



WESTERN STATES WATER COUNCIL

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Web Page: www.westernstateswater.org

MEMORANDUM

TO: Western States Water Council Members and Others

FROM: Tony Willardson, Executive Director

DATE: October 12, 2022

RE: Briefing Materials for the 200th Western States Water Council Meetings

This is to advise you that briefing materials for our 2022 Fall meetings being held in Sulphur, Oklahoma (a hybrid in-person and virtual event) on October 19-21, may be downloaded on our [meetings webpage](#). The minutes from the Summer 2022 meetings held this past August 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.

On Wednesday, October 19, interested members and guests are invited to register for and attend two morning workshops held in conjunction with our regularly scheduled Council meetings. The first workshop on Abandoned Hardrock Mine Remediation will begin at 8:00 am CDT and feature a panel of federal agencies engaged in abandoned hardrock mine reclamation. States should come prepared to engage in a discussion of opportunities for state-federal coordination and prioritization related to the IJA funding dedicated to the Bureau of Land Management (BLM) and U.S. Forest Service (USFS). EPA's Office of Mountains, Deserts, and Plains will present an update on recent activities. The second workshop will highlight a report from EPA and USACE on the WOTUS summer regional roundtables hosted by the agencies. It will follow at 9:30 am CDT and will conclude by 11:00 am CDT.

Following the workshops on Wednesday, our Oklahoma hosts have arranged for a field trip that will begin at 11:30 a.m. CDT at the Chickasaw National Recreation Center across the street from the hotel. After lunch, catered by Golden Chick, we will board the bus at the Visitor's Center and will visit the Little Niagra, Byrd's Mill Spring, the Pontotoc Ridge Preserve, and the Tishomingo National Fish Hatchery. We will return to the hotel by 5:00 p.m. We appreciate *Bank of America, Burns & McDonnell, and Duane Smith & Associates* for generously sponsoring our field trip.

On Thursday, October 20, regular Council meetings will begin at 8:00 a.m. CDT with the Oklahoma host state presentation. The Water Resources Committee meeting will be held directly following the host state presentation, starting at 8:45 a.m. and adjourning by 11:45 a.m. The Executive Committee will meet over lunch (in the Ballroom South) from 12:00 p.m. to 1:15 p.m. All others attending the meetings in person will be on their own for lunch. The Water Quality Committee will begin at 1:30 p.m. and adjourn at 3:30 p.m. The Legal Committee meeting will follow thereafter beginning at 3:40 p.m. and is scheduled to adjourn at 5:40 p.m.

A reception sponsored by *Bank of America, Burns & McDonnell, and Duane Smith & Associates* will be held from 6:00 - 8:00 p.m. on Thursday evening. All Council members and guests attending in person are invited.

The meetings will conclude with the Full Council meeting on Friday morning beginning at 8:00 a.m. and adjourning by 11:30 a.m.

We look forward to seeing many of you once again in person in Sulphur, and anticipate interesting and productive meetings. If you have any questions regarding these matters, please let us know.



WESTERN STATES WATER COUNCIL

FALL (200TH) MEETINGS
SULPHUR, OKLAHOMA
OCTOBER 19-21, 2022

**WESTERN STATES WATER COUNCIL
200th COUNCIL MEETING
Sulphur, Oklahoma
October 20-21, 2022**

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- WR Position #439 - expressing support for implementation of the SECURE Water Act
- L Position #440 - supporting legislation requiring the federal government to pay state filing fees in state general stream adjudications

List of Current WSWC Policy Statements

List of Sunsetted Positions

- D. Budget
- E. WSWC Activities and Events
- F. Future WSWC Meetings
- G. WRDA Western Water Cooperative Committee
- H. Southwest Oklahoma Water Plan and NDRP Update
- I. Pumped Storage Developments
- J. HydroGEN and the HALO Hydrogen Hub Proposal
- K. Water Data Exchange (WaDE)/WestDAAT Program Update
- L. FY22-23 Water Quality Committee Work Plan Progress Report
- M. WSWC Technical Report on WOTUS Regional Classification Schemes and Tools
- N. Water Rights Speculation in Colorado
- O. Watershed Restoration Project Funding and Water Rights
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- Q. State Reports
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Tab A – Schedule of Meetings – Agenda –
30-day Notice



SCHEDULE OF MEETINGS

WESTERN STATES WATER COUNCIL

Sulphur, Oklahoma
Artesian Hotel, Casino & Spa
October 19-21, 2022

<u>Date/Time</u>	<u>Meeting</u>	<u>Room</u>	<u>Adjournment</u>
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(Central Daylight Time)

Wednesday, October 19

8:00 am	Abandoned Hardrock Mine Remediation Workshop	Ballroom North	9:30 am
9:30 am	WOTUS Workshop	Ballroom North	11:00 am
11:30 am	Field Trip: Arbuckle-Simpson Aquifer Sponsors: <i>Bank of America, Burns & McDonnell, and Duane Smith & Associates</i>		5:00 pm

Thursday, October 20

8:00 am	Host State Presentation	Ballroom North	8:45 am
8:45 am	Water Resources Committee Meeting	Ballroom North	11:45 am
12:00 pm	Executive Committee (over lunch)	Ballroom South	1:15 pm
1:30 pm	Water Quality Committee Meeting	Ballroom North	3:30 pm
3:40 pm	Legal Committee Meeting	Ballroom North	5:40 pm
6:00 pm	Social Hour Sponsor: <i>Bank of America, Burns & McDonnell, and Duane Smith & Associates</i>	Ballroom South	8:00 pm

Friday, October 21

8:00 am	WSWC Full Council (200 th) Meeting	Ballroom North	11:30 am
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Abandoned Hardrock Mine Remediation Panel and Discussion

Artesian Hotel, Casino & Spa - Ballroom North
Sulphur, Oklahoma
and via [zoom](#)

October 19, 2022

Workshop goals

- Provide an opportunity for states to learn about current federal efforts to remediate Abandoned Hardrock Mine issues, including new programming and funding authorized through the IIJA
- Promote good coordination between states and federal agencies to ensure state priorities are addressed with new programs and funding

Panel presentation topics

- Status on funding for BLM and USFS from IIJA and funding from other sources more generally for remediation of abandoned hardrock mine clean-ups
- Approach to state-federal partnerships in roll-out of new funds including alignment with state priorities
- Federal agency vision for programming and funding to maximize impact of the funds especially for state priorities
- Update on activities and staffing of the Office of Mountains, Deserts, and Plains

Agenda

- | | |
|---------|---|
| 8:00 am | Welcome and introductions |
| 8:10 am | Workshop Goals |
| 8:15 am | Presentations from federal agencies (10 minutes each) <ul style="list-style-type: none">● Shahid Mahmud - EPA, Office of Mountains, Deserts, and Plains● Holly Fliniaux - USDA, Environmental Management Division● Sarah Martinez - USDA, Forest Service, Minerals and Geology Management● William (Bill) Lodder - Department of Interior, Office of Environmental Policy and Compliance |
| 8:55 am | Discussion with state representatives <ul style="list-style-type: none">● How can states engage in the development of new federal programming and prioritization of funds? |

WOTUS Regional Roundtables Panel and Discussion

Artesian Hotel, Casino & Spa - Ballroom North
Sulphur, Oklahoma
and via [zoom](#)

October 19, 2022

Workshop goals

- Provide an opportunity for EPA and USACE to share perspectives and common themes from the regional roundtables that were hosted over the summer
- Explore the challenges, opportunities, and informational gaps that states and federal agencies might work together to address
- Encourage frequent and collaborative communication between states and the federal agencies ahead of the Part 2 WOTUS rule

Agenda

- | | |
|----------|--|
| 9:30 am | Welcome and introductions |
| 9:40 am | Overview of workshop Goals |
| 9:45 am | Presentations or remarks from federal agencies (15 minutes each) <ul style="list-style-type: none">● Brian Frazer - EPA, Acting Office Director, Office of Wetlands, Oceans, and Watersheds, Office of Water, EPA● Robyn Robyn Colosimo - Director for Policy and Legislation to the Assistant Secretary of the Army (Civil Works), USACE |
| 10:15 am | Discussion with state representatives |

AGENDA
WATER RESOURCES COMMITTEE
Artesian Hotel, Casino and Spa
Sulphur, Oklahoma

October 20, 2022

Call to Order at: 8:45 a.m. (Central Daylight Time)

Conducting: Mary Verner, Chair

Ballroom North

TABS

1. **Welcome and Introductions**
2. **Approval of Minutes**
- C 3. **Sunsetting Policies –**

Position #438 - urges the Administration and NASA to enhance focus on research for water Resources applications and promote long term engagement with the WSWC
Position #439 - expressing support for implementation of the SECURE Water Act
4. **Corps Water Infrastructure Financing (CWIF) Program –** Robyn Colosimo, Director for Policy and Legislation, Office of the Assistant Secretary of the Army (Civil Works), USACE
- G 5. **WRDA Western Water Cooperative Committee Status –** Tony Willardson
- H 6. **Southwest Oklahoma Water Plan and NDRP Update –** Roger Gorke, Office of Water, EPA & Anna Hoag, Bureau of Reclamation, Great Plains Region, Oklahoma-Texas Area Office
7. **NASA's Western Water Applications Office Update –** Indrani Graczyk, WWAO Director, NASA Jet Propulsion Laboratory
8. **Landsat Next Mission Status –** Tony Willardson
- I 9. **Pumped Storage Developments Discussion**
Proposed Goldendale pumped storage facility near the Columbia River – Sage Park, Director, Washington Department of Ecology Central Region
 - a. Nevada pumped storage permit – Micheline Fairbank
 - b. Wyoming pumped storage projects – Jennifer Zygmunt
10. **HydroGEN and the HALO Hydrogen Hub Discussion –**
- K 11. **WaDE/WestDAAT Program Update –** Adel Abdallah
- XYZ 12. **Sunsetting Positions for 2023 Spring Meetings –** (adopted March 6, 2020)

Position #441 – Sub-seasonal to seasonal weather research, forecasting, & innovation
Position #442 – The Bureau of Reclamation's maintenance, repair and rehabilitation needs
Position #443 – The Reclamation Safety of Dams Act of 1978
Position #444 – The transfer of federal water and power projects and related facilities
Position #445 – The National Levee Safety Act of 2007, levees and canal structures
Position #447 – Rural water and wastewater project/infrastructure needs and programs
13. **Other Matters/Adjourn** by 11:45 a.m.

AGENDA

EXECUTIVE COMMITTEE

Artesian Hotel, Casino & Spa
Sulphur, Oklahoma

October 20, 2022

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

Ballroom South

TAB

1. **Welcome and Introductions**
2. **Approval of Minutes**
- D 3. **Report on Budget and Finances – Tony Willardson**
 - a. FY2021-22 Budget Status Report
 - b. WaDE Grant Status
 - IOW BHP & Moore Foundation Grants
 - Water Foundation Grant
 - USBR WaterSMART Applied Science Matching Grant
 - c. FY2022-23 Budget Discussion
 - d. Dues
- C 4. **Sunsetting Positions – Jen Verleger**

Position #438 - urging the Administration and NASA to enhance their focus on research for water resources applications and promote long term engagement with the WSWC

Position #439 - expressing support for implementation of the SECURE Water Act

Position #440 - supporting legislation requiring the federal government to pay state filing fees in state general stream adjudications
- E 5. **Executive Director's Report/WSWC Activities and Events – Tony Willardson**
- F 6. **Future WSWC Meetings – Jen Verleger**
- B 7. **Council Membership Update – Tony Willardson**
- XYZ 8. **Sunsetting Positions for Spring 2023 Meetings – #471- #477**
9. **Other Matters**
- 1:15 p.m. Adjourn

AGENDA

WATER QUALITY COMMITTEE MEETING

Artesian Hotel, Casino & Spa
Sulphur, Oklahoma

October 20, 2022

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

Ballroom North

TAB

- 1:30pm 1. **Welcome and Introductions**
2. **Approval of Minutes**
3. **Oklahoma Water Quality Issues** - Shellie Chard, Oklahoma DEQ
4. **Proposed Position**
 Clean Water Act § 404(c) Veto
5. **Alaska §404 Permit Uncertainties** - Julie Pack and Emma Pokon, Alaska DEC
6. **Infrastructure Panel**
 Deirdre Finn, Council of Infrastructure Financing Authorities
 Shellie Chard, Oklahoma DEQ
 Jennifer Carr, Nevada DEP
 Roundtable Discussion of IIJA Funds
7. **Report out on AML panel and discussion regarding next steps** - Jennifer Zygmunt, Wyoming DEQ
8. **FY2022-2023 Water Quality Committee Work Plan Progress Report**
 PFAS Subcommittee
 WOTUS Updates (regional approach policy workshop, WOTUS panel, Sackett update)
9. **Sunsetting Positions for Spring 2023 Meetings**
 Position #446 – regarding the clean and drinking water state revolving funds and state and tribal assistance grants
- 3:30 pm Adjourn

AGENDA

LEGAL COMMITTEE MEETING

Artesian Hotel, Casino and Spa
Sulphur, Oklahoma

October 20, 2022

Call to Order at: 3:40 pm (Central Daylight Time)
Conducting: John Simpson

Ballroom North

TAB

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|---------|-----|--|--|
| 3:45pm | 1. | Welcome and Introductions | |
| | 2. | Approval of Minutes | |
| C | 3. | Sunsetting Positions | |
| | | | Position #440 - supporting legislation requiring the federal government to pay state filing fees in state general stream adjudications |
| | 4. | Oklahoma Legal Issues | – Sara Gibson |
| N | 5. | Water Rights Speculation in Colorado | – Scott Steinbrecher and Kevin Rein |
| | 6. | Water and the Kansas Legislature | – Earl Lewis and Connie Owen |
| O | 7. | Watershed Restoration Project Funding and Water Rights | |
| | | | Caroline Nash, Principal, CK Blueshift LLC
Paula Cutillo, Senior Water Resources Specialist, Bureau of Land Management |
| | 8. | Water Rights and the Chickasaw National Recreation Area | |
| | | | Sara Gibson, General Counsel, Oklahoma Water Resources Board
Stephen Greetham, Senior Council to the Chickasaw Nation
Peter Fahmy, Senior Policy Analyst, Water Rights Branch, National Park Service |
| P | 9. | Staff Updates | – Michelle Bushman |
| XYZ | 10. | Sunsetting Positions for Spring 2023 Meetings | – John Simpson |
| | | | None |
| | 11. | Other Matters | |
| 5:45 pm | | Adjourn | |

AGENDA

200th COUNCIL MEETING Artesian Hotel, Casino and Spa Sulphur, Oklahoma

October 21, 2022

Call to Order at: 8:00 a.m. (Mountain Daylight Time)
Conducting: Jen Verleger, WSWC Chair

Ballroom North

TAB

1. **Welcome and Introductions**
2. **Approval of Minutes**
3. **Committee Reports – Action Items**
 - a. Water Resources Committee – Mary Verner
 - b. Water Quality Committee – Jennifer Zygmunt
 - c. Legal Committee – John Simpson
 - d. Executive Committee – Jen Verleger
4. **WestFAST Report – Roger Gorke**
- Q 5. **State Reports**
- F 6. **Future Council Meetings – Jen Verleger**
- XYZ 7. **Sunsetting Positions for Spring 2023 Meetings – #471- #477**
8. **Other Matters**
- 11:30 a.m. **Adjourn**



WESTERN STATES WATER COUNCIL

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Web Page: www.westernstateswater.org

MEMORANDUM

TO: Council Members

FROM: Tony Willardson, Executive Director

DATE: September 21, 2022

RE: **30-Day Notice of Fall 2022 (200th) WSWC Meetings**

This memorandum is to advise you that the 200th meetings of the Western States Water Council will be held October 19-21, at the Artesian Hotel, Casino and Spa. Virtual meeting attendance will likewise be accommodated. Consistent with our rules of organization, any external policy positions to be proposed for Council consideration must be included with the 30-day notice.

One new proposed position related to EPA exercise of authority under Section 404(c) of the Clean Water Act has been proposed by the State of Alaska. Three positions adopted on October 18, 2019, are scheduled to sunset at this meeting unless readopted:

[Position #438](#) - urges NASA to enhance its focus on research for water resources applications

[Position #439](#) - supports for implementation of the SECURE Water Act

[Position #440](#) - supports requiring the federal government to pay state filing fees in state general stream adjudications

The proposed position is attached as are the sunseting positions, which are also available 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 sunseting positions. Any recommended changes will be considered during the Full Council meeting on October 21.

Please note that the Executive Committee will meet virtually to discuss these policy resolutions and any recommended revisions on Friday, September 30, at 2:00 p.m. Mountain Daylight Time (1:00 p.m. Pacific; 3:00 p.m. Central). Committee Chairs are also invited to participate. Zoom meeting information will be provided to Executive Committee members 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.

All meeting participants, whether attending in-person or virtually, must register in advance on our [meetings webpage](#). There is no registration fee. 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 a confirmation email which 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. **For those attending in person, please register no later than October 7.**

Our guest room block at the Artesian Hotel Casino and Spa will be held through October 4. The rate for single/double occupancy is \$96.00 per night, plus tax. Please contact the hotel directly by calling 1-580-622-8100 and reference the Western States Water Council group booking code: WSWC22. Any reservations requested after the cut-off date will be accepted, based on availability, at prevailing rates.

On Wednesday, October 19, interested members and guests are invited to register for and attend two morning workshops held in conjunction with our regularly scheduled Council meetings. The first workshop on Abandoned Hardrock Mine Remediation will begin at 8:00 am CDT and feature a panel of federal agencies engaged in abandoned hardrock mine reclamation. States should come prepared to engage in a discussion of opportunities for state-federal coordination and prioritization related to the IIJA funding dedicated to the Bureau of Land Management (BLM) and U.S. Forest Service (USFS). EPA's Office of Mountains, Deserts, and Plains will present an update on recent activities. The second workshop will highlight a report from EPA and USACE on the WOTUS summer regional roundtables hosted by the agencies. It will follow at 9:30 am CDT and will conclude by 11:00 am CDT.

Following the workshops on Wednesday, our Oklahoma hosts have arranged for a field trip. More information will be posted on the Council meeting website.

On Thursday, October 20, the Council meetings will begin with the Oklahoma State Presentation at 8:00 a.m., followed by our regular committee meetings. A social hour will be held for all WSWC members and guests from 6:00 – 8:00 p.m. that evening sponsored by Burns & McDonnell.

The Full Council meeting will be held on Friday morning, October 21, from 8:00 a.m. to 11:00 a.m.

More meeting information and agenda details will be posted as they are available online at <https://westernstateswater.org/events/2022-wswc-fall-200th-meetings/>.

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

Tab B – Membership List

WESTERN STATES WATER COUNCIL

MEMBERSHIP LIST

October 7, 2022

OFFICERS

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

STAFF

Executive Director - **Tony Willardson**
Associate Director/General Counsel - **Michelle Bushman**
Erica Gaddis - Sr. Policy Advisor
Wade Program Manager - **Adel Abdallah**
Data Analyst/Hydroinformatics Specialist - **Ryan James**
Administrative Assistant - **Julie Groat**
WestFAST Federal Liaison - **Heather Hofman**

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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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KANSAS

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MONTANA

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

Management Subcommittee

Jennifer Verleger
(Chair)
Jon Niermann
(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.

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Julie Pack - Alaska
Ayesha Vohra - Arizona
Kelly Brown - Arizona
(Alternate)*
Jeanine Jones - California
Kevin Rein - Colorado
Jerry Rigby - Idaho
John Simpson - Idaho
(Alternate)*
Kenneth Titus - Kansas
Jay Weiner - Montana
Jim Macy - Nebraska
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James Bolotin - Nevada
(Alternate)*
Vacant - New Mexico
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Sara Gibson - Oklahoma
Vacant - Oregon
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Hunter Roberts - South Dakota
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Jon Niermann - Texas
Teresa Wilhelmsen - Utah
Renee Spoonor - Utah
(Alternate)*
Alan Reichman - Washington
Chris Brown - Wyoming
(Chair)

Clean Water Act Jurisdiction

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Jennifer Verleger - North Dakota

Non-Tribal Federal Water Needs Subcommittee

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

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David Hu
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DOD - Lauren Dempsey
DOJ - Stephen Bartell
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Tribal Reserved Water Rights Subcommittee

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Trisha Oeth - Colorado
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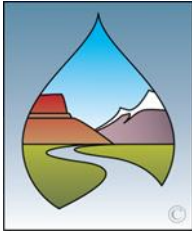
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Tab C – WSWC Policy Positions



**RESOLUTION
of the
WESTERN STATES WATER COUNCIL
regarding
CLEAN WATER ACT § 404(c)**

**Sulphur, Oklahoma
October 21, 2022**

WHEREAS, the Western States Water Council’s (WSWC) mission is “to ensure that the West has an adequate, secure, and sustainable supply of water of suitable quality to meet its diverse economic and environmental needs now and in the future;” and

WHEREAS, the Clean Water Act (CWA) does expressly “recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources....” CWA § 101(b); and

WHEREAS, there is a continuing need for greater collaboration between and among federal agencies, state agencies, local governments, and public/private organizations and businesses; and

WHEREAS, CWA § 404 establishes a permitting program for the disposal of dredge or fill material administered by the U.S. Army Corps of Engineers (USACE), unless delegated to a State or Tribe; and

WHEREAS, CWA § 404(c) grants the Environmental Protection Agency (EPA) Administrator the power “to prohibit the specification (including the withdrawal of specification) of any defined area as a disposal site, and...deny or restrict the use of any defined area...as a disposal site, whenever he determines...that the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas;” and

WHEREAS, in 1992, as directed by CWA Section 404(q), EPA and USACE executed a Memorandum of Agreement (“1992 MOA”) that bound the two agencies to specific procedures for resolving potential disagreements, including “elevation of specific individual permit cases...that involve aquatic resources of national importance;” and

WHEREAS, EPA’s uncertain and unpredictable involvement in the § 404 permitting process causes challenges for States’ engagement and public and private investment in projects requiring § 404 permits; and

WHEREAS, EPA’s use of the § 404(c) power has been infrequent, erratically applied, and recently inconsistent with the 1992 MOA; and

WHEREAS, EPA’s use of § 404(c) in an unpredictable manner will introduce unwarranted uncertainty into the investment climate.

NOW THEREFORE BE IT RESOLVED, that the WSWC supports legislation, regulation, and guidance: (a) improving predictability in § 404 permitting and (c) and (q) processes; (b) improving communication between federal agencies and their state counterparts; and (c) requiring EPA to adhere, to the maximum extent practicable, to the established § 404 permitting process.

BE IT FURTHER RESOLVED, that the WSWC urges legislation, regulation, and guidance expressly limiting exercise of EPA’s § 404(c) power to the time period between USACE’s indication of its intent to issue a permit, and USACE’s final issuance of that permit.

BE IT FURTHER RESOLVED, that the WSWC urges EPA to:

(1) clearly specify which waters, of the waters the project proposes to fill, EPA believes are Waters of the United States prior to exercise of its § 404(c) power;

(2) communicate with the State's environmental protection agency in which the § 404 permit is to be issued prior to exercise of its § 404(c) power, and that it do so in a transparent manner, providing the State with a meaningful opportunity to address EPA's concerns;

(3) abstain from contradicting a finding in a Final Environmental Impact Statement (FEIS) issued by the USACE absent clear and compelling evidence that the FEIS finding was inaccurate;

(4) see the CWA § 404(q) process through to completion, prior to any proposed § 404(c) veto;

(5) abstain from issuing a § 404(c) veto unless and until the affected State's time period for issuing a § 401 certification has expired;

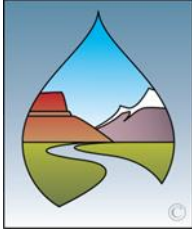
(6) establish, following consultation with States' environmental protection agencies, guidance outlining criteria that it will adhere to in exercising its § 404(c) power and enter into related MOUs with the States for implementing such guidance;

(7) limit the bases for exercising its § 404(c) power to those in which it has expertise, and only then, following application of that expertise to the actual body or bodies of water to be affected;

(8) before exercising its § 404(c) veto power, to fully and fairly consider proposed mitigation measures, including compensatory mitigation; and

(9) consistent with § 101(b) of the CWA, respect and defer to States' primary responsibilities and rights to prevent, reduce, and eliminate pollution, and to plan the development and use (including restoration, preservation, and enhancement) of land and water resources.

BE IT FURTHER RESOLVED, that the WSWC pledges to work with the Administration and Congress to reduce the uncertainties and inconsistencies in EPA's § 404(c) power, as it has been exercised to date.



**RESOLUTION
of the
WESTERN STATES WATER COUNCIL
regarding
CLEAN WATER ACT § 404(c)**

**Sulphur, Oklahoma
October 21, 2022**

WHEREAS, the Western States Water Council’s (WSWC) mission is “to ensure that the West has an adequate, secure, and sustainable supply of water of suitable quality to meet its diverse economic and environmental needs now and in the future;” and

WHEREAS, the Clean Water Act (CWA) does expressly “recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution, to plan the development and use (including restoration, preservation, and enhancement) of land and water resources....” CWA § 101(b); and

WHEREAS, there is a continuing need for greater collaboration between and among federal agencies, state agencies, local governments, and public/private organizations and businesses; and

WHEREAS, CWA § 404 establishes a permitting program for the disposal of dredge or fill material administered by the U.S. Army Corps of Engineers (USACE), unless delegated to a State or Tribe; and

WHEREAS, CWA § 404(c) grants the Environmental Protection Agency (EPA) ~~Administrator~~ -the power “to prohibit the specification (including the withdrawal of specification) of any defined area as a disposal site, and...deny or restrict the use of any defined area...as a disposal site, whenever he determines...that the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas;” and

WHEREAS, in 1992, as directed by CWA Section 404(q), EPA and USACE executed a Memorandum of Agreement (“1992 MOA”) that bound the two agencies to specific procedures for resolving potential disagreements, including “elevation of specific individual permit cases...that involve aquatic resources of national importance;” and

WHEREAS, ~~uncertainty and unpredictability~~ EPA’s uncertain and unpredictable involvement in the § 404 permitting process causes challenges for States’ engagement and public and private risks deterring investment in projects requiring § 404 permits; and

WHEREAS, EPA’s use of the § 404(c) power has been infrequent, ~~and erratically applied, somewhat erratic and recently inconsistent with the 1992 MOA;~~ and

WHEREAS, EPA’s use of § 404(c) in an unpredictable manner will introduce unwarranted uncertainty into the investment climate.

NOW THEREFORE BE IT RESOLVED, that the WSWC supports legislation, regulation, and guidance: (a) improving predictability in § 404 permitting and (c) and (q) processes; (b) improving communication between federal agencies and their state counterparts; and (c) requiring EPA to adhere, to the maximum extent practicable, to the established § 404 permitting process.

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(4) see the CWA § 404(q) process through to completion, prior to any proposed § 404(c) veto;

(5) abstain from issuing a § 404(c) veto unless and until the affected State's time period for issuing a § 401 certification has expired;

(6) establish, following consultation with States' environmental protection agencies, guidance outlining criteria that it will adhere to in exercising its § 404(c) power and enter into related MOUs with the States for implementing such guidance;

(7) limit the bases for exercising its § 404(c) power to those in which it has expertise, and only then, following application of that expertise to the actual body or bodies of water to be affected;

(8) before ~~its exercising its -of the-~~ § 404(c) veto power, to fully and fairly consider proposed mitigation measures, including compensatory mitigation; ~~and~~

(9) consistent with § 101(b) of the CWA, respect and defer to States' primary responsibilities and rights to prevent, reduce, and eliminate pollution, and to plan the development and use (including restoration, preservation, and enhancement) of land and water resources.

BE IT FURTHER RESOLVED, that the WSWC pledges to work with the Administration and Congress ~~to in~~ reducing the uncertainties and inconsistencies in EPA's § 404(c) power, as it has been exercised to date.



**RESOLUTION
of the
WESTERN STATES WATER COUNCIL
regarding
CLEAN WATER ACT § 404(c)**

**Sulphur, Oklahoma
October 21, 2022**

WHEREAS, the Western States Water Council’s (WSWC) mission is “to ensure that the West has an adequate, secure, and sustainable supply of water of suitable quality to meet its diverse economic and environmental needs now and in the future;” and

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BE IT FURTHER RESOLVED, that the WSWC urges EPA to:

(1) clearly specify which waters, of the waters the project proposes to fill, EPA believes are Waters of the United States prior to exercise of its § 404(c) power;

(2) communicate with the State's environmental protection agency in which the § 404 permit is to be issued prior to exercise of its § 404(c) power, and that EPA do so in a transparent manner, providing the State with a meaningful opportunity to address EPA's concerns;

(3) abstain from contradicting a finding in a Final Environmental Impact Statement (FEIS) issued by the Corps absent clear and compelling evidence that the FEIS finding was inaccurate;

(4) see the CWA § 404(q) process through to completion, prior to any proposed § 404(c) veto;

(5) abstain from issuing a § 404(c) veto unless and until the affected State's time period for issuing a § 401 certification has expired;

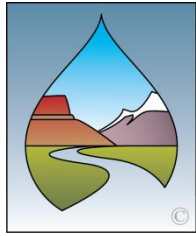
(6) establish, following consultation with States' environmental protection agencies, guidance outlining criteria that it will adhere to in exercising its § 404(c) power and enter into related MOUs with the States for implementing such guidance;

(7) limit the bases for exercising its § 404(c) power to those in which it has expertise, and only then, following application of that expertise to the actual body or bodies of water to be affected;

(8) before its exercise of the § 404(c) power, to fully and fairly consider proposed mitigation measures, including compensatory mitigation; and

(9) consistent with § 101(b) of the CWA, respect and defer to States' primary responsibilities and rights to prevent, reduce, and eliminate pollution, and to plan the development and use (including restoration, preservation, and enhancement) of land and water resources.

BE IT FURTHER RESOLVED, that the WSWC pledges to work with the Administration and Congress in reducing the uncertainties and inconsistencies in EPA's § 404(c) power, as it has been exercised to date.



Position #
Revised and Readopted
(Originally adopted Oct 29, 2010 and revised and readopted on Oct. 3, 2013;
and on Sep 30, 2016)

**POSITION
of the
WESTERN STATES WATER COUNCIL
regarding
NASA'S APPLIED SCIENCE RESEARCH PROGRAM
Sulphur, Oklahoma
October 21, 2022**

WHEREAS, the Western States Water Council is a policy advisory body representing eighteen states, and has long been involved in western water conservation, development, protection, and management issues, and the member states and political subdivisions have long been partners in cooperative federal water and climate data collection and analysis programs; and

WHEREAS, in the West, water is a critical, vital resource (much of which originates from mountain snows) and sound decision making demands accurate and timely mapping of, and data on, altimetry, topography, precipitation, temperature, snow water content, groundwater, land use and land cover, water use, water quality parameters, and similar information; and

WHEREAS, the demands for water and related climate data continue to increase along with the West's population, and this information is used by federal, state, tribal, and local government agencies, as well as private entities and individuals to: (1) forecast flood and drought occurrence; (2) project future water supplies for agricultural, municipal, and industrial uses; (3) estimate streamflows for hydropower production, recreation, and environmental purposes; (4) facilitate water management and administration of water rights, decrees, interstate compacts, and international water treaties; (5) assist in disaster response; (6) assess impacts of climate variability and change; and

WHEREAS, thermal infrared imaging data available from Landsat 8 and Landsat 9 is used to measure and monitor agricultural and other outdoor water uses and needs, and is increasingly important for present and future management of our scarce water resources, and is an example of the application of basic science pioneered by the National Aeronautics and Space Administration (NASA); and

WHEREAS, the ability to use interferometric synthetic aperture radar (InSAR) to measure land subsidence due to groundwater extraction has already been demonstrated, and there are promising research approaches for developing a method to directly measure snow depth using Lidar measurements from the Ice, Cloud, and Land Elevation Satellite-2 (ICESat-2);¹ and

WHEREAS, NASA research has enabled operational use of airborne snow observations; and

WHEREAS, additional airborne and spaceborne remote sensing research and observations have a potential to provide other information on varied temporal and spatial scales that could with sustained engagement focus on transition of research to operations and ultimately be useful for water resources planning, management and decision-making; and

WHEREAS, NASA has identified the "water and energy cycle" and "water resources" as topics to support in the agency's research and applications programs respectively; and

WHEREAS, NASA's demonstration project on California applications for use of remote sensing information has illustrated that the potential exists for repurposing data collected from certain present NASA

¹ [NASA Scientist Discovers New Means to Measure Snow Depth from Space | NASA](#)

missions for water management applications, and that additional potential exists for research applications with sensors planned in future Decadal Survey missions such as the NASA-ISRO Synthetic Aperture Radar (NISAR), which is designed to observe and take measurements of the planet's crust and disturbances, including subsidence due to groundwater pumping; and

WHEREAS, the successful transfer of technology from the research domain to the applications domain or research to operations (R2O) is dependent, in part, on on-going communication between researchers and those responsible for resource management and policy decisions and a long-term commitment to maintain such communication.

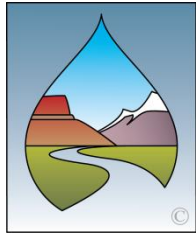
NOW THEREFORE BE IT RESOLVED, that the Western States Water Council urges the Administration and NASA to enhance the agency's focus areas on research for water resources applications, and to promote long-term engagement with the Council and the state and regional agencies in the western United States responsible for water management and water policy to maximize benefits to the public from NASA's existing and future investments in Earth observations, Earth system models and systems engineering.

BE IT FURTHER RESOLVED, that the Council supports efforts to advance linkages between NASA's capabilities and water managers' needs, such as NASA/JPL's Western Water Applications Office (WWAO).

BE IT FURTHER RESOLVED, that the Council urges the Administration and NASA to plan and provide for long-term continuity of observations from key sensors such as the thermal infrared sensor and InSAR used in water management.

BE IT FURTHER RESOLVED, that the Council strongly supports a continuing National Land Imaging Program, including existing thermal imaging capabilities, and expresses its strong support for the expedited approval and construction of the Landsat Next mission – while exploring the potential for medium and longer-term advances in technology, design and future capabilities to meet existing and future uses.

BE IT FURTHER RESOLVED, that the Council supports and strongly encourages interagency cooperation, including collaborative efforts between NASA, NOAA, and USGS to move research towards operational applications that inform and improve State water resources management and decisionmaking.



**POSITION
of the
WESTERN STATES WATER COUNCIL
regarding
NASA'S APPLIED SCIENCE RESEARCH PROGRAM
~~Breckenridge, Colorado~~Sulphur, Oklahoma
October ~~18, 2019~~2021, 2022**

WHEREAS, the Western States Water Council is a policy advisory body representing eighteen states, and has long been involved in western water conservation, development, protection, and management issues, and the member states and political subdivisions have long been partners in cooperative federal water and climate data collection and analysis programs; and

WHEREAS, in the West, water is a critical, vital resource (much of which originates from mountain snows) and sound decision making demands accurate and timely mapping of, and data on, altimetry, topography, precipitation, temperature, snow water content, groundwater, land use and land cover, water use, water quality parameters, and similar information; and

WHEREAS, the demands for water and related climate data continue to increase along with the West's population, and this information is used by federal, state, tribal, and local government agencies, as well as private entities and individuals to: (1) forecast flood and drought occurrence; (2) project future water supplies for agricultural, municipal, and industrial uses; (3) estimate streamflows for hydropower production, recreation, and environmental purposes; (4) facilitate water management and administration of water rights, decrees, interstate compacts, and international water treaties; (5) assist in disaster response; (6) assess impacts of climate variability and change; and

WHEREAS, thermal infrared imaging data available from Landsat ~~87~~ and Landsat ~~98~~ is used to measure and monitor agricultural and other outdoor water uses and needs, and is increasingly important for present and future management of our scarce water resources, and is an example of the application of basic science pioneered by the National Aeronautics and Space Administration (NASA); and

WHEREAS, ~~the ability to use interferometric synthetic aperture radar (InSAR) to measure land subsidence due to groundwater extraction has already been demonstrated, and there are promising research approaches for~~ using developing a method to directly measure snow depth using Lidar measurements from the Ice, Cloud, and Land Elevation Satellite-2 (ICESat-2);¹ remote sensing for estimating snowpack conditions; and

WHEREAS, NASA research has enabled operational use of airborne snow observations; and

WHEREAS, additional airborne and spaceborne remote sensing research and observations have a potential to provide other information on varied temporal and spatial scales that could with sustained engagement focus on transition of research to operations and ultimately be useful for water resources planning, management and decision-making; and

WHEREAS, NASA has identified the "water and energy cycle" and "water resources" as topics to support in the agency's research and applications programs respectively; and

¹ [NASA Scientist Discovers New Means to Measure Snow Depth from Space | NASA](#)

WHEREAS, NASA's demonstration project on California applications for use of remote sensing information has illustrated that the potential exists for repurposing data collected from certain present NASA missions for water management applications, and that additional potential exists for research applications with sensors planned in future Decadal Survey missions such as the NASA-ISRO Synthetic Aperture Radar (NISAR), which is designed to observe and take measurements of the planet's crust and disturbances, including subsidence due to groundwater pumping; and

WHEREAS, the successful transfer of technology from the research domain to the applications domain [or research to operations \(R2O\)](#) is dependent, in part, on on-going communication between researchers and those responsible for resource management and policy decisions and a long-term commitment to maintain such communication.

NOW THEREFORE BE IT RESOLVED, that the Western States Water Council urges the Administration and NASA to enhance the agency's focus areas on research for water resources applications, and to promote long-term engagement with the Council and the state and regional agencies in the western United States responsible for water management and water policy to maximize benefits to the public from NASA's existing and future investments in Earth observations, Earth system models and systems engineering.

BE IT FURTHER RESOLVED, that the Council supports efforts to advance linkages between NASA's capabilities and water managers' needs, such as NASA/JPL's Western Water Applications Office (WWAO).

BE IT FURTHER RESOLVED, that the Council urges the Administration and NASA to plan and provide for long-term continuity of observations from key sensors such as the thermal infrared sensor and InSAR used in water management.

BE IT FURTHER RESOLVED, that the Council strongly supports a continuing National Land Imaging Program, including existing thermal imaging capabilities, and expresses its strong support for the expedited [approval and construction of the Landsat Next mission and launch of Landsat 9](#) – while exploring the potential for medium and longer-term advances in technology, design and future capabilities to meet existing and future uses.

BE IT FURTHER RESOLVED, that the Council supports and strongly encourages interagency cooperation, including collaborative efforts between NASA, NOAA, and USGS to move research towards operational applications that inform and improve [State water resources management and decisionmaking](#).



Position #
Revised and Readopted
(see also Position #357, 10/3/ 2013, and
Position #397, 9/30/16)

**POSITION
of the
WESTERN STATES WATER COUNCIL
regarding
THE DEPARTMENT OF THE INTERIOR's WATER SMART PROGRAMS
Sulphur, Oklahoma
October 21, 2022**

WHEREAS, the Western States Water Council is a policy advisory body representing eighteen states, and has long been involved in western water conservation, development, protection, and management issues, and the member states and political subdivisions have long been partners in cooperative federal water programs; and

WHEREAS, in the West, water is a critical, vital resource and “...States bear the primary responsibility and authority for managing the water resources of the United States,” as recognized in the SECURE Water Act¹ ; and

WHEREAS, Western water law and policy are based on the reality of scarcity and the need to use water wisely, and Western states have made great strides in increasing efficiency and reducing water use, but continued investments and sacrifices are needed to maintain our quality of life in the West and to protect our environment; and

WHEREAS, the Act also recognizes that “the Federal Government should support the States, as well as regional, local and tribal governments...” and authorizes a number of important programs to provide this much needed support; and

WHEREAS, the Council supports technical and financial assistance to states and local watershed groups and water districts as an appropriate federal role, consistent with authorized federal programs; and

WHEREAS, the Council has long supported watershed and basin-wide coordination that involves all governmental entities and stakeholders interested in finding solutions to present and future water management challenges; and

WHEREAS, Section 9504 of the Act authorizes the Secretary of the Interior to provide grants or enter into cooperative agreements to assist states and other non-federal entities in carrying out a range of water use efficiency improvements to address crucial water supply issues, stretch limited water supplies, and improve water management; and

WHEREAS, the Act authorizes a variety of activities to enhance the Department of the Interior’s water data efforts with significant progress made on these activities, including the development of a national groundwater monitoring program, a brackish water assessment, and the establishment of a national water availability and use assessment; and

WHEREAS, real-time water resources data are critical for timely actions in response to droughts, flooding, and other extreme weather events, and the lack of federal capital investments in water data programs has led to the discontinuance, disrepair, or obsolescence of vital equipment needed to maintain existing water data gathering activities; and

¹ See Section 9501, SECURE Water Act, which Congress passed as Subtitle F of the Omnibus Public Lands Management Act of 2009 (Public Law 111-11).

WHEREAS, the lack of timely and accurate streamflow information threatens to put human life, health, welfare, property, and environmental and natural resources at a considerably greater risk of loss; and

WHEREAS, the U.S. Geological Survey's (USGS) National Streamflow Information Program (NSIP) facilitates an improved national backbone focused on national needs and interests; and

WHEREAS, the Groundwater and Streamflow Information Program (GWSIP), as well as USGS' cooperative matching funds within the Water Availability and Use Science Program (WAUSP), together provide vital water data that States and other public and private entities and individuals rely on in making day-to-day planning and management decisions; and

WHEREAS, substantial advances in water science, together with emerging breakthroughs in technical and computational capabilities, have led the USGS to develop a Next Generation Water Observing System (NGWOS); and

WHEREAS, USGS provides "grants to State water resource agencies to assist in developing water use and availability datasets" under the Water-Use Data and Research (WUDR) program, in support of the Water Use Data for the Nation publication and the National Water Census; and

WHEREAS, USGS' NSIP, GWSIP, NGWOS, WAUSP, and WUDR programs together provide vital water data that States and other public and private entities and individuals rely on to make day-to-day planning and management decisions; and

WHEREAS, authorization and funding for some of these WaterSMART programs have expired or appropriations have largely been depleted and some have gone unfunded or underfunded or remain dependent on year-to-year appropriations, as opposed to a dedicated line item.

NOW THEREFORE BE IT RESOLVED, that the Western States Water Council expresses our continuing strong support for authorization and implementation of the SECURE Water Act and related programs; and

BE IT FURTHER RESOLVED, that Western States recognize that too often program authorization and appropriations have not kept up with the need, limiting program participation and benefits; and

BE IT FURTHER RESOLVED, that the Council encourages the Administration to request and the Congress to ensure that the Act's authorized activities receive support and appropriations that are adequate to fulfill their stated purposes as a dedicated line item, as well as focus existing resources on these important programs.



