

## WESTERN STATES WATER COUNCIL

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Web Page: [www.westernstateswater.org](http://www.westernstateswater.org)

### MEMORANDUM

**TO:** Western States Water Council Members and Others

**FROM:** Tony Willardson, Executive Director

**DATE:** September 7, 2023

**RE:** Briefing Materials for the 202<sup>nd</sup> Western States Water Council Meetings

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This is to advise you that briefing materials for our 2023 Fall meetings being held in Anchorage, Alaska (a hybrid in-person and virtual event) on September 13-14, may be downloaded on our [meetings webpage](#). The minutes from the Spring 2023 meetings held this past May will be available on our website (under Past Meetings) for your review. Please bring any necessary changes to the attention of staff.

The meeting schedule and agenda are posted on our [meetings webpage](#). As a reminder, in order to participate, whether in-person or virtually, all must register. Please visit our meetings webpage and when registering for virtual attendance, please mark each day you wish to attend. A confirmation email will be sent containing directions to join the meetings via Zoom webinar. The Zoom link provided will be unique to each individual registrant and should not be shared. However, the meetings are open to the public and you are free to direct others to the webpage to register.

Our Alaska hosts have arranged a full day field trip on Tuesday, September 12. Members and guests will depart the Aloft Anchorage hotel at 8:00 am ADT. Field trip stops will include: Alaska Water and Wastewater Utility (AWWU) Drinking Water Treatment Facility; Eklutna Hydroelectric Project Powerhouse; Eklutna Village; and Eklutna Lake. Lunch and dinner will be included. The buses will depart by 7:00 pm and return to the Aloft Anchorage hotel by 8:00 pm.

On Wednesday, September 13, the Council meetings will begin with the Alaska State Presentation at 8:00 am ADT (Pacific 9:00 a.m.; Mountain Time 10:00 a.m.; and Central 11:00 a.m.), followed by our regular committee meetings. Attached is a schedule of meetings for your reference. A social hour will be held for all WSWC members and guests from 6:00 – 8:00 pm ADT on Wednesday evening.

The Full Council meeting will be held on Thursday morning, September 14, from 8:00 to 11:30 am ADT.

We look forward to seeing most of you in person! Please contact me with any questions at [twillardson@wswc.utah.gov](mailto:twillardson@wswc.utah.gov).

# ALASKA



**WESTERN STATES WATER COUNCIL  
(202ND MEETING)**

**Anchorage, Alaska**

**September 13-14, 2023**

**WESTERN STATES WATER COUNCIL  
202<sup>nd</sup> COUNCIL MEETING  
Anchorage, Alaska  
September 13-14, 2023**

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WQ Position #456 - Asserting State Primacy on Protecting Ground Water Quality

Position #457 - Supporting the Dividing the Waters Initiative (*superseded as Position #467*)

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Q. Stream Restoration Webinar Series

R. WSWC Exempt Wells Report (2010)

S. NY Times "Unchartered Waters" Article

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Tab A – Schedule of Meetings – Agenda –  
30-day Notice





# SCHEDULE OF MEETINGS

## WESTERN STATES WATER COUNCIL

Aloft Anchorage  
Anchorage, Alaska

September 12-14, 2023

<u>Date/Time</u>	<u>Meeting</u>	<u>Room</u>	<u>Adjournment</u>
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(ADT - Alaska Daylight Time)

### Tuesday, September 12

8:00 am	<b>Field Trip:</b> Alaska Water and Wastewater Utility (AWWU) Drinking Water Treatment Facility; Eklutna Hydroelectric Project Powerhouse; Eklutna Village; and Eklutna Lake.		8:00 pm
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### Wednesday, September 13

8:00 am	Host State Presentation	Katmai BC	8:45 am
8:45 am	Water Resources Committee Meeting	Katmai BC	11:45 am
12:00 pm	Executive Committee (over lunch)	Katmai A	1:15 pm
1:30 pm	Water Quality Committee Meeting	Katmai BC	3:15 pm
3:15 pm	Legal Committee Meeting	Katmai BC	5:00 pm
6:00 pm	Social Hour <b>Sponsor:</b> <i>Holland &amp; Hart</i>	Katmai BC	8:00 pm

### Thursday, September 14

8:00 am	WSWC Full Council (202 <sup>nd</sup> ) Meeting	Katmai BC	11:30 am
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**AGENDA  
EXECUTIVE COMMITTEE**

Aloft Anchorage Hotel  
Anchorage, Alaska

September 13, 2023

Call to Order at: 12:00 p.m. (Alaska Daylight Time)  
Conducting: Jen Verleger, Chair

Katmai A

**TAB**

1. **Welcome and Introductions**
2. **Approval of Minutes**
- D 3. **Report on Budget and Finances** – Tony Willardson
- C 4. **Sunsetting Positions** – Jen Verleger
- E 5. **Executive Director’s Report/WSWC Activities and Events** – Tony Willardson
6. **Nominating Subcommittee** – Jerry Rigby
- F 7. **Future WSWC Meetings** – Jen Verleger
- B 8. **Council Membership Update** – Tony Willardson
- G 9. **Draft FY2023-2024 Committee Work Plan**
- XYZ 10. **Sunsetting Positions for Spring 2024 Meetings** –  
Position #459 - Regarding Probable Maximum Precipitation Standards  
Position #460 - Supporting the Use of Forecast Informed Reservoir Operations &  
Innovations  
Position #461 - Supporting Weather Station Networks  
Position #462 - Supporting Water Infrastructure Funding  
Position #463 - Regarding Water and Energy Planning and Policy  
Position #464 - Supporting Federal Research on Climate Adaptation  
Position #465 - Supporting Universal Access to Reliable, Clean Drinking Water or  
Federally Recognized Indian tribes and Alaska Native Communities  
Position #466 - Regarding State Primacy Over Groundwater  
Position #467 - Regarding the Dividing the Waters Program
11. **Other Matters**
- 1:15 p.m. **Adjourn**

## AGENDA

### WATER RESOURCES COMMITTEE

Aloft Anchorage Hotel  
Anchorage, Alaska

September 13, 2023

Call to Order at: 8:45 a.m. (Alaska Daylight Time)  
Conducting: Nakaila Steen, South Dakota

Katmai BC

#### TABS

1. **Welcome and Introductions**
2. **Approval of Minutes**
- C 3. **Sunsetting Resolutions –**  
Position #455 – Supporting USDA Conservation Programs and Water Resources
4. **Alaska Water Resources –** Tom Barrett, Alaska Department of Natural Resources
- H 5. **Implications of AI to Water Management and Water Law –** Jim Davenport LLC
- I 6. **Seasonal to Subseasonal Forecasting Workshop and Follow Up –** Tony Willardson
- J 7. **NIDIS Climate Adaptive Drought Planning Platform –** Gretel Follingstad,  
Coordinator/Drought Planning Lead, Intermountain West Drought Early Warning System,  
NOAA - NIDIS
- K 8. **Landsat Next –** Tim Stryker, Chief, NLI Program's Outreach and Collaboration Branch,  
USGS
- L 9. **National Water Assessment –** Brian Clark, Program Coordinator, Water Availability & Use  
Science Program, USGS
- M 10. **Follow the Water: NHDPlus HR and 3DHP –** Becci Anderson, USGS National Geospatial  
Program
- N 11. **WaDE, WestDAAT and OpenET Conservation Tool –** Adel Abdallah
- G 12. **Draft FY2023-2024 Committee Work Plan**
- XYZ 13. **Sunsetting Positions for 2024 Spring Meetings – #459-#464**  
Position #459 - Regarding Probable Maximum Precipitation Standards  
Position #460 - Supporting the Use of Forecast Informed Reservoir Operations & Innovations  
Position #461 - Supporting Weather Station Networks  
Position #462 - Supporting Water Infrastructure Funding  
Position #463 - Regarding Water and Energy Planning and Policy  
Position #464 - Supporting Federal Research on Climate Adaptation
14. **Other Matters/Adjourn** by 11:45 a.m.

## WATER QUALITY COMMITTEE MEETING

Aloft Anchorage Hotel  
Anchorage, Alaska

September 13, 2023

Call to Order at: 1:30 p.m. (Alaska Daylight Time)  
Conducting: Jennifer Zygmunt

Katmai BC

### **TAB**

1. **Welcome and Introductions**
2. **Approval of Minutes**
- C 3. **Sunsetting Positions**  
Position #456 – Asserting State Primacy on Protecting Groundwater Quality
- XYZ **Sunsetting Positions for Spring 2024 Meetings – None**
4. **Alaska Water Quality Issues - Dan Graham, General Manager of Donlin Gold Mine**
- O 5. **Tribal Water Quality Standards**
  - a. EPA Updates on Rulemakings
  - b. State Comments of Federal Baseline Tribal WQS
  - c. State Roundtable Discussion
- P 6. **EPA Updates**
  - a. WOTUS
  - b. *Center for Biological Diversity v. EPA* and ESA consultations for WQS
7. **Nebraska CWA §404 Assumption Process – Jim Macy, Director, Nebraska Department of Environment and Energy**
- G 8. **Draft FY2023-2024 Committee Work Plan**
  - a. Nutrients
9. **Other Matters**
- 3:15 pm Adjourn

## LEGAL COMMITTEE MEETING

Aloft Anchorage Hotel  
Anchorage, Alaska

September 13, 2023

Call to Order at: 3:15 pm (Alaska Daylight Time)

Katmai BC

Conducting: Sara Gibson

### **TAB**

1. **Welcome and Introductions**
2. **Approval of Minutes**
- C 3. **Sunsetting Positions –**  
Position #454 – Supporting Indian Water Rights Settlements  
Position #458 – Outlining Actions Federal Agencies Should Take to Expedite State General Stream Adjudications
4. **Alaska Legal Issues –** Julie Pack, Alaska Department of Law
5. **Federal Litigation Update –** Stephen Bartell, Department of Justice
- Q 6. **Stream Restoration Webinar Series –** Madeline Franklin, WestFAST
- R 7. **Exempt Wells –** Anna Pakenham-Stevenson, Jerry Rigby
- S 8. **Roundtable Discussion: Groundwater Regulation**
- N 9. **WaDE Regulatory and Administrative Overlays –** Adel Abdallah
10. **Instream Flow Council -** Christopher Estes, Chalk Board Enterprises, LLC
- G 11. **Draft FY2023-2024 Committee Work Plan**
- T 12. **Staff Updates –** Michelle Bushman
  - a. 18<sup>th</sup> Biennial Symposium on the Settlement of Indian Reserved Water Rights Claims
  - b. Western Water Cooperative Committee Update
  - c. Legislation and Litigation Update
- XYZ 13. **Sunsetting Positions for Spring 2024 Meetings - #465-#467**  
Position #465 - Supporting Universal Access to Reliable, Clean Drinking Water for Federally Recognized Indian tribes and Alaska Native Communities  
Position #466 - Regarding State Primacy Over Groundwater  
Position #467- Regarding the Dividing the Waters Program
14. **Other Matters**
- 5:00 pm Adjourn



## AGENDA

### 202nd COUNCIL MEETING

Aloft Anchorage Hotel  
Anchorage, Alaska

September 14, 2023

Call to Order at: 8:00 a.m. (Alaska Daylight Time)

Conducting: Jen Verleger, WSWC Chair

Katmai: BC

#### **TAB**

1. **Welcome and Introductions**
2. **Approval of Minutes**
3. **Committee Reports – Action Items**
  - a. Water Resources Committee – Nakaila Steen
  - b. Water Quality Committee – Jennifer Zygmunt
  - c. Legal Committee – Sara Gibson
  - d. Executive Committee – Jen Verleger
4. **WestFAST Report** – Roger Gorke, Chair (EPA) and Madeline Franklin (Liaison)
5. **The Development of Water Law and Water Management in Alaska** [and Hawaii]
  - Christopher Estes, Chalk Board Enterprises, LLC
  - Hawaiian representative to be invited
- F 6. **Future Council Meetings** – Jen Verleger
7. **Election of Officers** – Jerry Rigby, Nominating Subcommittee
- U 8. **State Reports**
- XYZ 9. **Sunsetting Positions for Spring 2024 Meetings** – #459-#467
  - Position #459 - Regarding Probable Maximum Precipitation Standards
  - Position #460 - Supporting the Use of Forecast Informed Reservoir Operations & Innovations
  - Position #461 - Supporting Weather Station Networks
  - Position #462 - Supporting Water Infrastructure Funding
  - Position #463 - Regarding Water and Energy Planning and Policy
  - Position #464 - Supporting Federal Research on Climate Adaptation
  - Position #465 - Supporting Universal Access to Reliable, Clean Drinking Water for Federally Recognized Indian tribes and Alaska Native Communities
  - Position #466 - Regarding State Primacy Over Groundwater
  - Position #467 - Regarding the Dividing the Waters Program
10. **Other Matters**
- 11:30 a.m. **Adjourn**



## WESTERN STATES WATER COUNCIL

682 East Vine Street, Suite 7 | Murray, Utah 84107-5501 | (801) 685-2555 | FAX (801) 685-2559

Web Page: [www.westernstateswater.org](http://www.westernstateswater.org)

### MEMORANDUM

**TO:** Council Members

**FROM:** Tony Willardson, Executive Director

**DATE:** August 11, 2023

**RE:** **30-Day Notice of Fall 2023 (202<sup>nd</sup>) WSWC Meetings**

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This memorandum is notice that the 202<sup>nd</sup> meetings of the Western States Water Council (WSWC) will be held September 12-14, at the Aloft Anchorage Hotel. Guests may make their reservations using the following link <https://www.marriott.com/event-reservations/reservation-link.mi?id=1678823806267&key=GRP&app=resvlink>. **Our room block deadline is August 12.**

Consistent with our rules of organization, any external policy positions to be proposed for Council consideration must be included with the 30-day notice. Four positions are scheduled to sunset at this meeting if no action is taken to update them.

[Position #454](#) - Supporting Indian Water Rights Settlements

[Position #455](#) - Supporting USDA Conservation Programs and Water Resources

[Position #456](#) - Asserting State Primacy on Protecting Ground Water Quality

[Position #458](#) - Outlining Actions Federal Agencies Should Take to Expedite State General Stream Adjudications

The sunsetting positions are available for review on our [website](#). In keeping with our usual practice, we encourage you to consult with your respective Governor's office and Western Governors' Association Staff Advisory Council (SAC) member regarding the proposed and sunsetting positions. Any recommended changes will be considered during the Full Council meeting on September 14.

Please note that the Executive Committee will meet virtually to discuss these policy resolutions and any recommended revisions on Thursday, August 24, at 2:30 p.m. Mountain Daylight Time (1:30 p.m. Pacific; 3:30 p.m. Central). Committee Chairs are also invited to participate. Zoom meeting information will be provided separately. In the event an Executive Committee member is unable to join the call, they may designate an alternate to participate and engage in the discussion by so advising via email.

**For those attending the Anchorage meetings in person, please register no later than August 25.** All meeting participants, whether attending in-person or virtually, must register in advance on our [meetings webpage](#). There is no registration fee to attend our meetings. For virtual participants, please note that on the Zoom registration form you will need to mark each session that you plan to attend, and you will receive an email confirmation for the meetings that contains a link to join. Do not share the link

received in the email, as it will be unique to you. If you are aware of anyone else wishing to participate remotely, please advise them to go to our meetings webpage to register for themselves.

Our Alaska hosts have arranged a full day field trip on Tuesday, September 12. Members and guests will depart the Aloft Anchorage hotel at 8:00 am Alaska Daylight Time (ADT). Field trip stops will include: Alaska Water and Wastewater Utility (AWWU) Drinking Water Treatment Facility; Eklutna Hydroelectric Project Powerhouse; Eklutna Village; and Eklutna Lake.

On Wednesday, September 13, the Council meetings will begin with the Alaska State Presentation at 8:00 am ADT (Pacific 9:00 a.m.; Mountain Daylight Time 10:00 a.m.; and Central 11:00 a.m.), followed by our regular committee meetings. Attached is a schedule of meetings for your reference.

A social hour will be held for all WSWC members and guests from 6:00 – 8:00 pm on Wednesday evening.

The Full Council meeting will be held on Thursday morning, September 14, from 8:00 to 11:30 am.

Additional meeting information and agenda details as they are available will be posted online at <https://westernstateswater.org/events/wswc-2023-fall-meetings/>.

We look forward to seeing most of you in person! Please contact me with any questions at [twillardson@wswc.utah.gov](mailto:twillardson@wswc.utah.gov).

## Tab B – Membership List

# WESTERN STATES WATER COUNCIL

## MEMBERSHIP LIST

### September 5, 2023

#### OFFICERS

Chair - **Jennifer Verleger**  
Vice-Chair - **Jon Niermann**  
Secretary-Treasurer - **Julie Cunningham**

#### STAFF

Executive Director - **Tony Willardson**  
Deputy Director/General Counsel - **Michelle Bushman**  
Policy Analyst - **Elysse Campbell**  
Wade Program Manager - **Adel Abdallah**  
Data Analyst/Hydroinformatics Specialist - **Ryan James**  
Administrative Assistant - **Julie Groat**  
WestFAST Federal Liaison - **Madeline Franklin**

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#### ARIZONA

#### **\*Honorable Katie Hobbs**

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**\*Ex-Officio Member**

**\*\*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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## **COLORADO**

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## **MONTANA**

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## **NEBRASKA**

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Thomas Buschatzke - Arizona  
Jeanine Jones - California  
Rebecca Mitchell - Colorado  
Jerry Rigby - Idaho  
Earl Lewis - Kansas  
Anna Pakenham Stevenson - Montana  
Tom Riley - Nebraska  
Adam Sullivan - Nevada  
Vacant - New Mexico  
Andrea Travnicek - North Dakota  
Jennifer Verleger - North Dakota  
(Chair) (Alternate)\*  
Julie Cunningham - Oklahoma  
Sara Gibson - Oklahoma  
(Alternate)\*  
Doug Woodcock - Oregon  
Hunter Roberts - South Dakota  
Nakaila Steen- South Dakota  
(Alternate)\*  
Jon Niemann - Texas  
(Vice-Chair)  
Candice Hasenyager - Utah  
Vacant - Washington  
Brandon Gebhart - Wyoming  
Jeff Cowley - Wyoming  
(Alternate)\*

## Management Subcommittee

Jennifer Verleger  
(Chair)  
Jon Niemann  
(Vice-Chair)  
Julie Cunningham  
(Secretary/Treasurer)  
Tony Willardson  
(Executive Director)  
Jeanine Jones  
(Former Chair)

### Ex-Officio Representatives

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

## **LEGAL COMMITTEE**

Julie Pack - Alaska  
Ayesha Vohra - Arizona  
Kelly Brown - Arizona  
(Alternate)\*  
Jeanine Jones - California  
Kevin Rein - Colorado  
Jerry Rigby - Idaho  
John Simpson - Idaho  
(Alternate)\*  
Vacant - Kansas  
Jay Weiner - Montana  
Jim Macy - Nebraska  
Melissa Flatley - Nevada  
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Jennifer Verleger - North Dakota  
Sara Gibson - Oklahoma  
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Teresa Wilhelmsen - Utah  
Sarah Shechter - Utah  
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Alan Reichman - Washington  
Chris Brown - Wyoming  
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## **Clean Water Act Jurisdiction**

Jennifer Verleger - North Dakota

## **Non-Tribal Federal Water Needs Subcommittee**

Tom Barrett - Alaska  
Jay Weiner - Montana  
Adam Sullivan - Nevada  
Jennifer Verleger - North Dakota  
Kathy Alexander - Texas  
Buck Smith - Washington  
Chris Brown - Wyoming

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BLM - Ronald McCormick  
David Hu  
Paula Cutillo  
BOR - Arthur Coykendall  
DOD - Lauren Dempsey  
DOJ - Stephen Bartell  
USFS - Michael Eberle  
Chris Carlson  
Ed Harvey  
USFWS - Michael Higgins  
USGS - Timothy McHale  
NPS - Peter Fahmy

## **Tribal Reserved Water Rights Subcommittee**

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## **WRDA/Corps Policies**

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Jennifer Verleger - North Dakota  
Kathy Alexander - Texas

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Betty Olson - California  
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Trisha Oeth - Colorado  
Jojo La - Colorado  
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Jess Byrne - Idaho  
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Jim Macy - Nebraska  
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## Tab C – WSWC Policy Positions



**RESOLUTION  
of the  
WESTERN STATES WATER COUNCIL  
in support of  
INDIAN WATER RIGHTS SETTLEMENTS**  
**~~Fall No Host—Virtual Meeting~~**  
**~~October 15, 2020~~**  
**~~Anchorage, Alaska~~**  
**~~September 14, 2023~~**

**WHEREAS**, the Western States Water Council, an instrumentality of eighteen western states advising Western Governors on water policy, has consistently supported negotiated settlement of disputed Indian-Native American water quantity rights claims; and

**WHEREAS**, the public interest and sound public policy require the resolution of Indian-Native American water rights claims in a manner that is least disruptive to existing uses of water; and

**WHEREAS**, negotiated resolution of Indian-Native American water rights claims is a highly desirable process which can achieve the final determination of Indian-Native American water rights fairly, efficiently, and with the least cost; and

**WHEREAS**, the advantages of negotiated settlements include: (i) the ability to be flexible and to tailor solutions to the unique circumstances of each situation; (ii) the ability to promote conservation and sound water management practices; and (iii) the ability to establish the basis for cooperative partnerships between Indian-Native American and non-Indian-Native American communities; and

**WHEREAS**, the successful resolution of certain claims may require “physical solutions,” such as development of federal water projects and improved water delivery and application techniques; and

**WHEREAS**, the United States has developed many major water projects ~~that compete for use of~~ waters claimed by Indians-Native Americans and non-Native AmericansIndians, and has a responsibility to both to assist in resolving such water use conflicts; and

**WHEREAS**, the settlement of Native American water quantity rights claims is one of the most important aspects of the United States’ trust obligations, where applicable, to Native Americans and is of vital importance to the country as a whole and not just individual Tribes or States; and

**WHEREAS**, the obligation to fund resulting settlements is analogous to, and no less serious than the obligation of the United States to pay judgments rendered against it; and

**WHEREAS**, Indian-Native American water rights settlements involve a waiver of both tribal water right claims and tribal breach of trust claims that otherwise could result in court-ordered judgments against the United States and increase costs for federal taxpayers; and



**WHEREAS**, current budgetary pressures and legislative policies make it difficult for the Administration, the States and the Tribes to negotiate settlements knowing that they may not be funded because either they are considered earmarks or because funding must be offset by a corresponding reduction in some other expenditure, such as another tribal or essential Interior Department program; and

WHEREAS, a substantial federal investment has been made in past settlements, including appropriations under the Infrastructure Investment and Jobs Act creating an Indian Water Rights Settlement Completion Fund, but no permanent dedicated source of funding exists for future settlements.

**NOW, THEREFORE, BE IT RESOLVED**, that the Western States Water Council reiterates its support for the policy of encouraging negotiated settlements of disputed Indian-Native American water quantity rights claims as the best solution to a critical problem that affects almost all of the Western States; and

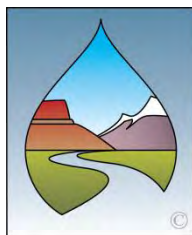
**BE IT FURTHER RESOLVED**, that the Western States Water Council urges the Administration to support its stated policy in favor of Indian-Native American water quantity rights settlements with a strong continuing fiscal commitment for meaningful federal contributions to these settlements that recognizes the applicable trust obligations of the United States government; and

**BE IT FURTHER RESOLVED**, that Congress should expand opportunities to provide funding for settlements both through the Bureau of Reclamation to undertake project construction related to these settlements from revenues accruing to the Reclamation Fund, -- or otherwise via fund-based settlements designed to provide resources for tribes to develop their own water resources – recognizing the existence of other legitimate needs that may be financed by these reserves; and

**BE IT FURTHER RESOLVED**, that Indian-Native American water rights settlements are not and should not be defined as Congressional earmarks; and

**BE IT FURTHER RESOLVED**, that steps be taken to ensure that any Indian-Native American water rights settlement, once authorized by the Congress and approved by the President, will be funded without a corresponding offset, including cuts to some other tribal or essential Interior Department program.

*\*Originally adopted March 21, 2003  
Revised and reaffirmed Mar 29, 2006, October 17, 2008, October 7, 2011,  
October 10, 2014, and October 20, 2017  
(See also Nos. 250, 275, 310, 336, 376, and 412)*



**POSITION  
of the  
WESTERN STATES WATER COUNCIL  
regarding  
USDA CONSERVATION PROGRAMS  
and  
WATER RESOURCES**

**~~Fall No Host -- Virtual Meeting~~  
~~October 15, 2020~~  
~~Anchorage, Alaska~~  
~~September 14, 2023~~**

**WHEREAS**, water is the lifeblood of the West and this is most apparent in the agricultural sector, which accounts for the predominant share of consumptive water use westwide; and

**WHEREAS**, agriculture sustains many rural economies and provides important employment opportunities both directly and indirectly; and

**WHEREAS**, increasing demands on often scarce water resources and periodic drought threaten the West and its agricultural base and the communities built on that base; and

**WHEREAS**, many agricultural producers in the West rely on irrigation surface water delivery systems that are shared among multiple producers and operated by an irrigation district, canal company, mutual ditch company, or acequia while others rely on overdrafted and or overallocated groundwater basins; and

**WHEREAS**, maintaining a sustainable agricultural economy in the West requires promoting efficient water use and achieving net water savings, while maximizing production and in some cases assisting in the transition from irrigated to dryland farming; and

**WHEREAS**, U.S. Department of Agriculture (USDA) conservation programs focus on conservation of ground and surface water resources, as well as reductions in nonpoint source pollution, including nutrients, sediment, pesticides and salinity; and

**WHEREAS**, 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; and

**WHEREAS**, the Farm Service Agency (FSA), Rural Development (RD), Natural Resources Conservation Service (NRCS), and National Water and Climate Center (NWCC) administer many water-related programs; and

**WHEREAS**, multiple USDA farm financial assistance programs are particularly important to producers and rural communities, water users and water quality managers, including the Conservation Reserve Program (CRP), Conservation Reserve Enhancement Program (CREP), Conservation Stewardship Program (CSP), Emergency Watershed Protection Program (EWPP), Environmental Quality Improvement Program (EQIP) and its Conservation Innovation Grants (CIG)

and Colorado River Salinity Control Program (CRSCP), and Regional Conservation Partnership Program, and others such as watershed protection and planning programs; and

**WHEREAS**, special EQIP funding also covers a number of initiatives, including the Drought, Ogallala Aquifer, National Water Quality, Resiliency to Climate Change, and WaterSMART Initiatives; and

**WHEREAS**, the Western States Water Council (WSWC) supports USDA Conservation Program funding levels based on need rather than baseline budget targets; and

**WHEREAS**, the WSWC supports collaborative, targeted and voluntary conservation actions to address locally identified farm, range, forest and water resource concerns on private and public lands; and

**WHEREAS**, the WSWC supports actions to address secure water supplies, improved water quality, and drought and wildfire resilience, as well as wildlife habitat conservation and invasive species threats; and

**WHEREAS**, 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; and

**WHEREAS**, the WSWC supports the continued efforts of Rural Development to provide financial assistance for drinking water, wastewater facilities and other services to rural communities.

**NOW, THEREFORE BE IT RESOLVED**, that the Western States Water Council strongly supports USDA Conservation Programs, and urges the Administration and the Congress to provide sufficient funding to address water conservation, flood protection and water quality remediation needs.

**BE IT FURTHER RESOLVED**, that the WSWC supports regional cooperative agricultural programs such as EQIP Initiatives, the Colorado River Salinity Control Project, and the Regional Conservation Partnership Program.

**BE IT FURTHER RESOLVED**, that the WSWC supports the work done by Rural Development to bring clean, safe drinking water and sanitation to rural communities.

**BE IT FURTHER RESOLVED**, that the WSWC supports investment in voluntary, incentive-based conservation programs, including when appropriate assisting in the transition from irrigated to dryland farming, that are implemented in coordination with state and local governmental partners, while providing the maximum flexibility possible and opportunity for innovation to create efficiencies, coordinate funding and achieve real water savings.

Position #455  
Revised and Readopted  
(See also Position #413 adopted Oct 20, 2017)



**POSITION  
of the  
WESTERN STATES WATER COUNCIL  
on  
PROTECTING GROUND WATER QUALITY**  
**~~Fall No Host – Virtual Meeting~~**  
**~~October 15, 2020~~**  
**~~(revised and reaffirmed)~~**  
**Anchorage, Alaska**  
**September 14, 2023**

**WHEREAS**, ground-water is a critically important natural resource, especially in the mostly arid West; and

**WHEREAS**, ground-water management – the protection of its quality and its orderly, rational allocation and withdrawal for beneficial use – requires cooperation among all levels of government; and

**WHEREAS**, states recognize the importance and role of comprehensive ground water planning in overall water management; and

**WHEREAS**, the federal government has a longstanding policy of deferring to the states to develop and implement ground-water management and protection programs; and

**WHEREAS**, most western states have legal systems to allocate ground-water rights and further have the responsibility for ground-water quality protection; and

**WHEREAS**, the regulatory reach of the Clean Water Act was not intended and should not be applied to the management and protection of ground-water resources contravening state water law, policies and programs; and

**WHEREAS**, nothing stated in this position is intended to apply to the interpretation or application of any interstate compact;

**NOW THEREFORE BE IT RESOLVED** that any federal ground water quality strategy must recognize and respect state primacy, reflect a true state-federal partnership, and provide adequate funding consistent with current federal statutory authorities and regulatory mandates.

*Originally adopted March 14, 1997*

*Revised and Reaffirmed:*

*Mar 14, 2000, Mar 21, 2003, Mar 29, 2006, Oct 17, 2008, Oct 7, 2011,*

*Oct 10, 2014, and Oct 20, 2017*

*(See also Nos. 215, 230, 249, 274, 309, 337, 377, and 414)*



**RESOLUTION**  
**on the**  
**FEDERAL GOVERNMENT'S ROLE IN EXPEDITING**  
**STATE GENERAL STREAM ADJUDICATIONS**

~~Fall No Host~~—**Virtual Meeting**

**October 15, 2020**

**Anchorage, Alaska**

**September 14, 2023**

**WHEREAS**, the western states use general stream adjudications to determine and document relative water rights within basins, including rights to waters claimed by the United States under either state or federal law; and

**WHEREAS**, 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; and

**WHEREAS**, Congress recognized the benefits of state general stream adjudication systems when it adopted the McCarran Amendment (43 U.S.C. §666), which requires the federal government to submit to state court jurisdiction for the adjudication of its water right claims; and

**WHEREAS**, adjudications typically involve hundreds or even tens of thousands of claimants, and federal water right claims are typically the largest, most complex, and costly to resolve; and

**WHEREAS**, the United States Supreme Court held in *United States v. Idaho*, 508 U.S. 1 (1992), that the McCarran Amendment does not require the United States to pay the filing fees and costs that many states use to help fund and reimburse the expenses associated with adjudications; and

**WHEREAS**, the Court's holding shifted much of the costs and expenses of adjudicating federal claims in many states to private water users and state taxpayers, draining state resources and significantly inhibiting the ability of both state and federal agencies to conduct adjudications in a timely manner, threatening private and public property interests; and

**WHEREAS**, requiring federal agencies to pay filing and other fees and costs and follow the same procedures as all other water right claimants would help ensure that their claims are legitimate, in conformity with state law, and made in good faith;

**NOW THEREFORE BE IT RESOLVED** that the Western States Water Council recommends policy changes at the federal level as follows:

1. As a matter of policy, federal agencies should pay a fair share of the fees and costs associated with adjudicating their claims in state court adjudications. The federal government has discretion to adopt such a policy as a matter of fairness, even though not presently required to do so by law. Federal payment of filing fees was a common practice prior to the Court's *United States v. Idaho* decision.

2. General stream adjudications pursuant to the McCarran Amendment should be brought in state and not in federal court. Actions brought in federal court divert substantial resources from state adjudications and are contrary to the intent of the McCarran Amendment.
3. There must be high-level federal involvement in negotiations and mediation that often occur with regard to federal claims within the context of ongoing adjudications in order for them to be effective. Experience has shown that without the involvement of federal participants who have the authority to make decisions, achieving agreements can be illusory and delay mutually beneficial outcomes. Policy direction must be provided by the relevant federal agencies.
4. 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, and which are ultimately of no benefit to the United States.
5. Federal agencies should place a higher priority on educating their leaders and applicable staff regarding western water rights. Where federal agency leadership and staff have an incomplete understanding of the nature of their claims, the processes needed to resolve them, and state water law, this can result in federal actions and policies that hinder or delay the adjudication process or infringe on state authority and water management. Educating federal leaders and staff regarding western water rights will improve federal participation in the adjudication process, thereby improving the process as a whole.
6. Federal agencies should consult with states before asserting water rights claims. Federal water rights claims, particularly reserved water rights claims, can be contentious, time-consuming, costly, and counterproductive, often resulting in outcomes that do not adequately provide for federal needs or are divisive to community needs and interests. States and federal agencies have worked together to craft mutually acceptable and innovative solutions to address federal water needs that are often more capable of accommodating federal interests. At a minimum, federal agencies should consult with states to consider alternatives before filing reserved water rights and other claims in adjudications.
7. Requiring the federal government to provide whatever evidence it may have to substantiate its claims at the time of filing would ensure that federal claims have a sound basis in fact, and also would facilitate timely review of those claims. Given the complexity and the contentiousness involving such claims, states are justified in asking the federal government to take this step. Doing so will expedite the process by: (1) minimizing the filing of questionable or non-compliant claims; and (2) providing a basis for states to ascertain early on the level of resources that states need to commit to the investigation of such claims.

*Originally adopted October 9, 2002  
Reaffirmed Oct 21, 2005, Oct 17, 2008, Oct 7, 2011, Oct 10, 2014, and Oct 20, 2017  
(See also Positions #247, #272(a-b), #308, #335, #375, and 416)*

Commented [MB1]: From Arizona: For the Arizona Department of Water Resources, these two provisions are contradictory and/or would not be appropriate for the Arizona Department of Water Resources to advocate given ADWR's unique role in the Adjudications process as a neutral technical advisor to the court.

Commented [MB2R1]: From Arizona: If the WSWC Legal Committee does not support removing #6 and #7 before going to the Full Council for vote, we would ask that language in the resolution explicitly note Arizona's exclusion from resolution #458.

WSWC POLICY STATEMENTS

Position Number	Committee Oversight	Date Adopted	POSITIONS (Policy positions will be deactivated three (3) years after their adoption, unless extended by formal action of the Council.)
503	WR/E	5/24/2023	regarding water-related federal rules, regulations, directives, orders and policies
502	WR	5/24/2023	support federal authorization and financial support through the U.S. Geological Survey (USGS) for State Water Resources Research Institutes
501	WR	5/24/2023	requests Congress fully appropriate receipts accruing to the Reclamation Fund for their intended purpose
500	WR	5/24/2023	supporting NOAA data, forecasting, and research programs
499	L	5/24/2023	opposes any federal legislation intended to preempt state water law
498	WR	5/24/2023	supporting national dam safety programs
497	WR	5/24/2023	regarding the rural water and wastewater project/infrastructure needs and U.S. Department of Agriculture programs
496	WQ	5/24/2023	regarding the clean and drinking water state revolving funds and state and tribal assistance grants
495	WR	5/24/2023	regarding the National Levee Safety Act of 2007, levees and canal structures
494	WR	5/24/2023	regarding the transfer of federal water and power projects and related facilities
493	WR	5/24/2023	regarding the Reclamation Safety of Dams Act of 1978
492	WR	5/24/2023	regarding the Bureau of Reclamation's maintenance, repair and rehabilitation needs
491	WR	5/24/2023	urging Congress to support subseasonal to seasonal weather research, forecasting, and innovation
490	WQ	5/24/2023	water quality standards and federal reserved treaty rights for tribes
489	L	10/21/2022	supporting legislation requiring the federal government to pay state filing fees in state general stream adjudications
488	WR	10/21/2022	expressing support for implementation of the SECURE Water Act
487	WR	10/21/2022	urges the Administration and NASA to enhance focus on research for water resources applications and promote long term engagement with the WSWC
486	WQ	10/21/2022	related to EPA exercise of authority under Section 404(c) of the Clean Water Act,
485	WR	8/5/2022	urging the Administration and Congress to Support Water Research and Development Programs at the Department of Energy National Laboratories
484	WQ	8/5/2022	regarding Hydraulic Fracturing
483	WR	8/5/2022	supporting Strengthening the Resiliency of Our Nation to the Impacts of Extreme Weather Events
482	WR	8/5/2022	on the Preservation of Radio Frequencies necessary for Weather forecasting and Water Management
481	WQ	4/6/2022	regarding Clean Water Act Jurisdiction
480	L	4/6/2022	regarding Migratory Birds and the Management of State Water Rights and Resources
479	WR	4/6/2022	supporting Renewable Hydropower Development
478	WR	4/6/2022	supporting Rural Water Infrastructure Needs & Projects
477	WQ	9/16/2021	regarding Abandoned Hardrock Mine Cleanup
476	L	9/16/2021	regarding States’ Water Rights and Natural Flows
475	WR	9/16/2021	regarding Bureau of Reclamation Drought Response Program
474	WR	9/16/2021	regarding Drought Preparedness, Prediction and Early Warning Programs
473	WR	9/16/2021	regarding Federal Water and Climate Data Collection and Analysis Programs
<del>472</del>	WQ	9/16/2021	<del>regarding Clean Water Act Jurisdiction</del> > <b>Past Position - replaced by Position #481</b> <
471	WQ	9/16/2021	supporting State Clean Water Act Section 401 Certification Authority
470	L	6/25/2021	regarding Endangered Species and State Water Rights
469	WQ	6/25/2021	regarding Water Transfers and National Pollutant Discharge Elimination System (NPDES) Discharge Permits
468	WR	6/25/2021	regarding the Rural Water Supply Project/Infrastructure Needs
467	L	3/25/2021	regarding the Dividing the Waters program
466	L	3/25/2021	on State primacy over groundwater
465	L	3/25/2021	supporting universal access to reliable, clen drinking water for federally recognized Indian tribes and Alaska native communities
464	WR	3/25/2021	supporting federal research on climate adaptation
463	WR	3/25/2021	regarding water and energy planning and policy
462	WR	3/25/2021	supporting water infrastructure funding
461	WR	3/25/2021	supporting weather station networks
460	WR	3/25/2021	supporting the use of Forecast Informed Reservoir Operations and Innovations
459	WR	3/25/2021	regarding probable maximum precipitation standards
458	L	10/15/2020	outlining actions Federal agencies should take to expedite State General Stream Adjudications
<del>457</del>	L	10/15/2020	supports the Dividing the Waters Program > <b>Past Position - replaced by Position #467</b> <
456	WQ	10/15/2020	asserting state primacy on Protecting Ground Water Quality
455	WR	10/15/2020	supporting U.S. Department of Agriculture (USDA) Conservation Programs and Water Resources
454	L	10/15/2020	supporting Indian Water Rights Settlements

## **Sunsetted Positions**

### **2022**

#472 Regarding Clean Water Act Jurisdiction (*superseded by more recent position*)

### **2020**

#410 Acknowledges state authority over “waters of the State” and called for recognizable limits to federal Clean Water Act jurisdiction. (*superseded by more recent position*)

### **2019**

#394 Urging Congress to authorize and the Administration to complete a comprehensive study of the Missouri River Mainstem Reservoir System’s authorized purposes and related benefits before addressing an appropriate balance and mix of uses. (*outdated*)

#389 Urging Congress and the Administration to prioritize federal programs that provide the translation function between basic scientific research on climate and weather extremes to water resources management actions. (*positions more recently adopted*)

### **2017**

#373 Letter commenting on the proposed rule developed by the EPA and the USACE to clarify the scope of Clean Water Act jurisdiction. (*proposed rule became the 2015 Clean Water Rule*)

#372 Letter sending comments on the USFS Proposed Directive on Groundwater Resource Management, Forest Service Manual 2560. (*Forest Service has withdrawn their activity*)

#370 The Interpretive Rule Regarding Applicability of the Exemption from Permitting under Section 404(f)(1)(A) of the Clean Water Act to Certain Agricultural Conservation Practices. (*proposed rule was withdrawn*)

### **2016**

#359 Opposing requiring pesticide applications for National Pollutant Discharge Elimination System (NPDES) discharge permits. (*outdated*)

### **2015**

#338 Energy and Water Integration Act of 2011. (*outdated*)

#341 Letter regarding concerns with the Bureau of Reclamation’s proposed changes to the Reclamation Manual. (*outdated*)

### **2013**

#323 A Shared Vision on Water Planning and Policy. (*superceded by a permanent mission statement, A Vision of Water*)



## **2012**

- #313 Letter Regarding National Water Research and Development Initiative Act. *(There is no current legislation)*
- #315 Letter to House Transportation and Infrastructure Committee leaders raising concerns regarding a draft bill entitled the Sustainable Watershed Planning Act. *(outdated, not reintroduced)*
- #317 Supporting the Bureau of Reclamation's Field Services Program. *(outdated)*
- #318 Offering general comments to CEQ on the Principles and Guidelines. *(outdated)*
- #319 Describing principles that are important to the Western states in considering a "national vision" for water policy. *(superceded by more recent position)*

## **2011**

- #297 Strong support for legislation to establish a National Drought Council to improve national drought preparedness, mitigation, and response efforts. *(There is no current legislation)*
- #298 In cooperation with the Interstate Council on Water Policy expressing strong support for increased funding for the Cooperative Water Program and the National Streamflow Information Program. *(superceded by more recent position statements and letters)*
- #299 Supporting S. 2842, the Aging Water Infrastructure and Maintenance Act. *(enacted)*
- #300 Regarding introduction of the Cooperative Watershed Management Act of 2008 (S. 3085). *(enacted)*
- #301 Commenting on H.R. 135, the "21st Century Water Commission," specifically declaring that the WSWC be involved in the selection of members and that it include State and Native American involvement. *(Bill has not been reintroduced)*
- #302 Supporting the enactment of S. 895 to provide the Bureau of Reclamation with authority to assess rural water supply needs and for sufficient funding. *(enacted)*
- #303 Revised resolution in support of the Weather Modification Research and Technology Transfer Act. *(No federal research program or legislation has been reintroduced)*
- #306 Urging support for full funding of the USGS National Streamflow Information Program (NSIP) and sufficient funding for the Cooperative Water Program to match non-USGS contributions. *(outdated)*
- #307 Letter to Senator Bingaman, Senate Energy and Natural Resources Committee, expressing interest in S. 3231, the Omnibus Public Lands Management Act. *(outdated)*
- #311 Letter to Steve Stockton offering assistance to the Corps in their water planning initiative. *(outdated)*

## **2010**

- #287 Setting forth the Council's past perspectives on a proposed "Twenty-First Century Water Commission." *(outdated - see #301 above)*

- #289 Support of the proposed Water Conservation, Efficiency and Management Act, to specifically authorize the Bureau of Reclamation's water conservation programs. (*separately authorized*)
- #290 Concern over the Administration's decision to zero out funding for the U.S. Bureau of Reclamation's Technical Assistance to States (TATS) Program. (*outdated*)
- #291/#292 Regarding the proposed Agricultural Water Enhancement Program. (*enacted*)
- #295 Concern over budget request for federal funding for water and wastewater treatment, specifically EPA's State Revolving Fund (SRF) Capitalization Grants. (*combined with #296 and replaced with #330 – Apr 15, 2011*)
- #296 Concern with OMB directive to EPA disallowing the use of SRF revenues to repay bonds. (*combined with #295 and replaced with #330 – Apr 15, 2011*)

## **2009**

- #276 Urging the Congress and Administration to Continue to Recognize State Primacy Regarding Water Rights and Water Quality Certification in the Federal Licensing of Hydroelectric Projects. (*supplanted by WGA resolution*)
- #277 Letter commending the American Indian Environmental Office of EPA for its efforts in establishing the Tribal Water Program Council and expressing a hope that it would "offer an ongoing opportunity for state-tribal cooperation on issues of mutual interest." (*outdated*)
- #279 Support for legislation (S. 2751 and H.R. 5136) to create a National Integrated Drought Information System within the National Oceanic and Atmospheric Administration. (*authority enacted*)
- #280 Strong support for federal legislation, the National Drought Preparedness Act, to establish a national policy for drought and coordinate "proactive measures at all levels of government to plan, prepare and mitigate the serious impacts of drought." (*deferred to WGA resolution*)
- #281 Support for Reclamation's Water Conservation Field Services Program and "Bridging-the-Headgate" Partnerships. (*outdated*)
- #282 Regarding Federal Non-Tribal Fees in General Adjudications asking the Congress to pass legislation requiring the Federal government, when a party to a general water rights adjudication, to pay fees for costs imposed by the state to conduct the proceedings to the same extent as all other users. (*deferred to WGA resolution*)
- #283 Reiterating strong support for maintaining a thermal band as part of the Landsat Data Continuity Mission, and the necessary funding. (*separately updated*)

## **2008**

- #262 Support for the U.S. Geological Survey's Cooperative Water Program (CWP) and opposes any effort to force the privatization of related USGS services. (*separately updated*)
- #268 The WSWC endorses policy resolutions adopted by the Western Governors' Association, and will allow these policies to guide the Council in matters relevant to implementation and potential reauthorization of the Clean Water Act. (*deferred to WGA resolution*)
- #269 Water Efficiency Standards for Plumbing Products. (*subsequently enacted*)

- #270      Reauthorization of the Farm Bill. (*reauthorized*)
- #271      Support for the National Aeronautics and Space Administration's Landsat Data Continuity Mission and calling for continued funding to include a thermal infrared sensor. (*superceded by 2009 WSWC Position No. 283*)
- #273      Support for the Nonpoint Source Grant program administered by the U. S. Environmental Protection Agency under Section 319 of the Clean Water Act. (*outdated*)

Tab D – Budget

FY2023 Approved Budget w/FY2023 Year-End Income & Expenses Estimates & FY2024 Budget Projections

		WaDE-WSWC FY2023 Total Budget	FY2023 WaDE Approved Budget	FY2023 WaDE Income/Expenses	FY2024 WaDE Approved Budget	FY2023 WSWC Approved Budget	FY2023 WSWC Income/Expenses	FY2024 WSWC Budget Projections	FY2024 WSWC/WaDE Combined Budget
<b>INCOME</b>									
Member States Assessments	1	\$ 594,000.00	\$ -		\$ -	\$ 594,000.00	\$ 594,000.00	\$ 648,000.00	\$ 648,000.00
Miscellaneous Income		\$ -	\$ -		\$ -	\$ -	\$ 1,241.00	\$ 1,200.00	\$ 1,200.00
Council Meeting Sponsors		\$ 4,500.00	\$ -		\$ -	\$ 4,500.00	\$ 10,462.00	\$ 5,000.00	\$ 5,000.00
Interest		\$ 2,500.00	\$ -		\$ -	\$ 2,500.00	\$ 20,731.04	\$ 25,000.00	\$ 25,000.00
Symposium/Workshop Sponsors		\$ 8,000.00	\$ -		\$ -	\$ 8,000.00	\$ -	\$ 8,000.00	\$ 8,000.00
NARF WSWC Symposium (net)		\$ -	\$ -		\$ -	\$ -	\$ -	\$ 5,000.00	\$ 5,000.00
NASA JPL		\$ 14,191.58	\$ -		\$ -	\$ 14,198.50	\$ 14,198.50	\$ -	\$ -
USBR Water SMART (\$200k/2 years)		\$ 100,000.00	\$ 90,000.00	\$ 93,230.31	\$ 86,769.69	\$ 10,000.00	\$ 20,717.84	\$ 20,717.84	\$ 107,487.53
Water Foundation Grant		\$ 125,000.00	\$ 112,500.00	\$ 255,000.00	\$ 140,000.00	\$ 12,500.00	\$ -	\$ -	\$ 140,000.00
Moore Foundation - Internet of Water		\$ 54,998.83	\$ 49,498.95	\$ -	\$ -	\$ 5,499.88	\$ 8,953.33	\$ -	\$ -
BHP Foundation - Internet of Water		\$ 166,992.71	\$ 150,293.44	\$ 32,411.79	\$ 100,000.00	\$ 16,699.27	\$ 9,084.48	\$ 10,000.00	\$ 110,000.00
<b>TOTAL INCOME</b>		\$ 1,070,183.12	\$ 402,292.39	\$ 380,642.10	\$ 326,769.69	\$ 667,890.73	\$ 665,189.69	\$ 722,917.84	\$ 1,049,687.53
<b>EXPENSE</b>									
Accounting		\$ 10,000.00	\$ -			\$ 10,000.00	\$ 9,025.00	\$ 4,500.00	\$ 4,500.00
Annual & Sick Leave Funding		\$ -	\$ -			\$ -	\$ 22,083.23	\$ -	\$ -
Audit		\$ 5,000.00	\$ -			\$ 5,000.00	\$ -	\$ 10,000.00	\$ 10,000.00
Contingencies		\$ 7,000.00	\$ 3,500.00	\$ 950.00	\$ 1,500.00	\$ 3,500.00	\$ 5,074.17	\$ 6,000.00	\$ 7,500.00
Contract Services		\$ 59,400.00	\$ -			\$ 59,400.00	\$ 12,883.75	\$ 25,000.00	\$ 25,000.00
Equipment Replacement Fund		\$ 3,000.00	\$ -			\$ 3,000.00	\$ 3,000.00	\$ 3,000.00	\$ 3,000.00
Furniture-Equipment		\$ 2,000.00	\$ -			\$ 2,000.00	\$ 1,717.81	\$ 2,000.00	\$ 2,000.00
Insurance		\$ 7,500.00	\$ 3,600.00		\$ -	\$ 3,900.00	\$ 1,413.00	\$ 5,000.00	\$ 5,000.00
Maintenance Contracts		\$ 5,000.00	\$ -			\$ 5,000.00	\$ 4,690.38	\$ 5,000.00	\$ 5,000.00
Meetings & Arrangements		\$ 24,000.00	\$ 1,000.00	\$ -	\$ 1,000.00	\$ 23,000.00	\$ 22,127.81	\$ 25,000.00	\$ 26,000.00
Office Supplies		\$ 1,500.00	\$ 350.00			\$ 1,150.00	\$ 1,289.54	\$ 1,500.00	\$ 1,500.00
Payroll Benefits									
Dental Insurance		\$ 4,000.00	\$ 1,900.00	\$ 190.60	\$ 1,143.60	\$ 2,100.00	\$ 2,064.74	\$ 2,064.00	\$ 3,207.60
Life Insurance		\$ 360.00	\$ 144.00	\$ 21.80	\$ 130.80	\$ 216.00	\$ 196.02	\$ 196.20	\$ 327.00
LT Disability Insurance		\$ 2,350.00	\$ 940.00	\$ 135.46	\$ 891.81	\$ 1,410.00	\$ 1,334.14	\$ 1,422.01	\$ 2,313.82
Medical Insurance		\$ 85,900.00	\$ 38,826.00	\$ 3,720.54	\$ 23,327.64	\$ 47,074.00	\$ 45,566.25	\$ 47,065.32	\$ 70,392.96
Pension		\$ 73,713.00	\$ 28,350.00	\$ 4,604.36	\$ 30,321.66	\$ 45,363.00	\$ 47,174.23	\$ 48,348.33	\$ 78,669.99
Payroll Salaries		\$ 430,000.00	\$ 162,508.00	\$ 58,169.20	\$ 178,362.69	\$ 267,492.00	\$ 233,136.23	\$ 284,401.93	\$ 462,764.62
Payroll Taxes		\$ 37,109.00	\$ 14,024.00	\$ 2,088.42	\$ 14,536.45	\$ 23,085.00	\$ 23,168.82	\$ 23,062.50	\$ 37,598.95
Pension Management		\$ 6,000.00	\$ -			\$ 6,000.00	\$ 4,590.89	\$ 6,000.00	\$ 6,000.00
Postage & Freight		\$ 750.00	\$ -			\$ 750.00	\$ 463.43	\$ 550.00	\$ 550.00
Printing & Reproduction		\$ 2,500.00	\$ -			\$ 2,500.00	\$ 1,301.55	\$ 1,500.00	\$ 1,500.00
HOA Fees (w/o Property Tax)		\$ 3,565.00	\$ -			\$ 3,565.00	\$ 3,750.00	\$ 3,600.00	\$ 3,600.00
Property Tax		\$ 3,765.00				\$ 3,765.00	\$ -	\$ 4,000.00	\$ 4,000.00
Storage Rent		\$ 4,620.00	\$ -			\$ 4,620.00	\$ 3,970.00	\$ 4,800.00	\$ 4,800.00
Reports & Publications		\$ 7,500.00	\$ -			\$ 7,500.00	\$ 5,001.13	\$ 6,000.00	\$ 6,000.00
Symposium (Nat'l Water Data Workshop)		\$ -	\$ -	\$ -		\$ -	\$ -	\$ 500.00	\$ 500.00
Symposium (CDWR-S2S)		\$ -	\$ -			\$ -	\$ -	\$ 8,000.00	\$ 8,000.00
Symposium (WSWC / NARF)		\$ -	\$ -			\$ -	\$ -	\$ 1,000.00	\$ 1,000.00
Telephone (UBS)		\$ 3,780.00	\$ -			\$ 3,780.00	\$ 2,583.00	\$ 2,800.00	\$ 2,800.00
Travel		\$ 45,000.00	\$ 14,950.39	\$ 2,115.00	\$ 10,000.00	\$ 30,049.61	\$ 30,457.68	\$ 40,000.00	\$ 50,000.00
Utilities (Questar & Murray Power)		\$ 2,200.00	\$ -			\$ 2,200.00	\$ 1,622.89	\$ 2,000.00	\$ 2,000.00
Other - Software & Licensing		\$ 2,500.00	\$ 2,200.00		\$ 12,000.00	\$ 300.00	\$ -	\$ -	\$ 12,000.00
WaDE Contractor Payments (DPL)		\$ 130,000.00	\$ 130,000.00	\$ 36,500.00	\$ -	\$ -	\$ -	\$ -	\$ -
WaDE State Assistance		\$ -	\$ -		\$ -	\$ -	\$ -	\$ -	\$ -
<b>TOTAL EXPENSES</b>		\$ 970,012.00	\$ 402,292.39	\$ 108,495.38	\$ 273,214.65	\$ 567,719.61	\$ 489,685.69	\$ 574,310.29	\$ 847,524.94
<b>Balance</b>		\$ 100,171.12	\$ (0.00)	\$ 272,146.72	\$ 53,555.04	\$ 100,171.12	\$ 175,504.00	\$ 148,607.55	\$ 202,162.59

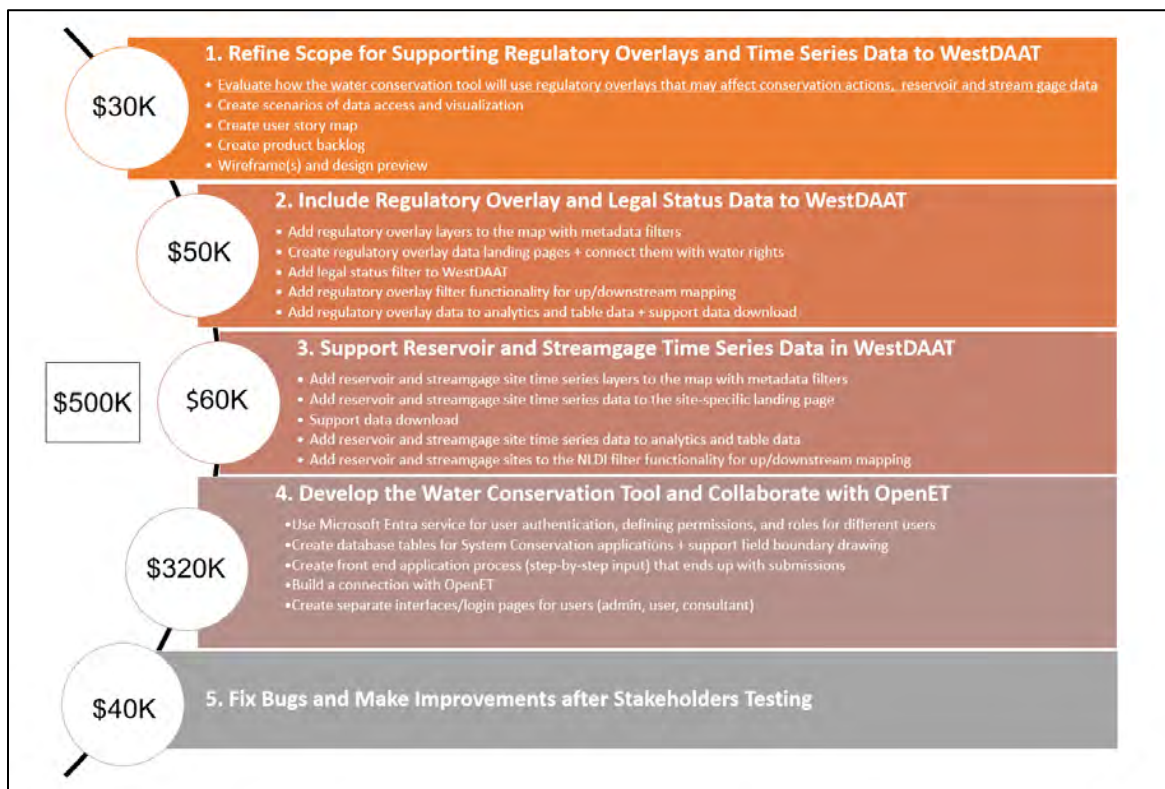
## Water Data Exchange (WaDE) Program Update for WSWC 2023 Fall Meetings

Adel Abdallah: WaDE Program Manager  
 Ryan James: WaDE Data Analyst / Hydroinformatics Specialist  
 Tony Willardson: Western States Water Council Executive Director

*The WaDE Program is committed to assisting the Western States Water Council (WSWC) member states in publicly sharing water rights, allocation, supply, and use data through a streamlined and standardized service that enables regional analyses to inform water resources planning and policies. See <https://westernstateswater.org/wade>.*

### What's Next? WestDAAT Second Stage Development

The second stage of development will support user-friendly access through WestDAAT to the following data types: (1) regulatory overlays; (2) site-specific time series; and (3) the Water Conservation Tool. These data types and the tool are essential in informing water use planning and management across the West. Figure 7 summarizes the key tasks of this second stage of development of WestDAAT and their estimated IT contracting costs.



**Figure 7:** Estimated IT contracting costs to build WestDAAT Second Stage data services.

Below is a summary of the identified additional added values of WestDAAT Second Stage development. As mentioned earlier, WSWC will seek funding next month to build this tool from a philanthropic organization and a WaterSMART Reclamation Grant.

### **Support water conservation programs**

The proposed Water Conservation Tool extension to WestDAAT will support conservation programs across the West.

### **Support access and analyses to regulatory overlays and water rights data**

WestDAAT users will query and filter regulatory overlays that provide context to surface and groundwater water rights administrations across the West. They will be able to answer questions like the following:

- What are the regulations or regulatory agencies or districts with authority over groundwater or surface water across the West?
- Show the water rights location within a selected regulatory overlay through a geospatial boundary (e.g., district), state, or interstate (compact). Such water rights could be impacted by a call on the river or a regulatory decision.
- What local or regional regulations have potential jurisdiction over the water right or water use of interest?

Users will also further query water rights data based on their legal status, point of diversion site type, and water source name. These filters are not currently supported in WestDAAT and need further work to narrow them down to common terms across the Western states. These additional functionalities were highlighted in the stakeholder engagement of the first stage of development.

- What are the water rights classified as adjudicated or pending in WestDAAT?
- Which states track relinquished, abandoned, or forfeited water rights?
- Which points of diversions in a watershed (e.g., Colorado River Basin) are permitted from a site type such as a reservoir or dam?
- Show water rights in California with a state-defined water source name as the Colorado River. Filtering by source name is useful especially when points of diversion are located outside the basin (trans-basin diversion rights).

### **Provide access to reported historic water withdrawals on points of diversion.**

WestDAAT users access reported historic water withdrawals (when available) for any water right of interest. Historic withdrawals are important to water budgets in river basins and planning future use, especially under drought. This task will provide visual and tabular access to historic withdrawals related to water rights whenever available by the states. California and North Dakota will be the first to support them as they have this data. Users can click at a Point of Diversion and access its reported withdrawals.

**Provide access to state-maintained gage stations, reservoirs, or groundwater pumping data across the West.**

WestDAAT users will access this data along with U.S. Geological Survey (USGS) and Bureau Reclamation data services to inform water supply and availability across the West. The WaDE database already has this data for ten western states. This task includes designing a new tab in WestDAAT to provide a wide range of data filtering for this data, as shown in the prototype application here

<https://waterdataexchange.swc.shinyapps.io/SiteSpecificReservoirAndObservationSiteDemo/>



\$30K

## 1. Refine Scope for Supporting Regulatory Overlays and Time Series Data to WestDAAT

- Evaluate how the water conservation tool will use regulatory overlays that may affect conservation actions, reservoir and stream gage data
- Create scenarios of data access and visualization
- Create user story map
- Create product backlog
- Wireframe(s) and design preview

\$50K

## 2. Include Regulatory Overlay and Legal Status Data to WestDAAT

- Add regulatory overlay layers to the map with metadata filters
- Create regulatory overlay data landing pages + connect them with water rights
- Add legal status filter to WestDAAT
- Add regulatory overlay filter functionality for up/downstream mapping
- Add regulatory overlay data to analytics and table data + support data download

\$500K

\$60K

## 3. Support Reservoir and Streamgage Time Series Data in WestDAAT

- Add reservoir and streamgage site time series layers to the map with metadata filters
- Add reservoir and streamgage site time series data to the site-specific landing page
- Support data download
- Add reservoir and streamgage site time series data to analytics and table data
- Add reservoir and streamgage sites to the NLDI filter functionality for up/downstream mapping

\$320K

## 4. Develop the Water Conservation Tool and Collaborate with OpenET

- Use Auth0 service for user authentication, defining permissions, and roles for different users
- Create database tables for System Conservation applications + support field boundary drawing
- Connect regulatory overlays, water rights, and streamgage data that are relevant to the conservation application
- Create front end application process (step-by-step input) that ends up with submissions
- Build a connection with OpenET
- Create separate interfaces/login pages for users (admin, user, consultant)

\$40K

## 5. Fix Bugs and Make Improvements after Stakeholders Testing

## Tab E – WSWC Activities and Events

# **Western States Water Council Summary of Activities**

## **June 2023 - September 2023**

### **ADMINISTRATION/CONGRESSIONAL OUTREACH**

On June 6, 2023, Jeanine Jones, California Department of Water Resources (CDWR) representing WSWC, testified before the House Science Space and Technology Subcommittee on Environment regarding Reauthorizing the Weather Act: Users of Weather Data and Areas for Improvement by Sector.

On August 21, the Council of Infrastructure Financing Authorities (CIFA) submitted a coalition letter to congressional leaders regarding funding for the Clean Water and Drinking Water State Revolving Funds. The WSWC signed onto the letter.

On August 4, the WSWC sent a letter to Environmental Protection Agency (EPA) Administrator Michaela Regan expressing Western State concerns regarding the proposed rule on Federal Baseline Water Quality Standards (WQS) for Indian Reservations.

### **WESTERN GOVERNORS' ASSOCIATION COORDINATION**

June 26-28, WSWC Executive Director attended Western Governors' Association (WGA) Annual Meeting in Boulder, Colorado.

The WSWC is a member of the Western Policy Network, led by WGA, and participates in quarterly calls and provides information for the Western Policy Network Roundup Monthly Newsletter.

The Executive Director keeps in contact with the WGA's Water Policy Advisor on various water issues.

### **WSWC CALLS, MEETINGS, SURVEYS, SYMPOSIA AND WORKSHOPS**

On August 8-9, the WSWC and Native American Rights Fund (NARF) held its 18th Biennial Symposium on the Settlement of Indian Reserved Water Rights Claims (virtually) with 139 registered.

On August 15-17, the WSWC and the CDWR cosponsored an Improving Sub-seasonal to Seasonal Precipitation Forecasting to Support Water Management Workshop in San Diego, California with 40 participants.

### **COORDINATION WITH WESTFAST AGENCIES**

WSWC and WestFAST leadership communicate weekly and via monthly WestFAST calls as needed.

EPA has also invited the WSWC to join their Dialogue with Intergovernmental Associations (monthly).

## **WestFAST WEBINARS**

May 3 – Pursuing Pumped Storage Hydropower.

June 21 – Supporting Drought Resilience Through State Planning.

July 12 – Introduction to Stream Restoration and Water Rights

August 31 – The Science of Stream Restoration.

## **COORDINATION WITH OTHER ORGANIZATIONS**

June 7, WSWC Executive Director presented at the NASA MAR Meeting (virtually).

August 10-11, WSWC Deputy Director attended the Attorney General Alliance Energy & Environmental Summit to moderate a panel discussing western water resources, compact negotiations, and recent Supreme Court decisions.

## **WaDE DEVELOPMENT AND OUTREACH**

Ongoing: WSWC and IT contractor (Don't Panic Labs) - WaDE Key Questions Agreement: Water Conservation Application Tool.

May 31, 223 – WSWC and Reclamation Upper Colorado Basin coordination call: Water Rights Information Management System (WRIMS).

May 31, 223 – Water Supply Hub: scoping meeting with Reclamation.

June 7, 223 – Geoconnex Working Group meeting.

June 9, 223 – WaDE and Cooperative Institute for Research to Operations in Hydrology (CIROH) coordination call.

June 13, 223 – Discussion call with Andy Brummond, Water Conservationist, Montana Fish, Wildlife & Parks: mapping Montana instream flow data in WestDAAT.

June 16, 2023 – UCRC 303rd Regular Summer Meeting – Virtual.

June 20, 2023 – Wyoming State Engineer's Office and Wyoming Water Development Office: Discussing Wyoming water rights data in WestDAAT + experience with System Conservation Pilot Program (SCPP) Applications.

June 21, 2023 – Internet of Water (IoW) Public Agencies Working Group Meeting.

July 17-19, 2023 – American Water Resources Association (AWRA) 2023 Summer Conference: Connecting Land & Water for Healthy Communities. WestDAAT demo and presentation.

July 20, 2023 – Internet of Water (IoW) Application Programming Interface (API) user testing.

July 21, 2023 – WSWC collaboration discussion call with Upstream Tech.

July 26, 2023 – WUDR Open Forum: The history and applications of the Great Lakes Regional Water Use Database.

July 26, 2023 – WaterSMART Applied Science Grant Webinar.

July 27, 2023 – WSWC collaboration discussion call Deloitte: Updating Water Rights Data for California (UPWARD) Project.

August 3, 2023 – Native American water rights data discussion between WSWC and Bureau of Indian Affairs (BIA), Michael Whitehead.

August 3, 2023 – WSWC and Reclamation Upper Colorado Basin coordination call: Water Rights Information Management System (WRIMS).

August 3, 2023 – Internet of Water (IoW) Coalition Steering Committee meeting- Virtual.

August 7, 2023 – Upper Colorado River Commission (UCRC) and WSWC: Water Conservation Tool discussion.

August 7, 2023 – Wilson Water Group and WSWC: WestDAAT demo and Water Conservation Tool discussion.

August 8-9, 2023 – WSWC-NARF 18th Biennial Indian Reserved Water Rights Symposium: WestDAAT demo and presentation.

August 10, 2023 – WSWC and OpenET and WestDAAT Water Conservation Tool discussion.

August 18, 2023 – Upper Colorado River Commission (UCRC) and WSWC: Water Conservation Tool discussion follow-up.

August 24, 2023 – WaDE and United States Geological Survey (USGS) water use data discussion.

August 29, 2023 – WestDAAT and Aspect Consulting LLC Washington water rights data discussion.

August 31, 2023 – WestDAAT demo to Great Salt Lake Commissioner.

September 1, 2023 – Reclamation's consumptive use estimates for Colorado River Basin call with Jim Praire.

## **COMMITTEES, TASK FORCES AND WORKGROUPS**

Ad Hoc Group on Indian Water Rights Settlements – WSWC Executive Director/Deputy Director

American Water Resources Association (AWRA) – WSWC Exec. Dir. and WaDE Program Manager

AWRA 2023 Summer Land and Water Conference Program Planning Committee – WSWC Exec. Dir

CUAHSI Hydroinformatics Conference Planning Committee – WaDE Program Manager

IOW Coalition – WSWC Executive Director (Vice-Chair) and WaDE Program Manager (alternate)

National Integrated Drought Information System (NIDIS) Executive Council – WSWC Executive Director, Co-Chair

National Water Census Ad Hoc Group – WaDE Program Manager

National Drought Resilience Partnership – WSWC Executive Director

USGS Water Use Strategic Planning Team – WaDE Program Manager

Western Association of Fish and Wildlife Agencies (WAFWA) – WSWC Executive Director (liaison)

Western Policy Network – WSWC Executive Director

Western Regional Partnership – WSWC Executive Director/Deputy Director

## Tab F – Future WSWC Meetings

# **WESTERN STATES WATER COUNCIL**

## **FUTURE MEETINGS**

### **Upcoming Council Meetings/Host States**

Spring – Washington, D.C.  
March 11-15, 2024 (**tentative**)

#### Summer/Fall Options

- North Dakota last held 7/15/16 in Bismarck
- Kansas last held 10/9/15 in Manhattan

### **2025 Meetings Projections**

Spring –	Utah	last held 9/30/2016 in St. George
Summer –	Nebraska	last held 4/14/2017 in Nebraska City
Fall –	California	last held 6/29/2017 in Rohnert Park



# MEETING SCHEDULE

	Alaska	Arizona	California	Colorado	Idaho	Kansas	Montana	Nebraska	Nevada	New Mexico	North Dakota	Oklahoma	Oregon	South Dakota	Texas	Utah	Washington	Wyoming	Other
164			San Diego 10/29/10																
165										Santa Fe 4/15/11									
166													Bend 7/29/11						
167					Idaho Falls 10/7/11														
168																			Wash. DC 3/15/12
169																	Seattle 6/8/12		
170															San Antonio 10/12/12				
171				Denver 4/5/13															
172																		Casper 6/26/13	
173														Deadwood 10/4/13					
174																			Wash. DC 4/3/14
175							Helena 7/18/14												
176		Scottsdale 10/10/14																	
177												Tulsa 4/17/15							
178									50 <sup>th</sup> Anniversary Stateline 7/10/15										
179						Manhattan 10/9/15													
180																			Wash. DC 3/22/16
181											Bismarck 7/15/16								

[illegible]

## Tab G – Draft FY 2023-2024 Committee Workplans

**EXECUTIVE COMMITTEE  
WORK PLAN  
2023/2024**

**1. WGA/WSWC COORDINATION and COLLABORATION**

**Work to date:** The Western Governors' Association (WGA) has adopted two comprehensive policy statements, one ~~focused on water quantity~~, Water Resource Management in the West (2021-08) and the other ~~on water quality~~, Water Quality in the West (2021-10), as well as other policy statements with water-related implications.

