water Data Exchange
WestFAST	Western States Federal Agency Support Team
WGA	Western Governors' Association
WIFIA	Water Infrastructure Finance and Innovation Act
WOTUS	Waters of the United States
WQS	Water Quality Standards
WRCB	California State Water Resources Control Board
WSWC	Western States Water Council