**POSITION
of the
WESTERN STATES WATER COUNCIL
regarding
THE DEPARTMENT OF THE INTERIOR's WATER SMART PROGRAMS
Breckenridge, Colorado Sulphur, Oklahoma
October 18, 201921, 2022**

WHEREAS, the Western States Water Council is a policy advisory body representing eighteen states, and has long been involved in western water conservation, development, protection, and management issues, and the member states and political subdivisions have long been partners in cooperative federal water programs; and

WHEREAS, in the West, water is a critical, vital resource and “...States bear the primary responsibility and authority for managing the water resources of the United States,” as recognized in the SECURE Water Act¹ ; and

WHEREAS, Western water law and policy are based on the reality of scarcity and the need to use water wisely, and Western states have made great strides in increasing efficiency and reducing water use, but continued investments and sacrifices are needed to maintain our quality of life in the West and to protect our environment; and

WHEREAS, the Act also recognizes that “the Federal Government should support the States, as well as regional, local and tribal governments...” and authorizes a number of important programs to provide this much needed support; and

WHEREAS, the Council supports technical and financial assistance to states and local watershed groups and water districts as an appropriate federal role, consistent with authorized federal programs; and

WHEREAS, the Council has long supported watershed and basin-wide coordination that involves all governmental entities and stakeholders interested in finding solutions to present and future water management challenges; and

WHEREAS, Section 9504 of the Act authorizes the Secretary of the Interior to provide grants or enter into cooperative agreements to assist states and other non-federal entities in carrying out a range of water use efficiency improvements to address crucial water supply issues, stretch limited water supplies, and improve water management; and

WHEREAS, the Act authorizes a variety of activities to enhance the Department of the Interior’s water data efforts with significant progress made on these activities, including the development of a national groundwater monitoring program, a brackish water assessment, and the establishment of a national water availability and use assessment; and

WHEREAS, real-time water resources data are critical for timely actions in response to droughts, flooding, and other extreme weather events, and the lack of federal capital investments in water data programs has led to the discontinuance, disrepair, or obsolescence of vital equipment needed to maintain existing water data gathering activities; and

¹ See Section 9501, SECURE Water Act, which Congress passed as Subtitle F of the Omnibus Public Lands Management Act of 2009 (Public Law 111-11).

WHEREAS, the lack of timely and accurate streamflow information threatens to put human life, health, welfare, property, and environmental and natural resources at a considerably greater risk of loss; and

WHEREAS, ~~Section 9507 of the Act authorizes an additional \$10 million for each of fiscal years 2009 through 2019 for enhancements to~~ the U.S. Geological Survey's (USGS) National Streamflow Information Program (NSIP) ~~in order to provide~~facilitates an improved national backbone focused on national needs and interests; and

WHEREAS, ~~the~~ Groundwater and Streamflow Information Program (GWSIP), as well as USGS' cooperative matching funds within the Water Availability and Use Science Program (WAUSP), together provide vital water data that States and other public and private entities and individuals rely on in making day-to-day planning and management decisions; and

WHEREAS, substantial advances in water science, together with emerging breakthroughs in technical and computational capabilities, have led the USGS to develop a Next Generation Water Observing System (NGWOS); and

WHEREAS, ~~Section 9508 (c) of the Act authorizes the~~ USGS to "provide grants to State water resource agencies to assist in developing water use and availability datasets" ~~and has led to initiation of~~ under the Water-Use Data and Research (WUDR) program, in support of the Water Use Data for the Nation publication and the National Water Census; and

WHEREAS, USGS' NSIP, GWSIP, NGWOS, WAUSP, and WUDR programs together ~~will~~ provide vital water data that States and other public and private entities and individuals rely on to make day-to-day planning and management decisions; and

WHEREAS, authorization and funding for some of these and many WaterSMART programs have expired or appropriations have largely been depleted and some have gone unfunded or underfunded or remain dependent on year-to-year appropriations, as opposed to a dedicated line item.

NOW THEREFORE BE IT RESOLVED, that the Western States Water Council expresses our continuing strong support for authorization and implementation of the SECURE Water Act and related programs; and

BE IT FURTHER RESOLVED, that Western States recognize that too often program authorization and appropriations have not kept up with the need, limiting program participation and benefits; and

BE IT FURTHER RESOLVED, that the Council encourages the Administration to request and the Congress to ensure that the Act's authorized activities receive support and appropriations that are adequate to fulfill their stated purposes as a dedicated line item, as well as focus existing resources on these important programs.



**POSITION
of the
WESTERN STATES WATER COUNCIL
regarding
DEPARTMENT OF THE INTERIOR's WATER SMART PROGRAM
Breckenridge, Colorado Sulphur, Oklahoma
October ~~18, 2019~~ 21, 2022**

WHEREAS, the Western States Water Council is a policy advisory body representing eighteen states, and has long been involved in western water conservation, development, protection, and management issues, and the member states and political subdivisions have long been partners in cooperative federal water programs; and

WHEREAS, in the West, water is a critical, vital resource and "...States bear the primary responsibility and authority for managing the water resources of the United States," as recognized in the SECURE Water Act¹; and

WHEREAS, Western water law and policy are based on the reality of scarcity and the need to use water wisely, and Western states have made great strides in increasing efficiency and reducing water use, but continued investments and sacrifices are needed to maintain our quality of life in the West and to protect our environment; and

WHEREAS, the Act also recognizes that "the Federal Government should support the States, as well as regional, local and tribal governments..." and authorizes a number of important programs to provide this much needed support; and

WHEREAS, the Council supports technical and financial assistance to states and local watershed groups and water districts as an appropriate federal role, consistent with authorized federal programs; and

WHEREAS, the Council has long supported watershed and basin-wide coordination that involves all governmental entities and stakeholders interested in finding solutions to present and future water management challenges; and

WHEREAS, Section 9504 of the Act authorizes the Secretary of the Interior to provide grants or enter into cooperative agreements to assist states and other non-federal entities in carrying out a range of water use efficiency improvements to address crucial water supply issues, stretch limited water supplies, and improve water management; and

WHEREAS, the Act authorizes a variety of activities to enhance the Department of the Interior's water data efforts with significant progress made on these activities, including the development of a national groundwater monitoring program, a brackish water assessment, and the establishment of a national water availability and use assessment; and

WHEREAS, real-time water resources data are critical for timely actions in response to droughts, flooding, and other extreme weather events, and the lack of federal capital investments in water data programs has led to the discontinuance, disrepair, or obsolescence of vital equipment needed to maintain existing water data gathering activities; and

¹ See Section 9501, SECURE Water Act, which Congress passed as Subtitle F of the Omnibus Public Lands Management Act of 2009 (Public Law 111-11).

WHEREAS, the lack of timely and accurate streamflow information threatens to put human life, health, welfare, property, and environmental and natural resources at a considerably greater risk of loss; and

WHEREAS, ~~Section 9507 of the Act authorizes an additional \$10 million for each of fiscal years 2009 through 2019 for enhancements to~~ the U.S. Geological Survey's (USGS) National Streamflow Information Program (NSIP) ~~in order to provide~~facilitates an improved national backbone focused on national needs and interests; and

WHEREAS, ~~the~~ Groundwater and Streamflow Information Program (GWSIP), as well as USGS' cooperative matching funds within the Water Availability and Use Science Program (WAUSP), together provide vital water data that States and other public and private entities and individuals rely on in making day-to-day planning and management decisions; and

WHEREAS, substantial advances in water science, together with emerging breakthroughs in technical and computational capabilities, have led the USGS to develop a Next Generation Water Observing System (NGWOS); and

WHEREAS, ~~Section 9508 (c) of the Act authorizes the~~ USGS to ~~“provides “grants to State water resource agencies to assist in developing water use and availability datasets”~~ and has led to initiation of ~~under~~ the Water-Use Data and Research (WUDR) program, in support of the Water Use Data for the Nation publication and the National Water Census; and

WHEREAS, USGS' NSIP, GWSIP, NGWOS, WAUSP, and WUDR programs together ~~will~~ provide vital water data that States and other public and private entities and individuals rely on to make day-to-day planning and management decisions; and

WHEREAS, authorization and funding for some of these ~~and many~~ WaterSMART programs have expired or appropriations have largely been depleted and some have gone unfunded or underfunded or -remain dependent on year-to-year appropriations, as opposed to a dedicated line item.

NOW THEREFORE BE IT RESOLVED, that the Western States Water Council expresses our continuing strong support for authorization and implementation of the SECURE Water Act and related programs; and

BE IT FURTHER RESOLVED, that the Council encourages the Administration to request and the Congress to ensure that the Act's authorized activities receive support and appropriations that are adequate to fulfill their stated purposes as a dedicated line item.



Position #
Revised and Readopted
*(Originally adopted Nov. 17, 1995, readopted Nov. 20, 1998 and revised and readopted
Nov. 16, 2001, Oct. 29, 2004, Nov. 16, 2007, Oct. 29, 2010, and Oct. 3, 2013)*

**RESOLUTION
of the
WESTERN STATES WATER COUNCIL
URGING CONGRESS TO REAFFIRM ITS DEFERENCE TO STATE WATER LAW,
PROVIDE FOR THE WAIVER OF THE UNITED STATES' IMMUNITY TO
PARTICIPATION IN STATE ADMINISTRATIVE AND JUDICIAL PROCEEDINGS,
AND PROVIDE FOR PAYMENT OF FEES REQUIRED BY STATE LAW
Sulphur, Oklahoma
October 21, 2022**

WHEREAS, water is the lifeblood of each of the arid Western States, the allocation of which determines the future of each Western State's economic, environmental, social and cultural fortunes; and

WHEREAS, each Western State has developed comprehensive systems for the appropriation, use and distribution of water tailored to its unique physiographic, hydrologic and climatic conditions found within that state; and

WHEREAS, the United States does not have a water management system that is equivalent to those of the Western States for the appropriation, use or distribution of water; and

WHEREAS, Congress has consistently recognized the primacy of state water law because of the need for comprehensive water management systems tailored to the unique needs and characteristics of the individual states; and

WHEREAS, the adjudication of water rights claims is absolutely essential for the orderly allocation of water in all the Western States where state law is based on the prior appropriation doctrine; and

WHEREAS, Congress enacted the McCarran Amendment, 43 U.S.C. § 666, to allow the joinder of the United States in state general stream adjudications, and Congress intended the United States to be subject to the same procedures as all other water right claimants joined in state general stream adjudications; and

WHEREAS, many of the Western States are conducting general stream adjudications for the purpose of quantifying all water right claims in accordance with the McCarran Amendment; and

WHEREAS, the United States is often the largest claimant of water rights in these general stream adjudications, and the adjudication of federal water right claims requires a large commitment of time, effort and resources by the state courts and by state agencies; and

WHEREAS, many of the Western States' general stream adjudication procedures require claimants to pay a fee to offset the states' expenses arising from state general stream adjudications; and



Position #
Revised and Readopted
(Originally adopted Nov. 17, 1995, readopted Nov. 20, 1998 and revised and readopted
Nov. 16, 2001, Oct. 29, 2004, Nov. 16, 2007, Oct. 29, 2010, and Oct. 3, 2013)

WHEREAS, citing the U.S. Supreme Court's decision in *United States v. Idaho*, 508 U.S. 1 (1993), the United States claims immunity from the payment of adjudication filing fees required of all other claimants to offset the judicial and administrative expenses Western States incur in conducting general stream adjudications; and

WHEREAS, for the United States to be immune from sharing in the expenses of these proceedings constitutes an unfunded federal mandate to the states; and

WHEREAS, many Western States are facing budget shortfalls and limited resources, and the federal non-payment of state filing-fees is a significant impediment to their ability to begin or carry out general stream adjudications in a timely manner; and

WHEREAS, drawn out adjudications are having a detrimental impact on the willingness of stakeholders in watersheds to collaborate on joint management and planning for water supply and water quality; and

WHEREAS, the United States contends that it cannot be joined in state administrative or judicial proceedings with respect to water rights it has acquired under state law other than pursuant to the McCarran Amendment, 43 U.S.C. § 666; and

WHEREAS, it is inefficient and wasteful to require that a separate lawsuit be commenced for the sole purpose of regulating water rights acquired by the United States under state law; and

WHEREAS, the United States often claims it is also immune from paying fees to states that are required of all other water users for the appropriation, use or distribution of water; and

WHEREAS, equity and fairness dictate that federal agencies who voluntarily seek to appropriate water pursuant to state law, or who acquire water rights based on state law, should be required to comply with state law, including the payment of fees, to the same extent as all other persons.

NOW, THEREFORE, BE IT RESOLVED that the Western States Water Council supports passage of legislation that at a minimum provides for the following:

1. Requires the federal government to participate in all state administrative and judicial proceedings with respect to water rights it acquires to the same extent as all other persons.
2. Requires the federal government (not Native American tribes) to pay filing fees as well as comply with all other state substantive and procedural water right adjudication laws to the same extent as all other persons.



Position #
Revised and Readopted
(Originally adopted Nov. 17, 1995, readopted Nov. 20, 1998 and revised and readopted
Nov. 16, 2001, Oct. 29, 2004, Nov. 16, 2007, Oct. 29, 2010, and Oct. 3, 2013)

3. Requires the federal government to pay applicable fees as well as comply with all other state substantive and procedural laws for the appropriation, use and distribution of water rights to the same extent as all other persons.
4. Provides for state administration of all water rights.

BE IT FURTHER RESOLVED, that the Western States Water Council also urges Congress to appropriate moneys for retroactive payment of unpaid fees to states that have incurred expenses as a result of processing federal claims or federal objections to private claims in state general stream adjudications.

BE IT FURTHER RESOLVED, that absent legislation the Council encourages federal agencies to work with states and enter into memoranda of agreement or other administrative mechanisms to minimize and otherwise mitigate the expense of federal claims incurred by states in general adjudications to the maximum extent allowed by law.



Position ~~# No. 440~~
Revised and Readopted

*(Originally adopted Nov. 17, 1995, readopted Nov. 20, 1998 and revised and readopted
Nov. 16, 2001, Oct. 29, 2004, Nov. 16, 2007, Oct. 29, 2010, and Oct. 3, 2013)*

RESOLUTION
of the
WESTERN STATES WATER COUNCIL
URGING CONGRESS TO REAFFIRM ITS DEFERENCE TO STATE WATER LAW,
PROVIDE FOR THE WAIVER OF THE UNITED STATES' IMMUNITY TO
PARTICIPATION IN STATE ADMINISTRATIVE AND JUDICIAL PROCEEDINGS,
AND PROVIDE FOR PAYMENT OF FEES REQUIRED BY STATE LAW
Breckenridge, Colorado Sulphur, Oklahoma
October ~~1821~~, 2022~~19~~

WHEREAS, water is the lifeblood of each of the arid Western States, the allocation of which determines the future of each Western State's economic, environmental, social and cultural fortunes; and

WHEREAS, each Western State has developed comprehensive systems for the appropriation, use and distribution of water tailored to its unique physiographic, hydrologic and climatic conditions found within that state; and

WHEREAS, the United States does not have a water management system that is equivalent to those of the Western States for the appropriation, use or distribution of water; and

WHEREAS, Congress has consistently recognized the primacy of state water law because of the need for comprehensive water management systems tailored to the unique needs and characteristics of the individual states; and

WHEREAS, the adjudication of water rights claims is absolutely essential for the orderly allocation of water in all the Western States where state law is based on the prior appropriation doctrine; and

WHEREAS, Congress enacted the McCarran Amendment, 43 U.S.C. § 666, to allow the joinder of the United States in state general stream adjudications, and Congress intended the United States to be subject to the same procedures as all other water right claimants joined in state general stream adjudications; and

WHEREAS, many of the Western States are conducting general stream adjudications for the purpose of quantifying all water right claims in accordance with the McCarran Amendment; and

WHEREAS, the United States is often the largest claimant of water rights in these general stream adjudications, and the adjudication of federal water right claims requires a large commitment of time, effort and resources by the state courts and by state agencies; and

WHEREAS, many of the Western States' general stream adjudication procedures require claimants to pay a fee to offset the states' expenses arising from state general stream adjudications; and



(Originally adopted Nov. 17, 1995, readopted Nov. 20, 1998 and revised and readopted Nov. 16, 2001, Oct. 29, 2004, Nov. 16, 2007, Oct. 29, 2010, and Oct. 3, 2013)

WHEREAS, citing the U.S. Supreme Court's decision in *United States v. Idaho*, 508 U.S. 1 (1993), the United States claims immunity from the payment of adjudication filing fees required of all other claimants to offset the judicial and administrative expenses Western States incur in conducting general stream adjudications; and

WHEREAS, for the United States to be immune from sharing in the expenses of these proceedings constitutes an unfunded federal mandate to the states; and

WHEREAS, many Western States are facing budget shortfalls and limited resources, and the federal non-payment of state filing-fees is a significant impediment to their ability to begin or carry out general stream adjudications in a timely manner; and

WHEREAS, drawn out adjudications are having a detrimental impact on the willingness of stakeholders in watersheds to collaborate on joint management and planning for water supply and water quality; and

WHEREAS, the United States contends that it cannot be joined in state administrative or judicial proceedings with respect to water rights it has acquired under state law other than pursuant to the McCarran Amendment, 43 U.S.C. § 666; and

WHEREAS, it is inefficient and wasteful to require that a separate lawsuit be commenced for the sole purpose of regulating water rights acquired by the United States under state law; and

WHEREAS, the United States often claims it is also immune from paying fees to states that are required of all other water users for the appropriation, use or distribution of water; and

WHEREAS, equity and fairness dictate that federal agencies who voluntarily seek to appropriate water pursuant to state law, or who acquire water rights based on state law, should be required to comply with state law, including the payment of fees, to the same extent as all other persons.

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Position # ~~No. 440~~

Revised and Readopted

(Originally adopted Nov. 17, 1995, readopted Nov. 20, 1998 and revised and readopted Nov. 16, 2001, Oct. 29, 2004, Nov. 16, 2007, Oct. 29, 2010, and Oct. 3, 2013)

3. Requires the federal government to pay applicable fees as well as comply with all other state substantive and procedural laws for the appropriation, use and distribution of water rights to the same extent as all other persons.
4. Provides for state administration of all water rights.

BE IT FURTHER RESOLVED, that the Western States Water Council also urges Congress to appropriate moneys for retroactive payment of unpaid fees to states that have incurred expenses as a result of processing federal claims or federal objections to private claims in state general stream adjudications.

BE IT FURTHER RESOLVED, that absent legislation the Council encourages federal agencies to work with states and enter into memoranda of agreement or other administrative mechanisms to minimize and otherwise mitigate the expense of federal claims incurred by states in general adjudications to the maximum extent allowed by law.

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.)
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
472	WQ	9/16/2021	regarding Clean Water Act Jurisdiction > Past Position - replaced by Position #481 <
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
457	L	10/15/2020	supports the Dividing the Waters Program > Past Position - replaced by Position #467 <
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
453	WR/E	7/22/2020	emphasizes state primacy over water and call for cooperative federalism and substantive consultation by federal agencies regarding water-related rules, regulations, directives, orders and policies
452	WR	7/22/2020	support federal authorization and financial support through the U.S. Geological Survey (USGS) for State Water Resources Research Institutes
451	WR	7/22/2020	requests Congress fully appropriate receipts accruing to the Reclamation Fund for their intended purpose
450	WR	7/22/2020	supporting NOAA data, forecasting, and research programs
449	L	7/22/2020	opposes any federal legislation intended to preempt state water law
448	WR	7/22/2020	supporting national dam safety programs
447	WR	3/6/2020	regarding the rural water and wastewater project/infrastructure needs and U.S. Department of Agriculture programs
446	WQ	3/6/2020	regarding the clean and drinking water state revolving funds and state and tribal assistance grants
445	WR	3/6/2020	regarding the National Levee Safety Act of 2007, levees and canal structures
444	WR	3/6/2020	regarding the transfer of federal water and power projects and related facilities
443	WR	3/6/2020	regarding the Reclamation Safety of Dams Act of 1978
442	WR	3/6/2020	regarding the Bureau of Reclamation's maintenance, repair and rehabilitation needs
441	WR	3/6/2020	urging Congress to support subseasonal to seasonal weather research, forecasting, and innovation
440	L	10/18/2019	supporting legislation requiring the federal government to pay state filing fees in state general stream adjudications
439	WR	10/18/2019	expressing support for implementation of the SECURE Water Act
438	WR	10/18/2019	urges the Administration and NASA to enhance focus on research for water resources applications and promote long term engagement with the WSWC

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

Preliminary FY2022 Final Estimates and FY2023 Budget Projections

	WSWC FY 2022 Approved Budget	FY2022 July-May (pro forma)		WSWC FY2022 Final Estimates	WSWC FY2023 Budget Estimates	FY2023 Q3 Proforma Income & Expenses	WSWC FY 2023 Comments
<u>INCOME</u>							
Member States Assessments	\$ 561,000.00	\$ 561,000.00	1	\$ 561,000.00	\$ 594,000.00	\$ 330,000.00	We expect full dues from 18 States
Newsletter	\$ -	\$ 200.00		\$ 200.00	\$ -	\$ -	Discontinued newsletter fee
Council Meeting Sponsors	\$ -	\$ 4,211.15		\$ 4,211.15	\$ 4,500.00	\$ 2,050.00	
Interest	\$ 3,500.00	\$ 1,705.88		\$ 1,705.88	\$ 2,500.00	\$ 750.00	
Symposium/Workshop Sponsors	\$ -	\$ 8,000.00		\$ 8,000.00	\$ 8,000.00	\$ -	
NARF WSWC Symposium	\$ -	\$ 9,260.00		\$ 9,260.00	\$ -	\$ -	
NASA JPL or CDWR Contracts	\$ -	\$ -		\$ -	\$ 14,191.58	\$ -	
USBR Water SMART (\$200k/2 years)	\$ -	\$ -		\$ -	\$ 100,000.00	\$ -	
Water Foundation Grant	\$ -	\$ 255,000.00		\$ 255,000.00	\$ 125,000.00	\$ -	
Moore Foundation - Internet of Water	\$ 195,393.00	\$ 246,900.17		\$ 246,900.17	\$ 54,998.83	\$ 43,476.47	CY2022 Q1 reimbursement
BHP Foundation - Internet of Water	\$ 125,000.00	\$ 57,579.17		\$ 57,579.17	\$ 166,992.71	\$ 37,928.12	CY2022 Q1 reimbursement
Other Income				\$ -	\$ -	\$ -	
TOTAL INCOME	\$ 884,893.00	\$ 1,143,856.37		\$ 1,143,856.37	\$ 1,070,183.12	\$ 414,204.59	
<u>EXPENSE</u>							
Accounting	\$ 10,000.00	\$ 8,250.00		\$ 8,250.00	\$ 10,000.00	\$ 3,826.97	
Annual & Sick Leave Funding (HRA)	\$ -	\$ -		\$ -	\$ -	\$ -	
Audit/Review	\$ 3,250.00	\$ 3,500.00		\$ 3,500.00	\$ 5,000.00	\$ -	
Contingencies	\$ 2,000.00	\$ 4,186.19		\$ 4,186.19	\$ 7,000.00	\$ 2,050.00	
Contract Services	\$ 12,700.00	\$ 2,397.50		\$ 2,397.50	\$ 59,400.00	\$ 16,320.00	
Equipment Replacement Fund	\$ -	\$ 2,750.00		\$ 2,750.00	\$ 3,000.00	\$ 750.00	
Furniture-Equipment	\$ 1,526.00	\$ 694.32		\$ 694.32	\$ 2,000.00	\$ 270.00	
Insurance	\$ 1,215.00	\$ -		\$ -	\$ 7,500.00	\$ -	
Maintenance Contracts	\$ 5,000.00	\$ 3,093.29		\$ 3,093.29	\$ 5,000.00	\$ -	
Meetings & Arrangements	\$ 16,000.00	\$ 5,933.76		\$ 5,933.76	\$ 24,000.00	\$ 7,817.25	
Office Supplies	\$ 2,000.00	\$ 495.83		\$ 495.83	\$ 1,500.00	\$ 669.48	
Payroll Benefits	\$ -	\$ -		\$ -			
Dental Insurance		\$ 3,340.86		\$ 3,340.86	\$ 4,000.00	\$ -	included w/medical insurance
Life Insurance		\$ 362.43		\$ 362.43	\$ 360.00	\$ -	included w/medical insurance
LT Disability Insurance		\$ 2,067.05		\$ 2,067.05	\$ 2,350.00	\$ 566.79	
Medical Insurance		\$ 73,936.74		\$ 73,936.74	\$ 85,900.00	\$ 21,109.18	
Pension		\$ 70,277.82		\$ 70,277.82	\$ 73,713.00	\$ 18,147.00	
Payroll Salaries	\$ 760,997.00	415,118.65		415,118.65	430,000.00	\$ 106,746.00	
Payroll Taxes	\$ -	\$ 33,853.58		\$ 33,853.58	\$ 37,109.00	\$ 8,688.00	
Pension Management	\$ 5,690.00	\$ 3,939.30		\$ 3,939.30	\$ 6,000.00	\$ 116.97	
Postage & Freight	\$ 1,000.00	\$ 201.07		\$ 201.07	\$ 750.00	\$ 159.54	
Printing & Reproduction	\$ 2,000.00	\$ 996.93		\$ 996.93	\$ 2,500.00	\$ 782.38	
HOA Fees (w/o Property Tax)	\$ 7,000.00	\$ 3,202.50		\$ 3,202.50	\$ 3,565.00	\$ 810.00	
Property Tax		\$ 3,422.74		\$ 3,422.74	\$ 3,765.00	\$ -	
Storage Rent	\$ 3,500.00	\$ 2,488.00		\$ 2,488.00	\$ 4,620.00	\$ 1,050.00	
Reports & Publications	\$ 7,200.00	\$ 6,698.99		\$ 6,698.99	\$ 7,500.00	\$ 275.71	
Symposium (CDWR-Runoff Workshop)	\$ 5,000.00	\$ -		\$ 8,000.00	\$ -	\$ -	
Symposium (JPL/CDWR-S2S)	\$ -	\$ -			\$ -	\$ -	
Symposium (WSWC / NARF)	\$ -	\$ 441.56		\$ 441.56	\$ -	\$ -	
Telephone (UBS)	\$ 4,000.00	\$ 239.04		\$ 239.04	\$ 3,780.00	\$ 390.00	FY2022 costs were reduced w/credits
Travel	\$ 10,000.00	\$ 10,043.69		\$ 10,043.69	\$ 45,000.00	\$ 10,574.35	FY 2023 costs reduced w/air credits
Utilities (Comcast, Dominion & Murray)	\$ 1,600.00	\$ 1,394.90		\$ 1,394.90	\$ 2,200.00	\$ 409.28	
Other - Software & Licensing	\$ 7,220.00	\$ 960.18		\$ 960.18	\$ 2,500.00	\$ 5,457.78	
WaDE Contractor Payments (DPL)	\$ 15,995.00	\$ 109,497.50		\$ 109,497.50	\$ 130,000.00	\$ 134,267.50	
WaDE State Assistance	\$ -	\$ 6,991.00		\$ 6,991.00	\$ -	\$ -	
National Water Use Workshop					\$ -	\$ 3,371.89	
TOTAL EXPENSES	\$ 884,893.00	\$ 780,775.42		\$ 788,775.42	\$ 970,012.00	\$ 344,626.07	
Balance	-	\$ 363,080.95		\$ 355,080.95	\$ 100,171.12	\$ 69,578.52	

1 Full dues from 17 states

Tab E – WSWC Activities and Events

Western States Water Council Summary of Activities

July 2022 – October 2022

ADMINISTRATION/CONGRESSIONAL OUTREACH

On July 28, WSWC sent two letters on abandoned mines to the Administration and to Congress. The first letter was addressed to Secretary Deb Haaland, Department of the Interior; Secretary Tom Vilsak, Department of Agriculture; and Administrator Michael Regan, EPA. It requested collaboration and coordination of resources, programs, and funding to prioritize sites with environmental and physical hazards, including impaired waters.

The second letter was sent to Senators Martin Heinrich (D-NM) and James Risch (R-ID) in support of various provisions of the Good Samaritan Remediation of Abandoned Hardrock Mines Act (S. 2371). It requested that States be protected from cleanup CERCLA liability alongside federal agencies, and recommended a formal state-federal consultation process for pilot projects and an opportunity for States, particularly as co-regulators, to help shape the program selection criteria, as well as permit issuance, and oversight.

On August 8, 2022, the Council of State Governments-West (CSG-West) and the Western States Water Council (WSWC) submitted comments in the form of a letter to EPA Administrator Regan regarding EPA's proposed rule to improve the Clean Water Act Section 401 state certification process.

On September 16, the Executive Directors of the Interstate Council on Water Policy (ICWP), Beth Callaway, National Water Supply Association (NWSA), Dave Mitamura, and Western States Water Council (WSWC), Tony Willardson, met virtually with Rick Spinrad, Administrator, National Oceanic and Atmospheric Administration (NOAA). All three emphasized the need for continuous engagement and collaboration between NOAA and the States, interstate organizations, and others, as well as the role of the "Water Subcabinet" in working with non-federal agencies toward addressing common challenges.

WESTERN GOVERNORS' ASSOCIATION COORDINATION

On July 14, WSWC staff provided WGA staff with a WaDE demonstration that included water rights information visualization using our Western States Water Data Access and Analysis Tool (WestDAAT).

On July 20, WSWC Executive Director participated in the Western Policy Network's quarterly call, led by WGA staff.

On July 25-28, the WSWC Executive Director attended the WGA Annual Meeting in Coeur d'Alene, Idaho.

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

The WSWC hosted a series of workshops over the summer to further explore technical and policy elements of a potential regional approach to defining “Waters of the United States” (WOTUS). Two technical workshops (virtual) took place on June 21, and July 11, and a full-day policy-oriented workshop (hybrid) was held on August 2, in conjunction with the WSWC Summer meetings. A technical white paper has been drafted outlining various approaches to applying a regional context to WOTUS.

On August 2-5, the WSWC Summer (199th) Meetings were held in Polson, Montana.

On August 3, in conjunction with the WSWC Summer Meetings, WaDE staff invited WSWC members, particularly state engineers and other state water rights administrators, to participate in a demonstration and feedback workshop on our Western States Water Data Access and Analysis Tool (WestDAAT).

On August 16-18, the Western States Water Council Water, in collaboration with the U.S. Geological Survey, Interstate Council on Water Policy, and Internet of Water, sponsored a National Water Use Data Workshop in Salt Lake City, Utah. A summary of the workshop was posted on westernstateswater.org.

COORDINATION WITH WESTFAST AGENCIES

October 3-5 – WSWC Executive Director presented At NASA WWAQ R2O Meeting in Salt Lake City.

October 6 – WSWC Executive Director co-chaired the National Integrated Drought Information System (NIDIS) Executive Council Fall 2022 Meeting in Washington, DC.

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

EPA Dialogue with Intergovernmental Associations (monthly).

WestFAST WEBINARS

July 13 – Department of Interior’s Office of Wildland Fire.

August 24 – Community Wildfire Risk Reduction Tools.

September 21 – Impact of Wildfires on Water Quality and Treatment.

COORDINATION WITH OTHER ORGANIZATIONS

July 13 – IoW Steering Committee regular virtual meetings.

July 18 – Scripps Regional Climate Downscaling call with Dan Cayan and Kathleen Ritzmann.

July 19-22 – WSWC Executive Director attended the CSG-WEST Meeting in Boise, Idaho.

August 10 – WSWC Exec. Dir. presentation to National Association of Flood and Stormwater Management Agencies (NASFSMA) in Park City, Utah.

WaDE DEVELOPMENT AND OUTREACH

July 14 – WGA staff WaDE/WestDAAT Demo.

August 16-18 – National Water Use Data Workshop, Salt Lake City, Utah.

August 24 – Bureau of Reclamation/WaDE/IoW Coalition Call.

August 31 – ICWP Water Data and Science Committee Meeting

September 15 – Open Environmental Data Project (OEDP) Brain Trust: Collaboratively managed data stewardship webinar.

September 20 – Rethinking Water 2022 Forum, Columbia Water Center, virtual.

September 21 – U.S. EPA: Introducing the REUSExplorer - a tool to explore water reuse regulations.

September 27 – Focus Group call with Utah Water Research Lab Director- Western States Water Data Access and Analysis Tool (WestDAAT).

September 28 – WUDR Open Forum: Developing the Texas Water Data Hub Using a Human-Centered Design Approach.

October 4 – Water Data Exchange (WaDE) Program Discussion with Utah Division of Water Rights.

October 4-7 – 2022 NASA Applied Sciences Program, WWAO & Water Resources Team Meetings, Salt Lake City, Utah.

October 6 – WestDAAT Demo at NIDIS Executive Council meeting.

October 7 – WestDAAT Demo for National Water Resources Association (NWRA) staff.

WaDE, Internet of Water (IOW) and USGS discussions connecting WaDE and the Geoconnex project.

WaDE data interoperability work with EPA, USGS, and U.S. Bureau of Reclamation data (ongoing).

WaDE water use data sharing with USGS Water Use Census (ongoing).

WaDE 2.0 Western States Water Data Access and Analysis Tool (WestDAAT) design and development with the IT contractor, Don't Panic Labs (ongoing).

COMMITTEES, TASK FORCES AND WORKGROUPS

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

OpenET API Working Group -- WaDE Program Manager

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/Associate Director

Tab F – Future WSWC Meetings

WESTERN STATES WATER COUNCIL

FUTURE MEETINGS

Upcoming Council Meetings/Host States

2023 Meetings Projections

Spring – Nevada last held 7/10/15 in Stateline

Summer Options

- Alaska

- North Dakota last held 7/15/16 in Bismarck

- Kansas last held 10/9/15 in Manhattan

Fall –

2024 Meetings Projections

Spring – Washington, DC

Summer –

Fall – Utah

*Depending on existing and future state travel and meeting restrictions.

MEETING SCHEDULE

[illegible]

	Alaska	Arizona	California	Colorado	Idaho	Kansas	Montana	Nebraska	Nevada	New Mexico	North Dakota	Oklahoma	Oregon	South Dakota	Texas	Utah	Washington	Wyoming	Other
181											Bismarck 7/15/16								
182																St. George 9/30/16			
183								Nebraska City 4/14/17											
184			Eohnerl Park 6/29/17																
185										Albuquerque 10/20/17									
186																			Wash. DC 3/14/18
187													Newport 8/3/2018						
188					Coeur d'Alene 10/26/8														
189		Chandler 3/22/19																	
190																	Leavenworth 7/18/19		
191				Breckenridge 10/18/19															
192																			Cancelled - Wash.-DC 4/1/20 COVID-19
193																			No Host 7/22/20
194																			No Host 10/15/20
195															Virtual Texas 3/25/21				
196																		Cody 6/25/21	
197														Deadwood 9/16/21					
198																			Arlington, VA 4/6/22
199							Polson 8/5/22												
200												Sulphur 10/21/22							

Tab G – WRDA Western Water Cooperative Committee

H.R.7776 - Water Resources Development Act of 2022

Engrossed in Senate 7/28/2022

SEC. 117. CORPS OF ENGINEERS WESTERN WATER COOPERATIVE COMMITTEE.

(a) FINDINGS.—Congress finds that—

(1) a bipartisan coalition of 19 Western Senators wrote to the Office of Management and Budget on September 17, 2019, in opposition to the proposed rulemaking entitled “Use of U.S. Army Corps of Engineers Reservoir Projects for Domestic, Municipal & Industrial Water Supply” (81 Fed. Reg. 91556 (December 16, 2016)), describing the rule as counter to existing law and court precedent;

(2) on January 21, 2020, the proposed rule making described in paragraph (1) was withdrawn; and

(3) the Corps of Engineers should consult with Western States to ensure, to the maximum extent practicable, that operation of flood control projects in prior appropriation States is consistent with the principles of the first section of the Act of December 22, 1944 (commonly known as the “Flood Control Act of 1944”) (58 Stat. 887, chapter 665; 33 U.S.C. 701–1) and section 301 of the Water Supply Act of 1958 (43 U.S.C. 390b).

(b) ESTABLISHMENT.—

(1) IN GENERAL.—Not later than 90 days after the date of enactment of this Act, the Secretary shall establish a Western Water Cooperative Committee (referred to in this section as the “Cooperative Committee”).

(2) PURPOSE.—The purpose of the Cooperative Committee is to ensure that Corps of Engineers flood control projects in Western States are operated consistent with congressional directives by identifying opportunities to avoid or minimize conflicts between operation of Corps of Engineers projects and State water rights and water laws.

(3) MEMBERSHIP.—

(A) IN GENERAL.—The Cooperative Committee shall be composed of—

(i) the Assistant Secretary of the Army for Civil Works (or a designee);

(ii) the Chief of Engineers (or a designee);

(iii) 1 representative from each of the States of Alaska, Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming, who may serve on the Western States Water Council, to be appointed by the Governor of each State;

(iv) 1 representative with legal experience from each of the States of Alaska, Arizona, California, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, and Wyoming, to be appointed by the Attorney General of each State; and

(v) 1 employee from each of the impacted regional offices of the Bureau of Indian Affairs.

(4) MEETINGS.—

(A) IN GENERAL.—The Cooperative Committee shall meet not less than once each year in a State represented on the Cooperative Committee.

(B) AVAILABLE TO PUBLIC.—Each meeting of the Cooperative Committee shall be open and accessible to the public.

(C) NOTIFICATION.—The Cooperative Committee shall publish in the Federal Register adequate advance notice of a meeting of the Cooperative Committee.

(5) DUTIES.—The Cooperative Committee shall develop and make recommendations to avoid or minimize conflicts between the operation of Corps of Engineers projects and State water rights and water laws, which may include recommendations for legislation or the promulgation of policy or regulations.

(6) STATUS UPDATES.—

(A) IN GENERAL.—On an annual basis, the Secretary shall provide to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a written report that includes—

(i) a summary of the contents of meetings of the Cooperative Committee; and

(ii) a description of any recommendations made by the Cooperative Committee under paragraph (5), including actions taken by the Secretary in response to such recommendations.

(B) COMMENT.—

(i) IN GENERAL.—Not later than 45 days following the conclusion of a meeting of the Cooperative Committee, the Secretary shall provide to members of the Cooperative Committee an opportunity to comment on the contents of the meeting and any recommendations.

(ii) INCLUSION.—Comments provided under clause (i) shall be included in the report provided under subparagraph (A).

(7) COMPENSATION.—

(A) IN GENERAL.—Except as provided in subparagraph (B), the members of the Cooperative Committee shall serve without compensation.

(B) TRAVEL EXPENSES.—The members of the Cooperative Committee shall be allowed travel expenses, including per diem in lieu of subsistence, at rates authorized for employees of agencies under subchapter I of chapter 57 of title 5, United States Code, while away from their homes or regular places of business in the performance of services for the Cooperative Committee.

(8) MAINTENANCE OF RECORDS.—The Cooperative Committee shall maintain records pertaining to operating costs and records of the Cooperative Committee for a period of not less than 3 years.

Tab H – Southwest Oklahoma Water Plan and NDRP Update

SOUTHWEST OKLAHOMA



Water Action Plan

2021 Update

Duane Smith
Duane Smith & Associates

Southwest Oklahoma Water Action Plan (SWAP)

- Developed in 2014 (updated in 2015 and 2018) to address regional drought and long-term water needs:
 - 2010-2015 Drought:
 - Tom Steed Reservoir almost goes dry.
 - Lugert-Altus Reservoir falls to 12% capacity.
 - In 2013, no irrigation is reported (first time ever).