The Council has worked closely with WGA on various regulatory and other issues, especially the Corp's Water Supply Rule, EPA's proposed and final rules related to Clean Water Act (CWA) jurisdiction and the definition of Waters of the United States, as well as the CWA 401 State Water Quality Certification.

WGA has taken the lead on some issues and deferred to the Council ~~to take the lead on some other~~ issues, such as tribal water rights settlements.

**2023/24/23:** The Council and the Committee will continue to coordinate and consult with the WGA on matters that come before the Council and assist as requested in the development and implementation of WGA water-related policies. WGA staff are invited to attend and participate in our meetings, workshops and symposia. WGA and WSWC staff collaborate on a continuing basis.

As in the past, the Council may propose policy resolutions for WGA consideration. Further, the WSWC Chair and/or Executive Director will participate in WGA meetings as appropriate. Working with the WGA, the Council will also coordinate Western Federal Agency Support Team (WestFAST) activities and needs. WGA and WSWC will also work together as part of the Western Policy Network.

**Subcommittee:** Management Subcommittee

**Time Frame:** ongoing

**2. WESTFAST**

**Work to date:** ~~WestFAST's~~ The creation in 2008 of our Western States Federal Agency Support Team (WestFAST) has had many benefits. It is a unique forum for addressing western (and national) water issues that has brought together fifteen separate ~~over a dozen~~ federal agencies to collaborate with each other and state agencies with water-related responsibilities. WestFAST addresses issues raised with the Council and WGA (which in turn support development and implementation of related federal policies and programs). WestFAST and the Council have also discussed collaborative federalism principles to guide federal/state working relationships.

**2023/242/23:** The Executive Committee will continue to oversee the Council's work with WestFAST. Further, the Committee will work to ensure participating agencies realize the real and potential benefits of WestFAST, helping to build a sound foundation for continuing collaboration. The WSWC will meet regularly with WestFAST representatives and will continue building and maintaining closer ties with WestFAST principals. The Council will also advocate for continued WestFAST funding.

**Time Frame:** Ongoing

### **3. FEDERAL ADMINISTRATION and CONGRESSIONAL VISITS/CONTACTS**

**Work to date:** In an ongoing effort to promote WSWC and WGA positions and priorities, Council officers, members and staff often travel to Washington, D.C. to visit with Administration officials and Congressional members and staff. WSWC members and staff have also previously hosted or presented at briefings for congressional staff on the importance of federal data gathering activities, including Landsat thermal data, U.S. Geological Survey streamgaging programs, USDA's National Weather and Climate Center and its snow survey activities, National Oceanic and Atmospheric Administration programs (including the National Integrated Drought Information System and improving subseasonal to seasonal (S2S) [precipitation](#) forecasting), as well as Indian water rights settlements. Some of the feedback from these meetings has suggested a need for greater contact and communication between the Council and federal and congressional policymakers.

Of note, the Council is often invited to testify on proposed legislation. Further, the Council also distributes policy positions adopted at its meetings to House and Senate members of western state delegations, key Congressional leadership and staff, and senior Administration officials.

**2023/242/23:** The Council will continue to communicate our positions with the ~~new~~ Administration and the Congress. Future meetings when appropriate will be scheduled with Administration and Congressional contacts and advise them on major national water issues from the perspective of western states. The WestFAST Liaison Officer and WestFAST members will assist with and participate in visits with Executive Branch agencies. The WSWC will meet with WestFAST principals. Other trips and visits may be made as needed. The Council staff and members will also communicate our external positions as the need arises and continue to respond to requests for testimony, briefings and information from the Congress and the Administration.

**Subcommittee:** Management Subcommittee

**Time frame:** Ongoing

### **4. REGULAR COUNCIL MEETINGS**

**Work to date:** The first meeting of the Council was held in Stateline, Nevada in 1965, and regular meetings have been held since. Currently, the Council meets three times per year, rotating among the member states, which host the meetings at a location of their choice. ~~Given the current~~ During the pandemic, meetings ~~werehave been~~ held virtually. One benefit ~~of virtual and now hybrid~~

meetings has been expanded participation and reduced meeting and travel costs. Guest speakers and topics for discussion are scheduled according to members' interests and needs. External policy positions for consideration are noticed 30-days before the Council meets and are distributed not only to members, but also to WGA staff and the Governors' staff. Any position statement not noticed may be brought before the Council for consideration at a meeting by unanimous consent, but if approved, must be sent to WGA for review prior to distribution consistent with mutually agreed upon WGA and WSWC procedures for policy coordination.

**2023/242/23:** The Spring 2023 meetings were held in Reno, Nevada late in May, and the Fall meetings scheduled in mid-September, in Anchorage, Alaska. Therefore, it was determined there would be no Summer 202322 meetings, nor would there be an attempt to schedule a winter meeting. Rather, the WSWC will meet in March 2024 in Washington, D.C. in collaboration with the Interstate Council on Water Policy (ICWP), with a joint roundtable meeting. Unlike past roundtables, the National Water Supply Association (NWSA) will not be joining us. are scheduled to be held in Polson, Montana. The Fall 2022 meetings are scheduled to be held in Oklahoma.

## **5. NEWSLETTER**

**Work to date:** *Western States Water* provides members and others with accurate and timely information on various water resources topics, activities and events at state, regional and national levels. It has been-is provided as a free service to members, governors and their staff, member state water resource agencies, state water users associations, selected multi-state organizations, key congressmen and their staffs, and top federal administration officials. A subscription fee for others has been discontinued. It is primarily distributed via email, and is posted on our website, with password protection (for recent issues).

**2023/241/22:** Along with the Council's regular meetings, the newsletter requires our most significant commitment of staff resources, though that is usually ancillary to other efforts. The response from members and others receiving the newsletter has been consistently positive. The Council will continue to provide this service weekly via email, except for those who request a hard copy.

**Time Frame:** Ongoing

## **6. WATER MANAGEMENT SYMPOSIA**

**Work to date:** An annual WSWC Water Management Symposium has traditionally been held under the auspices of the Executive Committee. However, the Committee has usually asked one of the other committees to take the lead. This includes a biennial Indian Water Rights Settlement Symposia cosponsored with the Native American Rights Fund. The last WSWC/next Council and NARF Symposium was ill-be held virtually in August 2023. The Executive Committee considers hosting symposia on any topic and issues as their importance merits.

In ~~2022-23~~<sup>19</sup>, the Council held a number of meetings and webinars in collaboration with relevant federal agencies, multiple stakeholders, and public and private experts. ~~on water resources infrastructure needs and financing strategies.~~ This included exploring a potential regional approach to defining “Waters of the United States” (WOTUS), and a technical white paper summarizing the discussions was drafted. Further, a National Water Use Data Workshop was held. ~~state financing authorities, policies, programs and projects, as well as public-private financing and cost sharing mechanisms.~~ One goal is identifying common interests and promoting partnerships.

~~The Water Resources Committee, under the direction of the Executive Committee, and working with WestFAST, had planned to co-host a symposium on infrastructure with members of the federal Water Subcabinet during the cancelled 2020 Spring meetings, and will continue to pursue future options to address infrastructure needs, strategies, and federal and state programs.~~

~~The Executive Committee considers hosting symposia on any topic and issues as their importance merits.~~

~~2023/24~~<sup>23</sup>: The Legal Committee, under the direction of the Executive Committee, ~~will~~ coordinated with NARF in sponsoring the next 2023 Indian Water Rights Settlement Symposium, and in 2024 may consider other topics.

**Time Frame** –2023-24

## **7. ANNUAL REPORT**

**Work to date:** Since its organization in 1965, the Council has prepared and published an annual report, with a brief discussion of the Council’s formation and a detailed summary of its current membership and activities. It is a report of the Council’s meetings and provides an explanation of resolutions and positions and other actions taken by the Council. Further, it includes a description of workshops, seminars and symposia sponsored by the Council, as well as other important activities and events. It also describes the Council’s involvement in major current water policy issues. Lastly, biennially, it includes an audit of the Council’s finances, and current rules of organization. Recently, electronic copies have been distributed.

2023/24: The staff will work on the current backlog of annual reports.

**Time frame:** ~~January—September~~October 2023-June 2024

## **8. HISTORICAL REVIEW: ISSUES & OUTCOMES**

**Background:** The Council has positions addressing numerous issues and has taken various actions and invested significant resources in attempting to influence outcomes. While the annual report, newsletter, meeting minutes and other sources document such work, there has never been a comprehensive review of some of the major topics addressed and outcomes achieved. Such a summary evaluating the influence the Council has had on outcomes would be useful. The Council has been active in both administrative and congressional affairs, including federal regulatory matters and federal budgeting and appropriations processes. The Council has also provided a

forum for states to learn from each other, as well as serving as a resource and catalyst for innovation, such as the WSWC Water Data Exchange. Selecting appropriate metrics for measuring results could be challenging.

**2022/23/24:** The Committee will consider the best means of undertaking such a review and metrics for evaluating the Council's influence on matters that have been brought before the Council. The Committee, given its oversight functions, will use the results of any summary to guide the investment of Council staff and budgetary resources.

**Subcommittee:**

**Time frame:**

## **9. STATE WATER AGENCY STAFFING AND RETENTION CONCERNS**

**Background:** During the Deadwood, South Dakota meeting in September 2021, various WSWC members raised concerns about hiring, training, and retaining technical and professional staff to carry out essential agency functions. Some turnover or lack of new applicants may be attributable to: (1) high specialization of western water challenges; (2) shuffling among state/federal agencies; (3) smaller salaries compared to the private sector; (4) limited advancement opportunities for mid-level staff; and (5) retirements, pandemic-related adjustments, and younger generation career-culture shifts. On October 22, 2021 and January 24, 2022, various WSWC members discussed challenges and potential solutions that the WSWC might work together to be able to accomplish.

**2022/23/24:** The Committee will consider: (1) a brief survey of states to identify obstacles, with the intent to create a report that may be utilized to demonstrate the staffing needs of state water agencies across the West; (2) a mechanism for sharing job postings at state water agencies across the West that is cost-effective; and (3) developing a pipeline of incoming staff by introducing a younger generation of potential employees to day-to-day work of technical and professional staff, complex western water challenges, and benefits beyond salaries (e.g., through webinar series, cooperation with universities or other organizations).

**Subcommittee:** Henry Brooks, Jerry Rigby, Mary Anne Nelson, Connie Owen, Earl Lewis, Matt Unruh, Jesse Bradley, Sara Gibson, Jeanne Goodman, Kathy Alexander, Kim Nygren, ~~Norm Johnson, Mary Verner~~, Jeff Cowley

**Time frame:**



**WATER RESOURCES COMMITTEE**  
**WORK PLAN**  
**2023~~2~~/2023~~4~~**

**1. WATER AVAILABILITY & USE - WATER DATA EXCHANGE (WaDE)**

**Background/Work-to-date:** The Council continues to work with member states and federal agencies through the Western States Federal Agency Support Team (WestFAST) to build a robust and performant architecture for accessing and sharing water data – Phase 2. WaDE 2.0 is a cloud-based schema centered around supporting use cases for data queries to support decision making within and across state boundaries. Along with the development of the WaDE 2.0 system, WSWC have been working on connecting publicly available water rights and water use datasets as published by our member state agencies into the WaDE SQL database. WSWC is working towards a user-friendly portal to access, filter, and analyze water rights and water use data.

With WSWC assistance, Member States are developing WaDE-compliant data services that will feed directly into the new WaDE platform. Some eastern states have expressed interest in deploying to the WaDE platform also, with a proto-type completed for New Jersey. WSWC will work with ICWP and through the USGS Water Use Data and Research (WUDR) program to engage states and other entities that wish to serve data in the WaDE platform.

WaDE is collaborating with and seeking to help integrate other national efforts, including the Water Availability and Use Program (WAUSP), which is led by the U.S. Geological Survey (USGS), as well as federal and non-federal open water data initiatives. WaDE supports these efforts by laying the groundwork for exchanging the core state data. [The WSWC serves as a foundational hub for the Internet of Water, and promotes related FAIR data standards \(Findable, Accessible, Interoperable and Reproducible\).](#) Greater interoperability and consistent data standards [to facilitate decisionmaking](#) are goals of the program.

The WSWC co-hosted a Water Information Management System (WIMS) workshop with NASA's Western Water Applications Office (WWAO) in 2018 and in September 2019 cohosted a WIMS workshop with USGS. Other events were planned, before meeting and travel restrictions were imposed due to the Covid-19 pandemic. [In August 2023, the WSWC hosted a National Water Use Data Workshop in Salt Lake City, Utah.](#)

[On April 25, 2022, the WSWC publically released its Western States Water Data Access and Analysis Tool \(WestDAAT\) with data for over 1.7 million water rights, including where available, in a machine-readable format, ownership, point of diversion, place of use, purpose of use, and priority date. For the first time, such information was presented in a user-friendly format accross state lines. Work continues to add data to the tool, including state time series data related to state streamgages, wells and reservoirs. A significant amount of outreach with various state and federal agencies, and public and private stakeholders was involved in the development and production phases of WestDAAT's release. Such outreach continues.](#)

~~20232/20243~~: WSWC is working ~~with its renovated WaDE architecture using cloud computing technology and adapting the current system~~ to support specific use cases of the data, including a streamlined, spatially and temporally consistent water budget implementation for selected states. WSWC will also continue assisting participating member states to refine their data, find optimal ways to publish those data that are compatible with WaDE, ~~as well as providing funding and internship support for states' data programs (subject to available funding)~~. A WaDE beta portal ~~with water rights and water use data is nearing completion~~.

The Council will also continue working with member states, USGS, NASA and various federal agencies to gather and disseminate water resources data using WaDE and other resources. The Council ~~continues to will also partner~~discuss with USGS ~~ways of~~en facilitating funding to states for water data through the WUDR program.

The Committee, through the Water Information and Data Subcommittee (WIDS) and various other work groups, will continue to gather information on state water availability and use data and summarize existing state capabilities. Work to help states develop, disseminate, visualize and review data on water availability will continue. The WSWC is seekings resources to maintain current efforts, ~~and assist states~~. A number of philanthropic foundations ~~have~~are provideding support, ~~as has the U.S. Bureau of Reclamation through its WaterSMART program~~.

The WSWC working with an IT contractor has also completed scoping the effort and resources needed to incorporate OpenET (evapotranspiration data) into WestDAAT in order to tie measurable consumptive use with water rights and field boundaries. Such capabilities would help facilitate efforts to conserve water for various private and public purposes. The WSWC is working with the Upper Colorado River Commission and other interests to help expedite and simplify initiatives such as the UCRC's System Conservation Pilot Program.

~~Further, WSWC will assist CUAHSI by advising on data standards and interoperability, reviewing their data products, assisting with the planning of data-related workshops.~~

**Subcommittee:** Sam Hermitte (TX), Lisa Williams, Natalie Mast (AZ), Mat Weaver, Linda Davis (ID), Ken Stahr (OR), Julie Cunningham, Kent Wilkins (OK), Gary Darling (CA), Todd Adams, Candice Hasenyager (UT), Lane Letourneau, Ginger Pugh (KS), Nancy Barber (USGS), Allison Danner (USBOR), Dwane Young (USEPA), Forrest Melton (NASA)

**Timeframe:** Ongoing

## **2. WESTERN WATER OBSERVING SYSTEMS**

**Background/Work-to-date:** The Council has a long history of working to support federal programs to maintain and improve the observation, measurement, monitoring and management of western water resources and related data, including related Interior, NASA, NOAA and USDA programs (see Positions ~~#473 Sept. 2021; #450, July 2020; #438 and #439, October 2019; and #473, September 2021~~#487 Oct. 2022; and #500 May 2023). Such programs include but are not limited to USGS cooperative streamgaging and groundwater monitoring, NRCS snow survey and water supply forecasting, NASA/USGS Landsat, and EPA water quality monitoring. These data

are important for a number of applications. Some examples include, but are certainly not limited to: (a) state and regional water planning and water rights administration; (b) local watershed and urban planning and development; (c) analyzing water balances and water budgets; (c) siting of electric power generation and other energy production facilities; and (d) enabling a better understanding of the links between energy, water quantity, and water quality.

**20232/20243:** The [WSWC Council](#) will communicate the critical need for federal water data related programs and will revise and renew its message to better bring attention to water data needs and develop strategies to meet those needs. Consistent reliable future funding will be one major focus. There are a number of items under this functional area. Part of this effort will be to highlight critical measuring and monitoring “tools” for any water management “toolbox,” and communicating their value for enhancing our ability to wisely manage water resources. [This includes working with Congress on authorizations and appropriations, as well as with the Administration on budget requests and program implementation.](#)

**Subcommittee:**

**Timeframe:** Ongoing

### **3. SUB-SEASONAL to SEASONAL PRECIPITATION FORECASTING**

**Work to date:** The Western States Water Council (WSWC) and California Department of Water Resources (CDWR) have entered into a number of agreements to assist with efforts to improve sub-seasonal to seasonal (S2S) forecasting skill (2 weeks to one year). Several workshops were held in between 2015 and 2019. The Council prepared a report on these meetings and an outreach publication with recommendations to NOAA on improvements regarding sub-seasonal to seasonal precipitation forecasting. -Additional workshops in 2020 were precluded by the pandemic.

In 2020, NOAA released a report to Congress on efforts to improve S2S forecasting, as required by the Weather Research Act of 2017. The report recommendations included developing four pilot projects. [In 2022, the WSWC worked with its members and congressional staff to encourage support for appropriations to initiate work on a western pilot project.](#)

**20232/20243:** Additional S2S workshops [have and will be held](#)~~are anticipated~~, and the Council will otherwise work to support federal efforts to improve our predictive capabilities and skill. The Council will support efforts to acquire sufficient federal appropriations for appropriate programs. The WSWC will [also](#) work to promote federal funding to implement the 2017 Act, and the recommended S2S pilot projects in the West. (Position #[441, March 2020](#)~~491~~, [May 2023](#))

**Subcommittee:**

**Timeframe:**

#### **4. RESEARCH to OPERATIONS (R2O)/TECHNOLOGY TRANSFER**

**Background:** Too often promising water resources related discoveries and scientific advances fail to lead to widespread improvements, for a variety of reasons, some technical, but often institutional, financial, economic or political. Research to Operations (R2O) and technology transfer success requires advance planning and effective partnerships that are often lacking. Academic and government research agencies may focus on important basic research, but even applied research organizations are generally not designed and staffed to bridge the so-called “valley of death” between researchers and those entities and individuals that can successfully envision and leverage resources to add value to that research through management, policy and operational changes.

**Work to date:** In August 2019, in cooperation with NASA’s Western Water Applications Office (WWAO), the Council sponsored a workshop intended to identify and begin to address the challenges inherent in effectively moving research advances towards improvements in water resources management and project operations. The workshop brought together partners from federal and state agencies that have experience with technology transfer, or that have programs that could be adopters of new technology and remotely sensed information products. Next steps were outlined in the workshop summary report.

~~2022/2023:~~—A second planned WSWC/NASA workshop was postponed due to the pandemic. Future workshops ~~would will~~ build upon the insights identified and connections established to: (1) ~~s~~Strengthen agency partnerships and continue building an inter-agency community to facilitate R2O in water resource management; (2) ~~d~~Develop WSWC’s WestFAST network to help transition new technologies and information products for water resources management to operational federal programs, including, but not limited to, remote sensing-based measurement technologies and sub-seasonal to seasonal (S2S) weather forecasting; and (3) ~~d~~Develop a strategy for raising awareness and support within state and federal government agencies for R2O. ~~Together we will identify best practices to transfer applied research to operational programs in western federal, state, and local water agencies and tribes.~~

2023/2024: The Committee will consider holding another workshop to identify best practices to transfer applied research to operational programs working with western federal, state, and local water agencies and tribes.

#### **5. DROUGHT, NIDIS and EXTREME WEATHER EVENTS**

**Work to Date:** Drought is a recurring natural phenomenon, the effects of which can be minimized through appropriate planning and preparedness activities. The Council has expressed its support for federal applied research and hydroclimate data collection programs to assist water agencies at all levels of government in adapting to weather extremes and climate variability and change (Positions #500 May 2023 and #464, March 2021 and #473 September 2021). The Council also supports development of an improved western observing system for extreme precipitation events and research to better understand hydroclimate processes (Position #483 Aug. 2022 #450, July

2020). The Council's Executive Director serves as Co-Chair of the National Integrated Drought Information System (NIDIS) Executive Council with NOAA and USDA.

**20232/20243:** The Committee will continue working to improve preparedness and response to drought, floods and other extreme events in cooperation with member states, the WGA and WestFAST. The Council will also continue to support and advise WGA and NOAA with respect to NIDIS, and other weather/climate monitoring and adaptation efforts (including RISAs work). The Council will work to evaluate proposed climate, drought and weather legislation and drought related authorities and programs of federal agencies, and support appropriate authorizing legislation and appropriations.

**Subcommittee:**

**Time Frame:** Ongoing

## **6. GROUNDWATER RECHARGE PROJECT PROGRAMS & POLICIES**

**Work to Date:** The Council has in the past addressed groundwater management programs and policies, including recharge and aquifer storage and recovery projects. The Council prepared a number of reports covering financial feasibility, legal and institutional issues, and water reuse for recharge (1990-2012). Much of the work is now dated, and many changes have taken place.

**20232/20243:** Working with the Legal Committee and the Council, the Committee will update past reports on state groundwater management programs and especially efforts to promote conjunctive use of surface and groundwater resources through artificial aquifer storage and recovery projects. This may include the use or reuse of waters of impaired quality.

**Subcommittee:**

**Timeframe:**

## **7. WESTERN WATER INFRASTRUCTURE PROJECTS AND PROGRAM FUNDING**

**Work to date:** Many western states face overwhelming infrastructure financing needs, as well as declining budgets for ongoing services. The Council's origins are associated with challenges to augment and better manage the West's water supply, which continues to be a priority. The Council has in the past prepared reports on state water resources programs and project cost sharing and financing and analyzed state water use fees. The Council has also convened symposia and workshops and summarized the proceedings. Further, the Council has compiled summaries of western state infrastructure financing authorities, funding sources, policies and programs. Further, the Council has supported expenditures from the Reclamation Fund for authorized project purposes, including specifically authorized rural water supply projects and authorized projects as part of negotiated Indian water rights settlements.

**20232/20243:** The Council will continue to call on the Congress to ensure that revenues raised from the development of western resources, specifically revenues accruing to the Reclamation Fund, are appropriated and expended as intended for the development and management of western

water resources (consistent with Position #~~501, May 2023~~<sup>451, July 2020</sup>). The Council will otherwise support efforts to secure adequate federal funding to meet growing western water demands, and work to develop a strategy to communicate important infrastructure needs. The Council will promote development of public-private partnerships to support this effort. As conditions permit, the Council will sponsor a symposium on infrastructure needs, strategies, and federal and state programs, under the direction of the Executive Committee, with WestFAST's assistance and in cooperation with other non-federal and federal interests. Regulatory streamlining is also important for water resource projects. The Council will work with the Administration and Congress towards successful water project development. Finally, the Council will provide a summary of western state water financing authorities and programs, as time and resources permit.

**Subcommittee:**

**Time Frame:**

## **8. ENERGY & WATER RESOURCES – INTEGRATED MANAGEMENT**

**Work to date:** The increase in demands for water to meet energy needs is raising interest in the interrelationship between water and power resources, including opportunities to better understand the energy-water nexus and maximize efficiencies. The Council has addressed various aspects of energy issues as they relate to water resources as part of its regular meetings, including the demand for water resources created by new energy development. Hydraulic fracturing ~~has been an~~ <sup>is a</sup> ~~current~~ issue and long standing practice with which the states have considerable experience. The use of water produced by energy development has also been discussed. The Council has also urged the Administration and Congress to support Department of Energy hosted energy-water programs conducted at national laboratories (Position #~~485, Aug. 2022~~<sup>437, July 2019</sup>). The Council has ~~in the past~~ participated with the Western Electric Coordinating Council (WECC) and related State Provincial Steering Group and Environmental Data Work Group.

~~20232/20243~~: As resources permit, the Council will continue to compile existing information through WaDE addressing water availability and anticipated demands for energy resources development (and the implications for water use in the West). Further, the Council will consider and evaluate any federal legislation and other potential collaborative efforts in addressing energy and water needs, as well as related water quality concerns. The Council will evaluate as appropriate specific energy and water-related issues as they arise, such as hydraulic fracturing, hydropower licensing, pumped hydropower projects, Clean Water Act Section 401 certification, and other practices.

**Subcommittee:**

**Timeframe:** Ongoing



**WATER QUALITY COMMITTEE  
WORK PLAN  
July 1, 202~~32~~ to June 30, 202~~43~~**

**1. WATER QUALITY/QUANTITY NEXUS**

**Background:** Western Governors’ Association (WGA) Policy Resolution 2021-08, Water Resource Management in the West, states: “Western Governors believe effective solutions to water resource challenges require an integrated approach among states and with federal, tribal and local partners. Federal investments should assist states in implementing state water plans designed to provide water for municipal, rural, agricultural, industrial and habitat needs, and should provide financial and technical support for development of watershed and river basin water management plans when requested by states. Integrated water management planning should also account for flood control, water quality protection, and regional water supply systems. Water resource planning must preserve state authority to manage water through policies which recognize state law and the financial, environmental and social values of water to citizens of western states today and in the future.” (Paragraph (B)(3), emphasis added)

**Work-to-Date:** On October 6-7, 2015, the Water Quality Committee held a workshop in conjunction with the WSWC’s 2015 fall meetings in Manhattan, Kansas. The workshop provided insights on: (1) how state water quantity and quality (WQ2) regulations interact with each other; (2) how states can protect water quality within the existing framework of the prior appropriation doctrine; and (3) the proper relationship between federal environmental protections and the states’ primary and exclusive authority over the allocation of water resources. WSWC staff prepared a preliminary report of the meeting, which included recommendations for WSWC next steps.

During the WSWC October 2019 meeting in Breckenridge, Colorado the Committee heard a presentation from Alex Davis, Deputy Director of Water Resources for the City of Aurora about the city’s challenges related to the water quantity-quality nexus and the complex efforts to ensure adequate source water protection across several water basins.

**202~~32~~-202~~43~~:** The Committee supports WGA Resolution 2021-08, and directs staff to follow up on the next steps recommended in the 2015 WQ2 workshop, including: (1) create a nexus Toolbox of useful and accessible information, including interagency MOUs, instream flow legislation, case studies, and reports of additional workshops, to provide a resource for the states seeking to learn from each other’s experiences; (2) identify and coordinate with federal agencies and other technical or national organizations with common interests to co-host educational workshops or symposia on relevant nexus topics, both to develop better relationships and to find additional potential solutions to nexus problems; and (3) provide updated information from states on current water quality-water quantity issues at Council meetings. Initial conversations with the subcommittee have occurred.

**Time Frame:** Ongoing

WQ2 Nexus Workgroup – goal to re-establish in 202~~43~~

## 2. CLEAN WATER ACT ISSUES

There are several ongoing Clean Water Act (CWA) issues that pertain to WSWC policies or are otherwise of interest that the Committee will monitor and address on an as-needed basis. These issues are listed below in order of priority.

### a. CWA Jurisdiction\*

**Background:** In 2011, the EPA and the U.S. Army Corps of Engineers released draft guidance intended to provide clearer, more predictable guidelines for determining which water bodies are subject to Clean Water Act (CWA) jurisdiction, consistent with the U.S. Supreme Court's decisions in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001), and *Rapanos v. United States*, 547 U.S. 715 (2006). This was followed by the Clean Water Rule (2015 WOTUS Rule), finalized on June 29, 2015 (80 FR 37054). Many of our member states filed lawsuits challenging the 2015 WOTUS Rule in federal court. The 2015 WOTUS Rule was rescinded, and was replaced by the Navigable Waters Protection Rule (2020 WOTUS Rule), finalized on April 21, 2020 (85 FR 22250). Several of our member states filed lawsuits challenging the 2020 WOTUS Rule in federal court. On January 20, 2021, President Biden issued Executive Order 13990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*, directing EPA and the Corps to review the 2020 WOTUS Rule. On August 30, 2021 the Arizona U.S. District Court vacated and remanded the 2020 Navigable Waters Protection Rule to EPA and the Corps. The agencies halted implementation of the 2020 Rule, relying on pre-2015 guidance, and continued efforts toward the new rulemakings: (1) to codify the pre-2015 guidance, and (2) a new rule intended to be durable. On January 24, 2022, the U.S. Supreme Court granted the petition for certiorari in *Sackett v. EPA* (21-454). The 2020 WOTUS Rule was vacated, and was replaced by the Revised Definition of the "Waters of the United States" Rule (2023 WOTUS Rule), finalized on January 18, 2023 (88 FR 3004). On May 25, 2023, the U.S. Supreme Court issued its decision in *Sackett v. EPA* (#21-454). Citing the Justice Scalia plurality opinion in *Rapanos*, the five-Justice majority Court concluded that the definition of WOTUS in Clean Water Act (CWA) §1362(7) "encompasses only those relatively permanent, standing or continuously flowing bodies of water forming geographical features that are described in ordinary parlance as streams, oceans, rivers, and lakes." The Court held that WOTUS does not apply to all wetlands, but extends only to those wetlands with a continuous surface connection to bodies of water that are WOTUS in their own right, so that they are indistinguishable from those waters. The Court acknowledged that "temporary interruptions in surface connection may sometimes occur because of phenomena like low tides or dry spells." In footnote 16, the Court said: "Although a barrier separating a wetland from a water of the United States would ordinarily remove a wetland from federal jurisdiction, a landowner cannot carve out wetlands from federal jurisdiction by illegally constructing a barrier on wetlands otherwise covered by the CWA. Whenever the EPA can exercise its statutory authority to order a barrier's removal because it violates the Act...that unlawful barrier poses no bar to its jurisdiction." On August 29, 2023, the EPA and Corps issued an Amended 2023 Rule to conform key aspects of the regulatory text to the *Sackett* decision.



**Work-to-Date:** WSWC adopted positions #369 and #373 regarding CWA rulemaking efforts and state-federal collaboration. Position #369 was revised and readopted as Position #410, while Position #373 was allowed to sunset and acknowledged as a letter with continued historical value. At the October 2018 meeting in Coeur d'Alene, Idaho, Position #410 was revised and readopted as #427, with the State of Washington abstaining from the vote. At the September 2021 meeting in Deadwood, South Dakota, Position #472 was again revised and adopted, with the understanding that further efforts would be made to improve the position the following Spring. WSWC sent various letters and comments to EPA and the Corps. At the April 2022 meeting in Arlington, Virginia, Position #481 was revised and adopted, replacing #472.

In the Summer of 2022, WSWC hosted a series of workshops to consider the technical and policy implications of a regional approach to WOTUS implementation, and prepared a ~~draft~~ white paper to document this effort for future use;

[https://westernstateswater.org/wp-content/uploads/2022/10/WSWC-WOTUS\\_RegionalConcepts\\_Technical\\_Whitepaper\\_Final.pdf](https://westernstateswater.org/wp-content/uploads/2022/10/WSWC-WOTUS_RegionalConcepts_Technical_Whitepaper_Final.pdf)

~~20232-20243~~: The Committee will continue to work with the Water Resources and Legal Committees through the Workgroup to understand and share how states are affected by and dealing with the changes to the “waters of the United States” definition. Staff will track any developments in agency actions regarding the WOTUS definition, and report on potential impacts to states.

**Time Frame:** Ongoing

CWA Rulemaking Workgroup: ~~Erica Gaddis (UT)~~, Tom Stiles (KS), Jennifer Verleger (ND), ~~-, Laura Driscoll (WA)~~, Jennifer Carr (NV);

\*See Item 2 of the Legal Committee Workplan

## **b. Water Reuse**

**Background:** In 2011, the WSWC prepared a report summarizing state responses to survey questions on water reuse standards, regulations, issues, projects and funding titled “Water Reuse in the West: State Programs and Institutional Issues.” Given that it has been nearly a decade since those responses were compiled, the Committee decided to update the report. At the October 2019 meeting in Breckenridge, the Committee expressed interest in coordinating survey responses with the Association of Clean Water Administrators (ACWA) and other organizations. Additionally, the Environmental Protection Agency recently unveiled their Water Reuse Action Plan (WRAP), a collaborative effort across federal agencies, water organizations and the private water sector. This is the first of its magnitude, intended to innovate, scale and implement water reuse technologies and policies. The WRAP identifies 37 actions and 200 implementation milestones. WSWC’s and ACWA’s survey update will help implement action 2.2.1: Compile Existing State Policies and Approaches to Water Reuse.

**Work-to-Date:** From November 2019 – January 2020, WSWC staff and council members worked with ACWA and other organizations to update survey questions. These

questions were somewhat different from the 2011 questions and provided a comprehensive picture of what is happening in water reuse across the states. States submitted responses to the survey in mid-2020, and staff compiled these into a final report. This report ~~will be~~is available ~~on the WSWC website at:~~  
<https://westernstateswater.org/publications/other-reports/2021/2021-water-reuse-report/>

~~2023-2024~~**2023-2024**: With the report finalized, staff will work with ACWA to determine next steps, including potential publication in a national water policy or law journal.

**Time Frame:** 2021-2022

### c. **State Revolving Funds (SRFs) and Infrastructure Financing**

**Background:** The Clean Water and Drinking Water SRFs provide states with capitalization grants that are leveraged with state contributions to offer financial assistance to cities, towns, communities and others to improve and construct water quality infrastructure. These programs are widely used and have been critically important for improving and maintaining water infrastructure at the local level. Over the years, some budget requests from the Administration have proposed cuts to the SRF programs. Various acts of Congress have also authorized or retained a number of limitations on the use of SRF funds, including: (1) “Buy American” provisions for iron and steel; (2) requirements that between 20% and 30% of SRF funds be used for principal forgiveness, negative interest loans, or grants subject to additional provisions; and (3) requirements that states use at least 10% of their SRF funds for green infrastructure, water or energy efficiency improvements, or other “environmentally innovative” activities.

When Congress enacted the Water Infrastructure Finance and Innovation Act (WIFIA) in 2014, there was some concern that the subsequent WIFIA loan and guarantee program would redirect critical funds from the SRF programs. Thus far, this has not been the case (see table below). Since 2017, the WIFIA program has invited a total of 89 projects to apply for funding, with over \$13B in financing requests. SRFs have access to this funding and are also able to jointly fund projects in conjunction with WIFIA loans. In 2019, both types of funding mechanisms were used by projects. To date, 16 WIFIA loans have been closed totaling over \$3.5B in credit assistance to help finance \$8B for water infrastructure projects and create 16,000 jobs.

*Congressional Appropriations for Water Infrastructure (FY2017-19), in millions*

	Clean Water SRF & Title II	Drinking Water SRF	WIFIA
FY2017	\$1,393.9	\$863.2	\$30.0
FY2018	\$1,696.9	\$1,163.2	\$63.0
FY2019	\$1,694.0	\$1,164.0	\$68.0

Source: Congressional Research Service Report R43871

When Congress enacted the 2022 Infrastructure Investment and Jobs Act (IIJA) (P.L. 117-58) it authorized significant but short-term federal funding for SRFs. However, a substantial portion of those increases were earmarked for Congressionally-directed spending on earmarked projects.

**Work-to-Date:** During the July 2018 meeting in Newport, Oregon, the Committee heard reports from Kansas and Washington on the process they went through to apply for WIFIA loans during the first round, and on the water projects that were built with these low-interest loans. Since then, projects in member states Arizona, California, Nebraska, North Dakota, Oklahoma, Oregon and Utah have been funded. Overall, WIFIA funded projects are larger than typical SRF-funded projects, while both programs prioritize those that are shovel-ready and credit-worthy.

WSWC Position #446 urges the Administration and Congress to provide greater flexibility and fewer restrictions on state SRF management and stable and continuing appropriations to the SRF capitalization grants at funding levels that are adequate to help states address their water infrastructure needs and meet federal mandates. WGA Policy Resolution 2021-10, Water Quality in the West, also supports the SRFs as “important tools” and requests greater flexibility and fewer restrictions on state SRF management.

[On August 21, 2023, WSWC joined a coalition of organizations led by the Council of Infrastructure Financing Authorities \(CIFA\) urging Congressional leaders to fund the CW and DW SRFs to their maximum authorized amount of \\$3B each for FY2024, and noting concerns with Congressional earmarks.](#)

**2023-2024:** The Committee will continue to support the WGA and WSWC positions. WSWC staff will update the Committee on developments within Congress and the Administration that have potential to impact SRFs. As needed, Committee members and WSWC staff will meet with the Administration and Congress officials to further the objectives of the WGA and WSWC positions. Some topics for discussion include state experiences with Buy American and Davis-Bacon, whether there are otherwise eligible entities, but for the limitations, and how many are walking away from SRFs because of these restrictions, as well as options for a right of first refusal by the SRFs prior to funding projects through WIFIA.

**Time Frame:** Ongoing

#### **d. EPA’s Water Transfers Rule**

**Background:** On January 18, 2017, the 2<sup>nd</sup> Circuit upheld the EPA’s Water Transfers Rule, 40 CFR §122.3(i), in *Catskills Mountains Chapter of Trout Unlimited v. EPA*, No. 14-01991. The Court of Appeals reversed the decision of the U.S. District Court for the Southern District of New York, which previously vacated the EPA’s rule. On February 26, 2018, the Supreme Court denied the petition for certiorari, allowing the Water Transfers Rule to stand.

WGA Policy Resolution 2021-10 (paragraph B(2)(c)) and WSWC Position #469 support EPA’s Water Transfers Rule, which clarifies that water transfers from one “navigable” water to another are exempt from National Pollutant Discharge Elimination System (NPDES) permitting under Section 402 of the CWA. The rule states that transfers do not require NPDES permits if they do not add pollutants and if there is no intervening municipal, industrial, or commercial use between the diversion and the discharge of the transferred water.

On February 18, 2020, WGA sent a letter to the Committee on Energy and Natural Resources in support of the Drought Resiliency and Water Supply Infrastructure Act (S. 1932), in which it suggested including language to affirm the rule in federal statute in order to “add a needed measure of stability and certainty to western water planning and drought mitigation efforts.” WSWC and other state organizations also signed onto this letter.

**2023-2024:** The Committee and WSWC staff will: (1) continue to support the WGA and WSWC positions; (2) monitor any and all activities impacting EPA’s rule, including but not limited to future litigation and possible efforts by EPA to reconsider the rule; (3) inform the WSWC of ongoing developments; and (4) take any other actions needed to support the WGA/WSWC positions regarding the rule.

**Time Frame:** Ongoing

#### e. Nutrients

**Background:** EPA’s Office of Water released the Nancy Stoner memo *Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions* on March 16, 2011, and the Joel Beauvais memo *Renewed Call to Action to Reduce Nutrient Pollution and Support for Incremental Actions to Protect Water Quality and Public Health* on September 22, 2016.

The Beauvais memo highlights the continued need for action by states and other stakeholders to reduce the threat of nutrients to water quality and public health by:

- Reducing nitrates in sources of drinking water and nitrogen and phosphorus pollution contributing to harmful algal blooms;
- Reducing nutrients from point and nonpoint sources;
- Prioritizing watersheds and setting load reductions;
- Strengthening water quality standards;
- Highlighting high priority incremental actions of states;
- Issuing biennial reports that assess progress and provide accountability, and
- Encouraging EPA to continue to provide support and financial assistance.

**Work-to-Date:** The Committee and WSWC staff continue to follow and update the WSWC on EPA efforts involving nutrients. Various Committee meetings have featured presentations from EPA and state officials on federal and state nutrient management efforts. At the October 2019 meeting in Breckenridge, the Committee heard from Jennifer Carr, Deputy Administrator of the Nevada Division on Environmental Protection, on multi-agency coordination on harmful algal blooms in several water bodies in Nevada.

Remote sensing is also becoming an increasingly important method for monitoring water quality and water supplies. Landsat 8 can provide images in near-real time that provide water quality managers with information on where harmful algal blooms may be forming and allows them to rapidly respond. WSWC was instrumental in ensuring Landsat 8 was equipped with the data collection tools needed for these assessments.

Commented [MB1]: Add information from the new Fox memo?

On August 14, 2019, EPA and USDA co-hosted a workshop titled Innovative Financing Strategies for Reducing Nutrients. The workshop explored private, state, and federal funds that could be combined and leveraged for nutrient reduction projects, and ways that the agencies could increase funding opportunities and awareness of innovative funding approaches.

**2023-2024:** The Committee and WSWC staff will monitor and update the Council on any changes to EPA’s nutrient efforts, including those related to Harmful Algal Blooms (HABs) and cyanotoxin criteria. Each state is encouraged to develop its own strategy to control nutrient pollution. The Committee will ask states with a strategy to share highlights from their nutrient and HABs strategies and efforts that they think could benefit other Council member states. The Association of Clean Water Administrators has a Nutrients Reduction Progress Tracker that has some state strategies that the Committee can use as a starting point.

Commented [MB2]: Do we want to add something in about ACWA’s standing principles (in progress)?

**Time Frame:** Ongoing

#### f. Section 401 Certifications

**Background:** In early 2019, WSWC and WGA became aware of a potential executive order from the White House to address energy infrastructure development that would have included provisions affecting the implementation of state water quality certification programs under Section 401 of the CWA. This was in response to denials by some states, based on section 401 authority, for permits to build energy infrastructure that would allow other states to export coal and natural gas. WGA sent a letter strongly opposing “any changes to agency rules, guidance, or policy that may diminish, impair, or subordinate states’ well-established sovereign and statutory authorities to protect water quality within their boundaries.”

On April 10, 2019, President Trump issued an Executive Order 13878, Promoting Energy Infrastructure and Economic Growth, in which EPA was directed to review regulations and guidance, in consultation with states, tribes, and federal agencies, on state certification under section 401. WSWC and WGA submitted comments during the pre-proposal period in April and May 2019 expressing continued concern over changes to section 401. Following this consultation, EPA released new guidance on implementing 401, including statutory and regulatory timelines for 401 certification requests, the appropriate scope of 401 certification conditions, and the scope of a state or authorized tribe’s 401 review. In early August, the Corps also released guidance on “Timeframes for Clean Water Act Section 401 Water Quality Certifications and Clarifications of Waiver Responsibility,” establishing a 60-day window for 401 certification review by the states, despite statutory allowance of a year-long timeframe the state agencies have to act.

On August 22, 2019, EPA issued a proposed rule to include definitions of various terms to provide greater clarity. The proposed rule limited the scope of certification to assuring that any discharge from a federal project will comply with state and federal water quality requirements, changed the definition of a “complete application” and placed a mandatory maximum timeframe on certification of one year from submission of the application, which is consistent with the Clean Water Act. It required justification for conditions imposed on licenses or permits, and limit conditions only to water-related concerns. It

also removed the enforcement authority from the certifying body, and instead placed that responsibility on the federal agency issuing the permit. The final rule was published in the Federal Register on July 13, 2020 (85 FR 42210).

The WSWC closely followed this issue, given the implications for state authority over water quality certification requests provided under Section 401. The Council submitted numerous letters to the Administration and Congress, and formal comments during the public comment periods both individually and in conjunction with WGA and other stakeholders. On April 21, 2022, WSWC sent a letter to the Administration encouraging the accelerated review of the CWA 401 Certification Final Rule, under Executive Order 13990, and requesting the involvement of states as co-regulators.

**Work-to-Date:** In 2020, the Committee formed a workgroup to explore the possibility of developing a template for Memorandums of Understanding between states and federal agencies that will be implementing the new 401 certification rule. The new rule expands the number of federal agencies responsible for obtaining 401 certifications, many of which have not previously engaged in this process. States are concerned about maintaining and opening lines of communication regarding project activities so that they can conduct their process to certify projects without waiving their ability to do so due to the strict time constraints. This workgroup has created a list of needs and wants from such a document, and are now moving towards determining what outputs would be most helpful.

**2023-2024:** Staff will continue to facilitate the 401 MOU workgroup, track the implementation of the rule, and report on challenges or experiences that states have had regarding how the changes are working on-the-ground.

**Timeframe:**

**g. Tribal Treatment as States**

**Background:** In 2016, EPA finalized two separate but related rulemaking efforts regarding the tribes' ability to obtain "treatment as states" (TAS) status under CWA Section 518, necessary for delegation of regulatory programs to the tribes. The first involved an interpretive rule regarding inherent authority of tribes, considering CWA Section 518 an express delegation of authority from Congress. The second rule sets forth a regulatory process for TAS status to operate impaired listing and total maximum daily load (TMDL) programs. WSWC and various states sent letters commenting on concerns with how the programs would be implemented.

EPA also engaged in a pre-rulemaking outreach to states, tribes, and other stakeholders, soliciting input on setting federal baseline water quality standards for tribes without TAS status. WSWC submitted comments in December 2016. EPA heard from 12 tribal governments and associations and 11 state officials, agencies and associations, among others, and reported that most tribes were largely supportive while most states raised concerns. In Summer 2022, EPA plans to submit a proposed rule for public comment. In 2023, EPA published its proposed rule, Federal Baseline Water Quality Standards for Indian Reservations (88 FR 29496). At least 12 of our member states provided substantive comments. See WSW Special Report #2571.

In December 2022, EPA issued a proposed rule, Water Quality Standards Regulatory Revisions To Protect Tribal Reserved Rights (87 FR 74361). At least 10 of our member states provided substantive comments. See [WSW Special Report #2548](#).

**Work-to-Date:** In December 2016, the WSWC submitted a [letter](#) commenting on the ANPR proposing federal baseline WQS for tribes. In May 2023, the WSWC approved a new policy position #490 regarding Water Quality Standards, Protecting Tribal Reserved Rights, and Federal Baseline Water Quality Standards for Indian Reservations. In August 2023, the WSWC submitted a [comment](#) on EPA's proposed rule for federal baseline WQS for tribes.

**2023-2024:** The Committee will continue to monitor the potential rulemakings and their implementation and engage with EPA as appropriate.

**Time Frame:** Ongoing

#### **h. Abandoned Hardrock Mine Remediation**

**Background:** The West has an undetermined number of abandoned hardrock mines that have the potential to or unknowingly already do affect water quality. “Good Samaritan” bills have been introduced in Congress over the years to protect public entities that are willing to voluntarily clean up these sites from legal liability under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the CWA. These bills have been unsuccessful due to concerns about the potential impacts of amending the CWA and perceptions that sufficient protections already exist under CERCLA. However, considerable uncertainty exists as to whether CERCLA and other existing authorities provide Good Samaritans with sufficient protection.

In December 2012, EPA issued a memorandum to clarify administrative protections for Good Samaritans. It clarified that Good Samaritans who complete cleanup efforts pursuant to EPA policies will not be considered “operators” responsible for obtaining NPDES permits if they lack: (1) access and authority to enter the site; (2) an ongoing contractual agreement or relationship with the site owner to control discharges; (3) power or responsibility to make timely discovery of changes to the discharges; (4) power or responsibility to direct persons who control the mechanisms, if any, causing the discharges; and (5) power or responsibility to prevent and abate the environmental damage caused by the discharges. Nevertheless, the memorandum states that it “...does not address or resolve all potential liability associated with discharges from abandoned mines.”

In September 2020, EPA announced a new office, the Office of Mountains, Deserts, and Plains, to primarily work with Good Samaritan organizations and tribes, and ensure more efficient clean-up of both Superfund and non-Superfund sites in the West, including abandoned mines.

In September 2021, the WSWC passed Position #477 regarding Abandoned Hard Rock Mine Cleanup. On February 3, 2022, Senator Martin Heinrich (D-NM) introduced the Good Samaritan Remediation of Abandoned Hardrock Mines Act (S. 3571). On July 28,



2022, WSWC sent letters to Congress and to the Administration regarding the Good Samaritan bill and joint efforts to address abandoned hardrock mine cleanup.

**Work-to-Date:** The WGA and WSWC have long supported legislation to amend the CWA to protect Good Samaritans from inheriting perpetual liability for the site under the CWA (WGA Policy Resolution 2021-09). Over the past several years, the Committee has worked to support Good Samaritan legislation and other efforts to clean up abandoned hardrock mines, including multiple visits with Congress and the Administration, Congressional testimony in support of such legislation, and involvement in a former WGA-organized Task Force focused on crafting an exemption for Good Samaritan activities by state governments.

At the Fall 2020 WSWC meeting, Roger Gorke presented an update on the creation of the new Office, including that it will be lead by Shamid Mahmud. Mahmud has decades of experience leading the Good Samaritan Abandoned Mine Internal Working Group.

**2023-2024:** The Committee will continue to coordinate with the WGA and encourage efforts to clean up abandoned hardrock mines, including but not limited to enactment of Good Samaritan legislation and efforts to support utilization of EPA's 2012 memorandum. The Committee will work with key Congressional members/staff, Administration officials, and other stakeholders to develop and support efforts to clean up abandoned hardrock mines in accordance with the WGA's policies, including the possible reactivation of a workgroup and/or developing a workshop to bring together interested stakeholders to identify ways to facilitate abandoned hardrock mine remediation. Staff will also track activities of the Office of Mountains, Deserts, and Plains and report back to the Committee any developments of interest.

**Time Frame:** Ongoing

#### **i. Per- and Polyfluoroalkyl Substances (PFAS)**

**Background:** The widespread use and persistent nature of PFAS chemicals presents a complex environmental problem that affects water quality, human health, and ecosystems in varying degrees around the nation. Water sources with high levels of contamination in some instances must be replaced by alternative water sources, which can be costly and difficult in the arid west. Additionally, cleanup efforts may require coordination between state, federal, tribal, and local authorities.

**Work-to-Date:** In 2022-23, the Subcommittee explored the possibility of WSWC position and actions that might be taken to address PFAS water contamination in a collaborative way. The WSWC hosted a States-only PFAS Roundtable and prepared a summary of the meeting: <https://westernstateswater.org/events/states-only-pfas-roundtable/> In May 2023, the Committee determined not to pursue a PFAS policy position at this time, but to continue to keep an eye on PFAS developments.

**2023-2024:** The Committee will continue to monitor PFAS developments and revisit this issue as needed, explore the possibility of a WSWC position and actions that might be taken to address PFAS water contamination in a collaborative way. The Committee



will coordinate efforts with sister organizations such as ECOS and ASDWA in order to not unnecessarily duplicate efforts.

**Subcommittee:** Buck Smith (WA), ~~Mary Verner (CO) (will volunteer a colleague)~~, Jennifer Zygmunt (WY), Julie Pack (AK), ~~Jeremy Neustifter (CO) (will volunteer a colleague)~~

#### i. NPDES Permits/Quality Assurance Project Plans QAQC/Other?

##### Background:

### 3. HYDRAULIC FRACTURING

**Background:** In June 2015, the Environmental Protection Agency (EPA) published a study on the relationship between hydraulic fracturing and drinking water, titled “Assessment of the Potential Impacts of Hydraulic Fracturing for Oil and Gas on Drinking Water Resources.” In March 2015, the Bureau of Land Management (BLM) issued a final rule for hydraulic fracturing on public lands, which includes a variance process that would allow states to propose their own standards if they can prove that their regulations meet or exceed the requirements in BLM’s rule. In addition, EPA, the Department of Energy (DOE), and the Department of the Interior (DOI) agreed in April 2012 to develop a “Multi-Agency Unconventional Oil and Gas Research Program” to support policy decision by relevant state and federal agencies. The effort is intended to help support the White House’s March 2011 “Blueprint for a Secure Energy Future.”

In December 2016, EPA published its report, Hydraulic Fracturing for Oil and Gas: Impacts from the Hydraulic Fracturing Water Cycle on Drinking Water Resources in the United States, available at <https://cfpub.epa.gov/ncea/hfstudy/recordisplay.cfm?deid=332990>

On December 28, 2017, BLM rescinded the 2015 hydraulic fracturing rule, noting that “all 32 of the 32 states with federal oil and gas leases have regulations that address hydraulic fracturing” and that “since the 2015 final rule was published, more companies are using state regulatory agencies and/or databases such as FracFocus to disclose the chemical content of hydraulic fracturing fluids.” Litigation pending in the U.S. District Court for the Northern District of California (*California v. Bureau of Land Mgmt.*, #18-521) seeks to vacate the rescission and reinstate all of the 2015 rule’s provisions. The Court heard arguments on motions for summary judgment in February 2020, and a decision is still pending.

The Western Governors’ Association (WGA) Resolution #2021-10 and WSWC Position #436 state that: (1) federal efforts involving hydraulic fracturing should leverage state knowledge, experience, policies, and regulations; (2) such efforts should be limited, based upon sound science, and driven by states; and (3) that both organizations oppose any and all efforts that would diminish the primary and exclusive authority of states over the allocation of water resources used in hydraulic fracturing.

**2023-2024:** The Committee will work with the Water Resources and Legal Committees to support the WGA and WSWC positions, and will continue to monitor and update the WSWC on developments involving hydraulic fracturing, including but not limited to EPA’s study, BLM’s rule, and the EPA/DOE/DOI research program.

The Committee will also work in collaboration with the Water Resources and Legal Committees to prepare a summary of the applicable WSWC states' experiences with hydraulic fracturing. The summary will complement previous reports by the Groundwater Protection Council and others that describe how state programmatic elements and regulations ensure that hydraulic fracturing does not impair water resources and environmental values. Examples of the types of information sought for the summary include but are not limited to: (1) the impacts of hydraulic fracturing on water quality, if any; (2) examples of how state regulations and other efforts protect water quality; (3) the economic benefits of hydraulic fracturing; (4) water supplies and amounts used for hydraulic fracturing; (5) state interaction with federal agencies involving hydraulic fracturing; and (6) the degree to which states use oil and gas taxes and other revenue related to hydraulic fracturing to fund water-related efforts, including but not limited to water planning, water management, and water regulation and protection. WSWC staff will prepare the summary under the direction of the Committees and will gather the necessary information through independent research and focused telephone interviews with select staff from the applicable WSWC state agencies. WSWC staff will also coordinate with other relevant state associations and organizations to avoid duplicating prior efforts. It is envisioned that the full WSWC will review the summary.

**Time Frame:** 2016-2024<sup>49</sup>, pending available staff time and resources.

**LEGAL COMMITTEE  
WORK PLAN  
July 1, 202~~32~~ to June 30, 202~~43~~**

**1. STATE AND FEDERAL COLLABORATION REGARDING THE  
ADJUDICATION OF FEDERAL NON-TRIBAL WATER RIGHTS**

**Background:** On July 15-16, 2014, the WSWC and WestFAST held a workshop in Helena, Montana to discuss ways to improve the resolution of federal non-tribal water rights claims and to begin the process of developing a clearinghouse of information that states and tribes can use to resolve these claims. The WSWC and WestFAST subsequently created a joint state-federal workgroup to help develop the clearinghouse and implement the other recommendations that emerged from the workshop.

**Work-to-Date:** The Committee created a Federal Non-Tribal Water Claims Subcommittee to evaluate ways the WSWC and WestFAST can improve the effective resolution of federal non-tribal water rights claims. The Subcommittee consists of WSWC members and WestFAST members, who serve in an *ex officio* capacity. Past webinars and workshops include:

November 10, 2015	McCarran Amendment – state and federal perspectives	
July 13, 2016	Groundwater and Meeting Federal Water Needs (ND)	
October 18, 2017	Continuing State-Federal Relationships through the Implementation Phase of Decreed and Adjudicated Water Rights (NM)	
October 24, 2018	State and Federal Agencies' Approach to Grazing Water Rights (ID)	
October 15, 2019	Grazing Water Rights (CO)	<a href="https://westernstateswater.org/publications/2021/stock-water-rights-for-grazing-livestock-on-federal-lands/">https://westernstateswater.org/publications/2021/stock-water-rights-for-grazing-livestock-on-federal-lands/</a>
September, 2021	Wild and Scenic Rivers (SD)	<a href="https://westernstateswater.org/publications/seminars-workshops/2021/wild-scenic-rivers-workshop/">https://westernstateswater.org/publications/seminars-workshops/2021/wild-scenic-rivers-workshop/</a>

~~As of March 24, 2020, the WSWC WestFAST Clearinghouse is available on the Council's website under Member Resources, and additional documents may be added by contacting Council staff.~~

Commented [MB1]: This Clearinghouse page was lost in the transition to the new website format, and WSWC Staff need to identify a new way to make all of these documents available and searchable.

~~20232-20243~~: The Committee will work to carry out the recommendations and next steps that emerged from the workshops and webinar. Under the direction of the Committee, the workgroup will hold calls on a quarterly basis to discuss the development of the clearinghouse and to serve as a forum for information sharing and relationship building. The Workgroup will also advise the Committee about potential future actions the WSWC and WestFAST may take to address federal water needs and may hold webinars on specific topics of interest. The workgroup will continue to hold workshops. Additional topics to pursue include ~~(1) water rights related to Wild and Scenic Rivers, and (2)~~ identifying useful principles for state-federal memoranda of understanding (MOUs) to develop a useful framework and recommended approaches.

**Time Frame:** Ongoing

Federal Non-Tribal Water Claims Subcommittee: Jay Weiner (MT), Jennifer Verleger (ND), ~~Micheline Fairbank (NV), Todd Chenoweth (TX), Norm Johnson (UT)~~, Buck Smith (WA), and Chris Brown (WY). WestFAST members and agency staff participating in the Subcommittee in an *ex officio* capacity include: Michael Higgins (U.S. Fish and Wildlife Service), Donald Anderson (Bureau of Reclamation), ~~(National Park Service)~~, Stephen Bartell (Department of Justice), Lauren Dempsey (Air Force) and Chris Carlson (U.S. Forest Service).

## 2. CWA JURISDICTION\*

**Work-to-Date Background:** In 2011, the EPA and the U.S. Army Corps of Engineers released draft guidance intended to provide clearer, more predictable guidelines for determining which water bodies are subject to Clean Water Act (CWA) jurisdiction, consistent with the U.S. Supreme Court's decisions in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001), and *Rapanos v. United States*, 547 U.S. 715 (2006). This was followed by the Clean Water Rule (2015 WOTUS Rule), finalized on June 29, 2015 (80 FR 37054). Many of our member states filed lawsuits challenging the 2015 WOTUS Rule in federal court. The 2015 WOTUS Rule was rescinded, and was replaced by the Navigable Waters Protection Rule (2020 WOTUS Rule), finalized on April 21, 2020 (85 FR 22250). Several of our member states filed lawsuits challenging the 2020 WOTUS Rule in federal court. ~~The 2020 WOTUS Rule was vacated, and was replaced by the Revised Definition of the "Waters of the United States" Rule (2023 WOTUS Rule), finalized on January 18, 2023 (88 FR 3004). On January 20, 2021, President Biden issued Executive Order 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, directing EPA and the Corps to review the 2020 WOTUS Rule. On August 30, 2021 the Arizona U.S. District Court vacated and remanded the 2020 Navigable Waters Protection Rule to EPA and the Corps. The agencies halted implementation of the 2020 Rule, relying on pre-2015 guidance, and continued efforts toward the new rulemakings: (1) to codify the pre-2015 guidance, and (2) a new rule intended to be durable. On January 24, 2022 May 25, 2023, the U.S. Supreme Court granted the petition for certiorari issued its decision in Sackett v. EPA (#21-454). Citing the Justice Scalia plurality opinion in Rapanos, the five-Justice majority Court concluded that the definition of WOTUS in Clean Water Act (CWA) §1362(7) "encompasses only those relatively permanent, standing or continuously flowing bodies of water forming geographical features that are described in ordinary parlance as streams, oceans, rivers, and lakes." The Court held that WOTUS does not apply to all wetlands, but extends only to those wetlands with a continuous surface connection to bodies of water that are WOTUS in their own right, so that they are indistinguishable from those waters. The Court acknowledged that~~

“temporary interruptions in surface connection may sometimes occur because of phenomena like low tides or dry spells.” In footnote 16, the Court said: “Although a barrier separating a wetland from a water of the United States would ordinarily remove a wetland from federal jurisdiction, a landowner cannot carve out wetlands from federal jurisdiction by illegally constructing a barrier on wetlands otherwise covered by the CWA. Whenever the EPA can exercise its statutory authority to order a barrier’s removal because it violates the Act...that unlawful barrier poses no bar to its jurisdiction.” On August 29, 2023, the EPA and Corps issued an Amended 2023 Rule to conform key aspects of the regulatory text to the *Sackett* decision.

**Work-to-Date:** WSWC adopted positions #369 and #373 regarding CWA rulemaking efforts and state-federal collaboration. Position #369 was revised and readopted as Position #410, while Position #373 was allowed to sunset and acknowledged as a letter with continued historical value. At the October 2018 meeting in Coeur d’Alene, Idaho, Position #410 was revised and readopted as #427, with the State of Washington abstaining from the vote. At the September 2021 meeting in Deadwood, South Dakota, Position #472 was again revised and adopted, with the understanding that further efforts would be made to improve the position the following Spring. WSWC sent various letters and comments to EPA and the Corps. At the April 2022 meeting in Arlington, Virginia, Position #481 was revised and adopted, replacing #472.

In the Summer of 2022, WSWC hosted a series of workshops to consider the technical and policy implications of a regional approach to WOTUS implementation, and prepared a draft white paper to document this effort for future use.

**2023-2024:** The Committee will continue to work with the Water Resources and Water Quality Committees through the Workgroup to follow and comment on federal actions regarding CWA jurisdiction in accordance with the WSWC’s and WGA’s positions, as well as consider the impacts of the new rule(s) on state policies, programs and regulations.

**Time Frame:** Ongoing

CWA Rulemaking Workgroup: Erica Gaddis (UT), Jennifer Zygmunt (WY), Tom Stiles (KS), Jennifer Verleger (ND), and Julie Cunningham (OK).

\*See Item 2(a) of the Water Quality Committee Workplan

### **3. AD HOC GROUP ON RESERVED INDIAN WATER RIGHTS**

**Work-to-Date:** The Western Governors’ Association (WGA) and WSWC have long supported the negotiated resolution of Indian water rights claims (WSWC Position #454). As a result, the WGA and WSWC have worked with the Native American Rights Fund (NARF) for over ~~thirty~~ forty years as part of an Ad Hoc Group on Reserved Indian Water Rights to promote negotiated settlements.

Over the years, the Ad Hoc Group has carried out a number of activities to support the negotiated settlement of Indian reserved water rights claims, including frequent trips to Washington, D.C. to support policies and legislation that facilitate settlements. A biennial symposium on settlements is held by the WSWC and NARF every odd year. The Group has also worked to highlight the need to secure a permanent funding mechanism for authorized settlements and to identify alternative

funding sources to help ensure that settlements authorized by Congress and approved by the President will be implemented.

In recent years, the WSWC and NARF have established regular meetings with the Deputy Secretary of the Interior's Office, the Secretary of the Interior's Indian Water Rights Office, and other Interior and Department of Justice officials engaged in Indian water rights settlement efforts. The WSWC and NARF have also held regular meetings with the White House Office of Management and Budget and other White House officials to support the WSWC's settlement policies.

~~The 116<sup>th</sup> Congress passed legislation approving the Navajo-Utah settlement, the Confederated Salish and Kootenai settlement in Montana, increased funding and a time extension for the settlement in Aamodt in New Mexico, and approval for a 2-year NRCS study for a dam that would help settle the Kickapoo tribe water claims in Kansas. On August 8-9, 2023, the WSWC and NARF co-hosted the 18<sup>th</sup> Biennial Symposium on the Settlement of Reserved Water Rights, highlighting the Hualapai Tribe's settlement authorized by the 117<sup>th</sup> Congress. The Symposium also provided a forum to discuss the Biden Administration's settlement and negotiation policies, Congressional outlooks for pending settlement bills and permanent funding mechanisms, and water leasing of reserved water rights. Recordings and presentation materials are available at: <https://westernstateswater.org/events/wwc-narf-18th-biennial-indian-reserved-water-rights-symposium/>~~

**2023-2024:** The Committee will oversee WSWC's Ad Hoc Group efforts in the following areas: (1) activities to gather support for an appropriate remedy to settlement funding issues, including the development of a permanent settlement funding mechanism, the identification of other possible funding sources, and funding for federal assessment, negotiation, and implementation teams; (2) continue meeting with the Administration via quarterly conference calls and other face-to-face opportunities to discuss key issues associated with Indian water rights settlements, including possible modifications to the Criteria & Procedures; and (3) prepare to hold the 2025 Symposium on the Settlement of Indian Reserved Water Rights Claims in partnership with the Native American Rights Fund.

**Time Frame:** Ongoing

Reserved Rights Subcommittee: Jay Weiner (MT), ~~Mary Verner (WA)~~. NARF members participating in the Subcommittee in an *ex officio* capacity include: John Echohawk, ~~Joel Williams~~, Steve Moore, Dan Lewerenz, and David Gover. Other *ex officio* members include ~~Stanley Pollack, Ryan Smith, Vanessa Ray-Hodge, and Melanie Stansbury~~.

#### **4. WRDA/CORPS POLICIES**

**Work to date:** The Council has in the past supported regular passage of a Water Resources Development Act (WRDA), and has addressed a number of specific policy issues, while not taking any position on specific project authorizations. The Council has raised concerns with the U.S. Army Corps of Engineers' approach to identifying and regulating the use of "surplus waters," and Corps drought authorities related to Corps projects. The Council also worked successfully to exclude irrigation water supply canals from federal levee safety program, and to encourage the Corps to withdraw the Surplus Water Supply rulemaking.

On May 10, 2022, the Council sent a letter in support of Senator Cramer’s proposed legislation to create a committee with the Corps of Engineers and the States focused on cooperative federalism concerns surrounding the management of water resources, which passed as §8158 of WRDA 2022. The purpose of the Western Water Cooperative Committee (WWCC) is to ensure that U.S. Army Corps of Engineers (Corps) “flood control projects in Western States are operated consistent with congressional directives by identifying opportunities to avoid or minimize conflicts between the operation of the [Corps] projects and water rights and water laws in such States.” The membership of the Cooperative Committee includes the Assistant Secretary of the Army for Civil Works, the Chief of Engineers, two representatives from each Western State appointed by the governor and the attorney general, and one employee from each of the impacted regional offices of the Bureau of Indian Affairs. On March 17, 2023, the WSWC co-hosted a briefing for our western states on the WWCC with the Conference of Western Attorneys General (CWAG) and WGA, and encouraged our Governors and Attorneys General to prepare appointment letters to the Committee. The briefing materials are available at: <https://westernstateswater.org/events/wswc-cwag-briefing-wwcc/>

On May 18, 2023, the WSWC and CWAG sent a group of 25 appointment letters to Assistant Secretary Mike Connor, with some Governors and Attorneys General sending letters directly to the Army Corps of Engineers. On August 29, 2023, the Corps reached out to verify contact information for each of the current appointees, and WSWC assisted with outreach and filling in the gaps. The Corps indicated that they were nearing a point where they would be able to stand up the WWCC, but were still waiting for approval on funding to facilitate efficient operation of the committee and to determine whether FACA rules apply.

**2023-2024:** The Council will continue to work with the Congress and Corps on WRDA and Corps-related issues, to ensure that state water rights and prerogatives are protected, specifically as it relates to natural flows, Corps storage and other issues.

**Subcommittee:** Jennifer Verleger (ND);

## **5. GROUNDWATER**

There are a number of ongoing groundwater issues that pertain to WSWC policies or are otherwise of interest that the Committee will monitor and address on an as-needed basis.

### **A. Reserved Water Rights**

**Background:** On March 7, 2017, the 9th Circuit (849 F.3d 1262) upheld the California District Court’s summary judgment from Phase I of the trifurcated case, *Agua Caliente Band of Cahuilla Indians v. Coachella Valley Water District* (No. 15-55896). The 9th Circuit decision holds that the United States implicitly reserved a right to water when it created the Agua Caliente Reservation, and that the Tribe’s reserved water right extends to the groundwater underlying the Reservation. The court acknowledged that it was unable to find any controlling federal appellate authority explicitly holding that the federal reserved water rights doctrine in *Winters v. United States*, 207 U.S. 564 (1908), extends to groundwater. Instead, it pointed to *United States v. Cappaert*, 426 U.S. 128 (1976) and *In re General Adjudication of All Rights to Use Water in Gila River System and Source*, 989 P.2d 739 (Ariz. 1999) as persuasive and implied authority for its decision, emphasizing

that *Winters* does not distinguish between surface and groundwater or prohibit the inclusion of groundwater.

Given that the federal agencies have relied on tribal water rights cases in the past to press for reserved water rights to groundwater, the implications of the 9<sup>th</sup> Circuit decision could be far reaching, not only for states and tribes outside the 9<sup>th</sup> Circuit's jurisdiction, but also for federal agencies seeking to control groundwater appurtenant to federal lands.

As one example, the Forest Service issued a proposed groundwater directive May 6, 2014. Although the Forest Service asserted that the directive would not infringe on state-issued water rights or change how state groundwater and surface water quality regulations affect federal lands, the proposed directive would have: (1) required application of "...the Reservation or Winters Doctrine to groundwater, as well as surface water, consistent with the purposes of the Organic Administration Act, the Wild and Scenic Rivers Act, and the Wilderness Act;" (2) required the Forest Service to evaluate all applications to states for water rights on lands adjacent to NFS lands; and (3) would have presumed that groundwater and surface water are connected unless proven otherwise. Western Governors strongly objected to the directive, as did the WSWC, which worked with the Forest Service to modify it. The Forest Service later withdrew this proposed directive.

WSWC position #466 notes that no federal statute has addressed any federal property or other rights to groundwater, and opposes "...efforts that would establish a federal ownership interest in groundwater or diminish the primary and exclusive authority of States over groundwater."

Subsequent court decisions that have cited to *Agua Caliente's* groundwater holding include: (1) *Silver v. Pueblo Del Sol Water Co.*, 423 P.3d 348, 353 (Ariz. 2018); (2) *State ex rel. State Eng'r v. United States*, 425 P.3d 723, 733-734 (N.M. Ct. App. 2018) (oblique reference, as the settlement at issue included reserved groundwater); (3) *United States v. State (In re CSRBA Case No. 49576 Subcase No. 91-7755)*, 448 P.3d 322, 350-351 (Idaho 2019); (4) *Baley v. United States*, 942 F.3d 1312, 1338, (Fed Cir. 2019) (although for the discussion on groundwater this case cites to *Cappaert v. United States*, 426 U.S. 128, 142-43 (1976)); (5) *United States v. Walker River Irrigation Dist.*, 473 F. Supp. 3d 1150, 1156-1157 (D. Nev. 2020).

Additionally, the Department of Defense is considering reserved water rights claims to the use of groundwater for Naval Air Weapons Station China Lake in the groundwater basin adjudication *Indian Wells Valley Water District v. All Persons Who Claim a Right to Extract Groundwater in the Indian Wells Valley Groundwater Basin, etc., et al.* (Orange County Superior Court, California, 30-2021-01187275-CU-OR-CJC).

**2023-2024:** The Committee will continue to work to ensure that state water rights and prerogatives are protected, specifically as they relate to tribal and non-tribal federal water rights and state authority over groundwater.

## **B. Groundwater Storage Projects**

**Background:** In 1983, Congress passed the High Plains States Ground Water Demonstration Project Act, authorizing the Bureau of Reclamation to undertake a westwide groundwater recharge program. In 1989, WSWC and Reclamation entered a cooperative agreement to prepare a number of case studies to evaluate project effectiveness, identify economic and institutional problems such



as the allocation of project costs and requisite legal authorities, and recommend alternative solutions to improve public policymaking with respect to future groundwater programs and projects. As a result of this agreement, WSWC prepared two reports in 1991 and 1998, titled Ground Water Recharge Projects in the Western United States. Among other recommendations to encourage recharge opportunities, the 1998 report suggested that each state examine its own legal and institutional systems to assure that they adequately address groundwater recharge, amending statutes as necessary to recognize it as a beneficial use, and reasonably protect the right to recover recharged waters.

**2022-2023:** In coordination with the Water Resources Committee, the Legal Committee will work on updating the information in the old reports, and prepare a new summary report. The Committee will query the states to review and update their relevant laws on groundwater storage, particularly as they relate to groundwater banking or Aquifer Storage and Recovery (ASR) projects.

## **6. WATER RIGHTS**

Some of our states have expressed interest in understanding how other states approach different aspects of the management and administration of water rights, including what qualifies as beneficial uses, extensions of time to prove beneficial use to perfect a water right application, and statutes or rules or court procedures governing curtailments in times of scarce water resources, and regulation of water wells. In December 2020, Council staff began distributing a series of survey questions to member states to facilitate this understanding. In 2021, WSWC members responded to the survey questions, and WSWC staff began compiling the responses into four separate reports.

### **A. State Water Well Construction Rules and Regulations**

**Background:** The State Engineer, or other state official, is required to make rules regarding well construction and related regulated activities and the licensing of water well drillers and pump installers. Various states have varying requirements, which may change from time to time. The purpose of these rules is to: (1) assist in the orderly development of underground water; (2) insure that minimum construction standards are followed in the drilling, construction, deepening, repairing, renovating, cleaning, development, testing, disinfection, pump installation/repair, and abandonment of water wells and other regulated wells; (3) prevent pollution of aquifers within the state; (4) prevent wasting of water from flowing wells; (5) obtain accurate records of well construction operations; and (6) insure compliance with the state's authority for appropriating water. The rules establish administrative procedures for applications, approvals, hearings, notices, revocations, orders and their judicial review, as well as requirements related to well construction standards, such as casing, and procedures for monitoring, reporting and criteria for the waivers of certain requirements.

**2023-2024:** Council staff will prepare a report of the 2021 responses to the survey questions. The Committee and Council will also provide a forum for the discussion of best management practices.

**Subcommittee:**

**Timeframe:**

## **B. Proof of Beneficial Use of Water and Extension Criteria**

**Background:** Beneficial use is the measure of any right to the use of water in the West. The State Engineer, or other state official, on behalf of the State, may grant a permit to put water to beneficial use but evidence or proof of completion of the work necessary to then actually put the water to use is also required. Only after development is done and the water is being fully put to beneficial use, will a water right be granted, which will be limited to the extent and nature of use in the accepted proof. This also applies to requests to change the use of a water rights, whether changing the point of diversion, use or purpose of use, or location water is returned to a natural source. Generally, some specific period of time will be allowed to complete the work, and if needed applicants may request an extension of time. The specific criteria for proof of beneficial use and extending timelines may vary by state.

**2023-2024:** Council staff will compile responses to the 2021 survey questions and report on the results. The Committee and Council will also provide a forum for the discussion of best management practices.

**Subcommittee:**

**Timeframe:**

## **C. Calls and Curtailments**

**Background.** Droughts in many areas of the West have highlighted state procedures and methods of enforcing curtailment of water uses and administration of water rights in a priority system, particularly where junior groundwater pumping, insufficient carriage water, instream flow for fish and wildlife, junior municipal supply, and federal reserved rights are at issue.

**2023-2024.** Council staff will prepare a report on the 2021 survey responses. The Committee and Council will also provide a forum for a discussion of water rights enforcement.

**Subcommittee:**

**Timeframe:**

## Tab H – Implications of AI to Water Management and Water Law

# Artificial Intelligence in Water Management

Western States Water Council  
September 12-14, 2023  
Anchorage, Alaska



James H. Davenport  
JHDavenport LLC  
Attorney at Law

# Potential Advantages of Using AI

## Per WSWC's Executive Director, Tony Willardson

- In 2020, Tony Willardson called for “applied science to support decisionmaking, national and regional impact assessments, better, more robust forecasting models, watershed scale climate model outputs, agreed upon data standards and protocols, better understanding of climate drivers, and an internet portal for public and decisionmakers.” Another municipal climate-response consultant, a California “resiliency planner,” recommends “portfolio approaches,” “adaptive implementation,” “system vulnerability and risk assessment,” and “futurecasting of vision.”
- Tony Willardson, “The Challenges of Change: Resilient Water Resource Management,” American Water Resources Association, Washington State Conference, October 6, 2020.

# Who is thinking about AI?

- Growing body of literature on the subject, covering a wide range of topics and perspectives, that could be found via searching relevant databases such as Google Scholar, JSTOR, etc.
- In academia, researchers from various fields, such as computer science, environmental science, and engineering, are studying the potential of AI for natural resource management., and publishing their findings in journals and conference proceedings.
- Government agencies, such as the National Aeronautics and Space Administration (NASA) and the United States Geological Survey (USGS), also conduct research on the use of AI in natural resource management, and disseminate their findings to the public through reports, articles, and other publications.
- Companies and industries are developing and using AI-based technologies for natural resource management,
- Non-profit organizations, such as the World Wildlife Fund (WWF) and the Nature Conservancy, are conducting research and publishing information on AI and natural resource management.

# Current Use of AI

- AI algorithms can be used to analyze data and provide insights that can inform conservation and land management decisions.
- Use of remote sensing technology, such as satellites and drones, to gather data on land use and land cover change, deforestation, and forest fire detection.
- Artificial intelligence programs are available now in the evaporative cooling of computerized data centers, high-occupancy hotels, convention centers, mega-resorts and office buildings, and can be used to bring better water usage efficiency in the agricultural sector.
  - Hot water, 35-40 C (95-104 F), heated by exposure to heat intensive process is plumbed through a “wet loop” to a cooling tower from which moist heat collected from the heat intensive process is discharged at a cooling tower. Then the cooler water, 24C (75 F), loop is plumbed to a condenser permitting that cooler water to be returned to the heat-generating process area to collect more heat, or otherwise for landscaping purposes. Meters, submeters and sensors in water process loops are installed throughout the system’s plumbing. Real-time data is collected and maintained in a database of historical readings. Live comparisons are made by artificial intelligence software between current data and historical data, so as to reveal plumbing system inefficiencies that can be notified to on-site operating personnel. See Apana’s Intelligent Water Management Platform, [www.apana.com](http://www.apana.com)
- Use of AI in precision agriculture to optimize crop yields, reduce water and fertilizer use, and detect and respond to pests and diseases.
- AI also has been applied to predict and manage fish stock, predict water scarcity, and optimize water use in irrigation systems.
- Additionally, AI can be used for monitoring and management of wildlife populations, tracking animal migrations, and identifying and protecting endangered species.

# The Capacity of Artificial Intelligence

- AI has the capacity to:
  - Transform conventional, nuclear and cyber weapons strategy.
  - Manage electric grids
  - Mitigate climate change
  - Revolutionize farming
  - Revolutionize medicine
  - Does AI have the capacity to transform natural systems management?



# The Capacity of Artificial Intelligence

- “AI is facilitating the precise administration of pesticides, the detection of diseases, and the prediction of crop yields. In medicine, it is facilitating the discovery of new drugs, the identification of new applications of existing drugs and the detection of prediction of future maladies, e.g. breast cancer.”
  - Henry Kissinger, Eric Schmidt, Daniel Huttenlocher, *The Age of AI and the Human Future*, Back Bay Books (2021), P. 69

# Potential Advantages of Using AI

Per WSWC's Executive Director, Tony Willardson

- Today's water managers refer to the challenge of establishing resource "resiliency." Challenges to resiliency include: growth and related economic and environmental needs; limited data regarding water supplies and demands; competing or poorly defined water rights; aging and often inadequate infrastructure; unpredictable climate and extreme events (inability to predict seasonal/subseasonal supply); and a constantly evolving regulatory landscape.
- Strategies to address that challenge include: "recognition of the importance of climate impacts; support for climate resiliency research; longer term forecasting (seasonal to subseasonal); continuing dynamic earth systems research; and continuing monitoring of the water cycle."

## Some AI Success Stories:

- Winning a game: AlphaZero chess victory, “Reinforcement Learning,” a simulator played chess against itself, each move calibrated to strategic opportunities created as a “reward” for the move. AI “trains itself.”
- Killing a bacterium: MIT discovery of Halcion: “Supervised Learning” A machine learning algorithm to predict the antibacterial properties of molecules, training the algorithm with a dataset of more than two thousand molecules. An artificial “neural” network in which information nodes and numerical weights simulate neurons and synapses, i.e. like the brain. The “neural network” captured the association between the molecules and their potential to inhibit bacterial growth.
  - Henry Kissinger, Eric Schmidt, Daniel Huttenlocher, *The Age of AI and the Human Future*, Back Bay Books (2021).

# AI in Language Analysis

- Utilizing language data, change the semantic relationships between words into geometric relationships.
  - Words that are near each other in meaning are near each other in geometric relationship,
  - inter-rational relationships (every concept to every other concept) within the language are encoded in the geometric shape. The computer doesn't know what anything means, it just knows how they relate.
- Compare geometric relationship of one language to another, using spatial relationships of “word clouds.” Rotate one word geometric shape upon another of a different language to compare similarities.
- Build similar geometry of animal sounds, compare geometries.
  - “Talking to Animals,” Karen Bakker, University of British Columbia, Aza Raskin, Center for Humane Technology, *Unexplainable*, Vox Media Podcast Network, Norm Hasenfeld, host, August 16, 2023,

## AI—4<sup>th</sup> generation of the Technology Era

- Technology era 1970s-2020s
  - Data collection/calculation phase
  - Menu oriented search engine phase (mature)
  - Robot phase (adolescent)
  - Artificial intelligence phase (immature)

# Algorithms

- Classical algorithms consist of steps for producing precise results
- Machine learning algorithms depart from the precision and predictability of classical algorithms.
- Machine-learning algorithms consist of steps for improving imprecise results.
- “The building blocks of these ‘learning’ techniques are algorithms, sets of steps for translating inputs into repeatable outputs.”
- AI “intuits” outcomes from data analysis. It is more a matter of probability than deduction.
- AIs “learn” by consuming data, then drawing observations and conclusions based on the data. While previous systems required exact inputs and outputs, AIs with imprecise function require neither.
  - Henry Kissinger, Eric Schmidt, Daniel Huttenlocher, *The Age of AI and the Human Future*, Back Bay Books (2021)

# Machine Learning Algorithms

- “The building blocks of these ‘learning’ techniques are algorithms, sets of steps for translating inputs into repeatable outputs. Machine learning algorithms are a departure from the precision and predictability of classical algorithms, including those in calculations like long division. Unlike classical algorithms, which consist of steps for producing precise results, machine-learning algorithms consist of steps for improving upon imprecise results.”
- Henry Kissinger, Eric Schmidt, Daniel Huttenlocher, *The Age of AI and the Human Future*, Back Bay Books (2021)

# Forms of “Machine Learning” in Multi-Dataset Analysis

- Supervised learning: Label dataset inputs individually so as to achieve the desired output.
- Unsupervised learning: Algorithm produce gross database groupings based on some specified weight of measuring the degree of similarity.
- Reinforcement learning: AI trains itself in an artificial environment.
- Transfer learning: train one data set to identify anomalies in another data set.
- Multivariate anomaly detection: learn the patterns in multiple data sets, then identify data points that don't fit the pattern.
  - Isolation Forest: algorithm isolates anomalies by randomly partitioning the data sets into smaller and smaller sets. Anomalies are more likely to be isolated in smaller sets.
  - Local Outlier Factor: algorithm measures the local density of each data point. Anomalies are more likely to have a lower local density than normal data points.”
  - One-Class Support Vector Machine: Algorithmy learns a boundary that separates normal data from anomalies.



# Relevant data sets for water resource management

- “You’re in spreadsheet hell,” Veselka said. “You’re in silo data.”
  - “Digital Dialogues: The next wave of AI in the orchard arrives,” *Good Fruit Grower*, September 2023, p. 9
  - Keith Veselka, NWFM, LLC, Central Washington (Yakima) farm management company.

# Relevant data sets for water resource management:

\*Calendar formatted

<sup>G</sup>Geo-specific

- Surface water
- Precipitation\*<sup>G</sup>
- Snowpack\*
- Climate\*
- Bathymetric data (2 and 3 dimensional) <sup>G</sup>
- Hydrographic data\*<sup>G</sup>
- Stream gage (water surface elevation] data\* <sup>G</sup>
- Flow volumes\*
- Flow speed (velocity)\*
- Surface water hydrograph, generated from other listed data
- Surface water chemistry data\*
- Surface water temperature data\*
- Water storage data\*
- Hydropower volume and production data<sup>G</sup>
- Geomapping data <sup>G</sup>

# Relevant data sets for water resource management:

\*Calendar formatted

<sup>G</sup>Geo-specific

- Ground water
- Aquifer elevations <sup>G</sup>
- 3-dimensional definition <sup>G</sup>
- gradients, topography and bathymetry <sup>G</sup>
- Hydrogeologic formation <sup>G</sup>
- Permeability <sup>G</sup>
- Hydraulic conductivity attributes <sup>G</sup>
- Water supply volume <sup>G</sup>
- Recharge data <sup>G</sup>
- Points of diversion <sup>G</sup>
- Historic use (“drawdown”) <sup>G</sup>

# Relevant data sets for water resource management:

\*Calendar formatted

<sup>G</sup>Geo-specific

- Environmental
- Fishery data
- Other aquatic species data
- Aves data
- List of ESA (or other) listed species<sup>G</sup>
- Human recreation data
- Related ecosystem data

# Relevant data sets for water resource management:

\*Calendar formatted

<sup>G</sup>Geo-specific

- Water Demand
- Diversion rights data <sup>G</sup>
- Seniority Date
- Permit or license number
- Maximum annual diversion
- Maximum daily or seasonal diversion
- Consumptive/nonconsumptive use volumes
- Categorical Use (municipal, industrial, agricultural, etc.)
- Return Flows (including hydropower plant once-through returns)
- Points of diversion data <sup>G</sup>
- Water delivery volume data\*
- Distribution of use type data\*<sup>G</sup>

# Relevant data sets for water resource management:

\*Calendar formatted

<sup>G</sup>Geo-specific

- Economic
- Economic return-on-use data per use category, e.g., hydropower, agricultural, municipal\*
- Water rights transaction data\*
- Agricultural Market value data\*<sup>G</sup>
- Agricultural crop mix data\*<sup>G</sup>
- Agricultural gross product value data\*
- Agricultural specific product value data\*
- Human population density and other demographic data\*<sup>G</sup>
- Per capita use data
- Urban gross production value data\*
- Economic: annual inches of irrigation & area (agricultural use)\*

## How Can AI Data Analysis Be Used?

- A generator network creates potential outputs.
- A Generator Discriminator Network prevents poor outputs from being generated.
- A Generator Adversarial Network refines its outputs from its learning refinements based on rejected outputs.
  - Henry Kissinger, Eric Schmidt, Daniel Huttenlocher, *The Age of AI and the Human Future*, Back Bay Books (2021), P. 75

# How Can AI Data Analysis Be Used?

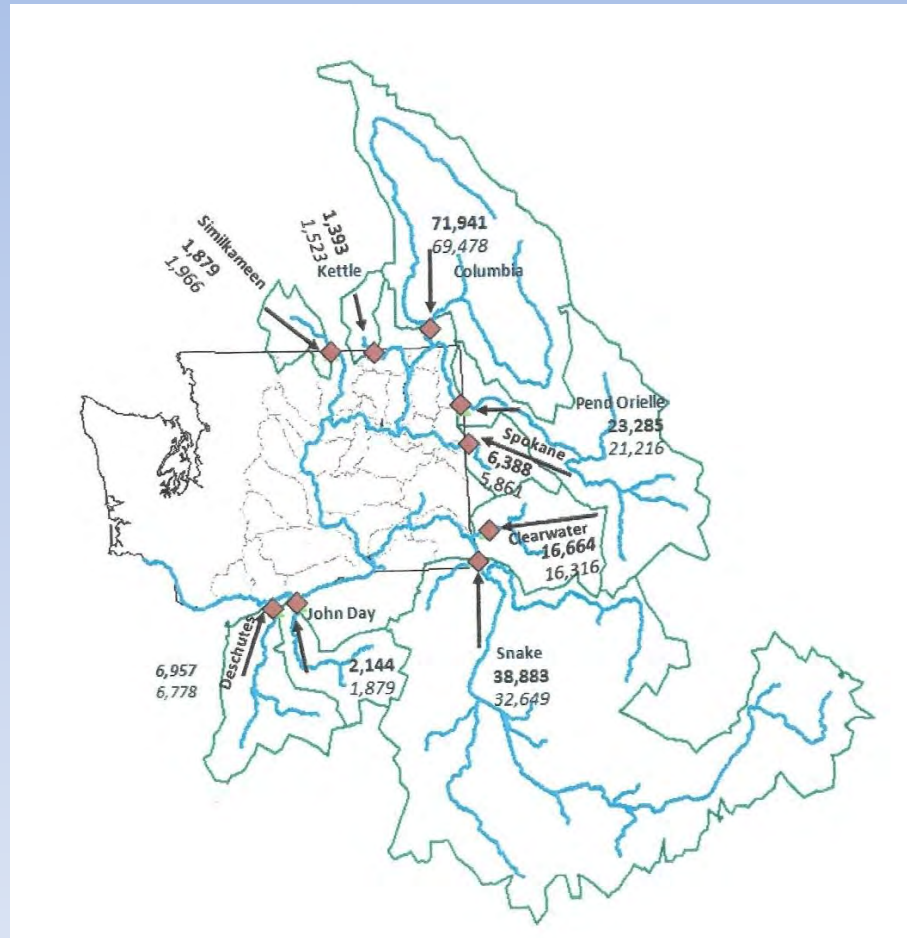
- Determine quality of data sets:
  - Uniformity of data collection
  - Consistency of data collection
  - Integrity of data collection
- Use machine learning techniques to:
  - Determine correlation between data bases
  - Discover anomalies between data bases



## How Can AI Data Analysis Be Used?

- Develop simulation models, (“digital twins”) of natural systems.
  - Models capable of natural system operation outcomes premised on variable hypotheses.
- Amend existing simulation models to accommodate consideration of greater number of data variables.

# Simulation Models exist for Columbia and Colorado River Systems (and likely many others)



## How Can AI Data Analysis Be Used?

- Populate Simulation Models (“Digital Twins”) with access to AI-recommended, relevant data bases.
- Use AI-discovered data relationships to construct cause-effect infrastructure (algorithms) of Model.
- Use AI to suggest hypotheses for digital twin analysis.
- Hypothecate alternative data inputs to discover implications to Simulation Model outputs.
- Evaluate hypothecated data input variation against desired resource system performance data.

## How Can AI Data Analysis Be Used?

- Consider modifications to natural system management in line with simulation model-suggested results.
- “Using machine learning to create and adjust models based on real world feedback, modern AI can approximate outcomes and analyze ambiguities that would have stymied classical algorithms.”
  - Henry Kissinger, Eric Schmidt, Daniel Huttenlocher, *The Age of AI and the Human Future*, Back Bay Books (2021), p. 62.

# Shortcomings of AI

- Depends upon quality, uniform data sets.
- Limited understanding of human emotions and social interactions.
- Lack of common sense and ability to reason.
- Difficulty in handling tasks that require creativity and originality
- Limited ability to learn from unstructured data.
- Lack of transparency and explainability in decision-making processes.
- Potential for bias in data and algorithms.
- Limited ability to generalize from specific examples to new situations.
- Current AI systems are not perfectly robust and can be deceived by cleverly crafted inputs.

# AI is not sentient

- AI has no self awareness.
- AI does not know what it doesn't know.
- AI cannot reflect on the accuracy or significance of what it discovers.
- AI cannot “feel” moral or philosophical compunction.
- AI does not have or use intuition.
- AI does not hope or pray.

# The “Audit” Function

- Managing the risks that increasingly prevalent AI will pose is a task that must be pursued concurrently with the advancement of the field.
- Technology should be used in conjunction with other data sources and expertise.
- Ethical and environmental considerations should be taken into account.
- AI design, process and outcome all need be audited by human evaluation.
- AI can misidentify poorly presented data.
- The Age of AI has yet to define its organizing principles, its moral concepts, or its sense of aspirations or limitations.
- Leaders will have to confront the implications of the technology, for whose application they bear significant responsibility.

# Costs

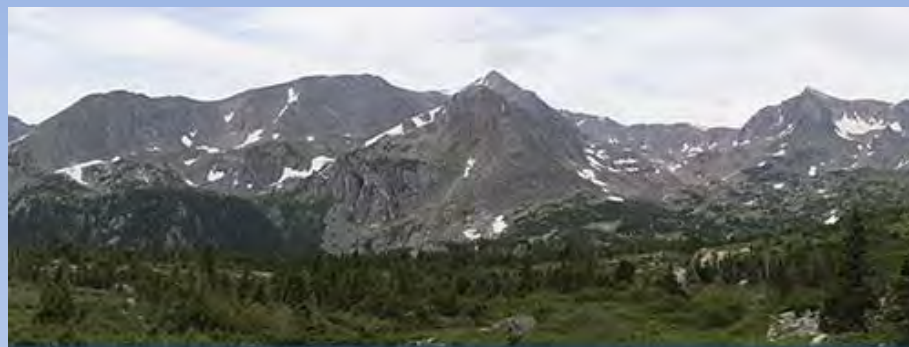
- Neural network training is resource-intensive. The process requires substantial computing power and complex algorithms to analyze and adjust to large amounts of data.



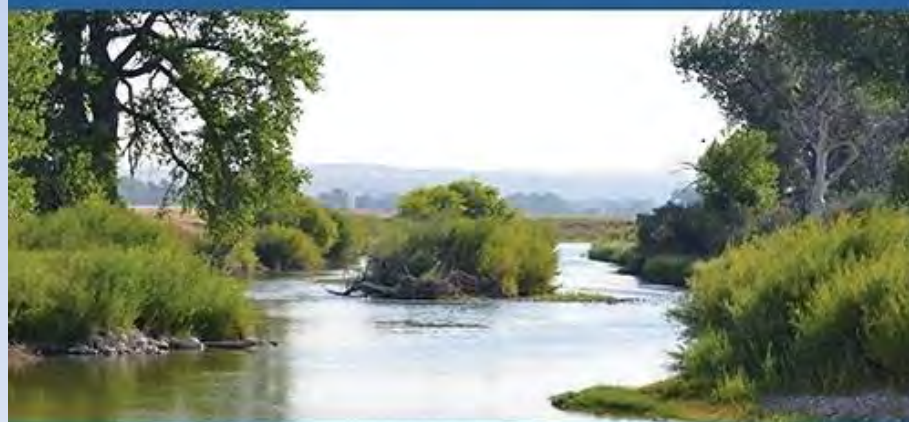
# What needs doing?

- Data inventory—identify whereabouts and accessibility of existing data sets.
- Research AI design knowledge base.
- Describe relational attributes of data sets
  - Cause and effect
  - Influence
  - Statistical similarity
  - Congruence/incongruence
  - Timing
- Create a task-particular AI application

- <https://en.wikipedia.org/wiki/Algorithm>
- [https://en.wikipedia.org/wiki/Artificial\\_intelligence](https://en.wikipedia.org/wiki/Artificial_intelligence)
- *The Age of AI and the Human Future*, Henry Kissinger, Eric Schmidt, Daniel Huttenlocher, Back Bay Books (2021).
- “Talking to Animals,” Karen Bakker, University of British Columbia, Aza Raskin, Center for Humane Technology, *Unexplainable*, Vox Media Podcast Network, Norm Hasenfeld, host, August 16, 2023.
- Kaustuv M. Das, “Blockchains and Streaming and AI, Oh My!” 73/7 *NW Lawyer* 39, Sept. 2019
- Colin Rigley, “Clinical Diagnosis—Old Law in New Tech, And How Lawyers Can Guide Smarter Policy” 73/7 *NW Lawyer* 26, Sept. 2019.



WESTERN WATER  
RIGHTS AND THE U.S.  
SUPREME COURT



— JAMES H. DAVENPORT —

# Columbia River from Source to Mouth



JHD asked Google Bard the following questions. Bard's answers follow.

### Do you have water resource data?

Yes, I have access to water resource data from a variety of sources, including:

- The United States Geological Survey (USGS)
- The National Oceanic and Atmospheric Administration (NOAA)
- The Environmental Protection Agency (EPA)
- The World Bank
- The United Nations

I can provide data on a variety of water resources topics, such as:

- Surface water (lakes, rivers, streams)
- Groundwater
- Water quality
- Water quantity
- Water use
- Water management

I can also provide data on a variety of spatial scales, from local to global.

If you have a specific question about water resources, I can help you find the data you need. Just let me know what you are looking for and I will do my best to help.

Here are some specific examples of water resource data that I can access:

The USGS National Water Information System (NWIS) provides data on surface water levels, streamflow, water quality, and groundwater levels.

The NOAA National Water Model (NWM) provides forecasts of surface water levels, streamflow, and precipitation.

The EPA Water Quality Data Portal provides data on water quality parameters such as dissolved oxygen, pH, and bacteria.

The World Bank Water Data Portal provides data on water resources in developing countries.

The United Nations Water Resources Programme provides data on water resources around the world.

### What about fishery data?

Yes, I have access to water resource data from a variety of sources, including:

Yes, I also have access to fishery data from a variety of sources, including:

- The Food and Agriculture Organization of the United Nations (FAO)

The National Oceanic and Atmospheric Administration (NOAA)  
The World Bank  
The Global Fishing Watch  
The Fish Base

I can provide data on a variety of fishery topics, such as:

Fish catch  
Fish production  
Fish stocks  
Fish trade  
Fishery management

I can also provide data on a variety of spatial scales, from local to global.

If you have a specific question about fisheries, I can help you find the data you need. Just let me know what you are looking for and I will do my best to help.

Here are some specific examples of fishery data that I can access:

The FAO FishStat database provides data on global fish catch, production, and trade.  
The NOAA Fisheries FishWatch website provides data on fish stocks and fishing effort in the United States.  
The World Bank Fisheries Data Portal provides data on fisheries in developing countries.  
The Global Fishing Watch website provides real-time data on fishing activity around the world.  
The FishBase database provides information on over 30,000 fish species.

Let me know if you have any other questions about fishery data.

### Can you compare data from the data sets?

Yes, I can compare data from different data sets. I can use a variety of methods to compare data, including:

Visualization: I can create charts, graphs, and other visualizations to help you see the differences between the data sets.

Statistics: I can calculate statistical measures such as the mean, median, and standard deviation to compare the data sets.

Hypothesis testing: I can use hypothesis testing to determine if there is a statistically significant difference between the data sets.



The best method for comparing data will depend on the specific data sets and the questions you are trying to answer.

For example, if you are comparing the fish catch in two different countries, you might want to create a bar chart to see how the catch has changed over time. You could also calculate the mean catch per year to see if there is a statistically significant difference between the two countries.

If you are comparing the fish stocks in two different regions, you might want to use a scatter plot to see how the stock levels are correlated with other factors such as water temperature or pollution. You could also use hypothesis testing to determine if there is a statistically significant difference between the stock levels in the two regions.

I can help you choose the best method for comparing your data sets and interpret the results.

Is there a specific data set you want me to compare?

**Compare Columbia River water levels and water quality data with Salmon population 1960-2020.**

Sure, I can compare the Columbia River water levels and water quality data with salmon population data from 1960 to 2020.

The Columbia River is a major river in the Pacific Northwest of the United States. It flows from British Columbia, Canada, through Washington and Oregon, and into the Pacific Ocean. The river is home to a variety of salmon species, including Chinook, sockeye, and coho.

Water levels in the Columbia River have been declining since the 1960s. This is due to a number of factors, including climate change, dams, and water withdrawals for irrigation and other uses.

Water quality in the Columbia River has also declined since the 1960s. This is due to pollution from agricultural runoff, industrial discharges, and urban stormwater.

The decline in water levels and water quality has had a negative impact on salmon populations. Salmon need cold, clean water to survive. As the water levels and water quality have declined, salmon populations have declined as well.

A study by the National Oceanic and Atmospheric Administration (NOAA) found that salmon populations in the Columbia River have declined by an average of 90% since the 1960s. The study also found that the decline in salmon populations is directly correlated with the decline in water levels and water quality.

The decline in salmon populations has had a significant impact on the economy and ecology of the Pacific Northwest. Salmon are an important food source for many people and animals in the

region. They also play a vital role in the ecosystem by helping to control the populations of other fish and insects.

There are a number of things that can be done to improve water levels and water quality in the Columbia River and help to restore salmon populations. These include:

- Reducing greenhouse gas emissions to slow climate change.

- Removing dams that block salmon migration.

- Reducing pollution from agricultural runoff, industrial discharges, and urban stormwater.

- Improving fish hatchery programs.

- Creating more habitat for salmon.

The restoration of salmon populations in the Columbia River is a complex challenge, but it is one that is worth pursuing. Salmon are an important part of the Pacific Northwest ecosystem and their decline has had a significant impact on the region. By taking steps to improve water levels and water quality, we can help to restore salmon populations and protect this important species.

### Numeric data with attribution to source please

Sure, here is some numeric data with attribution to source on the comparison of Columbia River water levels and water quality data with salmon population data from 1960 to 2020:

#### Water levels:

- The average annual flow of the Columbia River has declined by about 10% since 1960.

- The average summer low flow has declined by about 25% since 1960.

- The average number of days with low flows has increased by about 50% since 1960.

#### Water quality:

- The concentration of nitrogen in the Columbia River has increased by about 50% since 1960.

- The concentration of phosphorus in the Columbia River has increased by about 30% since 1960.

- The concentration of sediment in the Columbia River has increased by about 20% since 1960.

#### Salmon populations:

- The number of adult salmon returning to the Columbia River has declined by an average of 90% since 1960.

- The number of Chinook salmon returning to the Columbia River has declined by an average of 95% since 1960.

- The number of sockeye salmon returning to the Columbia River has declined by an average of 85% since 1960.



The sources for this data are:

Water levels:

- National Oceanic and Atmospheric Administration (NOAA)
- U.S. Geological Survey (USGS)

Water quality:

- NOAA
- USGS
- Environmental Protection Agency (EPA)

Salmon populations:

- NOAA
- USGS
- Columbia River Inter-Tribal Fish Commission

Can you compare entire data sets to identify anomalies?

Yes, I can compare entire data sets to identify anomalies. I can use a variety of methods to do this, including:

- Outlier detection: This is a statistical method that identifies data points that are significantly different from the rest of the data set.

- Changepoint detection: This is a statistical method that identifies points in the data set where there is a significant change in the distribution of the data.

- Machine learning: This is a more sophisticated approach that uses algorithms to learn the patterns in the data and identify anomalies that do not fit the pattern.

The best method for identifying anomalies will depend on the specific data set and the questions you are trying to answer.

For example, if you are trying to identify anomalies in financial data, you might use outlier detection to identify data points that are significantly different from the mean or median of the data set. You could also use changepoint detection to identify points in the data set where there is a significant change in the volatility of the data.

If you are trying to identify anomalies in medical data, you might use machine learning to learn the patterns in the data and identify data points that do not fit the pattern. This could be useful for identifying patients who are at risk for developing a disease or who are not responding to treatment.

I can help you choose the best method for identifying anomalies in your data set and interpret the results.

Do you have a specific data set you want me to compare?

## Compare river elevation, hydropower production and climate data for Columbia River 1960-2020, identifying anomalies.

Sure, I can compare river elevation, hydropower production, and climate data for the Columbia River from 1960 to 2020, identifying anomalies.

The Columbia River is a major river in the Pacific Northwest of the United States. It flows from British Columbia, Canada, through Washington and Oregon, and into the Pacific Ocean. The river is home to a variety of salmon species, including Chinook, sockeye, and coho.

River elevation is the height of the water surface above a fixed point. Hydropower production is the amount of electricity generated by water power. Climate data includes information on temperature, precipitation, and other weather variables.

Anomalies are deviations from the normal or expected value. They can be caused by a variety of factors, including natural variability, climate change, and human activities.

I can use a variety of methods to compare river elevation, hydropower production, and climate data for the Columbia River from 1960 to 2020, identifying anomalies. These methods include:

- Visualization: I can create charts, graphs, and other visualizations to help you see the data and identify anomalies.

- Statistics: I can calculate statistical measures such as the mean, median, and standard deviation to compare the data sets.

- Hypothesis testing: I can use hypothesis testing to determine if there is a statistically significant difference between the data sets.

- Machine learning: I can use machine learning algorithms to learn the patterns in the data and identify anomalies that do not fit the pattern.

The best method for comparing the data sets and identifying anomalies will depend on the specific data sets and the questions you are trying to answer.

For example, if you are trying to identify anomalies in river elevation data, you might use visualization to create a time series plot of the data. This would allow you to see the overall trend in the data and identify any unusual spikes or dips. You could also use statistical methods to calculate the mean and standard deviation of the data. Any data points that are significantly outside of the normal range would be considered anomalies.

If you are trying to identify anomalies in hydropower production data, you might use hypothesis testing. You could compare the average hydropower production in each year to the average hydropower production over the entire period. Any years with significantly lower or higher hydropower production would be considered anomalies.

If you are trying to identify anomalies in climate data, you might use machine learning. You could train a machine learning algorithm to learn the patterns in the temperature and precipitation data. The algorithm could then be used to identify data points that do not fit the pattern. This could be useful for identifying extreme weather events or other unusual climate conditions.

I can help you choose the best method for comparing the data sets and identifying anomalies in your data set and interpret the results.

Is there a specific data set you want me to compare?

Want to discover whether anomalies in one data set correspond with similar anomalies in other data sets. Prefer machine learning.

Sure, I can help you discover whether anomalies in one data set correspond with similar anomalies in other data sets using machine learning.

One machine learning approach that you can use is multivariate anomaly detection. This approach uses machine learning algorithms to learn the patterns in multiple data sets. The algorithms can then be used to identify data points that do not fit the pattern in any of the data sets. This could be useful for identifying anomalies that are correlated across multiple data sets.

Another machine learning approach that you can use is transfer learning. This approach uses machine learning algorithms that have been trained on one data set to identify anomalies in another data set. This can be useful if you have limited data for the second data set.

The best machine learning approach for you will depend on the specific data sets and the questions you are trying to answer.

Here are some specific examples of machine learning algorithms that can be used for anomaly detection:

Isolation Forest: This algorithm isolates anomalies by randomly partitioning the data set into smaller and smaller sets. Anomalies are more likely to be isolated in smaller sets.

Local Outlier Factor (LOF): This algorithm measures the local density of each data point. Anomalies are more likely to have a lower local density than normal data points.

One-Class Support Vector Machine (OCSVM): This algorithm learns a boundary that separates normal data points from anomalies.

I can help you choose the best machine learning algorithm for your needs and interpret the results.

Do you have specific data sets that you want to compare?

Compare river elevation, hydropower production and climate data for Columbia River 1960-2020, identifying anomalies.

Sure, I can help you with that.

I will use the multivariate anomaly detection approach using the Isolation Forest algorithm. This algorithm isolates anomalies by randomly partitioning the data set into smaller and smaller sets. Anomalies are more likely to be isolated in smaller sets.

I will use the following data sets:

- River elevation data from the USGS National Water Information System (NWIS)
- Hydropower production data from the US Department of Energy (DOE)
- Climate data from the National Oceanic and Atmospheric Administration (NOAA)

The data sets will be pre-processed to remove any missing values and outliers. The Isolation Forest algorithm will then be trained on the data sets. The algorithm will learn the patterns in the data and identify anomalies.

The anomalies will be identified by their isolation score. Anomaly scores close to 0 indicate normal data points, while anomaly scores close to 1 indicate anomalies.

I will then compare the anomalies in the river elevation data to the anomalies in the hydropower production data and the climate data. I will look for correlations between the anomalies in the three data sets.

I will also visualize the data to help me identify the anomalies. I will create time series plots of the river elevation, hydropower production, and climate data. This will allow me to see the overall trend in the data and identify any unusual spikes or dips.

I will be able to tell you whether anomalies in one data set correspond with similar anomalies in other data sets. I will also be able to tell you the correlations between the anomalies in the three data sets.

This information can be used to understand the causes of the anomalies and to develop strategies to mitigate their effects.

I will need some time to process the data and run the analysis. I will let you know the results as soon as I have them.

Is there anything else I can help you with?

Data sets:

\*Calendar formatted

<sup>G</sup>Geo-specific

Surface water

Precipitation\*<sup>G</sup>

Snowpack\*

Climate\*

Bathymetric data (2 and 3 dimensional) <sup>G</sup>

Hydrographic data\*<sup>G</sup>

Stream gage (water surface elevation] data\* <sup>G</sup>

Flow volumes\*

Flow speed (velocity)\*

Surface water hydrograph, generated from other listed data

Surface water chemistry data\*

Surface water temperature data\*

Water storage data\*

Hydropower volume and production data<sup>G</sup>

Geomapping data <sup>G</sup>

Ground water

Aquifer elevations <sup>G</sup>

3-dimentional definition <sup>G</sup>

gradients, topography and bathymetry <sup>G</sup>

Hydrogeologic formation <sup>G</sup>

Permeability <sup>G</sup>

Hydraulic conductivity attributes <sup>G</sup>

Water supply volume <sup>G</sup>

Recharge data <sup>G</sup>

Points of diversion <sup>G</sup>

Historic use ("drawdown") <sup>G</sup>

Environmental

Fishery data

Other aquatic species data

Aves data

List of ESA (or other) listed species<sup>G</sup>

Human recreation data

Related ecosystem data

### Water Demand

#### Diversion rights data <sup>G</sup>

- Seniority Date
- Permit or license number
- Maximum annual diversion
- Maximum daily or seasonal diversion
- Consumptive/nonconsumptive use volumes
- Categorical Use (municipal, industrial, agricultural, etc.)
- Return Flows (including hydropower plant once-through returns)

#### Points of diversion data <sup>G</sup>

#### Water delivery volume data\*

#### Distribution of use type data\*<sup>G</sup>

### Economic

#### Economic return-on-use data per use category, e.g., hydropower, agricultural, municipal\*

#### Water rights transaction data\*

#### Agricultural Market value data\*<sup>G</sup>

#### Agricultural crop mix data\*<sup>G</sup>

#### Agricultural gross product value data\*

#### Agricultural specific product value data\*

#### Human population density and other demographic data\*<sup>G</sup>

##### Per capita use data

##### Urban gross production value data\*

#### Economic: annual inches of irrigation & area (agricultural use)\*

Tab I – S2S Forecasting Appropriations  
Request / Committee on Science,  
Space, & Technology Testimony

## Sub-seasonal to Seasonal Precipitation Forecasting for Water Management

April 18, 2023

The Honorable Hal Rogers  
Chairman  
House Appropriations Subcommittee on  
Commerce, Justice, and Science  
United States House of Representatives  
Washington, DC 20515

The Honorable Matt Cartwright  
Ranking Member  
House Appropriations Subcommittee on  
Commerce, Justice, and Science  
United States House of Representatives  
Washington, DC 20515

Dear Chairman Rogers and Ranking Member Cartwright:

On behalf of the below-signed water management agencies and organizations, we are writing to request your support for a \$15 million Fiscal Year 2024 (FY24) appropriation to support the pilot for improving sub-seasonal to seasonal (S2S) precipitation forecasting in the western U.S. The National Oceanic and Atmospheric Administration's (NOAA) [2020 report to Congress](#) under Public Law 115-25 recommended the creation of this pilot project.

The purpose of the pilot project is to improve precipitation forecasting for water management in the U.S. As the report notes, NOAA pilot 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.”

For many decades the scientific community has not been able to offer dependable forecasts beyond a week or two, and S2S forecasts have the ability to provide state and local water managers with reliable extended precipitation outlooks. These sub-seasonal (2- to 6-week) to seasonal (2- to 12-month) projections fill an important gap between weather and climate forecasting and represent a central component of seamless short-term and long-term predictions that are needed to support water project operations, drought preparedness and response, and innovative water management strategies such as forecast-informed reservoir operations.

NOAA's Climate Prediction Center (CPC) has been issuing S2S precipitation outlooks since the mid- 1990s. Their skill for the western U.S. has been minimal, just slightly better than predicting average weather conditions, and has shown little improvement over time. Forecasting precipitation at S2S timescales is scientifically challenging and has historically received little federal research funding support.

Your support for a \$15 million increase in the U.S. Weather Research Program line item within NOAA's Office of Oceanic and Atmospheric Research (OAR) would begin development of reliable forecasting with longer lead times to provide water managers with critical data to operate infrastructure more efficiently and allocate resources to mitigate and manage impacts of extreme wet and dry conditions. From this amount, we support a FY24 allocation of \$3 million for the Weather Program Office (WPO) for grants, \$4 million to the OAR Labs for product development, \$2 million to the National Weather Service (NWS) CPC for product evaluation and implementation, \$2 million to the NWS Environmental Modeling Center (EMC) for implementation and evaluation of model improvements, and \$4 million for computing resources needed to support the federal efforts at OAR and NWS. The attached proposed committee report language describes how we believe this critical funding should be focused.

We appreciate your consideration and hope you will support S2S pilot project funding in FY24. Please contact Jordan Smith at [jas@vnf.com](mailto:jas@vnf.com) with any questions or to schedule a meeting to discuss this project with your staff.

Sincerely,

*Signature Page Follows*



## Sub-seasonal to Seasonal Precipitation Forecasting for Water Management



*Matthew Knudson*  
General Manager  
**Antelope Valley - East Kern Water Agency**



*David Reynolds*  
Director of Federal Relations  
**Association of California Water Agencies**



*Thomas Dobbins*  
Chief Executive Officer  
**Association of Metropolitan Water Agencies**



*John A. Coleman*  
Chief Executive Officer  
**Bay Planning Coalition**



*Karla A. Nemeth*  
Director  
**California Department of Water Resources**



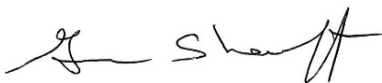
*Aaron A. Avery*  
Senior Legislative Representative  
**California Special Districts Association**



*Paul Hutton*  
Executive Director  
**California Water & Environmental Modeling Forum**



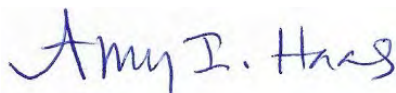
*Joseph Yun*  
Executive Director  
**California Water Commission**



*Gene Shawcroft*  
General Manager  
**Central Utah Water Conservancy District**



*J.M. Barrett*  
General Manager  
**Coachella Valley Water District**



*Amy Haas*  
Executive Director  
**Colorado River Authority of Utah**



*Andrew A. Mueller*  
General Manager  
**Colorado River Water Conservation District**

## Sub-seasonal to Seasonal Precipitation Forecasting for Water Management



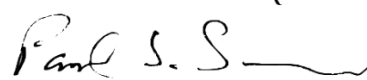
*Dan Keppen*  
*Executive Director*  
**Family Farm Alliance**



*Jason Phillips*  
*Chief Executive Officer*  
**Friant Water Authority**



*Beth Callaway*  
*Executive Director*  
**Interstate Council on Water Policy**



*Paul Simmons*  
*Executive Director*  
**Klamath Water Users Association**




*Anselmo G. Collins, P.E.*  
*Senior Assistant General Manager – Water System*  
**Los Angeles Department of Water and Power**



*Adel Hagekhalil*  
*General Manager*  
**Metropolitan Water District of Southern California**



*Matthew Chase*  
*Executive Director*  
**National Association of Counties**



*Dale Nellor*  
*Executive Vice President*  
**National Water Resources Association**



*Adam Sullivan*  
*Nevada State Engineer*  
**Nevada Department of Conservation and Natural Resources**



*David J. Guy*  
*President*  
**Northern California Water Association**

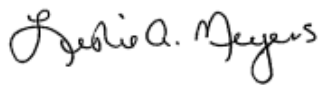


*Cathy Green*  
*Board President*  
**Orange County Water District**



*Mary-Ann Warmerdam*  
*Senior Vice President, Governmental Affairs*  
**Regional Council of Rural Counties**

## Sub-seasonal to Seasonal Precipitation Forecasting for Water Management



*Leslie A. Meyers, PE*  
*Associate General Manager & Chief Water*  
*Resources Executive*  
**Salt River Project**



*Sandra L. Kerl*  
*General Manager*  
**San Diego County Water Authority**



*J. Scott Peterson*  
*Water Policy Director*  
**San Luis & Delta-Mendota Water Authority**



*Chris Harris*  
*Secretary*  
**Six Agency Committee**



*Grant Davis*  
*General Manager*  
**Sonoma Water**



*Jennifer Pierre*  
*General Manager*  
**State Water Project Contractors**



*John R. Zimmerman*  
*General Manager*  
**Truckee Meadows Water Authority**



*Lisa Wallace*  
*Executive Director*  
**Truckee River Watershed Council**



*Michelle Reimers*  
*General Manager*  
**Turlock Irrigation District**



*Tony Willardson*  
*Executive Director*  
**Western States Water Council**

Cc: The Honorable Grace Napolitano

**WRITTEN STATEMENT**

**Jeanine Jones**

**Interstate Resources Manager for the California Department of Water Resources**

**on behalf of the Western States Water Council**

**Before the**

**Subcommittee on Environment**

**Committee on Science, Space, and Technology**

**United States House of Representatives**

**Hearing on**

**“Reauthorizing the Weather Act: Users of Weather Data and Areas for Improvement by Sector”**

**June 6, 2023**

Chairman Miller, Ranking Member Ross, and members of the Environment Subcommittee. Thank you for inviting me to testify before you today on the importance of improving subseasonal to seasonal (S2S) forecasting in the upcoming reauthorization of the *Weather Research and Forecasting Innovation Act of 2017* (Public Law 115-25). I am Jeanine Jones, Interstate Resources Manager for the California Department of Water Resources and a member and former Chair of the Western States Water Council. The Western States Water Council is a government entity composed of representatives from eighteen western states that works to promote effective cooperation among western states on conservation, development, and management of water resources.

I am a registered civil engineer in California and Nevada and a designee on the Colorado River Board of California. Much of my career has been spent in drought preparedness and management. I have previously served on NOAA's Climate Working Group and on the Water Resources Adaptation to Climate Change Workgroup of the USGS Advisory Committee on Water Information.

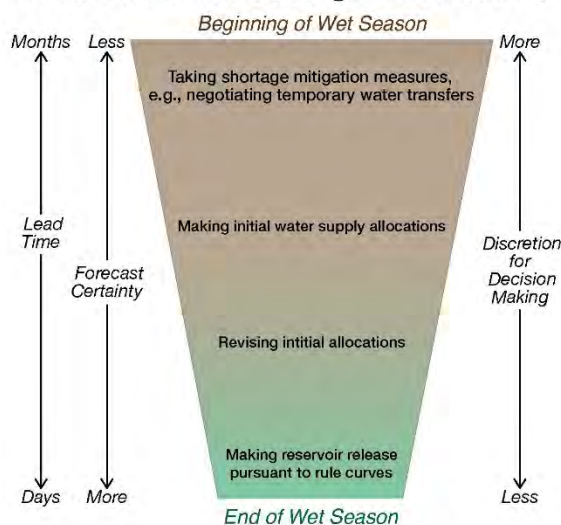
#### Forecasting and Water Management

The western U.S. has high variability in precipitation, both annually and within the water year. As documented by the National Oceanic and Atmospheric Administration's (NOAA's) National Centers for Environmental Information, disasters at both wet and dry extremes (floods and droughts) are responsible for billions of dollars in losses. Being able to predict and plan for extremes and to store water when available benefits local communities, agriculture, energy production, and the environment.

Water management decisions are made at many time scales. Lead time is critical in making water management decisions and few such decisions are made within the time period of a conventional weather forecast (i.e., lead times of up to seven to ten days). These short-lead forecasts can support actions such as near-term reservoir operations, but reservoir operations decisions represent only a small fraction of water management decision-making. Most decisions involve longer timeframes, with the most impactful ones involving resource allocation or hazard mitigation actions made with lead times of months, not days.

Water users, whether they are retail water agencies who contract with a water wholesaler for their supplies or individuals such as agricultural producers, want information about their likely annual water allocations as early as possible to allow them to make operational or business decisions. It is not the forecast of a single storm that influences such decisions, but rather the cumulative results of multiple storms occurring over weeks or months that determines their water supply conditions. For example, about half of the nation's drinking water and most of the drinking water in rural areas comes from groundwater; whether a community or resident needs to drill a new well or deepen an existing one in expectation of potential drought-related shortages is unrelated to the forecast of a single storm but a seasonal forecast would be relevant information.

### Seasonal Water Management Funnel

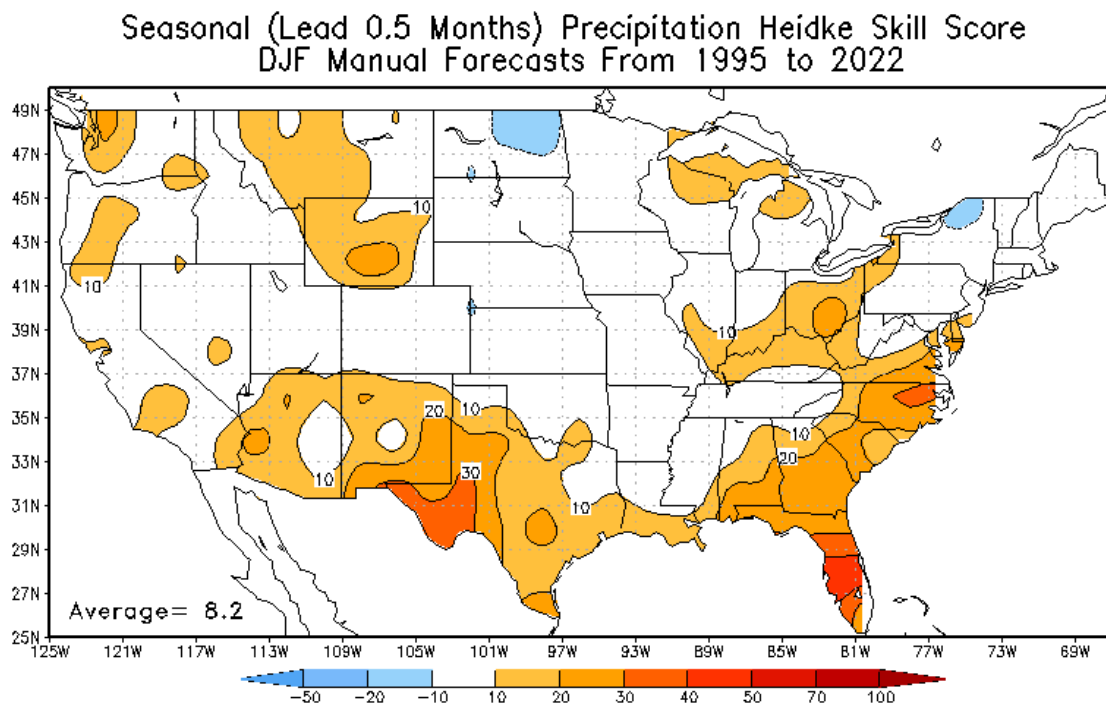


Water agencies' preparation for the extremes of droughts and floods can entail actions such as prepositioning resources, negotiating contracts for water transfers or temporary agricultural land following programs, completing environmental regulatory compliance and permitting, or implementing public outreach campaigns. Such actions do not happen quickly, and they need to be put in place before impacts occur in order to mitigate potential hazards. State water agencies may be able to offer financial or technical assistance to mitigate impacts, but they too need advance warning to secure the resources needed,

including state budget resources. Water agencies have pointed out the importance of skillful seasonal forecasting for drought response, as has NOAA itself.<sup>1</sup>

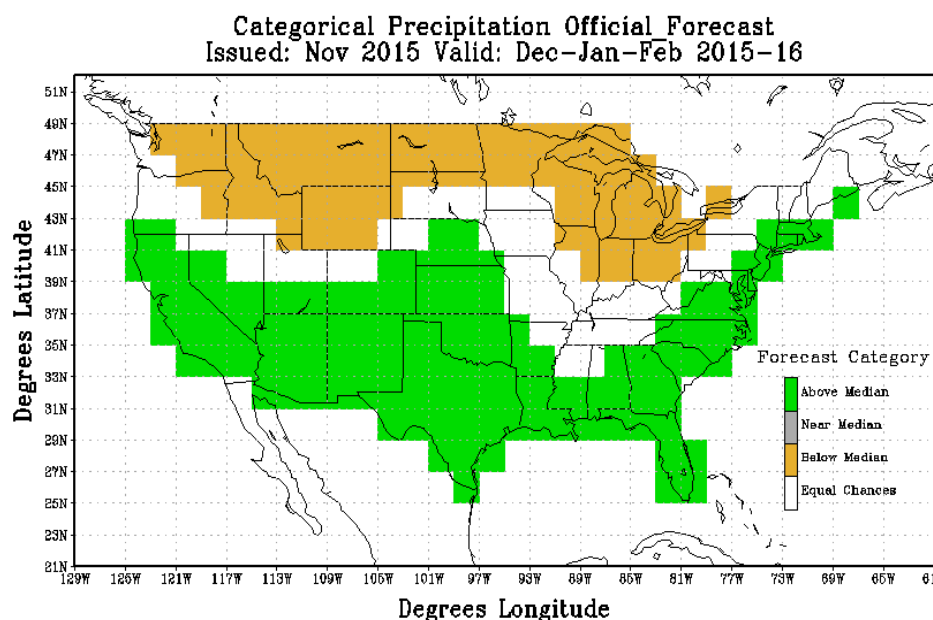
#### Present S2S Forecast Products Not Adequate

There is significant disparity between water agency needs and applications for S2S precipitation forecasts and the skill of presently available operational products. The National Weather Service's Climate Prediction Center (CPC) has issued S2S precipitation outlooks since the mid-1990s. However, forecast skill for the western U.S. is limited – just slightly better than predicting average weather conditions – and is not adequate to support water management decision-making. The CPC graphic below summarizes the historical skill of its outlooks for the December – February period important for western water supply. The Heidke skill score measures the performance of forecasts. A zero score means no more skill than predicting average historical conditions; a perfect forecast would have a score of one.



<sup>1</sup> [https://www.weather.gov/media/publications/assessments/drought\\_ca14.pdf](https://www.weather.gov/media/publications/assessments/drought_ca14.pdf)

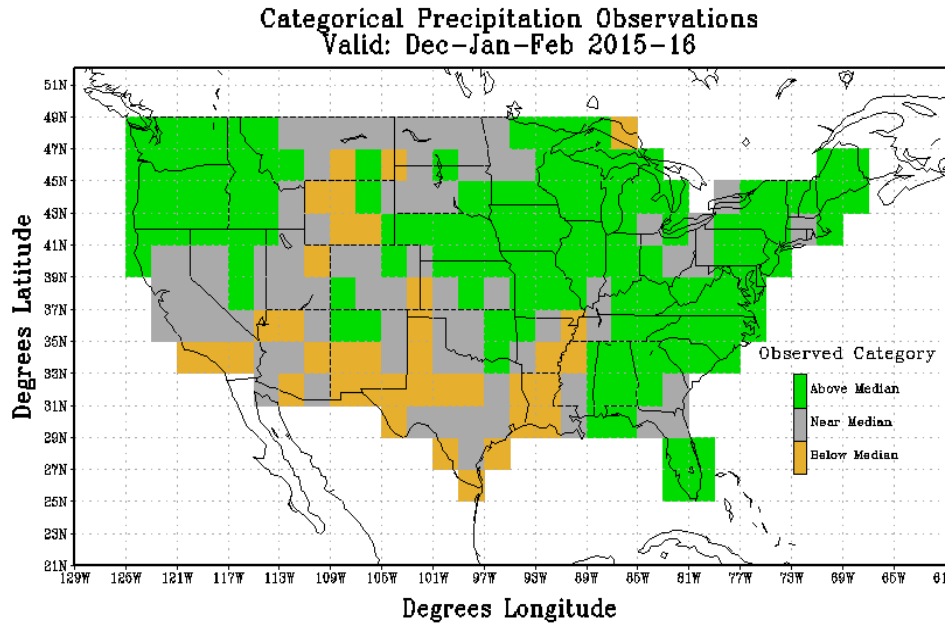
Of particular note for water agencies, NOAA's seasonal outlooks have been dramatically wrong in extreme years when the need for skillful forecasts is the greatest. Shown below is a Water Year 2016 example, when one of the strongest El Niño events of record occurred, comparing NOAA's precipitation outlook with the observed conditions. Water Year 2016 was the fifth year of California's 2012-2016 drought, when urban water agencies were calling for their customers to comply with stringent conservation requirements at the same time as the news media were postulating wide-scale flooding based on the precipitation outlook tied to a strong El Niño event. This example highlights the lack of scientific understanding regarding the actual influence of the El Niño-Southern Oscillation (ENSO) in much of the country. NOAA's precipitation outlooks rely heavily on ENSO conditions as an indicator of precipitation, but research performed by the Western Regional Climate Center<sup>2</sup> and by others<sup>3</sup> shows that ENSO conditions alone are a poor predictor in many western watersheds, including in California and in the Upper Colorado River Basin.



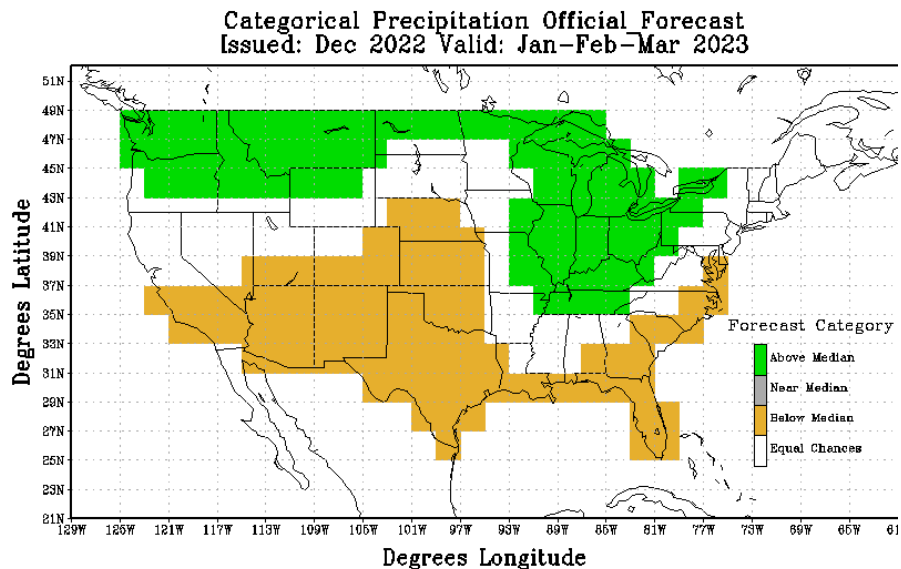
<sup>2</sup> [https://wrcc.dri.edu/Climate/soi\\_precip.php](https://wrcc.dri.edu/Climate/soi_precip.php)

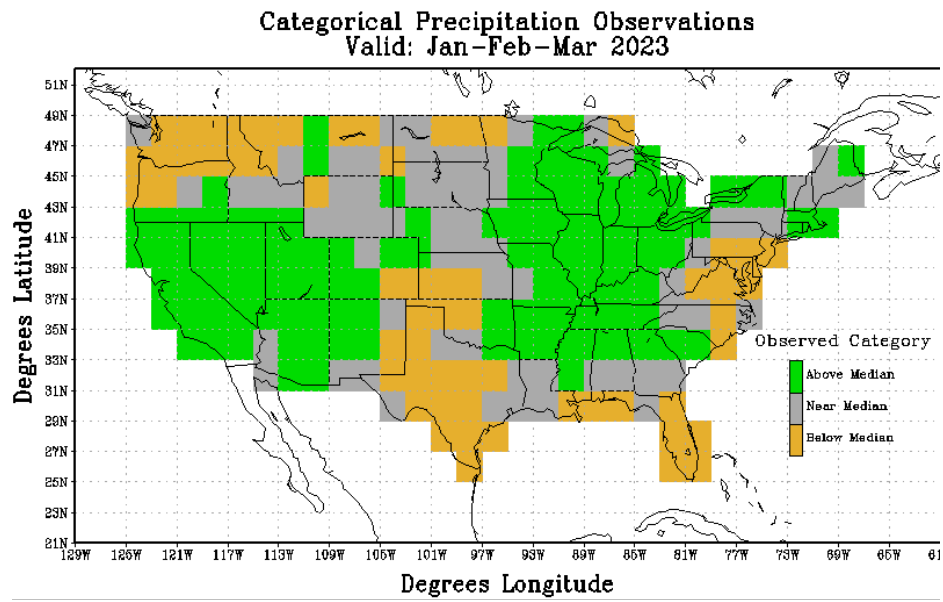
<sup>3</sup> <https://journals.ametsoc.org/view/journals/bams/103/12/BAMS-D-21-0252.1.xml>





The present water year, Water Year 2023, is another illustration of a dramatically missed forecast in a critically important water year. Many western watersheds went from severe drought conditions to flooding conditions. California, for example, had just experienced its driest three consecutive years of record and water agencies were preparing for another year of drought emergency response. Instead, one of the wettest years of record occurred, necessitating a rapid shift to flood emergency response and flood fights, and a massive effort to maximize groundwater recharge with temporarily available floodwaters, including issuance of emergency recharge permits and mobilization of rented high-capacity pumps.





### Opportunities for Improving Forecasting

The *Weather Research and Forecasting Innovation Act of 2017* directed NOAA to improve its S2S forecasts and to submit a report to Congress with recommendation for doing so. NOAA's 2020 report to Congress<sup>4</sup> pursuant to that requirement recommended four regional pilot projects *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. They were also chosen because the limited predictive skill of the climate phenomena highlighted for these regions is due to fundamental limitations in our current understanding and models. Therefore, improving predictive skill for these projects would improve skill for other regions as well.*

Two of the pilot projects were for precipitation forecasting, one for winter precipitation in the western U.S. to support water management and the other for spring/summer precipitation in the central U.S. for agriculture. Although recommended in 2020, NOAA has not sought funding for these pilot projects via the President's budget request to Congress. In concept, the pilot projects would be modelled after NOAA's successful Hurricane Forecasting Improvement Program (HFIP), in which specific metrics of performance

<sup>4</sup> <https://repository.library.noaa.gov/view/noaa/27408>

improvement would be identified for its operational forecasts. Each of the pilot projects would require a level of investment and time commitment similar to that for HFIP.

Western water agencies have demonstrated their support for a winter precipitation pilot project, as evidenced by seed research projects funded by the California Department of Water Resources with NOAA, the National Aeronautics and Space Administration, and the academic community, and by stakeholder support as evidenced by the attached letter for the record.

Reliable S2S forecasts would allow water managers to operate infrastructure more efficiently and allocate resources to mitigate and manage impacts. Improved forecasts would also allow agencies to expand the use of new technologies to maximize efficient use of infrastructure and resources. Forecast-informed reservoir operations (FIRO) and managed aquifer recharge with floodwaters (FloodMAR) are now being successfully piloted at the seven-day weather forecast time scale. Expanding use of forecasts to longer time scales, if reliable S2S forecasts were available, would significantly increase the ability to develop new water supplies at minimal cost to their customers.

#### Recommendation

The Western States Water Council respectfully recommends that the Weather Act be reauthorized with explicit direction to NOAA to improve S2S precipitation forecasting, including the specific direction to NOAA to implement two precipitation forecasting pilot projects it recommended in its 2020 report to Congress.

#### Conclusion

Mr. Chairman, Ranking Member, and Members of the Subcommittee, thank you for the opportunity to testify before you today. I would be pleased to answer any questions you may have.

## Tab J – NIDIS Climate Adaptive Drought Planning (CADP) Platform

## **NOAA Climate Program Office**

### **NIDIS and Federal Partners Kick Off Project to Develop Climate-Adaptive Drought Planning (CADP) platform**

On Aug. 15, Gretel Follingstad and Elizabeth Ossowski from NIDIS led the kick-off Federal-partners meeting at the Department of Interior in Washington D.C. for a new Climate-Adaptive Drought Planning (CADP) platform. The CADP is a whole-of-government collaboration that integrates and curates scientific data products and downscaled global climate modeling for drought risk assessments in a changing climate. The CADP serves as a deliverable to the National Drought Resilience Partnership (NDRP), which is co-led by the US Department of Agriculture and the U.S. Army Corps of Engineers. In addition to improving drought risk assessment, the CADP will provide high quality, up-to-date drought planning guidance and resources curated from federal, tribal, state, and local agencies; academia; private and non-profit organizations.

The CADP will provide a usable, integrated platform for needed technical assistance for drought planning with consideration of climate change impacts. The partnering agencies will launch a Needs Assessment survey for the CADP in November of 2023. The CADP will be a functioning element on drought.gov by the end of 2026.

For more information, contact [gretel.follingstad@noaa.gov](mailto:gretel.follingstad@noaa.gov)

Tab K – NASA Landsat Next



# LANDSAT NEXT

## A New and Revolutionary Landsat Mission

[Landsat Next is on the horizon.](#) The new Landsat mission, which is expected to launch in late 2030, will not only ensure the continuity of the longest space-based record of Earth's land surface, but it will fundamentally transform the breadth and depth of actionable information freely available to end users. With two to three times the temporal, spatial, and spectral resolution, Landsat Next will build upon the Landsat legacy of observing, managing, and adapting to change on Earth and provide expanded capabilities to support evolving and emerging applications in land, water, and climate science.

*Video credit: [NASA Scientific Visualization Studio](#), Goddard Space Flight Center.*

Landsat Next represents a quantum leap forward in measurement capabilities. The enhanced temporal and spatial resolution of the new 26-band superspectral Landsat Next constellation will enhance existing Landsat applications and unlock new applications that support water quality and aquatic health assessments (e.g., harmful algal blooms), crop production and soil conservation (e.g., crop residues and non-photosynthetic vegetation), forest management and monitoring (e.g., photosynthetic bioindicators), climate and snow dynamics research (e.g., snow grain size and albedo), and mineral mapping based on thermal emissivity. Landsat Next will also have a water vapor band that will provide for atmospheric correction without ancillary data from other satellites.

[Landsat Next | Landsat Science \(nasa.gov\)](#)

<https://landsat.gsfc.nasa.gov/satellites/landsat-next/>

# LANDSAT NEXT



## QUICK FACTS

- Mission architecture: Identical triplet satellite observatories
- Mission Category: 2
- Mission Class: B
- Number of spectral bands: 26
- Spatial resolution: 10-20 meters (VSWIR), 60 meters (atmospheric/TIR)
- Orbit: Sun-synchronous at 653 km (406 miles)
- Orbital inclination: 98 degrees
- Observatory orbital separation: 120 Degrees
- Mean equatorial crossing time: 10:10 am  $\pm$  5 minutes
- Single observatory repeat interval: 18 days
- Triplet constellation repeat interval: 6 days
- Global cataloging grid system: WRS-3
- Scene size: 164 km (102 miles) x 168 km (104 miles)
- Half angle field of view: 7.2 degrees
- Expected launch date: Late 2030
- Mission design life: 5 years



Landsat Next will continue the Landsat Program's decades-long data record of spaceborne multispectral imagery, which affords global, synoptic, and repetitive coverage of Earth's land surfaces at a scale where natural and human-induced changes can be detected, differentiated, characterized, and monitored over time.

Landsat Next will be a constellation of three identical observatories sent into orbit on the same launch vehicle. The triplet observatories will be spaced 120 degrees apart at an orbital altitude of 653 kilometers (406 miles). Each satellite observatory will consist of a spacecraft and a Landsat Next Instrument Suite (LandIS), which will acquire all bands nearly simultaneously. The simultaneity will minimize illumination change between bands, facilitating both cloud screen detection and products derived from multispectral surface reflectance and thermal emission data (e.g., evapotranspiration).