Drought poses a particular threat to the SW OK economy:

- Altus, Frederick & Snyder (~40,000+ customers)
- Crop irrigation (93% of total 4-county demand)
- Altus Air Force Base (~40,000 jobs)

SWAP Stakeholders & Partners



Altus Air Force Base

Mountain Park
MASTER CONSERVANCY DISTRICT

Lugert-Altus
IRRIGATION DISTRICT

**OKLAHOMA ASSOCIATION OF
RECLAMATION PROJECTS**

**SECRETARY OF ENERGY &
ENVIRONMENT**

OWRB
WATER RESOURCES BOARD

USGS

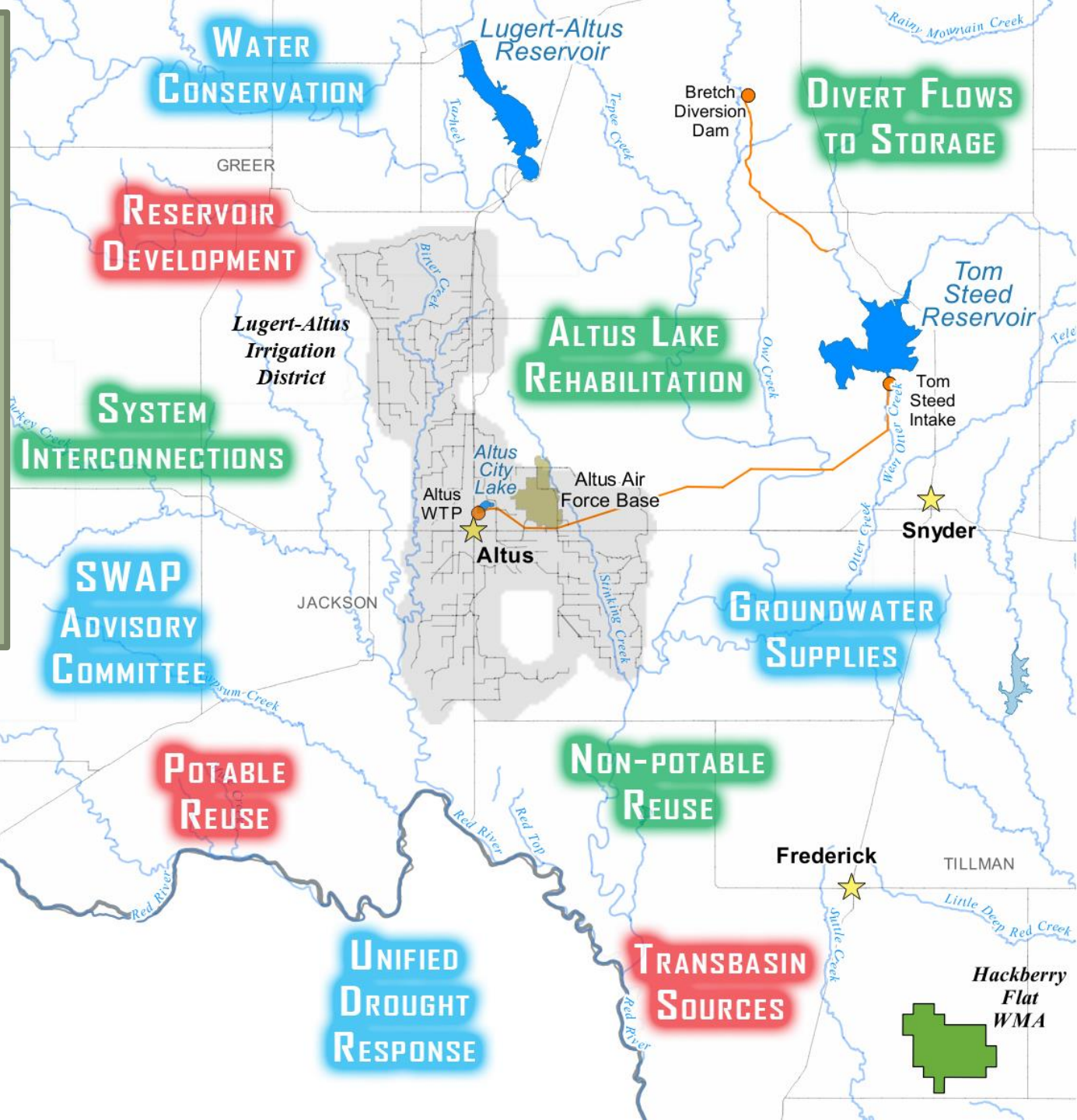


SWAP

Key

Infrastructure &
Stakeholders

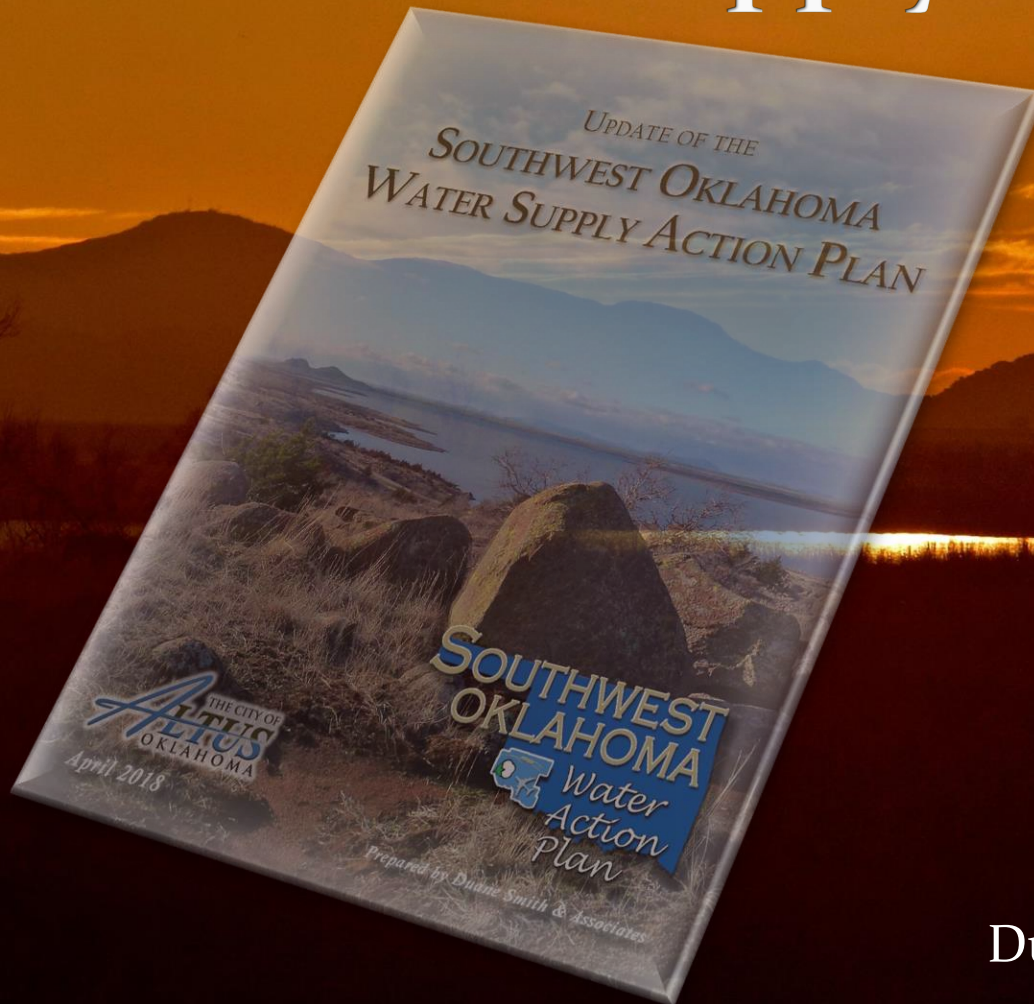
Implementation
Strategies



Southwest Oklahoma Water Supply Action Plan

- Proposed Update (2021):
 - Mountain Park Master Conservancy District in leadership role.
 - Align with 2025 Oklahoma Comprehensive Water Plan Update

Southwest Oklahoma Water Supply Action Plan



Duane Smith & Associates

Tab I – Pumped Storage Developments

Why is Everyone Talking About Pumped Storage Hydro?

By Michael Purdie, Director of Regulatory Affairs and Markets, National Hydropower Association (NHA)

September 26, 2022

The Inflation Reduction Act (IRA), which passed in August, represents the United States' most significant climate legislation to date. While much attention has been paid to how the IRA will shape the electricity landscape, part of that conversation, which has seen a fervor of activity in recent weeks, pertains to long duration energy storage; specifically, the production of batteries and the development of pumped storage hydropower.

With the extension of an Investment Tax Credit to cover energy storage projects, pumped storage hydropower, which offers integral support to other renewables via large-scale energy storage, has both the ability and opportunity to help the world achieve a carbon-zero future.

SENATORS HIGHLIGHT THE NECESSITY OF PUMPED STORAGE

The development of pumped storage hydropower has become the focal point of critical conversations on both a domestic and global scale. Late last week, on September 22, 2022, the “Full Committee Hearing on Opportunities and Challenges in Deploying Innovative Battery and Non-Battery Technologies for

Energy Storage” was conducted by the Senate Committee on Energy and Natural Resources.

In the hearing, the need for pumped storage hydropower and battery development was discussed, and Senator John Barrasso (R – WY) had this to say:

“Wind and solar are weather dependent technologies. We are going to continue to add these technologies to the grid, and energy storage is going to be critical for maintaining electric reliability. It will require more affordable and longer duration storage technologies than we have right now. The only currently available long duration storage is pumped storage hydropower.”

By investing in long duration energy storage, the United States is establishing a path forward to support renewables, achieve carbon-zero, and enable a clean energy future. Yet, the development of pumped storage and battery storage is not a “one or the other” argument; the world needs both.

WHY PUMPED STORAGE DEVELOPMENT IS CRITICAL

The Inflation Reduction Act’s expansion of tax credits represents a boon for pumped storage hydropower. As pumped storage is the only proven long duration storage technology, and as long duration storage is becoming more and more important, if the world wants to move to a truly 24/7 carbon-free energy system, then more solar, wind, waterpower, and energy storage technologies, including pumped storage, must be constructed and our existing hydropower should be preserved.

The development of additional renewables must also occur alongside the displacement of coal and oil resources, as well as natural gas generation, which has been built up over the last two decades.

To understand the impact of gas and coal, it's important to look at 2019 when gas represented 38% of electricity generation and coal represented 23%. When those numbers are compared to 2005, the outsized reliance on coal and gas are more striking, with coal making up 50% of electricity generation while gas represented 19%. Although this drop in coal and gas reliance has allowed for the lowering of emissions by 32%, the United States still has a long way to go, but the Inflation Reduction Act will help.

With gas generation, the significant reliability benefits it provides are not easily replaced, as gas generation provides not only dispatchable energy and reserves but all the ancillary services that allow for modern electric system to function. Currently, a mixture of solar, wind, and lithium-ion batteries are not able to displace the full value proposition of gas generation, but pumped storage hydropower offers that capability.

The National Hydropower Association (NHA) recently participated in a workshop hosted by World Resources Institute with the focus of "How to procure a 24-7 carbon free portfolio of energy," and Peninsula Clean Energy provided an overview of their goals.

Below is a heat map of Peninsula Clean Energy's carbon intensity in 2020. As one can see, during the winter months – December through March – the Community Choice Aggregator still requires carbon emitting resources to serve its load. Long

duration storage and pumped storage hydro, as well as marine energy, can help alleviate these off-peak, winter, and shoulder season periods when the renewable fleet can't serve its load.

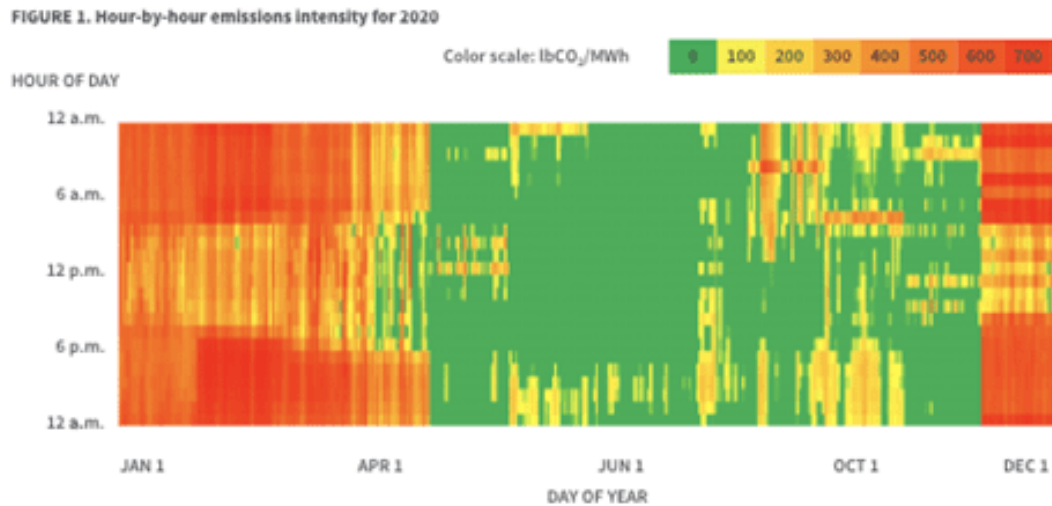


Image credit: Peninsula Clean Energy (2022), Our Path to 24/7 Renewable Energy by 2025

THE PUMPED STORAGE CONVERSATION

Integral to the implementation of pumped storage is the educational component of spreading awareness. While the waterpower industry understands pumped storage hydropower's value, the greater global community is re-discovering its potential.

With the recent "Full Committee Hearing on Opportunities and Challenges in Deploying Innovative Battery and Non-Battery Technologies for Energy Storage," conducted by the Senate Committee on Energy and Natural Resources, pumped storage hydropower was discussed alongside battery production as a means of providing long duration storage capacity for the increase in renewables.

Discussed in the hearing were the challenges facing pumped storage hydropower development. Key among them is the permitting process, which is notoriously laborious, complicated, and lengthy.

Senator Angus King (Independent – Maine) addressed this topic, *“In order to get to a clean energy future, we have to rationalize and correct the deficiencies in the permitting or we’ll never get there because we’re going to need to permit transmission, [and] we are going to need to permit pumped storage projects.”*

Tim Hemstreet, who is the managing director for renewable energy development at PacifiCorp, served as a witness during the hearing. Hemstreet’s testimony highlighted not only the critical nature of pumped storage development and investments, but Hemstreet also discussed the value PacifiCorp sees in the energy storage technology, including insight into PacifiCorp’s current investment in pumped storage. In response to the need for permitting reform, Hemstreet had this to say:

“The need for improvements to the FERC licensing process is acknowledged by a diverse number of parties with varying interests in licensing decisions. Recently, the representatives of the hydropower industry, Native American Tribes, and environmental stakeholders have agreed upon consensus recommendations to Congress around a package of reforms to the Federal Power Act. These recommendations have come out of a series of discussions among these stakeholders known as the Uncommon Dialogue.”

Hemstreet then explained in greater detail how the reforms would help:

“The reforms would improve the licensing process and result in more timely, less costly, and more scientifically defensible licensing decisions while also expanding the ability of Native American Tribes to represent their interests in licensing proceedings impacting Tribal lands. Significantly, these reforms would provide for a three-year licensing process for certain pumped storage projects. This is important to ensure pumped storage projects can be ready to meet the identified need for storage as our energy resource mix continues to evolve.”

In addition to the Senate hearing, the Global Clean Energy Action Forum, which took place in Pittsburgh, Pennsylvania, last week from September 21-23, featured a session about pumped storage. The session “Pumped Hydropower Meets the Long Duration Energy Storage Wave” was focused on understanding the role of long duration energy storage as it relates to the clean energy transformation. Attendees learned from global experts, including Malcolm Turnbull, the former Prime Minister of Australia, and Malcolm Woolf, CEO of NHA, about the “real-world, global impact of long duration energy storage” and the role it plays in decarbonization.

In what amounts to a huge week for pumped storage, Oak Ridge National Laboratory participated in the first of three events conducted by the U.S. Department of Energy Office of Clean Energy Demonstrations. The event was part of the “Clean Energy Demonstration Program on Current and Former Mine Land,” which is a program related to the \$500 million funding opportunity for demonstrating the economic and technical viability of conducting clean energy projects on current and former mine lands across the United States.

THE NEED FOR PUMPED STORAGE

With an unprecedented amount of momentum behind it, pumped storage hydropower is becoming an integral component of the long duration storage dialogue. Through the utilization of the Investment Tax Credits created by the Inflation Reduction Act, long duration storage is well-positioned to experience significant developmental growth while bolstering other renewables.

In a world where providing clean, dispatchable energy grows more pressing by the day, the reduction in development costs for pumped storage hydropower enable this critical need.

**Statement of Timothy J. Hemstreet
Managing Director of Renewable Energy Development for PacifiCorp**

U.S. Senate Committee on Energy and Natural Resources

**Full Committee Hearing on Opportunities and Challenges in Deploying Innovative Battery
and Non-Battery Technologies for Energy Storage**

September 22, 2022

Introduction

Chairman Manchin, Ranking Member Barrasso, and members of the Committee, I appreciate the opportunity to appear before you today as you consider energy storage technologies necessary for our evolving electric generation and transmission system, as well as challenges and opportunities related to their deployment. This hearing is important for the customers and communities throughout the West who drive our business.

My name is Tim Hemstreet, and I am the Managing Director for Renewable Energy Development for PacifiCorp, an electric utility that serves approximately 1.9 million customers in communities across Utah, Wyoming and Idaho through its Rocky Mountain Power division, and across Oregon, Washington and California through its Pacific Power division. PacifiCorp's generation and transmission assets are located in ten states in the Western U.S., and include over 11,600 megawatts of owned generation capacity from hydropower, coal, gas, wind, solar, geothermal and biomass resources, with 40 percent of that capacity located in Wyoming. PacifiCorp is the single largest owner and operator of high-voltage transmission facilities in the West, and our system is still expanding, with a recent groundbreaking in Medicine Bow, Wyoming for our Gateway South transmission project. PacifiCorp can safely be described as an "all of the above" energy company. We are a proud member of the Berkshire Hathaway Energy family of businesses, but our customers – located predominantly in rural areas of the West – know us as their local power company.

As the Managing Director of Renewable Energy Development, I have the responsibility to plan and develop renewable generation assets to serve our customers so that we can safely, reliably and affordably meet their energy needs. PacifiCorp is seeing incredible growth in the amount of renewable generation we are bringing online, in addition to demand-side management and energy efficiency measures, to ensure we can meet our customers' needs and continue to power the growth of our communities. We are deeply engaged in this effort: in 2020 PacifiCorp completed an expansion of its transmission capacity in eastern Wyoming to improve reliability and create access to the highly favorable wind energy generation available in that part of our system. This effort resulted in the doubling of PacifiCorp's owned wind fleet to more than 2,250 megawatts, or nearly twenty percent of its owned generating capacity, with further growth anticipated.

We anticipate bringing on an additional 12,000 megawatts of new renewable generation to serve our customers over a twenty-year planning horizon. These new generating resources are anticipated to be predominantly fueled by the wind and the sun.

However, wind and solar resources are not dispatchable, and we also need to add substantial amounts of energy storage to ensure we can balance intermittent renewable generation with real-time customer energy needs. Indeed, we have found that this need calls for the addition of 5,500 megawatts of energy storage over the next twenty years to ensure we can meet this constant balancing act where generation need meet customer demand at all times.

Other generation types may also play an important role in meeting this challenge, and PacifiCorp is partnering on the development of TerraPower's Natrium advanced nuclear reactor design that is proposed to be located at the site of one of PacifiCorp's retiring coal facilities in Wyoming. An important attribute of this technology is its energy storage component, which can allow the 345-megawatt reactor to increase facility output capacity to 500 megawatts for more than five and a half hours using energy stored in molten salt. Natrium's design enhances grid reliability and stability while continuing to produce reliable power for our customers.

The Importance of Pumped Storage to Support Long-Duration Storage Needs

PacifiCorp is currently adding energy storage coupled with solar generation, and we anticipate adding a significant amount of standalone battery resources in the coming years to meet short-duration storage needs. Pumped storage hydropower can play an additional role that is unique and important in meeting the growing need for long-duration, commercially available energy storage that will be necessary to continue to supply reliable energy in the future.

Hydropower has historically been a meaningful component of PacifiCorp's generation portfolio, and it continues to comprise approximately ten percent of its generation capacity. Pumped storage hydropower can provide spinning reserves and quickly ramp up to balance energy supply and demand to integrate renewable resources cost-effectively while maintaining system reliability. We are also very familiar with the ability of hydropower to generate emissions-free energy, while also providing important ancillary services, including voltage and frequency support, as well as inertia and black-start capabilities that enhance the reliability and resiliency of the grid.

Given the valuable attributes of hydropower, pumped storage hydropower can play a critical role in meeting the present need for energy storage. This is not surprising given pumped storage hydropower is already serving this function. The Department of Energy reported last year that ninety-three percent of the utility-scale energy storage capacity in the United States was provided by this tried-and-true technology.

Given this understanding of the value of pumped storage hydropower, PacifiCorp is currently evaluating how we can incorporate pumped storage capabilities at our existing hydroelectric projects. Enhancing existing facilities to provide additional energy storage and needed capacity can be cost-effective by increasing the utilization of existing infrastructure, while also reducing environmental impacts. PacifiCorp has also filed eleven preliminary permit applications with the Federal Energy Regulatory Commission (FERC) in October 2021 to allow it to evaluate the feasibility of new pumped storage hydropower developments at promising locations across our service territory. Four of these potential projects are located in Utah, three in Wyoming, two in Oregon and one each in Idaho and Washington. These preliminary permits will preserve the company's priority in the competitive FERC licensing process if feasibility studies indicate the projects may benefit our customers while minimizing impacts.

Another important attribute of pumped storage worthy of note is the ability of the technology to be deployed at scale, with proposals for pumped storage projects before FERC that range in scale up to thousands of megawatts in capacity. Additionally, hydropower projects have long asset lives – the average age of hydropower units in PacifiCorp's fleet is ninety years. Thus, we know that investments in this form of storage are durable and these projects can continue to provide benefits for decades after they are built. And these storage benefits do not degrade over time. Investments in pumped storage also relieves pressure on battery storage resources that may have a higher value when deployed in electric vehicles – an increasing area of load growth. Finally, pumped storage projects can be developed with secure supply chains sourced

domestically or with strategic allies. This means pumped storage – given its durability and non-exotic sourcing and supply chains – can enhance our energy security.

Challenges and Opportunities for Pumped Storage Development

Despite the benefits of generation, load and grid support that pumped storage hydropower provides - there are challenges to its development. With long development timelines and high upfront costs, there has not been a large-scale pumped storage project brought online in the United States since the early 1990s.

Congress can help to address these issues by directing the U.S. Department of Energy to continue its efforts in evaluating how pumped storage can benefit the grid and maintain reliability to raise awareness about the value of pumped storage and other long-duration storage resources. Additional focus and assistance by national laboratories to model the value that pumped storage projects can provide to the grid can also be helpful to inform our modeling tools so they fully capture the value these projects provide.

Congress has already taken a step in providing incentives to technology-neutral storage resources, and this will be helpful in solving some of the economic challenges faced by pumped storage – and storage in general. Pumped storage projects, in particular, would also benefit by improved regulatory clarity that all components of these projects – dams, reservoirs, pumps, turbines, generators, water conveyances, generation interconnection and transmission tie lines – are included as property eligible for the newly enacted energy storage investment tax credit. This will provide needed certainty that will improve the ability of industry to raise capital and generate financing to support the development of these projects.

In most cases, development of a pumped storage project requires a license from FERC, and the licensing process for hydropower projects is highly complex and time consuming. A FERC licensing proceeding usually takes between seven to ten years to complete. Applicants must undertake extensive environmental studies in coordination with Federal and State agencies, and other stakeholders, to inform FERC's licensing process, including compliance with the National Environmental Policy Act, Clean Water Act, and the Endangered Species Act. These laws are, in turn, implemented by a number of Federal agencies, and some Federal laws, such as the Clean Water Act, are administered by States. The complex and lengthy licensing process, and the diffuse responsibility for licensing decisions and the terms and conditions that are ultimately incorporated into a license, adds uncertainty to the development of pumped storage projects.

The need for improvements to the FERC licensing process is acknowledged by a diverse number of parties with varying interests in licensing decisions. Recently, the representatives of the hydropower industry, Native American Tribes, and environmental stakeholders have agreed upon consensus recommendations to Congress around a package of reforms to the Federal Power Act. These recommendations have come out of a series of discussions among these stakeholders known as the Uncommon Dialogue. The reforms would improve the licensing process and result in more timely, less costly, and more scientifically defensible licensing decisions while also expanding the ability of Native American Tribes to represent their interests in licensing proceedings impacting Tribal lands. Significantly, these reforms would provide for a three-year licensing process for certain pumped storage projects. This is important to ensure pumped storage projects can be ready to meet the identified need for storage as our energy resource mix continues to evolve.

Enactment of the Uncommon Dialogue licensing reforms are a step in the right direction and will help address many challenges in the licensing process. Given the complexity of Federal laws, regulations, and policies that exist in the FERC process, additional steps could be taken to help applicants navigate the licensing process and enable FERC to issue licenses in a more timely manner, using existing agency authorities.

Given the long lead-time and costs associated with constructing pumped storage projects, it is important that Congress and Federal agencies take steps to streamline the permit process for these projects. Failing to do so will make it more difficult for the private sector to commit substantial resources to developing these projects in the near-term to meet our energy storage needs and meet our common goal of ensuring a safe and reliable energy system that fosters the economic growth of our communities.

I want to again thank you for the opportunity to participate in this hearing. PacifiCorp and Berkshire Hathaway Energy look forward to working with you further on these important issues.

Testimony of Spencer Nelson
Managing Director of Research & New Initiatives, ClearPath Inc.
U.S. Senate Energy and Natural Resources Committee
Opportunities and Challenges for Deploying Innovating Battery and Non-Battery
Technologies for Energy Storage
Thursday, September 22, 2022

Good morning Chairman Manchin, Ranking Member Barrasso, and members of the Committee. My name is Spencer Nelson, and I am the Managing Director of Research & New Initiatives at ClearPath, a 501(c)(3) organization devoted to accelerating breakthrough innovations to reduce emissions in the energy and industrial sectors. To further that mission, ClearPath provides education and analysis to policymakers and collaborates with relevant partners to inform our independent research and policy development. An important point – ClearPath is supported by philanthropy, not industry.

Thank you for the opportunity to be here. It is a privilege to testify before you today after working as Professional Staff for Senator Murkowski last Congress developing the Energy Act of 2020. I have great respect for the work of the members of this Committee and its staff across its entire jurisdiction. While the Energy Act made great progress to advance energy storage, the Committee's work in this area is far from over. There is great opportunity for supporting new energy storage technologies that bolster both baseload and renewable resources, and American innovation will play a key role. I will discuss four key topics today:

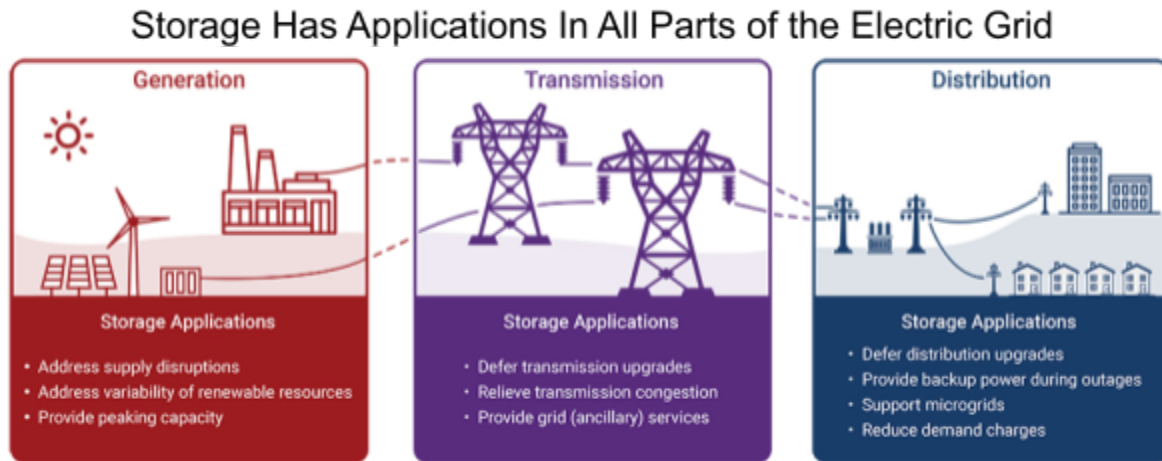
1. The valuable role of energy storage on the grid today;
2. The long-term limits of lithium and the importance of alternatives;
3. Advancing alternative energy storage technology solutions; and
4. Building on Federal Policy Wins in the Energy Act of 2020 and IIJA.

1. The Valuable Role of Energy Storage on the Grid Today

America's power grid is incredibly complex. It must balance hundreds of gigawatts of power demand with supply in real time over thousands of miles, with the potential for sudden disruptions due to weather, mechanical issues, or other unexpected disruptions like cyberattacks. The system relies on an intricate network of transmission and pipelines for the transportation of energy. As the American economy grows, the grid transitions to lower carbon resources, and consumer preferences change energy supply needs, our nation's grid operators face immense challenges. There are few places where this is more evident than the State of California, where a recent statewide grid emergency was declared to deal with record high energy demand due to blistering summer heat. The need for more firm, flexible electricity generation along with new grid-scale energy storage solutions to maximize reliable, affordable, and clean energy has never been more urgent.

Energy storage is not new to the electric grid. The energy storage technology with the greatest capacity in the United States today is pumped storage hydropower (PSH), in which water is

pumped up or down a mountain when electricity demand is low and allowed to flow through a generator when demand is high. The first PSH plants were built a full century ago in the 1920s. PSH has historically been a tremendous asset by providing daily and weekly load shifting for baseload power generators like nuclear and coal power plants.



Innovative grid-scale technologies are opening up new roles for energy storage on the modern electric grid. Energy storage technologies now provide a wide variety of market services, including, but not limited to:

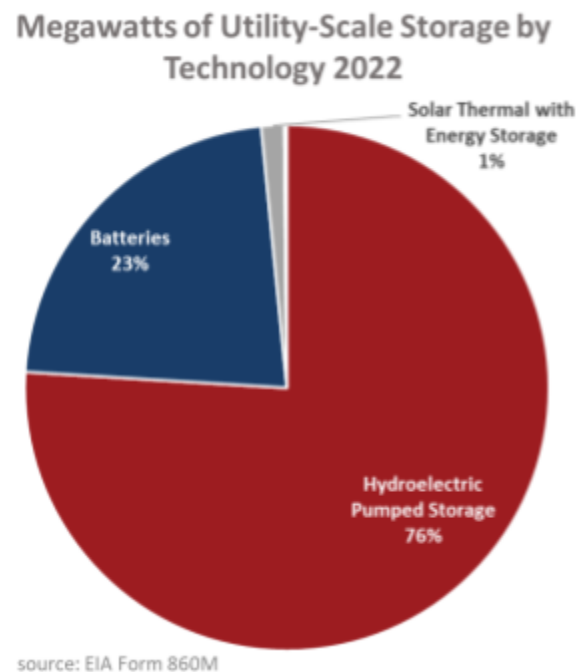
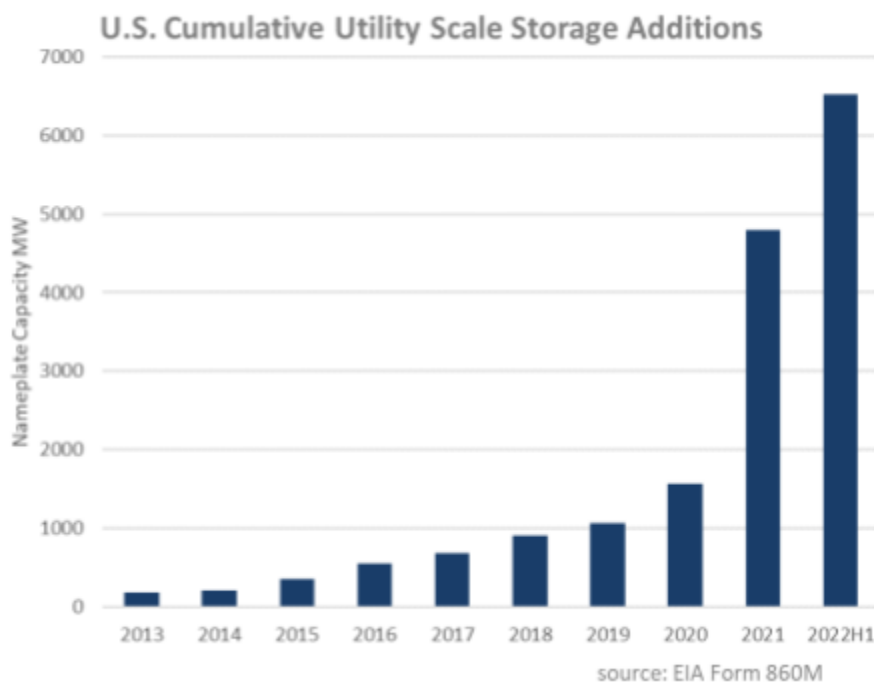
- Load shifting/peak shaving when demand is high;
- Reductions in the need for transmission capacity;
- Frequency regulation and other ancillary services for the grid;
- Operational flexibility for electric generators; and
- Reducing the need for overbuilding electric generating capacity.

While PSH remains the largest energy storage technology by capacity in the United States today, lithium-ion batteries are dominating new capacity additions. Boosted by the global development of electric vehicles, the cost of lithium-ion battery packs has fallen 90 percent since 2010, bringing down the cost of grid-scale batteries 75 percent along the way.¹ Lithium-ion batteries have grown tremendously; reaching nearly 7,000MW of generation capacity on the grid, a 920 percent increase since just 2017.² Looking ahead, there is 421GW of energy storage in the interconnection queue waiting to be added to the grid, nearly all of which is in the form of lithium-ion battery technology.³ For context, this is equivalent to 40% of the total U.S. electric grid's capacity.

¹ <https://arstechnica.com/science/2020/10/us-grid-battery-costs-dropped-70-over-3-years/>

² [July Generating 2022 860M](#)

³ <https://emp.lbl.gov/generation-storage-and-hybrid-capacity> . Important to note that due to issues in the interconnection market, likely only 25% of this capacity will ultimately be built.



The growth of grid-scale battery storage provides real benefits to the grid. During the 2022 California summer heat wave, batteries provided more than 3 GW of power during the hours of peak demand, which helped avoid blackouts.⁴ Without the deployment of battery storage technology, outages would have been widespread, at tremendous cost to both California's economy and the state's residents.

Elsewhere, storage is being developed as a transmission asset. In places where additional transmission capacity is only needed for a few hours a day, adding storage assets to the grid can help avoid significant costs that would otherwise be borne by ratepayers.⁵

2. The Long-term Limits of Lithium and the Importance of Alternatives

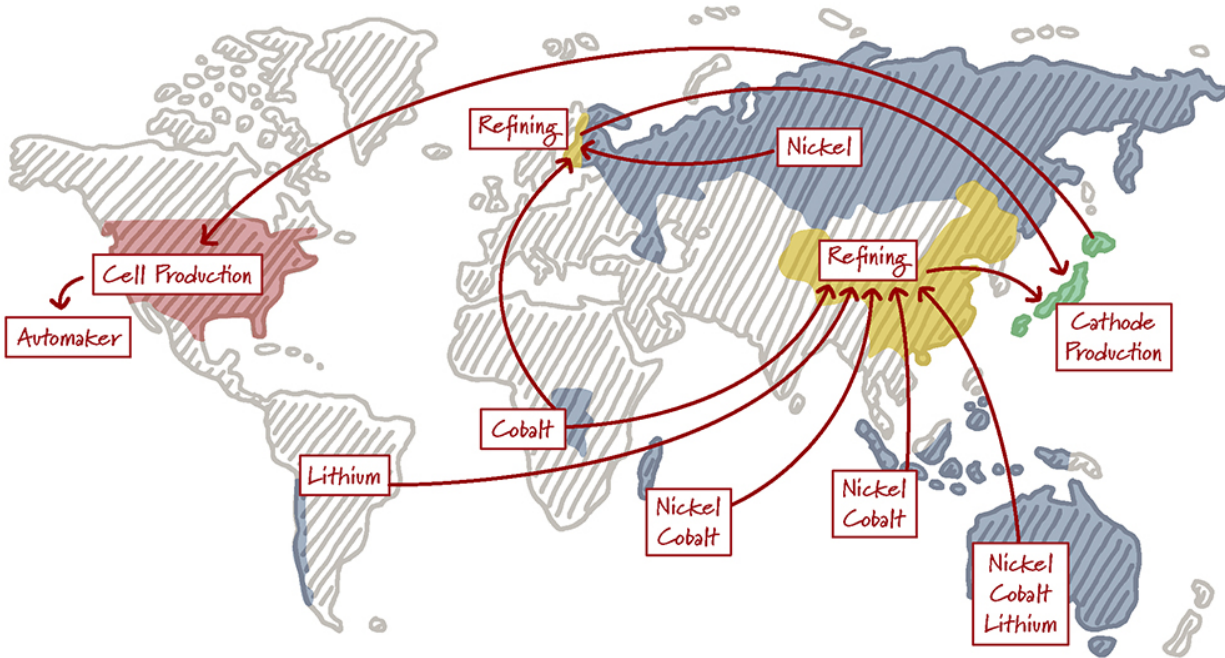
While lithium-ion grid-scale batteries are useful and will likely have a role to play for the foreseeable future, there are several drawbacks to consider. First, the geopolitical implications of lithium-ion batteries are severe and tragic. The current most common form of lithium-ion batteries uses nickel-manganese-cobalt (NMC) cathodes, which rely heavily on a variety of critical minerals that are not readily available in the U.S. The current supply of these materials is concentrated in Australia, Chile, Democratic Republic of the Congo, and Russia, but the majority of processing and manufacturing comes from China. In 2021, China controlled two-thirds of lithium pre-processing facilities, as well as 77 percent of production capacity

⁴<https://www.bloomberg.com/news/articles/2022-07-21/how-batteries-can-help-power-grids-withstand-heat-waves>

⁵ <https://energystorage.org/storage-as-a-transmission-alternative-is-gaining-traction-in-many-rtos-isos/>

worldwide.⁶ Based on current trends, China will still hold 67 percent of global lithium ion cell capacity in 2030.⁷

Critical Minerals Production and Refining by Country



Global demand for critical minerals used in battery storage is expected to skyrocket – reaching between 180,000 and 300,000 tons by 2030, compared with 25,000 tons today.⁸

Another challenge with lithium-ion batteries tied to electric vehicles is that as the demand for EVs increases, so does the price of lithium. Prices for lithium carbonate have increased from \$5,000 per ton in mid-2020 to \$70,000 per ton in 2022 as demand has skyrocketed and supply has flatlined. This cost curve is unsustainable.

⁶ <https://www.wired.com/story/china-lithium-mining-production/>

⁷ <https://www.benchmarkminerals.com/membership/global-battery-arms-race-200-gigafactories-china-lead-s-2/>

⁸ <https://www.iea.org/data-and-statistics/charts/total-mineral-demand-from-battery-storage-additions-by-scenario-2020-2040>

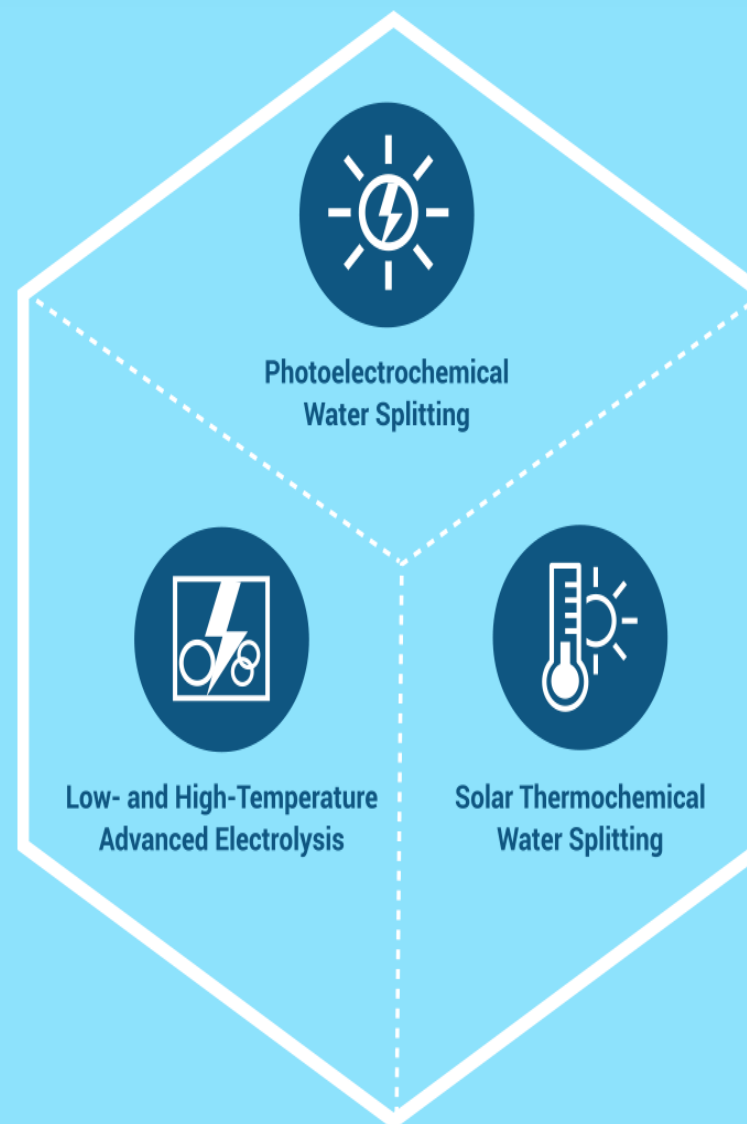
Tab J – HydroGEN and the HALO Hydrogen Hub Proposal



About HydroGEN

The HydroGEN consortium is led by the National Renewable Energy Laboratory and includes Lawrence Berkeley National Laboratory, Sandia National Laboratories, Idaho National Laboratory, and Lawrence Livermore National Laboratory. HydroGEN is funded by DOE's [Hydrogen and Fuel Cell Technologies Office](#) in the Office of Energy Efficiency and Renewable Energy.

HydroGEN aims to facilitate collaborations between federal laboratories, academia and industry. The consortium is guided by a steering committee with representatives from each member lab and DOE. The steering committee is available to clarify the capabilities offered by the consortium and to help interested users identify capabilities relevant to a given research project.



**Photoelectrochemical
Water Splitting**

**Low- and High-Temperature
Advanced Electrolysis**

**Solar Thermochemical
Water Splitting**

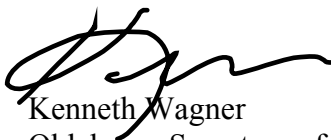
HALO HYDROGEN HUB RFI SUBMISSION FOR U.S. DEPARTMENT OF ENERGY

Per DE-FOA-0002664: BIPARTISAN INFRASTRUCTURE LAW –
2022 REGIONAL CLEAN HYDROGEN HUBS IMPLEMENTATION STRATEGY
March 21, 2022

The HALO three-state hydrogen hub coalition, a partnership between Louisiana, Oklahoma and Arkansas appreciates the opportunity to provide assistance to the U.S. Department of Energy (DOE) in setting parameters and shaping the discussion for implementing clean hydrogen hub strategies going forward. The work of forming the initial coalition and the cooperative efforts involved in preparing our response to the Request For Information (RFI) document have given us a head start in examining the areas where our respective states can support each other in both resources and strengths we have in common and in areas where each member state's unique assets complement those of the other partners in the shared effort. Our states are well-situated from an industry and resource standpoint, and our administrations are excited to work together to make clean hydrogen affordable and available as part of a wider clean energy future. In light of that, please review our RFI responses and feel free to reach out to the points of contact below for any further information.



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Louisiana, Oklahoma, and Arkansas Response to DOE's Regional H2Hub RFI

Category 1: Regional Clean Hydrogen Hub Provisions and Requirements

1. ***The BIL defines a “regional clean hydrogen hub” as “a network of clean hydrogen producers, potential clean hydrogen consumers, and connective infrastructure located in close proximity.”***
 - a. ***What should qualify as ‘close proximity’ in context of the hub requirements?***

Proximity should be determined on a case-by-case basis depending upon the applicants’ concepts for a networked hub, however, the movement of hydrogen from the point of production to the point(s) of consumption, as well as for carbon sequestration, are limited to about 350-mile radii.
 - b. ***What existing facilities and infrastructure, including pipelines and storage facilities, could be most easily leveraged by the H2Hubs?*** Existing hydrogen production and consumption facilities, (including ammonia production), which can be leveraged by new low-carbon and carbon-neutral production facilities to both back stand supplies and provide a market for new hydrogen ecosystems, economical and abundant sources of renewable energy with the potential to add substantial generation capacity in the future, sustainable water sources water, plentiful and affordable natural gas, existing carbon capture use and geological storage facilities with the capabilities to expand sequestration and associated monitoring and data robustness to manage geostorage, an environment monitoring network to assess impacts to urban and rural community air and water quality by hydrogen transition, existing collaborations within research universities for research, testing, and workforce development, diversified workforce within energy focused corridors, engaged and participating Tribes, nuclear power production, extensive highways with strategic crossroads and large annual tonnage movements, power generation willing to blend hydrogen with natural gas and ultimately utilize pure hydrogen, reliable interstate high voltage electricity power transmission capacity to assure multi-state hubs have the ability to transmit renewable energy across the entire hub, inland sea ports and seaports with associated drayage equipment and tugs, major airports and military installations with ground transportation vehicles that can be converted to hydrogen fuel, and extensive natural gas pipeline networks that can support hydrogen transport and diverse blending opportunities.
 - c. ***What types of new ‘connective infrastructure’ will be needed by the H2Hubs (e.g., pipelines, storage, etc.)?*** Hydrogen storage below ground in depleted oil and gas reservoirs, salt formations, salt domes, existing and expansion of geology targets for hydrogen and carbon capture, use and storage, monitoring networks for managing geostorage. Environmental, weather, and geological monitoring networks to ensure safety and compliance, and decision making for weather and geological related controls to enhance electrical grid reliability and asset

optimization. Connected data transmission and computing infrastructure for AI/ML enabled decision making to aid grid optimization. Hydrogen fuel stations along network of high tonnage highways. Alternatives for H₂ transport including existing and modified natural gas pipelines, and newly installed H₂-rated pipelines.