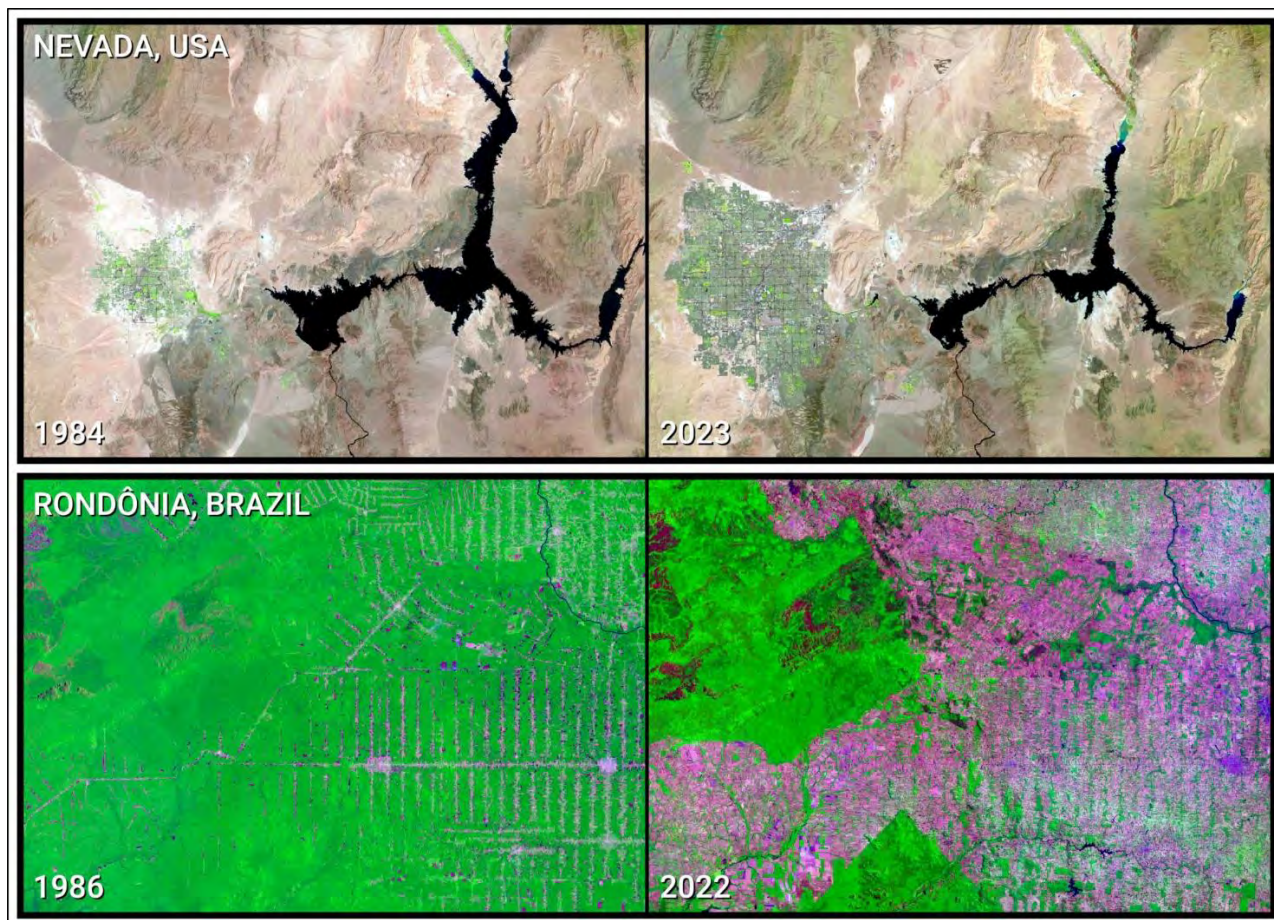
Play Video about Landsat Next equatorial view of satellite constellation

*Landsat Next observatories as viewed from near the equator. Video credit: [NASA Scientific Visualization Studio](#), Goddard Space Flight Center.*

Play Video about Landsat Next polar view of satellites

*Landsat Next observatories as viewed from above the North Pole. Video credit: [NASA Scientific Visualization Studio](#), Goddard Space Flight Center.*

Landsat Next satisfies global Landsat data user needs by improving temporal, spatial, and spectral capabilities, all while maintaining Landsat data continuity and quality. The Landsat Next triplets will provide an improved collective 6-day temporal revisit, a significant upgrade from the 16-day repeat interval of Landsat 8 and Landsat 9. The temporal frequency will increase the probability of acquiring cloud-free scenes and enhance monitoring and management of dynamic and changing landscapes. Landsat Next will capture phenological signatures used for vegetation classification and modeling crop development, health, and yields; detect periodic disturbances due to harvesting and episodic insect and disease agents; assess near-continuous water use and evapotranspiration; provide early warnings about the onset of fires and harmful algal blooms; monitor public health during heat wave seasons; and track dynamics of snow and ice on both land and sea.



The improved temporal frequency of Landsat Next will increase the probability of acquiring cloud-free scenes and enhance monitoring and management of dynamic and changing landscapes. These two examples demonstrate rapidly changing landscapes. In Nevada, the city of Las Vegas has experienced considerable urbanization and Lake Mead water levels have dropped due to increased demand and drought. In Brazil, the state of Rondônia has undergone large-scale tropical deforestation largely as a result of unchecked cattle ranching and agricultural expansion.

Landsat Next will collect 26 bands—15 more bands than each of the two former Landsat missions. The LandIS on each observatory will acquire refined versions of the 11 Landsat “heritage” bands to maintain data continuity, five new bands with similar spatial and spectral characteristics to the European Space Agency’s Copernicus Sentinel-2 mission to allow for improved data synergy and fusion, and 10 new spectral bands to support data user needs and emerging applications. All bands will have higher spatial resolutions than former Landsat missions, with ground sample distances of 10 to 20 meters for visible, near infrared, and shortwave infrared bands and 60 meters for atmospheric and thermal infrared bands.

Landsat Next will preserve the robust radiometric and geometric accuracy requirements associated with the Landsat Program to ensure long-term data consistency and

facilitate critical time-series analyses. The radiometric accuracy will be comparable to the signal-to-noise ratios and noise equivalent differential temperatures of Landsat 8 and Landsat 9. The geometric accuracy of previous Landsat missions will match the finer ground sample distances of Landsat Next. Rigorous radiometric and geometric calibration and validation methods will be employed to provide band-to-band and image-to-image registration. Top of atmosphere and surface reflectance data products will be comparable with those from previous Landsat missions.

## Why Landsat Next?

**Landsat Next will help us live sustainably on Earth.** Landsat Next will propel the next half century of scientific discovery and informed decision making. The Landsat Program has provided a global perspective of Earth at a management-scale resolution since 1972. These long-term observations have become more valuable as the population continues to rise and there are increased pressures on essential resources such as food, water, housing, and energy. Tracking global environmental change and natural resources is important for sustaining human needs in the future.

**Landsat Next will provide continuity, improve understanding, and support decision making.** Landsat Next will continue to provide an unbiased, unbroken, and continuous record of changes on Earth that is freely available for everyone to use. A half century record of Landsat data is proving more valuable with time, as it allows the long-term characterization of environmental changes. Harmonization of Landsat Next data with similar observatories (e.g., Sentinel-2), improving data access through cloud storage and computing, and developing new algorithms will offer the ability for more rapid analyses and decision making.

**Landsat Next will result in breakthrough science.** New measurements will allow Landsat data users to identify features and patterns that were missed in previous Landsat images due to insufficient temporal, spatial, or spectral resolutions. This may include events that lasted for a very short time (e.g., flood, harvest, snow/ice), features too small to detect (e.g., farm field, deforestation, urban structures), or objects with indistinguishable spectral attributes (e.g., land plants and algal pigments). These scientific discoveries are led by developments in engineering and technology that were not previously available and reflect the overall evolution and improvement in imaging capabilities.

## Landsat Next and the Sustainable Land Imaging Program

The Landsat Program, jointly administered by [NASA](#) and the DOI/[USGS](#), consists of a series of civilian Earth-observing satellite missions. Initiated in 1972 to map, assess, monitor, and manage the Earth's natural resources, the Landsat Program has provided an unbiased and unparalleled record of the planet and its changing conditions for more than half of a century. NASA is responsible for developing the space segment, launch

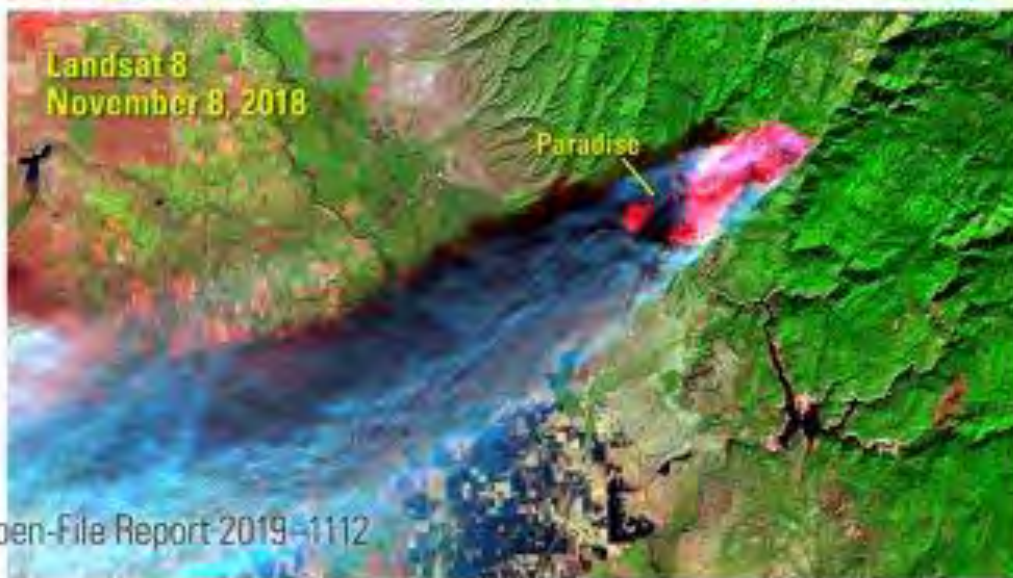
and on-orbit check-out, and the DOI/USGS is responsible for developing the ground segment, flight and ground system operations, and data archiving and distribution.

User needs, mission architecture, and mission requirements for Landsat Next were developed under the [Sustainable Land Imaging \(SLI\) Program](#), a partnership between NASA and the DOI. The SLI Program is intended to meet the nation's growing needs for a wide range of government, commercial, and international land imaging data and services. It also includes the development of international partnerships, cross-calibration and interoperability of complementary Earth-observing systems, and investment in the technology needed to ensure that state-of-the-art systems will meet evolving user needs.

The Landsat Program has continued to provide essential data which has been used to map land use and land cover, assist with agricultural production, manage and monitor ecosystems and natural resources, assist urban planning, and support numerous other [societal benefits](#). According to a report by the USGS, [Economic Valuation of Landsat Imagery](#), the Landsat Program provided domestic and international users an estimated \$3.45 billion in benefits in 2017, with users in the United States accounting for \$2.06 billion of those benefits. Much of the societal value of Landsat data stems from the [free and open data policy](#) that allows users to access imagery and data products for important Earth-based research and analysis.

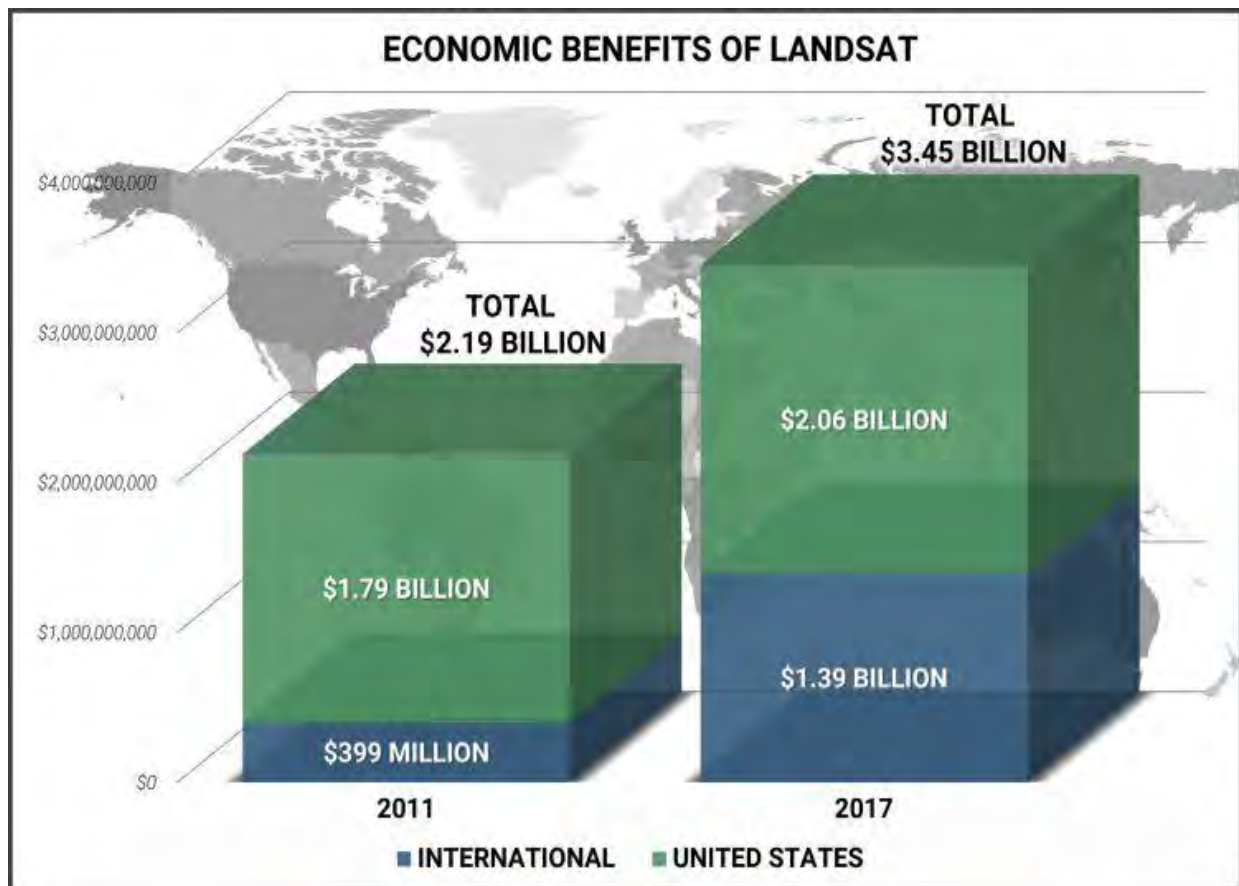


## Economic Valuation of Landsat Imagery



Open-File Report 2019-1112

U.S. Department of the Interior  
U.S. Geological Survey



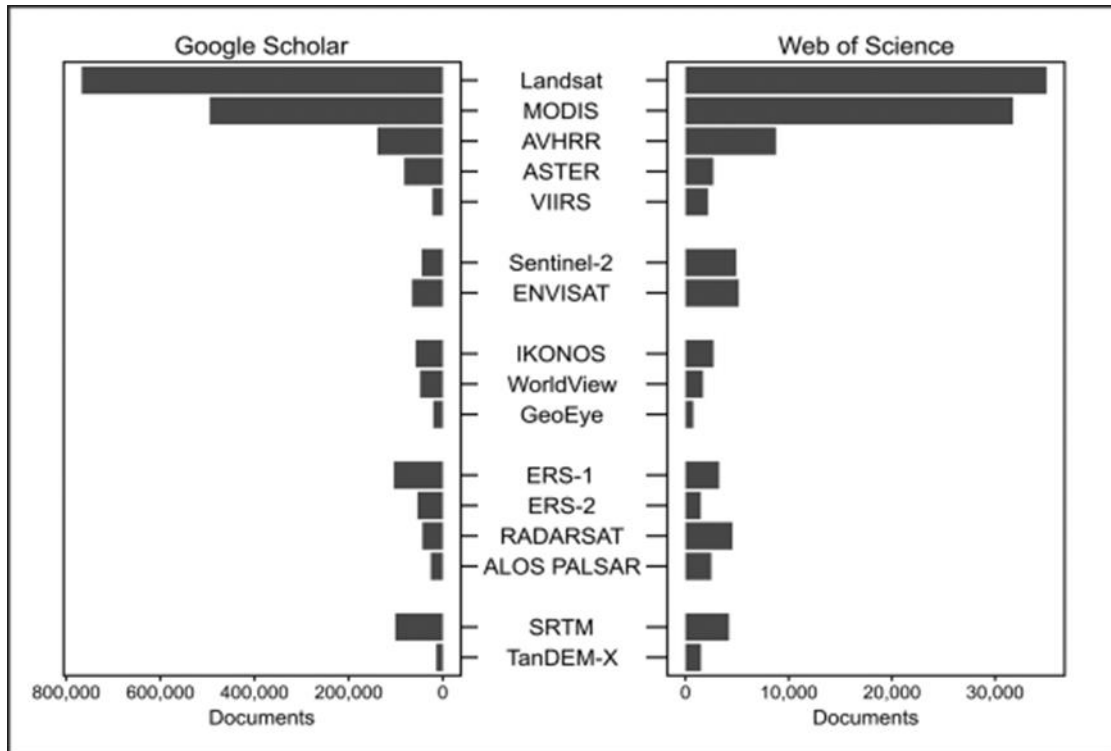
Estimated economic benefits of the Landsat Program for 2011 and 2017. Data reported in USGS Open-File Report 2019-1112: Economic Valuation of Landsat Imagery.

The Landsat Program has been the [cornerstone of global land imaging](#) and civilian Earth observation for more than fifty years. By supplying an unprecedented record of global land cover status and change, Landsat is a crucial national asset which has made and continues to make critical contributions to economic, environmental, and national security interests.

According to the [2014 National Science and Technology Council report](#), Landsat has been ranked as a top Earth observation system in terms of societal benefits provided, along with GPS and weather satellites. Landsat is the [most widely used land remote sensing data source](#) within federal civil agencies. Landsat contributes to [annual productivity savings](#) because it is more efficient than other technologies in terms of accomplishing decision support requirements. Commercial providers rely on the [rigorous calibration](#) of Landsat to build and improve products. Lastly, Landsat has been an essential data source for a wide range of Earth science research, and it is the most cited Earth-observation dataset within the scientific literature ([Wulder et al., 2022](#)).

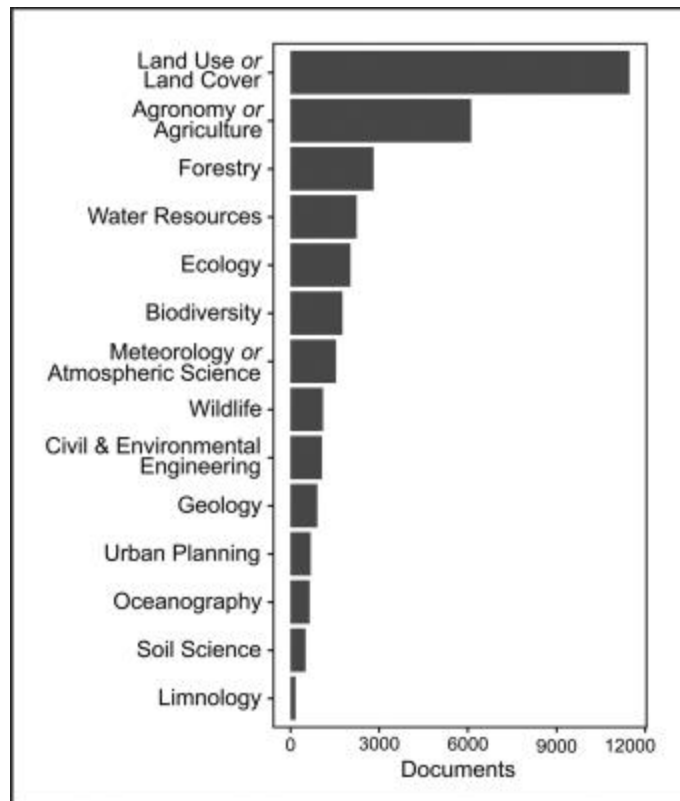
**ESTIMATED PRODUCTIVITY SAVINGS FROM USES OF LANDSAT (Landsat Advisory Group, 2014)**

LANDSAT APPLICATION	ESTIMATED ANNUAL EFFICIENCY SAVINGS
1. USDA Risk Management Agency	over \$100 million
2. U.S. Government Mapping	over \$100 million
3. Monitoring Consumptive Agricultural Water Use	\$20 - \$80 million
4. Monitoring Global Security	\$70 million
5. Landsat Support for Fire Management	\$28 - \$30 million
6. Forest Fragmentation Detection	over \$5 million
7. Forest Change Detection	over \$5 million
8. World Agriculture Supply and Demand Estimates	over \$3 - \$5 million
9. Vineyard Management and Water Conservation	\$3 - \$5 million/year
10. Flood Mitigation Mapping	over \$4.5 million
11. National Agricultural Commodities Mapping	over \$4 million
12. Waterfowl Habitat Mapping and Monitoring	\$1.9 million/year
13. Coastal Change Analysis Program	\$1.5 million
14. Forest Health Monitoring	\$1.25 million
15. NGA Global Shoreline	over \$90 million (one time)
16. Wildfire Risk Assessment	\$25 - \$50 million (one time)



The scientific contribution of Landsat, as measured by the number of published scholarly works, is larger than any other Earth-observing satellite program. Image credit: Wulder et al., 2022.





Number of document records for published works in Web of Science for different Landsat application areas. Image credit: Wulder et al., 2022.

The value of the Landsat Program will be magnified with the expanded capabilities of Landsat Next. The new mission will continue to add to the indispensable and extensive data record. It will provide land and ecosystem change data and trending information that would otherwise not be available. With the revolutionary temporal, spectral, and spatial enhancements, Landsat Next will bestow new capabilities to support evolving and emerging applications, and it will assist land managers and policymakers in making more informed decisions about global, regional, and local natural resources and the environment.

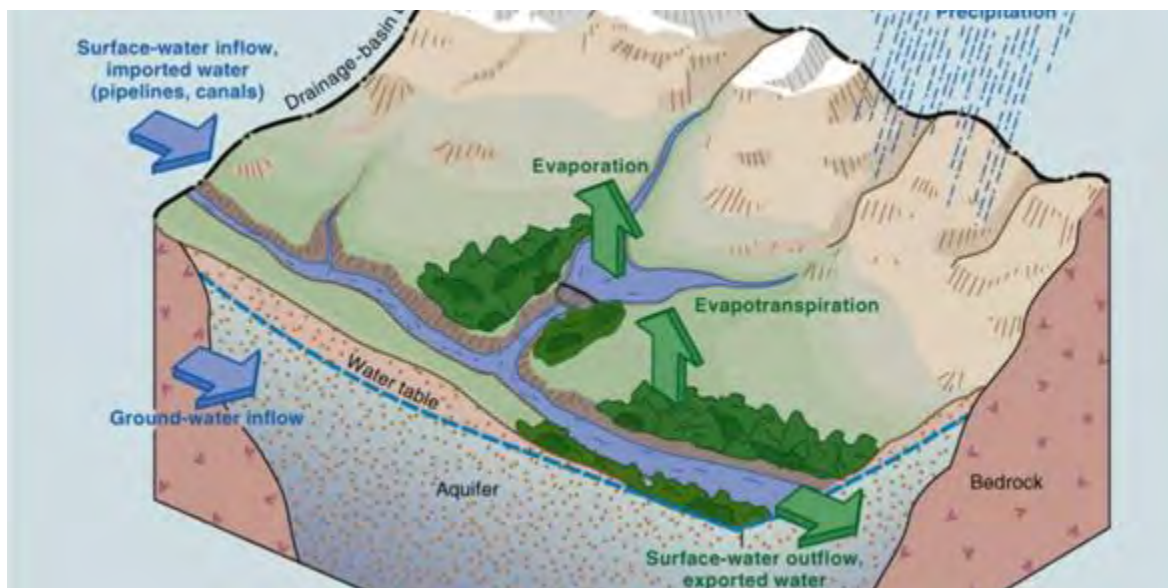
## Tab L – USGS National Water Assessment

# Water Availability and Use Science Program

The Water Availability and Use Science Program (WAUSP) assists in the determination of water that is available for human and ecological uses, now and in the future. This includes evaluating the quantity and quality of water, identifying long-term trends in water availability, and developing an improved ability to forecast water availability for economic, energy production, and environmental uses.

<https://www.usgs.gov/programs/water-availability-and-use-science-program>

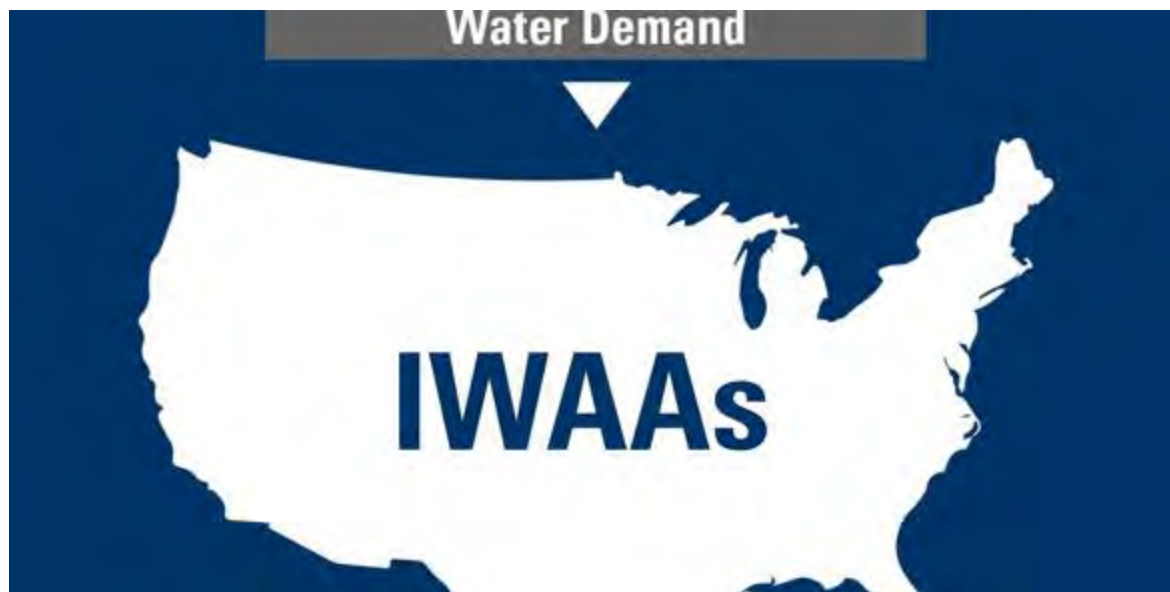
## National Water Census



[\*\*Learn more\*\*](#)

<https://www.usgs.gov/mission-areas/water-resources/science/national-water-census>

# Integrated Water Availability Assessments



**[Learn more](https://www.usgs.gov/mission-areas/water-resources/science/integrated-water-availability-assessments)**

<https://www.usgs.gov/mission-areas/water-resources/science/integrated-water-availability-assessments>

## Tab M – USGS National Geospatial and 3D Hydrography Programs

# Historical Topographic Map Collection



Historical Topographic Maps - Preserving the Past



[Take Me To The Past](#)

## National Geospatial Program

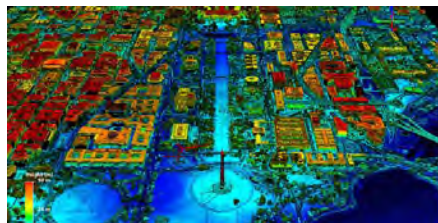
The mission of the National Geospatial Program is to provide National topographic information to advance science, support government, enlighten citizens, and enable decision making. The NGP provides a foundation of digital geospatial data representing the topography, natural landscape, and manmade environment of the United States.

### Topographic Maps



US Topo maps, OnDemand Topo maps, and the Historical Topographic Map Collection (HTMC) are produced by the National Geospatial Program of the USGS.

### 3D Elevation (3DEP)



3DEP is a cooperative program with a goal of acquiring nationwide lidar (IfSAR in AK) to provide the first-ever national baseline of consistent high-resolution elevation data – both bare earth and 3D point clouds.

### NGP Quick Links

[3D Hydrography Program](#)

[U.S. Board on Geographic Names](#)

[CEGIS](#)

[The National Map](#)

[TNM Viewer](#)

[TNM Supporting Themes](#)

[User Engagement](#)

[GET DATA](#)

## Learn About the 3D Hydrography Program



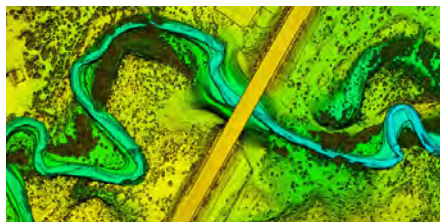
[Learn More](#)



# 3D Hydrography Program

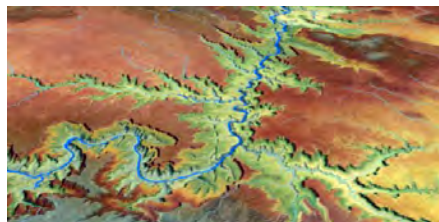
The implementation of 3D National Hydrography Program (3DHP) marks the start of a new era of water data – the first systematic remapping of the Nation’s hydrography since the original USGS 1:24,000-scale topographic mapping program was active. Community-wide coordinated investments will contribute toward a consistent set of national water data to answer the most demanding water resource questions.

### Data Collaboration Announcement



The USGS National Geospatial Program (NGP) collaborates with a wide range of stakeholders to share acquisition costs for topographic data in support of collective

### Benefits and Applications



The National Hydrography Requirements and Benefits Study was performed to establish a baseline understanding of national business uses, needs, and

### Other Resources

[National Hydrography Dataset](#)

[Watershed Boundary Dataset](#)

[NHDPlus High Resolution](#)

[The National Map](#)

[National Geospatial Program](#)

[3D Elevation Program](#)

Tab N – WaDE Update



# Water Data Exchange (WaDE) Program Update for WSWC 2023 Fall Meetings

Adel Abdallah: WaDE Program Manager  
Ryan James: WaDE Data Analyst / Hydroinformatics Specialist  
Tony Willardson: Western States Water Council Executive Director

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## Water Data Exchange (WaDE) Program Update for WSWC 2023 Fall Meetings

Adel Abdallah: WaDE Program Manager  
Ryan James: WaDE Data Analyst / Hydroinformatics Specialist  
Tony Willardson: Western States Water Council Executive Director

*The WaDE Program is committed to assisting the Western States Water Council (WSWC) member states in publicly sharing water rights, allocation, supply, and use data through a streamlined and standardized service that enables regional analyses to inform water resources planning and policies. See <https://westernstateswater.org/wade>.*

For over a decade, the Western States Water Council (WSWC) has nurtured the Water Data Exchange (WaDE) Program development with financial support from state and federal agencies and philanthropic organizations. Currently, WaDE is funded by three grants to modernize western water data infrastructure as an Internet of Water Coalition data hub. The funders are (1) a BHP Foundation grant through Duke University; (2) a Bureau of Reclamation Applied Science WaterSmart grant; and (3) a Water Foundation grant. The WaDE Program's overarching goal is to provide a standardized water data-sharing framework for state and other public agencies that makes data findable, accessible, interoperable, and reusable (FAIR).

This report provides a brief update of the WaDE Program's progress over the period from mid-May through August 2023 in the following three areas: (1) WSWC hiring two interns; (2) WestDAAT Traffic Update; (2) Technical Activities; (4) WSWC collaboration on an "Interoperable Data Hub for Western Water Data"; (5) What's Next? WestDAAT Second Stage Development; and (6) Key Outreach and Coordination Activities.

### 1. WSWC hired two independent contractors

In July 2023, WSWC contracted with Andrew Campbell and Joseph Wirthlin to assist with WaDE Program data management and visualization tasks.

- **Andrew Campbell**

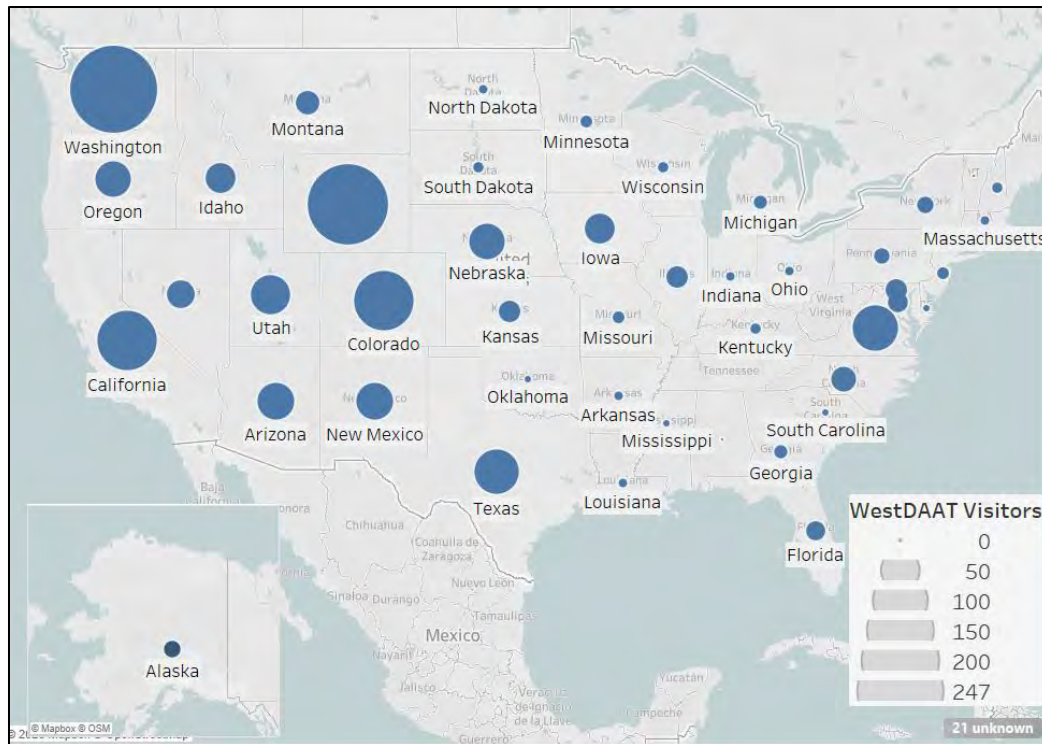
Andrew graduated in May 2023 with a Bachelor of Science in Software Engineering from Utah Valley University. He has diverse programming skills and databases, GitHub, Python, and React, which are used for data management, mappings, and visualizations. Since joining, Andrew redesigned the water right landing pages in WestDAAT to better display and organize metadata and how they appear on the map. Andrew also mapped groundwater well permits and drill logs for Texas and California into the WaDE database. He is also working on mapping North Dakota aggregate basin water use data into the WaDE database.

- **Joseph Wirthlin**

Joseph is pursuing a Master of Science in Economics at the University of Utah. He interned with the Utah Foundation before and contributed to a report under preparation by the Utah Foundation on the status of water rights and law in Utah. Joseph also brings data analysis skills in Python programming language. Joseph has mapped and imported state regulatory overlay data for a dozen states into the WaDE database. He is prototyping a Shiny Application to visualize the geospatial regulatory overlays across the West.

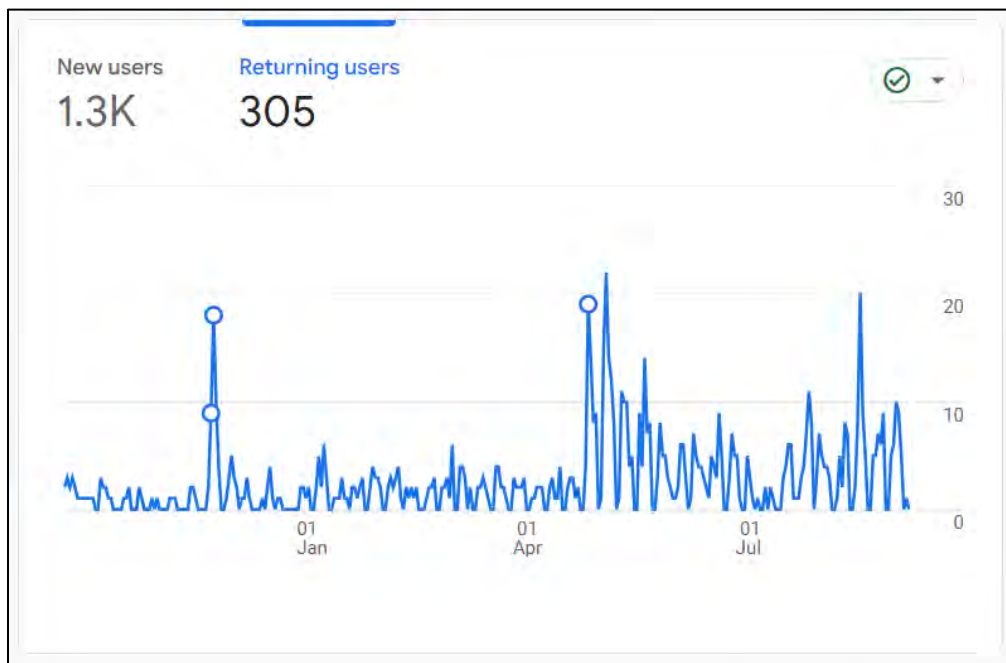
## 2. Western States Water Data Access and Analysis Tool (WestDAAT) Traffic Update

The Western States Water Data Access and Analysis Tool (WestDAAT) was rolled out of production in September 2022 (<https://westdaat.westernstateswater.org>). Since then, WestDAAT has been visited by 1,300 unique users across the US (Figure 1). Most of the visitors are from the West and the DC area.



**Figure 1:** WestDAAT unique visitors across the US from October 1, 2022, through August 29, 2023. Total 1,298 unique visitors

The public release of WestDAAT through the Internet of Water Coalition network in late April 2023 drew more attention to WestDAAT and spiked the unique daily returning visitors. Returning visitors indicate more interest in WestDAAT compared to a one-time visit (Figure 2). Out of the 1,300 visitors, 300 are active and returning to WestDAAT. Among those returning visitors, there are 29 who created accounts that allow them to download data. These users came from Arizona, California, Colorado, Maryland, Nebraska, New Mexico, New York, North Carolina, North Dakota, Oregon, Pennsylvania, Texas, Virginia, Washington, and West Virginia. They belong to these groups: City, Consulting, Federal, Non-profit organizations, State, and University.



**Figure 2:** WestDAAT unique daily returning visitors from October 1, 2022, through August 29, 2023

### 3. Technical Activities

The WestDAAT public release focused on providing access to water rights data as the first stage of the tool's development. The WaDE team has also been working on other important data collected and maintained by the states. Most of these datasets already exist in the WaDE database (Table 1). The second stage of development (see Section 5) will support user-friendly access through WestDAAT for (1) regulatory overlays; (2) site-specific time series data; and (3) the water conservation tool (see Section 3.6). These data types and services are essential in informing water use planning and management across the West.

**Table 1:** The WaDE database and WestDAAT sharing water rights data in the first stage of development, while the second stage could extend WestDAAT to support sharing the rest of the data types.

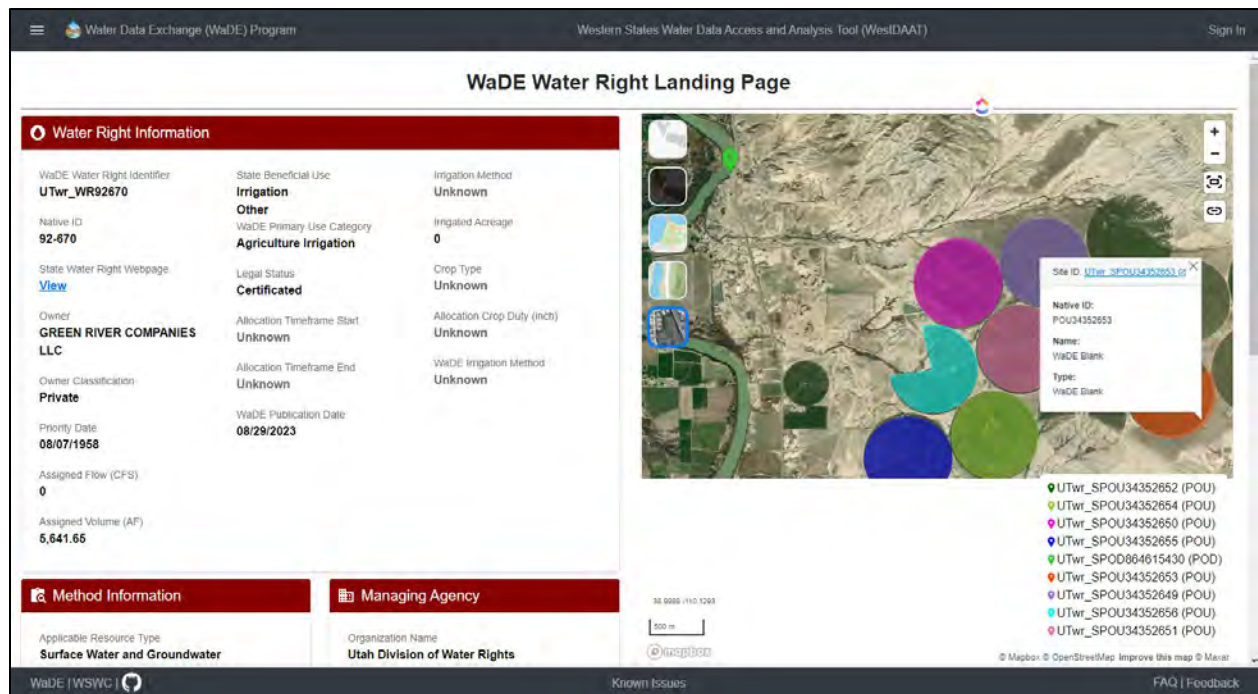
#	Data Type	Data	# States sharing	WaDE database	WestDAAT
1	Water Rights	Ownership, point of diversion, purpose of use, permitted flow or volume, place of use, the priority date, water source name, and type	18	Yes	Yes
2	Regulatory Overlays	Groundwater management districts, groundwater conservation districts, natural resources districts, and interstate river compact boundaries	15	Yes	No

3	Site-Specific time series	a. State reservoirs, stream gages, or groundwater observation wells	10	Yes	No
		b. State public-supply water use	4		
		c. Historic withdrawals related to water rights (possibly CA, KS, ND)	0		
4	Area Aggregated time series	Available water supply, withdrawal, demand delivered water and consumptive use	9	Yes	No

Below is a summary of recent key technical activities the WaDE team worked on, including improving WestDAAT and adding new water rights datasets.

### 3.1 Redesigned water right landing page

The WaDE team redesigned the layout of the metadata of the landing pages to support the following more user-friendly activities (Figure 3): (1) toggle between different background map layers or themes, especially satellite view to show topography and irrigated fields; (2) remove crowded labels on the map, moved them to the legend; (3) and supported the display of info card for each site with a link to its landing page and fit the map to half the screen without the user needing to scroll down to see the rest of the map, and rearranged metadata cards and their content for easier reading.



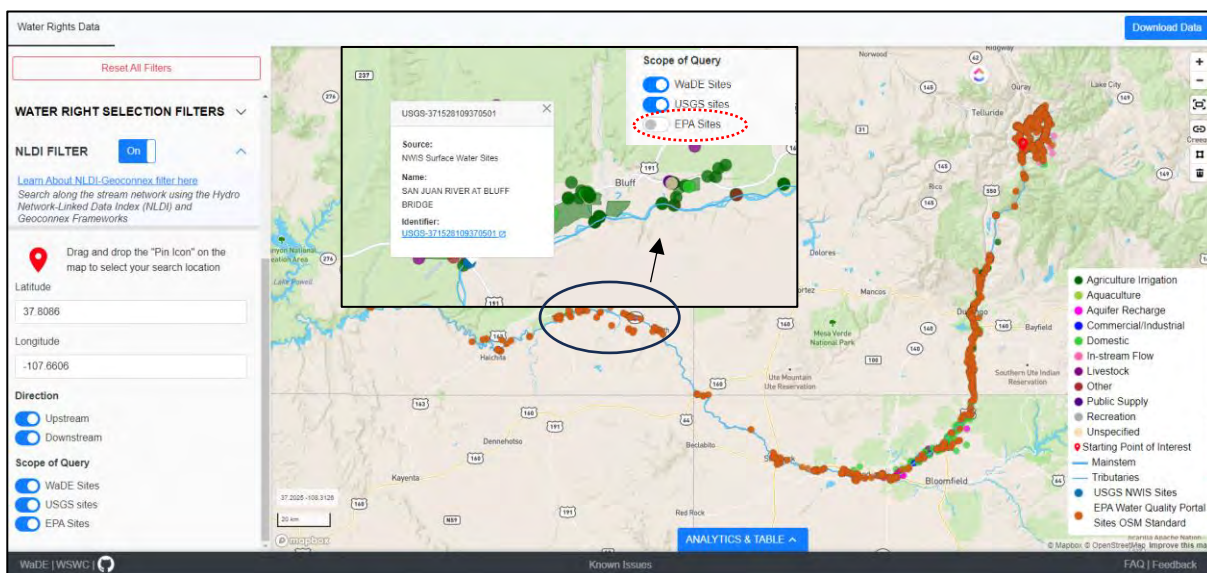
**Figure 3:** Example water right landing page showing the redesigned layout. Visit: [https://westdaat.westernstateswater.org/details/right/UTwr\\_WR92670](https://westdaat.westernstateswater.org/details/right/UTwr_WR92670)



### 3.2 Supported the integration of water quality data discovery in WestDAAT

The Hydro Network-Linked Index (NLDI)<sup>1</sup> tool in WestDAAT supports the geospatial discovery of sites indexed to the National Hydrography dataset, which mainly includes United States Geological Survey (USGS) streamgages, Environmental Protection Agency (EPA) water quality data, and WaDE water rights sites. The first release of WestDAAT included support for WaDE and USGS sites. In the past few months, the WaDE team added support to discovery and access to external landing pages providing metadata and historical measurements to the Water Quality Portal as "the nation's largest water quality monitoring data source. The Water Quality Portal (WQP) uses the Water Quality Exchange (WQX) data format to share over 380 million water quality data records from 900 federal, state, tribal, and other partners."<sup>2</sup>

The NLDI tool in WestDAAT is demonstrated in the example below (Figure 4) by querying all sites with permitted points of diversion, USGS gage stations, and EPA water quality sites downstream of Silverton, Colorado, near the Gold King Mine through New Mexico and downstream to Lake Powell Utah. In 2015, Gold King Mine suffered a spill of toxic mining waste<sup>3</sup>. This emergency highlighted the need for geospatial data integration of water quality and quantity along the downstream path of the pollutants and was selected as a motivation use case for the Open Water Data Initiative<sup>4</sup>.



**Figure 4:** States permitted Points of Diversion (POD), USGS gage stations, and EPA water quality sites downstream of Silverton, Colorado, near the Gold King Mine through New Mexico to the San Juan River and downstream to Lake Powell, Utah. To view in WestDAAT, visit: <http://tinyurl.com/3fmxmexn>

<sup>1</sup> The Hydro Network-Linked Index (NLDI) <https://waterdata.usgs.gov/blog/nldi-intro/>

<sup>2</sup> EPA Water Quality Portal <https://www.epa.gov/waterdata/water-quality-data>.

<sup>3</sup> Emergency Response to Release from Gold King Mine: <https://www.epa.gov/goldkingmine>

<sup>4</sup> Open Water Data Initiative <https://acwi.gov/spatial/owdi/>.

This NLDI WestDAAT integration, though it needs more improvements, demonstrates for the first time an integration of water quality and quantity data services across federal and state agencies, which allows emergency managers to identify water quality and quantity monitoring sites along the different river sections and towns, where can access near-real-time series data and notify owners of permitted points of diversions of the potential risk and timing of pollutants from any possible future spills.

### **3.3 Evaluated the Great Lakes Commission water use data**

As part of the BHP Foundation grant to WSWC through Duke University and the Internet of Water Coalition, WaDE is requested to explore sharing eastern states' water use data. The WaDE team evaluated the Great Lakes Regional Water Use Database<sup>5</sup>, which provides comparable water use information on withdrawals, diversions, and consumptive uses for the Great Lakes Basin in the US and Canada since 1998. The database is accessible online with public access for aggregate water data since 2012 classified by water use category, sub-basin, and state or province. The Great Lakes Commission (GLC) tentatively approved the data sharing through WaDE, and a conference call is scheduled in early October to discuss this data-sharing process with GLC staff.

### **3.4 Shared additional water rights datasets**

The WaDE team imported the following two new water rights datasets into the WaDE database and WestDAAT: (1) Alaska water rights data, including about 17,500 surface and sub-surface rights. The data in WestDAAT shares the location, owner name, legal status, and a link to the state water right landing page. The WaDE team will continue to work with staff at the Alaska Division of Water Resources, Department of Natural Resources to provide additional metadata whenever available in machine-readable formats for a priority date, beneficial use, and permitted amounts; (2) Texas Water Development Board (TWDB) Groundwater database which includes information about 142,000 submitted well driller reports with metadata for well location, beneficial use, owner name, and a weblink to TWDB landing page for the well.

In the meantime, the WaDE team is working on mapping and importing the California "Domestic and Irrigation Wells" database by the California Department of Water Resources. The database includes information on well location, beneficial use, and owner names for about 1 million wells. About 50,000 wells in the database have historical water level data.

### **3.5 Imported and updated administrative and regulatory overlays**

The WaDE Data System is designed to share information on administrative and regulatory overlays providing spatial and descriptive context of regulations affecting water rights and use across the West. In the past few months, the WaDE team worked on evaluating, summarizing, and importing administrative and regulatory overlay geospatial data and metadata of 15 member states into the WaDE database. Each administrative and regulatory overlay geospatial polygon is tentatively related to water right points of diversion in the WaDE database based on the scope of regulation or administration affecting surface water and groundwater (Table 2). The WaDE team classified overlays into two types: regulatory and administrative. Regulatory type overlays delineate geographic boundaries in a state with specific water rights or use restrictions,

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<sup>5</sup> Great Lakes Regional Water Use Database <https://waterusedata.glc.org/>

such as in New Mexico, to "protect public health, water quality, existing water rights, or the state's water resources."<sup>6</sup> Administrative type overlays define the geospatial boundaries of entities, watersheds, or districts that may regulate, administer, or plan surface and groundwater rights and use, such as Groundwater Management Districts in Kansas. The WSWC team will continue to work with the identified regulatory data in Table 3 and reach out to each state to review their administrative and regulatory data and its connection to water rights.

**Table 2:** Summary of administrative and regulatory overlays in the WaDE database

#	State	Name	Type	Water Source Type	Count
1	AZ	Active Management Area	Regulatory	Groundwater	8
2	CA	Sustainable Groundwater Management Act (SGMA)	Administrative	Groundwater	505
3	CO	Ground Water Management District	Administrative	Groundwater	13
4	ID	Comprehensive Aquifer Management Plan	Regulatory	Groundwater	3
5	KS	Groundwater Management Districts	Administrative	Groundwater	5
6	MT	Conservation District	Administrative	Surface Water	6
7	NE	Natural Resources Districts	Administrative	Groundwater	23
8	NM	Water Rights District	Administrative	Surface Water and Groundwater	7
9	NM	Interstate River Compact	Administrative	Surface Water	8
10	NV	Groundwater Basin Designations	Administrative	Groundwater	123
11	OK	Special Provision Watersheds	Regulatory	Surface Water	5
12	SD	Water Development District	Administrative	Surface Water	7
13	TX	Groundwater Conservation Districts	Administrative	Groundwater	100
14	WA	Watershed Administrative Units	Administrative	Surface Water	846
16	WA	Water Resource Inventory Area	Administrative	Surface Water	62

**Table 3:** Summary of evaluated overlays to be imported into the WaDE database

#	State	Name	Type	Water Source Type	Status
1	Alaska	Alaska Soil and Water Conservation Districts	Administrative	Surface Water	To be imported
2	Arizona	Irrigation Non-Expansion Areas	Regulatory	Surface Water	To be imported
3	Colorado	Water Conservation Board	Administrative	Surface and Groundwater	To be imported
4	Idaho	Aquifer Recharge Districts	Administrative	Groundwater	To be imported
5	Idaho	Groundwater Districts	Administrative	Groundwater	To be imported
6	Idaho	Groundwater Management Areas	Administrative	Groundwater	To be imported
7	New Mexico	Closure Areas	Regulatory	Surface and Groundwater	To be imported
8	New Mexico	Critical Management Areas	Regulatory	Surface and Groundwater	To be imported
9	New Mexico	Local Ordinance Area	Regulatory	Surface and Groundwater	To be imported
10	New Mexico	Negative Easement Area	Regulatory	Surface and Groundwater	To be imported
11	New Mexico	Quality Recreation Area	Regulatory	Surface and Groundwater	To be imported

<sup>6</sup> New Mexico Water Rights Regulations:  
<https://ose.maps.arcgis.com/home/item.html?id=5617df05c3de4ac8b59594bd51cbab94>



12	New Mexico	Special Conditions	Regulatory	Surface and Groundwater	To be imported
13	North Dakota	Water Resource District	Administrative	Surface and Groundwater	To be imported
14	Oregon	Administration Basins	Administrative	Surface and Groundwater	To be imported
16	Texas	Groundwater Management Areas	Administrative	Groundwater	To be imported
17	Utah	Great Salt Lake Basin	Administrative	Surface Water	To be imported
18	Wyoming	Groundwater Control Areas and Advisory Boards	Administrative	Surface Water	To be imported
22	Alaska	Critical Water Management Area	Regulatory	Unspecified	Unavailable*
23	Kansas	Intensive Groundwater Use Control Areas	Regulatory	Unspecified	Unavailable*
24	Kansas	Local Enhanced Management Area	Regulatory	Unspecified	Unavailable*
25	Kansas	Water Assurance District	Administrative	Unspecified	Unavailable*
31	Kansas	Water Conservation Areas	Administrative	Unspecified	Unavailable*

\*Unavailable in machine-readable formats or identified as incomplete

### 3.6 Scoped the Conservation Application Tool

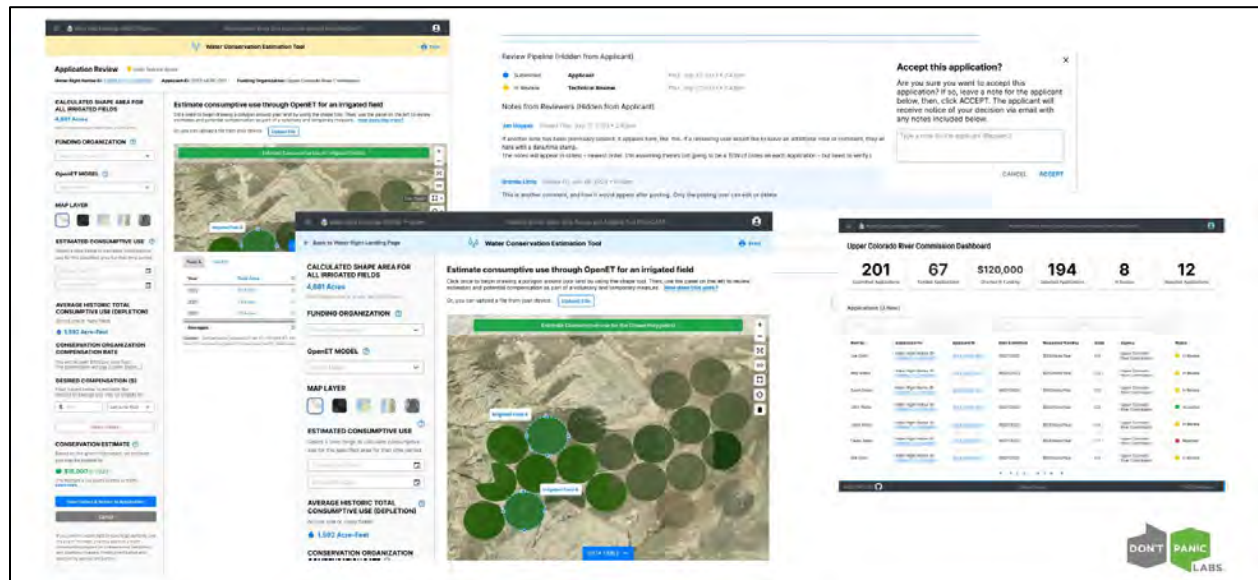
In 2023, the Upper Colorado River Commission (UCRC), with funding from the U.S. Bureau of Reclamation, offered compensation for water-saving measures to select applicants as part of their System Conservation Pilot Program (SCPP)<sup>7</sup>. Farmers, however, faced challenges in submitting applications to this program. UCRC staff also struggled to evaluate them given the fluid nature of proposed operational savings--from following different parcels to changing crops. The process requires sharing water rights data and geospatial information and estimating their existing and potential consumptive water use and savings, using OpenET, as well as determining fair compensation. UCRC staff and commissioners have highlighted the difficulty of implementing the program. UCRC staff and other stakeholders who used WestDAAT realized its value in providing consistent data for water rights across the West. They suggested that an on-demand integration with OpenET can make WestDAAT more valuable in supporting conservation programs Westside.

During the past two months, WSWC worked with its IT contractor, "Don't Panic Labs," in scoping building an extension to WestDAAT as the Water Conservation Tool to help users estimate potential water savings from alternative agricultural water conservation measures using OpenET. This tool for mapping evapotranspiration and calculating consumptive water use at the field scale relies on technology and data developed by the National Aeronautics and Space Administration (NASA). The tool will mainly extend WestDAAT capabilities to support (1) an integration with OpenET to estimate total consumptive historical water use for any selected field; and (2) multiple user access and secured user accounts. The tool will rely on Microsoft's state-of-the-art cloud security identity and access management<sup>8</sup>. WSWC will seek funding next

<sup>7</sup> System Conservation Pilot Program (SCPP): <http://www.ucrcommission.com/system-conservation-pilot-program-for-2023/>

<sup>8</sup> Reimagine secure access with Microsoft Entra: <https://www.microsoft.com/en-us/security/business/solutions/identity-access>

month to build this tool from a philanthropic organization and a WaterSMART Reclamation Grant. The scoping narrowed the critical design decisions and created mockups showing the user experience and how the tool would look like (Figure 6).



**Figure 6:** Different mockup views of the of the scoped Water Conservation Tool extension to WestDAAT

## Water Conservation Tool key design decisions

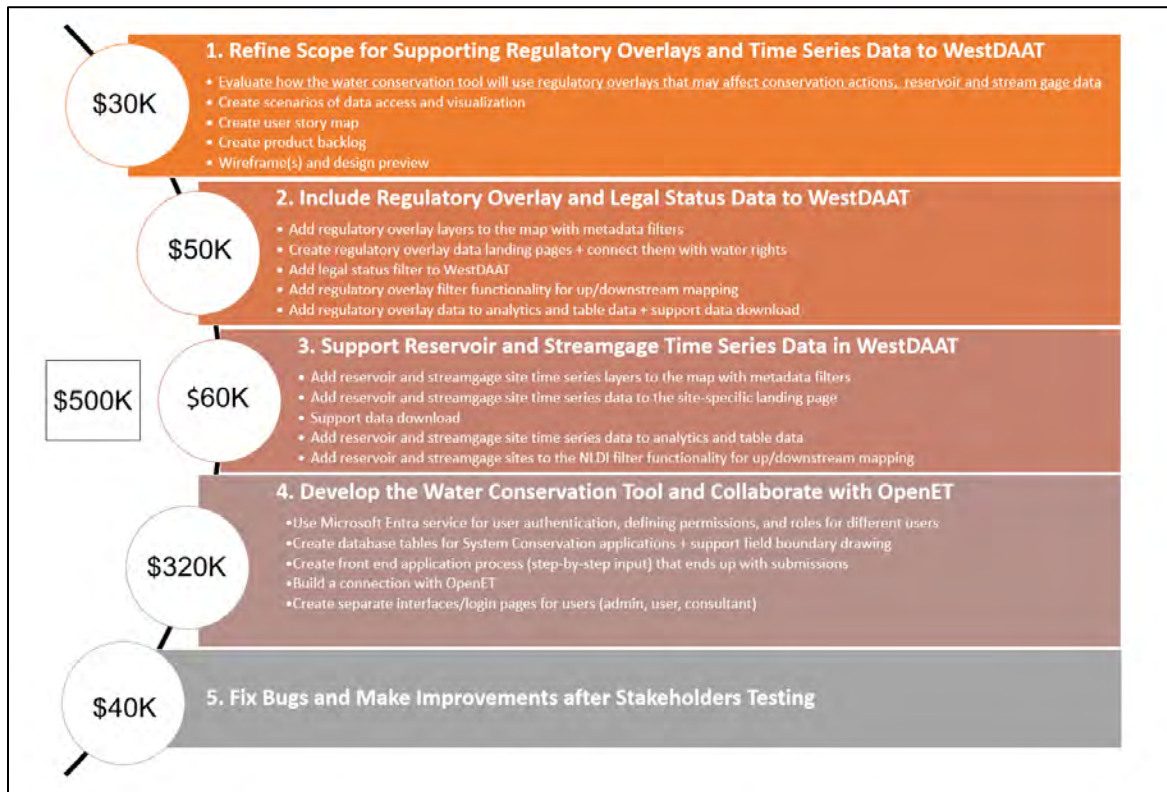
Here is a summary of how a water user (e.g., a farmer) may use the tool to submit an application and then for the conservation organization to evaluate it

- Find water right through WestDAAT search filters, select water right for water right landing page, then click the "Estimate Consumptive Use" button.
- Log in / create a WestDAAT account.
- Using drawing tools, draw boundaries around one or many fields.
- Select Conservation Organization, OpenET Model name, and start and end dates. The latter are pre-populated based on the funding organization's preference.
- Allow users to select the compensation rate either in \$ per acre-ft or \$ per acre.
- If satisfied with the results, click on the "Apply for Conservation Benefits" button.
- Include contact information & and a conservation plan.
- Review drawn boundaries, total ET estimates, and application. If satisfied, click "Complete & Submit."
- Applications are saved in memory within the session. They are not saved to draft for later access. Edits cannot be made after submission.
- Once an application is submitted, the tool will send email notifications with links to the submitted application for the following users: Applicant (i.e., Farmer) with view-only access, WestDAAT administrator; conservation organization (e.g., commission); and technical reviewer.
- The conservation organization can view all submitted applications with the ability to add comments and change application status (e.g., in-review, accept, reject).

The technical reviewer (independent contractor, third party) can edit applications, especially the drawn field boundaries, add comments, and change application status (e.g., under review, recommend, reject). The reviewer will also add a non-irrigated reference area and estimate its consumptive use as a proxy for effective precipitation. Effective precipitation accounts for non-irrigation water that contributed to crop total consumptive use.

#### 4. What's Next? WestDAAT Second Stage Development

As mentioned in Section 2, the second stage of development will support user-friendly access through WestDAAT to the following data types: (1) regulatory overlays; (2) site-specific time series; and (3) the Water Conservation Tool. These data types and the tool are essential in informing water use planning and management across the West. Figure 7 summarizes the key tasks of this second stage of development of WestDAAT and their estimated IT contracting costs.



**Figure 7:** Estimated IT contracting costs to build WestDAAT Second Stage data services.

Below is a summary of the identified additional added values of WestDAAT Second Stage development. As mentioned earlier, WSWC will seek funding next month to build this tool from a philanthropic organization and a WaterSMART Reclamation Grant. What users will be able to access that can't do now? Here is a list of new data services through WestDAAT:

## **4.1 Support water conservation programs**

The proposed Water Conservation Tool extension to WestDAAT will support conservation programs across the West.

## **4.2 Support access and analyses to regulatory overlays and water rights data**

WestDAAT users will query and filter regulatory overlays that provide context to surface and groundwater water rights administrations across the West. They will be able to answer questions like the following:

- What are the regulations or regulatory agencies or districts with authority over groundwater or surface water across the West?
- Show the water rights location within a selected regulatory overlay through a geospatial boundary (e.g., district), state, or interstate (compact). Such water rights could be impacted by a call on the river or a regulatory decision.
- What local or regional regulations have potential jurisdiction over the water right or water use of interest?

Users will also further query water rights data based on their legal status, point of diversion site type, and water source name. These filters are not currently supported in WestDAAT and need further work to narrow them down to common terms across the Western states. These additional functionalities were highlighted in the stakeholder engagement of the first stage of development.

- What are the water rights classified as adjudicated or pending in WestDAAT?
- Which states track relinquished, abandoned, or forfeited water rights?
- Which points of diversions in a watershed (e.g., Colorado River Basin) are permitted from a site type such as a reservoir or dam?
- Show water rights in California with a state-defined water source name as the Colorado River. Filtering by source name is useful especially when points of diversion are located outside the basin (trans-basin diversion rights).

## **4.3 Provide access to reported historic water withdrawals on points of diversion**

WestDAAT users access reported historic water withdrawals (when available) for any water right of interest. Historic withdrawals are important to water budgets in river basins and planning future use, especially under drought. This task will provide visual and tabular access to historic withdrawals related to water rights whenever available by the states. California and North Dakota will be the first to support them as they have this data. Users can click at a Point of Diversion and access its reported withdrawals.

#### **4.4 Provide access to state-maintained gage stations, reservoirs, or groundwater pumping data across the West**

WestDAAT users will access this data along with U.S. Geological Survey (USGS) and Bureau Reclamation data services to inform water supply and availability across the West. The WaDE database already has this data for ten western states. This task includes designing a new tab in WestDAAT to provide a wide range of data filtering for this data, as shown in the prototype application here:

<https://waterdataexchangeuswc.shinyapps.io/SiteSpecificReservoirAndObservationSiteDemo/>

### **5. Interoperable Data Hub for Western Water Data**

WSWC partnered with the Center for Geospatial Solutions at the Lincoln Institute of Land Policy, which hosts the Internet of Coalition (IoW), on a cooperative agreement proposal to the Bureau of Reclamation to build an "Interoperable Data Hub for Western Water Data." The proposed collaboration will leverage substantial philanthropic investment in the technologies being developed by the Internet of Water Coalition by further developing WSWC's Water Data Exchange (WaDE) to provide an interoperable data hub (Hub) for western water data (Figure 8). The proposed collaboration, under evaluation, will support Reclamation's vital water delivery mission and long-term drought resilience in the West by empowering stakeholders with interoperable water data with a standardized interface to inform management decisions, research, and policy planning. The Hub will include:

- Application Programming Interfaces (APIs) and data wrappers that provide standardized access to the disparate data services;
- a catalog of all variables and search terms across data providers, which include semantic mapping among synonyms;
- integration and geo-indexing of water data sites into the National Hydrography dataset as part of Geoconnext<sup>9</sup> and Hydro Network-Linked Data Index (NLDI)<sup>10</sup> systems, which connect water data via geographic location;
- an online data discovery tool allowing users to search for and discover water quality and quantity data across data providers and download it into a consistent format;
- A robust map user interface for visualizing Hub data in pre-set views, user-customized views, and the ability to export views to static formats.

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<sup>9</sup> Geoconnext: <https://internetofwater.org/geoconnext/>

<sup>10</sup> The Hydro Network-Linked Data Index: <https://waterdata.usgs.gov/blog/nldi-intro/>

WSWC contributions include:

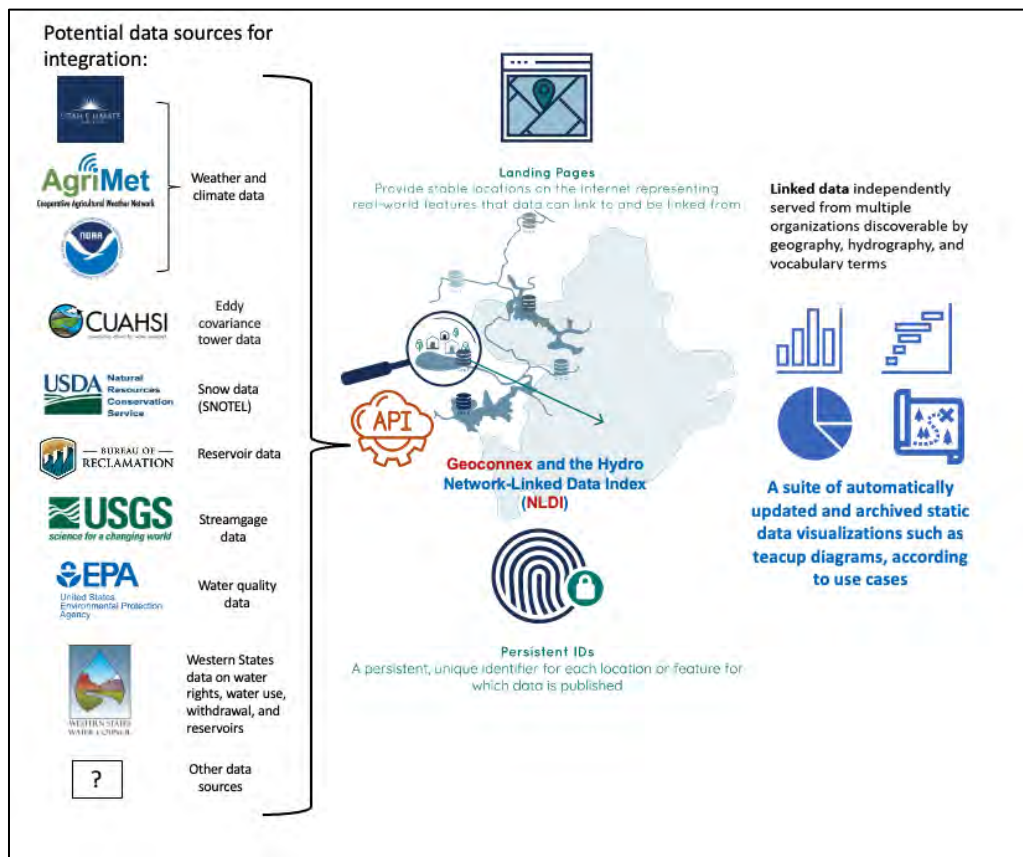
- Participate in stakeholder engagement and develop Water Supply Hub use cases and scope WaDE's water use and supply data integration into the Hub. See WestDAAT Use cases as an example of this deliverable.<sup>11</sup>
- Assist with refining the WaDE API for site-specific time series data to be compatible with SensorThings API or, if not possible, OGC-API Features and ensure performance is suitable for use by an external API proxy or another API client.
- Contribute to creating a catalog of variables and search terms in the Water Supply Hub, especially for WaDE's data.
- Import new site-specific time series states' datasets into the WaDE database, such as streamgage, reservoir, and withdrawal data. Revise and maintain the existing states' site-specific time series data in the WaDE database for ten states<sup>12</sup>. Index all the sites with NLDI.
- Contribute to the scoping discussion of the Water Supply Hub API and front-end architecture and visualization products.
- Participate with the technical advisory service for Reclamation.

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<sup>11</sup> WestDAAT Use Cases [https://westernstateswater.org/wp-content/uploads/2021/09/WestDAAT-Persona-Use-Cases-Focus-Group-Doc\\_09\\_01\\_2021.pdf](https://westernstateswater.org/wp-content/uploads/2021/09/WestDAAT-Persona-Use-Cases-Focus-Group-Doc_09_01_2021.pdf)

<sup>12</sup> WaDE existing data site-specific reservoir and streamgage/headgate time series data for ten states <https://waterdataexchangewswc.shinyapps.io/SiteSpecificReservoirAndObservationSiteDemo/>





**Figure 8:** Proposed interoperability and streamlined data access of potential water supply and demand data across data providers.

## 6. Key Outreach and Coordination Activities

### 6.1 State/Federal Outreach Activities

Recent state and federal outreach included the following:

- Montana Fish, Wildlife & Parks; Wyoming State Engineer's Office and Wyoming Water Development Office.
- Bureau of Indian Affairs (BIA); Bureau of Reclamation; United States Geological Survey (USGS)

### 6.2 Outreach and Coordination Activities with Various Organizations

Recent outreach involved the following organizations and agencies:

- Aspect Consulting LLC; Cooperative Institute for Research to Operations in Hydrology (CIROH); Deloitte; Great Salt Lake Commission; Internet of Water Coalition; OpenET Team; Sherman & Howard L.L.C.; Upper Colorado River Commission (UCRC); Upstream Tech; and Wilson Water Group

- The WaDE Program Manager and WSWC Executive Director presented about WestDAAT at the WSWC-NARF 18th Biennial Indian Reserved Water Rights Symposium held virtually on August 8-9, 2023.
- The WaDE Program Manager presented about WestDAAT at the American Water Resources Association (AWRA) 2023 Summer Conference: Connecting Land & Water for Healthy Communities held in Denver, Colorado on July 17-19.

### **6.3 Publication: Water Features: An Internet of Water Coalition Blog**

In August 2023, the Internet of Water Coalition published a blog post in their "Water Features: An Internet of Water Coalition Blog" entitled: "Unveiling WestDAAT: A Breakthrough for Water Rights Data Management in the Western United States," which is accessible online at: <https://internetofwater.org/blog/unveiling-westdaat-a-breakthrough-for-water-rights-data-management-in-the-western-united-states/>



Tab O – State Comments on EPA's  
Proposed Tribal Water Quality  
Standards

On August 4, the public comment period ended for the Environmental Protection Agency's (EPA) proposed rule on Federal Baseline Water Quality Standards (WQS) for Indian Reservations (88 FR 29496). Twelve of our western states submitted comments – AK, AZ, CO, ID, MT, NE, ND, NV, OK, SD, TX, WY – and excerpts of those letters are summarized below. Additionally, eight state attorneys' general submitted a joint comment letter to EPA Administrator Michael Regan from AK, ID, KS, MS, NE, ND, SC, and SD.

### Alaska

The Alaska Department of Environmental Conservation (ADEC) detailed the provisions of legislative and judicial law that create a unique Tribal landscape in Alaska. The 1971 Alaska Native Claims Settlement Act (ANCSA) abolished all non-Metlakatla reservations, and the concept of "Indian country" with off-reservation trust lands does not exist in Alaska according to the Department of the Interior's Solicitor's Opinion and the Alaska Supreme Court. ADEC concluded that "EPA must exclude the navigable waters of all Alaska Tribes, including Metlakatla, from coverage under the final rule."

### Arizona

The Arizona Department of Environmental Quality (ADEQ) expressed concerns about EPA Region 9's capacity to work with tribes and states in establishing federal baseline WQS, particularly given that it "has yet to issue final action on water quality standards submitted by ADEQ to the agency in November of 2019 due to inadequate staffing...." They noted that effective implementation of the rule would require an extensive collaborative effort between EPA, ADEQ, and the tribes. "Arizona has 22 federally recognized Native American tribes that represent more than 296,000 people. A total of 20 reservations cover more than 30,938 square miles (27%) of the state.... Of the 22 tribes, eight have treatment as state (TAS) status and can develop their own surface water quality standards; and only four have EPA-approved standards." ADEQ noted that the remaining tribal lands cover 11,236 sq. mi., leaving 10% of the state without WQS protections.

ADEQ continued: "In addition to the spatial scale issues above, tribal lands are sometimes commingled with public and private lands in Arizona; such as in the Phoenix metropolitan area and some cities along the Colorado River. Tribal lands are also part of a 'checkerboard' of public, private and tribal land south of Winslow in northern Arizona. While the total number of waters on which federal standards apply depends on the final dispensation of the Supreme Court ruling on *Sackett v. EPA*, there are at least 99 Arizona surface waters that cross reservation boundaries that will likely be affected. Of those waters, there are currently 33 federal Arizona Pollutant Discharge Elimination System (AZPDES) permits. An additional 238 surface waters with 74 more AZPDES permits lie within a five-mile buffer of the tribal reservation boundaries." Finally, ADEQ pointed out the need for a defined resolution process for inconsistencies between state and tribal WQS.

### Colorado

The Colorado Department of Public Health and Environment (CDPHE) provided its perspective on (1) "unique jurisdictional circumstances concerning waters within the exterior boundaries of the Southern Ute Indian Reservation," and (2) comments related to the implementation of the numeric translation procedures.

CDPHE said: "The Southern Ute Indian Reservation consists of a "checkerboard" pattern of tribally-owned lands, federal trust lands, and non-Indian owned fee lands. Colorado has long held the position that pursuant to Public Law 98-290, enacted by Congress in 1984, 98 Stat. 201, the State has civil jurisdiction, including jurisdiction to administer federally-delegated Clean Water Act programs, on non-Indian owned fee lands within the exterior Reservation boundaries. The Tribe, on the other hand, has historically held the position that the State lacks regulatory and EPA-delegated authority over water quality on non-Indian owned fee lands within the Reservation boundaries. Because stream segments cross through this checkerboard of lands, Colorado and the Tribe have collaborated for decades on a consistent approach for managing water quality across the entire Reservation. Colorado appreciates and respects the Southern Ute Tribe's commitment to protect water quality. Without ceding its jurisdictional position, the Southern Ute Indian Tribe's 2015 application for TAS status to administer a WQS program was limited to trust lands within the Reservation boundaries. As such, EPA's grant of TAS authority to the Tribe in 2018 did not include any non-Indian owned fee lands within the Reservation boundaries. In 2022, EPA approved the WQS promulgated by the Tribe for those trust lands. Without ceding the state's jurisdictional position, Colorado intends to recognize EPA's baseline standards for WOTUS on non-Indian owned fee lands within the Southern Ute Reservation boundaries in the context of EPA-issued discharge permits. In implementing its baseline standards on WOTUS flowing through those lands, we encourage EPA to honor the longstanding desire for consistency of protective WQS across the entire reservation. We believe EPA's proposed approach provides sufficient flexibility to accomplish this, and we look forward to working with EPA and the Tribe to ensure continued consistency and protectiveness of the Tribe's and State's water resources. At the same time, Colorado intends to continue to use its own standards to establish effluent limits for State-issued discharge permits on such fee lands."

CDPHE also noted that in discussions with EPA Region 8 staff, the five options to translate the narrative standard into numeric values under 40 CFR § 131.XX(d)(2) of the proposed rule appear to be non-prioritized, and that any option may be utilized. “We request that this is made clear in the rule. In Colorado, Option 2 may be the most appropriate as both the State and both the Ute Mountain Utes and the Southern Ute Indians tribes have applicable standards that should be considered on a site-specific basis. The most protective standards should be considered to protect downstream uses. For example, Colorado has adopted more protective temperature standards than the temperature standards adopted by the Southern Ute Indian Tribe; the aquatic community should be considered when determining the most appropriate temperature standards to be implemented for any given stream. In addition, streams may pass in and out of tribal lands, and downstream protection should be considered. In some cases where Colorado has adopted a standard for a particular parameter, there may be no 304(a) criteria for that parameter. All three options – EPA 304(a) criteria, Colorado basin-specific standards, and Southern Ute standards – should be carefully considered when implementing these translation procedures on non-Indian owned fee lands within the Reservation’s external boundaries.”

## Idaho

The Idaho Department of Environmental Quality (IDEQ) agreed with the intent of the rule to protect waters without WQS, but did not support the establishment of federal baseline WQS for Indian reservation waters. In particular, EPA’s lack of clarity about where reservations and trust lands even exist, and the presently-inconsistent data between states and federal agencies, adds to the time and expense of moving forward with regulatory decisions. “For example, data provided by the Bureau of Indian Affairs in response to a 2018 Freedom of Information Request submitted by the Native Lands Advocacy Project, shows that Idaho has 1,057,430 acres of trust land, not including fee or restricted lands. It took BIA nearly two years to fulfill this request for data, and there were hundreds of thousands of discrepancies between the area of land reported by BIA, and that recorded by the States.” Additionally, while “tribes can only obtain TAS status over waters within the borders of their reservations, and conversely, tribes cannot obtain TAS under the CWA for water resources pertaining to any non-reservation Indian country,” EPA has inconsistently asserted authority to promulgate WQS over trust lands “even if such lands have not formally been designated as an Indian reservation.” IDEQ expressed concerns about the potential preemption of state water quality law jurisdiction over non-tribal members on non-tribal lands within an Indian reservation boundary, even prior to a tribe obtaining TAS authority, questioning EPA’s assertion that the revised interpretation of CWA §518 would have no effect on existing state CWA programs. IDEQ also noted that EPA’s proposed rule “recognizes tribal reserved rights to use and access natural and cultural resources but does not identify how it will identify and protect those *tribal cultural and traditional uses and tribal reserved rights*.”

Regarding EPA’s implementation of this rule, IDEQ noted that this rule does not require the same transparency or standards from EPA that the states are required to provide. “EPA has not identified how TMDL’s, water quality assessments and listings, or other CWA programs will be developed on reservation waters and implemented or how the tribes and state will be part of the process.... EPA will only develop the water quality criteria component of standards when implementing a TMDL, NPDES permit, or water quality certification. A situation which would never be approved in a state’s WQS package.... [The binding translation procedures] are vague, and it is unclear how the process will be implemented for the development of NPDES permits limits, water quality assessment, or water quality certification development. States are unable to provide adequate feedback for implementation if there isn’t a clear process or procedure provided to comment on. During the ACWA/EPA listening session, EPA clarified that the first time a state would be able to review the binding translation and the resulting criteria would be when the NPDES permit is out for review, which is very late in the development process.” IDEQ listed the information EPA has indicated it would make publicly available on a website, including a list of tribes with reservations, which tribes are covered by baseline WQS, which are excluded from coverage, and all updates and changes to permits. “This is a large amount of information requiring frequent updates. This is not an effective way to inform states or stakeholders and would be difficult to maintain.” EPA also noted during the ACWA/EPA listening session that it would not be reviewing the narrative standards or the translated criteria under a triennial review, which would hold states to a higher burden than EPA is willing to implement.

They also raised the concern of significant economic impacts on permitted dischargers upstream in a state with many naturally-occurring metals due to the regional geology.

## Montana

The Montana Department of Environmental Quality (MDEQ) expressed support for the adoption of WQS that protect beneficial uses of water bodies that are based on sound scientific rationale that is documented, as well as opportunities for public input as WQS are adopted and implemented. MDEQ recommended a means of enabling state, tribal, and interested stakeholder notification of significant implementation actions.

MDEQ acknowledged the efforts of several tribes in Montana that have TAS authority and have adopted their own WQS, and other tribes that are pursuing those actions. MDEQ expressed concern about the lack of clarity about where these new WQS would apply: “States must be able to distinguish where the proposed federal baseline [WQS] apply and where state [WQS] apply. States must also accurately identify the spatial boundaries of lands to which this rule applies to evaluate water

body assessment unit boundaries and evaluate potential for downstream impacts of pollutant discharges. EPA has noted difficulty in acquiring accurate spatial information depicting boundaries of certain categories of tribal lands. [MDEQ] requests that EPA maintain accurate maps that clearly distinguish the spatial boundaries of the formal and informal Indian reservation lands (including applicable trust lands) covered by this rule, as well as those lands that are considered exceptions including off-reservation allotments or dependent Indian communities and make them readily available to states and tribes."

MDEQ requested clarity and guidance on various technical and logistical aspects of the narrative translation procedures, particularly as they impact state programs. "This proposed rule will impact several [MDEQ] programs, including Montana Pollutant Discharge Elimination System (MPDES) permitting, beneficial use support and impairment assessment, Total Maximum Daily Load development, and our 401 and 404 certification programs.... The proposed rule includes narrative criteria and binding translation procedures which EPA would use to determine case-specific numeric values protective of applicable designated uses for use in CWA program implementation. States must know the numeric values that are applicable to downstream waters to ensure adequate downstream protections when issuing permits. States also take upstream water quality conditions and downstream protections into consideration when performing waterbody assessments, reasonable potential analysis, TMDL development, and other CWA program actions."

MDEQ expressed its commitment to continue collaboratively engaging with EPA, tribes, and other state partners to achieve shared goals of water quality protection under the cooperative federalism approach to administering CWA programs. They also noted that the regional offices will need additional resources to meet the increased workload, and requested that EPA notify the states "to what degree the practical implementation of this proposed rule may affect EPA regional offices' capacity and resulting effects to states' state Clean Water Act Programs, including: (1) review and approval of state-issued permits; (2) review and approval of Total Maximum Daily Load documents; and (3) review and approval of 303d/305b water quality reports."

### Nebraska

The Nebraska Department of Environment and Energy (NDEE) acknowledged "that all Waters of the United States within Indian reservations under EPA jurisdiction should have [WQS] under the [CWA]. NDEE has concerns about the ambiguity of the proposed rule, how the rule will be implemented, the apparent lack of an avenue for impartial dispute resolution, underestimation of the fiscal impact to permittees, as well as the lack of opportunity for ongoing public participation."

NDEE said the method of translating proposed narrative criteria into numeric limits "as necessary" is ambiguous and not in line with current CWA requirements for states. "This approach would allow for multiple implementation programs to choose different translation options resulting in multiple numeric limits for the same waterbody." NDEE gave the example of an EPA NPDES permit with limits under option 5 and a §404 individual permit containing conditions under option 1. "This will be confusing and making it difficult for upstream authorities to know which numeric limits apply to downstream beneficial uses." NDEE recommended that EPA take a similar approach to Nebraska's, setting WQS based on §101(a) designated uses with §304(a) recommended criteria. "This would ensure consistency with Nebraska [WQS] and would facilitate the protection of downstream beneficial uses of waters within Nebraska as well as within Indian reservations." Additionally, EPA has not explained how it will handle disputes between its own WQS and state WQS when WPA is the decision maker.

EPA has also underestimated the economic impacts to upstream permitted dischargers. "Many small systems in Nebraska have aging populations and may be experiencing population declines making it more difficult to facilitate system upgrades" to protect downstream beneficial uses on Indian reservations. "It is also not clear how financial impacts were determined when numeric limits and subsequent facility upgrades are largely unknown at this time."

NDEE concluded by asserting that EPA should be held to the same public WQS process as states under CWA §131.20(b) and 40 CFR 130.3(b)(6), with public participation and accepting comments when reviewing and revising WQS and setting numeric limits.

### Nevada

The Nevada Division of Environmental Protection (NDEP) acknowledged the importance of WQS to protect the integrity of Nevada's and the nation's waters, but recommended that this rule not be adopted. "The proposed rule appears to be a framework that leaves many critical questions unanswered and lacks the detail necessary to thoroughly evaluate potential impacts and consequences of its adoption to State water programs, stakeholders, and the public. In fact, many of the most impactful decisions won't be made until after the rule is already in place, resulting in reduced predictability and increased uncertainty related to rule implementation."

NDEP noted that EPA had not provided a list of waters affected, and at a minimum EPA should provide an interactive web map depicting tribal boundaries and affected waters prior to consideration of the rule, and a GIS coverage/layer would be valuable. The rule also does not consider attainability of proposed baseline designated uses, or cultural and traditional designated uses, particularly where the affected waterbodies don't have sufficient flow to support baseline designated uses such as contact recreation or consumption of specific aquatic organisms, or where WQS are unachievable due to natural background

conditions. NDEP recommended that EPA allow affected Tribes to request a public water supply use on a case-by-case basis rather than designate a blanket public water supply use. "This will ensure the designation is appropriate for the waterbody."

NDEP also raised concerns with the potential overreach of Narrative Criterion #2 into the States' sole and exclusive authority to address water rights, in contradiction of CWA §101(g) and §518(a). The criterion states: "All waters shall be free from adverse impacts to the chemical, physical or hydrologic, or biological integrity caused by pollutants or pollution that prevent the attainment of applicable designated uses." NDEP said: "The term 'hydrologic integrity' may lead to conflicts with Nevada regulations and statutes if it can be interpreted as lack of environmental flow due to agricultural or other water diversions. NAC 445A.122 *Standards applicable to beneficial uses* states that "The following standards are intended to protect both existing and designated beneficial uses and must not be used to prohibit the use of the water as authorized under title 48 of NRS," which includes the adjudication of vested water rights and the appropriation of public waters.

NDEP noted that some of Nevada's WQS are different from the §304(a) criteria and a blanket tribal WQS would cause conflicts. For example, Nevada has sturgeon-free waters and the statewide selenium criteria are higher than EPA's criteria for waters with sturgeon. "NDEP recommends including a process in the proposed rule for consulting with states on where/when it is appropriate to rely upon adjacent states or Tribal CWA-effective WQS. The proposed rule must include a detailed process to address any future inconsistencies between existing state water quality standards and those promulgated under this proposed rule." The process for the public, tribes, and states to review and comment on the implementation and revisions of WQS should also be explicit in the rule. Finally, NDEP recommended that the rule be revised to include a delineated process for consulting with states on the designation of Outstanding Natural Resource Waters (ONRWs), and EPA should not take the lead role in identifying those waters on tribal lands.

### **North Dakota**

The North Dakota Department of Water Resources (NDDWR) expressed concern about EPA's use of hydrologic integrity as a water quality criterion, treating water infrastructure as pollution that influences the water body "including the characteristic pattern of flow magnitude, timing, duration, frequency, and rate of change of a water body." NDDWR said: "[W]ater infrastructure is necessary for the health and safety of all people and is a necessary part of supporting North Dakota's largest industries – agriculture and energy through flood protection and drainage as well as irrigation and industrial uses of water. The EPA's ongoing stance that [WQS] cannot be met if hydrology is altered implies that infrastructure such as flood protection can be achieved in ways that don't affect the environment at all. As a part of NDDWR's and the North Dakota Department of Environmental Quality's (NDEQ) permitting processes, impacts to waters are properly mitigated and managed at a state level to assure that the state's water resources remain healthy and safe. All projects meet the requirements of the Endangered Species Act, National Environmental Protection Act, and other state and federal regulations."

### **Oklahoma**

The Oklahoma Secretary of Energy and Environment (OSEE) and Oklahoma Department of Environmental Quality (ODEQ) noted the conflict between the proposed rule and EPA's 2020 approval of Oklahoma's request to administer WQS in certain areas of Indian country under the Oklahoma-specific §10211(a) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act of 2005 (SAFETEA). Following the *McGirt v. Oklahoma* decision, EPA recognizes the existence of six tribal reservations in Oklahoma, but the exterior boundaries of these reservations are not clearly identified. In 2021, EPA proposed to withdraw and reconsider the 2020 SAFETEA approval, which Oklahoma's Governor opposed, and EPA has taken no additional action. Oklahoma continues to administer environmental regulatory programs where the SAFETEA statutory elements are met, creating uncertainty about where EPA's baseline WQS would apply and the economic impacts of those new WQS. OSEE and ODEQ recommended that Oklahoma be explicitly excluded from this rulemaking. "If EPA takes future action on the 2020 SAFETEA request approval, then EPA should initiate a separate rulemaking action prior to applying and Federal Baseline Water Quality Standards in Oklahoma in order to allow the State and the impacted tribal nations a meaningful opportunity to comment on the potential consequences of the applicability of such standards."

On the technical side of the rule, OSEE and ODEQ noted that where federal WQS deviate significantly from the state WQS, the checkboard nature of Indian Country in Oklahoma will make implementation difficult. "[M]aking assessment and permitting decisions on small segments of waterbodies for which standards have been established by two sovereign entities becomes difficult, if not practically impossible. Fragmenting the WQS framework within Oklahoma is more likely to result in untenable confusion than it is increased protection of Tribal waters."

### **South Dakota**

The South Dakota Department of Agriculture and Natural Resources (SDDANR) opposed the rule, noting that: (1) it does not provide a transparent process or consistency with state permitting processes; (2) blanket designations of non-existent and unattainable uses to waters on tribal reservations will have detrimental implications for both Tribes and States, particularly where streams are actually intermittent or ephemeral, requiring an assessment on a case-by-case basis; (3) adding "cultural significance" to ONRW designations is unnecessary because their purpose is to maintain high quality and not allow

degradation; (4) this rule bypasses the existing process for states and TAS-tribes to develop WQS and proposes a different, unequal, and less stringent process for EPA outside the requirements established by Congress; (5) the proposed rule lacks commitment to triennial reviews, water body assessments and listing, and TMDL development and restoration, cornerstones of CWA protections, leaving tribal communities to continue to be underserved by EPA; (6) the economic analysis failed to address the financial impacts of nutrient standards and PCBs, and utilized the minimum five-mile radius to identify potentially impacted upstream users when EPA regions commonly require assessments up to 30 miles or more; and (7) EPA has exceeded its authority by including tribal trust lands outside of formal reservations, not all of which meet the definitions of Indian Country, and it is not clear how EPA, states, tribes, or others can differentiate where the proposed WQS will apply on off-reservation tribal trust lands and off-reservation allotments.

## Texas

The Texas Commission on Environmental Quality (TCEQ) requested that the rule include publicly available lists of (1) reservation surface waters where the federal WQS apply, together with their known locations and designated uses; and (2) numeric criteria developed by EPA regions. States need this information to ensure they can clearly identify waters under their own jurisdiction and criteria applicable to those waters, and enable states to evaluate potential WQS discrepancies.

TCEQ said: "Clarity is needed regarding EPA's authority to promulgate and implement the proposed rule, to describe the mechanism that will be used to resolve potential conflicts or disputes; and how EPA will meet its existing CWA Section 303(c) responsibilities to act on state-adopted WQS in light of the proposal." TCEQ pointed to the need for extensive resources to implement this rule and EPA's existing backlog of actions, noting that "portions of the 2010, 2014, 2018, and 2022 revisions to 30 Texas Administrative Code Chapter 307, the Texas Surface Water Quality Standards, are awaiting action by EPA."

Technical comments included the need to clearly define: (1) the binding translation procedure, particularly how the procedures will be developed for the same constituent within each CWA program (i.e., WQS, wastewater permitting, total maximum daily load and assessment); (2) Option 5 for implementing the binding translation procedure and how this can be appropriately used for all CWA purposes; and (3) the definition of bioaccumulative to ensure specificity regarding which pollutants EPA considers ineligible for mixing zones.

## Wyoming

The Wyoming Department of Environmental Quality (WDEQ) supported the intent of the rule to ensure that CWA protections are in place for WOTUS under tribal authority, but expressed concern that the proposed rule has significant adverse implications for Wyoming, including 140 discharge permits upstream of the Wind River and Crow Reservations.

"It has been more than 35 years since Congress amended the CWA to provide two main pathways [§518 (d) and (e)] for WOTUS under tribal authority to receive CWA protections.... Despite Congress's clear direction, EPA has chosen to spend the last several decades focused on the fundamentally flawed approach of promulgating baseline WQS rather than meaningfully engaging with states and tribes to address barriers to CWA implementation for surface waters under tribal authority. Furthermore, EPA has proposed a rule that will require a significant investment of resources on the part of tribes, states, and EPA without any additional funding to support implementation." WDEQ questioned EPA's authority to sidestep the provisions and objectives of the CWA, to supplant the role of tribes in administering the CWA, and to create a WQS process that is inconsistent with the requirements that states and TAS-tribes must meet.

WDEQ outlined sixteen concerns with the proposed rule: (1) EPA's lack of Congressional authority to promulgate WQS for tribes without TAS, noting that non-authorized tribes are not considered "States" under the CWA, but are a "municipality" under §502(4); (2) EPA must follow the same §303 and 40 CFR §131.22 procedures as States and TAS Tribes, including triennial reviews, public notice and hearings to establish ONRWs, numeric criteria for toxic pollutants or clear methods to regulate narrative criteria, and rationale and site-specific information supporting the designation of specific waters for cultural and traditional uses; (3) EPA must clearly identify applicable waters and provide opportunities to comment on specific waters, noting that "ad-hoc jurisdictional decisions during the permitting process...creates both legal and practical concerns"; (4) EPA needs a mechanism for tribes to opt-in or opt-out of WQS coverage beyond the initial 90-day period, which seems infeasibly short and inconsistent with tribal sovereignty, and a tribe's decision to opt-in or opt-out should be subject to public comment to ensure all relevant information has been considered.

Notable was concern (5), that EPA's use of narrative criteria and five broad translation options are not sufficient to ensure compliance with the CWA, and EPA's threat to use its oversight authority to ensure States' and TAS Tribes' NPDES permits comply with the new federal WQS "is both irrational and alarming. First, unless a specific CWA implementation activity has occurred that prompted EPA to translate the narrative criteria, there would be no translation available that states and authorized tribes could use to ensure compliance with the WQS. Second, even in cases where numeric translations were available, since the translation procedures are not actually 'binding,' states and authorized tribes would not necessarily have to use EPA's translations because they are not WQS. Regardless, the ambiguity associated with EPA's proposed narrative criteria will lead to significant regulatory uncertainty for state and tribal permitting authorities and the regulated community, delaying issuance

of CWA Section 402 and 404 permits as well as CWA Section 401 certifications, because states and EPA may disagree in how to interpret the narrative criteria. In such cases, a long dispute/resolution process is likely."

WDEQ's list continued: (6) EPA should use the established Federal Register process to promulgate WQS to be more consistent with past precedent and procedures used by States and TAS Tribes, and to streamline access to the revisions and translations; (7) EPA must include the criteria and evaluation process for designating ONRWs in the federal WQS. Also notable was concern (8), that EPA's hydrologic integrity narrative may create confusion regarding the scope of the CWA. "Although some states and authorized tribes may have authority over the hydrologic integrity of surface waters through their WQS, Section 101(g) of the CWA...makes it clear that Congress did not intend for the CWA to interfere with state authorities to allocate quantities of water. Given that hydrologic integrity is integrally linked with allocation of water and other hydrologic modifications, WDEQ is concerned the hydrologic conditions narrative will hinder potential water projects or implicate the legal diversion of water for beneficial uses (including diversions from waters under state jurisdiction) as causing or contributing to a designated use impairment. In circumstances where neither EPA nor the tribe has authority over allocation of water, the narrative will only cause confusion regarding the scope of the CWA. Given these concerns, EPA must remove any provisions related to hydrologic integrity since it is outside the scope and authority of the CWA and the EPA."

The final concerns included: (9) EPA needs to clarify requirements regarding non-point sources of pollution within the tribes' control; (10) the rule has federalism consultation implications under E.O. 13132; (11) EPA's consultation with individual states was insufficient, and EPA still has not addressed concerns previously raised in 2016; (12) EPA should formalize or codify tribal participation in baseline WQS implementation to ensure that they are legally binding and not subject deviations; (13) EPA cannot objectively, fairly, and consistently promulgate federal WQS and be the arbiter of disputes between states and EPA under 40 CFR 131.7, and must provide an alternative dispute resolution process; (14) EPA's economic analysis was incomplete, omitting dischargers further than 5-miles away, nonpoint sources, and potential impacts of ONRWs; (15) EPA must work with the Army Corps of Engineers to determine whether a water is WOTUS to ensure consistency after the *Sackett* decision; (16) EPA should clarify the applicability of the proposed rule to wetlands and ensure the WQS are appropriate for wetlands.

### **Attorneys General**

The 20-page joint letter from the eight attorneys general (AGs) said: "In 1987, Congress amended the Clean Water Act to allow Tribes to be treated like States for some provisions of the CWA upon meeting certain requirements. Tribes with treatment-as-States ('TAS') status have authority to establish WQS, administer permits, and manage nonpoint source pollutants. Tribes that have not attained TAS status have no such authority. EPA's role in the world of WQS is twofold: (1) to serve as a 'backstop,' stepping in only when a State or TAS Tribe is failing to meet the requirements of the Clean Water Act; and (2) to 'support' States and TAS Tribes by providing technical services like § 304(a) national recommended water quality criteria for use by States and TAS Tribes when setting WQS." The AGs summarized EPA's reasoning behind the rule as: "EPA believes that: (1) there is a gap in CWA protections over waters on reservations of non-TAS Tribes; (2) this gap exists because Tribes are not attaining TAS Status fast enough; and (3) it is EPA's prerogative to promulgate comprehensive, nationwide water quality criteria to fill this gap."

The AGs noted that the CWA requires EPA to play a supportive role for the states, and for tribes with TAS, as the states and TAS tribes take the lead in protecting their health while juggling multiple other policy considerations. "The Proposed Rule upsets this considered division of responsibility."

The AGs pointed out that the authority invoked under CWA §303(c)(4) requires EPA to make a "necessity determination," and then to follow the same policies, procedures, analyses, and public participation requirements established for the States when promulgating WQS. The AGs noted that since EPA is already writing protective NPDES permits in Indian country by relying on downstream state WQS, the premise that these non-TAS waters are unprotected is false. Additionally, §303(c)(4)(B) power can only be invoked when the states or tribes will not or cannot act. "Far from demonstrating that non-TAS Tribes 'will not, or cannot, act,' EPA acknowledges that Tribes are actively applying for TAS status and that twenty-seven Tribes have been approved in the last six years." Further, under §303(c)(4)(B), "The power to promulgate a particular standard in one case at a time does not encompass the power to promulgate every type of WQS in innumerable cases, nationwide, over an EPA-estimated 76,000 miles of rivers and streams and 1.9 million acres of lakes, reservoirs, and other open surface waters."

The AGs asserted that EPA was disregarding Congressional intent that State WQS apply to all intrastate waters, including Tribal navigable waters, until Tribes attain TAS status and promulgate Tribe-specific WQS. "States have spent more than 50 years establishing science-based water quality standards that recognize each State's unique topography, hydrogeology, geology, climate, and the resulting rivers, streams, and lakes that make up the State's surface waters. Not only is relying on State WQS to protect reservation waters sensible, adherent to cooperative federalism precepts, and consistent with EPA past policy – it is required by the CWA."

Tab P – EPA’s Revised Definition of  
WOTUS (August 2023) / CBD v.  
EPA





## Fact Sheet for the Final Rule: Amendments to the Revised Definition of “Waters of the United States”

August 2023



### Overview

On August 29, 2023, the U.S. Environmental Protection Agency (EPA) and Department of the Army (the agencies) announced a final rule amending the 2023 definition of “waters of the United States.”<sup>1</sup> The amendments conform with the U.S. Supreme Court’s May 25, 2023, decision in the case of *Sackett v. Environmental Protection Agency*. While EPA’s and Army’s 2023 rule defining “waters of the United States” was not directly before the Supreme Court, the decision in *Sackett* made clear that certain aspects of the 2023 rule are invalid. Therefore, the agencies have amended key components of the regulatory text to conform it to the Supreme Court decision. The final rule provides clarity for protecting our nation’s waters consistent with the Supreme Court’s decision while advancing infrastructure projects, economic opportunities, and agricultural activities.

### Changes to the “Waters of the United States” Categories and Definitions<sup>2</sup>

The agencies’ amendments change the parts of the 2023 definition of “waters of the United States” that are invalid under the *Sackett* decision. For example, the rule removes the significant nexus test from consideration when identifying tributaries and other waters as federally protected. It also revises the adjacency test when identifying federally jurisdictional wetlands, clarifies that interstate wetlands do not fall within the interstate waters category, and clarifies the types of features that can be considered under the “additional waters” category.

#### ***Changes that the agencies have made to the January 2023 Rule categories:***

Jurisdictional Category	Key Changes to the January 2023 Rule Regulation Text	Regulatory Text Paragraph
<b>Traditional Navigable Waters</b>	No changes	(a)(1)
<b>Territorial Seas</b>	No changes	(a)(1)
<b>Interstate Waters</b>	Removing interstate wetlands from the text of the interstate waters provision	(a)(1)
<b>Impoundments</b>	No changes	(a)(2)
<b>Tributaries</b>	Removing the significant nexus standard	(a)(3)
<b>Adjacent Wetlands</b>	Removing the significant nexus standard	(a)(4)
<b>Additional Waters</b>	Removing the significant nexus standard; removing wetlands and streams from the text of the provision	(a)(5)

<sup>1</sup> The “Revised Definition of ‘Waters of the United States’” rule published in the Federal Register on January 18, 2023.

<sup>2</sup> These tables are provided for informational purposes; the rule establishes the requirements defining “waters of the United States.”

***Changes that the agencies have made to the January 2023 Rule definitions:***

Definition	Key Changes to the January 2023 Rule Regulation Text	Regulatory Text Paragraph
<b>Wetlands</b>	No changes	(c)(1)
<b>Adjacent</b>	Revised definition to mean “having a continuous surface connection.”	(c)(2)
<b>High tide line</b>	No changes	(c)(3)
<b>Ordinary high water mark</b>	No changes	(c)(4)
<b>Tidal waters</b>	No changes	(c)(5)
<b>Significantly affect</b>	Deleted definition	(c)(6)

## **No Changes to the Exclusions from “Waters of the United States”**

The amendments to the January 2023 Rule do not change the eight exclusions from the definition of “waters of the United States” that provide clarity, consistency, and certainty. **The exclusions are:**

- **Prior converted cropland**, adopting USDA’s definition and generally excluding wetlands that were converted to cropland prior to December 23, 1985.
- **Waste treatment systems**, including treatment ponds or lagoons that are designed to meet the requirements of the Clean Water Act.
- **Ditches** (including roadside ditches), excavated wholly in and draining only dry land, and that do not carry a relatively permanent flow of water.
- **Artificially irrigated areas**, that would revert to dry land if the irrigation ceased.
- **Artificial lakes or ponds**, created by excavating or diking dry land that are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.
- **Artificial reflecting pools or swimming pools**, and other small ornamental bodies of water created by excavating or diking dry land.
- **Waterfilled depressions**, created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction operation is abandoned and the resulting body of water meets the definition of “waters of the United States.”
- **Swales and erosional features** (*e.g.*, gullies, small washes), that are characterized by low volume, infrequent, or short duration flow.

Additionally, the agencies’ amended definition of “waters of the United States” does not affect the longstanding activity-based permitting exemptions provided to the agricultural community by the Clean Water Act.

## **For More Information**

Additional information is available on [EPA’s Waters of the United States website](#).

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6 **IN THE UNITED STATES DISTRICT COURT**  
7 **FOR THE DISTRICT OF ARIZONA**  
8

9 Center for Biological Diversity,  
10 Plaintiff,

11 v.

12 United States Environmental Protection  
13 Administration, et al.,  
14 Defendants.

No. CV-22-00138-TUC-JCH

**ORDER**

15 In this case, Plaintiff Center for Biological Diversity (the "Center") asserts the  
16 Endangered Species Act ("ESA") requires Defendant Environmental Protection Agency  
17 ("EPA") to consult with expert agencies before issuing recommended water-quality  
18 criteria. *E.g.*, Doc. 29 at 16–17.<sup>1</sup> EPA responds that the ESA only requires EPA to consult  
19 later, when states apply to adopt or modify EPA's recommended criteria. *E.g.*, Doc. 31 at  
20 12–13. The issues are fully briefed, *see* Docs. 32, 37, and the Court heard oral argument  
21 on July 18, 2023. Doc. 38 ("Hr'g Tr.").

22 Although EPA's position is defensible, the Court agrees with the Center that issuing  
23 water-quality criteria recommendations is an "action" under the ESA that requires  
24 consultation. The Court therefore will grant in part summary judgment for the Center, deny  
25 summary judgment for EPA, vacate EPA's 2016 chronic freshwater 304(a) cadmium  
26 criterion, and remand EPA's 2016 304(a) cadmium criteria for proceedings consistent with  
27 this Order.

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<sup>1</sup> All page citations are to the ECF document page number unless otherwise specified.

**I. Background**

This case arises from the intersection of the ESA and the Clean Water Act ("CWA"). The ESA is "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation." *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 180 (1978). Its heart is section 7(a)(2). *W. Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 495 (9th Cir. 2011). Section 7(a)(2) provides:

Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat of such species....

16 U.S.C. § 1536(a)(2). The Department of the Interior, through the United States Fish and Wildlife Service ("FWS"), and the Department of Commerce, through the National Marine Fisheries Service ("NMFS" and together with FWS "the Services"), promulgated regulations interpreting and implementing ESA Section 7(a)–(d). 51 Fed. Reg. 19926-01; 50 C.F.R. § 402.01. These regulations provide:

Each Federal agency shall review its actions at the earliest possible time to determine whether any action may affect listed species or critical habitat. If such a determination is made, formal consultation is required....

50 C.F.R. § 402.14(a). By contrast, if an agency determines its action will have "no effect," then consultation is not required. *See San Luisa & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 596 (9th Cir. 2014) (citing 50 C.F.R. § 402.14).

The CWA exists to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters" by reducing, and eventually eliminating, the discharge of pollutants into these waters. 33 U.S.C. § 1251(a). To that end, the CWA requires each state to adopt water quality standards for all the waters of that state and to review them at least every three years. *Id.* §§ 1313(a), (b), (c)(1) (2000). EPA administers the CWA. 33 U.S.C. § 1251(d). As the CWA's administrator, EPA must develop and publish recommendations for states' water quality criteria, called "304(a) criteria." *Id.* §§ 1313(a)–(d), 1314(a). As of 2015, states must either adopt EPA's 304(a) criteria or explain their decision not to,

1 justifying any departure based on "sound scientific rationale" and "scientifically defensible  
2 methods." *See* 40 C.F.R. §§ 131.11, 131.20(a). Specifically,

3 States must adopt those water quality criteria that protect the designated use.  
4 Such criteria must be based on sound scientific rationale and must contain  
5 sufficient parameters or constituents to protect the designated use. For waters  
6 with multiple use designations, the criteria shall support the most sensitive  
7 use.

8 ....

9 In establishing criteria, States should:

10 (1) Establish numerical values based on:

11 (i) 304(a) Guidance; or

12 (ii) 304(a) Guidance modified to reflect site-specific conditions; or

13 (iii) Other scientifically defensible methods;

14 (2) Establish narrative criteria or criteria based upon biomonitoring methods  
15 where numerical criteria cannot be established or to supplement numerical  
16 criteria.

17 40 C.F.R. § 131.11. Likewise,

18 [I]f a State does not adopt new or revised criteria for parameters for which  
19 EPA has published new or updated CWA section 304(a) criteria  
20 recommendations, then the State shall provide an explanation when it  
21 submits the results of its triennial review to the Regional Administrator  
22 consistent with CWA section 303(c)(1) and the requirements of paragraph  
23 (c) of this section.

24 40 C.F.R. § 131.20. Whatever course states choose to take, they must seek EPA's  
25 permission before revising their water-quality standards. 33 U.S.C. § 1313(c). If a state  
26 fails to maintain CWA standards, EPA is also required to promulgate water quality  
27 standards for that state directly. 33 U.S.C § 1313(c)(4).

28 The Center and EPA agree on the material facts. *Compare* Doc. 29 at 11–17, with  
Doc. 31 at 10–15. In 2001, EPA and the Services signed a Memorandum of Agreement  
(MOA) "to enhance coordination between [the] agencies so [they could] best carry out  
[their] responsibilities under the CWA and ESA." 66 Fed. Reg. 11202; AR 4768–83. For  
its part, EPA agreed it would consult with the Services at the national level. AR 4778. The  
MOA stated:

///

1 National 304(a) consultations will ensure a consistent approach to evaluating  
2 the effects of pollutants on species .... National consultations will also ensure  
3 better consideration of effects on species whose ranges cross State  
boundaries.

4 66 Fed. Reg. 11202, 11212; AR 4778. In 2007, EPA began its first national consultation  
5 under the MOA for cyanide. AR 4790. In 2010, the Services issued draft Biological  
6 Opinions finding that EPA's proposed cyanide criteria likely would jeopardize more than  
7 200 species. *See* AR 5089–901; AR 5392. FWS noted:

8 [T]his biological opinion does not include incidental take exemptions  
9 [(permitting incidental harms to protected species in certain circumstances)]  
10 .... Therefore, it will be necessary for EPA to conduct subsequent, step-down  
11 ESA section 7 consultations ... on individual State and Tribal water quality  
12 standards .... [FWS] anticipate[s] much of the [nationwide] analysis will  
carry over, so that the [state-level] consultation ... need only focus on  
potential effects of elements that were not fully considered here.

13 AR 4788; *accord* AR 5395 (NMFS's draft biological opinion). The parties disagree to some  
14 extent what happened next. EPA cites its own letter to the Services to assert EPA and the  
15 Services agreed to end the cyanide national consultation for a variety of reasons. *See* AR  
16 4766–67. The Center asserts "[t]here are no contemporaneous documents in the record ...  
17 confirming this decision was made." Doc. 29 at 15–16 (citing Docs. 21-2, 26-2, 28-2). In  
18 any event, the parties agree nothing further came of the 2001 MOA after the Services'  
19 issued their draft biological opinions.

20 In 2016, EPA revised its 304(a) criteria for cadmium. *See* Doc. 29 at 12; Doc. 31 at  
21 10. Cadmium is a metal pollutant that can harm aquatic species, particularly in freshwater  
22 species and long-lived species. *See* Doc. 29 at 11; Doc. 31 at 10. Harmful exposure to  
23 cadmium may be either acute or chronic. *See* Doc. 29 at 11; Doc. 31 at 11. Acute exposure  
24 causes increased mortality in organisms, and chronic exposure affects their growth,  
25 reproduction, immune and endocrine systems, development, and behavior. AR 725.  
26 Cadmium pollution in water predominantly results from human sources, such as mining or  
27 industrial waste. *See* Doc. 29 at 11; Doc. 31 at 10. The Services have noted that increased  
28 cadmium levels would risk harm to many listed species, including salmon, steelhead,

1 sturgeon, sea turtles, corals, and mussels. *See* AR 1628–29, 1656, 5463. Of the four  
2 categories of allowable cadmium concentration—acute and chronic for freshwater, and  
3 acute and chronic for marine/estuarine waters—EPA increased only the chronic freshwater  
4 criterion; EPA decreased the criteria for the other three categories. *See* Doc. 29 at 13; Doc.  
5 31 at 11. Before revising the criteria, EPA followed its own process for major criteria  
6 revisions, which included data review, public notice, a call for additional data, peer review,  
7 public input, and publication of the final criteria in the Federal Register. *See* 63 Fed. Reg.  
8 67548, 67549; AR 722–883.

9 EPA did not consult with NMFS and FWS when it revised and published the new  
10 cadmium criteria. *See* Doc. 29 at 12–13; Doc. 31 at 16. Instead, EPA performed state-level  
11 consultations for each state that has revised its cadmium criteria since the 2016 revision.  
12 *See* Doc. 31 at 13; Hr'g Tr. at 65:19–25. EPA justified its state-by-state approach in a  
13 response to the Center's public comment on its 2016 criteria. *See* AR 871. EPA noted that  
14 national consultations are inefficient because "any gains in consistency from an initial  
15 national consultation are likely to be undone by inconsistencies among the follow-up  
16 consultations at the field office level." AR 871. EPA also noted that even if it conducted  
17 nationwide consultations, they would not "obviate the need for further consultation" at the  
18 lower level. AR 871. EPA also acknowledged that nationwide consultation would "tend to  
19 produce" more stringent 304(a) criteria. *See* AR 871; *see also* Doc. 31 at 12.

## 20 **II. Legal Standards**

### 21 **A. Summary Judgment Standard**

22 Summary judgment is required if "the pleadings, depositions, answers to  
23 interrogatories, and admissions on file, together with the affidavits, if any, show that there  
24 is no genuine issue as to any material fact and that the moving party is entitled to judgment  
25 as a matter of law." Fed. R. Civ. P. 56(c). Summary judgment is a particularly appropriate  
26 tool for resolving claims challenging agency action. *See Occidental Eng'g Co. v. INS*, 753  
27 F.2d 766, 770 (9th Cir. 1985).

28 ///

1           **B. Review Standard**

2           The Court reviews de novo an agency's interpretation of a statute outside its  
3 administration. *Karuk Tribe of Cal. v. U.S. Forest Serv.*, 681 F.3d 1006, 1017 (9th Cir.  
4 2012) (en banc) (citations omitted). The Court may set aside an agency's action if the action  
5 was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law."  
6 5 U.S.C. § 706(2)(A).

7           **III. Analysis**

8           **A. Standing**

9           The parties first dispute whether the Center has standing to bring its case. Article III  
10 standing requires "(1) a concrete and particularized injury that is 'actual or imminent, not  
11 conjectural or hypothetical'; (2) a causal connection between the injury and the defendant's  
12 challenged conduct; and (3) a likelihood that a favorable decision will redress that injury."  
13 *Pyramid Lake Paiute Tribe of Indians v. Nev. Dep't of Wildlife*, 724 F.3d 1181, 1187 (9th  
14 Cir. 2013) (quoting *Lujan v. Defs. of Wildlife*, 504 U.S. 555, 560, 112 S. Ct. 2130 (1992)).  
15 When a plaintiff is an organization, plaintiff's members must set forth their "reasonable  
16 concerns about the effects of [the challenged activity]" and how that activity "directly  
17 affected those [members'] recreational, aesthetic, and economic interests." *Friends of the*  
18 *Earth v. Laidlaw Envtl. Servs.*, 528 U.S. 167, 183-84 (2000). "[T]he desire to use or observe  
19 an animal species, even for purely [a]esthetic purposes, is undeniably a cognizable interest  
20 for purposes of standing." *Lujan*, 504 U.S. at 562–63.

21           **a. The Center establishes injury-in-fact.**

22           Injury-in-fact from a procedural injury is established by showing "the procedures in  
23 question are designed to protect some threatened concrete interest ... that is the ultimate  
24 basis of [a plaintiff's] standing." *Nat. Res. Def. Council v. U.S. Env't Prot. Agency*, 38 F.4th  
25 34, 54 (9th Cir. 2022) ("NRDC (2022)") (citing *Salmon Spawning & Recovery All. v.*  
26 *Gutierrez*, 545 F.3d 1220, 1225 (9th Cir. 2008)). EPA somewhat ambivalently disputes  
27 that the Center has established injury-in-fact. Doc. 31 at 16 (challenging "at least" the  
28 second and third prongs); *see also* Doc. 37 at 9–10 (emphasizing aspects of EPA's MSJ



1 challenging imminent injury). Either way, the Court must resolve the question to its  
2 satisfaction. *See Lance v. Coffman*, 549 U.S. 437, 439 (2007) ("A federal court has an  
3 obligation to assure itself of jurisdiction before proceeding to the merits[.]").

4 First, the Center alleges a procedural injury because it claims EPA violated the ESA  
5 when EPA issued revised 304(a) criteria without consulting the Services. Doc. 29 at 18.  
6 Failure to conduct a required consultation is a procedural injury for standing purposes.  
7 *Citizens for Better Forestry v. U.S. Dep't of Agric.*, 341 F.3d 961, 969 (9th Cir. 2003).  
8 Second, the Center's members assert that cadmium threatens their educational,  
9 professional, and recreational activities associated with protected species. Doc. 29 at 18;  
10 *see also, e.g.*, Doc. 29-1 (declarant Burdette describing personal and professional interests  
11 extending to South Atlantic and Gulf Regions (more than 20 states), Kemp's ridley sea  
12 turtles that range between Nova Scotia, North Carolina, Texas, and Mexico, and Atlantic  
13 sturgeon that range between New York, North Carolina, and Georgia). Mr. Burdette's  
14 interests, like the other declarants, indicate a "tangible, continuing connection" to states  
15 and species impacted by EPA's decision not to conduct nationwide consultation. *See*  
16 *Ecological Rts. Found. v. Pac. Lumber Co.*, 230 F.3d 1141, 1148 (9th Cir. 2000). Third,  
17 the ESA consultation requirement was designed to "advance the ESA's overall goal" of  
18 protecting endangered species, *see Salmon Spawning & Recovery All.*, 545 F.3d at 1225–  
19 26, including the Kemp's ridley sea turtles and Atlantic sturgeon the Center's members have  
20 a concrete interest in. Finally, the Center's members adequately allege their interest is  
21 threatened by EPA's state-by-state approach to water-quality consultation, which the  
22 Center says insufficiently provides for cumulative and inter-state effects compared with  
23 nationwide consultation. Doc. 29 at 18. More generally, and as discussed in more detail  
24 below, *see* §§ III(A)(b), (B), the Court finds that the Center's alleged injury is actual and  
25 imminent because EPA's current approach is deficient in ways that tend to produce less  
26 stringent criteria and have been adopted or likely will be adopted by most states soon.

27 **b. The Center establishes causation.**

28 Given an alleged procedural injury, "[t]he causation requirement is satisfied by

1 showing a 'reasonable probability of the challenged action's threat to [plaintiffs'] concrete  
2 interest.'" *NRDC (2022)*, 38 F.4th at 54–55 (citing *Nat'l Fam. Farm Coal. v. EPA*, 966 F.3d  
3 893, 910 (9th Cir. 2020)). The challenged action here is EPA's decision not to conduct  
4 nationwide consultation. The Center alleges EPA's decision threatens the Center's interests  
5 by inadequately considering cumulative and inter-state effects. This threat either has  
6 materialized or will materialize imminently. For example, Mr. Burdette describes his  
7 ongoing interest and plans to observe Kemp's ridley sea turtles and Atlantic sturgeon,  
8 which are found near his home in North Carolina but range far outside state waters. Doc  
9 29-1 ¶ 22. North Carolina has adopted EPA's 2016 criteria. AR 4641–87. Similarly,  
10 declarant Miller describes an ongoing interest in and plans to observe chinook salmon and  
11 green sturgeon, which are found near his home in Oregon but range between Washington  
12 and California. Doc 29-4 ¶¶ 7, 13. Oregon and California currently use the EPA's 2001  
13 304(a) criterion for chronic freshwater cadmium and are overdue to review and update it.  
14 *See* Doc. 29 at 37, 40; 40 C.F.R. § 131.20(a). Washington currently uses EPA's 1985 304(a)  
15 criteria together with EPA's National Toxics Rule and is overdue to review and update  
16 them. *See* Doc. 29 at 21; 40 C.F.R. §§ 131.20(a), 131.36. If, as the Center alleges, EPA's  
17 current state-by-state approach to Section 7 consultation is inadequate, Mr. Burdette and  
18 Mr. Miller's interests, like the other declarants, are threatened to a reasonable probability.  
19 In that case, the threat materialized for Mr. Burdette and the other declarants whose states  
20 adopted EPA's 2016 criteria. And the threat currently hangs over Mr. Miller and those  
21 declarants whose states are overdue to review and revise their water quality standards.<sup>2</sup> The  
22 Court thus turns to the question of whether EPA's current approach creates a reasonable  
23 probability of harm and thereby threatens the Center's concrete interests.

24 First, EPA's current approach creates a reasonable probability of harm because it  
25 likely results in less stringent criteria than nationwide consultation would produce. EPA

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26  
27 <sup>2</sup> The Court assumes states will comply with the law. Here, that means the Court assumes  
28 states overdue to review and revise their water-quality standards will do so immediately.  
The alternative—permitting hypothetical failure to comply with the law to defeat  
standing—would set the standing threshold impossibly high.

1 acknowledges that nationwide consultation likely would "tend to produce" more stringent  
2 criteria. Doc. 31 at 12; AR 871 (response to the Center's public comment on EPA's 2016  
3 criteria).<sup>3</sup> That result is intuitive because EPA's criteria would then have to account for  
4 those states with the highest risk and exposure to cadmium. EPA argues that more stringent  
5 criteria are inefficient because more states would have to depart from them, causing greater  
6 expense overall. *See* Doc. 31 at 36 (defining the purpose of 304(a) criteria as to alleviate  
7 states' "burden"). But the ESA instructs agencies to give endangered species "first priority,"  
8 "whatever the cost." *Tenn. Valley Auth.*, 437 U.S. at 184–85, 194. Agencies must review  
9 their actions "at the earliest possible time," 50 C.F.R. § 402.14, "to avoid piecemeal  
10 chipping away of habitat ... [that] eviscerate[s] Congress' intent to give the benefit of the  
11 doubt to [threatened] species." *See Conner v. Burford*, 848 F.2d 1441, 1454 (9th Cir. 1988)  
12 (citation omitted). EPA's argument essentially turns that mandate on its head. *See* Doc. 31  
13 at 12 ("allowing the most sensitive location-specific potential concerns" for protected  
14 species "to drive national recommendations would inappropriately distort those  
15 recommendations."); AR 871 ("EPA believes that it is more efficient [for states to modify  
16 304(a) criteria to make them more stringent than to modify 304(a) criteria to make them  
17 less stringent]."). The ESA requires primary consideration of protected species, not  
18 efficiency or cost-effectiveness. EPA's contrary emphasis drives the point home. EPA  
19 emphasizes again and again that nationwide consultation would be cumbersome and that  
20 more states would have to seek site-specific variances. But that is the point. Nationwide  
21 consultation would produce more stringent criteria, which gives the "benefit of the doubt"  
22 to protected species. The Center and its members seek a result consistent with the ESA's  
23 policy. To the extent that result is inconsistent with EPA's policy, EPA's policy must yield.

24 Second, EPA's approach creates a reasonable probability of harm because NMFS  
25

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26 <sup>3</sup> In its Reply, EPA tries to distance itself from this admission. *See* Doc. 37 at 11. EPA  
27 emphasizes that nationwide consultation would "'tend to produce' recommended criteria  
28 'that states would need to modify to make less stringent,' not that more stringent criteria  
'would in fact occur.'" *Id.* That distinction is irrelevant because a tendency to produce  
something is also a reasonable probability that it will occur.

1 believes EPA's approach is inadequate. NMFS is one of the two agencies entrusted with  
2 promulgating and administering ESA's enacting regulations. NMFS is also a subject-matter  
3 expert, responsible for understanding and quantifying risks to protected species. NMFS's  
4 interpretations of ESA's enacting regulations are therefore highly relevant. In 2016, NMFS  
5 commented on EPA's 2016 304(a) criteria when EPA sought public comment. *See* AR  
6 1628–29. NMFS asserted EPA's decision to consult "only when [EPA] approves state  
7 proposed water quality criteria results in a piecemeal approach when considering  
8 implications of such guidelines for broadly ranging species." AR 1629. NMFS urged EPA  
9 to "implement an assessment strategy that takes into account the aggregate effects of EPA's  
10 authorizations of state proposed water quality criteria such that EPA can ensure that these  
11 authorizations taken together do not jeopardize the continued existence of ESA listed  
12 species[.]" AR 1629. NMFS specifically identified concerns with sturgeon and sea turtles.  
13 *See* AR 1628. For sea turtles, NMFS wrote:

14       The Oregon consultation concluded that ESA listed sea turtles would be  
15       unlikely to accumulate a significant amount of cadmium specifically from  
16       state waters. However, EPA's cadmium guidelines apply to all waters of the  
17       US so exposures would occur throughout the US portion of sea turtle ranges.  
18       Further cadmium accumulates in tissue with age and sea turtles are  
19       understood to be very long lived species. For example, green turtles reach  
20       sexual maturity between 20 and 50 years of age. For such long lived species  
21       we would need to consider whether cadmium accumulation from US waters  
22       over a lifespan would reach tissue concentrations directly resulting in or  
23       contributing to adverse effects.

24 AR 1628. NMFS's concerns mirror the Center's and its declarants'. *See* Doc. 29 at 29; Doc.  
25 29-4 ¶ 23. NMFS uniquely understands the strengths and weaknesses of its consultations  
26 with EPA. If, as the record shows, NMFS believes its state-by-state consultations with EPA  
27 inadequately consider cumulative and inter-state effects, then they likely do. At the very  
28 least, NMFS's concerns create a reasonable probability of harm from EPA's decision not to  
conduct nationwide consultation.

Third, EPA's approach creates a reasonable probability of harm because the record  
shows that formal consultations do not completely consider cumulative and inter-state  
effects. North Carolina, for example, sought to adopt EPA's 2016 criteria, and EPA

1 accordingly consulted formally with NMFS. *See* AR 11699–995. NMFS's biological  
2 opinion focused almost entirely on North Carolina, not species' lifecycle or migratory path.  
3 *See id.* EPA insists that biological opinions consider cumulative and inter-state effects  
4 through the definition of the "environmental baseline" and "action area." Doc. 31 at 34–35.  
5 EPA's argument is not supported by the record. Cumulative effects are limited to those  
6 within "the action area." AR 11804; 50 C.F.R. § 402.02 (same). Similarly, the  
7 "environmental baseline" is "the condition of the listed species or its designated critical  
8 habitat *in the action area*, without the consequences to the listed species or designated  
9 critical habitat caused by the proposed action." AR 11751 (emphasis added); 50 C.F.R. §  
10 402.02 (same). The "action area" includes "all waters the criteria will be applied to within  
11 the state ... and any waters in other states affected by [that state's] water quality[.]" AR  
12 11733; 50 C.F.R. § 402.02. Essentially, a biological opinion considers 304(a) criteria  
13 impacts to species within the state and within waters downstream of the state. It does not,  
14 as EPA contends, thereby focus on the lifecycle of long-lived and migratory species who  
15 range both upstream and downstream of a state. EPA's citation to the Services' 2019  
16 revision of Section 7 regulations is misplaced. *See* Doc. 31 at 34–35 (citing 84 Fed. Reg.  
17 44,976, 44,994–95 (Aug. 27, 2019)). The Services' discussion of the "effects of climate  
18 change both 'within and outside the action area'" does not suggest the Services analyze  
19 species' life history outside the action area. Climate change appears to be a unique aspect  
20 of biological opinions. *See, e.g.,* AR 11804–05 (setting apart climate change in a subsection  
21 of cumulative effects within the action area). The other state consultations show similar  
22 shortcomings. The record of formal state-by-state consultations thus shows that EPA's  
23 approach creates a reasonable probability of harm by failing to consider cumulative and  
24 interstate effects completely.

25 Finally, EPA's approach creates a reasonable probability of harm even if formal  
26 consultations are not deficient because EPA can conduct informal consultations. Informal  
27 consultations do not require a biological opinion from the Services. *See* 50 C.F.R. § 402.13.  
28 Instead, EPA typically produces a biological assessment or evaluation, which avoids a

1 formal consultation if the Services concur with its conclusions. *See* 50 C.F.R. §§ 402.13,  
2 402.14(b)(1). Most of EPA's consultations are informal. Hr'g Tr. at 66:2–5. EPA concedes  
3 that these informal consultations do not use the "environmental baseline" term, but insists  
4 they still consider cumulative effects. Doc. 31 at 35 (citing, *e.g.*, AR 3289–90 (Mississippi),  
5 3667 (Northern Mariana Islands)). EPA's citations do not support its claim. The Mississippi  
6 Biological Evaluation, for example, mentions bioaccumulation but does not consider inter-  
7 state effects. AR 3289–90. Similarly, the Northern Mariana Islands consultation mentions  
8 "bioaccumulation" but only in contrast with "direct effects." AR 3667. The other informal  
9 consultations have similar shortcomings. Thus, even if formal consultations sufficiently  
10 considered cumulative and interstate effects, EPA's state-by-state approach would still  
11 create a reasonable probability of harm through its use of informal consultations.

12 **c. The Center establishes redressability.**

13 Given a procedural violation, the redressability prong is satisfied by showing that  
14 the agency decision "could be influenced" by the procedures at issue. *NRDC (2022)*, 38  
15 F.4th at 56 (citing *Hall v. Norton*, 266 F.3d 969, 977 (9th Cir. 2001)). Here, nationwide  
16 consultation on cadmium 304(a) criteria would require EPA to collaborate with an expert  
17 agency, and 304(a) criteria "could be influenced" as a result. *See id.*; 50 C.F.R. §§ 402.13–  
18 402.14. That is the purpose of consultation. EPA also acknowledges that "nationwide  
19 consultation for Section 304(a) criteria would tend to produce more stringent  
20 recommendations." Doc. 31 at 12. Therefore, EPA's approach to consultation could  
21 influence EPA's determination of 304(a) criteria.

22 **d. EPA's objections are unpersuasive.**

23 EPA objects that the Center lacks standing because any harm flows from multiple  
24 subsequent regulatory steps, specifically a state-level process, expert agency consultation,  
25 and EPA review and approval. Doc. 31 at 17. EPA focuses on declarant Miller as an  
26 example, asserting that Mr. Miller "provides no evidence that [California, Oregon, and  
27 Washington] will adopt EPA's 2016 recommended 304(a) criteria for cadmium without  
28 modification[.]" Doc. 31 at 18. EPA's point is two-fold: any injury flows from subsequent

1 regulatory steps, not the 304(a) criteria, and, for the same reason, nationwide consultation  
2 cannot redress that injury. *See id.* at 17 (citing *Nat. Res. Def. Council, Inc. v. EPA*, 16 F.3d  
3 1395, 1408 (4th Cir. 1993) ("NRDC (1993)"); *Arizona Yage Assembly v. Garland*, 595 F.  
4 Supp. 3d 869, 880 (D. Ariz. 2022)).

5 EPA's argument and cases are unpersuasive for several reasons. First, the injury the  
6 Center asserts is not too tenuously connected to EPA's failure to consult because states are  
7 required to explain any departure from EPA's criteria and because most states adopt EPA's  
8 criteria verbatim. *See also supra* § III(B). Just as 304(a) criteria affect state water-quality  
9 standards generally, EPA's procedures generating 304(a) criteria—including nationwide or  
10 state-by-state consultation—affect state water-quality standards. That is enough for  
11 procedural causation. For redressability, the bar is even lower—the *possibility* of influence  
12 is enough. *See NRDC (2022)*, 38 F.4th at 56. As discussed throughout this Order, the Center  
13 has shown more than a possibility. Second, *NRDC (1993)* is not helpful to EPA because its  
14 reasoning was based in part on the lack of "compulsory language" accompanying 304(a)  
15 criteria, and it was decided before EPA began requiring states to explain any departure  
16 from EPA's criteria. *See* 16 F.3d at 1407–08.<sup>4</sup> Similarly, in *Arizona Yage Assembly*,  
17 plaintiffs lacked standing because the interim guidance at issue "does not require Plaintiffs  
18 to do anything or prevent them from doing anything[.]" 595 F. Supp. 3d at 880. That is not  
19 the case here, where states must justify any departure from EPA's 304(a) criteria. The  
20 Center and its declarants are hardly imagining things when they observe an identity  
21 between EPA's 304(a) criteria and most states' water-quality standards. EPA's regulations  
22 may "only" require states to justify any departure, but that requirement appears to have a  
23 powerful effect on what they actually do. That is enough to remove the Center's concerns  
24 from the realm of attenuated connections and speculation. But even if that were not enough,  
25 the fact that at least 25 states, tribes, and territories have adopted EPA's 2016 criteria means  
26 any shortcomings stemming from a failure to consult nationwide have actually  
27

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28 <sup>4</sup> *NRDC (1993)* was also decided based on whether issuing 304(a) criteria is a "final action" under the APA, not standing in an ESA context. *Id.*

1 materialized.

2 For these reasons, the Court finds that the Center has standing to challenge EPA's  
3 decision to revise its 304(a) criteria without conducting nationwide consultation.

4 **B. Issuing 304(a) criteria is an "action" under the ESA.**

5 Section 7 of the ESA defines agency action as "any action authorized, funded, or  
6 carried out by [a federal] agency." 16 U.S.C. § 1536(a)(2). The ESA implementing  
7 regulations provide:

8 Action means all activities or programs of any kind authorized, funded, or  
9 carried out, in whole or in part, by Federal agencies in the United States or  
10 upon the high seas. Examples include, but are not limited to: (a) actions  
11 intended to conserve listed species or their habitat; (b) the promulgation of  
12 regulations; (c) the granting of licenses, contracts, leases, easements, rights-  
of-way, permits, or grants-in-aid; or (d) actions directly or indirectly causing  
modifications to the land, water, or air.

13 50 C.F.R. § 402.02. Section 7 and its requirements "apply to all actions in which there is  
14 discretionary Federal involvement or control." 50 C.F.R. § 402.03.

15 The ESA's appearance of broad meaning is not deceiving. Agencies must give  
16 endangered species "first priority," even over the agencies' primary missions, "whatever  
17 the cost." *Tenn. Valley Auth.*, 437 U.S. at 184–85, 194. To that end, "'agency action is to  
18 be 'construed broadly.'" *Karuk Tribe*, 681 F.3d at 1021 (citation omitted). Unsurprisingly,  
19 this broad construction leads courts to find that many agency activities are "actions." *See*,  
20 *e.g.*, *Karuk Tribe*, 681 F.3d at 1021 (collecting cases). Some examples are straightforward.  
21 *See, e.g., Washington Toxics Coal. v. Env't Prot. Agency*, 413 F.3d 1024 (9th Cir. 2005)  
22 (registering a pesticide is an action); *NRDC (1993)*, 16 F.3d at 1395 (approving states'  
23 water-quality standards is an action); *N. Plains Res. Council v. U.S. Army Corps of*  
24 *Engineers*, 454 F. Supp. 3d 985 (D. Mont. 2020) (permitting certain activities nationwide  
25 is an action); *see also W. Watersheds Project v. Matejko*, 468 F.3d 1099, 1108 (9th Cir.  
26 2006) ("'inaction' is not 'action'"). Other examples of agency action are more subtle. *See*,  
27 *e.g., Env't Def. Ctr. v. Bureau of Ocean Energy Mgmt.*, 36 F.4th 850 (9th Cir.  
28 2022) (issuing guidelines for oil treatment is an action), *cert. denied sub nom. Am.*



1 *Petroleum Inst. v. Env. Def. Ctr.*, No. 22-703, 2023 WL 3801206 (U.S. June 5, 2023); *Pac.*  
 2 *Rivers Council v. Thomas*, 30 F.3d 1050 (9th Cir. 1994) (revising criteria for future forest  
 3 management is an action); *Lane County Audubon Society v. Jamison*, 958 F.2d 290 (9th  
 4 Cir. 1992) (setting criteria for selection of logging land is an action); *see also Marbled*  
 5 *Murrelet v. Babbitt*, 83 F.3d 1068, 1073–74 (9th Cir. 1996) (informal compliance advice  
 6 is not an action).

7 The Court analyzes whether a given activity is an "action" under the ESA in two  
 8 steps: first, the Court determines "whether the agency affirmatively authorized, funded, or  
 9 carried out the underlying activity"; second, the Court determines "whether the agency had  
 10 discretion to influence or change the [underlying] activity for the benefit of a protected  
 11 species." *See Karuk Tribe*, 681 F.3d at 1021.

12 **a. Issuing 304(a) criteria is affirmative because 304(a) criteria establish**  
 13 **a condition under which states must explain themselves, "directly or**  
 14 **indirectly causing modifications to the ... water."**

15 To start, the Court notes that agency activity itself is not the question, but rather  
 16 agency activity relative to "underlying activity"—here state adoption of water-quality  
 17 standards.<sup>5</sup> Agency activity relative to underlying activity is affirmative if it involves  
 18 "decision[s] about whether, or under what conditions, to allow ... [this underlying] activity  
 19 to proceed." *Id.* at 1027. At oral argument, the Center emphasized one of the non-exclusive  
 20 examples of agency action provided by the enacting regulations: "actions directly or  
 21 indirectly causing modifications to the land, water, or air." *See Hr'g Tr.* at 83:24–84:02  
 22 (citing 50 C.F.R. § 402.02).

23 Here, EPA's 304(a) activity does not decide *whether* state activity may proceed. But  
 24 EPA's activity does decide *how* a state may proceed: with or without explanation. If a state

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25 <sup>5</sup> If an agency's activity "authorizing, funding, or carrying out" its own programs were  
 26 sufficient to be an "agency action," then EPA's activity would be affirmative because it  
 27 conducted a comprehensive data review, issued a public notice and call for additional data,  
 28 developed draft criteria, issued another public notice and call for peer review and public  
 input, and published the final criteria in the Federal Register. *See* 63 Fed. Reg. 67548,  
 67549; AR 722–883. The issue here is not so simple.

1 proposes to adopt EPA's criteria, nothing further is required of it. If a state proposes not to  
2 adopt or to depart from EPA's criteria, the state must explain or justify that departure. *See*  
3 40 C.F.R. §§ 131.11, 131.20(a). So although EPA's 304(a) activity does not authorize states  
4 to proceed outright, it does decide a condition under which states may proceed. As  
5 discussed above, § III.A(b), and below, § III.B(b), EPA's 304(a) criteria both directly and  
6 indirectly cause modifications to the water. Those points lead the Court to agree with the  
7 Center that EPA's activity issuing 304(a) criteria is affirmative under the ESA and  
8 associated regulations.