- d. ***What supportive activities would make the hydrogen hubs successful and sustainable (e.g., workforce development, community-based organization engagement, domestic manufacturing, labor standards, etc.)?*** Partnerships with research universities for the workforce development, industrial research and testing, partnerships with community colleges for workforce development upskilling and reskilling, coordination with Tribal Nations, military, and other federal entities, Environmental, Social and Governance (ESG) and other energy-science training, streamlining required federal permits (for both hydrogen, carbon capture, and supply chain activities), domestic supply chain support and development (pivoting manufacturers into the hydrogen economy), and support with stakeholder engagement to include a focus on the creation of technical jobs for under-represented minorities. Outreach and education to ensure that key components of the hub (e.g., carbon capture and disposal in depleted oil formations) are well understood and supported by the stakeholders/residents of host communities. Preference should be given to plans that identify and address such concerns in the early stages of the program.

2. *The BIL states that H2Hubs must (1) demonstrably aid the achievement of the clean hydrogen production standard developed under Section 822(a) [defined as 2 kg CO₂e/kg H₂ at the point of production]; (2) demonstrate the production, processing, delivery, storage, and end-use of clean hydrogen; and (3) can be developed into a national clean hydrogen network to facilitate a clean hydrogen economy.*

- a. ***What CO₂ equivalent emissions should be met within the project and its supply chain? What strategies are available for, and how can DOE incentivize, the H2Hubs to reduce emissions not only at the point of production but also including upstream emissions? What challenges are there in measuring CO₂ equivalent emissions?*** Measuring improvements from today's baseline CO₂ associated with hydrogen production using a multi-year progression toward Section 822(a) objectives, which includes an "all of the above" solution approach to attain emission levels within boundaries of the H2Hubs. Leverage established partnerships with scalable carbon monitoring efforts such as emerging satellite technologies like GeoCarb. A thorough guideline for life cycle inventory analysis and life cycle impact assessment.
- b. ***Please specify CO₂e/kg H₂ you anticipate at the point of production in addition to well to gate (i.e., including upstream emissions). Include range?*** Total CO₂e/kg H₂ as an average across the total H2Hub portfolio should strive to attain Section

822(a) for all new hydrogen production facilities (those facilities entering commercial operations no earlier than 1/1/2022), striving to attain 970gCO₂e/kg H₂ with renewable electrolysis approaching 9kg CO₂e/kg of H₂ (GREET 2019).

- c. ***Given the level of funding, and with the ultimate goal of developing a national clean hydrogen network, would four (4) large H2Hubs that each produce more than a certain amount of hydrogen (e.g., more than 1,000 tonnes/day, see question 3 to specify amount) or 6-10 H2Hubs of varying size be more effective?***

Four (4) well-funded hubs formed by an alliance spanning regional geographies with diverse production and consumption characteristics that can fulfill multiple deliverables, attain no less than 2 million kg per year, and provide the best platform for highly probable and sustainable growth post DOE funding initiatives, focusing on regional GHG reduction pathways with hundreds of millions of tons per year emission reduction potential.

- d. ***What policies, infrastructure, or other considerations could be put in place to enable the H2Hubs to develop into a national clean hydrogen network in the future?*** Timely permitting and clear framework for Class 6 disposal wells for carbon sequestration supported by research with pilot scale experiments, and a framework for Class 2 hydrogen injection. Coordination of complementary grants and funding for infrastructure initiatives which will support the complexities of implementing the H2Hubs, including but not limited to, electricity grid infrastructure modernization initiatives that provide transmission flexibility for electricity system load balancing which fully utilizes the flexibility of electrolyzer technologies.
- e. ***How should the H2Hubs be asked to measure progress toward the administration's goal of transforming the economy by 2050 to achieve net-zero emissions goals? Please be as specific as possible.*** CO₂e progressive improvements from a 2021 baseline greenhouse gas footprint, computed following generally accepted methodologies utilized for corporate sustainability reporting. Industrial adoption of H₂-based solutions, clean energy investments in the region, academic innovations commercialized, graduation of students able to take the H₂ economy further.

3. ***FEEDSTOCK DIVERSITY: "To the maximum extent practicable– (i) at least 1 regional clean hydrogen hub shall demonstrate the production of clean hydrogen from fossil fuels; (ii) at least 1 regional clean hydrogen hub shall demonstrate the production of clean hydrogen from renewable energy; and (iii) at least 1 regional clean hydrogen hub shall demonstrate the production of clean hydrogen from nuclear energy."***

- a. ***Should DOE require a minimum level of hydrogen production per regional clean hydrogen hub, and if so, what should that minimum amount be (i.e., X***

tonnes/day)? Should this requirement vary for clean hydrogen produced from fossil fuels with carbon capture and storage (CCS), renewable energy, and nuclear energy? If a minimum is not specified, how may DOE incentivize larger capacity hubs? DOE should consider the most robust and diversified hub concept that can sustainably strive toward the Section 822(a) objective with existing technologies in the full supply chain while providing dependable supplies for a diverse group of first movers in the consumer sector for the hydrogen produced, with a minimum total production within each hub of 2 million kg per year by the end of the funding period.

- b. ***Related to 3a, how should DOE take into account specifying minimum required hydrogen production when considering capacity factors and the potential intermittency of generation, which would increase the cost and requirement for hydrogen storage?*** DOE should consider all possible solutions to match supply with demand, including underground storage in salt formations and depleted fossil fuels reservoirs, mechanisms to reward ancillary electric grid congestion relieve, and other solutions.
- c. ***What terms should be required for an H2Hub powered by renewable energy to demonstrate clean production (e.g., a power purchase agreement with a renewable generator, or direct connection to a co-located renewable generator)?*** Access to renewable energy delivered to the production via purchase power agreement, utility tariff, or other acceptable proof of renewable energy supplies.
- d. ***Should DOE prioritize the repurposing of historic fossil infrastructure in the regional hub(s) focused on production from fossil fuels and if so, over what time frame? If yes, should DOE incentivize an eventual transition from fossil fuels to another fuel source? What conditions should DOE place on the carbon intensity of the fossil fuels (with CCS) used in this hub other than what is already specified in the BIL?*** The DOE should encourage cooperation within historic fossil infrastructure as we transition to low-carbon energy, leveraging an H2Hub's existing hydrogen production facility for reliable back-up supplies during operational situations which negatively impact low carbon hydrogen producers to assure markets have readily available fuel. Diversifying supplies of hydrogen during the early stages of implementation could reduce price and supply volatility across commodities.
- e. ***How might hydrogen production be constrained by the availability of clean electricity or natural gas supply and distribution? Will hydrogen producers provide a sustainable market/revenue stream for clean electricity and natural gas that encourages new investments to expand electricity generation and natural gas production capacity? Are separate federal, state, or local incentives to expand clean electricity generation or natural gas production capacity available, necessary, or adequate?*** All solutions should be considered and analyzed, while a hub should provide a forum for optimization concepts that maximize availability

and dependability with a focus on profitability for all methods of hydrogen production, while simultaneously maintaining off-setting of historic higher carbon intensive industries; diversification is key to resilient supply to assure new demand side market participants have hydrogen they require, which will lead to reduced volatility. Additionally, electricity grid enhancement funding within the Infrastructure Bill should be considered for the implantation of the hydrogen hubs to complement the operational benefits of electrolyzers for grid operations.

- f. ***Should H2Hub funding be made available to upgrade or develop new dedicated clean electric or heat generating energy resources (e.g., renewables or other clean generation sources) needed to produce clean hydrogen?*** Yes, retrofitting existing assets for hydrogen economy should be supported, which can include, but not limited to, natural gas fired power generation retrofitting, replacement fleet vehicle expense abatement, natural gas pipeline upfitting for blending, and drayage mobile equipment support.

4. *END-USE DIVERSITY: “To the maximum extent practicable— (i) at least 1 regional clean hydrogen hub shall demonstrate the end-use of clean hydrogen in the electric power generation sector; (ii) at least 1 regional clean hydrogen hub shall demonstrate the end- use of clean hydrogen in the industrial sector; (iii) at least 1 regional clean hydrogen hub shall demonstrate the end-use of clean hydrogen in the residential and commercial heating sector; and (iv) at least 1 regional clean hydrogen hub shall demonstrate the end-use of clean hydrogen in the transportation sector.”*

- a. ***What are the ideal timing and desirable features, terms, and conditions of off-taker agreements that would encourage construction and development of hydrogen hub infrastructure and long-term sustainability leading to local economic prosperity including union jobs and benefits to disadvantaged communities? Would hubs that supply multiple end users provide advantages, and in what ways?*** Ten years or longer duration off-taker agreements should be a minimum for hubs that engage multiple end users into the hydrogen ecosystem (multiple off-taker hubs should have priority); diversification of the hydrogen ecosystem is a key to success. Preference should be provided to a hub that has established and modern hydrogen producers and consumers that can be leveraged during the early phases of the new hydrogen ecosystems, to aide in attaining critical mass and economies of scale from production to consumption and all processes in between.
- b. ***What approaches can applicants use to guarantee off-taker commitments and matching of supply and demand?*** Incentivize off-takers’ economics to assure cost indifference (e.g.: Class 8 vehicle overall cost of ownership compared to diesel fuel) with a commitment to participate for the duration of the funding

cycle with a structure similar to open access pipelines' and LNG facilities' firm capacity precedent agreement format.

- c. ***The climate value of displacement may vary across end uses. How should the climate benefit of different hydrogen end uses be considered?*** Greenhouse gas reduction computed on a CO₂e basis utilizing generally accepted analytical methods, similar to that of natural gas versus coal power generation, or electric vehicles versus gasoline-powered vehicles.

5. GEOGRAPHIC DIVERSITY: “To the maximum extent practicable, each regional clean hydrogen hub– (i) shall be located in a different region of the United States; and (ii) shall use energy resources that are abundant in that region.”

- a. ***A region could be defined as anything from a city, a state, multiple states, tribal communities, or a geographic area. Should DOE define the regions or allow applicants to define them within their proposal? If a definition is preferred, explain how regions should be defined for the purposes of this FOA and provide the rationale.*** Applicants should be allowed to define regions.
- b. ***In addition to sufficient energy and feedstock/water resources, what other regional factors should be considered when identifying and selecting regional hubs (e.g., economic considerations, policy considerations, environmental and energy justice considerations, geology, workforce availability and skills, current industrial and other relevant infrastructure and storage available/repurposed/reused, industry partners, minority-serving institutions [MSIs], minority-owned businesses, regional specific resources, security of supply, climate risk, etc.)?*** Considerations for lowest cost of living, sizeable workforce that can readily pivot into the hydrogen economy, business friendly states (states which promote and provide support for new enterprises), renewable energy, abundance of opportunity for additional renewable energy production in the future, plus all of the following which contributes to the economies of scale necessary for a hub to thrive: existing hydrogen production and consumption facilities which can be leveraged by new low-carbon production facilities to both back stand supplies and provide a market for new hydrogen ecosystems, existing collaborations within research universities for research, testing, and workforce development, economical and abundant sources of renewable energy with the potential to add substantial generation capacity in the future, plentiful water/water reuse, plentiful and affordable natural gas and existing natural gas infrastructure and subsurface pore space, existing carbon capture use and storage facilities with the capabilities to expand sequestration, diversified workforce within energy focused corridors, engaged and participating Tribes, nuclear power production, extensive highways with strategic crossroads and large annual tonnage movements, power generation

willing to blend hydrogen with natural gas and ultimately utilize pure hydrogen, reliable interstate high voltage electricity power transmission capacity to assure multi-state hubs have the ability to transmit renewable energy across the entire hub, inland sea ports and seaports with associated drayage equipment and tugs, major airports and military installations with ground transportation vehicles that can be converted to hydrogen fuel, and extensive natural gas pipeline networks that can support diverse blending opportunities.

6. *HUBS IN NATURAL GAS-PRODUCING REGIONS: “To the maximum extent practicable, at least 2 regional clean hydrogen hubs shall be located in the regions of the United States with the greatest natural gas resources.”*

- a. ***What level of natural gas resources should be required to qualify as a region with the “greatest natural gas resources”? How should DOE consider the difference between the available natural gas resources and the current natural gas production of an area when considering hub candidates? How should DOE consider the volatility of natural gas prices and its effect on production levels when defining these regions?*** (1) historical production highs, (2) historical production averages, (3) Estimated Ultimate Recovery (“EUR”) for the average well in the given basin, (4) total Proved Developed Producing reserves (“PDP”), (5) total Proved & Probable reserves (“2P”), (6) total Proved, Probable & Possible reserves (“3P”), (7) carbon intensity of the upstream and midstream sectors in the given basin and (8) renewable electricity penetration within the given basin.
- b. ***How should DOE consider the volatility of natural gas prices and its effect on production levels when defining these regions? Should annual (or average over a five-year period) production and/or available proven reserves be the criteria for the above provision?*** Yes, a five-year average would be an appropriate criterion.

7. *EMPLOYMENT: DOE “shall give priority to regional clean hydrogen hubs that are likely to create opportunities for skilled training and long-term employment to the greatest number of residents of the region.”*

In keeping with the administration’s goals, and as an agency whose mission is to help strengthen our country’s energy prosperity, the Department of Energy strongly supports investments that expand union jobs, improve job quality through the adoption of strong labor standards, increase job access, strengthen local economies, and develop a diverse workforce for the work of building and maintaining the country’s energy infrastructure and growing domestic manufacturing. The Department intends to use the H2Hubs to support the creation of good-paying jobs with the free and fair choice to join a union and the incorporation of strong labor

standards and training and placement programs, especially registered apprenticeship. Respondents to this RFI are encouraged to include information about how this program can best support these goals.

- a. ***What tools should H2Hubs utilize to meet the goals of creating good union jobs and work opportunities for local residents in the construction phase of the project and in the long-term operations phase of the project?*** Implement workforce training, workshops, short-courses, and college programs to prepare the local workforce. Utilize state universities to develop training programs for both young students, apprenticeships, post-graduate programs and local residents in transition.
- b. ***What tools should H2Hubs utilize to meet the goals of providing opportunities for workers displaced from fossil industries and other industrial or resource-based industries in decline?*** Colleges and universities associated with the H2Hubs should have existing educational capabilities in energy, energy transition, and energy management to enable reskilling, and be at the forefront of energy technology research.
- c. ***How should short-term build-out (i.e., construction phase) employment and long-term operational employment opportunities be measured and evaluated?***
N/A
- d. ***What would “success” look like, especially related to Diversity, Equity, and Inclusion (DEI) and support for union and energy transition jobs?*** N/A
- e. ***How should H2Hubs include workforce development and training activities (e.g., by including institutions of higher education, such as MSIs, community-based organizations, registered apprenticeship programs, joint labor-management apprenticeship programs and quality community-based pre-apprenticeship programs, as project partners)? In addition to each H2Hub having its own workforce development and jobs plan, should there be a nationally coordinated effort between hubs (and other hydrogen activities) to ensure an adequately trained workforce is available? If so, how should this be designed?*** H2Hubs should have universities with existing energy, energy transition, and energy management undergraduate and graduate programs can collaborate to provide for degrees and certifications that include coursework and fieldwork to build the needed workforce and to transition existing workforce along with robust community college systems.
- f. ***How will the H2Hub training model offer opportunities for a range of jobs across the hydrogen supply chain?*** Pivot US manufacturing into the hydrogen supply chain from their existing operational focus which will require workforce training, associated with retooling, while simultaneously diversifying their

portfolio and bolster Made in America domestic supply chain (NIST MEP deliverable pursuant to EO 14005 Section 7).¹

- g. ***How should labor standards be incorporated in project planning stages to support the creation of high-quality, good-paying jobs?*** N/A

Category 2: Solicitation Process, FOA Structure, and H2Hubs Implementation Strategy

8. ***DOE is evaluating funding mechanisms for the H2Hubs projects in accordance with the BIL. What applicable funding mechanisms are best suited to achieve the purposes of the H2Hubs (e.g., Cooperative Agreements, Grants, Other Transactions Authority)?*** Consider DOE-Basic Energy Science (BES) and DOE-Fossil Energy/Carbon Management (FECM) funding coordination, as well as CRADA mechanisms.
9. ***What are the key review criteria (e.g., technical merit, workplan, market transformation plan, team and resources, financial, regional economic benefits, environmental justice, DEI) that DOE should use to evaluate and select the H2Hubs as well as evaluate readiness to move from Phase 1 to Phase 2?*** All the above criteria, with preference to a multi-state, cross industry and substantially diversified energy portfolio with the large GHG off set potential. See 5b of this response above for additional specific details
10. ***Does offering multiple launches roughly a year apart, as shown above in Figure 2, help facilitate expanding the hydrogen hub concept to more regions?*** Timing of implementation should be commensurate with H2Hub's ability to permit, build, and bring to commercial operations the necessary facilities. Timing delays associated with required permitting, supply chain challenges and the time needed to pivot existing domestic manufacturing into the hydrogen economy, and other normal construction delays should be considered.
11. ***What specific activities should be conducted in Phase 1 vs. Phase 2? Should Phase 2 be further broken into multiple sub-phases, and if so, what should be included in each sub- phase?*** Phase 1 should focus on initial hub planning and rate recovery mechanisms. Without rate recovery the investment will not happen. Specific activities include: a) analysis of key metrics such as the decarbonization potential and energy resources/infrastructure/ workforce in the proposed region; b) hub design, financing, and preliminary National Environmental Policy Act (NEPA) and related reviews; c) key partners for each potential H2Hub; d) engagement by the H2Hub teams with all communities in the region; e) Identification of potential role of community engagement throughout the project; and f) critical reviews, approvals, financing, permitting, safety, partnering agreements, power purchase agreements, long-term hub sustainability, etc.

12. **How much time will be needed to complete the Phase 1 activities? Have some regional teams already completed analysis and design activities?** Phase 1 will require approximately one year.
13. **Are the proposed funding levels for Phase 1 and Phase 2 appropriate/adequate?** N/A
14. **How much funding should DOE allocate for adding new technologies, capabilities/end-uses, or partners to the existing hubs (i.e., Launches 3 and 4)?** Support for collaborative efforts within H2Hubs research universities and existing DOE investments in developing innovative technologies through announced grants and the major research laboratories, which should target 10% of the annual funding for hydrogen research.
15. **What safety criteria (e.g., safety plan reviews, outreach to Authority Having Jurisdiction [AHJ] entities such as code/fire officials, training) should DOE use to evaluate readiness to move from Phase 1 to Phase 2?** Nominated suite of existing regulations with gap analysis followed with codification of new regulations to assure safety standards are documented.
16. **What resources might H2Hubs need regarding safety, permitting, and siting, particularly in relation to the Hydrogen Safety Panel and submission of safety plans?** Seismic and well-pressure monitoring with remote sensing for fugitive gases quantification, inclusive of academia, research institutions, industry, and regulatory agencies (state and federal).
17. **What environmental reviews and permitting challenges might H2Hubs encounter? Where can approaches such as “dig once” relating to buried conduits, pipelines, and other infrastructure (e.g., CO₂ pipelines) be developed and incentivized to reduce impact? Please provide examples of how community consultation and consent-based siting can successfully be included in the environmental and permitting review process.** Priority should be provided to those state(s) permitting organizations which have existing robust and efficient methodologies to assure risks of delays are minimized.
18. **Are there existing draft or final federal NEPA documents (e.g., environmental assessments and/or environmental impact statements) for similar or related proposals that could inform DOE NEPA reviews for the H2Hubs?** N/A
19. **What external non-project partners/stakeholders (e.g., CBOs, DACs, tribal groups, state and local governments, economic development organizations, labor representatives) will be critical to the success of the H2Hubs? What types of outreach and engagement strategies are needed to make sure these stakeholders are involved during each phase of the H2Hubs? Are there best practices for equitably and meaningfully engaging stakeholders?** Hub leadership should be tasked with programmatically engaging stakeholders throughout the Phases, and prior to kick-off of Phase 1. Priority should be

conveyed to hub applicants that have engaged Tribal groups for collaboration, as well as best practice procedures identified in a social license to operate should be adopted throughout the development of the hubs.

20. ***The H2MatchMaker tool will be available to help identify potential regional project partners. What specific fields/information would be valuable to include in the tool? What other mechanisms can DOE use to help facilitate teaming? NIST MEP National Network centers and Supplier Portal.***
21. ***Based on EPA Act 2005, Section 988, the cost share requirement for demonstration and commercial application projects is 50% cash and/or in-kind and must come from non-Federal resources (50% of the total project cost which includes both DOE share and recipient cost share). For example, a \$1B award for the Phase 2 Hub Deployment will require \$1B in matching cost share. Is it feasible for projects to meet this 50% cost share requirement on an invoice-by-invoice basis?*** It is feasible to meet 50% cost share and should be measured on an annual reporting basis with semi-annual status updates.
22. ***Is there sufficient manufacturing capacity to produce the necessary hydrogen related components/equipment within the U.S. to supply all the eventual H2Hubs? What incentives/programs exist or can be put in place to encourage and foster U.S. manufacturing? What potential challenges or opportunities might exist to meet the new Buy American requirements in the BIL?*** Supply chain support for all equipment and critical supplies, with high level of focus on sensitive technologies, are required to support H2Hub. Fully utilize the NIST MEP National Network resources pursuant to Executive Order 14005 for supply chain (Section 7. Supplier Scouting) as well as for workforce development and internships.
23. ***Please identify any iron, steel, manufactured goods, or construction materials that will be crucial for building out the H2Hubs that would not typically be procured domestically. For each, please specify how H2Hubs could work to procure these items domestically, and any potential barriers to domestic procurement, such as lack of availability or cost.*** The Departments of Commerce, Energy, and Defense could provide useful insight regarding domestically available supply chain items critical for the implementation of the hydrogen economy and the H2Hub initiative could utilize internal supply chain resources in collaboration with those mentioned here (see Executive Order 14005).
24. ***What types of cross-cutting support (e.g., technical assistance) would be valuable from the DOE/national laboratories, and/or from other federal agencies, to provide in proposal development or project execution? Are there other entities that DOE could fund to provide technical assistance across multiple H2Hubs?*** National labs, NIST MEP, EPAm, and others could provide valuable support for the H2Hub developers.
25. ***What data should DOE collect from the H2Hubs to evaluate the impact of the program?***

How should this data and the program outcomes be disseminated to the public? In addition, EAct 2005 Section 817 requires that three national labs (the National Energy Technology Laboratory, the Idaho National Laboratory, and the National Renewable Energy Laboratory) will work together to serve as a ‘clearinghouse’ for the H2Hubs and for the Clean Hydrogen Manufacturing and Recycling Program (Section 815). What data or information should be part of this ‘clearinghouse’? Installed H2 production capacity, additional demand created for low carbon hydrogen, renewable energy optimization metrics (off peak electricity that would otherwise be de-rated, used for H2 production), GHG reduction metrics for displaced mobile and stationary sources, expanded and improved existing hydrogen production facilities. Systemic data collection should ensure statewide representation including the ability to focus on regional differences and ensuring that diverse populations and underrepresented communities are included.

26. ***How could funding under other BIL provisions (e.g., Section 40303, Carbon Capture Technology Program) be leveraged by the H2Hubs to maximize the impact of BIL funding?*** Optimize all infrastructure funding opportunities, (Carbon Capture, Grid Reliability to enhance localized grids to optimize electrolyzers and enhance grid operations, etc.) should augment the H2Hub’s funding mechanisms.

Category 3: Equity, Environmental and Energy Justice (EEEJ) Priorities

EEEJ benefits will be a high priority as the H2Hubs are developed. For the purposes of this RFI, DOE has identified the following non-exhaustive list of policy priorities as examples to guide DOE’s implementation of Justice40 in DACs: (1) decrease energy burden; (2) decrease environmental exposure and burdens; (3) increase access to low-cost capital; (4) increase the clean energy job pipeline and job training for individuals; (5) increase clean energy enterprise creation (e.g., minority-owned or diverse business enterprises); (6) increase energy democracy, including community ownership; (7) increase parity in clean energy technology access and adoption; and (8) increase energy resilience.

27. ***What strategies, policies, and practices can H2Hubs deploy to support EEEJ goals (e.g., Justice40)? How should these be measured and evaluated for the H2Hubs?*** NEPA Analysis with public outreach.
28. ***What EEEJ concerns or priorities are most relevant for the H2Hubs?*** FERC NEPA Analysis, environmental impacts to underserved communities, effectiveness of workforce development, enhanced STEM education, meaningful engagement of stakeholders, fair and sustainable distribution of risks and benefits across the diverse populations and host communities in the H2Hub region.
29. ***What measures should H2Hub project developers take to ensure that harm to communities with environmental justice concerns, including local pollution, are mitigated?*** Implementation of best practices among H2Hub states with new project

construction containing a federal nexus conducting a NEPA analysis.

30. ***How can H2Hubs ensure community-based stakeholders/organizations are engaged and included in the planning, decision-making, and implementation processes (e.g., including community-based organizations on the project team)?*** State level environmental protection organizations (Oklahoma Department of Energy & Environment, Louisiana's Department of Natural Resources, and Arkansas Department of Energy & Environment) maintain community-based and organizational stakeholder engagements embedded within the permitting process for large scale facilities contemplated within the H2Hub initiatives, and for those instances where the States' respective departments do not contain regulations for smaller scale projects, the respective States' departments can lead similar stakeholder engagement processes as those mandated by regulation. Request documentation of host states' permitting process stakeholder engagement processes, as well as demonstrate through additional documentation effective community engagement, all within the H2Hub application process.
31. ***How can DOE support meaningful and sustained engagement with H2Hub relevant disadvantaged communities?*** Require documentation of engagement with Tribal Nations, disadvantaged communities, and other important stakeholders as part of the H2Hub application process.

Category 4: Market Adoption and Sustainability of Hubs

32. ***What mechanisms (e.g., tax/other incentives, offtake structures, prizes, competitions, alternative ownership structures for hydrogen production bundling demand, contracts for difference, etc.) would be valuable to incentivize market-based supply and demand?*** All possible tools should be used to incentivize economic indifference for early entrants on the demand side (support for retrofitting natural gas combustion generation, Class 8 operators on a per mile basis compared to diesel, etc.) along with producers of low-carbon hydrogen. Creating robust demand for the low carbon hydrogen is of paramount importance and should be encouraged using all possible pathways to secure economic indifference which will lead to economies of scale for demand side supply chains. Create and implement additional tax incentives similar to 45Q.
33. ***What role/actions can DOE take to support reliable supply and demand for potential hydrogen producers and customers?*** Collaborate with the regulatory bodies to remove hurdles for the development of distribution, storage, carbon capture, use and sequestration permitting, blending initiatives, and trans-continental hydrogen supply chain partnerships (joint statements of intent).
34. ***If DOE asks for a market analysis as part of the application process, what should the analysis include so that DOE can be confident that a proposed project will be successful?*** See response 1 b to this document above.

35. ***What can DOE provide/do that would be helpful to a project to facilitate its collaborations with potential financing partners?*** Loan guarantees or DOE backed “green bonds” which can also support domestic production of innovative technologies to maintain intellectual property protection, federal tax incentives for those entities that invest in hydrogen and carbon capture innovations, manufacturers, and service providers (engineering, and operational support).
36. ***How can DOE support the H2Hubs in working together to increase competitiveness and scale?*** Within Phase 2 and beyond, encourage hubs to expand operations to include neighboring states and/or those states which provide a logistical advantage (e.g.: expanded use of hydrogen in Class 8 vehicles through the build out of infrastructure for refueling).
37. ***Which regional and site-specific metrics should DOE track to estimate the impact of hydrogen production on regional water availability?*** Potential metrics, as applicable for specific locations: gallons/acre-ft/barrels of marginal quality water reused (i.e., produced water, wastewater, stormwater, etc.), stream flows, ground-water levels, reservoir levels. This could be modeled through machine learning algorithms coupled with forecasting models to optimize water use from various sources. The impact of hydrogen production would need to be isolated through modeling from other water stressors such as urbanization, climate change, increased agricultural use, etc.
38. ***Other than greenhouse gas emissions, what sustainability metrics should DOE include in evaluating the hubs (e.g., impact on regional water resources, availability of decarbonized electricity production resources, climate risk impacts on the resilience of the H2Hubs)?*** Improved optimization of renewable energy assets through economic and reliability dispatching of hydrogen production facilities, as well as hydrogen production that is stored for later use during high demand conditions. Additionally, water quality impacts to ground water and surface waters, air quality (relative particle emissions), water reuse, resilience against water stressors such as urbanization or increased agricultural use, impacts or benefits to endangered species, urban climate change, and public perception of benefits.
39. ***The goal is for the H2Hubs to be sustainable beyond the BIL funding (i.e., without additional government funding). To what extent will the H2Hubs be capable of demonstrating a path to economic viability after the BIL funded phases and how should the FOA and project (once awarded) be structured to ensure this outcome?*** For the H2Hubs to continue viable and sustainable operations beyond the BIL funding, H2Hubs should focus on multi-state collaborations which have the following assets in operation before Phase 1: see response 1 b above.

Category 5: Other

40. Please provide any additional information or input not specifically requested in the questions above that you believe would be valuable to help DOE develop a Regional Clean Hydrogen Hub FOA, including any specific criteria that DOE may take into consideration in implementing the Hub program.

Include research universities, specifically those that have long-standing collaboration history with industry and energy companies, in all phases of H2Hub implementation to assure innovative technologies advance to commercialization at an accelerated pace to support long term sustainability post DOE H2Hub funding, as well as support for internships in all technical and workforce related matters. Universities with a collaborative focus and demonstrated ability to manage multi-institutional, multi-institutional partnerships should be supported to create a “hub within hub” framework to facilitate knowledge, data, and information gathering and dissemination of the current state in engineering and sciences (across the technology readiness levels spectrum) within each H2Hub. Universities should be supported to facilitate entry into the hydrogen economy of smaller business by providing a de-risking service through techno socioeconomic analysis, bridges to policy makers, and readily available interns and visiting scholar programs within H2Hubs. Engagement within each H2Hub with entities that support and coordinate technical colleges in the region to support workforce development.

Tab K – Water Data Exchange
(WaDE)/WestDAAT Program Update

Water Data Exchange (WaDE) Program Update for Fall 2022

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 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

<https://westernstateswater.org/wade>

This report provides a brief update of the WaDE Program's progress over the period from August through early October 2022 in the following three areas: (1) Technical Activities; (2) Key Outreach and Coordination Activities; and (3) WaDE Financial Updates.

1. Technical Activities

1.1 Development of the Western States Water Data Access and Analysis Tool (WestDAAT)

In September 2022, our I.T. contractor, Don't Panic Labs, completed building a state-of-the-art WestDAAT dashboard that provides fifteen filters and tools that support water rights data query, filtering, analysis, and download across the 17 WSWC Member States (Figure 1). We are working on importing Alaska's water rights data this Fall.

The WaDE Data System, which includes the Microsoft SQL Server database, Application Programming Interface calls (APIs), and the web-browser-based front-end dashboard, is deployed in three independent environments (Figure 2). These environments allow the WaDE team to test and release any design changes or data updates before going into production: (1) The Quality Assurance (QA) environment (also known as Development) is used for testing how the system performs after new design changes using a sample of data.; (2) the Staging environment (also known as User Acceptance Testing (UAT)) is used for testing the quality of data before releasing it to production; and (3) the Production (Prod) environment is the

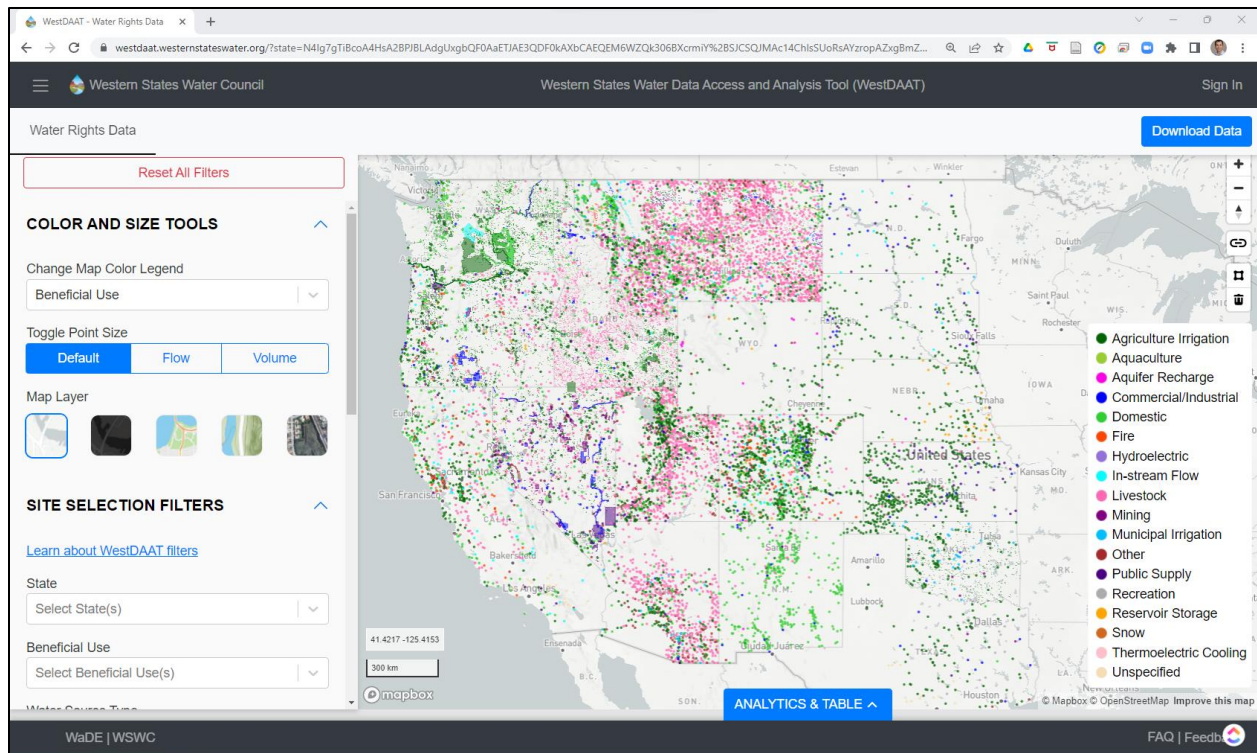


Figure 1: Western States Water Data Access and Analysis Tool (WestDAAT) interface. Data filters and tools are provided on the left as a navigation toolbar. Colors on the default page show beneficial uses for Points of Diversion (PODs) and Places of Use (POUs) across the West.

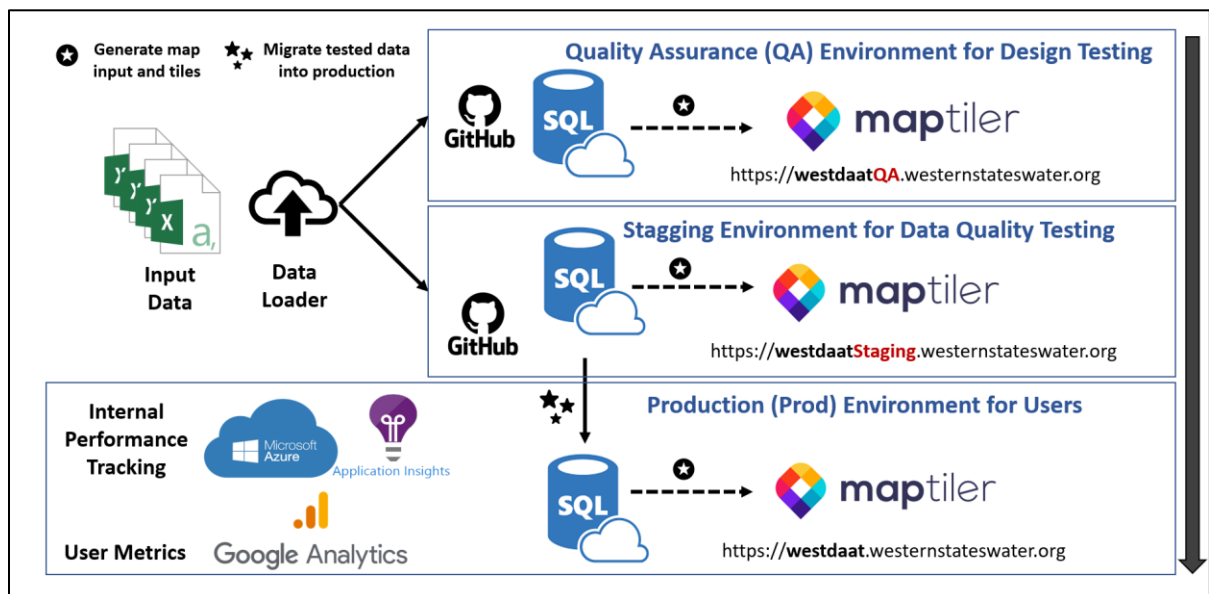


Figure 2: State-of-art scalable WaDE Data System based on best I.T practices deployed in three environments: Quality Assurance, Staging, and Production with open-source code tracked in GitHub

live service that is exposed to users. The source code of the Quality Assurance and Staging environments are tracked separately on GitHub and have automated deployment setup in concert with Microsoft Azure services. The monthly cost of hosting the WaDE Data System is mostly accrued from the Production environment, ranging from \$400 to \$600/month. This cost is a function of the server's capacity and how fast it responds to users.

To monitor and track how a wide range of users will use WestDAAT, we have designed and set up these three features: (1) Azure Application Insights feature that allows the WaDE team to monitor the performance of the system and track any potential failure issues; (2) user login feature that manages users who want to download WestDAAT data; (3) Google Analytics account to the Production environment which provides metrics that measure the number of visitors, the length of their visit, and the general location (city, state, country). These tools will be essential to communicate the value of WestDAAT to our funders based on the traffic it receives from users.

We plan to publicly release WestDAAT by next Spring. We will coordinate the release with the Internet of Water Coalition and the Water Foundation, as they both funded a significant part of its development. Until then, we have identified the following tasks that we need to complete before the public release:

1. Ask each state to review the mapping of their water rights data in GitHub and how the data shows up in WestDAAT and approve it for a public release.
2. Write the following documentation online webpages for links and buttons included in WestDAAT
 - Water Rights Data that describes the metadata data standardization approach and the source of data for each state
 - Contact Us
 - Terms of Service
 - Frequently asked questions (FAQ)
 - Learn about WestDAAT analytics
 - Learn about WestDAAT filters
 - WestDAAT-NLDI-Geoconnex-Docummentation that describes the Hydro Network-Linked Data Index (NLDI) and Geoconnex project and how WestDAAT integrates with them.

- Create short videos and documentation on how to use WestDAAT filters, primarily the NLDI tool, and its known limitation
 - Write documentation on how users can also access water rights data using our APIs
 - Write results about WestDAAT use cases and personas. Highlight new insights or added values that WestDAAT allows users to do (e.g., Colorado River Basin 1922 query). Highlight comments mentioned by users from the engagement campaign.
 - Write a press release 1–3-page document on WestDAAT
3. Classify the legal status terms across the states' water rights data (see Section 2.2). We will support a new filter for legal status if our budget permits. Otherwise, we will remove any water right with a legal status indicating the right is inactive.
 4. Finish the engagement campaign and publish its summary report. The three remaining groups that we will engage this Fall are: (i) irrigation managers/districts (Farm Alliance members); (ii) Western Governors' staff; (iii) water and land user managers as part of the Lincoln Institute of Land Policy group; (iv) Water Information and Data Subcommittee (WIDS) and the Western States Federal Agency Support Team (WestFAST) at the Western States Water Council, and possibly (iv) Native American tribal members.
 5. Draft a journal article that describes the WaDE metadata dictionary and data system as a first step toward standardization.
 6. As part of the engagement campaign, we need to stress-test the production version of WestDAAT and see how it performs under the pressure of multiple queries/users. We will track the performance of successful queries or failures based on different server capacities.

1.2 Water Rights Legal Status Terminology

The WSWC General Counsel is leading a project to group 123 unique legal status terms across the 17 Western States into a few terms allowing WestDAAT users to query regional water rights with a similar legal status (Figure 3). The General Counsel is compiling definitions of legal status terms for each state to determine which states have similar or different definitions for each term. We anticipate this project to be complete by the Spring 2023 Update Report.

1.4 Updates to the WaDE Data System and Data Imports

Since the Summer Update Report, we have revised and re-imported water rights data for the following states Idaho, Montana, and Oklahoma, and we are working on Utah's data. Next, we will import Alaska's water rights data, update North Dakota and California's water rights data, and import their corresponding withdrawal data reported at their diversions. We also evaluated Oregon and Nebraska stream gage data, and we will import them into the WaDE database. We determined that Washington's stream gage data is not available in machine-readable formats that we can use.

2. Key Outreach and Coordination Activities

2.1 State Engineer Persona Focus Group - Western States Water Data Access and Analysis Tool (WestDAAT) Workshop

In conjunction with the WSWC Summer Meetings in Polson, Montana, WSWC held a WestDAAT demonstration workshop for state engineers, directors, and Summer Meetings attendees. The workshop intended to familiarize members and others with WestDAAT and encourage hands-on practice with potential applications. The workshop was hybrid and attended by ten in-person and 16 remote participants. The workshop webpage is available online, and a discussion summary will be shared as part of the WestDAAT Stakeholder Engagement Report later this Fall. <https://westernstateswater.org/events/western-states-water-data-access-and-analysis-tool-westdaat-workshop/>

2.2 The 2022 National Water Use Data Workshop in Salt Lake City

On August 16-18, 2022, the Western States Water Council (WSWC), in cooperation with the U.S. Geological Survey (USGS), Interstate Council on Water Policy (ICWP), and Internet of Water Coalition (IoW Coalition), held a National Water Use Data Workshop, in Salt Lake City, Utah. Water use measurements, estimates, and reporting are essential to water supply planning, drought response planning, mitigation, water project construction and operations, water policy, and water rights administration. Yet, States and USGS face challenges in estimating and reporting water use to make informed decisions.

U.S. Rep. Melanie Stansbury (NM) kicked off the workshop with a pre-recorded video welcoming everyone and highlighting the Water Data Act she introduced in the House of Representatives. She pointed to the vital role of the participants in helping our communities better understand and manage our water resources, primarily through the power of data through

stakeholder partnerships. Rep. Stansbury has dedicated her career to working on water resources issues as a researcher and educator in the White House Office of Management and Budget, as staff to the U.S. Senate Committee on Natural Resources, in the New Mexico State Legislature, and now in the Congress. She emphasized that managing water resources sustainably into the future will require bringing stakeholders together, ensuring that everyone has a seat at the table, and ensuring people can access data and science.

The goal of the workshop was to: (1) provide a platform for state agencies' staff to learn from each other about the latest efforts related to water data management and sharing; (2) engage state information technology (IT) and water resources management staff with the USGS Water Mission Area staff (including the Water-Use Data and Research program- WUDR) and the WSWC Water Data Exchange (WaDE) Programs; (3) exchange the latest developments on water use data sharing methods and how States can benefit from them; and (4) identify challenges related to states' data sharing efforts and consider potential solutions.

Overall, the workshop drew some 100 participants, roughly half in-person and half virtually, from 32 states (Figure 1), representing 67 states, federal, private sector, nonprofit, academic agencies, and organizations. Thirty speakers covered topics of (1) programs and initiatives related to improving data collection, sharing, and access to water use data (2) data collection methods and models estimating and reporting surface and groundwater use for all categories of water use, such as agriculture, public supply, and thermoelectric and reporting; and (3) software tools to share, visualize, query, and download water use data. All workshop materials, including Rep. Melanie Stansbury's (NM) remarks and workshop summary report, are available online at <https://westernstateswater.org/events/2022-national-water-use-data-workshop/>

In a post-workshop survey, 42 participants provided valuable feedback about their experience and shared many insightful suggestions and comments. The overwhelming majority highly valued the workshop and indicated that they "will likely" or "very likely" participate in a future workshop in 2024. We will publish the survey results soon and share them on the workshop webpage.

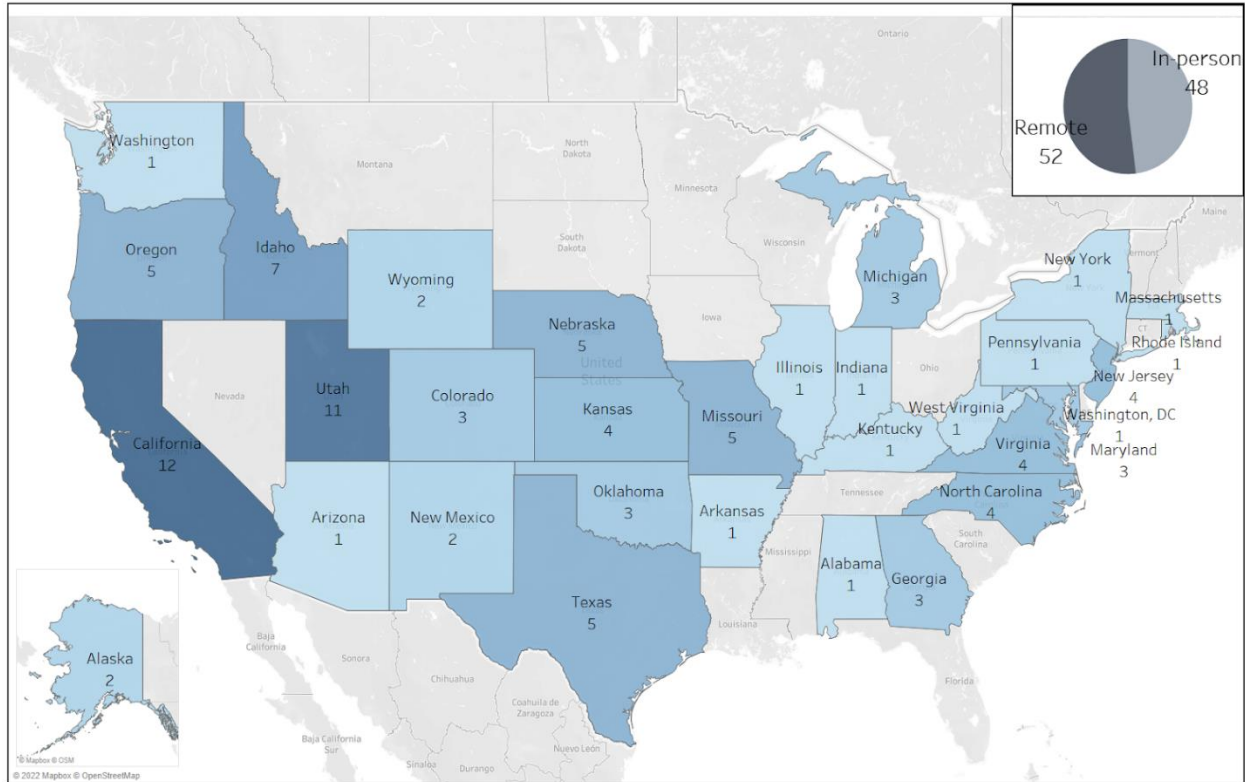


Figure 1: The distribution of workshop participants across the U.S.

2.3 Internet of Water Coalition Inaugural Meeting

On September 23, WSWC Executive Director participated in the inaugural meeting of the recently formed Internet of Water (IoW) Coalition (<https://internetofwater.org/blog/the-internet-of-water-coalition>). WSWC Executive Director serves as the vice chair of the IoW Coalition, and WaDE Program Manager serves on the steering committee. The Internet of Water Coalition is a multi-sector collaboration co-led by five nonprofit organizations: the Lincoln Institute of Land Policy's Center for Geospatial Solutions (CGS), Duke University's Nicholas Institute for Environmental Policy Solutions, the Consortium of Universities for the Advancement of Hydrologic Sciences, Inc. (CUAHSI), the Water Data Collaborative (WDC), and the Western States Water Council's Water Data Exchange (WaDE). One representative from each of these organizations will serve on the IoW Coalition's steering committee, and two representatives from other organizations in the water sector. The Coalition includes representatives from California, New Mexico, and Texas, which all have major water data-sharing initiatives.

2.4 Other State and Federal Outreach Activities

1. August 24, 2022 – Bureau of Reclamation/WaDE/IoW Coalition Call
2. September 15, 2022 – Open Environmental Data Project (OEDP) Brain Trust: Collaboratively managed data stewardship webinar
3. September 21, 2022 – U.S. EPA: Introducing the REUSExplorer - a tool to explore water reuse regulations
4. September 28, 2022 – WUDR Open Forum: Developing the Texas Water Data Hub Using a Human-Centered Design Approach
5. October 4, 2022 – Water Data Exchange (WaDE) Program Discussion with Utah Division of Water Rights
6. October 4-7, 2022 – 2022 NASA Applied Sciences Program, WWAO & Water Resources Team Meetings. Salt Lake City, Utah
7. October 6, 2022 – WestDAAT Demo to the National Integrated Drought Information System (NIDIS) meeting
8. October 7, 2022 – WestDAAT Demo and Visit to Office of Rep. Susie Lee (NV)

Other Outreach Activities with Organizations, Academics, and Groups

1. August 30, 2022 – WaDE: Release Readiness/Intro to Foundation Team. Don't Panic Labs
2. August 31, 2022 – ICWP Water Data and Science Committee Meeting
3. September 15, 2022 – Open Environmental Data Project (OEDP) Brain Trust: Collaboratively managed data stewardship webinar
4. September 20, 2022 – Rethinking Water 2022 Forum, Columbia Water Center, Virtual
5. September 27, 2022 – Focus Group call with Utah Water Research Lab Director- Western States Water Data Access and Analysis Tool (WestDAAT)
6. September 30, 2022 – WSWC Grant check-in call: Water Foundation
7. October 6, 2022 – IoW Coalition and WSWC Call: Reclamation Cooperative Agreement Scoping
8. October 7, 2022 – WestDAAT Demo to National Water Resources Association staff

3. Financial Updates

On September 15, 2022, WSWC concluded the Moore Grant contract, which funded the WaDE Program's second phase of modernizing its architecture into a cloud-based centralized system. The Moore Grant was a sub-contract with Duke University as part of the Internet of Water Project. The grant of \$633,000 funded WaDE from January 2019 through mid-September 2021. WSWC received another \$150,000 that extended the grant another year to mid-September 2022 to support the WaDE Program to (1) organize the National Water Use Data Workshop; (2) update a report on state capabilities to share water use data; and (3) share water use data through a pilot project with the USGS Water Use Program. As reported in the Summer 2022 Update Report, the WaDE Program is funded by three other active grants: (1) BHP Foundation through Duke University and the Internet of Water Coalition; (2) a Water Foundation grant; and a WaterSmart grant by the Bureau of Reclamation. These grants will continue to fund the WaDE Program through December 2024. We are collaborating with the Internet of Water Coalition to scope a cooperative agreement with the Bureau of Reclamation. The project will potentially expand WestDAAT's upstream and downstream search tool to be interoperable with other data providers such as Reclamation Information Sharing Environment (RISE), AgriMet weather stations, and Snow Telemetry (SNOTEL) data.

Tab L – FY22-23 Water Quality Committee Work Plan Progress Report

**WATER QUALITY COMMITTEE
WORK PLAN
Progress Report (August 2022 – October 2022)**

CWA Jurisdiction

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. On October 13, 2022 WSWC will host a final policy workshop for states to further discuss regional approaches to WOTUS. WSWC has also organized a panel for the Fall 2022 meeting in Oklahoma to hear a summary of the regional roundtables hosted by the USACE and USEPA over the summer.

Abandoned Hardrock Mine Remediation

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. On August 30, WSWC sent a letter to the Senate Committee on Appropriations requesting that funds be appropriated to support abandoned hardrock mine reclamation as authorized in the IIJA.

WSWC has also organized a panel for the Fall 2022 meeting in Oklahoma to facilitate collaboration between federal and state agencies on new abandoned hardrock mine reclamation projects, an update on the Office of Mountains, Deserts, and Plains, and new funding made available for projects on federal land through the IIJA.

Per- and Polyfluoroalkyl Substances (PFAS)

The Committee agreed to form a subcommittee on this topic at the Polson, MT meeting in August 2022. The subcommittee will coordinate efforts with sister organizations such as ECOS and ASDWA in order to not unnecessarily duplicate efforts. The subcommittee is made up of the following people: Brittany Duarte (WA), Jennifer Zygmunt (WY), Julie Pack (AK), Jojo La (CO).

The subcommittee met on October 5, 2022 to identify priority initiatives. The following ideas were agreed upon as initial steps:

- Organize an online forum (~Jan 2023) for states to exchange information around the following three topics: 1) Current strategies, initiatives and/or successes including state-led project examples for using IIJA emerging contaminant funds; 2) Examples of current challenges with implementing PFAS advisories and/or IIJA funding; and 3) Resource needs to overcome barriers.
- Explore a resolution on PFAS or more broadly on emerging contaminants to express common considerations from the western states.

- Work with EPA to better understand PFAS roadmap timeline/milestones and keep members informed

Other ideas were discussed but deferred until further discussion in the spring.

- Work with DOD through WestFAST to identify and promote strategies for source reduction of PFAS at DOD facilities and/or to develop a ‘buy back’ program for industries.
- Work with FAA to implement the new Preventing PFAS Runoff at Airports Act and/or identify additional programs that could be implemented through FAA.
- Collaborate with ASDWA to develop state messaging template for recently released health advisory criteria.
- Influencing the administrative process for jumping from interim advisories to MCL.

Tab M – WSWC Technical Report on
WOTUS Regional Classification
Schemes and Tools

Applicability of regional classification schemes and analytical tools to regional definitions of Waters of the United States (WOTUS)

Technical report following 2022 WOTUS workshop series

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WESTERN STATES
WATER COUNCIL

Fall 2022

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Introduction

The federal Clean Water Act was designed to protect and restore water quality in the Nation's surface waters through a complex but flexible structure. It accounts for a balance of authority between the federal government and states and incorporates a suite of tools, including financial incentives to improve infrastructure, regulations used to control the most acute sources of pollution, and cooperative programs to integrate water quality into other land and water management programs. Importantly, the Clean Water Act provides for regional differences through the application of different beneficial uses and different numeric water quality standards in different parts of the country. This results in frequent differences among state implementation of Clean Water Act programs that reflect the variety of natural landscapes and climates, as well as different uses of waters. As the Nation's water quality regulators and regulated community continue to grapple with how to develop a durable definition of Waters of the United States (WOTUS), Western States Water Council (WSWC) has explored whether there may be value in a regional framing of the issue.

Objectives

Following the consensus approval of a revised position on Clean Water Act jurisdiction (#481) at the Council's Spring 2022 meetings, the Council committed to assisting states in studying how a regional approach to WOTUS could be implemented, both from a technical and a policy perspective. This commitment to bring states together to explore new ideas and new approaches to water policy aligns with the role of the Council to facilitate dialogue between states and federal agencies. The Council hosted a workshop series over the summer of 2022 that forms the basis of this technical white paper. While this paper does not aim to recommend any new policy solutions to WOTUS, it provides foundational materials for the Council to do so at a later date. Further, the Council hopes that the ideas and tools presented in this white paper prove useful to the U.S. Environmental Protection Agency (USEPA) and the Army Corps of Engineers (USACE) as they further investigate a regional framing of WOTUS as part of the ongoing rulemaking for this issue.

Summary of 2022 Workshop Series

Western States Water Council (WSWC) hosted a series of workshops over the summer to explore technical and policy elements of a regional approach to defining Waters of the United States (WOTUS). Two technical pre-workshops (virtual) preceded a full day policy-oriented workshop (hybrid) that coincided with the Western States Water Council summer meeting. This technical white paper represents the primary technical output of the workshop series.

WOTUS regional approach pre-workshop 1: Regional classification schemes (June 21, 2022)

The first technical pre-workshop explored existing regional classification schemes and their potential applicability to WOTUS determinations. There were 32 attendees from 16 states and several federal agencies. Participants considered five existing regional classification schemes presented by four federal agencies:

- *Watershed Boundaries and National Hydrography Dataset* (Kim Jones, USGS)
- *Ecoregions* (Brian Topping, USEPA)
- *Stream Flow Duration Assessment Method Regions* (Brian Topping, USEPA)
- *Regionalization of Wetland Delineation Guidance* (Kyle Gordon, USACE)
- *Major Land Resource Areas and Land Resource Regions* (Drew Kinney, NRCS).

A post-workshop survey indicated that most participants believe the number of regions should be limited to 10-25 across the country. Generally, the participants agreed that the Stream Flow Duration Assessment Method best balances the various regional factors of concern to states, although there was support for further exploring several of the other classification schemes. Insights and comments provided by participants are incorporated into this technical whitepaper. More information, including materials from the event, are available on the meetings tab of the WSWC website.

WOTUS regional approach pre-workshop 2: Operationalizing regional concepts in western states (July 11, 2022)

The second pre-workshop explored analytical tools and operational aspects that could be useful for differentiating between waters in a regional context. These tools are currently in use in state and federal agencies. There were 47

attendees from 21 states and two individuals from federal agencies. Participants considered five protocols presented by state and federal representatives:

- *Stream Flow Duration Assessment Methods: Scientific underpinnings and western region applications* (Tracie Nadeau, PhD, USEPA Region 10)
- *New Mexico's Hydrology Protocol for Surface Water Quality Management* (Shelly Lemon, New Mexico Environment Department)
- *Arizona flow regimes* (Erin Jordan, PhD, Arizona DEQ)
- *Oregon forest management stream typing* (Josh Seeds, Oregon DEQ)
- *Wyoming flow duration curve criteria* (Eric Hargett, Wyoming DEQ)

Participants commented on the similarities of many of the tools presented by states and the potential for them to be used in a regional WOTUS context. Several tools differentiate between waters that are perennial, intermittent, and ephemeral. Others tools are used to determine the levels of protection necessary for different stream types. More information, including materials from the event, are available on the meetings tab of the WSWC website.

[WOTUS Regional Concept Workshop: Western States Water Council Summer Meeting \(August 2, 2022\)](#)

A full day policy workshop was held in Polson, MT ahead of the Council's summer 2022 meeting. Participants explored several different approaches to integrating technical aspects of regional approaches to WOTUS with policy considerations. A separate policy memo has been prepared as an addendum to this report for state participants.

[Lessons from the USACE Efforts to Regionalize Wetland Delineation Guidance](#)

Federal agencies have explored and implemented the concept of regional implementation of Clean Water Act jurisdictional determinations in the past. In the early 1990s, Congress directed EPA to fund a study by the National Research Council to document methods for wetland delineation that included an evaluation of how to improve sensitivity to regional differences. The final report, *Wetlands: Characteristics and Boundaries* (NRC 1995), led to the regional wetland delineation guidance manuals still in use by the USACE. Several lessons can be learned from the work that NRC, USEPA, and USACE completed nearly 30 years ago. Excerpts of material from a 2002 USACE report (Wakeley 2002; TR-02-20) summarizing this effort relevant to our current efforts are provided below, unedited.

In an effort to resolve some of the public and administrative confusion that existed in the early 1990s over the technical validity and credibility of wetland delineation methods, Congress directed EPA to fund a study by the NRC of the scientific basis for wetland characterization. The NRC report (National Research Council 1995) validated the basic structure and scientific foundations of the delineation methods that were in use at the time, including the 1987 Corps manual. However, it also listed a number of recommendations for improvement, including a call for improved sensitivity to regional differences in climate, hydrologic and geologic conditions, and other wetland characteristics.

In the broad sense, "regionalization" of wetland delineation methods can involve both technical and policy considerations. Technical issues include whether wetland criteria are appropriate in a particular region, and whether indicators used to identify wetlands in the field are sensitive to regional variations in environmental conditions (National Research Council 1995). These are mainly scientific issues that can be addressed with appropriate research. This report discusses some of the scientific issues involved in the regionalization of wetland delineation methods.

Policy issues include whether to extend regulatory jurisdiction to all areas encompassed by a strictly technical definition of wetlands or to exclude some wetlands from regulation based on political, social, or economic considerations. Furthermore, policy considerations may dictate that some areas that fail to meet wetland criteria (e.g., contiguous upland habitats or "buffers") should also be regulated. Regional factors that may affect wetland protection policy include the abundance or scarcity of wetlands in the region, historical rates of wetland loss, local development pressure, and public perceptions of wetland values.

At the most basic level, policy judgments must be made in deciding where to draw the line between regulated and unregulated portions of the wetness gradient. The issue is not strictly technical. For example, it is largely a policy decision that extends jurisdiction to areas with water tables 12 in. from the surface but not 14 in., and inundation frequencies of 1 year in 2 but not 1 year in 3. The 1991 proposed revisions to the 1989 Federal delineation manual represented a policy shift that would have rescinded the Federal government's regulatory authority over groundwater-dominated wetlands, those which do not pond or flood in an average year. State programs, by policy, may also limit protection to only a portion of the overall wetland resource. For example, the wetland delineation method used in Florida for the administration of State wetland programs (Gilbert et al. 1995) is intended to identify wetlands that are a subset of the "surface waters" defined by statute, thus leaving groundwater wetlands unprotected at the State level. Policy judgments are pervasive in the world of wetland regulation, particularly in the wetland definitions that have been developed to describe the limits of government jurisdiction. Policy issues cannot be avoided in a discussion of regionalization of wetland delineation methods. However, to the extent possible, this report emphasizes scientific issues.

In NRC 1995, the authors also outline the process to establish regional guidance as follows:

Regionalization is "a method of reducing or eliminating details which do not, on the average, hold true over large areas" (Wiken, 1986). Regionalization for the purpose of wetland delineation, therefore, would require the identification of areas with some degree of homogeneity in wetland characteristics and the development of specific regional procedures or indicators.

A regionalized delineation approach involves several steps. First, regional boundaries must be circumscribed around an area with unifying properties. Second, the occurrence and fidelity of wetland indicators within that region must be determined. Finally, a regionally valid system must be adopted for applying indicators to wetland determinations. Regionalization thus extends beyond mere division of a national list of indicators into subsets (such as state lists) because true regionalization involves the regional adaptation of indicators and delineation methods.

Finally, the authors arrived at the following recommendations, which are relevant to the content of this white paper.

1. Wetland vary regionally to a great extent; regulatory systems must acknowledge this variation.
2. Regions for wetland delineation should be redefined on the basis of physiography, climate, vegetation, and prevailing land use and should be used by all agencies for all wetland characteristics, including vegetation, soils, and hydrology.
3. Regional protocols should conform with national standards that ensure consistency among regions.
4. Regional delineation practices should be based on regional research and documentation.
5. A uniform process should be used to develop regional standards; all federal agencies that assess wetlands... should participate in the development of regional protocols.
6. Proposals for and review of regional practices should be solicited from scientific experts in the private and public sectors, both within and outside of the region.
7. The process that has been used to develop the regional hydrophyte lists is sound, as is the use of fidelity categories as a means of indicating regional differences.
8. Regionalization of hydric soils should be attempted by the use of regional fidelity categories analogous to those used for the Hydrophyte List.
9. Numeric thresholds for duration and frequency of saturation should be selected on the basis of their regional relationship to hydrophytic vegetation and hydric soils.
10. A central record should be maintained for the Hydrophyte List, as is currently done for the Hydric Soils List. Both records should be accessible via Internet, and both should contain information on the rationale for assignment of indicators.

History of WOTUS Rulemaking and Scope of CWA Jurisdiction

The purpose of the Clean Water Act (CWA) is to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters,”¹ but this stated purpose does not confer federal jurisdiction over all waters located within the boundaries of the United States. Many waters are hydrologically interconnected, but that connection alone does not necessarily confer sufficient authority for federal regulation. Temporary or permanent upstream waters have the potential to impact downstream waters over a variety of temporal and spatial scales.

In 2015, the USEPA and the USACE undertook rulemaking for the Clean Water Rule, which attempted to provide a more precise definition of WOTUS. The rule was developed by looking at physical indicators of flow (bed and banks, ordinary high-water mark) with sufficient volume and frequency to transport sediments, organic matter, nutrients, and organisms to downstream waters, establishing a significant nexus to make the waters jurisdictional. Under the 2015 Rule, wetlands were considered “adjacent waters” (along with ponds, lakes, oxbows, impoundments, and other similar water features) if they were sufficiently close to traditional navigable waters, interstate waters, and territorial seas (jurisdictional waters). The Rule used the terms “bordering,” “contiguous,” and “neighboring,” with a complex definition of the latter term that encompassed:

- (1) waters within 100 ft. of the ordinary high-water mark (OHWM) of jurisdictional waters;
- (2) waters within a 100-year floodplain plus 1,500 ft. of the OHWM of jurisdictional waters; and
- (3) waters within 1,500 ft. of the high tide line of jurisdictional waters.

Other wetlands outside this geographic proximity could be included on a case-by-case basis if the agencies determined that there was a significant nexus with jurisdictional waters (i.e. the wetlands “significantly affect the chemical, physical, or biological integrity”).

With a change in federal administration, the USEPA and USACE repealed the Obama Administration’s 2015 Clean Water Rule on October 22, 2019. On April 21, 2020, the USEPA and USACE published the Navigable Waters Protection Rule, which eliminated the “significant nexus” test for individual waters that had been used in practice since 1986 and was specified in the 2015 rule. The 2020 Rule established four categories of waters considered to be jurisdictional under the CWA:

- (1) territorial seas and traditional navigable waters;
- (2) tributaries of such waters;

1986 WOTUS: *Traditional navigable waters, interstate waters, all other waters that could affect interstate or foreign commerce, impoundments of waters of the United States, tributaries, the territorial seas, and adjacent wetlands.*

2015 WOTUS: *Traditional navigable waters, interstate waters, and the territorial seas; impoundments of jurisdictional waters; tributaries and adjacent waters due to their presumed significant nexus; and certain regional waters or waters within a floodplain, high tide line, or ordinary high water mark, on a case-by-case analysis for significant nexus, if shown to affect the chemical, physical, or biological integrity of jurisdictional waters, individually or in combination.*

2020 WOTUS: *Significant nexus test eliminated. WOTUS defined by 4 categories of waters: 1) territorial seas and traditional navigable waters; (2) tributaries of such waters; (3) certain lakes, ponds, and impoundments of jurisdictional waters; and (4) wetlands adjacent to other jurisdictional waters.*

2021 WOTUS (Rule 1): *Pre-2015 regime defined as: 1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide; 2) All interstate waters including interstate wetlands; 3) All other waters....the use, degradation or destruction of which could affect interstate or foreign commerce; 4) All impoundments of waters otherwise defined as waters of the United States under this definition; 5) Tributaries of waters identified [in 1-4 above; 6) The territorial sea; and 7) Wetlands adjacent to waters...identified [in 1-6 above].*

¹ 33 USC §1251(a)

- (3) certain lakes, ponds, and impoundments of jurisdictional waters; and
- (4) wetlands adjacent to other jurisdictional waters.

The rule also included 12 categories of waters excluded from CWA jurisdiction, including groundwater, ephemeral features, diffuse stormwater runoff, ditches, prior converted crop land, artificially irrigated waters, water-filled depressions constructed or excavated incidental to mining or construction activity, and water filled-pits excavated for the purpose of obtaining fill, sand, or gravel, and waste treatment systems.

On August 30, 2021, the U.S. District Court vacated and remanded the Navigable Waters Protection Rule, causing USEPA to revert to interpreting WOTUS consistent with the pre-2015 regulatory framework. This approach is also reflected in the most recent rulemaking initiated by the USEPA and USACE in June 2021 and finalized on November 18, 2021. More specifically, the 2021 Rule identifies the following waters as WOTUS:

- (1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (2) All interstate waters including interstate wetlands;
- (3) All other waters....the use, degradation or destruction of which could affect interstate or foreign commerce;
- (4) All impoundments of waters otherwise defined as waters of the United States under this definition;
- (5) Tributaries of waters identified in paragraphs (s)(1) through (4) of this section;
- (6) The territorial sea; and
- (7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of this section.

In spring 2022, the USEPA and USACE indicated an intent to initiate rule making on a second WOTUS rule, although it has not been released at the time of this report.

The following sections discuss a legal framework for defining the jurisdictional scope of the “waters of the United States,” with considerations pulled from case law, existing regulations, state feedback, and the discussion of potential alternatives. Over time, Supreme Court decisions have made clear that the jurisdictional scope of the CWA is something more than traditional navigable waters, but something less than all waters. Further, the CWA explicitly states Congress intended to protect the primary rights and responsibilities of states over water quality and the allocation and protection of land and water resources.

More than Navigable Waters

In the century prior to passage of the Clean Water Act, the courts and the Corps interpreted “navigable waters” to mean navigable in fact, or readily susceptible of being rendered so.² Following CWA enactment, in 1975, a district court held, in a one-page decision, that this definition was too narrow,³ and the USACE adopted a far broader definition, deliberately seeking to expand the definition of “the waters of the United States” to the outer limits of Congress’ commerce power consistent with the district court’s order.⁴ While the Supreme Court has placed some outer limits on the regulatory definition of “navigable waters,” past decisions have also made clear that the CWA term means something more than traditional navigable waters.⁵

² *Rapanos v. United States*, 547 U.S. 715, 723 (2006); also citing 39 FR 12119 and 33 CFR 209.120(d)(1) (1974) to illustrate the Corps’ initial limited jurisdictional definitions following immediate passage of the CWA.

³ *Id.*, at 724, citing *Natural Resources Defense Council, Inc. v. Callaway*, 392 F. Supp. 685, 686 (DC 1975); *but see Solid Waste Agency of Northern Cook County (SWANCC) v. Corps*, 531 U.S. 159, 172 (2001) (“Where an administrative interpretation of a statute invokes the outer limits of Congress’ power, we expect a clear indication that Congress intended that result.”).

⁴ *Id.*, citing 40 FR 31324 (1975) and 42 FR 37144 (1977).

⁵ *Id.* at 731, citing *SWANCC*, 531 U.S. at 167 and *U.S. v. Riverside Bayview Homes, Inc.*, 474 U.S. 121, 133 (1985).

Less than All Waters

The U.S. Supreme Court has not delineated clear inner and outer boundaries for the scope of the CWA jurisdiction, but in *SWANCC v. Corps* (2001), the Court held that an abandoned sand and gravel pit with no significant nexus to a navigable water, or ponds not adjacent to open water, could not fall under the definition of a “water of the United States.”

The *Rapanos* (2006) Court attempted to provide clearer jurisdictional boundaries, but was unable to reach a majority opinion. In a brief concurring opinion, Chief Justice Roberts lamented the failure of the agencies to complete their proposed rulemaking in 2003 following the curtailment in *SWANCC*, and labeled the *Rapanos* decision as another defeat of the USACE’s boundless view of the scope of its power.

The agencies were left to formulate a rule that would modify the 1986 efforts to define the scope of waters protected under the CWA based on the guidance contained in *U.S. v. Riverside Bayview*, *SWANCC v. Corps*, and *Rapanos v. U.S.*

The absence of federal jurisdiction over all waters under the limits of the CWA does not mean that those waters fall outside of state jurisdiction. Congress recognized the role of the states when it passed the CWA. Section 101(b) supports the states’ critical role in protecting water quality by stating: “It is the policy of Congress to recognize, preserve, and protect the primary responsibilities and rights of States to prevent, reduce, and eliminate pollution...” Section 101(g) of the CWA further provides that the primary and exclusive authority of each state to “allocate quantities of water within its jurisdiction shall not be superseded, abrogated, or otherwise impaired by this Act.”

States have authority pursuant to their “waters of the state” jurisdiction to protect the quality of waters within their borders, and such jurisdiction generally extends beyond the limits of federal jurisdiction, including groundwater. Excluding waters from federal jurisdiction does not necessarily mean that they will be exempt from regulation and protection, though the legislative authority to regulate state waters varies significantly. States are well positioned to manage the water within their borders because of their on-the-ground knowledge of the unique aspects of their hydrology, geology, and legal frameworks, including laws to allocate water. Western states, in particular, have specific conditions and needs where water may be scarce and a variety of unique waterbodies exist, including small ephemeral washes, effluent-dependent streams, prairie potholes, playa lakes, and numerous human-made reservoirs, waterways, and water conveyance structures. Additionally, most states are co-regulators with authority and experience in implementing various provisions of the CWA.

Rapanos: Scalia and Kennedy Opinions

Justice Scalia delivered a four-member plurality opinion in *Rapanos*, joined by Chief Justice Roberts, and Justices Thomas and Alito. Justice Kennedy wrote an opinion that concurred in the judgment, but for different reasons. The Obama Administration emphasized the Justice Kennedy approach in the 2015 Rule, while the Trump Administration emphasized the Justice Scalia approach in the 2020 Rule.

Plurality decisions have a muddled precedential value, generally considered more than persuasive and less than binding.⁶ The Supreme Court held in *Marks v. United States* that binding precedential value is found in the position taken by the justices who concurred in the judgment on the narrowest grounds.⁷ However, lower courts and even later Supreme Court cases have been ambivalent about the *Marks* rule, due to the complications of identifying the relevant reasoning between justices that concurs on the narrowest grounds.⁸ In 2018, the Supreme Court declined to provide better guidance on the *Marks* rule.⁹

⁶ See, e.g., James A. Bloom, *Plurality and Precedence: Judicial Reasoning, Lower Courts, and the meaning of United States v. Winstar Corp.*, 85 WASH. U. L. REV. (2008).

⁷ *Id.*, citing *Marks v. United States*, 430 U.S. 188, 193 (1977).

⁸ *Id.*

⁹ See, e.g., Amanda Reilly, *Justices sidestep chance to clarify Rapanos’ reach*, E&E News 6/4/18, involving a fractured 11th Circuit decision in a criminal sentencing case, *Hughes v. United States* (quoting Justice Breyer, “I think law is part art and part science. If you ask me to write something better than *Marks*, I don’t know what to say.”)

Sackett v. Environmental Protection Agency

The Supreme Court is expected to begin hearing oral arguments in Sackett v. USEPA on October 3, 2022. This will represent the fourth case before the Supreme Court related to the question of defining WOTUS for purposes of establishing jurisdiction under the federal Clean Water Act. In this case, the Sackett's are arguing for a narrow definition of WOTUS to exclude any wetlands that are not immediately abutting a Traditional Navigable Water. USEPA is arguing that a significant nexus test is necessary. A decision in this case is expected in late 2022 or early 2023.

Western States Water Council WOTUS Position

Western States Water Council has maintained a position on Clean Water Act jurisdiction since 2014. Amendments over the years reflect the various changes that have been made to defining Waters of the United States under three different presidential administrations. The Council's current [WOTUS position \(#481\)](#) is available on the Council's website. Because the definition of WOTUS issue is a highly contentious issue, the Council has carefully crafted the current position to reflect the areas of bi-partisan consensus across western states. These areas include durability and clarity in rule and in process, principles of cooperative federalism, and the importance of recognizing regional differences. Excerpts from the current position, relevant to the Council's efforts to explore regional WOTUS concepts, are listed below.

“NOW, THEREFORE BE IT RESOLVED that Congress and the Administration should ensure that any federal effort to clarify or define CWA jurisdiction and define Waters of the United States:

1. Creates an enduring and broadly supported definition.
....
10. Provides for mapping of jurisdictional waters as a joint federal/state/tribal effort employing the best available data and tools, with appropriate provisions and processes for map maintenance.
....
12. Recognizes the need to balance definitional clarity with flexibility in implementation to address the unique landscapes, flow regimes, and legal frameworks in various regions of the Nation and appropriately weighs all factors of science, law, and effective policy to draw jurisdictional conclusions that are appropriate, and that do not impinge on the rights of States.
....
13. Considers a regional approach to the definitions of terms for foundational and any categorical waters in the rule including terms such as “relatively permanent” and “significant nexus” and defines regions building upon existing classification systems based on hydrology, geology, and climate.

Western State Comments and Concerns regarding WOTUS

As states have varied opinions about various aspects of WOTUS, it is difficult to represent all of the nuanced perspectives accurately in a summary of western state concerns. However, the western states have raised several themes in the context of WOTUS over the years. Most recently, western states participated in the 2022 summer WOTUS regional roundtables organized by USEPA and hosted by a variety of organizations across the country. Below is a summary of some of the themes that were discussed at the western-focused roundtables.

Uniqueness of Western Landscapes

Many participants talked about the uniqueness of western landscapes and hydrology. Jennifer Carr, Nevada DEP and WSWC member, said that “the vastness of western topography” needs to be considered carefully when considering WOTUS, noting that the characteristics of ephemeral waters can differ significantly across the West, with some ephemeral features only experiencing flow every few decades. There was extensive discussion about the nature of ephemeral waters in the west. Hawaii only has one inland navigable water and, in many areas, localized rains between valleys create numerous ephemeral and intermittent features. Others discussed the diversity and uniqueness of the intermountain west including high deserts and forested areas in the north and at high elevations. Many ephemeral features in southern California percolate before reaching perennial waters or only flow when they receive

Title 22 recycled water. Several participants spoke about the importance of ephemeral and intermittent wet meadows and their importance to moderate temperature, sediment, and nutrient impacts in downstream waters. Some of these features provide critical hydrologic and geomorphic functions that are especially important in the context of climate change to provide water storage and flood protection.

Appropriate Balance between State and Federal Authority

Participants reminded the agencies that they need to stay true to the legislative intent of the Clean Water Act, which was to strike a balance between state and federal regulation with clear exemptions. Several participants noted areas of overlap and duplication between state and federal programs, and several said that some state laws are more stringent than federal regulations with respect to water quality protections and that it is important not to duplicate or complicate regulations. Further, some felt that Congress assumed that states would address land management issues and that these should not be subject to federal permitting requirements. Some questioned what the natural resource protection value would be of regulating, as waters, large areas of arid land in the West considering other state and federal environmental protections. There was discussion about how state agencies and local partnerships were best placed to manage water quality in coordination with water resource and land managers. Many participants felt that state agencies can communicate clearly with one another and local staff have the best handle on the hydrology and communities in a watershed. Most states have CWA primacy and can therefore provide clean water through a blend of federal and state programming. There is also a concern that there is insufficient capacity for federal regulators to monitor, inspect, and enforce on a broader suite of waters.

Protecting agricultural economic interests

Many participants talked about the importance of agriculture to western economies and emphasized the need not to hamper production agriculture. Most participants emphasized the importance of maintaining current agricultural exemptions. More specifically, several participants argued that irrigation canals, ditches, stock ponds, and other western irrigation infrastructure must be excluded from WOTUS to allow for regular maintenance critical to maintaining agricultural production.

The lack of clarity and the need for case-by-case determinations was identified as a source of significant uncertainty for landowners. In some areas of the west, farms can be very small and are owned by traditionally underserved and socially disadvantaged people that often do not have the means to comply with the proposed rules. A concern exists that an uncertain regulatory process interferes with environmental justice and food security goals for some states.

Others reminded participants that most agricultural activities and features are already exempted from Clean Water Act jurisdiction and that there was some confusion about whether an expanded definition of WOTUS would affect the existing exemptions.

Several participants requested that USEPA maintain the prior converted cropland (PCC) exclusion as outlined in the 2020 rule. In many western states, PCC could convert to a wetland if fallowed because an agricultural producer does not have a senior water right to keep it in active production. Participants emphasized that the exemption for PCC from WOTUS must recognize western water rights and water law to ensure there are no unintended consequences of PCC reverting to wetlands.

Other Exemptions

Several participants also discussed the importance of clearly exempting water treatment infrastructure, and some upland waters that may only be connected to a traditional navigable water (TNW) via groundwater. Most participants reiterated the importance of state oversight of groundwater and the need for clear guidelines associated with WOTUS in light of the Supreme Court decision in *County of Maui v. Hawaii Wildlife Fund*, 140 S. Ct. 1462 (2020).

Clarity

Participants emphasized the importance of clarity and predictability in the final rule, noting that subjective terms with case-by-case determinations are very difficult for landowners to navigate. Clarity and certainty are also necessary to ensure that the permit process is timelier. One participant highlighted the work that has been done

recently in Oregon under the private forest accords which looks at how to alter protections for different types of systems and evaluate the probability that a stream is perennial.

Applicability of Existing Regional Classification Schemes

In considering a regional approach to WOTUS, we first explore how the country could be divided into regions that reflect the major important differences across the country and that are practical to implement. In this section, we explore several existing regional classification schemes that could be used or adapted to regionalize on the basis of hydrologic, landscape, and climatic factors. These include the nested basins established in the National Hydrography Dataset developed and maintained by the US Geological Survey (USGS), the Ecoregion classification scheme developed and maintained by the USEPA, and the Land Resource Regions developed and maintained by the Natural Resources Conservation Service (NRCS). In addition, we describe two other classification schemes that build on the three foundational schemes listed above. These include the regions used by the USACE for purposes of wetland delineation guidance and the regions established by USEPA for the development of Stream Flow Duration Assessment Methods.

National Hydrography Dataset – Watershed Boundary Dataset

The Watershed Boundary Dataset (WBD) is a data product housed within the broader National Hydrography Dataset (NHD) that includes boundaries of nested or multilevel hierarchical watersheds for the nation. Boundaries are defined by hydrographic and topographic criteria using federal standards for delineation and resolution published by the USGS (USGS and NRCS 2013). The goal of the WBD is to create a “national, consistent, seamless, and hierarchical hydrologic unit dataset based on topographic and hydrologic features across the United States and territories.” The WBD defines the perimeters of drainage areas (hydrologic units), formed by the terrain and other landscape characteristics, at a 1:24,000 scale in the United States, except for Alaska at 1:63,360 scale and 1:25,000 scale in the Caribbean, and it consists of digital geographic data that include six levels of detailed nested hydrologic unit boundaries. The National Hydrography Dataset, including the Watershed Boundary Dataset, represents the highest standards of quality, consistency, and accessibility for hydrologic unit data nationwide.

The Watershed Boundary Dataset was originally developed in the mid-1970s under a system that divided and subdivided the country into four nested levels based on surface topography, drainage area, and number of divisions per nested level. These four levels eventually became the basis of the 8-digit hydrologic unit numbers prevalent in watershed management today. There are 22 of the highest level watershed boundaries (HUC-2) representing the major drainage basins in the country at a scale that is relatively consistent (Figure 1). The average size of each drainage area is 177,560 mi². The next level of drainage area (HUC-4) subdivides the HUC-2 watersheds into 227 drainages areas averaging 16,800 mi². All references to hydrologic unit codes (HUCs) of varying levels in this report follow the USGS Watershed Boundary Dataset standards.

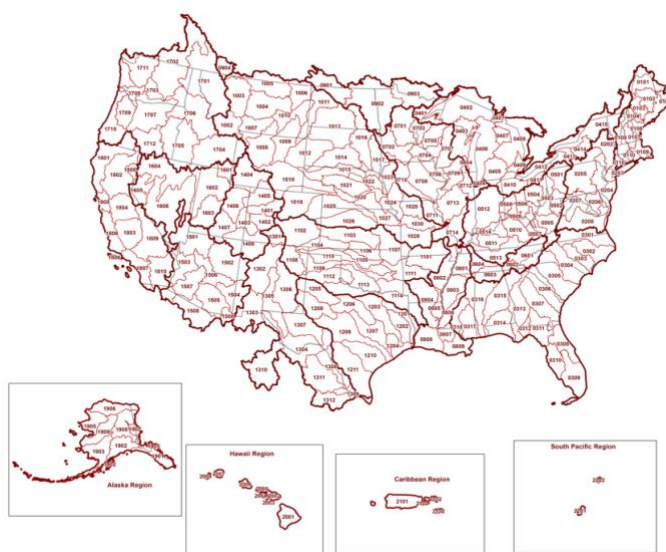


Figure 1. Watershed boundary dataset (HUC-2 and HUC-4) for the nation (Source: USGS NHD).

Ecoregions – Level I, II, III

The USEPA, in collaboration with other federal and state partners, developed and maintains an ecoregion framework that aggregates areas of the country (and continent) where ecosystems are generally similar. Ecoregions are based on the type, quality, and quantity of environmental resources. Ecoregions are not tied to any specific use case and are intended to support general research, assessment, and monitoring of both aquatic and terrestrial ecosystems.

Ecoregions are based on a weight of evidence approach rather than a formulaic model that can be automated. The ecoregion analysis is based on patterns and composition of both biotic and abiotic aspects of ecosystem quality and integrity (Omernik 1987, 1995). The primary factors considered in the ecoregion data are geology, landforms, soils, vegetation, climate, land use, wildlife, and hydrology. The framework incorporates both aquatic and terrestrial factors, including patterns of human use or human modification. The relative importance of each factor changes for different ecoregions (Omernik and Griffith 2014, McMahon et al. 2001).