9 **b. Issuing 304(a) criteria is discretionary and influences states directly**  
10 **and indirectly through the CWA's adopt-or-explain requirement and**  
11 **in other ways.**

12 The second step in the Court's agency "action" analysis has two parts. First, agency  
13 actions must be discretionary. *Karuk Tribe*, 681 F.3d at 1024 (citation omitted). An agency  
14 "cannot escape its obligation to comply with the ESA merely because it is bound to comply  
15 with another statute that has consistent, complementary objectives." *Id.* (citation omitted).  
16 The competing statutory objective need only leave the agency "some discretion." *Id.*  
17 (citation omitted). Second, agency actions must influence states' activity to the benefit of  
18 protected species. *Id.* (citation omitted). Otherwise—if an agency's activity could *not*  
19 influence an activity to benefit a listed species—consultation would be a "meaningless  
20 exercise." *Karuk Tribe*, 681 F.3d at 1024 (citation omitted).

21 Here, and first, EPA's activity issuing 304(a) criteria demonstrates broad discretion  
22 throughout its process. To begin the process, EPA chooses when to update the criteria. *See*  
23 33 U.S.C. § 1314(a)(1) (EPA shall revise 304(a) criteria "from time to time"). Once begun,  
24 EPA's activity issuing 304(a) criteria is also discretionary because EPA generates the  
25 criteria based on its own judgment and assumptions. *See, e.g.*, AR 5410 ("much of [EPA's  
26 304(a) guidance] is necessarily qualitative rather than quantitative; much judgment will  
27 usually be required to derive a water quality criterion"); AR 1799 (identifying EPA's  
28 decision to discount some findings and studies over others); AR 812–22 (numerous  
judgments in the external peer review process). Finally, EPA's activity issuing 304(a)

1 criteria is discretionary because EPA may choose how to respond to peer review and public  
2 comment. AR 864, 868 (accommodating studies); AR 874 (modifying dataset).

3 Second, EPA's activity issuing 304(a) criteria influences states directly and  
4 indirectly through the adopt-or-explain requirement. The fact that states must explain any  
5 departure from EPA's criteria distinguishes the function of EPA's activity from a mere  
6 recommendation. A recommendation is advice on how to proceed. Take it or leave it. That  
7 is not the situation here. States do not have the luxury of "leaving" EPA's 304(a) criteria  
8 because they must in every case consider it—i.e., use it, even if only as a point of departure.  
9 *See* 40 C.F.R. §§ 131.11, 131.20(a). Not only that, but states must take additional steps if  
10 they choose not to use EPA's criteria in a particular way. *Id.* In its Reply, EPA emphasizes  
11 that a state's "explanation" could include non-scientific reasons such as budgetary  
12 constraints or that "[the state] will continue to review efforts by other states to implement  
13 EPA's ... recommended [304(a)] criteria[.]" Doc. 37 at 6–7, 7; Hr'g Tr. at 59:12–61:16.  
14 EPA appears to assert that states can put off indefinitely their obligation to "adopt ... water  
15 quality criteria .... based on ... [1] 304(a) Guidance ...; [2] 304(a) Guidance modified to  
16 reflect site-specific conditions; or [3] [o]ther scientifically defensible methods[.]" 40  
17 C.F.R. § 131.11(a)–(b). If that were true, it would be surprising that virtually all states now  
18 use some vintage of 304(a) criteria. If states could put off their obligation indefinitely, that  
19 would also be in significant tension with the CWA's very purpose of prompting states to  
20 reduce and eventually eliminate the discharge of pollutants into the nation's waters. 33  
21 U.S.C. § 1251(a); *see also* 56 Fed. Reg. 58420-01 (EPA's proposed 1991 criteria explaining  
22 that 304(a) criteria "are essential to the process of controlling toxics because they allow  
23 States and EPA to evaluate the adequacy of existing and potential control measures to  
24 protect aquatic ecosystems and human health"); *id.* at 58424 (EPA explaining its more  
25 forceful approach in terms of "Congressional impatience" with state progress toward  
26 adopting water quality standards).

27 Thus, EPA's activity issuing 304(a) criteria does more than offer a helpful  
28 recommendation. It directly impacts the states' water-quality standard process by changing

1 the threshold for a states' obligation to explain itself, modify 304(a) criteria, or develop an  
 2 alternative, scientifically justifiable approach.<sup>6</sup> EPA's activity also indirectly impacts  
 3 states' processes by making the alternative to adopting EPA's criteria costly. Developing  
 4 unique water quality standards and justifying their departure from EPA's criteria is time-  
 5 consuming and expensive. *See* AR5138–39 (NMFS comment to this effect); *cf.* 80 Fed.  
 6 Reg. 51020, 51028 (EPA noting that updating 304(a) criteria recommendations requires  
 7 "investing significant resources"); *see also* AR1–721 (2016 cadmium criteria document  
 8 spanning over 700 pages). These direct and indirect impacts on the underlying activity of  
 9 state water-quality standards distinguish EPA's activity from simple "recommendations."

10 Finally, EPA's activity issuing 304(a) criteria also influences states indirectly in  
 11 different ways. First, EPA's 304(a) criteria become a sort of default. If a state fails to  
 12 maintain standards consistent with the CWA, EPA directly promulgates water quality  
 13 standards for them. *See* 33 U.S.C. § 1313(c)(4). When EPA does, it frequently uses its  
 14 304(a) criteria. *See, e.g.,* 82 Fed. Reg. 9166-01 (Oregon); 66 Fed. Reg. 9960-01  
 15 (California); 60 Fed. Reg. 22229-01 (Alaska, Arkansas, California, Idaho, Kansas,  
 16 Michigan, New Jersey, Vermont, and Washington). In fact, only five states do not use  
 17 EPA's 304(a) criteria. Doc. 29 at 40–41; *see generally* Doc. 31 (no dispute); Hr'g Tr. at  
 18 57:16–58:5. EPA also uses its 304(a) criteria to set contaminated property cleanup  
 19 requirements, 42 U.S.C. § 9621(d)(2)(A), and to support its national effluent limit  
 20 guidelines. Doc. 29 at 9; *see generally* Doc. 31 (no dispute); Doc. 37 at 8–9 (emphasizing  
 21 additional steps but not fundamentally disputing); *Pronsolino v. Nastri*, 291 F.3d 1123,  
 22 1127 (9th Cir. 2002) ("[CWA water quality standards are] central to the [CWA's] carrot-  
 23 and-stick approach to attaining acceptable water quality without direct federal regulation

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24  
 25 <sup>6</sup> This is why EPA's argument about the CWA as an "independent framework" is  
 26 unpersuasive. EPA urges, essentially, that the CWA is the real actor here, not EPA. *See*  
 27 Doc. 31 at 24–25 ("The CWA ... provide[s] an independent framework for ... state water  
 28 quality standards and criteria, and for using those ... standards as a regulatory tool. ...  
 Section 304(a) criteria do not."). But EPA does more than plug a number into a statutory  
 variable, then stand back and let CWA's obligations work. EPA is CWA's enforcer, and  
 its criteria raise or lower the CWA bar at which a state must explain itself.

1 of nonpoint sources of pollution."). And EPA proposes to use its criteria as "[f]ederal water  
2 quality standards (WQS) for Indian reservation waters that currently do not have WQS in  
3 effect under the Clean Water Act." *See* 88 Fed. Reg. 29496, 29506 (providing five options  
4 for translating narrative water quality criteria into numeric values, including using  
5 unmodified 304(a) criteria); Doc. 37 at 8. Like the requirement that states explain any  
6 departure, the reality of how EPA's criteria are used makes them less like a  
7 recommendation and more like a plan. A plan identifies future actions an agency intends  
8 to take. EPA's 304(a) criteria similarly signal critical contours of EPA's action given a  
9 CWA violation, property cleanup, effluent permit request, and, potentially, for certain  
10 Indian reservation waters.

11       These distinctions bring EPA's 304(a) criteria under a line of cases considering  
12 programmatic actions. Programmatic actions—as opposed to site-specific actions—  
13 include "proposed ... plan[s or] polic[ies] ... providing a framework for future proposed  
14 actions." 50 C.F.R. § 402.02. Issuing programmatic documents, for example, constitutes  
15 "agency action because [programmatic documents] 'set forth criteria' that would influence  
16 future activities" without explicitly authorizing them. *Env't Def. Ctr.*, 36 F.4th at 884–85  
17 (citing *Pac. Rivers Council*, 30 F.3d at 1055). In *Environmental Defense Center*, the court  
18 specifically noted that although issuing programmatic documents "does not directly  
19 authorize private activity," it is an action because it "establishes criteria for *future* private  
20 activity and has an 'ongoing and long-lasting effect.'" *Id.* at 884 (emphasis in original)  
21 (citation omitted). Consultation is thus required even if the criteria are not "binding." *See*  
22 *id.* at 885.

23       The court's reasoning in *Environmental Defense Center* applies squarely to EPA's  
24 304(a) activity. EPA's activity does not directly authorize states' activity, but it does  
25 influence state activity by establishing criteria for states to consider in the future. EPA's  
26 304(a) activity has an ongoing effect because states must consider 304(a) criteria every  
27 time they conduct their triennial water-quality standard review. EPA's activity also has a  
28 long-lasting effect because it remains in effect until EPA updates the 304(a) criteria "from

1 time to time"—most recently a period of 15 years. *See* AR 16. And EPA's activity has an  
2 effect because its 304(a) criteria are rarely rejected and have become the default option for  
3 most states. Finally, EPA's 304(a) activity is binding in the sense that states must consider  
4 EPA's 304(a) criteria, but EPA's activity would still require consultation even if it were not  
5 binding. Several older cases also support this result.

6 In *Pacific Rivers Council*, the Forest Service violated the ESA when it failed to  
7 consult with expert agencies about the effects of certain Land and Resource Management  
8 Plans ("LRMPs"). 30 F.3d at 1051. These LRMPs established "standards and guidelines  
9 to which all projects must adhere for up to 15 years[,] as well as "measures for preventing  
10 the destruction or adverse modification of critical habitat for threatened or endangered  
11 species." *Id.* at 1052. All uses "of the forest must be consistent with the LRMP." *Id.* The  
12 court reasoned that LRMPs required consultation because "every individual project  
13 planned in both national forests involved in this case is implemented according to [them]." *Id.*  
14 *Id.* at 1053. This reasoning applies to EPA's activity issuing 304(a) criteria to the extent  
15 304(a) criteria are like plans that identify future agency action, but also because EPA's  
16 criteria come with an adopt-or-explain requirement. That requirement creates strong  
17 consistency between the EPA's 304(a) criteria and states' criteria—as evidenced by the fact  
18 that few states depart from it.

19 Similarly, in *Lane County Audubon Society*, the Bureau of Land Management  
20 ("BLM") violated the ESA when it failed to consult before promulgating a document self-  
21 described as "Management Guidelines." 958 F.2d at 292–94. The Guidelines established  
22 interim timber management standards, including land-use allocations, "annual allowable  
23 harvest" for each designated forest district, and detailed criteria for developing individual  
24 timber sales each year. *Id.* BLM subsequently consulted with an expert agency for  
25 individual timber sales but did not submit the Management Guidelines themselves for  
26 consultation. *Id.* at 292. On appeal, BLM argued that consultation at the programmatic  
27 level was not required because BLM consulted at the individual sale level. *Id.* at 293. The  
28 court rejected that argument, holding that BLM's activity issuing the Management

Guidelines were "without a doubt" agency action that may affect a protected species because they "set[] forth criteria for harvesting owl habitat." *Id.* at 294; *accord N. Plains Res. Council*, 454 F. Supp 3d at 992–93 (project-level consultation does not eliminate the need for programmatic-level consultation); *Citizens for Better Forestry v. U.S. Dep't of Agric.*, 481 F. Supp. 2d 1059, 1095 (N.D. Cal. 2007) (same). Here, EPA's activity "sets forth [304(a)] criteria" for individual states to consider when updating their water-quality standards. Like a guideline that sets an annual allowable harvest, the 304(a) criteria set a maximum cadmium concentration from which any departure must be justified. And like BLM's violation of the ESA despite its consultation for individual timber sales, EPA's failure to consult when issuing its criteria violates the ESA even though EPA consults with expert agencies when individual states propose to adopt or reject EPA's criteria.

**c. EPA's cases are distinguishable.**

The adopt-or-explain requirement and direct and indirect impacts of EPA's 304(a) criteria on state water-quality standards also distinguish EPA's best cases. *See* Doc. 31 at 22–23 (citing *Matejko*, 468 F.3d at 1111, and *Marbled Murrelet*, 83 F.3d at 1073–74). In *Matejko*, the Bureau of Land Management chose not to regulate hundreds of river and stream diversions after a statutory regime change gave BLM discretion to do so given a "substantial deviation in their use or location." 468 F.3d at 1103–04, 1110. The court decided that BLM's inaction did not require consultation in part because it was not affirmative. *Id.* at 1108 (noting the "affirmative nature of the[] words ... 'authorized, funded, carried[.]'"'). The court also decided BLM's inaction did not require consultation because it was not discretionary. *Id.* at 1110–11. The court noted "BLM had 'no ability to influence' a project based on a right-of-way granted before the ESA was enacted," and had "no retained power to 'inure to the benefit of the protected species.'" *Id.* (citation omitted); *see also Env't Prot. Info. Ctr. v. Simpson Timber Co.*, 255 F.3d 1073, 1082 (9th Cir. 2001) (activity not discretionary where it was "legally foreordained by an earlier decision"). As discussed above, here EPA's 304(a) criteria affirmatively decide the condition under which a state must explain itself and powerfully influence states' water-quality processes. EPA's

1 304(a) activity is also discretionary because the criteria are not legally foreordained, arising  
2 instead from a process EPA initiates and controls. EPA's influence over its 304(a) criteria  
3 also can inure to the benefit of protected species because EPA can issue a higher or lower  
4 allowable cadmium concentration, AR 15, and lower concentrations are more protective.  
5 *See* Doc. 31 at 12 ("nationwide consultation ... would tend to produce more stringent  
6 recommendations"); AR 21–23, 25 (any level of cadmium is harmful to wildlife).

7 EPA's other primary case is also distinguishable. In *Marbled Murrelet*, several  
8 lumber companies sought permission from the California Department of Forestry ("CDF")  
9 to harvest dead, dying, and diseased trees from an old-growth redwood stand that was  
10 potentially important to protected wildlife. 83 F.3d at 1071. In response, FWS sent joint  
11 letters with CDF describing and subsequently clarifying "specific conditions that had to be  
12 met to comply with ... the ESA." *See id.* at 1071–72. FWS did not consult with expert  
13 agencies before sending the letters. *See id.* The court held that consultation was not required  
14 because FWS "merely provided advice on how the Lumber Companies could [comply  
15 with] ... the ESA." *Id.* at 1074. The court also noted that requiring consultation for  
16 compliance advice "would [create] a disincentive for the agency to give such advice[,] to  
17 the detriment of protected species. *Id.* at 1074–75; *see also* Doc. 31 at 22 (emphasizing this  
18 point). Here, EPA's 304(a) criteria are more than advice on how to comply with the CWA.  
19 Advice, particularly the informal advice in *Marbled Murrelet*, does not require anything  
20 and may be ignored. By contrast, EPA's 304(a) criteria come with the requirement that  
21 states consider it and adopt it or explain their departure, and the vast majority of states  
22 adopt it, likely because the alternative is so costly. And the CWA requires EPA to update  
23 its 304(a) criteria, so EPA's willingness to do so likely will not be chilled by an additional  
24 consultation requirement.

25 Finally, EPA's activity issuing 304(a) criteria may "inure to the benefit of protected  
26 species" because more conservative or restrictive 304(a) criteria directly and indirectly  
27 lower the maximum allowable cadmium concentration in the nation's waters. For these  
28 reasons, EPA's activity issuing 304(a) criteria is an "action" under the ESA. EPA's decision



1 to issue 304(a) cadmium criteria in 2016 without consulting the Services was therefore  
2 arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.

3 **C. 304(a) criteria "may affect" protected species.**

4 "May affect" is a "relatively low" bar. *Karuk Tribe*, 681 F.3d at 1027 (citation  
5 omitted). "*Any possible effect*, whether beneficial, benign, adverse or of an undetermined  
6 character, triggers the [Section 7 consultation] requirement." *Id.* at 1028 (citations omitted,  
7 emphasis in the original). An agency may avoid the consultation requirement only if it  
8 determines that its action will have "no effect" on a listed species or its critical habitat. *Id.*  
9 at 1027 (citation omitted).

10 Here, issuing 304(a) criteria "may affect" protected species by exposing them to  
11 more or less pollution than otherwise. The whole point of 304(a) criteria is that they affect  
12 state water-quality standards. 56 Fed. Reg. 58420-01; *id.* at 58424; 40 C.F.R. § 131.20(a).  
13 If, for example, EPA nearly triples the maximum chronic freshwater criterion for a  
14 pollutant, and if that criterion is adopted verbatim by most states, then protected species in  
15 those states' waters may be exposed to more of that pollutant than if EPA had lowered the  
16 criterion, kept it constant, or increased it by a smaller amount. That chain of possibilities  
17 is not long. Its links fit snugly together—by design. EPA essentially concedes as much  
18 when it writes that nationwide consultation would "tend to produce" more stringent criteria.  
19 *See* Doc. 31 at 12; AR 871. A "tendency" is a "beneficial, benign, adverse or ...  
20 undetermined" effect. *See Karuk Tribe*, 681 F.3d at 1027. The only way more stringent  
21 criteria would not in turn produce a "beneficial, benign, adverse or ... undetermined" effect  
22 on protected species is if states universally chose not to adopt them. But the opposite is  
23 true. Most states adopt EPA's criteria at least in part because the alternative is costly.

24 EPA's arguments to the contrary are unpersuasive. EPA first argues an explicit "no  
25 effect" finding was not required. Doc. 31 at 25; Doc. 37 at 19–20. According to EPA,  
26 issuing 304(a) criteria is like "hiring more employees in an urban office setting," in the  
27 sense that both so obviously have no effect on protected species that an implicit no-effect  
28 finding is sufficient. *See* Doc. 31 at 25. The Court disagrees. Issuing 304(a) criteria is not

1 like hiring employees because one is designed to influence state water-quality standards  
2 and the other is not. EPA revised its cadmium guidance without finding that its actions  
3 would have no effect on a listed species or endangered habitat as required by the ESA. *See*  
4 Hr'g Tr. at 70:25; 72:18–21. But the ESA requires all federal agencies to "review its actions  
5 at the earliest possible time to determine whether any action may affect listed species or  
6 critical habitat." 50 C.F.R. § 402.14(a). The issue, then, is not simply that EPA's finding  
7 was unreasonable, but that it did not make one in the first place. That alone is enough to  
8 violate the ESA enacting regulations.<sup>7</sup>

9 EPA next argues that its implicit no-effect finding was reasonable primarily because  
10 nationwide consultation is expensive and time-consuming. *See* Doc. 31 at 25–28. But  
11 EPA's policy and past effort to conduct nationwide consultations are largely irrelevant. *See*  
12 Doc. 31 at 28–30. EPA asserts that its implicit no-effect finding was reasonable because  
13 the process took several years and would still require state-level consultation. *Id.* EPA  
14 overlooks some important details. As discussed above, EPA's view of proper or efficient  
15 policy must yield to the ESA's policy—whatever the cost. *See supra* § III(A)(b).  
16 Furthermore, the record does not support EPA's position. EPA's main observation is that  
17 state-level consultations were still anticipated despite EPA's nationwide consultation with  
18 the Services. Doc. 31 at 29–30 (citing draft nationwide biological opinions by FWS (AR  
19 4788) and NMFS (AR 5395)). But FWS wrote that "much of the [nationwide] analysis  
20 would carry over, so that the [state-level] consultation ... need only focus on potential  
21 effects of elements that were not fully considered here." AR 4788; *accord* AR 5395 (NMFS  
22 cabining state-level consultations in context of incidental take permits not related to the  
23 main pollutant at issue); *see also* Hr'g Tr. at 90:1–16 (making the point that nationwide  
24 consultations likely would become more efficient over time through practice). Really,  
25 though, the bottom line here is that EPA does not have discretion to avoid its obligations  
26 under the ESA because EPA thinks they are inconvenient. And EPA's assertion that its

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27 <sup>7</sup> In its Reply, EPA appears to argue that EPA can avoid any obligation to consult simply  
28 by choosing not to make an effects determination (or making an implicit no-effect finding).  
Doc. 37 at 19:16–23. That would be surprising.

1 non-existent no-effect finding was reasonable flies in the face of EPA's own recognition  
2 that nationwide consultation would tend to produce more stringent criteria.<sup>8</sup>

3 For those reasons, the Court finds that EPA's 304(a) criteria may affect protected  
4 species, such that consultation with expert agencies was required before revising the  
5 cadmium criteria in 2016.

6 **D. Relief**

7 The Center asks the Court to vacate EPA's 2016 freshwater chronic cadmium  
8 criterion, remand all four 2016 criteria back to EPA, and to order EPA to initiate  
9 consultation on all four criteria during remand. Doc. 29 at 38.

10 **a. Vacatur**

11 In the Center's view, only partial vacatur is desirable because EPA lowered the  
12 maximum allowable concentration for three of four cadmium criteria. Doc. 29 at 38.  
13 Vacating those three could thus have a counter-productive effect. *Id.* EPA does not respond  
14 to the Center's vacatur argument. *See* Doc. 31 at 37.

15 Vacatur is presumptive and normally accompanies a remand when the Court finds  
16 an unlawful agency action produces an invalid result. *Alliance for the Wild Rockies v. U.S.*  
17 *Forest Serv.*, 907 F.3d 1105, 1121 (9th Cir. 2018) (citations and internal quotations  
18 omitted); *Ctr. for Biological Diversity v. Haaland*, 2022 U.S. Dist. LEXIS 94822, \*8–9  
19 ("Because vacatur is the presumptive remedy, the [agency] bears the burden of  
20 demonstrating vacatur is inappropriate.") (citation and internal quotation marks omitted).  
21 Remand without vacatur should be ordered "only in limited circumstances," with invalid  
22 rules left in place "only when equity demands." *Pollinator Stewardship Council v. U.S.*  
23 *E.P.A.*, 806 F.3d 520, 532 (9th Cir. 2015) (citations and internal quotations omitted). The  
24 Court considers three factors to determine whether vacatur is appropriate: (1) the  
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26 <sup>8</sup> EPA also argues that its implicit no-effect finding was reasonable because no effects were  
27 "reasonably likely to occur." Doc. 37 at 18–20 (drawing on regulatory definition of  
28 "effect"). This argument is unpersuasive for the same reasons discussed throughout this  
Order, namely that both practically (through cost considerations), legally (through the  
adopt-or-explain requirement), and by design, effects are nearly certain to occur.

1 seriousness of the agency's error weighed against the disruption that vacatur would cause;  
2 (2) the risk to environmental harm of either vacating or leaving the decision in place; and  
3 (3) likelihood of the agency's ability adopt the same rule on remand. *NRDC (2022)*, 38  
4 F.4th at 51–52.

5 Here, all three factors weigh in favor of partial vacatur. First, EPA's violation was  
6 serious because it ignored an ESA requirement that likely would produce more stringent  
7 criteria. *See* Doc. 31 at 10; AR 871. Vacating the 2016 freshwater chronic criterion likely  
8 would cause no disruption because states subsequently revising their water-quality  
9 standards would simply use EPA's 2001 criterion. And states that already adopted EPA's  
10 2016 criteria could continue to rely on EPA's approval until their next triennial review.  
11 Second, and similarly, the risk to environmental harm of leaving the freshwater chronic  
12 criterion in place is high given the shortcomings of EPA's state-by-state consultation as  
13 discussed above. This factor also weighs in favor of partial vacatur, because vacating the  
14 three more stringent criteria would risk environmental harm for the same reasons leaving  
15 the fourth criterion in place would risk environmental harm. Third, EPA is unlikely to adopt  
16 the same rule on remand because nationwide consultation likely will produce more  
17 stringent criteria. *See* Doc. 31 at 12; AR 871. And the Court has found EPA's 304(a) criteria  
18 "may affect" protected species as a matter of law. Thus, the balance of these factors weighs  
19 in favor of partial vacatur.

20 EPA fails to identify any equitable reasons why the Court should not vacate the  
21 freshwater chronic cadmium criterion. *See* Doc. 31 at 37.<sup>9</sup> Considering that concession and  
22 the factors above, the Court is persuaded that partial vacatur is warranted. The Court will  
23 vacate EPA's 2016 chronic freshwater cadmium criterion, but not EPA's 2016 acute  
24 freshwater cadmium criterion, or the 2016 chronic and acute marine cadmium criteria.

#### 25 **b. Consultation on Remand**

26 The Center also urges the Court to remand all four 2016 cadmium criteria to EPA

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27 <sup>9</sup> In its Reply, EPA still does not identify equitable considerations, but requests further  
28 briefing on remedy if the Court finds for the Center. Doc. 37 at 22. Given the Court's  
disposition below, further briefing is unnecessary.

1 and order it to initiate consultation during remand. Doc. 29 at 38. EPA responds that the  
2 Court should instead limit the Center's remedy "to a remand for EPA to reconsider its no-  
3 effect determination and make new ESA effects determination for those criteria." Doc. 31  
4 at 37 (citing without argument *Ctr. For Biological Diversity v. Leavitt*, No. C 02-  
5 01580JSW, 2005 WL 2277030, at \*3 (N.D. Cal. Sept. 19, 2005); *Ctr. for Biological*  
6 *Diversity v. EPA*, 861 F.3d 174, 189 n.13 (D.C. Cir. 2017); *Pac. Rivers Council v.*  
7 *Robertson*, 854 F. Supp. 713, 723 n. 14 (D. Or. 1993), *rev'd as to injunctive relief by Pac.*  
8 *Rivers Council*, 30 F.3d at 1057).

9 EPA's implied argument is unpersuasive because the cases it cites are  
10 distinguishable. None of them involve a situation where, as here, the agency concedes that  
11 consultation likely would produce more stringent criteria. *See* Doc. 31 at 12; AR 871. This  
12 case is more similar to *Karuk Tribe*, where the court determined "almost ... as a textual  
13 matter" that the agency action "may affect" critical habitat. *Karuk Tribe*, 681 F.3d at 1027.  
14 The issue there was mining activity that, by definition, might disturb fish habitat. *Id.* The  
15 issue here is 304(a) activity that, by design, influences state water-quality standards.

16 Nevertheless, the Court prefers not to manage an intricate and ongoing process. EPA  
17 has acted in good faith, and the Court has no reason to believe it will not respond to partial  
18 vacatur and remand appropriately. Ordering consultation is therefore unnecessary.

#### 19 **IV. Order**

20 For these reasons,

21 **IT IS ORDERED GRANTING IN PART** the Center for Biological Diversity's  
22 Motion for Summary Judgment (Doc. 29) consistent with this Order.

23 **IT IS FURTHER ORDERED DENYING** the United States Environmental  
24 Protection Agency's Motion for Summary Judgment (Doc. 31).

25 **IT IS FURTHER ORDERED VACATING** EPA's 2016 304(a) chronic  
26 freshwater cadmium criterion.

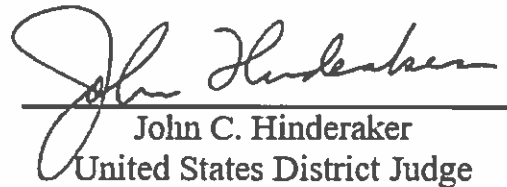
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1           **IT IS FURTHER ORDERED REMANDING** EPA's 2016 304(a) cadmium  
2 criteria for proceedings consistent with this Order.

3           The Clerk of the Court shall enter judgment accordingly.

4           Dated this 18th day of August, 2023.

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10           John C. Hinderaker  
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## Tab Q – Stream Restoration Webinar Series

## **Stream Restoration & Water Rights Webinar Update – September 2023**

The Western States Federal Agency Support Team (WestFAST) has been working in partnership with Western States Water Council and CK Blueshift to develop a series of informational webinars on aquatic ecosystem restoration. The series is intended to bring together state water managers, regulators, and federal agencies to share knowledge and collaboratively develop solutions to advance aquatic ecosystem restoration, comply with state and federal laws, and deploy federal funding efficiently. The webinars will focus on permitting processes, water laws in Western States, and the role of water rights in the process to facilitate better cooperation on future projects.

These webinars were motivated by questions emerging from the unprecedented funding made available through the Bipartisan Infrastructure Investment and Jobs Act and Inflation Reduction Act for federal agencies to implement valley floor restoration projects. Stream restoration projects aim to slow the flow of water, increase floodplain aquifer recharge, and restore natural processes to maintain healthy aquatic ecosystems. However, there remains uncertainty around the effects of these projects on downstream water availability.

A planning team has outlined and begun executing the 5-6 webinar series below:

**Webinar 1: Introduction to Stream Restoration & Water Rights (July 12, 2023)** This webinar provided an overview of river-focused nature-based solutions and watershed restoration tactics, discuss the motivation for new initiatives and funding, highlight the environmental and management challenges faced, and explore how these projects intersect with western water management and water rights. The webinar also highlighted the challenges and opportunities faced by state and federal agencies in funding, regulating, and implementing these projects with the goal of developing shared language and understanding.

**Webinar 2: The Science of Stream Restoration (August 31, 2023)** This webinar provided an overview of river-focused nature-based solutions and watershed restoration tactics, discuss the motivation for new initiatives and funding, highlight the environmental and management challenges faced, and explore how these projects intersect with western water management and water rights. The webinar also highlighted the challenges and opportunities faced by state and federal agencies in funding, regulating, and implementing these projects with the goal of developing shared language and understanding.

**Webinars 3a and 3b (October/November 2023)** will be led by **various state representatives and managers**. These events are anticipated to cover state statutes, regulations, guidance, and programs that impact or address stream restoration activities; and water management and enforcement of water rights, and how this can impact stream restoration activities.

**Webinar 4 (late fall/early winter 2023)** will provide a high-level overview on **restoration project permitting, including both federal, state and local compliance requirements**. It will walk through a generic permit map for a restoration project, highlighting different states' processes for integrating or streamlining between state and federal requirements, and discuss funding sources, partnerships, and their influence on project design and permitting.

**Webinar 5 (late fall/early winter 2023)** will present **case studies** to explore nuances in the permitting process based on applicant, land ownership, funding source, and proposed project. It will discuss four examples, highlighting where and when water rights factor in and how they affect the project.



## Tab R – WSWC Exempt Wells Report (2010)

# Western States Water Council

<https://westernstateswater.org/publications/2010/exempt-wells-report-2010/>

## Summary of Exempt Wells Report (2010)

There are over a million exempt domestic and livestock wells located throughout the West. Although these wells are an important source of water for a large number of water users, they also pose significant regulatory and administrative challenges that have the potential to impact the sustainability of water supplies, surface flows, and water quality. Every WSWC member state, with the exception of Utah and California, exempts certain groundwater uses from its permitting procedures, its adjudication procedures, or both. Although the specifics of these exemptions vary in each state, they generally allow landowners to withdraw small amounts of water for domestic or livestock purposes without obtaining a permit or subjecting their use to adjudication, monitoring, or reporting requirements. These exemptions typically restrict the amount of water that a well owner can withdraw (per minute, per day, per year, etc.) or limit the amount of acreage to which the water can be applied. The amount of water that can be withdrawn or used varies from state to state, but most exemptions allow landowners to install exempt wells without providing notice to other water users, and do not give other water users the option or ability to contest the installation of an exempt well. Many states enacted these exemptions decades ago with the belief that small domestic and stock uses were *de minimis* and were not worth the time or money needed to permit and regulate them.

In June 2008, the Western Governors' Association (WGA) and the Western States Water Council (WSWC) issued a report entitled [Water Needs and Strategies for a Sustainable Future: Next Steps](#), which contained recommendations on how the states and federal government should address the ever-increasing challenges associated with water management in the West. Item 3(D) of the Next Steps report's Executive Summary recommends that states "should examine their related laws and institutions and evaluate the merits of ... [permitting and monitoring] exempt domestic and livestock wells as part of water rights regulatory schemes."

The WSWC's Legal Committee subsequently commissioned this Report, which addresses (1) the statutory and regulatory authority among WSWC member states regarding exempt domestic and livestock wells, (2) the ways in which these wells can complicate or compromise water resources allocation, administration, and quality, (3) the specific challenges WSWC member states are facing with respect to exempt wells, (4) the relative costs and benefits associated with monitoring wells that are currently exempt, and (5) the potential approaches to mitigate the adverse impacts of exempt wells.

In most states, landowners who install an exempt well must comply with the well-drilling requirements that govern the construction of nonexempt wells. Many states also require landowners to file well logs or to register their exempt wells, but the information that states require varies, with some states requiring little information and others requiring detailed reports and logs that describe the location, capacity, and construction of exempt wells. Some states also have laws or regulations that specifically apply to exempt well use in subdivisions. However, most do not. Moreover, some states have laws and regulations that do not specifically apply to

exempt wells, but nevertheless limit or regulate their use in subdivisions. This Report describes those laws and regulations that specifically and indirectly govern exempt well use in subdivisions.

Exempt wells have the potential to cause a number of water quantity and quality problems. Most notably, there is a general concern that the cumulative effect of many exempt wells can equal the impact of a single large withdrawal that is not subject to the priority system or susceptible to monitoring and reporting requirements. A related concern is that most exemptions do not prevent landowners from installing exempt wells in closed basins and aquifers that are hydrologically connected to streams and wetlands with impaired surface flows. Such use in these areas may adversely impact surface flows, riparian habitats, aquifers, and senior water rights.

When considering the costs and benefits associated with whether and how to monitor exempt wells, states should consider the following: (1) some state reports indicate that most exempt wells do not use more water than the allowable amount, which means that monitoring would do little to curtail existing exempt use; (2) monitoring alone will not stop developers and other landowners from installing new exempt wells; (3) metering and self-reporting will only show the amount of water that exempt wells withdraw and will not show the amount of water those wells actually consume through outdoor irrigation and other consumptive uses; (4) monitoring methods will be ineffective if a state does not have sufficient data regarding the location and number of its exempt wells; and (5) each monitoring method will entail some type of initial or continuing expense that the state or exempt users will need to pay, and there may be political opposition to methods that assess fees to existing exempt well users or raise taxes to pay for increased administrative costs.

Read the [Exempt Wells Report](#)

Tab S – NY Times “Uncharted Waters”  
Article

## UNCHARTED WATERS

# America Is Using Up Its Groundwater Like There's No Tomorrow

Overuse is draining and damaging aquifers nationwide, a New York Times data investigation revealed.

By [Mira Rojanasakul](#), [Christopher Flavelle](#), [Blacki Migliozi](#) and [Eli Murray](#)

The [first article](#) in a series on the causes and consequences of disappearing water.

Aug. 28, 2023

**GLOBAL WARMING HAS FOCUSED** concern on land and sky as soaring temperatures intensify hurricanes, droughts and wildfires. But another climate crisis is unfolding, underfoot and out of view.

Many of the aquifers that supply 90 percent of the nation's water systems, and which have transformed vast stretches of America into some of the world's most bountiful farmland, are being severely depleted. These declines are threatening irreversible harm to the American economy and society as a whole.

The New York Times conducted a months-long examination of groundwater depletion, interviewing more than 100 experts, traveling the country and creating a comprehensive database using millions of readings from monitoring sites. The investigation reveals how America's life-giving resource is being exhausted in much of the country, and in many cases it won't come back. Huge industrial farms and sprawling cities are draining aquifers that could take centuries or millennia to replenish themselves if they recover at all.

States and communities are already paying the price.

Groundwater loss is hurting breadbasket states like Kansas, where the major aquifer beneath 2.6 million acres of land can no longer support industrial-scale agriculture. Corn yields have plummeted. If that decline were to spread, it could threaten America's status as a food superpower.

Fifteen hundred miles to the east, in New York State, overpumping is threatening drinking-water wells on Long Island, birthplace of the modern American suburb and home to working class towns as well as the Hamptons and their beachfront mansions.

Around Phoenix, one of America's fastest growing cities, the crisis is severe enough that the state has said there's [not enough groundwater](#) in parts of the county to build new houses that rely on aquifers.

In other areas, including parts of Utah, [California](#) and Texas, so much water is being pumped up that it is causing roads to buckle, foundations to crack and fissures to open in the earth. And around the country, rivers that [relied on groundwater](#) have become streams or trickles or memories.

"There is no way to get that back," Don Cline, the associate director for water resources at the United States Geological Survey, said of disappearing groundwater. "There's almost no way to convey how important it is."

But despite the importance, the view of the predicament has often been fragmented. Until now.

This analysis is based on tens of thousands of groundwater monitoring wells that dot the nation. The Times collected data for these wells, which are widely scattered and often poorly tracked, from dozens of federal, state and local jurisdictions.

That database reveals the scope of the crisis in many ways. Every year since 1940, for example, more wells have had falling water levels than rising levels.

One of the biggest obstacles is that the depletion of this unseen yet essential natural resource is barely regulated. The federal government plays almost no role, and individual states have implemented a dizzying array of often weak rules.

The problem is also relatively unexamined at the national scale. Hydrologists and other researchers typically focus on single aquifers or regional changes.

All of this helps enable and reinforce practices that have drained aquifers, such as growing water-intensive crops like alfalfa or cotton in dry areas and overreliance on groundwater in fast-growing urban areas.

Several states including Texas, Oklahoma and Colorado have rules that allow groundwater to be pumped from some regions until it's gone. Some areas have even set official timelines for how quickly they plan to use up groundwater over the next few decades.

Oklahoma is working to determine how much water remains in its aquifers, information that state lawmakers could use to set limits on pumping. But Christopher Neel, the head of water rights for the Oklahoma Water Resources Board, said people might not necessarily welcome the government telling them that their land is running out of groundwater.

"If we start showing that kind of data, that kind of goes into your property values," Mr. Neel said. "If we show an area may be depleted in, let's say, two years, well, if someone tries to sell that property, they're not going to be able to."

To get the clearest picture possible of the state of groundwater in the United States, The Times interviewed scientists, policymakers and hydrological experts in addition to building its national database of millions of measurements from wells used to measure groundwater depth.

The analysis of that data, some of it collected from wells that have been tracked for a century, enabled The Times to cross-reference water levels over time with crop cover and population patterns. Results were also compared against readings from sophisticated satellites that can estimate groundwater changes from space by measuring subtle shifts in gravity.

Recent data from those satellites, which are operated by the Jet Propulsion Laboratory and funded by NASA, also show aquifers in decline.

Two major California and Arizona aquifers recently matched or exceeded their lowest levels since NASA began collecting data two decades ago, according to research by Bridget Scanlon and Ashraf Rateb at the University of Texas at Austin. And parts of the vast Ogallala Aquifer beneath Kansas, eastern Colorado and the Oklahoma and Texas panhandles, an aquifer that irrigates a huge share of the global food supply, last year reached their lowest levels since the start of NASA's program. The gravity-measuring satellites are part of NASA's mission to study the workings of the planet.

Climate change is amplifying the problem.

Global warming is shrinking the snowpack that feeds rivers, increasing the reliance on groundwater to sustain communities, lawns and crops, even as rising temperatures mean that plants need more water. A warmer world also causes more surface water to evaporate, leaving less to seep through the ground to replenish overstressed aquifers.

Even in places experiencing more violent rainstorms because of climate change, the heavier rainfall only helps so much. That's because much of the water from extreme downpours races away quickly to the ocean, before it can sit and soak into the aquifer below.

It adds up to what might be called a climate trap. As rising temperatures shrink rivers in much of the country, farmers and towns have an incentive to pump more groundwater to make up the difference.

Experts call that a self-defeating strategy. By draining aquifers that filled up over thousands or millions of years, regions risk losing access to that water in the future when they might need it even more, as climate change makes rainfall less predictable or droughts more severe.

"From an objective standpoint, this is a crisis," said Warigia Bowman, a law professor and water expert at the University of Tulsa. "There will be parts of the U.S. that run out of drinking water."

# EVERYWHERE, THIRSTY FARMS

The most visible symbol of America's agricultural bounty is the "center pivot" irrigation system, a metal contraption on wheels that is attached to a pump and revolves around a central point. A single arm, mounted with sprinklers, can be as long as half a mile, dispersing hundreds of gallons per minute from a well, 24 hours a day, for weeks or months on end.

Across much of the High Plains, the landscape is dominated by these pivots.

But a visitor to Wichita County, in Western Kansas, will see fewer of them. The reason: There's little water left to lay down. The wells have begun to go dry.

Irrigation can more than double the amount of corn grown per acre. As farms in the area use up the groundwater, corn yields have declined, erasing decades of gains.

The region offers a glimpse into the future of America's farming industry if groundwater keeps getting used up.

"We overpumped it," said Farrin Watt, who has been farming in Wichita County for 23 years. "We didn't know it was going to run out."

American agriculture didn't always rely on pulling huge volumes of water out of the ground. Until the middle of the last century, farmers were mostly limited to relying on rainfall or river water. Smaller wells were mainly just supplements.

But advances in pump technology after World War II created an American agricultural powerhouse, turning the west and the High Plains into a bounty of corn, alfalfa and other crops, delivering yields that surface water alone couldn't support.

Last year the United States produced 39 percent of global sorghum exports, 32 percent of soybean exports, and 23 percent of corn exports, federal data show. America also exported more cotton than any other country.

That success has relied on pumping up more water than nature could put back.

As recently as the late 1990s, Wichita County farmers produced 165 to 175 bushels of corn per acre, well above the national average. But it came at a cost, requiring farmers to drain the aquifer in order to irrigate their crops. The area gets less than 20 inches of rain a year, on average, about one-third less than the continental United States as a whole — not nearly enough to replace the water being pumped from the ground.

As farmers ran out of water, they increasingly switched to what's called dryland farming, relying on rain alone.



That change is reflected in corn yields over time. Last year, corn growers nationwide produced an average of 173 bushels per acre. But for Wichita County, the yield was just 70.6 bushels, the lowest in more than six decades. The same is true for neighboring counties, whose yields have fallen to where they were in the 1960s.

Kansas has no mechanism in place to stop its groundwater decline.

The Kansas Geological Survey produces what it calls a lifetime map for the Ogallala Aquifer within state borders. It shows that large areas already lack enough water for commercial agricultural irrigation.

In the parts of Western Kansas where the usable portions of the Ogallala are located, more than one-quarter of the aquifer is at what the survey calls “minimum threshold,” according to Brownie Wilson, water data manager with the Kansas Geological Survey. That means it’s not possible to extract 200 gallons per minute, a standard threshold for large-scale irrigation. Within 50 years, almost half of the aquifer in that area is expected to decline to minimum threshold.

Wichita County and neighboring counties have been one of the first areas in Kansas to get close to the bottom of the aquifer, Mr. Wilson said. But they won’t be the last. “Tomorrow is here today for them, in terms of reduced yields,” he said.

Some farmers say they can adapt, including Mr. Watt, who cited advances in plant genetics and also more efficient irrigation and better land management. Experts say farmers nationwide should make similar changes to ensure remaining groundwater is used as carefully as possible.

But those types of innovations will only work for so long, said Bill Golden, a professor of agricultural economics at Kansas State University. “The loss of water is going to outpace the gain of technology,” he said. “Eventually, we’re going to lose.”

## STATES OPEN THE TAPS

It’s not just Kansas depleting its aquifers at a vicious clip. The same thing is playing out in areas around the country.

In Arkansas, one of the country’s biggest users of groundwater, more than twice as much water is being pumped annually from the main agricultural aquifer as rainfall and other sources put back in, according to state data.

In some places, the aquifer has fallen to less than 10 percent of capacity, the Arkansas Department of State [warned this year](#). Arkansas produces roughly half the nation’s rice, a water-intensive crop.

Ayden Massey, a spokeswoman for the Arkansas Department of Agriculture, said the federal government was building projects to divert more surface water to areas with groundwater shortages and that the state was encouraging people to use water more efficiently. Arkansas residents who depend on water for their livelihood “respect the need for water conservation the most,” she said.

In California, an agricultural giant and, like Arkansas, a major groundwater user, the aquifers in at least 76 basins last year were being pumped out faster than they could be replenished by precipitation, a condition known as “overdraft,” according to state numbers.

Unfortunately this year’s unusually wet winter in California, which led to widespread flooding, did only so much to refill those aquifers. That’s because much of the torrent [surged through rivers](#) and into the ocean.

In Colorado, like other western states, farming, residential development and reduced precipitation have increasingly strained the state’s groundwater. But Colorado has policies that allow its aquifers to run out.

Kevin Rein is the Colorado official in charge of allocating the state’s groundwater. He said his office does not track how much water remains in Colorado’s section of the Ogallala, or project how much time remains before that water is exhausted, because state lawmakers haven’t given him that authority.

But even without that data, Mr. Rein said, farmers can already see their wells running low on water. “They might say, ‘Tell us something we don’t know,’” he said.

In Maryland, almost three-quarters of monitoring wells have seen their water levels drop over the past 40 years, some by more than 100 feet. Charles County, which contains fast-growing suburbs of Washington, has used most of its groundwater for homes and agriculture. And it isn’t coming back anytime soon.

“Most of the water we’re pulling out of the ground is thousands of years old,” said Jason Groth, the county’s deputy director of planning and growth management. “It’s not like it rains on Monday, and by Saturday it’s in the aquifer.”

Mr. Groth said the county, which gets the vast majority of its water from its own aquifers, will hit a point within a decade where it doesn’t have enough water.

David Abrams, communications director for the Maryland Department of the Environment, said the state was improving its data collection and monitoring, and that its programs “have a strong track record of success in protecting our groundwater resources.”

Charles County is looking at piping in water from elsewhere or building a treatment plant to remove salt from the Potomac River. But that would increase costs as much as tenfold.

# DRINKING WATER DISAPPEARS

As in Maryland, depletion means many communities could simply run out of drinking water.

A little more than one-third of America's total volume of drinking water comes from groundwater, according to data from the U.S. Geological Survey. But small and rural communities are disproportionately dependent on wells, which typically cost less than treating and transporting water from rivers and lakes. Of the nation's 143,070 water systems, 128,362 rely primarily on groundwater, according to the Environmental Protection Agency.

In one particularly stark example, Arizona said in June that it would [stop granting permission](#) to build houses in the Phoenix area that rely on groundwater, because there wasn't enough water for the homes that had already been approved.

Arizona has seen an explosion of wells, and they've gotten much deeper. In effect, across much of the state, the wells are chasing rapidly falling water levels downward.

Many of the country's fast-growing communities are in places with limited rainfall, like Arizona, Texas, and Utah, and other areas across the southwest.

The National Association of Home Builders, asked about the wisdom of building houses where water is running out, said the industry was responding to the demands of homebuyers who want to live in those areas.

Susan Asmus, the association's senior vice president for regulatory affairs, said builders follow the rules that local officials establish. She said it was up to governments to determine where and how it's appropriate to build homes. The officials who approve those developments "obviously think they can manage the challenges," Ms. Asmus said in a statement.

The federal government sets rules on groundwater, but not its overuse or depletion, although experts say Congress has the constitutional authority to do so. Overall, federal responsibility for water is scattered among a half-dozen different agencies.

America's approach to regulating water is "a total mess," said Upmanu Lall, director of the Columbia Water Center at Columbia University.

In response to questions about groundwater extraction, the White House noted that the 2021 infrastructure law increased spending for water storage, recycling and desalination programs, which might reduce some groundwater demand.

A White House spokesman, Angelo Fernández Hernández, wouldn't say what the Biden administration's position was on whether the federal government should regulate groundwater extraction.

Senator Ron Wyden, Democrat of Oregon, represents a state where groundwater depletion is particularly severe. Almost two-thirds of monitoring wells in Oregon show a statistically significant decline in water levels since 1980.

Mr. Wyden is also chairman of the Water and Power Subcommittee, which has jurisdiction over groundwater management. Presented with the Times's findings, he said the federal government needed to work with states to address what he called "the groundwater crisis."

Any effort to impose federal oversight would very likely face opposition from agricultural groups. The American Farm Bureau Federation, which represents farmers, said states were best suited to address groundwater problems. The federal government's role should be to spend money on infrastructure projects and help farmers pay for new technology, according to Courtney Briggs, the federation's senior director of government affairs.

Overpumping can have other risks beyond diminishing the supply of water. It can also contaminate aquifers in ways that make the remaining water unsafe or undrinkable.

For example, in coastal areas, overpumping can accelerate "saltwater intrusion," the movement of ocean water into the freshwater aquifer, making it first unappetizing, then unhealthy.

Saltwater intrusion is happening in the Northeast, the mid-Atlantic states, Florida, the Gulf Coast and California. "It's pretty widespread," said Dr. Cline of the U.S. Geological Survey.

Consider Long Island in New York. Saltwater is encroaching on parts of the aquifers that provide drinking water for the three million people who live east of Queens and Brooklyn. The Suffolk County Water Authority has had to limit pumping at about 60 of its wells, or 10 percent of the total, according to Dan Dubois, a spokesman.

It's a reminder that America has been slow to learn the lessons of overpumping. In the first half of the 20th century, wells in Brooklyn and Queens began to show signs of saltwater intrusion. By the middle of the century, some of those wells had to be shut down.

In Norfolk, Va., and other cities around the country, the groundwater is so dangerously depleted that officials are now, at great cost, [pumping treated wastewater into the aquifer](#) to try to stop the water levels from falling.

Then, there's arsenic.

A naturally occurring, cancer-causing heavy metal, arsenic is often trapped in clay, a common soil type. But it can be released into drinking water supplies when aquifers are

overpumped, a phenomenon that scientists have documented in countries with less-developed water infrastructure, including [Mexico](#) and [Vietnam](#).

Now, as America's aquifers are depleted, the problem is happening in the United States.

In 2018, Ryan Smith, then a doctoral candidate at Stanford, published a paper showing a link between groundwater depletion and arsenic contamination in the San Joaquin Valley in California. He is now examining similar changes in the San Luis Valley in Colorado.

In general, as people drill deeper wells, the likelihood of arsenic contamination increases, according to Dr. Smith, now a professor at Colorado State University. And as shallower groundwater supplies are depleted, he said, more people are drilling deeper wells.

The technology exists to filter out arsenic from drinking water, Dr. Smith said. But that imposes a cost on low-income families, he added. And it works only if people know their wells have become contaminated in the first place, which can be a particular problem for private well owners, who might not realize what has happened to their water.

## THE EARTH CRACKS

The effects of the nation's dwindling supplies of groundwater are visible in another way: The ground itself is breaking apart.

In southwest Utah, at the edge of an otherwise fast-growing city named Enoch, are the outlines of a neighborhood that appears to have vanished. Streets and sidewalks meander past lots that were once meant for houses but now have only bits of trash and waist-high weeds. The burned-out foundation of a never-completed house marks what might have been.

Arizona, to the south, has [169 miles of mapped earth fissures](#), according to the Arizona Geological Survey, an office at the University of Arizona. In 2007, a fissure [killed a horse](#) that fell into a crack and couldn't be freed.

In the Houston area, overpumping of groundwater, along with oil extraction, has caused some land to sink by more than 10 feet over the course of decades, according to local officials. In Florida, overpumping sometimes causes [sinkholes](#).

But Enoch, population 8,000 or so, is a glaring example of subsidence.

A developer began laying out a subdivision during the housing boom of the mid-2000s, planning 800 homes. The project went bankrupt, a victim of the housing crash. Then, city workers noticed something that prevented other developers from trying again: an unusual crack in the road. The subdivision, it turned out, sat atop an earth fissure.

Pumping water can cause the earth above an aquifer to slump, collapsing the space left behind by the water that was removed. Once that space is lost, it can no longer hold water.

That process, called subsidence, is happening around the country, and more than 80 percent of it is the result of groundwater use, according to the U.S. Geological Survey. The agency says subsidence has affected more than 47,000 square miles of land and waterways across the United States.

As the land sinks, home foundations, sewer pipes and other structures are damaged. But among the most dramatic consequences of subsidence is a fissure. As softer ground slumps, sometimes an adjacent patch of ground stays put. The resulting movement shears the earth apart.

“We’re sucking water out, and it’s compressing the ground,” said Rob Dotson, Enoch’s city manager.

It’s hard to predict fissures before they open. But once they happen, they can’t easily be filled in or closed. Instead they tend to get both wider and longer.

Enoch’s new neighborhood had to be abandoned. And the fissure has since been detected in another neighborhood nearby, where people already live.

Yet despite knowing the consequences, Enoch has been unable to stop extracting its groundwater, a decision to keep pumping that is being repeated nationwide in cities and on farmland. After all, there are crops to sustain and communities like Enoch that keep growing.

“People are coming and coming and coming,” Mr. Dotson said. And those people need water.

Produced by Claire O'Neill, Matt McCann and Umi Syam.  
Edited by Jesse Pesta and Douglas Alteen.

## **Methodology**

To report this story, The Times built a dataset of groundwater levels from the U.S. Geological Survey’s National Water Information System, the U.S.G.S. National Groundwater Monitoring Network and 28 states and regional authorities: Arizona Department of Water Resources, California Department of Water Resources, Colorado Division of Water Resources, Delaware Geological Survey, Southwest Florida Water Management District, St. Johns River Water Management District, South Florida Water Management District, Suwannee River Water Management District, Hawaii Department of Land and Natural Resources, Iowa Geological Survey, Idaho Department of Water Resources, Illinois State Water Survey, Kansas Geological Survey, Kentucky Geological Survey, Minnesota Department of Natural Resources, Mississippi Department of Environmental Quality, Montana Bureau of Mines and Geology, North Dakota Department of Water Resources,

University of Nebraska Conservation and Survey Division, New Mexico Bureau of Geology and Mineral Resources, Nevada Division of Water Resources, Oklahoma Water Resources Board, Oregon Water Resources Department, South Dakota Department of Agriculture and Natural Resources, Texas Water Development Board, Utah Geological Survey, Washington State Department of Ecology and Wyoming State Engineer's Office.

Data from each agency may include water level measurements made by staff members as well as additional data submitted by contributing agencies, researchers or private firms. State agencies say they perform quality checks, but those checks don't guarantee complete accuracy. Data were limited to reflect stable groundwater measurement conditions as closely as possible. Duplicate sites that appeared in the U.S.G.S. and regional data sets were removed based on matching site numbers where available, and by matching latitude, longitude and well-depth combinations.

To analyze the data, The Times used Theil-Sen median regressions and the Mann-Kendall test, a method used in this field of science by U.S.G.S. and others, to identify significant trends and estimate increasing and decreasing patterns at each site. Mann-Kendall can overestimate significance in some cases with fewer observations. Trend analysis used annually averaged data. Sites were limited to those with a minimum of 10 years of observations, and at least one observation within the first and last 5 years. Theil-sen trends represented in the animated map were calculated on 20-year ranges, every year, from the end years of 1940 to 2022. Each site had a minimum of 10 years with observations, and at least one observation within the first and last three years.

For the analysis of record lows, annual averages based on January-to-May measurements were used to calculate record highs and lows in order to mitigate the effects of large swings during pumping seasons. Only sites that had a minimum of five years with observations within the past decade, and 15 years with observations before the past decade, were included.

United States aquifer map data from GebreEgziabher, Jasechko and Perrone, Nature Communications (2022)

## Tab T – IWR Symposium / Legislation and Litigation Update



The Native American Rights Fund (NARF) and Western States Water Council (WSWC) cosponsored their 18th biennial Symposium on the Settlement of Indian Reserved Water Rights Claims on August 8-9. Held virtually, the first day included a panel on the recent Supreme Court ruling in *Arizona v. Navajo Nation* and *U.S. Department of the Interior v. Navajo Nation* (#21-1484), as well as a series of presentations on settlement implementation, policies, and legislation.

The panel on the recent Supreme Court ruling included: Paul Spruhan, Assistant Attorney General, Navajo Nation Department of Justice; John Smeltzer, Attorney, U.S. Department of Justice; and Lisa McKnight, Of Counsel, Salmon, Lewis and Weldon. Spruhan agreed with Justice Gorsuch's dissent: "His dissent is pretty astonishing, in pretty much articulating exactly the point of view of the Nation." Although he called this a disappointing ruling for the Navajo Nation, Spruhan did not believe it would have major implications for other court cases. Smeltzer said that the majority ruling confirms a Supreme Court perspective of limited federal involvement as trustees, as well as positively reaffirming the *Winters* and Federal Trust Doctrines. He argued that the United States' trust authority is intended as the "backstop" to support Tribes exercising their own authority. McKnight said that the case was about the Separation of Powers between Congress and the Supreme Court. By virtue of the *Winters* Doctrine, a right to water can be implied and quantified by a judge. However, a federal duty of trust to secure access to that water cannot be implied, because there must be specific parameters to know whether that obligation has been met. Such obligations must be explicit in the treaty in order to be enforceable, and the Navajo Treaty of 1868 did not meet that standard.

Commissioner Camille Touton, Bureau of Reclamation (USBR), provided an update on infrastructure funding and implementation as part of authorized settlements. She also discussed managing Reclamation projects through drought. Touton focused on partnerships, and what has been achieved through collaboration with NARF, WSWC, and the USBR. She discussed ways the tribal partnerships and investments are fulfilling their purpose to "provide certainty" and to "serve these communities with a reliable water supply, not just for human health and safety, but for the economy of these places." She provided an update on the Navajo-Gallup Water Supply Project, reporting that the Cutter lateral is delivering water to homes, and there are 250 of the 300 miles of planned pipeline in the ground. She noted the first Colorado River partnership discussion hosted by USBR on August 10, in Phoenix, Arizona. "We've invited all seven Basin States and the thirty sovereign nations in the Colorado River Basin to start the conversation for what the guidelines look like for operating the Colorado River system starting post-2026. It really is a historic moment and sets the tone for collaboration within the Basin."

Speaking on the Administration's settlement policy were: Lynn Trujillo, Sr. Counselor to the U.S. Secretary of the Department of the Interior (DOI); and Pamela Williams, Director, Secretary's Indian Water Rights Office. Trujillo outlined the principles guiding the Administration's negotiations, indicating three primary settlement concerns: (1) reliance on appraisal-level studies to appropriate funds for settlement projects, resulting in later amendments; (2) the use of fund-based settlements as opposed to project-based settlements; and (3) growing demands for new settlement teams and DOI resources to meet that demand. "The Biden-Harris Administration recognizes that water is essential for people to lead healthy, safe and fulfilling lives on Tribal lands. We know that water is among the most sacred and valuable resources for Tribal nations.... Indian water rights settlements play a pivotal role in this Administration's commitment to putting equity at the center of everything that we do.... Here at the Interior, we have a clear charge from the President and Secretary Haaland to protect Tribal reserved water rights and improve water access and water quality on Tribal lands."

Williams reported that DOI has completed 39 Indian water rights settlements since 1978, with 35 congressionally approved, and the other four administratively approved. Williams anticipated that several settlements would be approved in the 118th Congress during the Presidential election year. She provided an overview of general concepts such as incentives to work toward settlements, the processes and components of a typical settlement, and the role of tribes in reaching settlement. When asked about the potential implications of *Arizona v. Navajo Nation*, Williams said: "I read that case very narrowly. It was talking about a duty to assess and come up with a plan. I can tell you that the Navajo Nation is continuing to explore settlement. We've been working on a settlement for many, many years with the State of Arizona and the local parties. That hasn't stopped."

Steve Moore, NARF Attorney, responded to the Administration's presentation from a tribal perspective, and focused his remarks on the potential impact of the Supreme Court ruling in *Arizona v. Navajo Nation*. Moore expressed concern about the enforceability of the *Winters* Doctrine moving forward. He emphasized a need for greater outreach and communication in regards to decisions and consultations. With respect to the progress that has been made, Moore commented that it has not been enough to meet the water crisis and called for collaboration: "We need to work together to find a better path forward to avoid the destruction of tribal communities and cultures in the face of growing human populations and climate change."

Michelle Bushman, WSWC Deputy Director/General Counsel, highlighted the long-term efforts of the WSWC and NARF to establish a permanent settlement fund for authorized settlements. She talked about the need for a permanent funding mechanism, similar to the \$1.2B Reclamation Water Settlement Fund (RWSF) (P.L. 111-11) or the more recent \$2.5B Indian Water Rights Settlement Completion Fund (P.L. 117-58). Ann Rodgers noted that when the settlement of the Acoma-Laguna Pueblos shifted from a project-based settlement to a fund-based settlement, they were informed that they would not be eligible for funds through the RWSF due to statutory language specifically limiting expenditures to Reclamation projects authorized for settlements.

The congressional panel speakers included Jennifer Romero, Majority Staff Director/Chief Counsel, Senate Indian Affairs; Annick Miller, Staff Director, Subcommittee on Water, Wildlife and Fisheries, House Natural Resources; and Matthew Muirragui, Deputy Staff Director, House Natural Resources Committee. Muirragui gave an update on new funding sources for settlements. He mentioned \$2.5B in the Infrastructure Investment and Jobs Act (IIJA) (H.R.3684) allotted to pay off settlements already approved in 2021. He also pointed out \$550M in the Inflation Reduction Act (IRA) (H.R.5376) intended to successfully implement recently passed bills. Miller focused on House processes, noting that former Rep. Rob Bishop's (R-UT) criteria for holding hearings on settlements when he chaired Natural Resources are not likely to return. She predicted the current "Cut-Go" requirement, with offsetting reductions in authorized spending and appropriations, will be the biggest hurdle for settlements in the future.

Romero gave an update on several bills: the Rio San José and Rio Jemez Water Settlements Act (S. 595); the Tule River Tribe Reserved Water Rights Settlement Act (S. 306); the Fort Belknap Indian Community Water Rights Settlement Act (S. 1987); and the Navajo-Gallup Water Supply Project Amendments Act (S. 1898). She suggested three primary considerations when preparing a settlement bill: (1) discretionary vs. mandatory spending; (2) non-federal cost sharing; and (3) whether the project is fund-based or project-based.

Tribal representatives responding to the congressional panel included Samantha Skenandore, Of Counsel, Quarles and Brady (Tule River); Ann Berkley Rodgers, Attorney, Chestnut Law Offices, P.A. (Acoma/Laguna); David Yepa, Attorney, New Mexico Law Group (Jemez/Zia); and Joanne Harmon Curry, Partner, Patterson Earnhart Real Bird & Wilson LLP (Ft. Belknap Indian Community). Skenandore provided a timeline of the Tule River Tribe's efforts to actualize a settlement agreement made in 2007. Technical studies led the Tribe to seek amendments through the proposed 2022 Tule River Water Settlement Act (S. 4879). Rodgers noted that the Acoma/Laguna settlement has gone through much the same agreement and study process as Tule River. Rodgers also shared the importance of getting the entire community on board, which helped them secure congressional sponsorship. Yepa chronicled the Jemez/Zia Pueblo settlement efforts and their work to continually bring parties back to negotiations. He cited the Tribes' historical relationships as a reason for success in settlement. Curry discussed the Fort Belknap settlement and compact. "We as a team worked hard and had to be nimble to go from a hearing, to markup, to Senate passage in three weeks. This comes with attention and commitment to the congressional process. We can't say enough about the assistance that was given by both our delegations, House staff and congressional staff in the Senate that we worked with."

KeAloha Douma, Douma Law PLLC (White Mountain Apache) talked about their approach to Congress to amend the White Mountain Apache Tribe Water Rights Quantification Act of 2010 (H.R. 1065). Part of the Claims Resolution Act of 2012 (P.L. 111-291) authorized funding for the White Mountain Apache Rural Water System. However, a later viability assessment identified complications in the water project and established the need for further time and funding. The amendments to the 2010 Act (S.3168/H.R. 5880) passed in December 2022, and were signed into law in January (P.L. 117-342). Douma emphasized the Tribe's engagement with Congress and others throughout the process.

The Colorado River panel included: Jason Hauter, Akin Gump, representing the Gila River Indian Community (GRIC); and Nicole Klobas, Chief Counsel, Arizona Department of Water Resources. Klobas gave an overview of the challenges facing Colorado River-dependent communities. Klobas highlighted issues of importance to Arizona with special consideration to the Drought Contingency Plan (DCP) and Colorado River Post-2026 Operations. She emphasized the need to seek basin-wide solutions and recognized Tribes as a vital component of conjunctive management. Hauter gave an overview of the GRIC's rights to Colorado River water under their settlement, and the impact of proposed DCP cuts on the Community. Hauter outlined the alternative approach that was developed when GRIC was included in the planning process. Specifically, GRIC would take payment in lieu of delivery of Colorado River water. GRIC committed 200,000 acre-feet/year of conserved waters through various mechanisms both paid and unpaid.

The second day of the Symposium included a panel on the Hualapai Tribe's negotiations and settlement, and focused on planning tools and initiatives in regard to climate change. The panel on the Hualapai settlement featured: Mary Pavel, Partner at Sonosky, Chambers, Sachse, Endreson & Perry, LLP; Sarah LeFlore, Policy Analyst, Secretary's Indian Water Rights Office; and Jeff Heilman, Legal Counsel, Arizona Department of Water Resources.

Pavel gave an account of the challenges in passing the Hualapai Tribe Water Rights Settlement Act (P.L. 117-349). The Act was reported by the Senate Committee on Indian Affairs in November 2022, leaving six weeks to secure approval from the House and Senate. The Tribe sought inclusion in the Consolidated Appropriations Act of 2022 (P.L. 117-103), but were ultimately excluded at the last minute. Pavel recalled watching the floor webcast as the Senate unexpectedly voted on the bill as a standalone measure under unanimous consent. Not expecting the bill to be presented as a standalone measure, Pavel questioned whether her firm had engaged the House sufficiently. On December 22, 2022, the Hualapai settlement passed 360 - 55, despite the minority leader voting against it. Pavel advised: "Take the time. Meet with as many members as you can. Tell them about your settlement and ask them to vote yes when the time comes. My failure to do so could have cost me dearly.... If I leave you with anything it is to remain persistent, but not rigid, in how you achieve your goals.... Stay persistent. Stay true. And approach the matter with as much integrity as you can have."

LeFlore outlined the Hualapai settlement terms and negotiations. She outlined initial concerns and steps taken to ensure protection of tribal groundwater rights into the future. Heilmann gave an update on the status of pending Arizona settlements, as well as Arizona's role in and policies toward settlements. Amidst precarious water conditions, the State of Arizona is committed to reach comprehensive settlements with Tribes and maintain flexibility in negotiations.

The next panel talked about future water supply planning for Tribes in the face of climate change. Panel speakers included: Crystal Tulley-Cordova, Navajo Nation Department of Water Resources; Nikki Tulley, National Aeronautics and Space Administration (NASA), Indigenous Peoples Initiative; and Gretel Follingstad and Crystal Stiles, National Oceanic and Atmospheric Association (NOAA), National Integrated Drought Information System (NIDIS). Tulley-Cordova talked about the Nation's work building an interconnected public water system and diversified water portfolio. The Tribe is developing methods of treating unregulated water sources (contaminated with uranium and dissolved solids) for rural and agricultural use.

Tulley spoke on new ways of measuring and mapping evapotranspiration and accessing data from NASA. Tulley introduced tools such as the Applied Remote Sensing Training Program (ARSET), DEVELOP, SERVIR, the Indigenous Peoples Initiative (IPI), and the Navajo Nation Drought Severity Evaluation Tool (DSET). Stiles talked about NIDIS, which coordinates drought planning data and resources among federal, state, and tribal agencies. NIDIS hosts the U.S. Drought Portal at [drought.gov](https://drought.gov) and [drought.gov/tribal](https://drought.gov/tribal). NIDIS will be offering a grant competition in FY24 focused on building tribal drought resilience. Follingstad discussed NIDIS' Drought Early Warning System (DEWS), a platform which aims to inform decision-making by providing regional drought risk assessments. Users can input local data to view regional climate history, conditions, and modeling.

Devin Rhinerson, Partner, PACE LLP, provided an overview of the Colorado River Indian Tribes (CRIT) Water Resiliency Act (P.L. 117-343). He explained the Tribes' focus on leasing as an option to shore up Arizona water supplies against drought. CRIT agreed to only lease water that had been previously consumptively used. Under that principle, and with a waiver of the Indian Non-Intercourse Act, the Tribe is now able to engage with the Department of the Interior and water users in the State of Arizona to develop a system for leasing, storage, and conservation of CRIT water.

Tony Willardson, Executive Director, WSWC, provided an overview of the WSWC's mission and challenges facing western states. He reminded everyone that States and Tribes are not stakeholders but sovereign entities with a responsibility to manage their water resources. Willardson introduced data resources available to decision makers including Landsat thermal imaging, the WSWC's Water Data Exchange Program (WaDE), and Western States Water Data Access and Analysis Tool (WestDAAT). Willardson emphasized a need for investment by federal agencies in drought forecasting. He also touched on the formation of the Internet of Water Coalition (IoW) to encourage change by building sustainable networks and developing modern data infrastructure to support decision-making.

Adel Abdallah, WaDE Program Manager, WSWC, demonstrated online navigation of WestDAAT and explained WaDE's operational principles for the management of data. Data sharing should be Findable, Accessible, Interoperable, and Reusable (FAIR). He introduced the WaDE Water Right Landing Pages, a tool which links WestDAAT water rights objects to state data. He also introduced a tool under development that allows users to view up- or downstream water rights, U.S. Geological Survey streamgages and Environmental Protection Agency monitoring stations and water quality data from any given point on a river or stream. For more information go to [westdaat.westernstateswater.org](https://westdaat.westernstateswater.org).

**Legislation Update  
202nd WSWC Meeting  
Anchorage, Alaska**

Complied By:  
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This summary describes developments regarding notable legislation that pertains to WGA/WSWC policies or are otherwise of interest. It focuses primarily on developments that have taken place since the beginning of the 118th Congress, and is organized in reverse chronological order according to bill number. For some bills, this document uses modified versions of summaries prepared by the Congressional Research Service.