The first ecoregion framework was published in 1987 (Omernik 1987) and has been modified and expanded over time in collaboration with many partners, including state resource management agencies. With each increasing level, there is an increasing number of categories in the nation. There are 12 Level I ecoregions, 25 level II ecoregions, and 105 Level III ecoregions (Figure 2). The complexity also increases with each level.

More information on ecoregions is available on the USEPA website and in the underlying publications including Omernik and Griffith (2014), Omernik (1995, 2004), and CEC (1997).

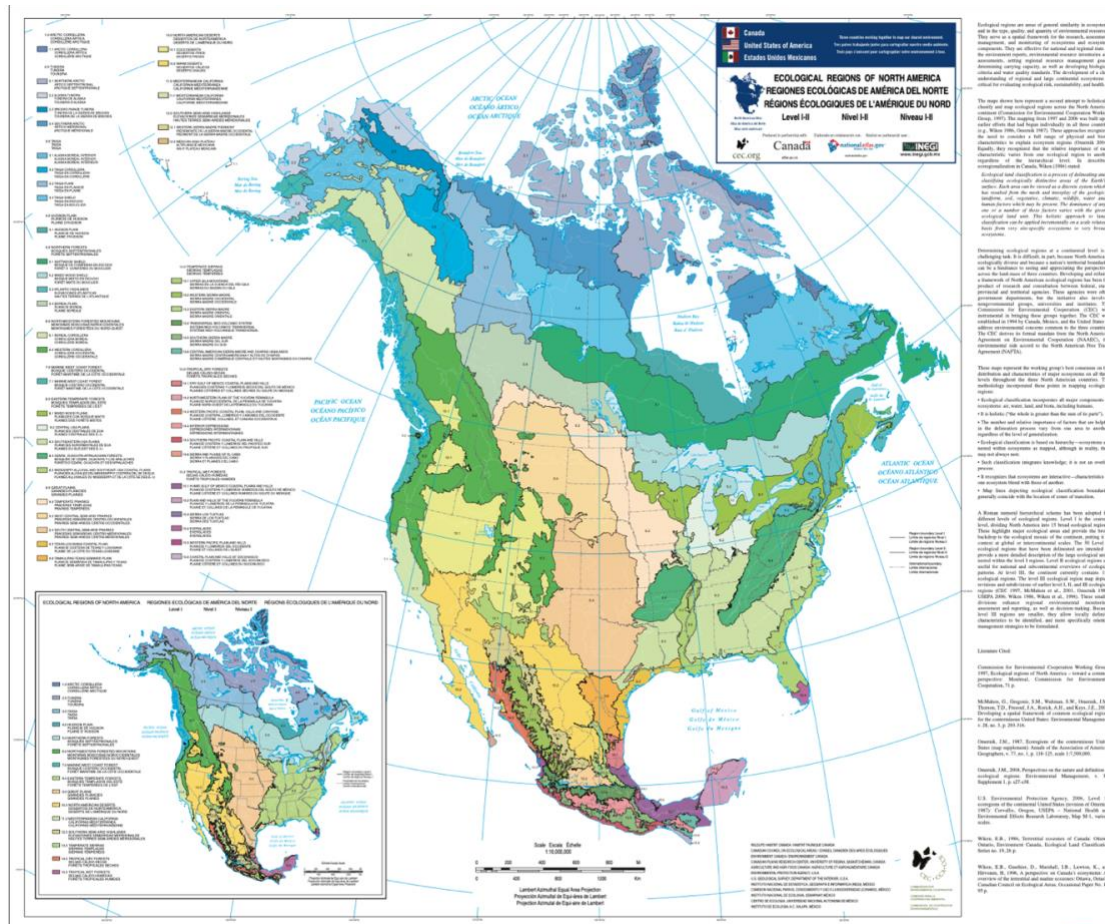


Figure 2. Ecoregions of North America (Level II shown in large image and Level I embedded image). Source: USEPA, Ecoregions.

USDA Land Resource Regions and Major Land Resource Areas

The United States Department of Agriculture (USDA) maintains regional classification systems for Land Resource Regions (LRR) and Major Land Resource Areas (MLRA) across the country. The LRR and MLRA classifications are based on patterns of physiography, geology, climate, water resources, soils, biological resources, and land use (Austin 1965). Since 1965, USDA has published multiple updates to the methods and maps in Agricultural Handbook 296, most recently in May 2022.

The purpose of the LRR and MLRA classification system is primarily to support agricultural research and management in different areas of the country. This includes identification of crop suitability to different areas as well as recommended conservation practices promoted by NRCS and its partners.

There are 28 Land Resource Regions in the country representing the highest level in the classification scheme (20 in the conterminous United States, 5 in Alaska, and 1 each for Hawaii, the Caribbean, and the Pacific Basin Islands). The LRRs range in size from 885 mi² (Pacific Basin Islands) to 548,305 mi². The MLRA is the second-level in the classification scheme with 267 MLRAs across the region ranging in size from 3 mi² to 70,215 mi² (Figure 3).



Figure 3. Land Resource Regions (LRRs) and Multi-Resource Land Resource Areas (MLRAs) for the United States (Source: USDA, LRR).

USACE wetland delineation regions

The USACE has primary responsibility to regulate dredge and fill of waters, primarily wetlands, under Section 404 of the Clean Water Act. In 1987, the USACE Wetland Delineation Manual was developed as a national guidance document for wetland delineation practices for purposes of determining jurisdiction under the Clean Water Act. The manual identified indicators for wetland hydrology, hydrophytic vegetation, and hydric soils. In the early 1990s, the combination of multiple wetland delineation guidance manuals issued by separate federal agencies and the long-standing practice to apply aspects of the delineation differently in different parts of the country, led to a federal undertaking to develop a regional approach to wetland delineation.

In 1993, Congress funded a study by the National Research Council (NRC) to evaluate a scientific basis for a regional approach to wetland delineation. This study resulted in *The Wetlands Characteristics and Boundaries* report published in 1995 by the NRC. The report recognized that “wetlands vary regionally to a great extent and that regulatory systems must acknowledge this variation.” Further, the report found that “regional protocols should conform with national standards that ensure consistency among regions....Regional delineation practices should be based on regional research and documentation....Regionalization would require the identification of areas with some degree of homogeneity in wetland characteristics and the development of specific regional procedures or indicators.”

The report also provided suggestions for how agencies could draw regional boundaries. The report evaluated the NHD Watershed Boundary Dataset, existing administrative boundaries, EPA’s Ecoregions, and the NRCS LRR and MRLA regional frameworks. The report recommended the use of LRRs because they incorporate multiple factors including human influences on wetland abundance and characteristics.

The USACE decided to divide the country into 10 regions by aggregating the existing 28 LRRs into similar categories (Figure 4). The resulting regional classification accounts for anthropogenic influences, aligns with National Technical Committee for Hydric Soils (NTCHS) field indicators of hydric soils, and provides meaningful regionalization without being overly specific.

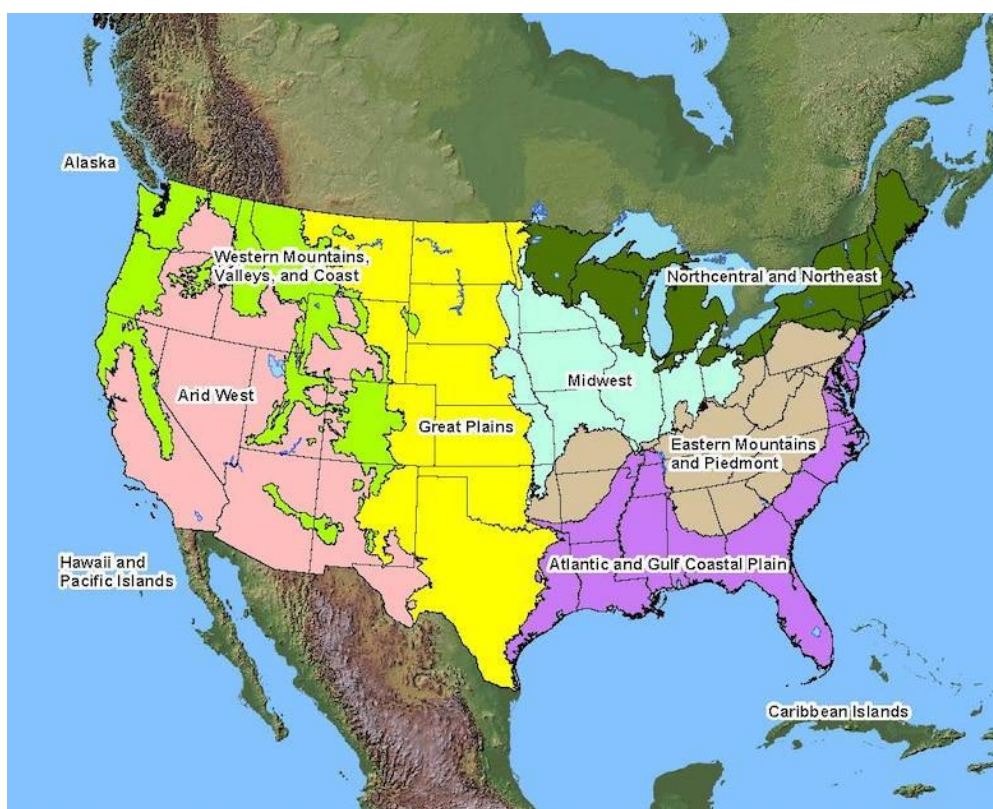


Figure 4. USACE Wetland delineation regions.

Stream Flow Duration Assessment Method Regions

Stream Flow Duration Assessment (SDAM) methods are a tool used to classify streamflow duration at a reach scale using data collected in one field visit. These methods and their applicability to WOTUS are described in the analytical tools section below. EPA divided the country into various regions for method development purposes. The SDAM regions were based first on the administrative boundary of EPA Region 10 (Pacific Northwest), and later on the regions defined in the Ordinary High Water Mark manuals and the National Wetland Plant list, which roughly correspond to the USACE wetland delineation regions. Recently, EPA decided that there was not sufficient variability in terms of stream characteristics in the mid-west and eastern states to justify using all of the regions identified for wetland delineation. Instead, EPA divided the mid-west and eastern states into four regions shown in Figure 5 and following Wohl et al. 2016.

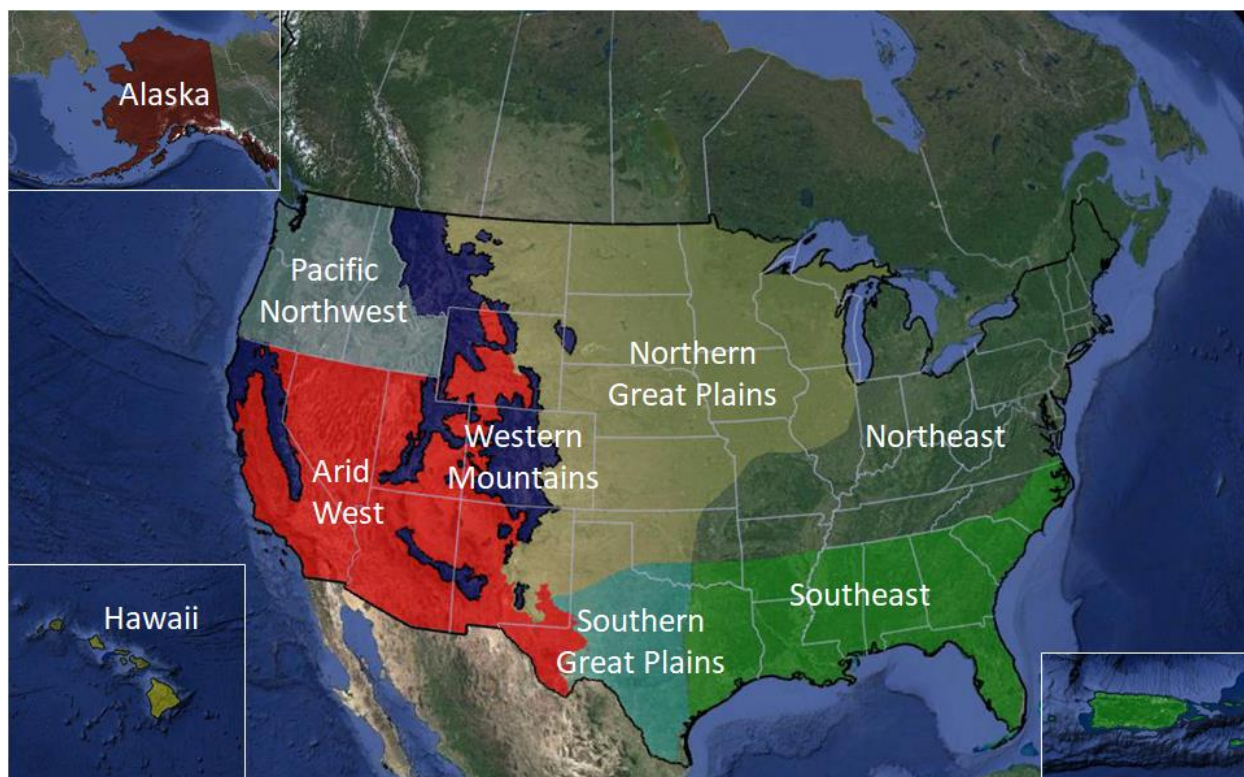


Figure 5. USEPA Streamflow Duration Assessment Method regions.

Comparison

Whereas the USGS NHD is based entirely on watersheds established by flow paths of surface waters, the other classification schemes are based on various landscape and climatic factors. The Ecoregions (USEPA) and Landscape Resource Regions (NRCS) classification schemes are grounded primarily in landscape and climatic factors. The Ecoregions and LRR schemes were both established in the 1980s and draw from one another to a certain extent, but have different end uses. Whereas USEPA's Ecoregion concept is meant to provide a general framework for use in monitoring, assessing, and managing the nation's aquatic and terrestrial ecosystems, the NRCS LRR concept aims to inform agricultural practices and resource conservation across the country. The regions used for USACE wetland delineation guidance are aggregated from the NRCS LRR regions. And the regions used in the Streamflow Duration Assessment Methods are grounded in both the NRCS LRR regions and the EPA Ecoregions. These similarities can be seen visually in Figure 6. The differences between the factors used to establish each regional classification scheme are summarized in Table 1. Table 2 summarizes the number of different regions in each western state for each of the classification schemes.

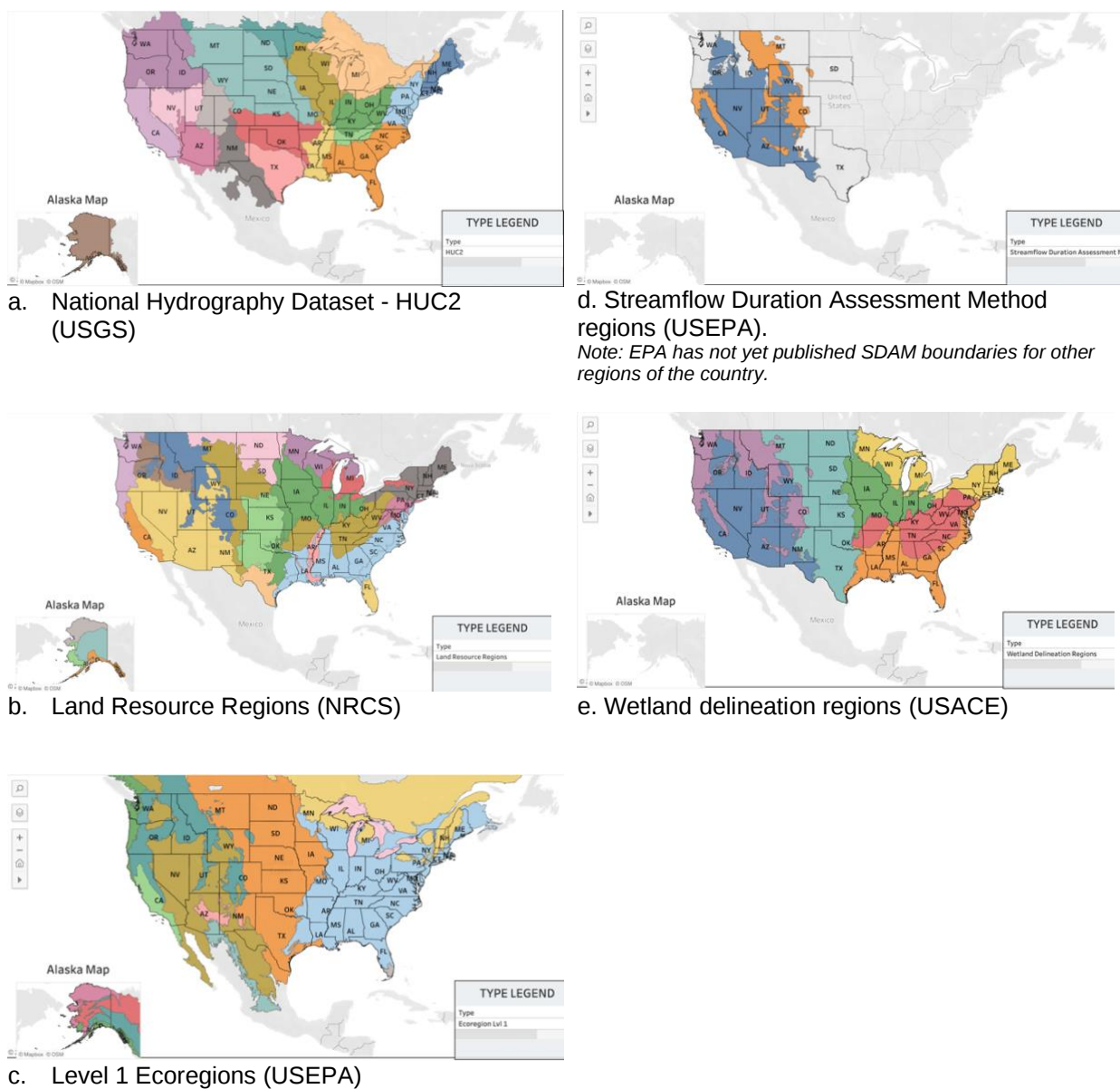


Figure 6. Spatial comparison of existing regional classification systems.

Table 1. Summary of Regional Classification Schemes

	Agency	Total number of regions in US	Factors incorporated into regional delineations	Average or range in size of categories (mi ²)
National Hydrography Dataset (HUC 2)	USGS	HUC 2: 22 HUC 4: 227	Topography Hydrology Watershed Size	HUC-2: 177,560 mi ² HUC-4: 16,800 mi ²
Ecoregions	USEPA	Level I: 13 Level II: 26 Level III: 107	Geology Landforms Soils Vegetation Climate Land use Wildlife Hydrology	
USDA Major Land Resource Areas	NRCS	255	Physiography Geology Climate Water Resources Soils Biological Resources Land Use	LRRs: 885 mi ² to 548,305 mi ² MLRAs: 3 mi ² to 70,215 mi ²
USACE wetland delineation regions	USACE	10	Aggregated MLRA	
Stream Flow Duration Assessment Method Regions	USEPA	5	Regional Supplements to the Wetland Delineation Manual Regional OHWM Manuals – Arid West and Western Mountains	

Table 2. Summary of Regional Classification Schemes

	NHD	Ecoregions (Level I) ¹⁰	USDA LRR/MLRA	USACE wetland delineation regions	SDAM Regions
Topography	USGS 7.5 minute topographic maps (USGS 15-minute topo maps in Alaska) ¹¹ .				
Landforms/Physiography		Classes of Land-Surface Form (Hammond 1970)	Fenneman and Johnson (1946), Wahrhaftig (1965), Thornbury (1965), and Hunt (1967)	USDA LRR	USDA LRR
Geology		Surficial Geology (Hunt 1979)	State and Federal geologic maps and reports	USDA LRR	USDA LRR
Hydrology	USGS 7.5 minute topographic maps (USGS 15-minute topo maps in Alaska).	Not referenced for Level I	Seaber et al. 1984	USDA LRR	Ordinary High Water Mark (Wohl et al. 2016)
Water Resources			Lumia et al. 2005. USGS Estimated Use of Water in the United States in 2000.	USDA LRR	USDA LRR
Watershed Size	USGS 7.5 minute topographic maps (USGS 15-minute topo maps in Alaska).				
Climate		Climates of the United States (Baldwin 1973)	Parameter elevation regression on Independent sloped model (PRISM) for lower 48 states National Weather Service climate records from 1981 through 2010 for Alaska and Hawaii	USDA LRR	USDA LRR
Soils		Various sources	NRCS soil survey geographic database (SSURGO)	USDA LRR	USDA LRR
Vegetation		Potential Natural Vegetation (Kuchler 1970)	"See reference section of Ag Handbook 296"	National Wetland Plant List	
Land use		Major Land Uses (Anderson 1970)	NRCS Natural Resource Inventory (NRI) data.	USDA LRR	USDA LRR
Wildlife		Not referenced in Level I			
Biological resources			"See reference section of Ag Handbook 296"	USDA LRR	USDA LRR
Other		Land Resource Regions and Major Land Resource Areas of the United States (USDA 1981)		LRR aggregated regions	USACE wetland delineation regions and OHWM aggregated regions

¹⁰ All references are cited in Omernik 1987.¹¹ Future elevation data will come from 3DEP, Lidar, IISAR or other sources.

Table 3. Count of regions within each western state for existing regional classification schemes

	Ecoregions			National Hydrography Dataset Watersheds		Major Land Resource Area	Streamflow Duration Assessment Methods	Wetland Delineation Regions
	Level I	Level II	Level III	HUC2	HUC4			
Alaska	4	6	21	1	8	25		
Arizona	3	4	7	2	10	6	2	2
California	4	5	12	4	16	17	2	2
Colorado	3	3	6	4	17	16	2	3
Hawaii	1	8	13					
Idaho	2	2	10	3	7	13	2	2
Kansas	2	3	8	2	13	15	3	
Montana	3	3	7	3	15	16	2	3
North Dakota	1	2	4	3	8	13		2
Nebraska	1	3	7	1	14	15		2
New Mexico	5	6	8	5	19	16	2	3
Nevada	2	3	5	4	12	11	2	2
Oklahoma	2	4	12	1	10	22		4
Oregon	3	3	10	3	10	17	2	2
South Dakota	2	4	8	3	9	21	1	3
Texas	4	6	12	3	24	36	1	3
Utah	2	3	7	4	12	13	2	2
Washington	3	3	9	1	8	11	1	2
Wyoming	3	4	7	4	14	17	2	3

Analytical Tools in Use by States and Federal Agencies

This section discusses the technical capabilities of several tools that are already in use by states and EPA. Most of the tools described in this white paper are already designed within a regional construct or could be adapted to reflect important regional differences. With respect to WOTUS, analytical tools can be used to help evaluate the following aspects of stream hydrology:

- Connectivity of surface waters
- Differentiation of perennial, intermittent, ephemeral flow regimes
- Estimation of the degree of ephemerality or intermittency on a continuum
- Evaluation of significant nexus with respect to flow and pollutant transport to downstream TNWs

Stream Flow Duration Assessment Methods

USEPA describes Stream flow Duration Assessment Methods as follows (EPA 2022).

Long-term hydrologic data to assess streamflow duration is often limited, especially for streams that do not flow year round. SDAMs are rapid field assessment methods that use hydrological, geomorphological, and/or biological indicators, observable in a single site visit, to classify streamflow duration as perennial, intermittent, or ephemeral at the reach scale. Regulators and water resource managers can use rapid, reach-scale methods to determine streamflow duration classifications (i.e., perennial, intermittent, ephemeral) and to help implement many federal, state and local programs. SDAMs have proven to be highly accurate; the Pacific Northwest SDAM, for example, correctly classified 84% of observations from a three-state study area and distinguished between ephemeral and intermittent/perennial streamflow with 94% accuracy.

There are several uses for SDAMs in federal and state water programs including:

- 1) implementation of state and local ordinances;
- 2) improved ecological assessment;
- 3) application of appropriate water quality standards;
- 4) prioritization of restoration and protection efforts;
- 5) ambient monitoring and understanding responses to a changing climate; and
- 6) assisting with timely and predictable jurisdictional determinations.

The general process of developing a SDAM begins with data collection of candidate indicators from study sites with known hydrology using consistent field protocols with appropriate QA/QC. Examples of candidate indicators include biological (aquatic invertebrates, algae, riparian vegetation, hydrophytic vegetation, iron-oxidizing bacteria, fish, amphibians, bryophytes), hydrological (soil moisture, hydric soils, wood jams), geomorphological (slope, channel width, sinuosity, entrenchment ratio, riffle-pool sequence, substrate sorting, sediment deposition), and GIS (climate, ecoregion, land cover, watershed, geology, and soils). Data are analyzed with machine learning techniques to build a “forest” of decision-trees to identify top candidate (predictor) indicators. Finally, the SDAM method (or model) is built with the results of the random-forest model while also considering factors such as field collection rapidity, repeatability, and robustness of top predictor indicators.

The USEPA and USACE are working collaboratively to develop robust SDAMs at appropriate regional scales nationwide and to identify and test existing and candidate indicators of streamflow duration assessment. This includes conducting validation studies that result in accurate, consistent, and defensible SDAMs and contribute to our understanding of intermittent and ephemeral streams. USEPA has already developed and published three regional SDAMs: Pacific Northwest, Western Mountains (beta version), and Arid West (beta version). Additional SDAMs will be completed for the Great Plains and eastern regions of the country by the end of 2022. The underlying datasets, models, and criteria used in each SDAM differ by region. A summary of each is provided in the sections below with a comparison in Table 3.

Table 3. Comparison of regional SDAMs developed by USEPA.

	Western Mountains (beta)	Arid West (beta)	Pacific Northwest
Types of indicators	Biological, geomorphological, and climatic	Biological	Biological and geomorphological
Single indicators	Fish	Fish Algal cover $\geq 10\%$	Fish Aquatic life stages of snakes or amphibians
Type of tool	Random forest model	Classification table (simplified from random forest model)	Decision tree (simplified from random forest model)
Stratification	Snow-influence	None	None
Classifications	Perennial, intermittent, ephemeral, and at least intermittent.	Perennial, intermittent, ephemeral, at least intermittent, and need more information.	Perennial, intermittent, ephemeral, and at least intermittent.
Aquatic invertebrate identification	Required at Family level	Required at Order level	Required at Family level
Hydrophytic plant identification	None	Required	Required
Field time required	Up to 2 hours	Up to 2 hours	Up to 2 hours

Streamflow Duration Assessment Method for the Pacific Northwest

The SDAM was developed for the Pacific Northwest in partnership between USEPA Region 10, USACE Portland District, and the Oregon Department of State Lands. It focused on low-order headwater streams that are on public lands. The Pacific Northwest SDAM was based on data collected at 178 sites in Oregon in 2009 and 2010 and at 86 sites in Idaho and Washington in 2010 and 2011. Data were collected in the wet spring season as well as the late summer dry season. Data were collected for 43 field indicators (geomorphology, hydrology, and biological) from 264 stream reaches totaling 528 observations (Nadeau 2015; Nadeau et al. 2015).

A machine learning technique was used to build a forest of decision trees to identify nine candidate indicators (Nadeau et al. 2015):

1. All macroinvertebrates (ordinal)
2. Perennial or intermittent macroinvertebrates (ordinal)
3. Presence of perennial macroinvertebrates
4. Sum of 2 & 3
5. Ephemeroptera abundance
6. Indicator status of most hydrophytic plant in streambed
7. Channel slope (%)
8. Streamer mosses or algal mats on streambed (ordinal)
9. Leaf litter or other debris accumulated in thalweg (ordinal)

The final constructed decision tree was selected because it had the highest agreement with direct hydrologic classifications (84.3% accuracy; 94.3% for at least intermittent) and relies on seven indicators, two of which are single indicators for fish and amphibians that strongly indicate at least intermittent streamflow when present, and five of which are included in the decision tree. The final decision tree with those five indicators is shown in Figure 7 below.

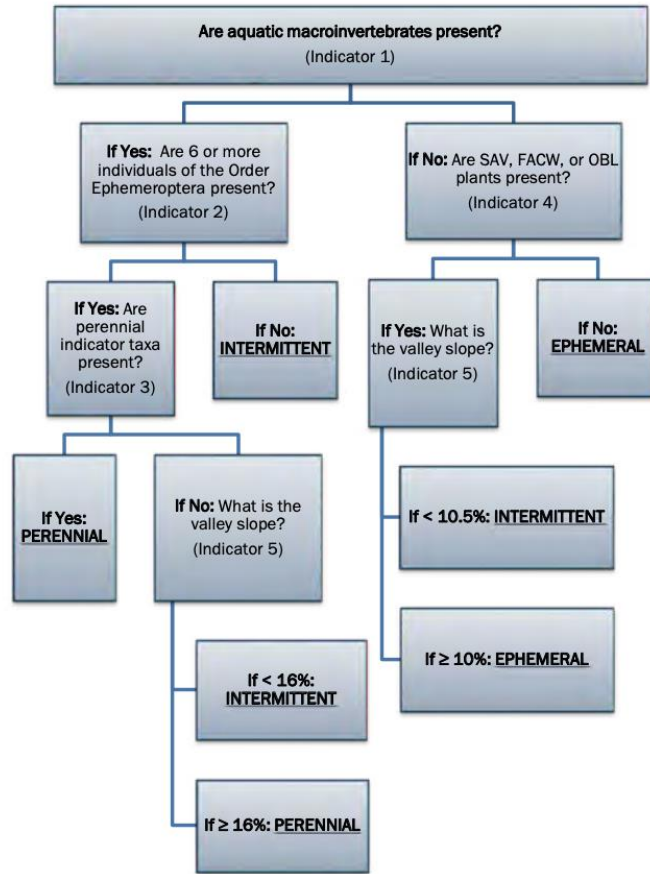


Figure 7. Pacific Northwest SDAM Decision tree for drawing conclusions from assessed indicators.

Streamflow Duration Assessment Method for the Arid West (beta version)

The SDAM developed for the Arid West is based on data collected at 89 sites across nine states between 2018 and 2019. Data were collected for 21 indicators on 30 ephemeral, 34 intermittent, and 25 perennial streams of known flow duration (Mazor et al. 2021a). Five biological indicators were found to best predict streamflow class:

1. Number of hydrophytic plant species (up to 5)
2. Number of aquatic macroinvertebrates
3. Presence of EPT taxa
4. Presence of algae
5. Presence of fish; % algal cover

The resulting beta model, shown in Figure 8 below, resulted in 81% accuracy for at least intermittent classification and 56% accuracy distinguishing all three classes. An additional 100 sites are being sampled per region in 2022 with special attention to states that were previously underrepresented (TX, MT, SD) with anticipated release of final methods in 2023.

1. Hydrophytic plant species	2. Aquatic invertebrates	3. EPT taxa	4. Algae	5. Single indicators • fish present • algae cover $\geq 10\%$	Classification
None	None	Absent	Absent	Absent	Ephemeral
				Present	At least intermittent
			Present	Absent	Need more information
				Present	At least intermittent
	Few (1-19)	Absent	Absent	Absent	Need more information
				Present	At least intermittent
			Present	Absent	Need more information
				Present	At least intermittent
		Present			At least intermittent
	Many (20+)	Absent	Absent	Absent	Need more information
				Present	At least intermittent
			Present	Absent	Need more information
				Present	At least intermittent
		Present			At least intermittent
Few (1-2)	None	Absent	Absent	Absent	Need more information
				Present	At least intermittent
			Present		At least intermittent
	Few (1-19)	Absent	Absent		Intermittent
		Present			At least intermittent
	Many (20+)	Absent	Absent		Intermittent
		Present	Absent		At least intermittent
Many (3+)	None	Absent	Absent	Absent	Need more information
				Present	At least intermittent
			Present		At least intermittent
	Few (1-19)	Absent			At least intermittent
		Present			Perennial
	Many (20+)	Absent			At least intermittent
		Present			Perennial

² Shading provided to enhance readability by increasing the contrast between neighboring cells; empty cells indicate the classification will not change with additional information however it is recommended that all five indicators be measured and recorded during every assessment.

Figure 8. Streamflow duration classifications for the Arid West based on key indicators (Source: Mazor et al. 2021a).

Streamflow Duration Assessment Method for Western Mountains (beta version)

The beta SDAM developed for the Western Mountains is based on data collected at 149 sites across eight states between 2019 and 2020. Data were collected for 21 indicators on 31 ephemeral, 66 intermittent, and 25 perennial streams of known flow duration (Mazor et al. 2021b). Data indicated a need to stratify the methods for this region by the degree of snow influence at the assessment reach. The indicators found to best predict streamflow class are

summarized in Table 5. The resulting predictive indicators, shown in Table 5 below, resulted in 89% accuracy for at least intermittent classification and 69% accuracy distinguishing all three classes. An additional 100 sites are being sampled per region in 2022 with special attention to states that were previously underrepresented (MT, NV, SD), with anticipated release of final methods in 2023. Whereas the other SDAMs have a decision tree or chart, obtaining a classification result for the Western Mountains regions requires a web application that runs a random forest model based on user inputs.

Table 5. Indicators of the beta SDAM for Western Mountains in snow-influenced and non-snow influenced areas.

Snow-influenced areas	Non-snow influenced areas
Aquatic invertebrates: • Total abundance • Abundance of perennial indicator families • Number of perennial indicator families	Aquatic invertebrates: • Abundance of mayflies • Number of perennial indicator families
Algal cover on the streambed	Algal cover on the streambed
Fish presence (as a single indicator)	Fish abundance (as a core indicator) and Fish presence (as a single indicator)
	Differences in vegetation
Bankfull channel width	Bankfull channel width
	Sinuosity
Climate • October precipitation	Climate • May precipitation • Annual maximum temperature

New Mexico's Hydrology Protocol for Surface Water Quality Management

The New Mexico Environment Department (NMED) has established a hydrology protocol to distinguish between ephemeral, intermittent and perennial streams and rivers using hydrologic, geomorphic, and biological indicators. NMED uses these determinations in the implementation of federal Clean Water Act programs and New Mexico's Water Quality Act including development of water quality standards, assessment of water quality, issuance of permits for discharges into surface waters, and development of TMDLs for impaired waters. The Hydrology Protocol is designed to help make hydrologic determinations to ensure that the appropriate protections (i.e., designated uses and water quality criteria) are applied to a particular stream or river. This is because New Mexico's water quality standards (WQS) set distinct protections for ephemeral, intermittent, and perennial waters (20.6.4.97 - 99 NMAC). New Mexico's WQS also identify many classified waters by their hydrology. For example, "perennial tributaries to" or "perennial reaches of" (20.6.4.101 - 899 NMAC).

The Hydrology Protocol (HP) is a qualitative field methodology that generates the scientific technical support to determine the hydrology of a stream or river. The protocol relies on hydrologic, geomorphic, and biological indicators of the persistence of water, and is organized into two levels of evaluations.

A Level 1 evaluation should provide enough information to give a clear indication of the hydrologic status of the stream. In the Level 1 evaluation, 14 different attributes are evaluated and assigned a numeric score using a four-tiered, weighted scale (strong, moderate, weak, or absent). Hydrologic indicators include water in the channel, riffle-pool sequences, hydric soils, evidence of sediment/debris transport, and seeps/springs. Geomorphic indicators include sinuosity, floodplain and channel dimensions, substrate particle size and sorting. Biological indicators include the presence or absence of fish, benthic macroinvertebrates, algae/periphyton, vegetation within/near the stream channel, and iron-oxidizing bacteria.

Level 2 evaluations rely on more focused, quantitative data collection efforts and may be used to make a final hydrologic determination if the Level 1 Evaluation is inconclusive (or to provide supporting documentation). Level 2 includes benthic macroinvertebrate and fish collections, as well as other presence/absence data.

Thresholds for scores derived through the hydrology protocol are used to determine whether a reach is ephemeral, intermittent, or perennial. The thresholds were developed using data collected in 2008 and 2009 at 57 sites with known hydrology (Table 6). Areas of overlap (i.e., gray zones) are assumed to be the “higher” stream determination, unless a Level 2 analysis is completed. EPA approved New Mexico’s Water Quality Management Plan (WQMP) (NMED 2020), which includes the Hydrology Protocol as an appendix, on December 23, 2011 for purposes of implementing the federal Clean Water Act.

Table 6. Score thresholds for the New Mexico Hydrology Protocol

Waterbody Type	Level 1 Total Score	Stream Determination
Ephemeral	Less than 9.0*	Stream is ephemeral
	≥ 9.0 and < 12.0	Stream is recognized as intermittent until further analysis
Intermittent	≥ 12.0 and ≤ 19.0	Stream is intermittent
	> 19.0 and ≤ 22.0	Stream is recognized as perennial until further analysis
Perennial	Greater than 22.0	Stream is perennial

** If macroinvertebrates and/or fish are present, then the stream is at least intermittent.*

Jurisdictional Evaluations in Arizona

The Arizona Department of Environmental Quality (ADEQ) applies a series of tools and processes to classify stream reaches for assessment and permitting under the Clean Water Act or a state Surface Water Protection Program. To date, Arizona has identified 1,561 unique reaches within the state and has used tools and processes to classify 1,266 as WOTUS, 92 as non-WOTUS, and 205 as inconclusive under the pre-2015 WOTUS definition. The non-WOTUS waters may be eligible for protection under the state Surface Water Protection Program.

The first tools employed by ADEQ is an evaluation of connectivity for the reach along the flow path using the USGS Raindrop Tool in StreamsStats along with the USGS National Elevation Dataset and/or FEMA 100-Year Flood Hazard Map. Next ADEQ reviews the flow regime of each reach along the flow path. Those waters that are perennial and flow into a TNW are WOTUS. Those that are disconnected from the TNW with no indication of connectivity are determined to be non-WOTUS. However, those waters that are intermittent, ephemeral or do not yet have a flow regime assigned are determined to be inconclusive until data shows either there is a significant nexus to a TNW or the reach is a relatively permanent water with connectivity to a TNW.

To determine the flow regime of reaches in Arizona, ADEQ applies a flow regime algorithm that assesses the quality of observational data by priority and assigns flow regimes based on a weight of evidence. Observational data types with higher accuracy receive greater weight. Observational data sources are then ranked based on scope with the greatest scope (the entire reach) ranking highest. Based on the underlying data and the ranking for accuracy and scope, a GIS-based algorithm uses a weight of evidence approach to assign a flow regime. If data quality thresholds are not attained, then the reach is assigned ‘Undetermined’; if there is no data for the reach, it is assigned ‘Null.’ ADEQ created a fact sheet available at azdeq.gov/flowregimes to explain how the algorithm works.

The most relevant data in the GIS algorithm is flow data directly available from USGS or other agencies. Through a review of published research, ADEQ determined a methodology for application of credible flow gauge data as an indicator for estimating intermittent or ephemeral flow regimes with breakpoints established by the percent of zero-flow days in a year (Huth et al., 2021). While this research does identify a breakpoint between intermittent and ephemeral reaches, it does not identify if a water is seasonally intermittent, which is required to determine if a water is relatively permanent. ADEQ is in the process of reviewing current scientific literature to understand seasonal intermittency in arid lands and is investigating if additional research is needed to determine thresholds.

ADEQ also uses a series of other tools to evaluate riparian vegetation, depth to groundwater, and snowpack to provide an estimate of flow regime. These tools received the 2022 National Association of Environmental Professionals Award for Best Available Innovative Technology.

The Riparian Vegetation Tool uses satellite imagery from the National Agriculture Imagery Program (NAIP) to evaluate the extent of riparian corridor vegetation (Spindler et al. 2022). The density of vegetation in riparian areas can be used to evaluate the probability that a reach is intermittent versus ephemeral as the presence of riparian or xeroriparian vegetation corridors in arid environments indicates the presence of shallow groundwater and an increased probability for intermittent flow in a surface water (Spindler et. al 2022; Nadeau & Megdal, 2012; Stromberg & Merritt, 2016; Manning et al., 2020; Mazor et al., 2021). ADEQ established a threshold of 50 percent or higher riparian vegetation corridor through NAIP imagery analysis to determine a potentially intermittent flow regime for a reach. This threshold was derived through a statistical evaluation of riparian vegetation cover in known intermittent reaches (Jones 2018) and reaches with an assigned flow regime of ephemeral (Spindler et al. 2022).

ADEQ also developed a Groundwater Tool to estimate probable intermittent or ephemeral flow regime based on knowledge of riparian vegetation rooting depths (Huth et al. 2022a). The approximate depth to groundwater is calculated by comparing groundwater elevations in well data from the Arizona Department of Water Resources to the elevation of the thalweg of the stream. ADEQ has established a threshold of 33 feet or less to classify the water as potentially intermittent.

In addition, ADEQ developed a Snowpack Tool (Huth et al. 2022b) to identify reaches that are likely to be in an area with sustained snowpack (greater than 30 days) and therefore have a higher probability of seasonal spring flow originating from snow melt (Svoma, 2011; Hunsaker et al., 2012). ADEQ selected a conservative value of 30 days for continuous snow on the ground as an assumption for seasonal snowpack in Arizona. ADEQ applies the Snowpack Tool only to reaches above 6,500 feet elevation to estimate an intermittent flow regime.

The Riparian Vegetation Tool, Groundwater Tool, and Snowpack tools are only used as indicators of flow regime for a reach until further verification work is completed. To assign a flow regime, ADEQ requires additional empirical data, including, but not limited to, flow gauge data, information from field visits, analysis of imagery (i.e. game cameras, satellite imagery, etc.), and/or results of a Streamflow Duration Assessment Methodology (SDAM) survey. Results of the tools can also assist ADEQ with prioritization of additional data gathering efforts (Spindler et al. 2022, Huth et al. 2022a, Huth et al. 2022b).

Additionally, ADEQ is in the process of developing additional analytical tools relevant to WOTUS including Arizona specific significant nexus guidance and is working to add additional data to the flow regime algorithm, such as the result of SDAM field surveys for the arid west, data from springs, historic water quality sampling reports, wet-dry mapping reports, game camera imagery, satellite imagery, and more.

Oregon forest management stream typing

Oregon has a broad *Waters of the State* Definition that includes all surface or groundwater including seeps and springs but excluding private waters unconnected to natural surface or groundwater (e.g. a lined rainwater reservoir). However, regulations for Waters of the State are not consistent across land uses, water types, and beneficial uses and are applied based, in part, on stream type.