**NOTABLE LEGISLATION**

<b>Bill Number</b> H.R. 5243  <b>Bill Title</b> No Title  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Santos, George [R-NY-3]	<b>Date Introduced</b> 08/18/23  <b>Assigned Committee(s)</b> Ways and Means; Appropriations; Energy and Commerce; Transportation and Infrastructure; Natural Resources  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> The bill would rescind funds for IRS enforcement and COVID-19 relief and redirect them toward water-related projects
<b>Bill Number</b> H.R. 5104  <b>Bill Title</b> No Title  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Edwards, Chuck [R-NC-11]	<b>Date Introduced</b> 08/01/23  <b>Assigned Committee(s)</b> Transportation and Infrastructure  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> The bill would reauthorize the National Dam Safety Program Act
<b>Bill Number</b> H.R. 5089  <b>Bill Title</b> No Title  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Rouzer, David [R-NC-7]	<b>Date Introduced</b> 07/28/23  <b>Assigned Committee(s)</b> Transportation and Infrastructure; Agriculture  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> The bill would amend FIFRA and CWA to clarify Congressional intent in the use of pesticides in or near navigable waters
<b>Bill Number</b> H.R. 5088/S. 1987  <b>Bill Title</b> Fort Belknap Indian Community Water Rights Settlement Act  <b>Passed (S/H)</b>	<b>Date Introduced</b> 07/28/23  <b>Assigned Committee(s)</b> Natural Resources; Indian Affairs  <b>Hearing(s)</b> 7/19/23: SIA hearing; ordered reported with an amendment	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Ratifies the settlement of the reserved water rights claims of the Fort Belknap Indian Community in Montana. It allocates 20,000 acre-feet per year of Reclamation water stored in Lake Elwell for the Community for any beneficial use on or off the reservation. It provides for mitigation of the Milk River Project in cooperation with Montana and the Blackfeet Tribe with \$300M in funding. It provides for BIA rehabilitation and modernization of the Fort Belknap Indian Irrigation Project in consultation with the Community, with funding of \$415M (228M mandatory). It establishes the Aaniiih Nakoda Settlement Trust Fund with three accounts for (1) irrigation and water resources development (\$89M, \$29M mandatory), (2) administration, operation, and maintenance of water resources and water rights (\$66M mandatory), and (3) clean and safe domestic water and sewer systems (\$157M, \$110M mandatory). The bill acknowledges Montana's contribution of \$5M toward the irrigation and water resources development account after

<b>Bill Sponsor</b> Rep. Rosendale Sr., Matthew M. [R-MT-2]; Sen. Tester, Jon [D-MT]	<b>Co-sponsors</b>		acknowledges Montana's contribution of \$5M toward the irrigation and water resources development account after approval of the final decree in the Montana Water Court.
<b>Bill Number</b> H.R. 5016/S. 2654 <b>Bill Title</b> Water Efficiency, Conservation, and Sustainability Act <b>Passed (S/H)</b> <b>Bill Sponsor</b> Rep. Levin, Mike [D-CA-49]; Sen. Padilla, Alex [D-CA]	<b>Date Introduced</b> 07/27/23 <b>Assigned Committee(s)</b> Energy and Commerce; Environment and Public Works <b>Hearing(s)</b> <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/5016/">https://www.congress.gov/bill/118th-congress/house-bill/5016/</a>	<b>Summary of Bill</b> Directs EPA to establish a grant program for eligible entities with water efficiency incentive programs, with half the grant funds for entities in areas of severe drought and where the Governor has declared a drought emergency. Grants would be up to \$250,000 with at least 40% cost share, with waivers for significant hardship. Authorizes \$50M each for FY24-28. Also directs EPA to establish a technical assistance grant program to support annual audits of public water systems and to implement sustainable water loss control, with \$40M each for FY24-28. Also directs EPA to establish a grant program to assist states, tribes, and local governments to adopt higher standard plumbing codes and implement a plan to comply, including workforce training and enforcement and compliance programs
<b>Bill Number</b> H.R. 4959 <b>Bill Title</b> No Title <b>Passed (S/H)</b> <b>Bill Sponsor</b> Rep. Van Orden, Derrick [R-WI-3]	<b>Date Introduced</b> 07/27/23 <b>Assigned Committee(s)</b> Transportation and Infrastructure; Agriculture; Natural Resources <b>Hearing(s)</b> <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Directs the Comptroller General to prepare a report for Congress on the status of dams in the USDA Watershed Program
<b>Bill Number</b> S. 2697 <b>Bill Title</b> Clean Drinking Water for Rural Communities Act <b>Passed (S/H)</b> <b>Bill Sponsor</b> Sen. Feinstein, Dianne [D-CA]	<b>Date Introduced</b> 07/27/23 <b>Assigned Committee(s)</b> Agriculture, Nutrition, and Forestry <b>Hearing(s)</b> <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Amends the definition of "rural" in the Consolidated Farm and Rural Development Act to populations of less than 20,000 inhabitants to improve access to grants and loans for compliance with drinking water standards.
<b>Bill Number</b> S. 2696 <b>Bill Title</b> EQIP Water Conservation Act <b>Passed (S/H)</b> <b>Bill Sponsor</b> Sen. Feinstein, Dianne [D-CA]	<b>Date Introduced</b> 07/27/23 <b>Assigned Committee(s)</b> Agriculture, Nutrition, and Forestry <b>Hearing(s)</b> <b>Co-sponsors</b> Democrat, Independent, and Republican co-sponsors from AZ, CA, CO, KS, NM	<b>WSWC Keywords</b>  <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/2696/">https://www.congress.gov/bill/118th-congress/senate-bill/2696/</a>	<b>Summary of Bill</b> The bill would amend the Food Security Act to modify a waiver authority for water conservation or irrigation efficiency practice
<b>Bill Number</b> S. 2636 <b>Bill Title</b>	<b>Date Introduced</b> 07/27/23 <b>Assigned Committee(s)</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b>

<p>Healthy Watersheds, Healthy Communities Act</p> <p><b>Passed (S/H)</b></p> <p><b>Bill Sponsor</b> Sen. Bennet, Michael F. [D-CO]</p>	<p>Agriculture, Nutrition, and Forestry</p> <p><b>Hearing(s)</b></p> <p><b>Co-sponsors</b> Democrat and Republican co-sponsors from NE, OR</p>		
<p><b>Bill Number</b> S. 2611</p> <p><b>Bill Title</b> Snow Survey Northeast Expansion Act</p> <p><b>Passed (S/H)</b></p> <p><b>Bill Sponsor</b> Sen. Shaheen, Jeanne [D-NH]</p>	<p><b>Date Introduced</b> 07/27/23</p> <p><b>Assigned Committee(s)</b> Agriculture, Nutrition, and Forestry</p> <p><b>Hearing(s)</b></p> <p><b>Co-sponsors</b></p>	<p><b>WSWC Keywords</b></p> <p><b>Congress.gov Link</b></p>	<p><b>Summary of Bill</b> Directs NRCS to expand the snow survey and water supply forecasting program to serve the northeastern US</p>
<p><b>Bill Number</b> H.R. 4913</p> <p><b>Bill Title</b> No Title</p> <p><b>Passed (S/H)</b></p> <p><b>Bill Sponsor</b> Rep. Jackson, Jeff [D-NC-14]</p>	<p><b>Date Introduced</b> 07/26/23</p> <p><b>Assigned Committee(s)</b> Science, Space, and Technology</p> <p><b>Hearing(s)</b></p> <p><b>Co-sponsors</b></p>	<p><b>WSWC Keywords</b></p> <p><b>Congress.gov Link</b></p>	<p><b>Summary of Bill</b> The bill would establish a NOAA program to improve precipitation forecasts across all timescales, including modeling for S2S and S2D</p>
<p><b>Bill Number</b> H.R. 4902/S. 2250</p> <p><b>Bill Title</b> Voluntary Groundwater Conservation Act</p> <p><b>Passed (S/H)</b></p> <p><b>Bill Sponsor</b> Rep. Caraveo, Yadira [D-CO-8]; Sen. Bennet, Michael F. [D-CO]</p>	<p><b>Date Introduced</b> 07/26/23</p> <p><b>Assigned Committee(s)</b> Agriculture; Agriculture, Nutrition, and Forestry</p> <p><b>Hearing(s)</b></p> <p><b>Co-sponsors</b></p>	<p><b>WSWC Keywords</b></p> <p><b>Congress.gov Link</b></p>	<p><b>Summary of Bill</b> The bill would amend the ACEP in the Food Security Act to establish a groundwater conservation easement program to support landowners with groundwater rights to adapt to and reduce reliance on declining groundwater resources, to recharge aquifers, and allow for continued ag production</p>
<p><b>Bill Number</b> S. 2514</p> <p><b>Bill Title</b> Colorado River Salinity Control Fix Act</p> <p><b>Passed (S/H)</b></p> <p><b>Bill Sponsor</b></p>	<p><b>Date Introduced</b> 07/26/23</p> <p><b>Assigned Committee(s)</b> Agriculture, Nutrition, and Forestry</p> <p><b>Hearing(s)</b></p> <p><b>Co-sponsors</b></p>	<p><b>WSWC Keywords</b></p> <p><b>Congress.gov Link</b></p>	<p><b>Summary of Bill</b> The bill modifies the allocation of reimbursible costs for salinity control units on the Colorado River</p>
<p><b>Bill Number</b> H.R. 4811</p> <p><b>Bill Title</b></p>	<p><b>Date Introduced</b> 07/20/23</p> <p><b>Assigned Committee(s)</b></p>	<p><b>WSWC Keywords</b></p> <p><b>Congress.gov Link</b></p>	<p><b>Summary of Bill</b> Amends the SDWA (42 USC 300h) to require state underground injection programs to include regular testing and reporting of groundwater quality for drinking water sources located within a mile of hydraulic fracturing operations</p>

Safe Hydration is an American Right in Energy Development Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Schakowsky, Janice D. [D-IL-9]	Energy and Commerce <b>Hearing(s)</b>  <b>Co-sponsors</b>		
<b>Bill Number</b> H.R. 4785 <b>Bill Title</b> Fracturing Responsibility and Awareness of Chemicals Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. DeGette, Diana [D-CO-1]	<b>Date Introduced</b> 07/20/23 <b>Assigned Committee(s)</b> Energy and Commerce <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Amends the SDWA (42 USC 300h) to repeal the exemption for hydraulic fracturing, requiring disclosure of fracking chemicals to the State or EPA Administrator
<b>Bill Number</b> H.R. 4778 <b>Bill Title</b> Focused Reduction of Effluence and Stormwater runoff through Hydrofracking Environmental Regulation (FRESHER) Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Cartwright, Matt [D-PA-8]	<b>Date Introduced</b> 07/20/23 <b>Assigned Committee(s)</b> T&I  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Amends the CWA (33 USC 1342 and 1362) to eliminate stormwater permit exemptions for oil, gas, and mining operations, and directs DOI to study stormwater impacts associated with oil and gas operations, including impacts to groundwater
<b>Bill Number</b> H.R. 4746/S. 2385 <b>Bill Title</b> Tribal Access to Clean Water Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Neguse, Joe [D-CO-2]; Sen. Bennet, Michael F. [D-CO]	<b>Date Introduced</b> 07/19/23 <b>Assigned Committee(s)</b> Natural Resources; Energy and Commerce; Agriculture; Indian Affairs <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Authorizes funding and extends authorizations for existing USDA, Reclamation, and Indian Health Services programs to provide access to reliable, clean, and drinkable water on tribal lands
<b>Bill Number</b> S. 2388/H.R. 3809 <b>Bill Title</b> Cybersecurity for Rural Water Systems Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Sen. Cortez Masto, Catherine [D-NV]; Rep. Davis, Donald G. [D-NC-1]	<b>Date Introduced</b> 07/19/23 <b>Assigned Committee(s)</b> Agriculture, Nutrition, and Forestry; House Agriculture <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Would amend the Consolidated Farm and Rural Development Act to establish a cybersecurity circuit rider program to provide cybersecurity-related technical assistance to certain entities that operate rural water or wastewater systems

<b>Bill Number</b> H.R. 4643 <b>Bill Title</b> Nogales Wastewater Improvement Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Grijalva, Raúl M. [D-AZ-7]	<b>Date Introduced</b> 07/14/23 <b>Assigned Committee(s)</b> Transportation and Infrastructure <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> To provide for the assumption of full ownership and control of the International Outfall Interceptor in Nogales, Arizona, by the International Boundary and Water Commission
<b>Bill Number</b> H.R. 4629/H.R. 4596/S. 2247/H.R. 3918 <b>Bill Title</b> Upper Colorado and San Juan River Basins Endangered Fish Recovery Programs Reauthorization Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Neguse, Joe [D-CO-2]; Rep. Boebert, Lauren [R-CO-3] ; Sen. Hickenlooper, John W. [D-CO]	<b>Date Introduced</b> 07/13/23 <b>Assigned Committee(s)</b> Natural Resources; Energy and Natural Resources <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> To reauthorize the Bureau of Reclamation to provide cost-shared funding to implement the endangered and threatened fish recovery programs for the Upper Colorado and San Juan River Basins.
<b>Bill Number</b> H.R. 4540 <b>Bill Title</b> Water Infrastructure Enhancement Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Cuellar, Henry [D-TX-28]	<b>Date Introduced</b> 07/11/23 <b>Assigned Committee(s)</b> Energy and Commerce <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Amends the SDWA to establish a grant program for water suppliers to make infrastructure improvements to public water systems, and authorizes \$800M for each of FY24-29
<b>Bill Number</b> H.R. 4356 <b>Bill Title</b> WaterSMART Access for Tribes Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Stansbury, Melanie Ann [D-NM-1]	<b>Date Introduced</b> 06/23/23 <b>Assigned Committee(s)</b> Natural Resources <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Amends the WaterSMART program to authorize DOI to waive the non-Federal share of infrastructure improvements for Indian tribes if the cost share would cause financial hardship
<b>Bill Number</b> H.R. 4297/S. 2156 <b>Bill Title</b> Bolts Ditch Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b>	<b>Date Introduced</b> 06/22/23 <b>Assigned Committee(s)</b> Natural Resources; Energy and Natural Resources <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> To amend the John D. Dingell, Jr. Conservation, Management, and Recreation Act to allow for additional entities to be eligible to complete the maintenance work on Bolts Ditch and the Bolts Ditch Headgate within the Holy Cross Wilderness, Colorado.



Rep. Neguse, Joe [D-CO-2]; Bennet, Michael F. [D-CO]	Sen.		
<b>Bill Number</b> H.R. 4290/S. 2077 <b>Bill Title</b> Acequia Communities Empowered by Qualifying Upgrades for Infrastructure Act <b>Passed (S/H)</b> <b>Bill Sponsor</b> Rep. Leger Fernandez, Teresa [D-NM-3]; Sen. Lujan, Ben Ray [D-NM]	<b>Date Introduced</b> 06/22/23 <b>Assigned Committee(s)</b> Agriculture; Natural Resources; Agriculture, Nutrition, and Forestry <b>Hearing(s)</b> <b>Co-sponsors</b>	<b>WSWC Keywords</b> <b>Congress.gov Link</b>	<b>Summary of Bill</b> To amend the Federal Agriculture Improvement and Reform Act of 1996 to ensure that producers who rely on acequia systems have access to drought protections
<b>Bill Number</b> S.2202 <b>Bill Title</b> Restore Aging Infrastructure Now (RAIN) Act <b>Passed (S/H)</b> <b>Bill Sponsor</b> Sen. Feinstein, Dianne [D-CA]	<b>Date Introduced</b> 06/22/23 <b>Assigned Committee(s)</b> Energy and Natural Resources <b>Hearing(s)</b> <b>Co-sponsors</b>	<b>WSWC Keywords</b> <b>Congress.gov Link</b>	<b>Summary of Bill</b> The bill would authorize the modification of transferred works to improve water quality for drinking water, to increase the reliability or quantity of the drinking water supply of disadvantaged communities, and other project benefits as part of extraordinary operation and maintenance work
<b>Bill Number</b> S. 2169 <b>Bill Title</b> Watershed Results Act <b>Passed (S/H)</b> <b>Bill Sponsor</b> Sen. Wyden, Ron [D-OR]	<b>Date Introduced</b> 06/22/23 <b>Assigned Committee(s)</b> Energy and Natural Resources <b>Hearing(s)</b> <b>Co-sponsors</b>	<b>WSWC Keywords</b> <b>Congress.gov Link</b>	<b>Summary of Bill</b> Directs DOI to establish 2-5 pilot watershed projects in Reclamation states, Alaska, and Hawaii, in consultation with states, tribes, and others, with a cross-agency funding strategy to achieve the outcomes of (1) a quantifiable increase in surface water or groundwater; (2) an increase in habitat; or (3) other quantifiable watershed benefits. The bill would waive cost-share requirements, and establishes a process for recommending permanent funding for permanent projects. Authorizes \$15M for each watershed pilot for each of FY24-29, and another \$2M to carry out advanced watershed analytics for each pilot for each of FY24-26.
<b>Bill Number</b> S. 2162 <b>Bill Title</b> Support To Rehydrate the Environment, Agriculture, and Municipalities (STREAM) Act <b>Passed (S/H)</b> <b>Bill Sponsor</b> Sen. Feinstein, Dianne [D-CA]	<b>Date Introduced</b> 06/22/23 <b>Assigned Committee(s)</b> Energy and Natural Resources <b>Hearing(s)</b> 7/19/23: ENR Subcommittee hearing <b>Co-sponsors</b>	<b>WSWC Keywords</b> <b>Congress.gov Link</b>	<b>Summary of Bill</b> Provides authorizations for Reclamation state storage and conveyance projects, water recycling, desalination, drinking water assistance for disadvantaged communities, O&M work, drought resilience, dam safety, improved technology and data, ecosystem restoration, and modifications to drought program. Authorizes over \$1.65B for FY25-29
<b>Bill Number</b> S. 2161 <b>Bill Title</b> Canal Conveyance Capacity Restoration Act <b>Passed (S/H)</b>	<b>Date Introduced</b> 06/22/23 <b>Assigned Committee(s)</b> Energy and Natural Resources <b>Hearing(s)</b>	<b>WSWC Keywords</b> <b>Congress.gov Link</b>	<b>Summary of Bill</b> To provide financial assistance for projects to address certain subsidence impacts in the State of California

<b>Bill Sponsor</b> Sen. Feinstein, Dianne [D-CA]	7/19/23: ENR Subcommittee hearing <b>Co-sponsors</b>		
<b>Bill Number</b> S. 2160 <b>Bill Title</b> Urban Canal Modernization Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Sen. Risch, James E. [R-ID]	<b>Date Introduced</b> 06/22/23 <b>Assigned Committee(s)</b> Energy and Natural Resources <b>Hearing(s)</b> 7/19/23: ENR Subcommittee hearing <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Authorizes O&M work for urban canals for at-risk populations.
<b>Bill Number</b> S. 2130 <b>Bill Title</b> PFAS Community Engagement and Transparency Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Sen. Shaheen, Jeanne [D-NH]	<b>Date Introduced</b> 06/22/23 <b>Assigned Committee(s)</b> Armed Services  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> To require community engagement and reporting relating to activities of the Department of Defense with respect to PFAS
<b>Bill Number</b> H.R. 4247 <b>Bill Title</b> Flood Prevention and Snowpack Management Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Harder, Josh [D-CA-9]	<b>Date Introduced</b> 06/21/23 <b>Assigned Committee(s)</b> T&I  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Directs the Corps to establish a Task Force with FEMA, Reclamation, NOAA, California representatives and agencies and tribes, develop a plan of action for snowpack melt, flood mitigation and recovery, and expediting water storage projects to capture water from the snowpack and alleviate future drought conditions.
<b>Bill Number</b> S. 2102 <b>Bill Title</b> Water for Conservation and Farming Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Sen. Wyden, Ron [D-OR]	<b>Date Introduced</b> 06/21/23 <b>Assigned Committee(s)</b> Energy and Natural Resources  <b>Hearing(s)</b> 7/19/23: ENR Subcommittee hearing <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Title I of the bill provides for drought preparedness and improved water supply reliability. It creates a new Bureau of Reclamation Infrastructure Fund which would transfer \$300M a year for FY35-65 directly from the Reclamation Fund, with a third of those funds expended by DOI for each of (1) reclamation and reuse projects, (2) water management improvement grants, and (3) Reclamation dam safety. It would increase WaterSMART funding from \$820M to \$1B and expend the program to include temporary, voluntary, and compensated transactions to decrease consumptive uses at a watershed scale; and to include enhancing natural water storage in floodplains and riparian wetlands.
<b>Bill Number</b> H.R. 4213 <b>Bill Title</b> Conservation Reserve Enhancement Program Improvement Act	<b>Date Introduced</b> 06/20/23 <b>Assigned Committee(s)</b> Agriculture	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Amends the Food Security Act to modify CREP, including setting payment rates for retired water rights under drought and water conservation agreements to be equal to the irrigated acre payment rates determined by USDA.

<b>Passed (S/H)</b>	<b>Hearing(s)</b>		
<b>Bill Sponsor</b> Rep. Buck, Ken [R-CO-4]	<b>Co-sponsors</b>		
<b>Bill Number</b> H.R. 4197 <b>Bill Title</b> Collaborative Forest Landscape Restoration Program Reauthorization Act <b>Passed (S/H)</b> <b>Bill Sponsor</b> Rep. Neguse, Joe [D-CO-2]	<b>Date Introduced</b> 06/16/23 <b>Assigned Committee(s)</b> Agriculture; Natural Resources <b>Hearing(s)</b> <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Reauthorizes the program and adds eligibility to criteria for proposals that (1) seek to use innovative implementation such as good neighbor agreements and conservation finance agreements; (2) seek to reduce the risk of uncharacteristic wildfire or increase ecological restoration activities within lands that cross state, tribal, and private boundaries; or (3) that seek to enhance watershed health and drinking water sources.
<b>Bill Number</b> H.R. 4094/S. 1955 <b>Bill Title</b> Great Salt Lake Stewardship Act <b>Passed (S/H)</b> <b>Bill Sponsor</b> Rep. Curtis, John R. [R-UT-3]; Sen. Lee, Mike [R-UT]	<b>Date Introduced</b> 06/14/23 <b>Assigned Committee(s)</b> Natural Resources; Energy and Natural Resources <b>Hearing(s)</b> 7/19/23: SENR hearing <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Authorizes the Central Utah Project to expend funds toward water conservation measures for the benefit of the downstream Great Salt Lake basin
<b>Bill Number</b> H.R. 4069 <b>Bill Title</b> Protecting Coasts and Cities from Severe Weather Act <b>Passed (S/H)</b> <b>Bill Sponsor</b> Rep. Kean, Thomas H. [R-NJ-7]	<b>Date Introduced</b> 06/13/23 <b>Assigned Committee(s)</b> Science, Space, and Technology <b>Hearing(s)</b> <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Directs NOAA to establish a coastal flooding and storm surge forecast improvement program that prioritizes real-time prediction of the ocean's role in coastal flooding and storm surge events, improvements in mitigating impacts, and utilizes distributed sensors to easily incorporate data into models. It also directs NOAA to work with FEMA and others to ensure equal and complete weather observation coverage and emergency information sharing in the United States, including advancing weather forecasting and climate modeling at urban scales, and supporting interagency pilot projects to accelerate coordination and use of localized weather data such as mesonets for emergency management decisions and infrastructure operators.
<b>Bill Number</b> H.R. 4052 <b>Bill Title</b> National Infrastructure Bank Act <b>Passed (S/H)</b> <b>Bill Sponsor</b> Rep. Davis, Danny K. [D-IL-7]	<b>Date Introduced</b> 06/13/23 <b>Assigned Committee(s)</b> 7 House committees <b>Hearing(s)</b> <b>Co-sponsors</b> 8 Democratic co-sponsors, included CA and NM	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> The Congressional findings include the ASCE 2021 report card estimating the costs of various infrastructure needs, including (1) drinking water, wastewater, and stormwater systems (\$801M), (2) dams, levees, inland waterways, and ports (\$197M, and (3) major new water supply projects (\$400M). The bill proposes a national bank to finance various infrastructure needs, including water infrastructure. It authorizes \$100M for FY23-24 to get the bank started.
<b>Bill Number</b> H.R. 4018 <b>Bill Title</b>	<b>Date Introduced</b> 06/12/23 <b>Assigned Committee(s)</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> To amend the Healthy Forests Restoration Act of 2003 to reauthorize and improve the Water Source Protection Program. Priority projects include risk management benefits for drought, wildfire, flooding, and minimizing risks to watershed health, water supply and quality, water-related infrastructure (including municipal and ag systems), and

<p>Headwaters Protection Act</p> <p><b>Passed (S/H)</b></p> <p><b>Bill Sponsor</b> Rep. Costa, Jim [D-CA-21]</p>	<p>Agriculture; Natural Resources</p> <p><b>Hearing(s)</b></p> <p><b>Co-sponsors</b> 6 Democrat and Republican Co-Sponsors including from CA, OR, NM, CO, WA</p>	<p><a href="https://www.congress.gov/bill/118th-congress/house-bill/4018">https://www.congress.gov/bill/118th-congress/house-bill/4018</a></p>	<p>watershed health, water supply and quality, water-related infrastructure (including municipal and ag systems), and include contributions of funds or in-kind or leadership support from non-federal partners. It authorizes \$30M for each of FY24-28.</p>
<p><b>Bill Number</b> H.R. 4017</p> <p><b>Bill Title</b> Conservation Reserve Program Improvement Act</p> <p><b>Passed (S/H)</b></p> <p><b>Bill Sponsor</b> Rep. Costa, Jim [D-CA-21]</p>	<p><b>Date Introduced</b> 06/12/23</p> <p><b>Assigned Committee(s)</b> Agriculture</p> <p><b>Hearing(s)</b></p> <p><b>Co-sponsors</b> 1 Democrat cosponsor, CA</p>	<p><b>WSWC Keywords</b></p> <p><b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/4017">https://www.congress.gov/bill/118th-congress/house-bill/4017</a></p>	<p><b>Summary of Bill</b> Revises the CRP to permanently establish a continuous enrollment procedure for the State Acres for Wildlife Enhancement Initiative. Provides federal cost sharing payments for grazing infrastructure on CRP contracts and practices where grazing is included in the conservation plan, and for other plans not related to haying or grazing. It increases the annual rental payment limitation from \$50,000 to \$125,000.</p>
<p><b>Bill Number</b> H.R. 3980</p> <p><b>Bill Title</b> National Oceanic and Atmospheric Administration Act</p> <p><b>Passed (S/H)</b></p> <p><b>Bill Sponsor</b> Rep. Lucas, Frank D. [R-OK-3]</p>	<p><b>Date Introduced</b> 06/09/23</p> <p><b>Assigned Committee(s)</b> Science, Space, and Technology; Natural Resources</p> <p><b>Hearing(s)</b></p> <p><b>Co-sponsors</b> 13 Republican co-sponsors, including CA, OK, TX</p>	<p><b>WSWC Keywords</b></p> <p><b>Congress.gov Link</b></p>	<p><b>Summary of Bill</b> The bill would create NOAA as an independent science research and development agency</p>
<p><b>Bill Number</b> H.R. 3977/S. 1898</p> <p><b>Bill Title</b> Navajo-Gallup Water Supply Project Amendments Act</p> <p><b>Passed (S/H)</b></p> <p><b>Bill Sponsor</b> Rep. Leger Fernandez, Teresa [D-NM-3]; Sen. Lujan, Ben Ray [D-NM]</p>	<p><b>Date Introduced</b> 06/09/23</p> <p><b>Assigned Committee(s)</b> Natural Resources; Indian Affairs</p> <p><b>Hearing(s)</b> 7/12/23: SIA hearing</p> <p><b>Co-sponsors</b></p>	<p><b>WSWC Keywords</b></p> <p><b>Congress.gov Link</b></p>	<p><b>Summary of Bill</b> The bill would amend the Northwestern New Mexico Rural Water Projects Act to authorize an expansion of the project service area to meet the needs of additional Navajo Nation tribal members in NM and AZ at no additional cost, extends the project deadline beyond 2024 to 2029 to allow time for project completion, and increases the funding authorization from \$870M to \$2.175B to match updated construction costs.</p>
<p><b>Bill Number</b> H.R. 3972</p> <p><b>Bill Title</b> Flood Resiliency and Land Stewardship Act</p> <p><b>Passed (S/H)</b></p> <p><b>Bill Sponsor</b></p>	<p><b>Date Introduced</b> 06/09/23</p> <p><b>Assigned Committee(s)</b> Agriculture</p> <p><b>Hearing(s)</b></p> <p><b>Co-sponsors</b></p>	<p><b>WSWC Keywords</b></p> <p><b>Congress.gov Link</b></p>	<p><b>Summary of Bill</b> To amend the Food Security Act of 1985 to add flood prevention and mitigation measures to purposes of the Regional Conservation Partnership Program</p>

Rep. Hinson, Ashley [R-IA-2]			
<b>Bill Number</b> H.R. 3966 <b>Bill Title</b> Improving Atmospheric River Forecasts Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Garcia, Mike [R-CA-27]	<b>Date Introduced</b> 06/09/23 <b>Assigned Committee(s)</b> Science, Space, and Technology  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> The bill directs NOAA to establish at least one pilot project within OAR's US Weather Research Program to carry out the activities to implement the recommendations in the 2018 NWS report on "Seasonal to Subseasonal Forecasting Innovation: Plans for the 21st Century."
<b>Bill Number</b> H.R. 3954/S. 1874 <b>Bill Title</b> Water and Agriculture Tax Reform Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Buck, Ken [R-CO-4]; Sen. Crapo, Mike [R-ID]	<b>Date Introduced</b> 06/09/23 <b>Assigned Committee(s)</b> House Ways and Means; Senate Finance  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> To amend the Internal Revenue Code of 1986 to facilitate water leasing and water transfers to promote conservation and efficiency.
<b>Bill Number</b> S. 1764 <b>Bill Title</b> Western Wildfire Support Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Sen. Cortez Masto, Catherine [D-NV]	<b>Date Introduced</b> 05/31/23 <b>Assigned Committee(s)</b> Energy and Natural Resources  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> The bill is to improve activities relating to wildfires, including preparation and post-wildfire mitigation. Section 302 establishes a Long-Term Burned Area Recovery Account (\$100M annually) for rehabilitation projects between 1-3 years after a wildfire, with a priority on downstream effects on water resources
<b>Bill Number</b> H.R. 3675 <b>Bill Title</b> Western Water Accelerated Revenue Repayment Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Boebert, Lauren [R-CO-3]	<b>Date Introduced</b> 05/25/23 <b>Assigned Committee(s)</b> Natural Resources  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Amends WIIN (PL 114-322) section 4013 to extend contract prepayment authority
<b>Bill Number</b> H.R. 3568 <b>Bill Title</b> Primacy Certainty Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Crenshaw, Dan [R-TX-2]	<b>Date Introduced</b> 05/22/23 <b>Assigned Committee(s)</b> Energy and Commerce  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Amends the SDWA to clarify EPA's timeline for making decisions on the approval or disapproval of State underground injection control programs. It requires EPA to provide notice to the State within 180 days of the application or notice on the status of the review, the reason a decision has not yet been made, and an itemized list of specific deficiencies with the State's application or notice to be addressed to receive approval of the application or notice. It would create automatic approval of complete applications or notices if EPA doesn't approve or disapprove within 30 days of the 180-day period.
<b>Bill Number</b>	<b>Date Introduced</b>	<b>WSWC Keywords</b>	<b>Summary of Bill</b>

H.R. 3490 <b>Bill Title</b> Water Infrastructure Modernization Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Gallego, Ruben [D-AZ-3]	05/18/23 <b>Assigned Committee(s)</b> T&I, Energy and Commerce <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>Congress.gov Link</b>	Amends the CWA and SDWA to authorize grants for smart water infrastructure technology for drinking water, wastewater, and stormwater systems, to support modernization of POTWs and drinking water systems, and to encourage use of water-efficient technologies to address drought and prepare for the strain of growing populations and climate change on over-allocated water supplies
<b>Bill Number</b> S. 1715/H.R. 3439 <b>Bill Title</b> Wildfire Emergency Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Sen. Feinstein, Dianne [D-CA]; Rep. Panetta, Jimmy [D-CA-19]	<b>Date Introduced</b> 05/18/23 <b>Assigned Committee(s)</b> Agriculture, Nutrition, and Forestry; 4 House committees <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Directs USDA to select and implement landscape-scale forest restoration projects, to assist communities in increasing their resilience to wildfire
<b>Bill Number</b> H.R. 3424 <b>Bill Title</b> Forest Conservation Easement Program Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Kelly, Trent [R-MS-1]	<b>Date Introduced</b> 05/17/23 <b>Assigned Committee(s)</b> Agriculture <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Directs USDA to establish the forest conservation easement program to, among other things, protect and restore watersheds for water quality and quantity improvements
<b>Bill Number</b> H.R. 3167 <b>Bill Title</b> Clean Water Allotment Modernization Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Waltz, Michael [R-FL-6]	<b>Date Introduced</b> 05/09/23 <b>Assigned Committee(s)</b> T&I <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> Revises EPA's allocation formula for distributing SRF funds for water quality infrastructure projects. The initial allotment for FY24-28 must be no less than the amount received by each state in FY23, with additional allotments based on each state's share of the US population. The formula must also provide allotments for tribes and territories, and an allotment for EPA's oversight of American iron and steel requirements. Beginning in FY29, EPA must use an updated allotment formula base on the needs of states as identified in the most recently available clean watersheds needs survey.
<b>Bill Number</b> S. 1430 <b>Bill Title</b> Water Systems PFAS Liability Protection Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Sen. Lummis, Cynthia M. [R-WY]	<b>Date Introduced</b> 05/03/23 <b>Assigned Committee(s)</b> Environment and Public Works <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b>  <b>Congress.gov Link</b>	<b>Summary of Bill</b> The bill would exempt state and local water entites (POTWs, municipalities with 402 permits for stormwater discharges, water agencies, public water systems, and contractors performing management or disposal activities) from CERCLA liability for PFAS releases.
<b>Bill Number</b> H.R. 3746	<b>Date Introduced</b> 05/29/23	<b>WSWC Keywords</b>	<b>Summary of Bill</b> The bill will raise the debt ceiling, temporarily suspend the debt limit, impose caps on discretionary funding in

<b>Bill Title</b> Fiscal Responsibility Act  <b>Passed (S/H)</b> 5/31/23: House passed 314-117 6/1/23: Senate passed 63-36 6/3/23: President signed into law, P.L. 118-5 <b>Bill Sponsor</b> Rep. McHenry, Patrick T. [R-NC-10]	<b>Assigned Committee(s)</b> 15 Committees  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/3746">https://www.congress.gov/bill/118th-congress/house-bill/3746</a>	FY24-25 enforced by sequestration, rescind unobligated balances, and make further changes affecting spending and revenues. It also amends provisions of existing law that regulate the permitting of proposed energy-related projects. Division C, Title III on permitting reform would amend the National Environmental Policy Act (NEPA) regarding: (1) thresholds for NEPA review; (2) the designation of lead agencies to coordinate cross-agency NEPA reviews; (3) categorical exclusions; and (4) adding energy storage to the projects covered by the FAST-41 program. It directs the CEQ to study the potential for online and digital technologies to address delays in NEPA reviews, including the creation of a unified online permitting portal that would allow applicants to submit required documents, to track progress, and to work with agencies to upload and edit documents in real-time. Section 324 directed the expedited completion of the Mountain Valley Pipeline (MVP), a 303-mile interstate natural gas. Congress directed the Army Corps of Engineers under subsection (d) to issue all permits or verifications necessary "to complete the construction of the [MVP] across the waters of the United States," notwithstanding any other provision of law, within 21 days of enactment of H.R. 3746. Division B, Title I, rescinded many ARPA (P.L. 117-2) funds. Section 57 rescinded the unobligated balance of the \$500M appropriated for state and tribal drinking water and wastewater grants for low-income ratepayer assistance (ARPA §2912(a)). Section 65 rescinded funds for the Fish and Wildlife Service (ARPA §6003). Section 66 rescinded unobligated funds for the Bureau of Indian Affairs, including \$20M to provide and deliver potable water to tribes (ARPA §11002(a)). Section 72 rescinded a portion of the \$100M appropriated to EPA to address health outcome disparities from pollution and COVID-19, including grants to states and publicly owned water systems for technical assistance under Safe Drinking Water Act §1442 (ARPA §6002(a)), leaving \$22M for all the listed programs.
<b>Bill Number</b> H.R. 3027 <b>Bill Title</b> Reclamation Climate Change and Water Program Reauthorization Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Porter, Katie [D-CA-47]	<b>Date Introduced</b> 04/28/23 <b>Assigned Committee(s)</b> Natural Resources  <b>Hearing(s)</b>  <b>Co-sponsors</b> 8 Democrat co-sponsors (including NM, OR, CA, AZ, CA)	<b>WSWC Keywords</b> SECURE Water Act <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/3027">https://www.congress.gov/bill/118th-congress/house-bill/3027</a>	<b>Summary of Bill</b> Originally authorized in the 2009 Omnibus Public Land Management Act, under the SECURE Water Act §9503(c), the program coordinates the efforts of the Bureau of Reclamation, the U.S. Geological Survey (USGS), the U.S. Department of Agriculture (USDA), the National Oceanic and Atmospheric Administration (NOAA), and other federal and state agencies to address the risks of climate change to water scarcity in watersheds with Reclamation facilities. The program is used to develop strategies to manage water supply, potential shortages and water delivery to contractors, conflicts, and impacts to water uses and the environment. Reclamation reports to Congress every five years with the West-Wide Climate and Hydrology Assessment, which provides estimates of changes in temperature, precipitation, snowpack, and streamflow across the West.
<b>Bill Number</b> H.R. 2921 <b>Bill Title</b> Water Infrastructure Sustainability and Efficiency (WISE) Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Williams, Nikema [D-GA-5]	<b>Date Introduced</b> 04/26/23 <b>Assigned Committee(s)</b> Transportation and Infrastructure  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b> SRFs <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/2921">https://www.congress.gov/bill/118th-congress/house-bill/2921</a>	<b>Summary of Bill</b> The bill would amend the CWA to require a certain percentage of funds appropriated for SRF grants to be used for green projects, water or energy efficiency improvements, or other environmentally innovative activities.
<b>Bill Number</b> H.R. 2811 <b>Bill Title</b> Limit, Save, Grow Act  <b>Passed (S/H)</b> 4/26/23: Passed House 217-215 <b>Bill Sponsor</b> Rep. Arrington, Jodey C. [R-TX-19]	<b>Date Introduced</b> 04/25/23 <b>Assigned Committee(s)</b> 11 Committees  <b>Hearing(s)</b> 5/4/23: Senate Budget Hearing <b>Co-sponsors</b> 19 Republican co-sponsors (including CA, OK, TX, UT, WA)	<b>WSWC Keywords</b> CWA 401 <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/2811">https://www.congress.gov/bill/118th-congress/house-bill/2811</a>	<b>Summary of Bill</b> The bill would provide for an increase to the debt ceiling. It also incorporates H.R. 1, including the provisions on amending CWA 401 State Certifications

<b>Bill Number</b> S. 1224  <b>Bill Title</b> Conservation Reserve Enhancement Program Improvement Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Sen. Bennet, Michael F. [D-CO]	<b>Date Introduced</b> 04/20/23  <b>Assigned Committee(s)</b> Agriculture, Nutrition, and Forestry  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b> Farm Bill Conservation Programs  <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/1224">https://www.congress.gov/bill/118th-congress/senate-bill/1224</a>	<b>Summary of Bill</b> To amend the Food Security Act of 1985 to modify the CREP.
<b>Bill Number</b> H.R. 2787 / S. 1233  <b>Bill Title</b> No Title  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Sewell, Terri A. [D-AL-7] Sen. Booker, Cory A. [D-NJ]	<b>Date Introduced</b> 04/20/23  <b>Assigned Committee(s)</b> Agriculture  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b> Infrastructure  <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/2787">https://www.congress.gov/bill/118th-congress/house-bill/2787</a>	<b>Summary of Bill</b> To amend the Consolidated Farm and Rural Development Act to modify provisions relating to rural decentralized water systems grants.
<b>Bill Number</b> H.R. 2671  <b>Bill Title</b> Restoring WIFIA Eligibility Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Costa, Jim [D-CA-21]	<b>Date Introduced</b> 04/18/23  <b>Assigned Committee(s)</b> T&I, Energy and Commerce  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b> WIFIA  <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/2671">https://www.congress.gov/bill/118th-congress/house-bill/2671</a>	<b>Summary of Bill</b> To amend the Water Infrastructure Finance and Innovation Act of 2014 with respect to budgetary treatment of certain amounts of financial assistance
<b>Bill Number</b> H.R. 2461  <b>Bill Title</b> San Juan Southern Paiute Tribal Homelands Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Crane, Elijah [R-AZ-2]	<b>Date Introduced</b> 04/03/23  <b>Assigned Committee(s)</b> Natural Resources  <b>Hearing(s)</b> 6/7/23: Subcommittee hearing  <b>Co-sponsors</b> 7 bipartisan co-sponsors from AZ and MT	<b>WSWC Keywords</b> Tribal water rights  <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/2461">https://www.congress.gov/bill/118th-congress/house-bill/2461</a>	<b>Summary of Bill</b> To ratify a Treaty (2000) between the San Juan Southern Paiute Tribe and the Navajo Nation, to provide for the creation of a reservation for the San Juan Southern Paiute Tribe. Section 10 provides for transfers of water rights, water rights held in trust by the federal government, and establishes parameters for water used on Northern and Southern areas of the newly created reservation.
<b>Bill Number</b> S. 1079  <b>Bill Title</b>	<b>Date Introduced</b> 03/30/23  <b>Assigned Committee(s)</b>	<b>WSWC Keywords</b> Rural infrastructure  <b>Congress.gov Link</b>	<b>Summary of Bill</b> To amend the Consolidated Farm and Rural Development Act to provide additional assistance to rural water, wastewater, and waste disposal systems



<p>Assistance for Rural Water Systems Act</p> <p><b>Passed (S/H)</b></p> <p><b>Bill Sponsor</b> Sen. Shaheen, Jeanne [D-NH]</p>	<p>Agriculture, Nutrition, and Forestry</p> <p><b>Hearing(s)</b></p> <p><b>Co-sponsors</b></p>	<p><a href="https://www.congress.gov/bill/118th-congress/senate-bill/1079">https://www.congress.gov/bill/118th-congress/senate-bill/1079</a></p>	
<p><b>Bill Number</b> H.R. 2429 / S. 1118</p> <p><b>Bill Title</b> Open Access Evapotranspiration Data Act</p> <p><b>Passed (S/H)</b></p> <p><b>Bill Sponsor</b> Rep. Lee, Susie [D-NV-3] Sen. Cortez Masto, Catherine [D-NV]</p>	<p><b>Date Introduced</b> 03/30/23</p> <p><b>Assigned Committee(s)</b> Natural Resources; Energy and Natural Resources</p> <p><b>Hearing(s)</b> 7/19/23: Senate Subcommittee hearing</p> <p><b>Co-sponsors</b> House: 3 bipartisan co-sponsors in CA, UT Senate: 1 Democratic co-sponsor in CO</p>	<p><b>WSWC Keywords</b> OpenET</p> <p><b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/2429">https://www.congress.gov/bill/118th-congress/house-bill/2429</a></p>	<p><b>Summary of Bill</b> The bill authorizes the OpenET Data Program under the USGS to deliver satellite-based ET data to advance the quantification of ET and consumptive water use, and to provide data users with estimates across large landscapes</p>
<p><b>Bill Number</b> H.R. 2419</p> <p><b>Bill Title</b> Canal Conveyance Capacity Restoration Act</p> <p><b>Passed (S/H)</b></p> <p><b>Bill Sponsor</b> Rep. Costa, Jim [D-CA-21]</p>	<p><b>Date Introduced</b> 03/30/23</p> <p><b>Assigned Committee(s)</b> Natural Resources</p> <p><b>Hearing(s)</b></p> <p><b>Co-sponsors</b></p>	<p><b>WSWC Keywords</b> Infrastructure</p> <p><b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/2419">https://www.congress.gov/bill/118th-congress/house-bill/2419</a></p>	<p><b>Summary of Bill</b> To provide financial assistance for projects to address certain subsidence impacts in the State of California</p>
<p><b>Bill Number</b> S. 1023/ H.R. 4956</p> <p><b>Bill Title</b> Farmer-Informed WOTUS Act</p> <p><b>Passed (S/H)</b></p> <p><b>Bill Sponsor</b> Sen. Braun, Mike [R-IN]; Rep. Yakym, Rudy [R-IN-2]</p>	<p><b>Date Introduced</b> 03/29/23</p> <p><b>Assigned Committee(s)</b> Agriculture, Nutrition, and Forestry; House Agriculture, T&amp;I</p> <p><b>Hearing(s)</b></p> <p><b>Co-sponsors</b></p>	<p><b>WSWC Keywords</b> WOTUS</p> <p><b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/1023">https://www.congress.gov/bill/118th-congress/senate-bill/1023</a></p>	<p><b>Summary of Bill</b> To establish an advisory committee to inform Congress of the impact of Waters of the United States regulations on United States agriculture</p>
<p><b>Bill Number</b> S. 1022</p> <p><b>Bill Title</b> Define WOTUS Act</p>	<p><b>Date Introduced</b> 03/29/23</p> <p><b>Assigned Committee(s)</b> Environment and Public Works</p>	<p><b>WSWC Keywords</b> WOTUS</p> <p><b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/1022">https://www.congress.gov/bill/118th-congress/senate-bill/1022</a></p>	<p><b>Summary of Bill</b> To amend the CWA to modify the definition of navigable waters</p>

<b>Passed (S/H)</b>	<b>Hearing(s)</b>		
<b>Bill Sponsor</b> Sen. Braun, Mike [R-IN]	<b>Co-sponsors</b> 2 co-sponsors		
<b>Bill Number</b> H.R. 1740 <b>Bill Title</b> No Title	<b>Date Introduced</b> 03/23/23 <b>Assigned Committee(s)</b> T&I, Energy and Commerce	<b>WSWC Keywords</b> WIFIA <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/1740">https://www.congress.gov/bill/118th-congress/house-bill/1740</a>	<b>Summary of Bill</b> To amend the Water Infrastructure Finance and Innovation Act of 2014 to establish payment and performance security requirements for projects. Requires a borrower to secure the financial project with payment and performance bonds in minimum amounts.
<b>Passed (S/H)</b>	<b>Hearing(s)</b>		
<b>Bill Sponsor</b> Rep. Bost, Mike [R-IL-12]	<b>Co-sponsors</b> 3 co-sponsors		
<b>Bill Number</b> S.950 / H.R. 1738 <b>Bill Title</b> No Title	<b>Date Introduced</b> 03/22/23 <b>Assigned Committee(s)</b> Indian Affairs; Natural Resources	<b>WSWC Keywords</b> Tribal water rights <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/950">https://www.congress.gov/bill/118th-congress/senate-bill/950</a>	<b>Summary of Bill</b> To amend the Omnibus Public Land Management Act of 2009 to make a technical correction to the water rights settlement for the Shoshone-Paiute Tribes of the Duck Valley Reservation. The bill adjusts interest payments to the Tribes' Development Fund, adding \$5.1M, and makes indexing adjustments since 2016.
<b>Passed (S/H)</b>	<b>Hearing(s)</b> 3/29/23: SIA hearing; S. Rpt. 118-80 7/26/23: Senate Legislative Calendar		
<b>Bill Sponsor</b> Sen. Cortez Masto, Catherine [D-NV]	<b>Co-sponsors</b>		
<b>Bill Number</b> S. 938 / H.R. 1729 <b>Bill Title</b> Water Affordability, Transparency, Equity, and Reliability Act	<b>Date Introduced</b> 03/22/23 <b>Assigned Committee(s)</b> Senate Finance Several House Committees	<b>WSWC Keywords</b> Infrastructure <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/938">https://www.congress.gov/bill/118th-congress/senate-bill/938</a>	<b>Summary of Bill</b> To establish a trust fund, up to \$35B or 1/20th of the CW and DW needs assessment, to provide for adequate funding for water and sewer infrastructure. The bill allocates specific percentages to infrastructure under EPA, USDA, HHS, and Labor programs: Clean Water, Safe Drinking Water, Household Wells, Colonias, Indian Health Services, and Water Operators Job Training grants.
<b>Passed (S/H)</b>	<b>Hearing(s)</b>		
<b>Bill Sponsor</b> Sen. Sanders, Bernard [I-VT] Rep. Watson Coleman, Bonnie [D-NJ-12]	<b>Co-sponsors</b>		
<b>Bill Number</b> S. 843 / H.R. 2694 <b>Bill Title</b> No title	<b>Date Introduced</b> 03/16/23 <b>Assigned Committee(s)</b> Energy and Natural Resources Natural Resources	<b>WSWC Keywords</b> Dams <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/843">https://www.congress.gov/bill/118th-congress/senate-bill/843</a>	<b>Summary of Bill</b> The bill would amend the IIJA to extend funding eligibility under 43 USC 3204(b) to dams developed under the Carey Act (43 USC 641) for rehabilitation and reconstruction projects
<b>Passed (S/H)</b>	<b>Hearing(s)</b>		

<b>Bill Sponsor</b> Sen. Risch, James E. [R-ID] Rep. Simpson, Michael K. [R-ID-2]	5/17/23: SENR hearing; reported 118-68 7/19/23: Senate Calendar <b>Co-sponsors</b>		
<b>Bill Number</b> S. 798 / H.R. 1593 <b>Bill Title</b> Land and Water Conservation Fund Water Amendments Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Sen. Rubio, Marco [R-FL] Rep. Mast, Brian J. [R-FL-21]	<b>Date Introduced</b> 03/14/23 <b>Assigned Committee(s)</b> Energy and Natural Resources Natural Resources  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b> water quality <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/798">https://www.congress.gov/bill/118th-congress/senate-bill/798</a>	<b>Summary of Bill</b> Authorizes DOI to use LWCF funds to provide financial assistance for water quality improvement projects that restore natural hydrologic systems such as wetlands or living shorelines. To be eligible, the statewide outdoor recreation plan must identify projects on waters with a CWA 303(d) impaired water quality control plan
<b>Bill Number</b> H.R. 1556/S. 1022 <b>Bill Title</b> Define WOTUS Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Miller, Mary E. [R-IL-15] Sen. Braun, Mike [R-IN]	<b>Date Introduced</b> 03/10/23 <b>Assigned Committee(s)</b> Transportation and Infrastructure Environment and Public Works  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b> WOTUS <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/1556">https://www.congress.gov/bill/118th-congress/house-bill/1556</a>	<b>Summary of Bill</b> The bill would amend the CWA to define "navigable waters" to explicitly exclude intermittent or ephemeral waters, subsurface waters, some intrastate waters, man-made channels or ditches, prior converted cropland, artificially irrigated areas, artificial lakes and ponds constructed in uplands, water-filled depressions in uplands, stormwater control features, wastewater recycling structures in uplands, waste treatment systems, water that require means beyond visual inspection to determine whether they are covered (e.g., aerial photographs, satellite imaging, or hydrologic testing), and limits determinations to the present-day regardless of whether the waters were navigable in the past or could become navigable in the future. The bill further defines "continuous surface water connection," "relatively permanent, standing, or continuously flowing bodies of water. Section 520 clarifies procedures for jurisdictional determinations. "Navigable waters" would include (1) territorial seas, (2) interstate waters used for interstate commerce, (3) relatively permanent, standing, or continuously flowing bodies of water that flow directly into interstate waters, and (4) adjacent wetlands that have a continuous surface water connection to interstant waters and their tributaries.
<b>Bill Number</b> S. 747 / H.R. 1517 <b>Bill Title</b> Relief for Farmers Hit with PFAS Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Sen. Collins, Susan M. [R-ME] Rep. Pingree, Chellie [D-ME-1]	<b>Date Introduced</b> 03/09/23 <b>Assigned Committee(s)</b> Agriculture, Nutrition, and Forestry Agriculture  <b>Hearing(s)</b>  <b>Co-sponsors</b> 8 Independent and Democratic cosponsors including NM	<b>WSWC Keywords</b> PFAS <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/747">https://www.congress.gov/bill/118th-congress/senate-bill/747</a>	<b>Summary of Bill</b> Directs USDA to establish a program to provide grants to eligible states and tribes, in consultation with EPA, to address PFAS contamination on agricultural lands. At least 30% of the total funding must go to one or more eligible governments with a population <3M, with state/tribe prioritizing purposes that directly assist producers experiencing financial losses due to PFAS. The bill authorizes \$500M for FY24-28.
<b>Bill Number</b> H.R. 1607 / S. 739 <b>Bill Title</b> No Title  <b>Passed (S/H)</b>	<b>Date Introduced</b> 03/09/23 <b>Assigned Committee(s)</b> Energy and Natural Resources Natural Resources  <b>Hearing(s)</b>	<b>WSWC Keywords</b> Hydropower <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/739">https://www.congress.gov/bill/118th-congress/senate-bill/739</a>	<b>Summary of Bill</b> This bill would clarify federal jurisdiction over land reserved under a 1917 agreement between the U.S. and the Salt River Valley Water Users' Association, with the exclusive right to use the covered land for the development, generation, and transmission of electrical power and energy for the use and benefit of the Salt River Federal Reclamation Project. The federal government will hold title to the land, and SRP will be responsible for O&M. The Bureau of Reclamation is developing pumped storage at the site near the Roosevelt Dam on the Salt River in Arizona.

<b>Bill Sponsor</b> Sen. Kelly, Mark [D-AZ] Rep. Schweikert, David [R-AZ-1]	06/14/2023: Subcommittee hearings held 07/19/2023: Ordered to be reported with amendment in the nature of a substitute by unanimous consent <b>Co-sponsors</b> 3 Bipartisan cosponsors from AZ		
<b>Bill Number</b> S. 702/H.R. 4890 <b>Bill Title</b> Urban Waters Federal Partnership Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Sen. Sinema, Kyrsten [I-AZ]; Rep. Stanton, Greg [D-AZ-4]	<b>Date Introduced</b> 03/08/23 <b>Assigned Committee(s)</b> Environment and Public Works; House T&I, Natural Resources  <b>Hearing(s)</b>  <b>Co-sponsors</b> 1 Republican cosponsor, TX 1 Democratic cosponsor, AZ	<b>WSWC Keywords</b> water resources <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/702">https://www.congress.gov/bill/118th-congress/senate-bill/702</a>	<b>Summary of Bill</b> The Senate bill authorizes EPA, DOI, and USDA to establish the Urban Waters Federal Partnership Program to coordinate across federal agencies (including the Corps, NOAA, DOE, FEMA, and other agencies) to support economically distressed urban communities in reconnecting with their associated waterways, including technical assistance, funding for projects that provide habitat or water quality improvements, increase river recreation, enhance community resiliency, install infrastructure, strengthen community engagement and education regarding water resources, and carry out community-based capacity building
<b>Bill Number</b> H.R. 1407 / S. 726 <b>Bill Title</b> Financing Lead Out of Water Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Kildee, Daniel T. [D-MI-8] Sen. Bennet, Michael F. [D-CO]	<b>Date Introduced</b> 03/07/23 <b>Assigned Committee(s)</b> House Ways and Means Senate Finance  <b>Hearing(s)</b>  <b>Co-sponsors</b> 12 Democratic including NM, CO, CA and 5 Republican cosponsors.	<b>WSWC Keywords</b> water quality <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/1407">https://www.congress.gov/bill/118th-congress/house-bill/1407</a>	<b>Summary of Bill</b> This bill allows the issuance of tax-exempt private activity bonds to finance the replacement of any privately-owned portion of a lead service line in a public water system. Specifically, the bill provides that the use of proceeds from such bonds for replacement of a lead service line does not constitute private business use.
<b>Bill Number</b> H.R. 1367 / S. 660 <b>Bill Title</b> Water System Threat Preparedness and Resilience Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Schakowsky, Janice D. [D-IL-9] Sen. Markey, Edward J. [D-MA]	<b>Date Introduced</b> 03/03/23 <b>Assigned Committee(s)</b> Transportation and Infrastructure; Energy and Commerce Environment and Public Works  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b> Infrastructure <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/1367">https://www.congress.gov/bill/118th-congress/house-bill/1367</a>	<b>Summary of Bill</b> This bill requires the Environmental Protection Agency (EPA) to create a program to support increased membership and involvement of certain smaller water utilities and water treatment works (e.g., wastewater systems) in the Water Information Sharing and Analysis Center (WaterISAC). As background, WaterISAC is a group of water and wastewater systems and associations that coordinate with the EPA and other federal agencies to collect and analyze data on water security and threats. WaterISAC also provides analysis and resources to support response, mitigation, and resilience initiatives.
<b>Bill Number</b> H.R. 1304 / S. 595 <b>Bill Title</b> Rio San José and Rio Jemez Water Settlements Act	<b>Date Introduced</b> 03/01/23 <b>Assigned Committee(s)</b> Natural Resources Indian Affairs	<b>WSWC Keywords</b> Indian water rights <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/1304">https://www.congress.gov/bill/118th-congress/house-bill/1304</a>	<b>Summary of Bill</b> To approve the settlement of water rights claims of the Pueblos of Acoma and Laguna in the Rio San José Stream System and the Pueblos of Jemez and Zia in the Rio Jemez Stream System in the State of New Mexico

<b>Passed (S/H)</b>	<b>Hearing(s)</b>		
<b>Bill Sponsor</b> Rep. Leger Fernandez, Teresa [D-NM-3] Sen. Heinrich, Martin [D-NM]	<b>Co-sponsors</b> 2 Democratic cosponsors from NM		
<b>Bill Number</b> H.R. 1274 / S. 612 <b>Bill Title</b> Lake Tahoe Restoration Reauthorization Act	<b>Date Introduced</b> 03/01/23 <b>Assigned Committee(s)</b> Natural Resources; Transportation and Infrastructure; Agriculture <b>Hearing(s)</b>	<b>WSWC Keywords</b> water quality <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/1274">https://www.congress.gov/bill/118th-congress/house-bill/1274</a>	<b>Summary of Bill</b> This bill expands the Smith River National Recreation Area in California into Oregon and designates specified segments of the North Fork Smith River as components of the National Wild and Scenic Rivers System (NWSRS).  The management emphasis for any portion of the recreation area in Oregon shall be on roadless backcountry and white-water recreation.  The Department of Agriculture (USDA) shall study the additions to the recreation area, including inventories and assessments of water features (e.g., streams and lakes). USDA shall modify any applicable management plan to protect the resources inventoried.  USDA shall seek to enter into a memorandum of understanding with applicable Indian tribes to (1) provide them with access to the portions of the recreation area in Oregon to conduct historical and cultural activities; and (2) develop interpretive information to be provided to the public on the history of, and use of the area by, those tribes.
<b>Passed (S/H)</b>	<b>Hearing(s)</b>		
<b>Bill Sponsor</b> Rep. Amodei, Mark E. [R-NV-2] Sen. Cortez Masto, Catherine [D-NV]	<b>Co-sponsors</b> 4 Democratic and 1 Republican cosponsors from NV and CA		
<b>Bill Number</b> S. 540 / H.R. 1236 <b>Bill Title</b> Protect the West Act	<b>Date Introduced</b> 02/28/23 <b>Assigned Committee(s)</b> Agriculture, Nutrition, and Forestry <b>Hearing(s)</b>	<b>WSWC Keywords</b> water quality and quantity <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/540">https://www.congress.gov/bill/118th-congress/senate-bill/540</a>	<b>Summary of Bill</b> The bill authorizes \$60B for an Outdoor Restoration Fund, with \$20B for a Restoration and Resilience Grant program and \$40B for the Restoration Resilience Partnership Program. The bill would establish a Restoration Fund Advisory Council, with 12 members representing states, tribes, local government, resource-dependent industries, conservation, wildlife, or watershed organizations, and national experts on restoration, economic development, and community and climate resilience. For the grant program, priority projects include collaborative projects that address shared priorities of federal and non-federal partners, advance state and tribal plans relating to forests and water, utilize watershed analytics to measure expected outcomes, and improve long-term economic security. The projects would focus on fire ecosystems, hazardous fuels reduction, wildlife habitat, and "measurably improve water quality or water quantity outcomes in waterways that flow through and out of priority areas."
<b>Passed (S/H)</b>	<b>Hearing(s)</b>		
<b>Bill Sponsor</b> Sen. Bennet, Michael F. [D-CO] Rep. Crow, Jason [D-CO-6]	<b>Co-sponsors</b> 2 Democratic co-sponsors (CO, OR)		
<b>Bill Number</b> H.R. 1181 <b>Bill Title</b> To amend the Federal Water Pollution Control Act with respect to permitting terms, and for other purposes.	<b>Date Introduced</b> 02/24/23 <b>Assigned Committee(s)</b> Transportation and Infrastructure <b>Hearing(s)</b>	<b>WSWC Keywords</b> NPDES permits <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/1181">https://www.congress.gov/bill/118th-congress/house-bill/1181</a>	<b>Summary of Bill</b> This bill extends the maximum term for certain permits issued under the National Pollutant Discharge Elimination System (NPDES) program. Specifically, the bill extends the maximum term for NPDES permits issued to states or municipalities from 5 to 10 years.
<b>Passed (S/H)</b>	<b>Hearing(s)</b>		
<b>Bill Sponsor</b> Rep. Garamendi, John [D-CA-8]	<b>Co-sponsors</b> 2 Democrat and 2 Republican co-sponsors		
<b>Bill Number</b> H.R. 1152 <b>Bill Title</b> Water Quality Certification and Energy Project Improvement Act	<b>Date Introduced</b> 02/24/23 <b>Assigned Committee(s)</b> Transportation and Infrastructure <b>Hearing(s)</b>	<b>WSWC Keywords</b> CWA 401 <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/1152">https://www.congress.gov/bill/118th-congress/house-bill/1152</a>	<b>Summary of Bill</b> The bill would amend CWA 401, limiting the authority and timing for states to issue certifications. The bill would require each State to publish new certification requirements within 30 days of when the bill is enacted. "A decision to grant or deny a request for certification shall be based only on the applicable provisions of sections 301, 302, 303, 306, and 307, and the grounds for the decision shall be set forth in writing and provided to the applicant. Not later than 90 days after receipt of a request for certification, the State, interstate agency, or Administrator, as the case may be, shall identify in writing all specific additional materials or information that are necessary to grant or deny the request." The bill would: (1) strike consideration of "activities" and limit certifications to only "discharges"; (2) require a
<b>Passed (S/H)</b>	<b>Hearing(s)</b>		

<b>Bill Sponsor</b> Rep. Rouzer, David [R-NC-7]	03/17/2023: Reported by the Committee on Transportation and Infrastructure. 03/17/2023: Placed on the Union Calendar by the House <b>Co-sponsors</b> 2 co-sponsors Rep. Garret Graves (R-LA) and Rep. Scott Perry (R-PA).		direct discharge into navigable waters; (3) remove the requirement for state applications, allowing a "request for certification" to trigger several statutory requirements; and (4) replaces broad consideration of "water quality requirements" in several places with the more specific provisions of CWA 301, 302, 303, 306, or 307. See also H.R. 1, H.R. 2811
<b>Bill Number</b> S. 482  <b>Bill Title</b> Klamath Power and Facilities Agreement Support Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Sen. Wyden, Ron [D-OR]	<b>Date Introduced</b> 02/16/23  <b>Assigned Committee(s)</b> Energy and Natural Resources  <b>Hearing(s)</b> 07/18/2023: Hearings held  <b>Co-sponsors</b> Sen. Merkley, Jeff [D-OR]	<b>WSWC Keywords</b> Hydropower and water supply  <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/482">https://www.congress.gov/bill/118th-congress/senate-bill/482</a>	<b>Summary of Bill</b> The bill directs Reclamation to support lowering the Klamath Irrigation District's net delivered power cost, authorizes agreements with state and local entities for watershed projects, authorizes Reclamation to cover a portion of O&M costs of an irrigation pumping plant in Tulelake, CA, and authorization for an agreement to take ownership and operation of the Keno Dam and Link River Dam.
<b>Bill Number</b> S. 466  <b>Bill Title</b> Federal PFAS Research Evaluation Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Sen. Peters, Gary C. [D-MI]	<b>Date Introduced</b> 02/16/23  <b>Assigned Committee(s)</b> Commerce, Science, and Transportation  <b>Hearing(s)</b>  <b>Co-sponsors</b> 3 Bipartisan cosponsors	<b>WSWC Keywords</b> PFAS  <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/466">https://www.congress.gov/bill/118th-congress/senate-bill/466</a>	<b>Summary of Bill</b> This bill requires various studies and reports on the exposure, hazards, and management of PFAS, and directs an implementation plan.
<b>Bill Number</b> S. 461 / H.R. 1061  <b>Bill Title</b> No Title  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Sen. Cramer, Kevin [R-ND]	<b>Date Introduced</b> 02/16/23  <b>Assigned Committee(s)</b> Energy and Natural Resources  <b>Hearing(s)</b>  <b>Co-sponsors</b> Sen. Hoeven, John [R-ND]	<b>WSWC Keywords</b> Hydropower  <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/461">https://www.congress.gov/bill/118th-congress/senate-bill/461</a>	<b>Summary of Bill</b> To make certain irrigation districts eligible for Pick-Sloan Missouri Basin Program pumping power.
<b>Bill Number</b> H.R. 1008  <b>Bill Title</b> Combat Harmful Algal Blooms Act  <b>Passed (S/H)</b>	<b>Date Introduced</b> 02/14/23  <b>Assigned Committee(s)</b> T&I, Energy and Commerce  <b>Hearing(s)</b>	<b>WSWC Keywords</b> HABs  <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/1008">https://www.congress.gov/bill/118th-congress/house-bill/1008</a>	<b>Summary of Bill</b> This bill includes algal blooms within the definition of major disaster under the Robert T. Stafford Disaster Relief and Emergency Assistance Act and directs the Centers for Disease Control and Prevention to submit to specified congressional committees a detailed study relating to the health effects of exposure to cyanotoxins in the air that result from algal blooms.