The State of Oregon's Department of Forestry (ODF) determines stream type based on flow, beneficial uses, and geographic regions that form the basis of forestry regulations designed to protect streams on non-federal forested lands within the state. The classification of streams incorporates ecology and climate by differentiating streams west or east of the crest of the Cascade Mountains (wet side, dry side). Although all streams must meet water quality standards, there are generally more protections required for streams with aquatic life beneficial uses for sensitive cold-water fish such as salmon, steelhead, and bull trout (Type - SSBT). Other stream types include those protected for other game fish such as cutthroat trout (Type-F), domestic use without fish (Type-D), and non-fish and non-domestic uses (Type-N). Streams are also grouped based on size: large streams have an annual average flow greater than 10 cubic feet per second (cfs), medium streams have a flow of 2 -10 cfs, and small streams have a flow less than 2 cfs. Under Oregon statute, the seasonality of Type-N streams will also be considered in implementing stream protections with perennial streams having greater protections than seasonal streams that do not flow continuously

during the summer months. The precise mechanisms for delineating whether streams are perennial or intermittent is under development by ODEQ but may rely on USGS observations and modeling.

Separately, the Oregon Department of Agriculture (ODA) regulates stream protections in Agricultural Water Quality Management Areas, typically a HUC8 subbasin or collection of ecologically similar subbasins. Protections are a combination of regulatory requirements and voluntary plans that include restoration. ODA and ODF both coordinate with Oregon Department of Environmental Quality to implement water quality standards and total maximum daily loads when nonpoint sources are a source of water pollution.

Conceptual Approach to Estimate Flow Duration at Regional Scales (Wyoming DEQ)

The Wyoming Department of Environmental Quality (WDEQ) is in the early phases of developing a tool for hydrologic evaluations in a WOTUS context (significant nexus) based on flow duration curve (FDC) methods. A conceptual outline of the approach is below and will be further developed in the future. The method aims to derive flow duration statistics using mean daily flow or annual flow. Flow duration curve methods define both duration of a given flow and the type of flow regime (Hargett pers comm 2022).

The FDC method would start with an *a priori* selection of homogenous hydrologic regions using other tools (e.g., combined HUC6 or HUC8 watersheds (USGS and NRCS 2013), level IV ecoregions, NHD+V2, etc.). Flow duration curves would then be developed, preferably with annual flow data, for all gauged¹² sites within each hydrologic region. *USGS gauges; state-operated gauges; state, federal, local and private stage recorders; university collected flow data; Annual FDCs are preferred because they can be used to evaluate inter-annual variability, and recurrence intervals can be developed. Abnormally wet or dry periods should have less weight. In addition, annual FDCs are representative of a median hypothetical year and not tied to a period of record.

The FDCs would be used to define hydrologic metrics for classification of the three flow regimes (ephemeral, intermittent, perennial) within each hydrologic region (e.g., % of year with flow). As an example, the percent of the year with flow might be used to define ephemeral (<25%), intermittent (25-80%), and perennial (>80%) waters. Physiographic and climatic variables (e.g., drainage area, precipitation, evaporation, channel slope) would be used to develop dimensionless empirical regression models that predict each of the three flow regimes within a hydrologic region. This could be done with Bayesian classification methods (random forest, regression trees) to determine the most important variables in prediction of a flow regime class. Next, the dimensionless models could be applied to ungauged sites (catchments) within the hydrologic region to determine flow regime.

This method establishes regional quantitative definitions of ephemeral, intermittent, and perennial with respect to WOTUS rule language and uses only hydrologic-based variables (gauged sites, geomorphic, climatic, and physiographic). It provides a prediction of each hydrologic class for a catchment with statistical significance and levels of confidence. Numeric thresholds could be developed using statistical models and confirmed with ground-truthing. Once developed, these methods could be applied using a desktop application.

WDEQ recommends that these methods only apply to lotic systems at regional scales smaller than those used by USEPA's SDAM to improve accuracy. This could be integrated into a broader SDAM application.

Summary

Most of the tools described in this section are used to differentiate perennial, intermittent, and ephemeral waters. They all rely on regionally relevant biological, geomorphic, climatic, and/or hydrologic indicators. The differences in specific indicators and factors are summarized in Table 7. The methods developed for New Mexico are the oldest of the tools summarized and have been used as the basis for other state tools. These tools could likely be adapted at least for the four corners region of the country.

Different factors and indicators of greatest importance have been identified in the tools used in different areas of the west, highlighting the need to have multiple tools or at least regional versions of tools available to implement any

¹² USGS gauges; state-operated gauges; state, federal, local and private stage recorders; university collected flow data.

WOTUS definition. However, if any of the tools were to be used to make jurisdictional determinations, the methods and significance thresholds would need to be further evaluated by states that were not involved in their development using supplemental datasets.

Table 7. Summary of analytical tools used by states and EPA in evaluating flow regime and stream type.

Analytical Tool	Primary Purpose	Hydrologic Classification Categories/Statistics	Indicators and factors used in method	Models and analytical methods
SDAM Pacific NW	1) implementation of state and local ordinances; 2) improved ecological assessment; 3) application of appropriate water quality standards; 4) prioritization of restoration and protection efforts; 5) ambient monitoring and understanding responses to a changing climate; and 6) assisting with timely and predictable jurisdictional determinations.	Perennial, intermittent, ephemeral, and at least intermittent	Presence of any aquatic macroinvertebrates (ordinal) Presence of perennial macroinvertebrates Presence of 6 or more ephemeroptera Indicator status of most hydrophytic plant in streambed Channel slope (%)	Decision tree derived from random forest model
SDAM Arid West (beta)		Perennial, intermittent, ephemeral, at least intermittent, and need more information.	Hydrophytic plant species Aquatic invertebrates EPT taxa Algae Single indicators present (fish/%algae cover)	Classification table derived from random forest model
SDAM Western Mountains, snow influenced (beta)		Perennial, intermittent, ephemeral, and at least intermittent	Aquatic invertebrates Algae cover on the streambed Fish presence Bankfull channel width Climate	Random forest model available through a web application.
SDAM Western Mountains, non-snow influenced (beta)		Perennial, intermittent, ephemeral, and at least intermittent	Aquatic invertebrates Algae cover on the streambed Fish presence or abundance Vegetation differences Bankfull channel width Sinuosity Climate	Random forest model available through a web application.
New Mexico Hydrology Protocol	Implementation of federal Clean Water Act programs and New Mexico's Water Quality Act including development of water quality standards, assessment of water quality, issuance of permits for discharges into surface waters, and development of TMDLs for impaired waters	Ephemeral, intermittent, perennial	Hydrologic indicators • Water in the channel • Riffle-pool sequences • Hydric soils • Evidence of sediment/debris transport • Seeps/springs Geomorphic indicators • Sinuosity • Floodplain • Channel dimensions • Substrate particle size and sorting Biological indicators • Presence or absence of fish • Presence or absence of benthic macroinvertebrates • Presence or absence of algae/periphyton • Presence or absence of vegetation within/near the stream channel • Presence or absence of iron-oxidizing bacteria.	Unitless score derived from testing the model on known intermittent and ephemeral waters. Data from perennial, intermittent, and ephemeral streams were assessed using analysis of variance (ANOVA) to verify which field indicators are useful in differentiating hydrologic systems in New Mexico by determining if the variation between groups was statistically significant ($p < 0.01$ or $p < 0.005$).
Jurisdictional Evaluations in Arizona	Clean Water Act program jurisdiction: 305(b) Biannual Assessment; 303(d) Impaired Waters; 402 Permitting State surface water program jurisdiction.	Perennial, intermittent, ephemeral, Undetermined, Null	Hydrology • Average number of precipitation events producing flow per year for intermittency • Percent days with zero flow for ephemeral status Riparian vegetation • Threshold of >50% riparian vegetation cover to support intermittency Groundwater • Thresholds of <33 feet below surface to support intermittency	Hydrology: Weight of evidence algorithm based on prioritized data sources (e.g. observation data types with higher accuracy receive greater weight). Supplemented by evaluations of riparian

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			Snowpack Threshold of 30 days of snow cover to support intermittency above 6,500 feet elevation	vegetation and groundwater.
Oregon Stream Typing	Basis of forestry regulations designed to protect streams on non-federal forested lands within the state	Type – SSBT (aquatic life beneficial uses for sensitive cold-water fish), Type-F (protected for other game fish), Type-D (domestic use without fish), and Type-N (non-fish and non-domestic uses).	Aquatic life and domestic beneficial use classes. Stratified based on stream size (small <2cfs, medium, and large >10cfs).	Categorical stream types.
Wyoming Flow Duration Curve Approach	Jurisdictional determinations; significant nexus	Perennial, intermittent, ephemeral	Hydrologic (annual flow at gauged sites) Geomorphic (channel slope) Climate (precipitation, evaporation) Physiographic (drainage area)	Dimensionless empirical regression models derived using Bayesian classification methods (random forest, regression trees)

Integrating Regional Classification Schemes and Analytical Tools in a WOTUS context

Regional Frameworks

Regions used for WOTUS implementation need to capture the most important attributes and differences across regions while ensuring that the regional scheme can be practically implemented by both federal regulatory agencies and states. Therefore, a regional classification scheme that results in approximately 10 regions across the country would strike the best balance. Of course, the tools applied within each region should reflect more site-specific and subregional landscape, climate, and hydrologic characteristics.

The Watershed Boundary Dataset represents one approach to regionalizing the country for WOTUS implementation based on hydrologic drainage patterns. The HUC-2 data layer of 22 drainages is most likely the only realistic regional scheme driven solely by hydrology. However, basing regional classification solely on hydrology will merge areas with very different elevation, precipitation, and ecological patterns. For example, high mountain streams and valley rivers are grouped together based on watershed boundary even though the ecology and geomorphology of these waters are quite different. Using this approach to divide the country may not provide sufficient opportunity to use tools that are tailored for different landscapes.

Ecoregions offer a classification scheme for the nation that incorporates many explanatory factors for surface water differences in different regions. Ephemeral features differ with respect to prevalence, significance, and hydrology based on geology, elevation, and precipitation, all of which are captured in the ecoregion classification scheme. The Level I classification with 13 regions is the most practical in terms of regional implementation of a WOTUS rule. Of course, such a classification scheme would encompass significant variability that would need to be addressed using regional versions of models or analytical tools.

Alternatively, the ecoregion concept may be best used as a supporting tool to explain why some hydrologic features behave differently in one area of the country than another. It may be possible to combine elements of the NHD and WBD (see section above) with ecoregions to geographically delineate areas of the country that are dominated by ephemeral waters, particularly in the southwest. This may lend itself to more precise definitions of ephemeral features and their potential significance on downstream TNWs.

The experience of the National Research Council and the USACE in exploring regional classifications schemes and developing regional wetland delineation guidance is directly relevant to regionalizing the current WOTUS rule. Indeed, the regionalization of wetland delineation practices by the USACE demonstrates the practicality and policy soundness of such an approach. Adopting the USACE wetland delineation regions (10 regions) for use in a regionalized WOTUS rule would provide clarity and simplicity that are not offered by the other classification schemes. Further, the USACE wetland delineation regions build on the NRCS LRR regionalization, which in turn builds on the datasets and classification used for NHD and ecoregion classifications.

Using the regions established for EPA's Streamflow Assessment Duration Methods is also a practical approach that incorporates many of the regional considerations of importance to states. There are currently envisioned to be only 5 SDAM regions. However, the regions established for SDAMs are a blend of administrative boundaries (Pacific Northwest aligns with the state boundaries for EPA Region 10) and ecological boundaries (aligning with Level I Ecoregions for Western Mountains and the Arid West). Further, the regional boundaries for the Great Plains, northeast, and southeastern regions of the country have not yet been finalized, nor is it clear how Alaska and Hawaii would be integrated into the scheme.

There could be benefits to USACE and USEPA agreeing on a regional classification scheme that is applicable to all waters of the US rather than having separate, overlapping but different, schemes for wetlands and streams.

Applicability of Analytical Tools

A variety of analytical tools exist that could prove useful in implementing a WOTUS rule with regional considerations. The utility of the tools largely depends upon how the WOTUS rule is structured and which hydrologic “tests” are included.

Connectivity

The National Hydrography Dataset represents the best tool to evaluate connectivity between surface waters across the country. The NHDplus data product combines the existing National Hydrography Dataset and Watershed Boundary Dataset with a new 3D Hydrography Program that will be used to create a 3D National Topography Model. NHDplus will provide new tools to connect hydrologic attributes to landscape features. These tools could contribute to the development of nationally consistent modeling approaches, with regional specificity, for WOTUS implementation.

Flow Regime

Multiple tools are available to differentiate perennial, intermittent, and ephemeral waters, including the regional Stream Flow Duration Assessment methods developed by USEPA, the flow regime tools implemented by Arizona DEQ, the New Mexico Environment Department Hydrology Protocol, and the approach using flow duration curves proposed by Wyoming DEQ. Each of these tools could be adapted to different regions of the country through the establishment of the most regionally relevant criteria and their thresholds. These categorical methods would be especially useful in evaluating a “relatively permanent” test. Obviously, the tools do not answer the question of which categories of waters should be considered WOTUS, a topic of significant debate across the country.

There is also an opportunity to develop a tiered method that would rely on the nationally available stream layer in the National Hydrography Dataset along with the USACE list of Section 10 waters to define waters that are clearly perennial and/or TNW, while utilizing the other methods to define waters with less clear flow regimes. A tiered approach could reduce resource strains on regulatory agencies.

Significant Nexus

If the USEPA and USACE elect to include some, but not all, intermittent and/or ephemeral waters into the WOTUS definition, there would be value in tools that could differentiate within these broad categories to evaluate the degree of intermittency or ephemerality as well as the significance of each water to a downstream TNW. For example, there could be differentiation with the category of ephemeral waters based on flow frequency, e.g., waters that only flow once a decade could be categorized differently from those that flow annually. The tools described and evaluated in this technical report do not provide for evaluation of a continuum of ephemeral and intermittent waters. Rather, they all result in a categorical assignment of a stream to one of the three main categories. However, the methods outlined in both the New Mexico and Arizona tools create a scoring system that could be adapted for use in a more continuous context. Additional thresholds for criteria could be used to evaluate the degree of ephemerality or intermittency. Further, the methods proposed by Wyoming and used by Oregon for stream typing also provide some ability to develop a continuum of outputs rather than only using categorical definitions. The strictly categorical framework of the Streamflow Duration Assessment Method approach is a significant limitation of this tool for this purpose.

It could also be helpful to differentiate waters based on the probability of contributing “significant” flow or pollution to a TNW. One approach to evaluating significance would be existing pollutant transport and hydrologic models paired with thresholds for significance. The most appropriate modeling tools may vary from region to region as different models have different strengths with respect to simulating certain hydrologic processes. For example, areas with primarily snow-influenced hydrology may require different modeling tools than areas dominated by flashy desert hydrology. Further, the thresholds established in making determinations regarding significance will need to reflect the beneficial uses and water quality standards of the downstream TNWs, which are generally specific to states and can differ significantly across the country. Although there are numerous modeling tools available to evaluate hydrology and pollutant transport, they can be very data and time intensive to implement.

Watershed Size

The USEPA and USACE may also consider incorporating thresholds for watershed size into the differentiation of especially ephemeral waters within WOTUS. The nature of hydrology is such that nearly any area of land could be considered an ephemeral water at some scale, though clearly the entire landscape should not be considered a WOTUS. NHD products may be useful in this evaluation as USGS has established watershed size thresholds for some HUC levels. The smaller drainage boundaries developed for the Watershed Boundary Dataset include size thresholds that are applied uniformly across the country. Whereas HUC 10 drainages have a threshold of 250,000 acres and HUC 12 drainages have a threshold of 40,000 acres, no size thresholds have been determined yet for HUC 14 or HUC 16 drainages. Different drainage size thresholds for different regions could be explored as one element of determining significance within a WOTUS context.

Mapping WOTUS

Regardless of how WOTUS is defined, there has long been a need for a national mapping structure that provides clarity to regulators and the regulated community with respect to jurisdiction. Any new tools developed for use in implementing WOTUS should incorporate a spatial model or algorithm that can be integrated into existing GIS applications.

References

- ADEQ. 2022. *Jurisdictional Evaluations – Focus on Significant Nexus*. Whitepaper.
- ADEQ. 2022. *Environmental, social, and economic cost/benefit analysis*. Whitepaper.
- Austin, M.E. 1965. *Land Resource Regions and Major Land Resource Areas of the United States*. SCS-USDA, Agriculture Handbook #296. U.S. Gov. Print. Office, Washington, DC.
- Hunsaker, C.T., Whitaker, T.W. and Bales, R.C., 2012. Snowmelt runoff and water yield along elevation and temperature gradients in California's Southern Sierra Nevada 1. *Journal of the American Water Resources Association*. 48(4), pp.667-678.
- Huth, H., Spindler, P., Smart, M., Pace, M., and Jordan, E. 2021. *Application of flow gauge data utilizing a USGS approach to identify ephemeral and intermittent flow regimes in Arizona*. ADEQ White Paper.
- Huth, H., Pace, M., Spindler, P., Smart, M., and Jordan, E. January 2022. *Analysis of snowpack for estimating flow regimes in Arizona*, ADEQ White Paper.
- Huth, H., Spindler, P., Smart, M., and Jordan, E. January 2022. *Analysis of depth to groundwater for estimating flow regimes in Arizona*, ADEQ White Paper.
- Manning, A., Julian, J.P. and Doyle, M.W., 2020. Riparian vegetation as an indicator of stream channel presence and connectivity in arid environments. *Journal of Arid Environments*, 178, p.104167.
- Mazor, R.D., Topping, B., Nadeau, T.-L., Fritz, K.M., Kelso, J., Harrington, R., Beck, W., McCune, K., Lowman, H., Allen, A., Leidy, R., Robb, J.T., and David, G.C.L. 2021a. *User Manual for a Beta Streamflow Duration Assessment Method for the Arid West of the United States*. Version 1.0. Document No. EPA800-5-21001
- Mazor, R.D., Topping, B., Nadeau, T.-L., Fritz, K.M., Kelso, J., Harrington, R., Beck, W., McCune, K., Allen, A., Leidy, R., Robb, J.T., David, G.C.L., and Tanner, L. 2021b. *User Manual for a Beta Streamflow Duration Assessment Method for the Western Mountains of the United States*. Version 1.0. Document No. EPA840-B-21008.
- McMahon, G., S.M. Gregonis, S.W. Waltman, J.M. Omernik, T.D. Thorson, J.A. Freeouf, A.H. Rorick, and J.E. Keys. 2001. Developing a spatial framework of common ecological regions for the conterminous United States. *Environmental Management* 28(3):293-316.
- Nadeau, T. et al. 2015. Validation of rapid assessment methods to determine streamflow duration classes in the Pacific Northwest, USA. *Environmental Management*. 1/2015.
- National Research Council, 1995. *Wetlands: Characteristics and boundaries*. National Academies Press.
- Nadeau, J., Megdal, S.B. 2012. *Arizona Environmental water needs assessment report*. University of Arizona Water Resources Research Center. https://wrrc.arizona.edu/sites/wrrc.arizona.edu/files/Assessment_9-27-2012_indesign%20rev3bleed_0.pdf.
- Nadeau, Tracie-Lynn. 2015. *Streamflow Duration Assessment Method for the Pacific Northwest*. EPA 910-K-14-001, U.S. Environmental Protection Agency, Region 10, Seattle, WA
- Omernik, J.M. 1987. Ecoregions of the conterminous United States. *Annals of the Association of American geographers*, 77(1), pp.118-125.
- Omernik, J. 1995. *Ecoregions: a framework for environmental management*. Pages in Davis, W., and T. Simon, editors. Biological assessment and criteria: tools for water resource planning and management. DOI: 10.13140/RG.2.1.4916.2726

- Omernik, J.M. and Griffith, G.E. 2014. Ecoregions of the conterminous United States: evolution of a hierarchical spatial framework. *Environmental management*, 54(6), pp.1249-1266.
- Stromberg, J.C. and Merritt, D.M. 2016. Riparian plant guilds of ephemeral, intermittent and perennial rivers. *Freshwater Biology*, 61(8), pp.1259-1275.
- Spindler, P., Smart, M., and Jordan, E. January 2022. *Analysis of percent riparian vegetation for estimating flow regimes in Arizona*, ADEQ White Paper.
- State of New Mexico. 2020. *Statewide water quality management plan and continuing planning process*. New Mexico Water Quality Control Commission. Approved October 23, 2020.
- Svoma, B.M. 2011. Trends in snow level elevation in the mountains of central Arizona. *International journal of climatology*, 31(1), pp.87-94.
- United States Department of Agriculture, Natural Resources Conservation Service. 2022. *Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin*. U.S. Department of Agriculture, Agriculture Handbook 296.
- U.S. Geological Survey and U.S. Department of Agriculture, Natural Resources Conservation Service. 2013. *Federal Standards and Procedures for the National Watershed Boundary Dataset (WBD) (4 ed.)*. U.S. Geological Survey Techniques and Methods 11-A3, 63 p.
- USEPA 2022. *Basic Information about SDAMs*. <https://www.epa.gov/streamflow-duration-assessment/learn-about-streamflow-duration-assessment-methods-sdams>. Accessed September 2022.
- Wakeley, J.S. 2002. *Developing a "regionalized" version of the Corps of Engineers Wetlands Delineation Manual: issues and recommendations*. USACE Technical Report TR-02-20.
- Wohl et al. 2016. *Synthesizing the scientific foundation for Ordinary High Water Mark delineation in fluvial systems*. USACE.

Tab N – Water Rights Speculation in Colorado

Work Group Submits Anti-Speculation Law Report to Water Resources Review Committee

<https://dnr.colorado.gov/press-release/work-group-submits-anti-speculation-law-report-to-water-resources-review-committee>

On behalf of the SB20-048 Work Group, the Department of Natural Resources delivered the Work Group's Anti-Speculation Law Report to the members of the Water Resources Review Committee today. The report, titled *SB 20-048 - Report of the Work Group to Explore Ways to Strengthen Current Water Anti-Speculation Law*, is the culmination of the Work Group's efforts to fulfill the provisions of SB20-048. As directed by the General Assembly, Dan Gibbs, the Executive Director of the Department of Natural Resources, convened the Work Group to explore ways to strengthen current water anti-speculation law. The Work Group included a diverse collection of Coloradans from the legal, nonprofit, municipal, and agricultural communities and from a variety of water basins throughout Colorado, and was co-chaired by Scott Steinbrecher, Assistant Deputy Attorney General and Kevin Rein, State Engineer as members.

The Work Group Co-chairs provided the following statement on the release of the final report:

"The quality and comprehensive nature of the report is the direct result of the extraordinary effort of the Work Group, which was composed of members with different backgrounds, experiences, and perspectives. The diversity in perspectives and each member's willingness to contribute based on their experience and unique background was what led to a final report that will be informative to the Water Resources Review Committee, giving them the information needed in order to decide whether to make changes to Colorado's body of anti-speculation law.

[A copy of the report can be found here.](#)

SB 20-048 - Report of the Work Group to Explore Ways to Strengthen Current Water Anti-Speculation Law

August 13, 2021

**Submitted to the Interim Water Resources Review Committee of the
Colorado General Assembly as required by Section 37-98-103, C.R.S.**



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Acknowledgements

This report was only possible because of the extraordinary efforts of the Work Group Members, each of whom volunteered countless hours to this important task. Their dedication was matched only by the diversity of their experience and perspectives. Each member's contribution was critical in the effort to develop a comprehensive final report, just as each citizen's contribution is critical to the success of our State.

1. Executive Summary

This *Senate Bill 20-048 Report of the Work Group to Explore Ways to Strengthen Current Water Anti-Speculation Law* (“Report”) was developed by the SB 20-048 Work Group and is submitted to the Water Resources Review Committee (“Committee”) in fulfillment of the provisions of SB 20-048. In SB 20-048 the General Assembly directed the Executive Director of the Department of Natural Resources (“Executive Director”) to convene a Work Group to explore ways to strengthen current water anti-speculation law.¹ SB 20-048 directed the Work Group to submit a written report regarding any recommended changes to the Committee by August 15, 2021.²

The Work Group has 22 members, including people affiliated with the agricultural community, environmental and recreational interests, and municipal water providers, as well as attorneys with a variety of backgrounds in water law. In addition, the Work Group includes members of the State Engineer’s Office, Colorado Water Conservation Board, Attorney General’s Office, and the Judicial Department. Work Group members were invited to apply their unique expertise to this effort with no expectation that they participate on behalf of a particular entity. The composition of the Work Group embodies the Executive Director’s objective of creating a Work Group with diverse interests and perspectives.

Through its work, the Work Group found it important to distinguish two different types of speculation: Traditional Water Speculation and Investment Water Speculation, both of which are later defined in the Report.³ The distinction is important. The Work Group understood that, at least in part, SB 20-048 grew out of concerns by Colorado water users that businesses, including some outside of Colorado, were appropriating or purchasing water rights with the primary motivation of profiting from a later transaction such as sale, lease, or payment for non-diversion of those rights - even if they have a current plan to beneficially use the water rights. Some people perceived those businesses to be more concerned with generating a profit based on changes in the market value of water rights than with using the water, and hence described those purchases as “speculative.” That terminology could be confusing because “speculation” is also a term of art in Colorado water law. Speculation as prohibited under existing law is generally subject to review by water courts only when a water right is appropriated, changed, or a claim for diligence is made for a conditional water right. Conveyances or purchases of water rights are not normally subject to review by the courts. That type of speculation that is prohibited under existing law essentially refers to the concept of trying to secure the right to use water but without a specific plan and intent to put the water to beneficial use. Colorado’s legal definition of “speculation” thus generally does not expressly cover the sorts of appropriations and purchases of water rights that provided the impetus for SB 20-048. This Report refers to activity within Colorado’s existing legal definition of speculation as “Traditional Water Speculation.” Speculation defined relative to profit as primary motivation is referred to as “Investment Water Speculation.” Section 4 of this Report contains more detailed definitions of both terms.

¹ C.R.S. § 37-98-103(8)(a).

² C.R.S. § 37-98-103(8)(b).

³ Full definitions are provided in Section 4 of this report.

The legal prohibition against Traditional Water Speculation is founded on the concept that the waters of our natural streams belong to the people and should be available to those with actual needs. A corollary is that water should not be hoarded by those without legitimate needs. These ideas are embedded in Colorado's Constitution. For example, Section 5 of Article XVI says:

The water of every natural stream, not heretofore appropriated, within the state of Colorado, is hereby declared to be the property of the public, and the same is dedicated to the use of the people of the state, subject to appropriation as hereinafter provided. (emphasis added)

and Section 6 of Article XVI declares:

The right to divert the unappropriated waters of any natural stream to beneficial uses shall never be denied. (emphasis added)

The legal foundations of Traditional Water Speculation are further detailed in Section 3.a of the Report: Factual and Historical Background of Colorado's Anti-Speculation Doctrine ("Legal Background"). The Legal Background describes existing tools to prevent Traditional Water Speculation. The Legal Background also states that water right conveyances without a change of water right are unlikely to be reviewed for Investment Water Speculation using existing tools.

Sections 4, 5, and 6 move from analysis of existing law and policy to more forward-looking analysis. They are designed to be understood separately from Section 3, although the legal and factual detail in Section 3 helps inform the analysis throughout.

In order to formulate a set of concepts for addressing speculation, the Work Group wanted to first understand the risks associated with Traditional and Investment Water Speculation and the potential negative outcomes that might result from either. Section 4 describes those risks and negative outcomes. Some of those outcomes are not unique to Traditional or Investment Water Speculation and could occur under various water right transactions. Through its discussion of these risks and outcomes, the Work Group identified common values that were shared among its members:

- Coloradans value water for its beneficial use. Water should not be traded as a commodity for profit.
- Coloradans value irrigated lands, safe and reliable drinking water, and the environmental, recreational, and community benefits derived from our water resources.
- Coloradans value property rights in the beneficial use of water and the protection of these property rights.

Having identified risks and negative outcomes, the Work Group then brainstormed potential concepts to address them. Section 5 includes all of the concepts that the Work Group evaluated from the brainstorming effort and details the pros and cons of each concept. Finally, in Section 6, the Work Group presents a select group of concepts

for the Committee's consideration. Each concept presented in Section 6 meets the criteria that the Work Group understands were intended by the General Assembly in SB 20-048: (1) it is a change in law and (2) it has the potential to effectively reduce Investment Water Speculation on a large scale, rather than just in certain limited situations.

Due in part to the drawbacks that the Work Group identified for each of the brainstormed concepts in Section 5, and a lack of consensus, the Work Group does not recommend any of the concepts for implementation. Nevertheless, as a collective body, the Work Group believes it has a responsibility to present concepts to the Committee for consideration, as long as the concepts meet the two criteria above. That will allow the Committee to consider the concepts, including their benefits and drawbacks, and determine whether to further pursue a concept. The Work Group recommends that the General Assembly gather additional feedback from multiple and diverse stakeholders within Colorado for any change in law considered.

The following eight concepts that meet the statutory criteria are described in greater detail, with a focus on the potential drawbacks, in Section 6.

- Concept E: Prohibit or penalize compensated non-diversion.

The receipt of payment for non-diversion would be made illegal or penalized, unless that payment occurs pursuant to an exception allowed by law. Potential penalties for receiving payment for non-diversion include abandonment of the water right. The primary focus of this concept would be to address speculation near the state line.

- Concept G: Fund and/or create a right of first refusal for the purchase of water rights for long-term irrigation use for public benefit.

This concept would provide funds for a public entity to purchase irrigation rights to keep those rights in irrigation use. Alternatively or in combination, the state or other entities would be granted a right of first refusal to purchase irrigation water rights before those rights can be sold to an Investment Water Speculator.

- Concept H: Eliminate or reduce the agricultural tax benefit for lands from which water is removed.

This concept would reduce the benefit for lands converted from irrigated agriculture to non-irrigated agriculture land use types.

- Concept I: Unless irrigated land is going to be changed to a new land use, require water to be tied to the land

This concept would impose stringent limits on when water rights currently used for irrigation use can be changed to other uses. To be effective in reducing Investment Water Speculation, the concept would need to be applied to a broad swath of lands and water rights, as otherwise the concept might simply increase speculative pressure on water rights for which changes of use are permitted.

- Concept J: Create a statewide process to identify and prohibit Investment Water Speculation.

This concept would create a statewide process through the water courts, a state agency, or another government body by which water rights purchases would be reviewed for speculative intent and blocked if speculative intent is found.

- Concept K: Encourage local governments to police Investment Water Speculation through their 1041 powers.

Counties already have some powers to regulate water projects under 1041 permitting projects. This concept would significantly expand the reach and usage of these powers by modifying the statutory language governing 1041 powers to explicitly cover review of water rights sales for speculative intent and providing state funding to counties to develop and implement 1041 regulations under the new designation.

- Concept L: Tax the profit derived from sale or lease of water rights previously purchased for Investment Water Speculation purposes.

This concept is similar to Concept J and would require a similar process to review the intent of a water right purchase. However, instead of outright preventing transactions identified as Investment Water Speculation, this Concept would merely disincentivize the transactions by imposing a tax. The tax would apply to all subsequent payments to the purchasing entity involving the water right, at a rate that would make Investment Water Speculation less attractive.

- Concept P: Establish maximum rate of water right price increase and impose higher taxes when the rate is exceeded.

This concept would establish a water right price increase rate, above which a high tax rate would need to be paid on water right transactions.

Common drawbacks include a high cost to implement the concept or impacts to the time and cost of water transactions for all water users, even those who are not speculative investors. Further, the Work Group recognizes that concepts that reduce the sale price of water rights, and therefore, their value as property, present a risk to the current owners of irrigation water rights.

The Committee should be aware that there are several concepts discussed in Section 5 that do not meet the two criteria listed above, but might otherwise be beneficial to Colorado and, therefore, may be worthy of consideration by the Committee and the Colorado water community in other contexts.

Tab O – Watershed Restoration Project Funding and Water Rights

**Watershed Restoration & Water Rights:
An opportunity for collaboration between States and Federal Agencies**

Caroline Nash, PhD Principal Hydrologist, CK Blueshift LLC

Paula Cutillo, PhD Senior Water Resources Specialist, Bureau of Land Management Headquarters

The unprecedented funding made available through the Bipartisan Infrastructure Investment and Jobs Act and Inflation Reduction Act has created new possibilities for the pace and scale at which restoration projects focused on increasing drought, flood, and wildfire resilience can be implemented. Many federal agencies have new priorities, guidances, and memos to support these efforts. The Bureau of Land Management has prioritized restoring degraded aquatic ecosystems on its managed lands. The Bureau of Reclamation has expanded its definition of water storage to include natural water storage, and has released a new WaterSMART program, Environmental Water Resources Program, to support such projects. The Army Corps of Engineers has issued internal memos guiding regional offices to support actions to increase drought resilience. Much of this funding and attention is centered on using process-based techniques (e.g., beaver dam analogs) to restore wet meadows and valley floors.

However, the implementation of such restoration projects on public and private lands throughout the Western States has created some controversy with regards to their potential impacts to downstream water availability and challenges associated with navigating the various permitting requirements necessary for their implementation. Specifically, there are several outstanding questions related to how these emerging restoration priorities and projects intersect with existing state authorities, plans, and administration around water rights. States like Idaho and Utah have already issued guidances in response to increasing project requests, while other states, like Wyoming and Colorado, are considering the most appropriate path forward.

The Western States Water Council is uniquely well positioned to bring together state and federal water managers and regulators to share knowledge and collaboratively develop optimal solutions to implement aquatic ecosystem restoration, deploy federal funding efficiently throughout the Western U.S., and ensure all parties can continue to serve their constituents and uphold their statutory obligations in ways that represent each individual state's priorities.

Tab P – Legislation and Litigation Update

**Legislation Update
200th WSWC Meeting
Sulphur, Oklahoma**

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 117th 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

Bill Number H.R. 8901 Bill Title No title Passed (S/H)	Date Introduced 09/19/22 Assigned Committee(s) Armed Services Hearing(s)	WSWC Keywords Congress.gov Link	Summary of Bill Directs the DOD to report on the provision of water alternatives to communities affected by PFAS contamination.
Bill Sponsor Slotkin, Elissa [Rep.-D-MI-8]	Co-sponsors		
Bill Number S. 4870 Bill Title No title Passed (S/H)	Date Introduced 09/15/22 Assigned Committee(s) Indian Affairs Hearing(s)	WSWC Keywords Congress.gov Link	Summary of Bill A bill to approve the settlement of the water rights claims of the Tule River Tribe
Bill Sponsor Padilla, Alex [Sen.-D-CA]	Co-sponsors		
Bill Number S. 4815 Bill Title Simplify Timelines and Assure Regulatory Transparency (START) Act Passed (S/H)	Date Introduced 09/12/22 Assigned Committee(s) Environment and Public Works Hearing(s)	WSWC Keywords Congress.gov Link	Summary of Bill The bill would codify various rules promulgated under the Trump administration, including NEPA procedures, WOTUS definitions, the Section 401 Certification Rule, Corps rules on Nationwide Permits, extending NPDES permits to ten years, expediting permitting and review processes and the use of categorical exclusions, deferring to states as the sole authority for regulating hydraulic fracturing on federal lands within the boundary of a state, and a section on prohibiting retroactive CWA 404 permit vetoes,
Bill Sponsor Sen. Capito, Shelley Moore [R-WV]	Co-sponsors 46 Republican co-sponsors		
Bill Number H.R. 8733 Bill Title No title Passed (S/H)	Date Introduced 08/19/22 Assigned Committee(s) House T&I Hearing(s)	WSWC Keywords Congress.gov Link	Summary of Bill This bill requires the Department of the Army to include communities affected by major disasters in the WRDA Section 160 (33 USC 2201) definition of an economically disadvantaged community.
Bill Sponsor	Co-sponsors		

Rep. Higgins, Clay [R-LA-3]			
Bill Number S. 2693 Bill Title Salton Sea Projects Improvements Act Passed (S/H) Bill Sponsor Sen. Padilla, Alex [D-CA]	Date Introduced 08/10/22 Assigned Committee(s) Energy and Natural Resources Hearing(s) 7/12/22: Committee hearing (before introduced); ordered reported with amendments Co-sponsors	WSWC Keywords Congress.gov Link	Summary of Bill Authorizes Reclamation to carry out projects, provide grants, and enter into agreements to improve water quality and habitat at the Salt Sea.
Bill Number H.R. 8676 Bill Title Salton Sea Public Health and Environmental Protection Act Passed (S/H) Bill Sponsor Rep. Ruiz, Raul [D-CA-36]	Date Introduced 08/05/22 Assigned Committee(s) Natural Resources, Energy and Commerce Hearing(s) Co-sponsors	WSWC Keywords Congress.gov Link	Summary of Bill Directs DOI to create a Reclamation restoration program to improve the water quality, air quality, and habitat at the Salton Sea.
Bill Number S. 4695 Bill Title Western Water Cooperative Committee Act Passed (S/H) Bill Sponsor Sen. Cramer, Kevin [R-ND]	Date Introduced 08/01/22 Assigned Committee(s) Environment and Public Works Hearing(s) Co-sponsors	WSWC Keywords Congress.gov Link	Summary of Bill Directs the Corps to establish a committee with Western State representatives to meet and make recommendations to avoid or minimize conflicts between Corps project operations and State water rights and water laws.
Bill Number H.R. 8556 Bill Title Build More Pipelines Act Passed (S/H) Bill Sponsor Rep. Budd, Ted [R-NC-13]	Date Introduced 07/29/22 Assigned Committee(s) Transportation and Infrastructure Hearing(s) Co-sponsors	WSWC Keywords Congress.gov Link	Summary of Bill The bill would enact the 2020 Clean Water Act Section 401 Certification Rule, and notes that "States have denied water quality certifications under section 401...for reasons other than protecting water quality"
Bill Number H.R. 8516 Bill Title Wildfire Response Improvement Act Passed (S/H)	Date Introduced 07/26/22 Assigned Committee(s) Transportation and Infrastructure Hearing(s)	WSWC Keywords Congress.gov Link	Summary of Bill Directs FEMA to review the benefit cost analysis criteria for mitigation projects under the Stafford Act (42 USC 5187)

Bill Sponsor Rep. Stanton, Greg [D-AZ-9]	Co-sponsors		
Bill Number S. 4579 Bill Title Colorado River Basin Conservation Act Passed (S/H)	Date Introduced 07/21/22 Assigned Committee(s) Energy and Natural Resources Hearing(s)	WSWC Keywords Congress.gov Link	Summary of Bill To amend the Energy and Water Development and Related Agencies Appropriations Act, 2015, to extend certain deadlines applicable to pilot projects to increase Colorado River System water to address effects of historic drought conditions
Bill Sponsor Sen. Hickenlooper, John W. [D-CO]	Co-sponsors		
Bill Number H.R. 8449 Bill Title Fire Ready Nation Act Passed (S/H)	Date Introduced 07/20/22 Assigned Committee(s) Science, Space, and Technology; N Hearing(s)	WSWC Keywords Congress.gov Link	Summary of Bill Directs NOAA to establish a coordinated wildfire forecasting program to address growing needs of the wildland-urban interface
Bill Sponsor Rep. Schrier, Kim [D-WA-8]	Co-sponsors		
Bill Number H.R. 8435 Bill Title Colorado River Drought Response Act Passed (S/H)	Date Introduced 07/20/22 Assigned Committee(s) Natural Resources Hearing(s)	WSWC Keywords Congress.gov Link	Summary of Bill To provide for near-term actions to preserve the Colorado River system and to amend the IJA to expedite measures for drought response.
Bill Sponsor Rep. Stanton, Greg [D-AZ-9]	Co-sponsors		
Bill Number S. 4548/H.R. 8426 Bill Title Nogales Wastewater Improvement Act Passed (S/H)	Date Introduced 07/19/22 Assigned Committee(s) Foreign Relations; Transportation a Hearing(s)	WSWC Keywords Congress.gov Link	Summary of Bill 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
Bill Sponsor Sen. Sinema, Kyrsten [D-AZ]; Rep. Grijalva	Co-sponsors		
Bill Number H.R. 8415 Bill Title Las Vegas Wash Program Extension Act Passed (S/H)	Date Introduced 07/19/22 Assigned Committee(s) Transportation and Infrastructure Hearing(s)	WSWC Keywords Congress.gov Link	Summary of Bill Increases WRDA section 529(b)(3) funding authorization from \$30M to \$55M

Bill Sponsor Rep. Lee, Susie [D-NV-3]	Co-sponsors		
Bill Number S. 4536 Bill Title Great Salt Lake Recovery Act Passed (S/H) Bill Sponsor Sen. Romney, Mitt [R-UT]	Date Introduced 07/14/22 Assigned Committee(s) Environment and Public Works Hearing(s) Co-sponsors	WSWC Keywords Congress.gov Link	Summary of Bill To study how the Great Salt Lake and other saline lakes are affected by drought and to require a feasibility study on drought solutions. The bill authorizes \$10M for the U.S. Army Corps of Engineers (Corps) to establish a monitoring and assessment program for saline lakes in the Great Basin, including the Great Salt Lake. The bill also authorizes funding for a feasibility study to evaluate technologies capable of redirecting water to the Great Salt Lake.
Bill Number S. 4494/H.R. 8434 Bill Title Facilitating Large-Scale Water Recycling and Reuse Projects Passed (S/H) Bill Sponsor Sen. Cortez Masto, Catherine [D-NV]; Rep. Susie Lee	Date Introduced 06/23/22 Assigned Committee(s) Energy and Natural Resources; Na Hearing(s) Co-sponsors	WSWC Keywords Congress.gov Link	Summary of Bill Amends IJJA to modify eligibility for a recycling and reuse grant program, authorizing additional appropriations of \$500M until expended.
Bill Number S. 4492 Bill Title Federal PFAS Research Evaluation Act Passed (S/H) Bill Sponsor Sen. Peters, Gary C. [D-MI]	Date Introduced 06/23/22 Assigned Committee(s) Commerce, Science, and Transport Hearing(s) Co-sponsors	WSWC Keywords Congress.gov Link	Summary of Bill Directs NSF and EPA to study hazards and management of PFAS and submit a report on the research and development needed to advance understanding of treatment and safe alternatives.
Bill Number H.R. 8127 Bill Title Water Infrastructure Finance and Innovation Act Ammendments Passed (S/H) Bill Sponsor Rep. Schrier, Kim [D-WA-8]	Date Introduced 06/16/22 Assigned Committee(s) Transportation and Infrastructure; E Hearing(s) Co-sponsors 5 bipartisan co-sponsors in CA, KS, WA	WSWC Keywords Infrastructure Congress.gov Link	Summary of Bill Amends WRDA to define rural projects, small communities, clarify eligibility for state-led storage projects, transferred works, and WRDA projects owned by non-federal entities, and authorizes collaborative project delivery methods. It also reauthorizes WIFIA funding for the Corps of Engineers, \$50M each for FY22-26.
Bill Number H.Res. 1179 Bill Title No title	Date Introduced 06/15/22 Assigned Committee(s)	WSWC Keywords Congress.gov Link	Summary of Bill To recognize and promote the role of demonstration farm networks in expanding the adoption of conservation farming practices that improve the health of watersheds and agricultural lands.