<b>Bill Sponsor</b> Rep. Donalds, Byron [R-FL-19]	<b>Co-sponsors</b> 6 Democratic and 9 Republican cosponsor from FL		
<b>Bill Number</b> H.R. 873 <b>Bill Title</b> Water Quality and Environmental Innovation Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Donalds, Byron [R-FL-19]	<b>Date Introduced</b> 02/08/23 <b>Assigned Committee(s)</b> Transportation and Infrastructure; Energy and Commerce; Science, Space, and Technology <b>Hearing(s)</b>  <b>Co-sponsors</b> Bipartisan cosponsors from NJ and FL	<b>WSWC Keywords</b> water quality <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/873">https://www.congress.gov/bill/118th-congress/house-bill/873</a>	<b>Summary of Bill</b> This bill establishes and transfers funds to the Water Quality and Environmental Innovation Fund. Until September 30, 2028, the Environmental Protection Agency (EPA) may use the fund to award grants and contracts to carry out projects (1) that use emerging technologies (e.g., artificial intelligence or quantum information science) to address threats to water quality; or (2) for the research, development, or design of such technologies. At the start of each fiscal year from FY2024 through FY2028, an amount of funding must be transferred to the fund that is equal to the amount that the EPA determines will be collected in such fiscal year from fees and charges under the Motor Vehicle and Engine Compliance Program of the EPA.
<b>Bill Number</b> S. 306 <b>Bill Title</b> Tule River Tribe Reserved Water Rights Settlement Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Padilla, Alex [Sen.-D-CA]	<b>Date Introduced</b> 02/07/23 <b>Assigned Committee(s)</b> Indian Affairs  <b>Hearing(s)</b> 03/29/2023: Committee on Indian Affairs ordered to be reported without amendment favorably. <b>Co-sponsors</b> Sen. Feinstein, Dianne [D-CA]	<b>WSWC Keywords</b> Tribal water rights <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/306">https://www.congress.gov/bill/118th-congress/senate-bill/306</a>	<b>Summary of Bill</b> A bill to approve the Tule River Tribe's water rights settlement.
<b>Bill Number</b> H.R. 797 / S. 271 <b>Bill Title</b> Farm System Reform Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Khanna, Ro [Rep.-D-CA-17]	<b>Date Introduced</b> 02/03/23 <b>Assigned Committee(s)</b> Agriculture; Transportation and Infrastructure <b>Hearing(s)</b>  <b>Co-sponsors</b> 34 Democratic cosponsors including CA, OR, WA, TX	<b>WSWC Keywords</b> CAFOs <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/797">https://www.congress.gov/bill/118th-congress/house-bill/797</a>	<b>Summary of Bill</b> This bill places a moratorium on large concentrated animal feeding operations (CAFOs); expands country-of-origin labeling; and expands requirements in the livestock, poultry, and meat markets. Large CAFO may not commence or expand operations and, after January 1, 2040, may not continue to operate. Department of Agriculture must provide grants to eligible animal feed operation (AFO) owners to pay off related debt and to transition the property to alternative agriculture activities. Integrators that exercise substantial operational control of an AFO are liable and subject to civil action for an AFO's operation. Further, the bill expands requirements and prohibitions under the Packers and Stockyards Act of 1921 in order to increase competition and transparency in the livestock, poultry, and meat markets.
<b>Bill Number</b> H.J. Res. 27 / S.J.Res. 7 <b>Bill Title</b> No Title <b>Passed (S/H)</b>	<b>Date Introduced</b> 02/02/23 <b>Assigned Committee(s)</b> Transportation and Infrastructure  <b>Hearing(s)</b>	<b>WSWC Keywords</b> WOTUS <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-joint-resolution/27">https://www.congress.gov/bill/118th-congress/house-joint-resolution/27</a>	<b>Summary of Bill</b> This joint resolution nullifies the rule titled Revised Definition of "Waters of the United States," which was submitted by the U.S. Army Corps of Engineers and the Environmental Protection Agency on January 18, 2023. The rule specifies which bodies of water fall under the scope of the Clean Water Act and are thereby under federal jurisdiction and protected. For example, the definition in the 2023 rule includes certain wetlands and ephemeral waters (e.g., waters that flow intermittently).  The 2023 rule replaced the 2020 Navigable Waters Protection Rule that included a narrower definition of waters of

<p>3/9/23 Passed House: 227-198 3/29/23 Passed Senate: 53-43 4/6/23 Vetoes by President 4/18/23 House failed to pass over veto, 227-196</p> <p><b>Bill Sponsor</b> Graves, Sam [Rep.-R-MO-6] Capito, Shelley Moore [Sen.-R-WV]</p>	<p><b>Co-sponsors</b> House - 170 Republican cosponsors Senate - 48 Republican cosponsors, 1 Democratic cosponsor from WV</p>		the United States.
<p><b>Bill Number</b> S. 202/H.R.4197</p> <p><b>Bill Title</b> Collaborative Forest Landscape Restoration Program Reauthorization Act</p> <p><b>Passed (S/H)</b></p> <p><b>Bill Sponsor</b> Sen. Merkley, Jeff [D-OR]</p>	<p><b>Date Introduced</b> 02/01/23</p> <p><b>Assigned Committee(s)</b> Agriculture, Nutrition, and Forestry</p> <p><b>Hearing(s)</b></p> <p><b>Co-sponsors</b> 3 Democratic and 2 Republican cosponsors from ID, OR, CO, MT</p>	<p><b>WSWC Keywords</b> Wildfires</p> <p><b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/202">https://www.congress.gov/bill/118th-congress/senate-bill/202</a></p>	<p><b>Summary of Bill</b> This bill reauthorizes and expands the Collaborative Forest Landscape Restoration program, which helps fund collaborative and community-based forest management. The bill emphasizes proposals that use good neighbor agreements, reduce the risk of uncharacteristic wildfire or increase ecological restoration activities, and enhance watershed health and drinking water sources.</p>
<p><b>Bill Number</b> S. 174/H.R.4017</p> <p><b>Bill Title</b> Conservation Reserve Program Improvement Act</p> <p><b>Passed (S/H)</b></p> <p><b>Bill Sponsor</b> Sen. Thune, John [R-SD]</p>	<p><b>Date Introduced</b> 01/31/23</p> <p><b>Assigned Committee(s)</b> Agriculture, Nutrition, and Forestry</p> <p><b>Hearing(s)</b></p> <p><b>Co-sponsors</b> Bipartisan Cosponsors from MN and SD</p>	<p><b>WSWC Keywords</b> Farm Bill Conservation Programs</p> <p><b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/174">https://www.congress.gov/bill/118th-congress/senate-bill/174</a></p>	<p><b>Summary of Bill</b> A bill to amend the Food Security Act of 1985 to improve the conservation reserve program (grazing and water infrastructure)</p>
<p><b>Bill Number</b> S. 162</p> <p><b>Bill Title</b> Smith River National Recreation Area Expansion Act</p> <p><b>Passed (S/H)</b></p> <p><b>Bill Sponsor</b> Sen. Merkley, Jeff [D-OR]</p>	<p><b>Date Introduced</b> 01/31/23</p> <p><b>Assigned Committee(s)</b> Energy and Natural Resources</p> <p><b>Hearing(s)</b> 07/11/2023, Reported by Senator Manchin without amendment with report No. 118-49</p> <p><b>Co-sponsors</b> 3 Democratic cosponsors from OR and CA</p>	<p><b>WSWC Keywords</b> Wild and Scenic Rivers</p> <p><b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/162">https://www.congress.gov/bill/118th-congress/senate-bill/162</a></p>	<p><b>Summary of Bill</b> This bill expands the Smith River National Recreation Area in California into Oregon and designates specified segments of the North Fork Smith River as components of the National Wild and Scenic Rivers System (NWSRS).  The management emphasis for any portion of the recreation area in Oregon shall be on roadless backcountry and white-water recreation.  The Department of Agriculture (USDA) shall study the additions to the recreation area, including inventories and assessments of water features (e.g., streams and lakes). USDA shall modify any applicable management plan to protect the resources inventoried.  USDA shall seek to enter into a memorandum of understanding with applicable Indian tribes to (1) provide them with access to the portions of the recreation area in Oregon to conduct historical and cultural activities; and (2) develop interpretive information to be provided to the public on the history of, and use of the area by, those tribes. On the adoption of a resolution by the State Land Board of Oregon, USDA shall acquire the 555 acres of land known</p>
<p><b>Bill Number</b> S. 128/H.R.4643</p>	<p><b>Date Introduced</b> 01/30/23</p>	<p><b>WSWC Keywords</b> International waters</p>	<p><b>Summary of Bill</b> This bill establishes requirements to address wastewater from the International Outfall Interceptor, which is a pipeline</p>



<b>Bill Title</b> Nogales Wastewater Improvement Act	<b>Assigned Committee(s)</b> Foreign Relations	<b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/128">https://www.congress.gov/bill/118th-congress/senate-bill/128</a>	that carries wastewater from the United States-Mexico border to the Nogales International Wastewater Treatment Plant. The plant, which is located in Rio Rico, Arizona, treats sewage and wastewater originating from Nogales, Mexico, and Nogales, Arizona.  The bill transfers the ownership, operations, and maintenance of the pipeline from the city of Nogales, Arizona, to the U.S. Section of the International Boundary and Water Commission. The commission must construct, operate, and maintain a debris screen at the pipeline's Manhole One for intercepting debris and drugs coming into the United States from Nogales, Mexico.  The bill also limits the portion of the costs that the city of Nogales, Arizona, must pay for the Nogales sanitation
<b>Passed (S/H)</b>	<b>Hearing(s)</b>		
<b>Bill Sponsor</b> Sen. Sinema, Kyrsten [I-AZ]	<b>Co-sponsors</b> Senator Mark Kelly (D-AZ)		
<b>Bill Number</b> S. 115/H.R.3167  <b>Bill Title</b> Clean Water Allotment Modernization Act	<b>Date Introduced</b> 01/26/23  <b>Assigned Committee(s)</b> Environment and Public Works	<b>WSWC Keywords</b> SRFs  <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/115/">https://www.congress.gov/bill/118th-congress/senate-bill/115/</a>	<b>Summary of Bill</b> This bill revises the formula the Environmental Protection Agency (EPA) uses to determine how to distribute funds from the Clean Water State Revolving Fund (SRF) program. Under the program, the EPA allocates funding to states for water quality infrastructure projects, such as wastewater systems and stormwater management projects. In FY2024-FY2028, the EPA must provide an initial allotment to each state that is equal to the amount the state received in FY2023. The EPA must also provide an additional allotment to each state that is based on its share of the U.S. population.  In FY2029 and each subsequent fiscal year, the EPA must use an updated allotment formula, which is based on the needs of states as identified in the most recently available clean watersheds needs survey.  Beginning in FY2024, the formula must also provide allotments for Indian tribes and territories. In addition, the formula must provide an allotment for EPA's oversight of SRF projects to ensure they use American iron and steel.
<b>Passed (S/H)</b>	<b>Hearing(s)</b>		
<b>Bill Sponsor</b> Sen. Rubio, Marco [R-FL]	<b>Co-sponsors</b> 2 bipartisan co-sponsors from AZ, FL		
<b>Bill Number</b> S. 64  <b>Bill Title</b> Water Rights Protection Act	<b>Date Introduced</b> 01/24/23  <b>Assigned Committee(s)</b> Energy and Natural Resources	<b>WSWC Keywords</b> water rights  <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/senate-bill/64">https://www.congress.gov/bill/118th-congress/senate-bill/64</a>	<b>Summary of Bill</b> This bill addresses issues of water rights with respect to lands under the jurisdiction of the Department of the Interior and the Department of Agriculture, including water rights of federally recognized Indian tribes. Specifically, such departments must ensure that federal action imposes no greater restriction or regulatory requirement than under applicable state water law.  Further, such departments shall not take actions that adversely affect state authority in permitting water usage or in adjudicating water rights. The bill also prohibits such departments from requiring water users to transfer water rights to the United States or acquire water rights in the name of the United States as a condition of issuing or renewing a land use or occupancy agreement.
<b>Passed (S/H)</b>	<b>Hearing(s)</b>		
<b>Bill Sponsor</b> Sen. Barrasso, John [R-WY]	<b>Co-sponsors</b> 2 Republican co-sponsors from ID		
<b>Bill Number</b> H.R. 289  <b>Bill Title</b> Protect Our Water Rights Act	<b>Date Introduced</b> 01/11/23  <b>Assigned Committee(s)</b> Natural Resources	<b>WSWC Keywords</b> water supply  <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/289">https://www.congress.gov/bill/118th-congress/house-bill/289</a>	<b>Summary of Bill</b> The bill directs Reclamation operations in the Central Valley Project and Upper Klamath Lake. Allocations for the Sacramento Valley contractors would align with the percentages in the Sacramento Water Year Type Index, with not less than 100% of their contract quantities in Wet and Above Normal Years, not less than 75% in Below Normal years, and not less than 50% in Dry and Critically Dry years. The bill provides additional conditions regarding substitute supplies, making water available to wetlands, protection of municipal and industrial water supplies, and protection of other operations, deliveries, and allocations to other Reclamation project contractors. The bill also directs Reclamation to operate all water in the Upper Klamath Lake above elevation 4136 feet solely for agricultural and refuge purposes, and to the extent practicable, maximize storage in the Upper Klamath Lake.
<b>Passed (S/H)</b>	<b>Hearing(s)</b>		
<b>Bill Sponsor</b> LaMalfa, Doug [Rep.-R-CA-1]	<b>Co-sponsors</b>		
<b>Bill Number</b> H.R. 277 / S. 184  <b>Bill Title</b> Regulations From the Executive in Need of Scrutiny (REINS) Act	<b>Date Introduced</b> 01/11/23  <b>Assigned Committee(s)</b> House - Judiciary, Rules, Budget Senate - placed directly on the legislative calendar	<b>WSWC Keywords</b> Regulatory oversight  <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/277">https://www.congress.gov/bill/118th-congress/house-bill/277</a>	<b>Summary of Bill</b> This bill revises provisions relating to congressional review of agency rulemaking. Specifically, the bill establishes a congressional approval process for a major rule. A major rule may only take effect if Congress approves of the rule. A major rule is a rule that has resulted in or is likely to result in (1) an annual effect on the economy of \$100 million or more; (2) a major increase in costs or prices for consumers, individual industries, government agencies, or geographic regions; (3) significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises; or (4) an increase in mandatory vaccinations. The bill also provides for the designation, review, and approval of at least 20% of agency rules currently in effect.
<b>Passed (S/H)</b> House: 06/14/2023 passed 221-210	<b>Hearing(s)</b>		

<b>Bill Sponsor</b> Rep. Kat Cammack (R-Fla.) Sen. Paul, Rand [R-KY]	<b>Co-sponsors</b> House - 182 Republican co-sponsors Senate - 28 Republican co-sponsors		
<b>Bill Number</b> H.R. 250 <b>Bill Title</b> Clean Water SRF Parity Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. Garamendi, John [D-CA-8]	<b>Date Introduced</b> 01/10/23 <b>Assigned Committee(s)</b> Transportation and Infrastructure  <b>Hearing(s)</b>  <b>Co-sponsors</b> 1 Republican and 4 Democrat co-sponsors	<b>WSWC Keywords</b> SRFs <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/250">https://www.congress.gov/bill/118th-congress/house-bill/250</a>	<b>Summary of Bill</b> The bill would amend the CWA (33 USC 1383) to make certain qualified nonprofit entity and POTW projects and activities eligible for financial assistance under SRFs, with limitations on contributions and recipients. This bill expands the state revolving fund established under the Clean Water Act, including by allowing low-interest loans to be given to privately owned treatment works to address wastewater. Currently, loans are given to wastewater systems that are publicly owned.
<b>Bill Number</b> H.R. 215 <b>Bill Title</b> Working to Advance Tangible and Effective Reforms (WATER) for California Act <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Valadao, David G. [Rep.-R-CA-22]	<b>Date Introduced</b> 01/09/23 <b>Assigned Committee(s)</b> Natural Resources  <b>Hearing(s)</b> 04/28/2023: Committee on Natural Resources approved for report 22-17 <b>Co-sponsors</b> 11 Republican co-sponsors, CA	<b>WSWC Keywords</b> water supply <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/215">https://www.congress.gov/bill/118th-congress/house-bill/215</a>	<b>Summary of Bill</b> The bill intends to provide long-term water supply and regulatory reliability to drought-stricken California by directing the operations of the CVP and SWP, directing allocations of water for Sacramento Valley Contractors, authorizing a Shasta Reservoir enlargement project, and expediting CVP mitigation and restoration actions, prioritizing the refuge water supply program. Section 103 directs the use of additional CVP yield for SWP contractors when California alters SWP operations in a way that reduces the water supply. It also prohibits California from restricting the exercise of any state water right (including pre-1914 appropriative or riparian right) to offset any impact resulting from the implementation of this bill on any species affected by operations of the CVP or SWP. Section 202 allocates irrigation water to CVP contractors in the Sacramento River Watershed during wet and dry years as a percentage of the contracted quantity.
<b>Bill Number</b> H.R. 189 <b>Bill Title</b> Action Versus No Action Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b> Rep. McClintock, Tom [R-CA-5]	<b>Date Introduced</b> 01/09/23 <b>Assigned Committee(s)</b> Natural Resources; Agriculture  <b>Hearing(s)</b>  <b>Co-sponsors</b> 6 Republican co-sponsors, including CA, OR	<b>WSWC Keywords</b> NEPA <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/189">https://www.congress.gov/bill/118th-congress/house-bill/189</a>	<b>Summary of Bill</b> For certain collaborative forest management activities (16 USC 6591b(b)(1)(C)) requiring NEPA environmental assessments (EA) or Environmental Impact Statements (EIS), the bill would limit the consideration of alternatives to only two: (1) the forest management activity, or (2) the alternative of no action. For the alternative of no action, the relevant Secretary (Agriculture or DOI) would consider the effect of no action on forest health, wildfire potential, wildlife diversity, and other factors, and the implications of resulting declines on domestic water supply, habitat, potential losses of life and property, and other economic and social factors.
<b>Bill Number</b> H.R. 186 <b>Bill Title</b> Water Supply Permitting Coordination Act  <b>Passed (S/H)</b>  <b>Bill Sponsor</b>	<b>Date Introduced</b> 01/09/23 <b>Assigned Committee(s)</b> Natural Resources  <b>Hearing(s)</b>  <b>Co-sponsors</b>	<b>WSWC Keywords</b> water storage projects <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/186/">https://www.congress.gov/bill/118th-congress/house-bill/186/</a>	<b>Summary of Bill</b> The bill directs the Bureau of Reclamation to coordinate Federal and State permitting processes and unified environmental documentation related to the construction of new surface water storage projects on lands under the jurisdiction of the Secretaries of the Interior and Agriculture, and designates the Bureau of Reclamation as the lead agency for permit processing and establishing the project schedule. Specifically, Reclamation must identify, notify, and coordinate all Federal agencies that may have jurisdiction over a review, analysis, opinion, statement, permit, license, approval, or decision for a qualifying project. A state where a project is being considered may also choose to participate as a cooperating agency. Reclamation's coordination responsibilities include (1) preparing a unified environmental review document, and (2) maintaining a consolidated administrative record and project data records. Additionally, Reclamation is authorized to accept and expend funds contributed by a nonfederal public entity to expedite the evaluation of a permit for such a project.

McClintock, Tom [Rep.-R-CA-5]	5 Republican co-sponsors, including CA, OR, and UT		expedite the evaluation of a permit for such a project.
<b>Bill Number</b> H.R. 1 / S. 947 <b>Bill Title</b> Lower Energy Costs Act  <b>Passed (S/H)</b> 3/30/23: Passed House 225-204  See H.R. <b>Bill Sponsor</b> Scalise, Steve [Rep.-R-LA-1] Sen. Kennedy, John [R-LA]	<b>Date Introduced</b> 03/14/23 <b>Assigned Committee(s)</b> Natural Resources, Energy and Commerce, Agriculture, Transportation and Infrastructure, Budget <b>Hearing(s)</b>  <b>Co-sponsors</b> House - 49 co-sponsors	<b>WSWC Keywords</b> CWA 401 <b>Congress.gov Link</b> <a href="https://www.congress.gov/bill/118th-congress/house-bill/1">https://www.congress.gov/bill/118th-congress/house-bill/1</a>	<b>Summary of Bill</b> Under §30002, the bill would amend CWA §401, limiting the authority and timing for states to issue certifications. The bill would require each State to publish new certification requirements within 30 days of when the bill is enacted. "A decision to grant or deny a request for certification shall be based only on the applicable provisions of sections 301, 302, 303, 306, and 307, and the grounds for the decision shall be set forth in writing and provided to the applicant. Not later than 90 days after receipt of a request for certification, the State, interstate agency, or Administrator, as the case may be, shall identify in writing all specific additional materials or information that are necessary to grant or deny the request." The bill would: (1) strike consideration of "activities" and limit certifications to only "discharges"; (2) require a direct discharge into navigable waters; (3) remove the requirement for state applications, allowing a "request for certification" to trigger several statutory requirements; and (4) replaces broad consideration of "water quality requirements" in several places with the more specific provisions of CWA 301, 302, 303, 306, or 307. Additionally, H.R. 1 §10009 includes provisions to promote interagency coordination for review of natural gas pipelines. Subsection (e) explicitly exempts natural gas pipelines from the CWA §401 state certification process, and shifts any discretionary decisions about terms and conditions to mitigate the discharge of pollutants to FERC as the lead coordinating agency.

**Litigation Update**  
**202nd WSWC Meeting**  
**Anchorage, AK**  
**Compiled By:**  
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This summary describes developments regarding notable litigation that pertains to WGA/WSWC policies or cases that are otherwise of interest. It focuses primarily on developments that have taken place since the beginning of 2023.

<b>Case Name</b>	<b>Issues</b>	Federal trustee affirmative duty to assess tribal water needs
<i>Center for Biological Diversity v. EPA</i>	<p>On August 18, 2023, the court vacated and remanded to EPA one of four cadmium water quality criteria (WQC) for further consideration. The plaintiff challenged EPA's 2016 revisions to ambient water quality criteria, arguing that EPA failed to consult with the FWS and NMFS as required under Section 7 of the ESA. EPA argued that formal consultation was not required, except with states as they chose how to incorporate those criteria into their water quality standards. The court held that issuing revised WQC is an "action" and, without nationwide consultation, is a violation of the ESA. The court determined that vacating all four cadmium criteria would risk environmental harm, as three criteria were more stringent than those prior to 2016. It agreed, however, to vacate the more lenient 304(a) chronic freshwater cadmium criterion due to the potential effect on protected species. The court determined that this would cause no disruption because states subsequently revising their water quality standards could simply use EPA's more stringent 2001 criterion. States that already adopted EPA's 2016 criteria could continue to rely on EPA's approval until their next triennial review.</p>	
<b>Case Number</b>		
22-cv-138		
<b>Court</b>		
U.S. District Court in Arizona		
<b>Relevant Dates</b>		
<b>Related Cases</b>		
<b>Notes</b>		
<b>Case Name</b>	<b>Issues</b>	Chevron Deference
<i>Loper Bright Enterprises v. Raimondo</i>	<p>On May 1, 2023, the U.S. Supreme Court granted certiorari with the limited issue of whether the court should overrule Chevron v. Natural Resources Defense Council, or at least clarify that statutory silence concerning controversial powers expressly but narrowly granted elsewhere in the statute does not constitute an ambiguity requiring deference to the agency. In the underlying case, the Magnuson-Stevens Act requires marine vessel owners to make room on board for federal observers to ensure compliance with federal regulations, and NMFS regulations require the owners to pay the salaries of the government-mandated observers. A divided panel of the D.C. Circuit deferred to the NMFS, identifying the silence in the statute as ambiguity that called for Chevron deference. Eighteen states filed an amicus brief in support of the petition, including Alaska, Idaho, Kansas, Montana, Nebraska, Texas, and Utah. They noted that Chevron deference, the most cited administrative case law in history, "gives agencies wide latitude to interpret statutes aggressively and shift course dramatically when administrations change. Regulation is costly; over-regulation and mercurial regulation even more so." The states argued: "This problem is not academic. Right or wrong, the lower courts treat Chevron as a heavy thumb on the federal government's side of the scale. The real-world result? Agencies have all the incentives to push expansive constructions of their governing statutes. After all, if agencies—and the administrations most of them answer to—know that lower courts will almost certainly defer to a plausible interpretation, it is hard to hold the line on a more restrained view of agency power.... Even more when administrations change and the next set of officials come in to 'undo the ambitious work of their predecessors' by 'proceeding in the opposite direction with equal zeal.' Changed agency priorities are not inherently wrong, of course—and we have seen a lot of them as presidents ask federal agencies to enact 'partisan policy agendas' that are otherwise 'stymied by congressional stalemate.' But by encouraging ever-more-ambitious theories of agency power, Chevron expands the range. Now, waffling from one aggressive construction to its opposite becomes a whipsaw. That's a bad place to be. Litigation is expensive and can take years; the countless challenges involving Chevron seem a poor investment when lower courts virtually always defer to the work of another Branch. More to the point, regulation is expensive. And when the uncertainty in the law favors over-regulation, not under, our residents and businesses pay the higher price."</p>	
<b>Case Number</b>		
22-451		
<b>Court</b>		
U.S. Supreme Court		
<b>Relevant Dates</b>		
<b>Related Cases</b>		
<b>Notes</b>		
<b>Case Name</b>	<b>Issues</b>	Federal trustee affirmative duty to assess tribal water needs
<i>Arizona v. Navajo Nation and Department of the Interior v. Navajo Nation (consolidated cases)</i>	<p>On June 22, 2023, the U.S. Supreme Court issued its 5-4 decision regarding the scope of the federal trust responsibility toward tribes. The U.S. Supreme Court held that the 1868 treaty contains no language imposing a duty on the United States to take affirmative steps to secure water for the Navajo Nation, and that the Court would not apply common-law trust principles to infer duties not found in the text of a treaty, statute, or regulation unless Congress has created a conventional trust relationship with a tribe with respect to a particular trust asset.</p> <p>BACKGROUND: The Navajo Nation filed the underlying case in 2003, which included a breach of trust claim against the federal government for failure to consider or protect the Nation's unquantified water rights in managing water projects on the Colorado River. Following a lengthy stay for settlement negotiations, the case resumed in 2013, and the Navajo Nation amended its complaint multiple times in response to decisions from the District Court and 9th Circuit about issues of sovereign immunity and standing to assert its various claims for relief. In its proposed Third Amended Complaint, the Navajo Nation sought an injunction compelling the federal government to: (1) "...determine the extent to which</p>	
<b>Case Number</b>		
#21-1484		
<b>Court</b>		
Navajo Nation v. Department of the Interior et al., 996 F.3d 623 (9th Cir. 2021)		

U.S. Supreme Court	<p>the Navajo Nation requires water from sources other than the Little Colorado River to enable its Reservation to serve as a permanent homeland for the Navajo Nation;" (2) "develop a plan to secure the water needed;" (3) "exercise [the government's] authorities, including those for the management of the Colorado River, in a manner that does not interfere with [such] plan;" and (4) "analyze" the government's "management decisions" in light of such plan and "adopt appropriate mitigation measures to offset any adverse effects" (as quoted in the DOI petition). The District Court denied the motion to file the proposed Third Amended Complaint, holding that (1) there was no treaty, statute, or regulation that imposed an enforceable trust duty on the federal government; (2) that enforceable trust duties are not inferable from implied water rights; and (3) that claims to Winters rights would have to be filed with the Supreme Court under the retained jurisdiction in Arizona v. California. The 9th Circuit reversed the decision, holding that the breach of trust claim was appropriately premised on the implied federally-reserved water rights in the Nation's treaties with the United States, under the Winters Doctrine. The court further held that the "Nation's [proposed Third Amended Complaint] does not seek judicial quantification of rights to the [Colorado] River, so we need not decide whether the U.S. Supreme Court's retained jurisdiction [in Arizona v. California] is exclusive." The 9th Circuit remanded to the District Court to allow the Navajo Nation to amend its complaint. The intervenor-defendant States of Arizona, Colorado, and Nevada, and various water districts from Arizona, California, and Nevada, appealed the decision first, presenting two questions: (1) Whether the 9th Circuit's decision was contrary to the Supreme Court's exclusive jurisdiction over the allocation of water in the Lower Basin of the Colorado River, as retained in Arizona v. California; and (2) Whether the Navajo Nation could assert breach of trust claims by relying on implied rights to water under the Winters Doctrine. The Department of the Interior also appealed the 9th Circuit's decision, presenting a different question: Whether the federal government owes the Navajo Nation an affirmative, judicially-enforceable fiduciary duty to assess and address the Navajo Nation's need for water from particular sources, in the absence of any substantive source of law that expressly establishes such a duty.</p>
<b>Relevant Dates</b>	
11/4/22: S.Ct. granted certiorari 3/20/23: Oral arguments 6/22/23: S. Ct. decision	
<b>Related Cases</b>	
<b>Notes</b>	<p><b>Case Name</b> WOTUS Rule 3.0 (88 FR 3004)</p> <p><b>Issues</b> A coalition of 24 states, led by WV and including the ten western states of AK, KS, MT, NE, ND, OK, SD, UT, and WY, requested that the rule be vacated and remanded to the agencies for violations of the Clean Water Act (CWA), the Administrative Procedures Act (APA), and the U.S. Constitution, including the Commerce Clause and the Fifth and Tenth Amendments. The States asserted that the 2023 WOTUS rule mirrors or exceeds the 2015 WOTUS Rule (enjoined by this court for likely violating the CWA grant of authority to EPA and the Corps), and that it "improperly upsets the balance of State and federal powers in an area typically dominated by the States." Each State expressed its sovereign authority to govern, manage, and protect the waters within its borders, as cited in their respective state constitutions and statutes. For a lengthier summary of the complaint, see WSW #2546 Special Report.</p> <p>On April 12, the court issued a preliminary injunction staying the implementation of the 2023 Waters of the United States (WOTUS) Rule in 24 states (AK, AL, AR, FL, GA, IA, IN, KS, LA, MI, MO, MT, ND, NE, NH, OH, OK, SC, SD, TN, UT, VA, WV, and WY). The court found that the 2023 rule has unlimited boundaries and "raises a litany of other statutory and constitutional concerns." The court noted that EPA has arguably acted beyond its statutory authority, noting problems with several categories of water, including: (1) interstate waters not connected to navigable waters; (2) impounded waters without any outlet or hydrologic connection to the tributary network; (3) an overly broad definition of tributary that includes dry waterways; (4) non-navigable intrastate waters previously considered isolated and not subject to CWA jurisdiction; and (5) a treatment of wetlands that is "plagued with uncertainty" and extends jurisdiction to remote wetlands that the U.S. Supreme Court has already excluded. For a lengthier summary of the preliminary injunction, see WSW # 2552 Special Report.</p>
<b>Case Name</b>	
<i>West Virginia et al. v. EPA</i>	
<b>Case Number</b>	
3:23-cv-00032	<p><b>Case Name</b> WOTUS Rule 3.0 (88 FR 3004)</p> <p><b>Issues</b> The complaint requested that the 2023 WOTUS rule be vacated for violations of the Constitution, the CWA, and the APA. Texas alleged: "The Final Rule harms Plaintiffs by: (1) expanding federal regulation beyond that authorized in the CWA; (2) eroding the states' authorities over their own waters; (3) increasing the states' burdens and diminishing the states' abilities to administer their own programs; and (4) undermining the states' sovereignty to regulate their internal affairs as guaranteed by the Constitution." Texas asserted that the CWA "only authorizes the Federal Agencies to regulate 'navigable waters,' defined as 'waters of the United States'" and the new rule is a violation of the CWA and APA for asserting jurisdiction over lands and waters that fall outside the CWA and effectively removing any requirement of navigability. For a lengthier summary of the complaint, see WSW #2546 Special Report.</p> <p>On March 19, 2023, the court issued a preliminary injunction preventing the 2023 WOTUS Rule from taking effect in the States of Texas and Idaho. "[T]wo aspects of the 2023 Rule make the plaintiffs particularly likely to succeed on the merits – first, the Rule's significant-nexus test, and second, the Rule's categorical extension of federal jurisdiction over all interstate waters, regardless of navigability." The court found that Chevron deference does not apply due to the criminal penalties in the rule, and due to the significant constitutional and federalism questions raised by the agencies' interpretation of the CWA. The court held that the states had standing to challenge the rule to protect their quasi-sovereign interests in regulating their land and water. For a lengthier summary of the preliminary injunction, see WSW # 2549.</p>
<b>Court</b>	
U.S. District Court in North Dakota	
<b>Relevant Dates</b>	
2/16/23: Lawsuit filed 4/12/23: Preliminary injunction (24 states) 7/18/23: Case stayed 9/1/23: Status report from Corps & EPA re: amended WOTUS rule issued	<p><b>Case Name</b> WOTUS Rule 3.0 (88 FR 3004)</p> <p><b>Issues</b> The complaint requested that the 2023 WOTUS rule be vacated for violations of the Constitution, the CWA, and the APA. Texas alleged: "The Final Rule harms Plaintiffs by: (1) expanding federal regulation beyond that authorized in the CWA; (2) eroding the states' authorities over their own waters; (3) increasing the states' burdens and diminishing the states' abilities to administer their own programs; and (4) undermining the states' sovereignty to regulate their internal affairs as guaranteed by the Constitution." Texas asserted that the CWA "only authorizes the Federal Agencies to regulate 'navigable waters,' defined as 'waters of the United States'" and the new rule is a violation of the CWA and APA for asserting jurisdiction over lands and waters that fall outside the CWA and effectively removing any requirement of navigability. For a lengthier summary of the complaint, see WSW #2546 Special Report.</p> <p>On March 19, 2023, the court issued a preliminary injunction preventing the 2023 WOTUS Rule from taking effect in the States of Texas and Idaho. "[T]wo aspects of the 2023 Rule make the plaintiffs particularly likely to succeed on the merits – first, the Rule's significant-nexus test, and second, the Rule's categorical extension of federal jurisdiction over all interstate waters, regardless of navigability." The court found that Chevron deference does not apply due to the criminal penalties in the rule, and due to the significant constitutional and federalism questions raised by the agencies' interpretation of the CWA. The court held that the states had standing to challenge the rule to protect their quasi-sovereign interests in regulating their land and water. For a lengthier summary of the preliminary injunction, see WSW # 2549.</p>
<b>Related Cases</b>	
<b>Notes</b>	
<b>Case Name</b>	<p><b>Case Name</b> WOTUS Rule 3.0 (88 FR 3004)</p> <p><b>Issues</b> The complaint requested that the 2023 WOTUS rule be vacated for violations of the Constitution, the CWA, and the APA. Texas alleged: "The Final Rule harms Plaintiffs by: (1) expanding federal regulation beyond that authorized in the CWA; (2) eroding the states' authorities over their own waters; (3) increasing the states' burdens and diminishing the states' abilities to administer their own programs; and (4) undermining the states' sovereignty to regulate their internal affairs as guaranteed by the Constitution." Texas asserted that the CWA "only authorizes the Federal Agencies to regulate 'navigable waters,' defined as 'waters of the United States'" and the new rule is a violation of the CWA and APA for asserting jurisdiction over lands and waters that fall outside the CWA and effectively removing any requirement of navigability. For a lengthier summary of the complaint, see WSW #2546 Special Report.</p> <p>On March 19, 2023, the court issued a preliminary injunction preventing the 2023 WOTUS Rule from taking effect in the States of Texas and Idaho. "[T]wo aspects of the 2023 Rule make the plaintiffs particularly likely to succeed on the merits – first, the Rule's significant-nexus test, and second, the Rule's categorical extension of federal jurisdiction over all interstate waters, regardless of navigability." The court found that Chevron deference does not apply due to the criminal penalties in the rule, and due to the significant constitutional and federalism questions raised by the agencies' interpretation of the CWA. The court held that the states had standing to challenge the rule to protect their quasi-sovereign interests in regulating their land and water. For a lengthier summary of the preliminary injunction, see WSW # 2549.</p>
<i>Texas et al. v. EPA et al.</i>	
<b>Case Number</b>	
3:23-cv-00017	
<b>Court</b>	<p><b>Case Name</b> WOTUS Rule 3.0 (88 FR 3004)</p> <p><b>Issues</b> The complaint requested that the 2023 WOTUS rule be vacated for violations of the Constitution, the CWA, and the APA. Texas alleged: "The Final Rule harms Plaintiffs by: (1) expanding federal regulation beyond that authorized in the CWA; (2) eroding the states' authorities over their own waters; (3) increasing the states' burdens and diminishing the states' abilities to administer their own programs; and (4) undermining the states' sovereignty to regulate their internal affairs as guaranteed by the Constitution." Texas asserted that the CWA "only authorizes the Federal Agencies to regulate 'navigable waters,' defined as 'waters of the United States'" and the new rule is a violation of the CWA and APA for asserting jurisdiction over lands and waters that fall outside the CWA and effectively removing any requirement of navigability. For a lengthier summary of the complaint, see WSW #2546 Special Report.</p> <p>On March 19, 2023, the court issued a preliminary injunction preventing the 2023 WOTUS Rule from taking effect in the States of Texas and Idaho. "[T]wo aspects of the 2023 Rule make the plaintiffs particularly likely to succeed on the merits – first, the Rule's significant-nexus test, and second, the Rule's categorical extension of federal jurisdiction over all interstate waters, regardless of navigability." The court found that Chevron deference does not apply due to the criminal penalties in the rule, and due to the significant constitutional and federalism questions raised by the agencies' interpretation of the CWA. The court held that the states had standing to challenge the rule to protect their quasi-sovereign interests in regulating their land and water. For a lengthier summary of the preliminary injunction, see WSW # 2549.</p>
U.S. District Court for the Southern District of Texas	
<b>Relevant Dates</b>	
1/18/23: Lawsuit filed 2/27/23: Idaho joined 3/19/23: Preliminary injunction (TX & ID only) 7/10/23: Case stayed 9/1/23: Status report from Corps & EPA re: amended WOTUS rule issued	
<b>Related Cases</b>	<p><b>Case Name</b> WOTUS Rule 3.0 (88 FR 3004)</p> <p><b>Issues</b> The complaint requested that the 2023 WOTUS rule be vacated for violations of the Constitution, the CWA, and the APA. Texas alleged: "The Final Rule harms Plaintiffs by: (1) expanding federal regulation beyond that authorized in the CWA; (2) eroding the states' authorities over their own waters; (3) increasing the states' burdens and diminishing the states' abilities to administer their own programs; and (4) undermining the states' sovereignty to regulate their internal affairs as guaranteed by the Constitution." Texas asserted that the CWA "only authorizes the Federal Agencies to regulate 'navigable waters,' defined as 'waters of the United States'" and the new rule is a violation of the CWA and APA for asserting jurisdiction over lands and waters that fall outside the CWA and effectively removing any requirement of navigability. For a lengthier summary of the complaint, see WSW #2546 Special Report.</p> <p>On March 19, 2023, the court issued a preliminary injunction preventing the 2023 WOTUS Rule from taking effect in the States of Texas and Idaho. "[T]wo aspects of the 2023 Rule make the plaintiffs particularly likely to succeed on the merits – first, the Rule's significant-nexus test, and second, the Rule's categorical extension of federal jurisdiction over all interstate waters, regardless of navigability." The court found that Chevron deference does not apply due to the criminal penalties in the rule, and due to the significant constitutional and federalism questions raised by the agencies' interpretation of the CWA. The court held that the states had standing to challenge the rule to protect their quasi-sovereign interests in regulating their land and water. For a lengthier summary of the preliminary injunction, see WSW # 2549.</p>
<b>Notes</b>	

<p><b>Case Name</b>  <i>Indian Wells Valley Water District v. All Persons Who Claim a Right to Extract Groundwater in the Indian Wells Valley Groundwater Basin, etc., et al.</i></p> <p><b>Case Number</b>  30-2021-01187275-CU-OR-CJC</p> <p><b>Court</b>  Orange County Superior Court, California</p> <p><b>Relevant Dates</b>  6/16/21: IWVWD Cross-complaint, opening the adjudication  9/7/21: California Department of Water Resources received notice of the adjudication  10/13/21: form of Notice of Commencement of Groundwater Basin Adjudication approved  12/16/21: Notices mailed to basin property owners  3/17/23: Case Management Conference  9/1/23: Status Conference (awaiting judicial assignment from the Judicial Council, followed by briefing on Court's authority to determine safe yield and impose a physical solution, as well as the issue of including de minimis users and McCarran jurisdiction)</p> <p><b>Related Cases</b>  Mojave Pistachios, LLC v. IWVWD</p> <p>Comprehensive adjudication of the Cuyama Valley Groundwater Basin, another basin in an overdraft condition. (9/2/21)</p> <p><b>Notes</b>  See: <a href="https://www.iwvwd.com/basin-adjudication/">https://www.iwvwd.com/basin-adjudication/</a></p>	<p><b>Issues</b>      Water rights adjudication (groundwater), SGMA 2014, federal water rights and groundwater</p> <p>During a joint case management conference, one of the jurisdictional issues raised was whether the de minimis water users, and any overlying non-users, needed to be included in the proceeding in order for the Court to have jurisdiction over the United States as part of a comprehensive adjudication, both to ensure the US participation and to protect the due process rights of these others. Also discussed was the potential for a bifurcated trial, with phase 1 focused on the characteristics of the basin, the total groundwater and available freshwater in storage, and the safe yield. Phase 2 would then address water rights claims not already agreed to by stipulation, and the presentation of a "physical solution" (California Const. Art. X sec. 2), one that achieves the practical allocation of water among competing interests consistent with the constitutional mandate to maximize reasonable and beneficial use, and recognize established water rights. The solution seeks to make water available for a greater number of beneficial uses while still protecting senior priorities and implementing targeted management actions. Some of the parties requested that phase 1 of the trial be completed by the end of summer 2023, and phase 2 occur expeditiously thereafter.</p> <p>BACKGROUND: The original complaint was filed by Mojave Pistachios, LLC. The cross-complaint by the Indian Wells Valley Water District (IWVWD) seeks "a judgment to comprehensively determine and adjudicate all groundwater rights in the Basin and to provide a physical solution for the perpetual and continuous management of the Basin." IWVWD's website noted that water use in the basin has exceeded groundwater supply for years, resulting in an "overdraft" condition. IWVWD is a member of the Indian Wells Valley Groundwater Authority, formed pursuant to the Sustainable Groundwater Management Act (SGMA). The Authority developed and adopted a groundwater sustainability plan (GSP), and several lawsuits were filed alleging that the GSP actions to regulate water use and impose fees were unlawful and excessive, leading in part to the present adjudication. IWVWD's website said: "The Basin underlies approximately 382,000 acres or approximately 600 square miles of land. Approximately 301,000 acres of land overlying the Basin are federal property managed by Naval Air Weapons Station China Lake, the Bureau of Land Management, and the Forest Service. The non-federal lands overlying the Basin consist of the City of Ridgecrest and unincorporated land in the Counties of Kern, Inyo, and San Bernardino. Water rights of the federal government are beyond the jurisdiction of the State to regulate. Under applicable law, the federal government may only participate in a water rights lawsuit if such a case is considered to be what is called a 'comprehensive adjudication' involving all stakeholders/pumpers. The District is therefore taking the necessary action of filing a comprehensive adjudication. Such steps will involve all stakeholders/pumpers; protect the general welfare of the Basin; protect the District's right to pump groundwater from the Basin; protect groundwater quality; and to manage water costs to the public. The goal of the District's action is to bring long-term and enforceable sustainability to the Basin."</p>
<p><b>Case Name</b>  <i>Sackett v. EPA</i></p> <p><b>Case Number</b>  21-454   (19-35469)</p> <p><b>Court</b>  U.S. Supreme Court   (9th Circuit)</p> <p><b>Relevant Dates</b>  9/22/21: Petition for writ of cert  10/21/21: Amicus briefs, including states  11/24/21: EPA brief  1/24/22: S.Ct. granted cert  4/11/22: Petitioner brief on merits  4/18/22: Amicus Brief 26 States (including AZ, ID, KS, MT, NE, ND, OK, SD, TX, UT, WY); separate Amicus Brief AK  6/10/22: Respondent EPA brief on merits  6/17/22: Amicus Brief CO; separate Amicus Brief by 17 states (including CA, NM, OR, WA)  10/3/22: S. Ct. argument  5/25/23: S. Ct. decision</p> <p><b>Related Cases</b></p>	<p><b>Issues</b>      WOTUS, wetlands</p> <p>On May 25, 2023, the U.S. Supreme Court reversed the decision of the 9th Circuit and remanded the case for further proceedings consistent with its decision. The Court found that the wetlands on the Sacketts' property are not "waters of the United States" (WOTUS), because they are "distinguishable from any possibly covered waters." Citing the Justice Scalia plurality opinion in Rapanos, the five-Justice majority Court concluded that the definition of WOTUS in Clean Water Act (CWA) §1362(7) "encompasses only those relatively permanent, standing or continuously flowing bodies of water forming geographical features that are described in ordinary parlance as streams, oceans, rivers, and lakes." The Court held that WOTUS does not apply to all wetlands, but extends only to those wetlands with a continuous surface connection to bodies of water that are WOTUS in their own right, so that they are indistinguishable from those waters. The Court acknowledged that "temporary interruptions in surface connection may sometimes occur because of phenomena like low tides or dry spells." In footnote 16, the Court said: "Although a barrier separating a wetland from a water of the United States would ordinarily remove a wetland from federal jurisdiction, a landowner cannot carve out wetlands from federal jurisdiction by illegally constructing a barrier on wetlands otherwise covered by the CWA. Whenever the EPA can exercise its statutory authority to order a barrier's removal because it violates the Act...that unlawful barrier poses no bar to its jurisdiction." The Court noted that EPA's interpretation of adjacent wetlands in the 2023 WOTUS Rule—including wetlands with a significant nexus to traditional navigable waters—is inconsistent with the text and structure of the CWA. The Court required Congress to "enact exceedingly clear language if it wishes to significantly alter the balance between federal and state power and the power of the Government over private property. Regulation of land and water use lies at the core of traditional state authority. An overly broad interpretation of the CWA's reach would impinge on this authority." The Court also pointed to CWA §1251(b), which expressly protects the primary responsibilities of States to prevent, reduce, and eliminate pollution and to plan the development and use of land and water resources. "It is hard to see how the States' role in regulating water resources would remain 'primary' if the EPA had jurisdiction over anything defined by the presence of water." The Court held that the CWA does not define EPA's jurisdiction based on ecological importance, and it anticipates a partnership between the States and the Federal Government. "States can and will continue to exercise their primary authority to combat water pollution by regulating land and water use." The Court further noted that EPA's significant nexus interpretation "gives rise to serious vagueness concerns in light of the CWA's criminal penalties. Due process requires Congress to define penal statutes with sufficient definiteness that ordinary people can understand what conduct is prohibited and in a manner that does not encourage arbitrary and discriminatory enforcement." The Court expressed concerns that the CWA could sweep broadly enough to "criminalize mundane activities like moving dirt" and put a "staggering array of landowners" at risk of criminal prosecution or onerous civil penalties, because a property that appears to be dry may later be determined to be subject to the CWA under guidance in a complicated agency manual.</p>

<b>Notes</b> <a href="https://www.supremecourt.gov/search.aspx?filename=/docket/docketfiles/html/public/21-454.html">https://www.supremecourt.gov/search.aspx?filename=/docket/docketfiles/html/public/21-454.html</a>		
<b>Case Name</b>	<b>Issues</b>	Nationwide Permits, ESA
<i>Center for Biological Diversity et al. v. Spellmon</i>	<p>The complaint for declaratory and injunctive relief stems from the Corps issuance of Nationwide Permit 12, a general permit for oil and gas pipeline projects pursuant to CWA 404(e). The lawsuit alleges ESA and APA violations for failure to assess environmental effects, and to fulfill consultation responsibilities under ESA section 7 with the National Marine Fisheries Service and the FWS. The NWP 12 allows oil and gas pipelines to cross water repeatedly without limits to the number of wetlands a project might impact, ignoring the cumulative effects of large interstate pipelines.</p> <p>On August 18, 2022, the federal court in Montana determined that it was not the appropriate venue for the ESA claims, as the events giving rise to the claims did not occur in Montana, and the sole Montana plaintiff could not show Article III standing on the ESA claims. The case was transferred to the District of Columbia for further proceedings.</p>	
<b>Case Number</b>		
4:21-cv-00047		
1:22-cv-02586		
<b>Court</b>		
U.S. District Court for Montana		
U.S. District Court for the District of Columbia		
<b>Relevant Dates</b>		
5/3/21: Lawsuit filed 6/7/21: Montana intervened 8/31/21: Petroleum associations intervened 9/7/21: Answer from the Corps 6/9/22: Hearing on MSJs ("order will be submitted forthwith") 8/18/22: Case transferred to District of Columbia 11/18/22: Supplemental Briefing on schedule submitted by the parties to the DC court		
<b>Related Cases</b>		
Northern Plains Resource Council et al. v. U.S. Army Corps of Engineers, No. 4:19-cv-00044 (D. Mont.), appeal vacated lower court decision (8/11/21) in part due to new NWP that renders some claims moot, and remanded to determine whether vacatur was appropriate, (9th Cir, #20-35412). On remand, claim four was dismissed as moot, and the other three claims were dismissed without prejudice (9/29/22)		
<b>Notes</b>		
<b>Case Name</b>	<b>Issues</b>	ESA
<i>Center for Biological Diversity et al. v. Interior et al.</i>	<p>On March 31, 2022, the lower court issued a decision requiring FWS and Fort Huachuca to reinstate an ESA 7(a)(2) consultation and formulate a BiOp consistent with the Opinion. They appealed the decision to the 9th Circuit, and the court held oral arguments on May 16, 2023.</p> <p>BACKGROUND: The lawsuit challenges the assumptions of a 2014 FWS biological opinion, over groundwater pumping for use by Fort Huachuca and its contractors near the San Pedro River. Plaintiffs challenge the reliance on speculative water savings from agricultural water easements that hadn't been used for years, ignoring the effects of pumping on river base flows over an extended period of time, failure to analyze the effects of climate change, and alleges various other (ESA) violations. The lawsuit seeks to vacate the 2014 biological opinion and order the defendants to reinstate consultation on the effects of continued groundwater pumping associated with the Fort on listed species.</p>	
<b>Case Number</b>		
4:20-cv-106		
22-15809		
<b>Court</b>		
U.S. District Court for the District of Arizona		
9th Circuit		
<b>Relevant Dates</b>		

3/13/20: Lawsuit filed 6/8/20: DOI/Army Answer 9/15/20: Administrative Record filed 11/13/20: Plaintiffs MSJ filed 3/26/21: Federal cross-MSJ filed 3/26/21: Motion to supplement Admin Record 9/21/21: Oral argument on MSJs 3/31/22: Court order directing FWS and the Fort to reinstate an ESA 7(a)(2) consultation and formulate a BiOp consistent with the Opinion 5/27/22: Notice of appeal to 9th Cir. by Plaintiffs 9/14/22: Opening brief filed 5/16/23: Oral arguments <b>Related Cases</b>  <b>Notes</b>		
<b>Case Name</b>	<b>Issues</b>	Indian Reserved Water Rights
<i>Agua Caliente Band of Cahuilla Indians v. Coachella Valley Water Dist.</i>	At issue is whether the water district's assessment of fees (replenishment assessment charges, RAC) on the tribe's production of its federally reserved groundwater is preempted as a matter of federal law. The water district uses Colorado River water to recharge the aquifer. The RACs are imposed on water production in designated areas of benefit—including much of the Agua Caliente Reservation—to cover the costs of artificial recharge programs. The tribe argues that the RACs unlawfully interfere with its inherent and exclusive sovereign authority to regulate its water resource.	
<b>Case Number</b>		
5:20-cv-00174		
<b>Court</b>		
U.S. District Court for the Central District of California		
<b>Relevant Dates</b>		
1/24/2020: case filed		
3/13/2020: Answers filed by Desert Water Agency and Coachella Valley Water District		
6/22/2020: Defendants motion to bifurcate case		
6/29/2020: Plaintiff's opposition to bifurcation		
7/20/20: Motion denied; case management order modified to extend deadlines		
10/6/20: Case stayed pending private mediation		
6/28/23: Stay extended (10/1/23)		
<b>Related Cases</b>		
<i>Agua Caliente Band of Cahuilla Indians v. Coachella Valley Water District, et al.</i> , 13-883		
<b>Notes</b>		
<b>Case Name</b>	<b>Issues</b>	WOTUS 2.0 (2019 and 2020) and "navigable waters"
<i>New Mexico Cattle Growers' Association (CGA) v. EPA et al.</i>	On January 18, 2023, the new WOTUS Rule was published by the Biden administration (88 FR 3004), scheduled to go into effect 3/20/23. Several lawsuits were filed challenging this rule, seeking injunctive relief and vacatur of the new rule. In light of the pending legal challenges to the new rule, the parties jointly requested this lawsuit be held in abeyance. "Any party may move to lift the stay if subsequent developments lead to reinstatement of the prior rules" under the CWA. On July 31, 2023, the parties agreed to dismiss the case without prejudice, and the case was closed.	
<b>Case Number</b>		
1:19-cv-00988		
<b>Court</b>		
U.S. District Court for the District of New Mexico		
<b>Relevant Dates</b>	BACKGROUND: The lawsuit initially challenged the October 2019 readoption of the 1986 regulations, when the agencies repealed the 2015 Clean Water Rule defining "waters of the United States" (WOTUS) and "recodified" the guidance in place prior to the 2015 rule. The amended	



<p>10/22/19: Case filed 4/27/20: Amended Complaint 7/16/20: Notice of briefing complete on Motion for Prelim. Injunction 2/10/21: Order denying PI motion without prejudice; granting DOJ motion for stay re: Biden EO 13990 (new WOTUS rule) 3/29/22: Stay continued pending new WOTUS rule. 2/2/23: Stay continued until 7/31/23 7/31/23: The parties agreed to dismiss the case without prejudice.</p> <p><b>Related Cases</b></p> <p>Washington Cattlemen's Association v. EPA (U.S. District Court Western Washington, #19-cv-569) (Motion to consolidate with Puget Soundkeeper Alliance filed on 8/27/20); Oregon Cattlemen's Association v. EPA (U.S. District Court Oregon, #19-cv-564) (Motion for prelim injunction denied on 8/7/20)</p> <p><b>Notes</b></p>	<p>Clean Water Rule defining "waters of the United States" (WOTUS) and "recovered" the guidance in place prior to the 2015 rule. The amended complaint expanded that challenge to the 2020 Navigable Waters Protection Rule. NMCGA argues that the agencies' interpretation of the term "navigable waters" exceeds "...the agencies' statutory authority under the Clean Water Act and the Congressional Review Act, or Congress' authority under the Commerce Clause, the Due Process Clause, the Non-Delegation Doctrine, and the Tenth Amendment. Plaintiff asks this Court to declare that several provisions of the Clean Water Act, the 1986 Regulations, and related guidance, and/or the Navigable Waters Protection Rule, are statutorily and constitutionally invalid, and to enjoin their enforcement." The complaint alleges that, even under the Navigable Waters Protection Rule, many of the waters included within the four categories – e.g., territorial seas and waters used for commerce, tributaries, lakes and ponds, and adjacent wetlands – "do not stand or flow year-round, and many of these non-perennial waters are only present for days or weeks before they dry up. EPA and the Army regulate discharges to the locations of these waters even though the 'waters' only occupy those locations for a few days or weeks in any given year."</p>	
<p><b>Case Name</b></p> <p><i>Save the Colorado, et al. v. DOI</i></p> <p><b>Case Number</b></p> <p>3:19-cv-8285</p> <p>23-15247</p> <p><b>Court</b></p> <p>U.S. District Court for the District of Arizona</p> <p>9th Circuit</p> <p><b>Relevant Dates</b></p> <p>10/1/2019: Complaint 12/5/2019: DOI answer 4/2/2020: Joint Motion to Intervene by Colorado, California, Arizona Department of Water Resources, Nevada, Utah, and Wyoming 4/30/2020: Joint Motion to Intervene by Southern Nevada Water Authority, Central Arizona Water Conservation District, and Metropolitan Water District of Southern California 1/22/22: Plaintiffs MSJ 3/13/22: DOI's MSJ 4/7/22: Intervenor defendants' (lower basin) joinder to DOI's MSJ 4/8/22: NM Interstate Stream Commission amicus brief 10/7/22: Oral Arguments held 12/23/22: Judgement entered for the Defendants</p> <p>2/23/23: Appeal to 9th Circuit 8/23: States' briefings filed, joining with DOI briefing and adding State concerns</p> <p><b>Related Cases</b></p> <p><b>Notes</b></p>	<p><b>Issues</b></p>	<p>Colorado River</p> <p>On December 23, 2022, the court issued its decision denying the plaintiffs' MSJ and granting the federal defendants' and state intervenors' cross-MSJs. The court held that NEPA only requires consideration of reasonable alternatives consistent with the agency's policy objectives and the purpose, in this case, of the LTEMP, which is to set guidelines regarding water releases based on the 2007 Interim Guidelines and the Law of the River. Complying with the Law of the River, meeting water delivery requirements, and complying with other federal laws is an appropriate goal for the federal defendants. The range of alternatives considered in the EIS was consistent with the NEPA goals of informed decision-making and informed public participation. The EIS provided explanations for why the plaintiffs' proposed alternatives (decommissioning Glen Canyon Dam, equalizing upstream flows, filling Lake Mead first, or run-of-the-river) were rejected. On February 23, 2023, the plaintiffs appealed the decision to the 9th Circuit.</p> <p>BACKGROUND: Plaintiffs allege that DOI failed to take into consideration the effects of climate change and the aging infrastructure of the Glen Canyon Dam in its environmental analysis of future operations. They also assert that DOI failed to consider the alternatives of decommissioning the dam, filling Lake Mead first, and returning the river to its natural flow. The plaintiffs seek to set aside DOI's final environmental impact statement for violations of NEPA, and to require the inclusion of the impacts of climate change and a reasonable range of alternatives in the proposed action. DOI denied all the allegations, and asserted that the plaintiffs are not entitled to the relief they seek, and that the court lacks subject matter jurisdiction. The Colorado River Basin states and agencies intervened, joining in DOI's answer, and laid out the intricate complexities of the Law of the River, with its many compacts, treaties, Congressional deference to state water rights and laws, and ongoing efforts among the states and various other organizations and interested parties to manage the flow, salinity, and ecological benefits of the river.</p>
<p><b>Case Name</b></p> <p><i>Agua Caliente Band of Cahuilla Indians v. Coachella Valley Water District, et al.</i></p> <p><b>Case Number</b></p> <p>5:13-cv-883</p> <p><b>Court</b></p>	<p><b>Issues</b></p>	<p>Indian Reserved Water Rights</p> <p>BACKGROUND: The Agua Caliente Band of Cahuilla Indians filed a lawsuit in May 2013, asking the Court to declare and quantify the existence of the tribe's water rights as the senior rights in the Coachella Valley under federal law. In March 2015, the District Court ruled on summary judgment that the Agua Caliente Band of Cahuilla Indians has a reserved right to water, and groundwater is a water source available to fulfill that right. The Court denied the Tribe's claim for aboriginal title to groundwater. The case was trifurcated, with phase II addressing whether the</p>

<p>U.S. District Court for the Central District of California</p> <p><b>Relevant Dates</b></p> <p>5/2013: Agua Caliente filed suit  3/27/2015: Summary judgment re: groundwater available as part of reserved water right  10/18/16: Oral arguments on interlocutory appeal, 9th Cir.  3/7/17: 9th Circuit panel decision on Phase I reserved groundwater appeal from CA court  6/5/17: Tribe's Motion to Lift Stay granted; CA Dist. Ct. proceeding with Phase II  7/5/17: Petition for Certiorari from DWA and CVWD  8/7/17: Amicus brief in support of Petition for Cert, filed by NV, AZ, AR, ID, NE, ND, SD, TX, WI, WY  11/27/17: S. Ct. denied Cert  4/19/19: Dist. Ct. granted Defendants' MSJ on Phase II  8/14/19: Dist. Ct. denied motion to reconsider  7/17/20: Agua Caliente filed its amended complaint  7/31/20: Answers to amended complaint  10/6/20: Case stayed pending private mediation  6/28/23: Stay extended (10/1/23)</p> <p><b>Related Cases</b></p> <p>9th Circuit #15-55896</p> <p>Agua Caliente Band of Cahuilla Indians v. Coachella Valley Water Dist., 5:20-cv-00174</p> <p><b>Notes</b></p> <p>For more information see:  <a href="http://www.scotusblog.com/case-files/cases/coachella-valley-water-district-v-agua-caliente-band-cahuilla-indians/">http://www.scotusblog.com/case-files/cases/coachella-valley-water-district-v-agua-caliente-band-cahuilla-indians/</a> and  <a href="https://www.narf.org/cases/agua-caliente-v-coachella/">https://www.narf.org/cases/agua-caliente-v-coachella/</a></p>	<p>Tribe beneficially owns the “pore space” of the groundwater basin underlying the Reservation, and whether a tribal right to groundwater includes the right to receive water of a certain quality. Phase III will focus on the quantification of the Tribe's right. (Note: The order of Phase II and Phase III appears to have been reversed. as litigation continued.)</p> <p>On March 7, 2017, the 9th Circuit upheld the California District Court's summary judgment, holding that the United States implicitly reserved a right to water when it created the Agua Caliente Reservation, and that the Tribe's reserved water right extends to the groundwater underlying the Reservation. The court expressed “no opinion on how much water falls within the scope of the Tribe's federal groundwater right,” since that will be determined at a later phase of the case. However, even with water under state-law entitlements, “there can be no question that water [from the aquifer] in some amount was necessarily reserved to support the reservation created.” On July 5, 2017, the Defendant water agencies filed petitions for cert. On August 7, 2017, NV, AZ, AR, ID, NE, ND, SD, TX, WI, and WY filed an amicus curiae brief , arguing that the 9th Circuit's expansion of the federal reserved water rights doctrine unsettles the scope of the states' authority over groundwater resources, and that the decision is inconsistent with caution courts must exercise when altering the federal-state balance by interfering with state sovereign power, particularly when applying implied Congressional intent. It calls the decision an “indiscriminate application of the Winters doctrine to groundwater” that ignores the nuances of past court decisions and expressed Congressional intent. The Supreme Court denied the petition for cert on November 27, 2017.</p> <p>On April 19, 2019, the U.S. District Court for the Central District of California granted the defendants' motions for summary judgment, which argued that the tribe does not have standing to assert its claims. The court agreed, noting that although there may be injury to the groundwater in the form of overdrafts and the practice of recharge with lower-quality Colorado River water, the tribe has not demonstrated injury to its ability to use water of a sufficient quality or quantity to fulfill the purposes of the reservation. Similarly, the court held that the tribe did not demonstrate that the defendants interfered with the tribe's right to use the aquifer's pore spaces to store its reserved water rights. On July 17, 2020, the tribe filed its amended complaint. The case was stayed for mediation.</p>
<p><b>Case Name</b></p> <p><i>California v. Bureau of Land Mgmt.</i></p> <p><b>Case Number</b></p> <p>18-521</p> <p>20-16157</p> <p><b>Court</b></p> <p>U.S. District Court for the Northern District of California</p> <p>9th Circuit</p> <p><b>Relevant Dates</b></p> <p>1/24/18: Lawsuits filed  7/17/18: U.S. Motion to transfer case to Wyoming denied  10/9/18: BLM lodged administrative record with the court  1/22/20: Hearing on MSJs  3/27/20: BLM and WY's Cross MSJ's granted, CA's MSJ denied</p> <p>6/12/20: CA filed appeal, 9th Cir. #20-16157  10/21/20: Opening briefs  11/20/20: Answering brief  2/11/21: Reply briefs  2/19/21: Mediation confrence scheduled for March 1  3/19/21: Case administratively closed for mediation  8/4/23: Administrative closure extended to 9/6/23</p>	<p><b>Issues</b> Hydraulic fracturing</p> <p>BACKGROUND: On December 28, 2017, the Bureau of Land Management (BLM) published its Federal Register notice of the final decision to rescind the stayed 2015 Hydraulic Fracturing Rule. BLM's review of the Rule found that all 32 of the states with federal oil and gas leases have regulations to address hydraulic fracturing, and that companies are disclosing the chemical content of their hydraulic fracturing fluids using FracFocus or other state regulatory databases. Rescinding the 2015 Rule was also considered consistent with the Administration's Executive Order 13771 to reduce the costs of regulatory compliance. On January 24, 2018, California and several environmental groups sought to vacate the rescission and reinstate all of the Hydraulic Fracturing Rule's provisions. CA argues that hydraulic fracturing on federal and Indian lands, particularly those not subject to state jurisdiction, will impact surface water and groundwater resources, air pollution, and seismicity from the disposal of wastewater. Additionally, states do not have BLM's stewardship standards and trust responsibilities over federal lands. ). California said that although new administrations are entitled to change policy positions, the APA requires a reasoned explanation for those changes, particularly addressing any inconsistencies with prior factual findings. California argues that state and tribal regulations fall short of the 2015 Rule requirements. “For example, at least six of the nine states where the majority of fracking on federal land occurs did not require the use of tanks instead of pits for containing injection waste fluids, as the Fracking Rule does. Additionally, most of the nine states' regulations on monitoring and verifying the integrity of cement casing fell short of the Fracking Rule's requirements. The Fracking Rule contemplated concurrent state regulation of wells on federal lands and in no way prevented states from enacting stricter requirements. States or tribes could also apply for a variance from the requirements of the Fracking Rule.” State requirements also differ “with regard to mechanical integrity testing, pressure monitoring during hydraulic fracturing operations, and post-fracturing disclosure requirements.”</p> <p>The district court rejected CA's arguments. “The Court's task is not to decide whether the changes [BLM] seek[s] to make will result in better or worse environmental policy...[or] to decide whether it would find the rationales advanced by the agency compelling (or even persuasive) if it were reviewing the matter from scratch. Instead, the narrow APA question before the Court is whether the admitted policy change represented by the Repeal was so inadequately explained as to be arbitrary and capricious.” The court added that it may not question BLM's choice to weigh socioeconomic concerns more heavily than the value of consistent federal regulations the 2015 rule may have provided. The court also rejected Wyoming's argument that BLM lacked authority to promulgate the rule. Aside from the fact that the 2015 rule wasn't before the court (only the repeal of the rule), the court said BLM never conceded that it lacked legal authority, only eliminated the need for further litigation over BLM's statutory authority by repealing the rule. The case is now on appeal before the 9th Circuit.</p>

Related Cases		
Sierra Club et al. v. Zinke, No. 18-524 (consolidated)		
Notes		
Case Name	Issues	Abandoned Hard Rock Mines
IN RE: Gold King Mine Release in San Juan County, Colorado		
Case Number		
1:18-md-2824		
Interlocutory appeals: 19-02197 (agrued Jan2021) 21-02047 (voluntary dismissal)		
Court		
U.S. District Court for the District of New Mexico		
10th Circuit Court of Appeals		
Relevant Dates		
5/23/16: New Mexico v. EPA filed 8/16/16: Navajo Nation v. EPA filed 11/28/16: NM and NN cases consolidated 2/13/17: EPA Motion to Dismiss consolidated NM and NN cases 4/4/18: MDL for pre-trial proceedings 9/1/20: Court granted Utah's motion to dismiss its claims against EPA and certain contractor parties 1/20/21: 10th Cir. appeal argued (Allen v. Environmental Restoration, 19-02197) 6/14/22: NM, NN, and US EPA signed a settlement agreement; payment pending 7/12/22: Court granted motion to stay NM and NN claims against the US, pending settlement completion 12/30/22: NM and defendant contractors settled the final NM claims 1/24/23: NN noted that the Phase I trial would only include the NN claims against defendant contractors and would require an estimated 3 weeks to complete 3/3/23: UT case remanded to Utah Dist. Ct. (closure pending supervision of defendant contractor payment of settlement)	BACKGROUND: In May and August 2016, New Mexico and the Navajo Nation filed lawsuits in the U.S. District Court in New Mexico against the EPA and mining companies for injuries relating to releases of heavy metals and waste from the Gold King Mine and Sunnyside Mine, requesting relief under CERCLA, RCRA, CWA, and various tort claims. The two cases were consolidated in November 2016. On June 19, 2018, a Special Master was appointed. (MDL-2824). The Court found that EPA qualified as an operator, arranger, and transporter under CERCLA's waiver of sovereign immunity; that the state and tribal plaintiffs were entitled to discovery regarding EPA's discretionary actions for the tort claims; and that the RCRA and CWA claims dealt with facts in dispute. Discovery and motions continued, with several parties settling their claims in late 2020 and 2021, and motions for partial summary judgment resolving various issues. In March 2022, New Mexico and the Navajo Nation were granted a stay of the claims against the U.S. for settlement negotiations.	
Related Cases		
New Mexico v. EPA, 1:16-cv-465; Navajo Nation v. EPA, 1:16-cv-931 (now consolidated with 1:16-cv-465); Utah v. Environmental Restoration LLC et al., 2:17-cv-866; Allen v. US, 18-cv-744; IN RE: Gold King Mine Release in San Juan County, Colorado, on August 5, 2015, 1:18-md-2824		
Notes		
For copies of the settlement agreements, see <a href="https://www.epa.gov/goldkingmine/gold-king-mine-litigation-settlements">https://www.epa.gov/goldkingmine/gold-king-mine-litigation-settlements</a>		
Case Name	Issues	Rio Grande Compact
Texas v. New Mexico and Colorado	On January 9, 2023, the Special Master released the states-proposed Consent Decree (document 720). In his order (document 742), the Special Master said: "The States, but not the United States, now have reached a proposed settlement of their pending claims against one another. The proposed settlement differs in many ways from the parties' litigation positions... Texas, however, asserts that it is satisfied the Decree achieves its primary goal: ensuring delivery to Texas of Rio Grande water with well-defined methods to verify delivery and enforceable consequences for under- or over-delivery. New Mexico, similarly, asserts that it is satisfied the Decree achieves New Mexico's primary goals: ensuring delivery in New Mexico of the appropriate share of Rio Grande water without unduly infringing upon New Mexico's sovereignty to address water-related disputes between New Mexicans, between New Mexico and its citizens (including water districts), or between New Mexico and the United States. Colorado, whose interests are primarily upstream of the Elephant Butte Reservoir, agrees that the	
Case Number		
#220141		
Court		
U.S. Supreme Court		
Relevant Dates		

<p>1/8/13: Texas filed its complaint  2/27/14: United States Motion to Intervene  3/20/17: Special Master Report received by the Supreme Court  8/4/17: Kansas amicus brief in support of Texas re: interstate compacts and impact of upstream groundwater diversions  1/8/18: S. Ct. oral arguments  3/5/18: S. Ct. decision to allow US to intervene  5/23/18: NM filed Answers and Counterclaims  7/20/18: TX Answer  7/23/18: U.S. Answer  12/21/18: U.S. Motion for Judgment on the Pleadings  12/26/18: Texas and New Mexico motions for partial judgment  4/2/19: Hearing on motions before Special Master  3/31/20: Status conference to discuss completion of discovery, to set hearing dates, to establish a trial date, and to discuss potential for settlement  6/25/20: Mediator appointed  11/5/20: Texas, U.S., and New Mexico's respective partial MSJs filed  12/22/20: responses to partial MSJs filed  3/9/21: Partial MSJ hearing  5/21/21: Order granting and denying various MSJ issues  8/19/21: Texas Motion for Continuance of Trial (COVID concerns)  October - November 2021: First half of split trial  3/1/22: Settlement negotiations continue; request for Fall 2022 second half of trial.  6/24/22: Status conference: settlement agreed to in principle (drafting, approval, legislative and regulatory steps pending)  9/21/22: Joint Status report: settlement discussions continue, proposed completion or trial by January 2023  1/9/23: Proposed Consent Decree (settlement agreement) unsealed  7/24/23: Special Master's Recommendation to the Supreme Court to approve the Consent Decree</p>	<p>between New Mexico and the United States. Colorado, whose interests are primarily upstream of the Elephant Butte Reservoir, agrees that the Decree is consistent with the Compact and adequately protects Colorado's interests. Finally, the Decree does not amend the Compact. In fact, it expressly disavows any such amendment as well as any interference with the United States' duties towards Mexico and towards native citizens' tribes. To achieve these goals, the proposed Decree employs several mechanisms found elsewhere in the Rio Grande Compact and in many other interstate compacts. For example, the Decree calls for a gauge to measure flow near El Paso and imposes a delivery requirement on New Mexico at that gauge. The delivery requirement is based on formulas that use many inputs including the flow leaving Caballo Reservoir just downstream of Elephant Butte Reservoir. Recognizing the likelihood that actual deliveries will vary from formula-required deliveries, the Decree establishes deviation limits and calls for responsive actions in the event deliveries exceed or fall short of requirements. In part, responsive actions are left for New Mexico to select in its sovereign prerogative. Ultimately water transfers through the Rio Grande Project and adjustments to water escrow accounts are required if any state fails to remedy deviations adequately or in a timely fashion." On July 24, 2023, the Special Master submitted his recommendation to the Supreme Court to approve the Consent Decree.</p> <p>BACKGROUND: The state of Texas filed a lawsuit in the United States Supreme Court against the states of New Mexico and Colorado alleging that New Mexico is violating the 1939 Rio Grande Compact, which governs the distribution of Rio Grande water among the three states. New Mexico denies this allegation. The United States filed a motion to intervene on the grounds that the case affects the Department of Interior's management of the Reclamation's Rio Grande Project, its calculation of diversion allocations, and its responsibility to deliver water to intended Project beneficiaries and to Mexico pursuant to Treaty. New Mexico filed a motion to dismiss on the grounds that the language of the compact could not provide the relief requested by Texas, and that the United States is not a party to the Compact. The case was referred to Special Master in November 2014. On May 21, 2021, the Special Master issued a ruling on several issues submitted for summary judgment: (1) 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; (2) 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; (3) 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"; (4) 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"; and (5) 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 Compact interpretation details were 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." Over a six week period in October-November 2021, the Special Master held the first part of a split trial to address issues that couldn't be resolved on summary judgment. Following the trial, the parties entered into settlement discussions.</p>
<p><b>Related Cases</b></p>	
<p><b>Notes</b></p>	
<p>For more information, see  <a href="https://www.ca8.uscourts.gov/texas-v-new-mexico-and-colorado-no-141-original">https://www.ca8.uscourts.gov/texas-v-new-mexico-and-colorado-no-141-original</a> and  <a href="https://www.scotusblog.com/case-files/cases/texas-v-new-mexico-and-colorado/">https://www.scotusblog.com/case-files/cases/texas-v-new-mexico-and-colorado/</a></p>	

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Tab XYZ – Sunsetting Positions for Spring  
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**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 Western States Water Council 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 Western States Water Council 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).



**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 (USACE) 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 that 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.



**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.





**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.



**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.



**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 20<sup>th</sup> 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.



**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.





**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.



**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.