Passed (S/H)	Hearing(s)		
Bill Sponsor Rep. Gallagher, Mike [R-WI-8]	Co-sponsors		
Bill Number H.R. 8018 Bill Title Healthy Drinking Water Affordability Act Healthy H2O Act Passed (S/H) Bill Sponsor Rep. Pingree, Chellie [D-ME-1]	Date Introduced 06/09/22 Assigned Committee(s) House - Agriculture Hearing(s) Co-sponsors Rep. Rouzer, David [R-NC-7]*	WSWC Keywords Agricultural Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/8018	Summary of Bill To amend the Consolidated Farm and Rural Development Act to establish a grant program to assist with the purchase, installation, and maintenance of point-of-entry and point-of-use drinking water quality improvement products
Bill Number H.R. 8016 Bill Title Federal Columbia River Power System Certainty Act Passed (S/H) Bill Sponsor Rep. Newhouse, Dan [R-WA-4]	Date Introduced 06/09/22 Assigned Committee(s) House - Natural Resources; Transp Hearing(s) Co-sponsors 10 Republicans (WA, CA, ID, OR, MT)	WSWC Keywords Hydropower Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/8016	Summary of Bill operations of the Federal Columbia River Power System pursuant to a certain operation plan for a specified period of time, and for other purposes. The Secretaries shall operate the FCRPS in a manner consistent with the reasonable and prudent alternative set forth in the Supplemental Opinion.
Bill Number H.R. 7861 Bill Title Plastic Pellet Free Waters Act Passed (S/H) Bill Sponsor Rep. Lowenthal, Alan S. [D-CA-47]	Date Introduced 05/20/22 Assigned Committee(s) House - Transportation and Infrastr Hearing(s) Co-sponsors 7 Democrats (OR, CA, NM, TX)	WSWC Keywords CWA Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/7861	Summary of Bill Require the Administrator of the Environmental Protection Agency to promulgate certain limitations with respect to pre-production plastic pellet pollution. Effluent limitations for wastewater, spills, and runoff from plastic polymer production facilities, plastic molding and forming facilities, and other point sources associated with the transport and packaging of plastic pellets or other pre-production plastic materials.
Bill Number H.R. 7847 Bill Title Water Efficiency, Conservation, and Sustainability Act Passed (S/H) Bill Sponsor	Date Introduced 05/19/22 Assigned Committee(s) House - Energy and Commerce Hearing(s) Co-sponsors	WSWC Keywords Water conservation, Efficiency Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/7847	Summary of Bill Identical to S 4279. Provides a grant program for annual water audits and established water efficiency incentive programs to carry out those water efficiency incentive programs. The Administrator shall establish a program to make grants to States, Tribal governments, and units of local government that have the authority to adopt plumbing codes.

Rep. McNerney, Jerry [D-CA-9]	7 Democrats (CA, CO, DE)		
Bill Number S. 4279 Bill Title Water Efficiency, Conservation, and Sustainability Act Passed (S/H) Bill Sponsor Sen. Padilla, Alex [D-CA]	Date Introduced 05/19/22 Assigned Committee(s) Senate - Environment and Public Works Hearing(s) Co-sponsors None	WSWC Keywords Water conservation, Efficiency Congress.gov Link https://www.congress.gov/bills/117th-congress/senate-bill/4279	Summary of Bill Provides a grant program for annual water audits and established water efficiency incentive programs to carry out those water efficiency incentive programs. The Administrator shall establish a program to make grants to States, Tribal governments, and units of local government that have the authority to adopt plumbing codes.
Bill Number S. 4274 Bill Title National Wildland Fire Risk Reduction Program Act Passed (S/H) Bill Sponsor Sen. Lujan, Ben Ray [D-NM]	Date Introduced 05/19/22 Assigned Committee(s) Senate - Commerce, Science, and Transportation Hearing(s) Co-sponsors 8 Dem (CA, NV, NM, OR, WA)	WSWC Keywords Wildfires Congress.gov Link https://www.congress.gov/bills/117th-congress/senate-bill/4274	Summary of Bill Improve federal effort to reduce wildland fire risk
Bill Number H.R. 7793 Bill Title Rio Grande Water Security Act Passed (S/H) Bill Sponsor Rep. Stansbury, Melanie Ann [D-NM-1]	Date Introduced 05/17/22 Assigned Committee(s) House - Natural Resources Hearing(s) 6/16/22: subcommittee hearings held Co-sponsors Rep. Leger Fernandez, Teresa [D-NM-3]* Rep. Neguse, Joe [D-CO-2]* Rep. Perlmutter, Ed [D-CO-7]* Rep. Herrell, Yvette [R-NM-2]*	WSWC Keywords Water Security Congress.gov Link https://www.congress.gov/bills/117th-congress/house-bill/7793	Summary of Bill To provide for the water security of the Rio Grande Basin, to reauthorize irrigation infrastructure grants, and for other purposes.
Bill Number H.R. 7792 Bill Title Water Data Act Passed (S/H)	Date Introduced 05/17/22 Assigned Committee(s) House - Natural Resources; Transportation and Infrastructure Hearing(s) 6/16/22: subcommittee hearings held	WSWC Keywords Water Data Congress.gov Link https://www.congress.gov/bills/117th-congress/house-bill/7792	Summary of Bill Establish a national water data framework for sharing, integrating, and utilizing water data and supporting the development of innovative water data technologies and tools. Develop common standards for water data to unlock the power of existing and future data for use in countless tools and technologies to empower water users and managers. Organize and direct federal agencies that generate and use water data to work together.

Bill Sponsor Rep. Stansbury, Melanie Ann [D-NM-1]	Co-sponsors 17 (14 Dem, 2 Rep) AZ, NM, NV, CA, CO, UT		
Bill Number S. 4236 Bill Title Water Data and Security Act Passed (S/H) Bill Sponsor Sen. Heinrich, Martin [D-NM]	Date Introduced 05/17/22 Assigned Committee(s) Senate - Energy and Natural Resources Hearing(s) 5/25/22: Subcommittee hearing held; H. Rept. 117-419 Co-sponsors Sen. Lujan, Ben Ray [D-NM]*	WSWC Keywords Water data, water security Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/4236	Summary of Bill To provide for a national water data framework, to provide for the water security of the Rio Grande Basin, to reauthorize irrigation infrastructure grants, and for other purposes.
Bill Number S. 4233 Bill Title Platte River Basin Critical Maintenance and Repair Act Passed (S/H) Bill Sponsor Sen. Barrasso, John [R-WY]	Date Introduced 05/17/22 Assigned Committee(s) Senate - Energy and Natural Resources Hearing(s) 5/25/22: Subcommittee hearing held Co-sponsors None	WSWC Keywords Infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/4233	Summary of Bill To amend the Infrastructure Investment and Jobs Act to provide for critical maintenance and repair of certain Bureau of Reclamation reserved or transferred works, and for other purposes.
Bill Number S. 4232 Bill Title No Title Passed (S/H) Bill Sponsor Sen. Kelly, Mark [D-AZ]	Date Introduced 05/17/22 Assigned Committee(s) Energy and Natural Resources Hearing(s) 5/25/22: Subcommittee hearing held Co-sponsors Sen. Sinema, Kyrsten [D-AZ]	WSWC Keywords Hydropower Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/4232	Summary of Bill To address the recovery of Reclamation facility hydropower construction costs in dry hydrologic conditions in the Colorado River Basin
Bill Number S. 4231 Bill Title Support To Rehydrate the Environment, Agriculture, and Municipalities (STREAM) Act Passed (S/H)	Date Introduced 05/25/22 Assigned Committee(s) Hearing(s) 5/25/22 Subcommittee on Water and Power. Hearings held.	WSWC Keywords Infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/4231	Summary of Bill To support water infrastructure in Reclamation States in technology, data and ecosystem restoration

Bill Sponsor Sen. Feinstein, Dianne [D-CA]	Co-sponsors Sen. Kelly, Mark [D-AZ]* Sen. Sinema, Kyrsten [D-AZ]*		
Bill Number H.R. 7776 Bill Title Water Resources Development Act (WRDA 2022) Passed (S/H) 6/8/22: Passed in House (384-37) 7/28/22: Passed Senate (93-1) Bill Sponsor Rep. DeFazio, Peter A. [D-OR-4]	Date Introduced 05/16/22 Assigned Committee(s) Transportation and Infrastructure Hearing(s) Senate Calendar No. 399. Co-sponsors Rep. Graves, Sam [R-MO-6]* Rep. Napolitano, Grace F. [D-CA-32]* Rep. Rouzer, David [R-NC-7]*	WSWC Keywords Water Resources Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/7776	Summary of Bill This bill authorizes the U.S. Army Corps of Engineers to carry out activities concerning water resources development projects, water supply and wastewater infrastructure, flood control, navigation, or ecosystem restoration, such as shoreline restoration. In addition, it modifies the process used to deauthorize certain inactive water resources development projects.
Bill Number H.R. 7771 Bill Title No Title Passed (S/H) Bill Sponsor Rep. Rouzer, David [R-NC-7]	Date Introduced 05/16/22 Assigned Committee(s) House - Transportation and Infrastructure Hearing(s) Co-sponsors None	WSWC Keywords CWA 404 Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/7771	Summary of Bill Directs the Corps and EPA to conduct a study analyzing the cost to permit applicants and permit holders of complying with sections 402 and 404 of the CWA
Bill Number S. 4189 Bill Title Agriculture Innovation Act Passed (S/H) Bill Sponsor Sen. Klobuchar, Amy [D-MN]	Date Introduced 05/11/22 Assigned Committee(s) Agriculture, Nutrition, and Forestry Hearing(s) Co-sponsors Sen. Thune, John [R-SD]*	WSWC Keywords Water Data Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/4189	Summary of Bill Amend the Food Security Act of 1985 to authorize the Secretary of Agriculture to improve agricultural productivity, profitability, resilience, and ecological outcomes through modernized data infrastructure and analysis, and for other purposes.
Bill Number H.R. 7696 Bill Title Clean Water Standards for PFAS 2.0 Act Passed (S/H)	Date Introduced 05/10/22 Assigned Committee(s) Transportation and Infrastructure Hearing(s)	WSWC Keywords PFAS Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/7696	Summary of Bill To establish effluent limitations guidelines and standards and water quality criteria for perfluoroalkyl and polyfluoroalkyl substances under the Federal Water Pollution Control Act, and for other purposes.

Bill Sponsor Rep. Pappas, Chris [D-NH-1]	Co-sponsors 13 (12 Dem, 1 Rep) CO, OR		
Bill Number S. 4176	Date Introduced 05/10/22	WSWC Keywords Infrastructure	Summary of Bill To amend the Infrastructure Investment and Jobs Act (43 U.S.C. 3203(b)(1)(B)(i)) to modify the eligibility requirements for certain small water storage and groundwater storage projects and to authorize the use of funds for dams eligible as Carey Act (43 U.S.C. 641) projects
Bill Title No Title	Assigned Committee(s) Energy and Natural Resources	Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/4175	
Passed (S/H)	Hearing(s) 5/25/22: Subcommittee hearing held 7/21/22: Committee hearing; ordered reported with amendment		
Bill Sponsor Sen. Risch, James E. [R-ID]	Co-sponsors None		
Bill Number S. 4175	Date Introduced 05/10/22	WSWC Keywords O&M	Summary of Bill To amend the Omnibus Public Land Management Act of 2009 (43 USC 510) to authorize certain extraordinary operation and maintenance work for urban canals of concern.
Bill Title No Title	Assigned Committee(s) Energy and Natural Resources	Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/4175	
Passed (S/H)	Hearing(s) 5/25/22: Subcommittee hearing held		
Bill Sponsor Sen. Risch, James E. [R-ID]	Co-sponsors None		
Bill Number S. 4161	Date Introduced 05/09/22	WSWC Keywords PFAS	Summary of Bill To establish effluent limitations guidelines and standards and water quality criteria for perfluoroalkyl and polyfluoroalkyl substances under the Federal Water Pollution Control Act, and for other purposes.
Bill Title Clean Water Standards for PFAS 2.0 Act	Assigned Committee(s) Environment and Public Works	Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/4161	
Passed (S/H)	Hearing(s)		
Bill Sponsor Sen. Gillibrand, Kirsten E. [D-NY]	Co-sponsors Sen. Casey, Robert P. [D-PA] Sen. Booker, Cory A. [D-NJ] Sen. Leahy, Patrick J. [D-VT]		
Bill Number H.R. 7665	Date Introduced 05/06/22	WSWC Keywords wild and scenic rivers	Summary of Bill
Bill Title Mt. Hood and Columbia River Gorge Recreation Enhancement and Conservation (REC) Act	Assigned Committee(s) Natural Resources; Transportation	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/7665	
Passed (S/H)	Hearing(s)		

Bill Sponsor Rep. Blumenauer, Earl [D-OR-3]	5/11/22: Subcommittee hearing held Natural Resources Co-sponsors Rep. Bonamici, Suzanne [D-OR-1]		
Bill Number S. 4137 Bill Title Water Resources Development Act (WRDA 2022) Passed (S/H) Bill Sponsor Sen. Carper, Thomas R. [D-DE]	Date Introduced 05/04/22 Assigned Committee(s) Environment and Public Works Hearing(s) Co-sponsors Sen. Capito, Shelley Moore [R-WV]* Sen. Cardin, Benjamin L. [D-MD]* Sen. Cramer, Kevin [R-ND]*	WSWC Keywords Water Resources Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/4137	Summary of Bill To provide for improvements to the rivers and harbors of the United States, to provide for the conservation and development of water and related resources, and for other purposes.
Bill Number S. 4136 Bill Title Water Resources Development Act (WRDA 2022) Passed (S/H) Bill Sponsor Sen. Carper, Thomas R. [D-DE]	Date Introduced 05/04/22 Assigned Committee(s) Environment and Public Works Hearing(s) 5/4/22: EPW reported to Senate without written report 6/22/22: S. Rpt. 117-124 Co-sponsors Sen. Thune, John [R-SD]*	WSWC Keywords USACE Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/4136	Summary of Bill To provide for improvements to the rivers and harbors of the United States, to provide for the conservation and development of water and related resources, and for other purposes.
Bill Number H.R. 7632 Bill Title Tribal Access to Clean Water Act Passed (S/H) Bill Sponsor Rep. Neguse, Joe [D-CO]	Date Introduced 04/28/22 Assigned Committee(s) Natural Resources; Energy and Commerce Hearing(s) 5/4/22: EPW reported to Senate without written report 6/22/22: S. Rpt. 117-124 Co-sponsors 18 co-sponsors, including AZ, CA, CO, KS, NM, OR	WSWC Keywords Clean Water, Tribal Water Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/7632	Summary of Bill The bill provides funding for the Indian Health Service to (1) provide essential sanitation facilities to community structures (e.g., schools, hospitals, and tribal offices) that were not previously considered eligible for such service; (2) provide technical assistance; and (3) operate and maintain water facilities that serve Native communities.
Bill Number H.R. 7612 Bill Title	Date Introduced 04/28/22 Assigned Committee(s)	WSWC Keywords Desalination Congress.gov Link	Summary of Bill Amends the Water Desalination Act (42 USC 10301) to increase authorized funding from \$5 to \$20M per fiscal year for FY22-26; and adding authority to research ways to minimize impacts of seawater desalination on aquatic life

Desalination Research Advancement Act Passed (S/H) Bill Sponsor Rep. Levin, Mike [D-CA]	Natural Resources; Science, Space, and Technology Hearing(s) 05/12/2022 Subcommittee Hearings Held. Co-sponsors Rep. Mace, Nancy [R-SC-1]* Rep. Stansbury, Melanie Ann [D-NM-1]	https://www.congress.gov/bill/117th-congress/house-bill/7612	
Bill Number S. 4104 / H.R. 7633 Bill Title Hualapai Tribe Water Rights Settlement Act Passed (S/H) Bill Sponsor Sen. Sinema, Kyrsten [D-AZ]; Rep. O'Halleran, Tom [D-AZ-1]	Date Introduced 04/28/22 Assigned Committee(s) Indian Affairs; Natural Resources Hearing(s) 5/12/22: Natural Resources Subcommittee hearing 7/20/22: Senate Indian Affairs hearing Co-sponsors Sen. Kelly, Mark [D-AZ]*, HR: Rep. Stanton, Greg [D-AZ-9] Rep. Gosar, Paul A. [R-AZ-4] Rep. Gallego, Ruben [D-AZ-7] Rep. Kirkpatrick, Ann [D-AZ-2]	WSWC Keywords Indian water rights Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/4104 https://www.congress.gov/bill/117th-congress/house-bill/7633	Summary of Bill To approve the settlement of water rights claims of the Hualapai Tribe and certain allottees in the State of Arizona, to authorize construction of a water project relating to those water rights claims, and for other purposes.
Bill Number S. 4081 Bill Title Healthy H2O Act Passed (S/H) Bill Sponsor Sen. Baldwin, Tammy [D-WI]	Date Introduced 04/26/22 Assigned Committee(s) Agriculture, Nutrition, and Forestry Hearing(s) Co-sponsors Sen. Smith, Tina [D-MN]	WSWC Keywords drinking water infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/4081	Summary of Bill To amend the Consolidated Farm and Rural Development Act to establish a grant program to assist with the purchase, installation, and maintenance of point-of-entry and point-of-use drinking water quality improvement products, and for other purposes.
Bill Number H.R. 7289 Bill Title Federal PFAS Research Evaluation Act Passed (S/H) 7/26/22: passed House 359-62	Date Introduced 03/30/22 Assigned Committee(s) House - Science, Space, and Technology Senate - Environment and Public Works Hearing(s) 7/13/22: SST reported with an amendment; H. Rpt. 117-406	WSWC Keywords Congress.gov Link	Summary of Bill Directs EPA and NASEM to complete studies and reports on PFAS, identify research needed to understand PFAS contamination, management, and treatment options.

Bill Sponsor Rep. Fletcher, Lizzie [D-TX-7]	Co-sponsors		
Bill Number S. 3886 / H.R. 7182 Bill Title Future of Water Act Passed (S/H) Bill Sponsor Sen. Warren, Elizabeth [D-MA]; JRep. Khanna, Ro [D-CA-17]	Date Introduced 03/21/22 Assigned Committee(s) Agriculture, Nutrition and Forestry; Hearing(s) Co-sponsors S: 6 (4 Dem, 2 Rep) WA, AK, OR / HR- 17 Dems, CA	WSWC Keywords water rights Congress.gov Link HR: https://www.congress.gov/bill/117th-congress/house-bill/7182	Summary of Bill To amend the Commodity Exchange Act to prohibit trading of water and water rights for future delivery, and for other purposes.
Bill Number S. 3693 Bill Title Upper Colorado and San Juan River Basins Recovery Act Passed (S/H) Bill Sponsor Sen. Hickenlooper, John W. [D-CO]	Date Introduced 02/17/22 Assigned Committee(s) Energy and Natural Resources Hearing(s) 5/25/22: Subcommittee hearing; H. Rept. 117-419 Co-sponsors 4 (3 Dem, 1 Rep) NM, CO, UT	WSWC Keywords Endangered Fish; water res Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/3693	Summary of Bill This bill extends through FY2024 the authority of the Department of the Interior to implement capital projects (i.e., construction of facilities) for the endangered fish recovery programs for the Upper Colorado and San Juan river basins. The bill raises the ceiling on costs for the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin and lowers the ceiling on costs for the San Juan River Recovery Implementation Program.
Bill Number S. 3621 Bill Title Climate Adaptation Science Centers (CASC) Act Passed (S/H) Bill Sponsor Sen. Hirono, Mazie K. [D-HI]	Date Introduced 02/09/22 Assigned Committee(s) Environment and Public Works Hearing(s) Co-sponsors 7 Democrats AZ, NM, WA	WSWC Keywords Climate adaptation Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/3621	Summary of Bill This bill provides statutory authority for the National and Regional Climate Adaptation Science Centers of the U.S. Geological Survey (USGS). The centers must provide scientific expertise to managers of natural resources, cultural resources, and ecosystem services to inform decisions that aid adaptation to a changing climate and extreme weather events. The program shall include a National Climate Adaptation Science Center and Regional Climate Adaptation Science Centers. Regional centers shall develop research, education, training, and advisory service priorities regarding the impacts of climate trends and variability on natural and cultural resource management. The USGS shall establish an Advisory Committee on Climate and Natural Resource Sciences to identify and recommend priorities for ongoing research needs on such impacts in informing the research priorities of the National Center.
Bill Number S. 3597 Bill Title Deschutes River Conservancy Reauthorization Act Passed (S/H) Bill Sponsor Sen. Merkley, Jeff [D-OR]	Date Introduced 02/08/22 Assigned Committee(s) Energy and Natural Resources Hearing(s) Co-sponsors Sen. Wyden, Ron [D-OR]*	WSWC Keywords Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/3597	Summary of Bill This bill (1) reauthorizes the Deschutes River Conservancy Working Group through FY2032, (2) increases from 5% to 10% the amount authorized to be provided to the working group, and (3) changes the composition of the members of the working group.
Bill Number	Date Introduced	WSWC Keywords	Summary of Bill

S. 3571 Bill Title Good Samaritan Remediation of Abandoned Hard Rock Mines Act Passed (S/H) Bill Sponsor Sen. Heinrich, Martin [D-NM]	02/03/22 Assigned Committee(s) Environment and Public Works Hearing(s) Co-sponsors 13 (7 Democrats, 6 Republicans) Sen. Risch, James E. [R-ID]; Sen. Lujan, Ben Ray [D-NM]; Sen. Daines, Steve [R-MT]; Sen. Tester, Jon [D-MT]; Sen. Crapo, Mike [R-ID]; Sen. Bennet, Michael F. [D-CO]; Sen. Barrasso, John [R-WY]; Sen. Cortez Masto, Catherine [D-NV]; Sen. Lummis, Cynthia M. [R-WY]; Sen. Kelly, Mark [D-AZ]; Sen. Cramer, Kevin [R-ND]; Sen. Sinema, Kyrsten [D-AZ]; Sen. Sullivan, Dan [R-AK]	Mines Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/3571	This bill promotes the remediation of abandoned hardrock mine sites by Good Samaritans. A Good Samaritan means a person that is (1) not a past or current owner or operator of the abandoned site; (2) had no role in the creation of the historic mine residue; and (3) is not potentially liable under any law for the remediation, treatment, or control of the historic mine residue. The bill directs EPA to establish a Good Samaritan pilot program. Under the program, the EPA may issue permits to allow Good Samaritans to remediate historic mine residue at abandoned hardrock mine sites without assuming liability under specified environmental laws for past, present, or future releases, threats of releases, or discharges of hazardous substances or other contaminants at or from the abandoned mine site. In addition, the bill establishes a Good Samaritan Mine Remediation Fund for land management agencies that authorize Good Samaritans to conduct remediation projects on federal land.
Bill Number S. 3539 Bill Title Watershed Results Act Passed (S/H) Bill Sponsor Sen. Wyden, Ron [D-OR]	Date Introduced 02/01/22 Assigned Committee(s) Energy and Natural Resources Hearing(s) 5/25/22: Subcommittee hearing Co-sponsors None	WSWC Keywords Watershed Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/3539	Summary of Bill Directs DOI to establish 2-5 watershed pilot projects in a Reclamation State, in consultation with states and tribes, with a five-year plan to advance watershed analytics. DOI would coordinate a cross-agency funding strategy to achieve analytic milestones. The bill would authorize \$15M for each of FY22-27 for the pilot projects, with another \$2M to carry out advanced watershed analytics for each of FY22-24. The intended outcome would be (1) a quantifiable increase in surface water or groundwater; (2) a measurable increase in habitat.
Bill Number H.R. 6492 / S. 3531 Bill Title Climate Resilience Workforce Act Passed (S/H) Bill Sponsor Rep. Jayapal, Pramila [D-WA-7]	Date Introduced 01/25/22 Assigned Committee(s) Agriculture, Natural Resources, others Hearing(s) Co-sponsors 39 Democratic co-sponsors, including AZ, CA, OR, TX, WA,	WSWC Keywords Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/6492	Summary of Bill Would establish an Office of Climate Resilience in the White House, with the authority to convene federal and non-federal stakeholders and a federal interagency National Climate Resilience Action workgroup to inform and develop a climate resilience action plan. The bill would also establish the Center for the Climate Resilience Workforce to serve as a public resource to support job quality and training, research on the relevant workforce to identify needs/challenges. Title II establishes a grant program for states and tribes to support climate change risk assessments and action plans, prioritized for "frontline communities."
Bill Number H.R. 6461 Bill Title National Climate Adaptation and Resilience Strategy Act	Date Introduced 01/20/22 Assigned Committee(s) Energy and Commerce	WSWC Keywords Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/6461	Summary of Bill To require the Federal Government to produce a national climate adaptation and resilience strategy. Would establish a Chief Resilience Officer and National Climate Adaptation and Resilience Working Groups to coordinate a whole-of-government plan. Would also establish a non-federal Partners Council on Climate Adaptation and Resilience, with representatives from states, tribes, academic, private, industry, and non-government organizations.

Passed (S/H)	Hearing(s)		
Bill Sponsor Rep. Peters, Scott H. [D-CA-52]	Co-sponsors 3 bipartisan co-sponsors, including Rep. John Curtis (R-UT)		
Bill Number H.R. 6336 Bill Title Western Wildfire Support Act Passed (S/H) Bill Sponsor Rep. Neguse, Joe [D-CO-2]	Date Introduced 12/20/21 Assigned Committee(s) Natural Resources, Agriculture, Transportation and Infrastructure, and others Hearing(s) Co-sponsors 4 Dem, CA and NV	WSWC Keywords Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/6336	Summary of Bill Requires USDA and DOI to establish spatial fire management plans, establishes wildfire accounts in Treasury, and creates a board and a prize for addressing wildfire-related invasive species. It requires federal and state disaster preparedness programs to include post disaster assistance. Authorizes FEMA to provide funding to states to operate postfire recovery websites.
Bill Number H.R. 6238 Bill Title WaterSMART Access for Tribes Act Passed (S/H) Bill Sponsor Rep. Stansbury, Melanie Ann [D-NM-1]	Date Introduced 12/09/21 Assigned Committee(s) Natural Resources Hearing(s) 05/12/2022NR Subcommittee Hearings Held Co-sponsors 13 bipartisan co-sponsors, including AK, AR, CA, CO, KS, NV, OK	WSWC Keywords Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/6238	Summary of Bill The bill would amend the Omnibus Public Land Management Act of 2009 to increase Tribal access to water conservation and efficiency grants, authorizing DOI to "reduce or waive the non-Federal share (and increase the Federal share accordingly) of the cost of any infrastructure improvement or activity that is the subject of that grant or other agreement if the Secretary determines that the Indian tribe does not have sufficient funds to pay such cost share."
Bill Number H.R. 6229 / S. 3371 Bill Title Land and Water Conservation Fund Water Amendments Act Passed (S/H) Bill Sponsor Rep. Mast, Brian J. [R-FL-18]; Sen. Rubio, Marco [R-FL]	Date Introduced 12/09/21 Assigned Committee(s) Natural Resources; Energy and Natural Resources Hearing(s) Co-sponsors 6 Republicans	WSWC Keywords Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/3371	Summary of Bill Would authorize the Secretary of the Interior to make financial assistance to States under the Land and Water Conservation Fund available for water quality projects
Bill Number S. 3355 Bill Title Dredging to Ensure the Empowerment of Ports (DEEP) Act	Date Introduced 12/09/21 Assigned Committee(s) Environment and Public Works	WSWC Keywords Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/3355	Summary of Bill Would require the Corps to propose a new nationwide permit under the CWA for dredging projects

Passed (S/H)	Hearing(s)		
Bill Sponsor Sen. Lee, Mike [R-UT]	Co-sponsors None		
Bill Number H.R. 6147	Date Introduced 12/07/21	WSWC Keywords	Summary of Bill
Bill Title Driftless Area Landscape Conservation Initiative Act	Assigned Committee(s) Agriculture	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/6147	Directs the Secretary of Agriculture to establish a Driftless Area Landscape Conservation Initiative to reduce erosion and restore cold water stream corridors in the Driftless Area of the Midwestern United States, with a focus on climate-smart agriculture, carbon sequestration, soil health, and ecological restoration. \$5M for each of FY22-26.
Passed (S/H)	Hearing(s) Agriculture		
Bill Sponsor Rep. Bustos, Cheri [D-IL-17]	Co-sponsors 4 (3 Dem, 1 Rep)		
Bill Number S. 3308	Date Introduced 12/02/21	WSWC Keywords Indian Tribes	Summary of Bill
Bill Title Colorado River Indian Tribes Water Resiliency Act	Assigned Committee(s) Indian Affairs	Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/3308	The bill would authorize the Colorado River Indian Tribes (CRIT) to enter into lease or exchange agreements and storage agreements relating to water of the Colorado River allocated to the Colorado River Indian Tribes, in accordance with applicable state and federal laws.
Passed (S/H)	Hearing(s) Indian Affairs		
Bill Sponsor Sen. Kelly, Mark [D-AZ]	Co-sponsors Sen. Sinema, Kyrsten [D-AZ]		
Bill Number H.R. 6088 / S. 3282	Date Introduced 11/30/21	WSWC Keywords Infrastructure	Summary of Bill
Bill Title Water Infrastructure Modernization Act	Assigned Committee(s) Energy and Commerce; Environment and Public Works	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/6088	The bill would amend the Safe Drinking Water Act to authorize grants for smart water infrastructure technology to address emerging contaminants, leaks, the need for infrastructure resiliency, and water efficiency, with \$25M for FY23-27, and set asides for rural and tribal communities.
Passed (S/H)	Hearing(s) Energy and Commerce; Environment and Public Works		
Bill Sponsor Rep. Gallego, Ruben [D-AZ-7]; Sen. Kelly, Mark [D-AZ]	Co-sponsors House: Rep. Katko, John [R-NY-24]* S: Sen. Risch, James E. [R-ID]* Sen. Sinema, Kyrsten [D-AZ]		
Bill Number S. 3277	Date Introduced 11/30/21	WSWC Keywords CWA	Summary of Bill
Bill Title Section 401 Certification Act	Assigned Committee(s) Environment and Public Works	Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/3277	Would enact the 2020 CWA Section 401 Certification Rule into statute, with a finding that "States have denied water quality certifications under section 401 of the Federal Water Pollution Control Act (33 U.S.C. 1341) for infrastructure projects for reasons other than protecting water quality..."
Passed (S/H)	Hearing(s)		

Bill Sponsor Sen. Capito, Shelley Moore [R-WV]	Environment and Public Works Co-sponsors 9 Republican co-sponsors including AK, ND, OK, WY		
Bill Number H.R. 5907 Bill Title Water Infrastructure for Rural and Impoverished Communities Act Passed (S/H) Bill Sponsor Rep. Vela, Filemon [D-TX-34]	Date Introduced 11/05/21 Assigned Committee(s) Agriculture Hearing(s) Agriculture Co-sponsors None	WSWC Keywords Infractrure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/5907	Summary of Bill To authorize the provision of water and waste facility direct loans and grants to communities with greater populations under certain circumstances.
Bill Number H.R. 5880 / S. 3168 Bill Title No Title Passed (S/H) Bill Sponsor Rep. O'Halleran, Tom [D-AZ-1]; Sen. Kelly, Mark [D-AZ]	Date Introduced 11/04/21 Assigned Committee(s) Natural Resources; Indian Affairs Hearing(s) Natural Resources; Indian Affairs Co-sponsors 3 bipartisan co-sponsors, including Rep. John Curtis (R-UT)	WSWC Keywords Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/5880	Summary of Bill To amend the White Mountain Apache Tribe Water Rights Quantification Act of 2010 to modify the enforceability date for certain provisions
Bill Number H.R. 5802 / S. 3128 Bill Title National Flood Insurance Program Reauthorization Act Passed (S/H) Bill Sponsor Rep. Pallone, Frank, Jr. [D-NJ-6]; Sen. Menendez, Robert [D-NJ]	Date Introduced 11/01/21 Assigned Committee(s) Transportation and Infrastructure, and others; Banking, Housing, and Urban Affairs Hearing(s) Transportation and Infrastructure, and others; Banking, Housing, and Urban Affairs Co-sponsors 21 (16 Dem, 5 Rep)	WSWC Keywords Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/5802	Summary of Bill To reauthorize the National Flood Insurance Program through FY26, with amendments for mitigation grants and a pilot program for loans, and changes regarding USGS-FWS-NOAA mapping, and standards for private or community maps.
Bill Number H.R. 5653 / S. 3031 Bill Title Clean Water Allotment Modernization Act Passed (S/H)	Date Introduced 10/21/21 Assigned Committee(s) Transportation and Infrastructure; Environment and Public Works Hearing(s)	WSWC Keywords CWA Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/5653	Summary of Bill Amends CWA Section 205 regarding financial allotments to states in FY 22-26, maintaining the amount allotted in 2021 and adding a proportional allotment based on the most recent Census. It also include funds for Buy American oversight. It amends the requirements of the clean watershed needs survey in CWA Section 516(b).

Bill Sponsor Rep. Waltz, Michael [R-FL-6]; Sen. Rubio, Marco [R-FL]	Transportation and Infrastructure; Environment and Public Works Co-sponsors HR: 17 (11 Rep, 6 Dem) FI, MD S: Sen. Kelly, Mark [D-AZ]* Sen. Scott, Rick [R-FL]* Sen. Burr, Richard [R-NC]*		
Bill Number S. 2807 Bill Title Watersheds Results Act Passed (S/H) Bill Sponsor Sen. Wyden, Ron [D-OR]	Date Introduced 09/22/21 Assigned Committee(s) Environment and Public Works Hearing(s) Environment and Public Works Co-sponsors None	WSWC Keywords Watershed Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/2807	Summary of Bill Authorizes DOI, EPA, and USDA to develop 2-5 watershed pilot projects, for five years, to achieve a quantifiable reduction in nutrients, sediment runoff, or thermal load, or a quantifiable increase in dissolved oxygen, or surface/groundwater that benefits fish and wildlife. Authorizes \$15M/year for FY 22-27.
Bill Number S. 2806 Bill Title Wildfire Emergency Act Passed (S/H) Bill Sponsor Sen. Feinstein, Dianne [D-CA]	Date Introduced 09/22/21 Assigned Committee(s) Energy and Natural Resources Hearing(s) Energy and Natural Resources Co-sponsors Sen. Padilla, Alex [D-CA]* Sen. Wyden, Ron [D-OR]* Sen. Daines, Steve [R-MT]	WSWC Keywords Wildfires Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/2806	Summary of Bill To direct the Secretary of Agriculture to select and implement landscape-scale forest restoration projects, to assist communities in increasing their resilience to wildfire
Bill Number H.R. 5376 Bill Title Inflation Reduction Act Passed (S/H) 8/16/22: became law, P.L. 117-169 Bill Sponsor	Date Introduced 09/27/21 Assigned Committee(s) Budget Hearing(s) Budget Co-sponsors	WSWC Keywords Congress.gov Link	Summary of Bill The bill provided (among other things) drought resiliency and water supply funding authorization, including (1) \$4B to “mitigate the impacts of drought in the Reclamation States, with priority given to the Colorado River Basin and other basins experiencing comparable levels of long-term drought,” including “compensation for temporary voluntary reduction in diversion of water or consumption of water use” (Section 50233); (2) \$837.5M for Department of Housing and Urban Development loans and grants to improve energy or water efficiency (Section 30002); (3) \$550M for USBR grants for “the planning, design, or construction of water projects the primary purpose of which is to provide domestic water supplies to communities or households that do not have reliable access to domestic water supplies” (Section 50231); (4) \$50M for National Oceanic and Atmospheric Administration (NOAA) competitive grants “to fund climate research as it relates to weather, ocean, coastal, and atmospheric processes and conditions, and impacts to marine species and coastal habitat” (Section 40004); (5) \$25M to USBR to cover water conveyance facilities with solar panels (section 50232); (6) \$23.5M for the USGS to produce, collect, disseminate, and use 3D elevation data (Section 50271); and (7) emergency drought relief for tribes (Section 80004)
Bill Number H.R. 5166 Bill Title	Date Introduced 09/03/21 Assigned Committee(s)	WSWC Keywords Congress.gov Link	Summary of Bill To direct the Secretary of Energy to establish a demonstration program for on-site treatment of produced water

Transitioning Research to Ensure Appropriate Treatment of Water Act Passed (S/H) Bill Sponsor Rep. Lamb, Conor [D-PA-17]	Science, Space, and Technology Hearing(s) Science, Space, and Technology Co-sponsors Rep. Fitzpatrick, Brian K. [R-PA-1]*	https://www.congress.gov/bill/117th-congress/house-bill/5166	
Bill Number H.R. 5001 Bill Title Upper Colorado and San Juan River Basins Recovery Act Passed (S/H) 3/15/22: Passed House - (397-27) Bill Sponsor Rep. Neguse, Joe [D-CO-2]	Date Introduced 08/10/21 Assigned Committee(s) Natural Resources Hearing(s) Natural Resources Co-sponsors 6 (3 Dem, 3 rep) CO, NM, UT	WSWC Keywords Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/5001	Summary of Bill To authorize the Secretary of the Interior to continue to implement endangered fish recovery programs for the Upper Colorado and San Juan River Basins
Bill Number S.2698/ H.R. 4573 Bill Title Stop Causing Alarming Tree, Air, and Soil Trauma Resulting from Obstructive Progressives' and Hypocritical Environmentalists' Schemes (Stop CATASTROPHES) Act Passed (S/H) Bill Sponsor Sen. Lummis, Cynthia [R-WY]; Rep. Newhouse, Dan [R-WA-4]	Date Introduced 08/10/21 Assigned Committee(s) Environment and Public Works; House Natural Resources; Agriculture Hearing(s) Co-sponsors None	WSWC Keywords water resources and wildfires Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/2698	Summary of Bill To establish a categorical exclusion to improve or restore National Forest System land or public land or reduce the risk of wildfire
Bill Number S.2693 Bill Title Salton Sea Projects Improvements Act Passed (S/H) Bill Sponsor Sen. Padilla, Alex [D-CA]	Date Introduced 08/10/21 Assigned Committee(s) Energy and Natural Resources Hearing(s) 7/21/22: ENR hearing, ordered reported with amendments Co-sponsors Sen. Feinstein, Dianne [D-CA]*	WSWC Keywords improvements, salton sea Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/2693	Summary of Bill Provides additional authority for Reclamation to provide grants and enter into contracts and cooperative agreements to carry out projects located in the area of the Salton Sea in southern California to improve air quality, fish and wildlife habitat, recreational opportunities, and water quality, in partnership with state, tribal, local governments, water districts, and others.
Bill Number H.R. 4979 Bill Title	Date Introduced 08/06/21 Assigned Committee(s)	WSWC Keywords Congress.gov Link	Summary of Bill To provide emergency loans to publicly owned and nonprofit water and wastewater utilities to maintain access to essential services during COVID.

Maintaining Access to Essential Services Act Passed (S/H) Bill Sponsor Rep. Tlaib, Rashida [D-MI-13]	Financial Services; Ways and Means Hearing(s) Co-sponsors 9 Dem- AZ, CA, WA	https://www.congress.gov/bill/117th-congress/house-bill/4979	
Bill Number H.R. 4976 Bill Title Ensuring PFAS Cleanup Meets or Exceeds Stringent Standards Act Passed (S/H) Bill Sponsor Rep. Slotkin, Elissa [D-MI-8]	Date Introduced 08/06/21 Assigned Committee(s) Armed Services; Transportation and Infrastructure; Energy and Commerce Hearing(s) Co-sponsors Rep. Khanna, Ro [D-CA-17]*	WSWC Keywords PFAS Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4976	Summary of Bill Directs DOD to ensure that removal and remedial actions relating to PFAS contamination result in levels meeting or exceeding certain standards
Bill Number H.R. 4915 Bill Title Water Supply Permitting Coordination Act Passed (S/H) Bill Sponsor Rep. McClintock, Tom [R-CA-4]	Date Introduced 08/03/21 Assigned Committee(s) Natural Resources Hearing(s) Co-sponsors None	WSWC Keywords Infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4915	Summary of Bill Authorizes the Secretary of the Interior to coordinate Federal and State permitting processes related to the construction of new surface water storage projects on lands under the jurisdiction of the Secretary of the Interior and the Secretary of Agriculture and to designate the Bureau of Reclamation as the lead agency for permit processing.
Bill Number H.R. 4832/ S.2568 Bill Title Open Access Evapotranspiration Data Act Passed (S/H) Bill Sponsor Rep. Lee, Susie [D-NV-3] Sen. Cortez Masto, Catherine [D-NV]	Date Introduced 07/29/21 Assigned Committee(s) Natural Resources; Energy and Natural Resources Hearing(s) 11/4/21: HNR subcommittee hearing 6/7/22: ENR subcommittee hearing Co-sponsors HR- 3 (2dem, 1rep) CA and UT	WSWC Keywords Evapotranspiration, satellite Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4832	Summary of Bill Directs the USGS to establish an Open Access Evapotranspiration (OpenET) Data Program to support the operational distribution of satellite-based evapotranspiration data to sustain and enhance water resources in the United States; to advance the quantification of evaporation and consumptive water use; and to provide data users with field-scale estimates of evapotranspiration data across large landscapes over certain periods of time.
Bill Number S. 2567	Date Introduced 07/29/21	WSWC Keywords WOTUS	Summary of Bill Would enact the definitions of "waters of the United States" and other terms in 33 CFR 328.3 as defined by the 2020

Bill Title Navigable Waters Protection Act	Assigned Committee(s) Environment and Public Works	Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/2567	Navigable Waters Protection Rule.
Passed (S/H)	Hearing(s)		
Bill Sponsor Sen. Capito, Shelley [R-WV]	Co-sponsors 32 Republicans WY, AK, TX, MT, ID		
Bill Number S. 2552	Date Introduced 07/29/21	WSWC Keywords Infrastructure	Summary of Bill Authorizes \$15B to the Department of Commerce for climate resilient infrastructure project pre development grants (funds for feasibility studies, permitting, capacity building, community outreach, acquisition/lease of site)
Bill Title Local Infrastructure Funding & Technical Assistance (LIFT) Act	Assigned Committee(s) Environment and Public Works	Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/2552	
Passed (S/H)	Hearing(s)		
Bill Sponsor Sen. Markey, Edward [D-MA]	Co-sponsors Sen. Durbin, Richard J. [D-IL] Sen. Padilla, Alex [D-CA] Sen. Kelly, Mark [D-AZ]		
Bill Number H.R. 4780	Date Introduced 07/28/21	WSWC Keywords	Summary of Bill Authorizes DOJ, at the request of DOI, to bring civil action for injuries to FWS resources.
Bill Title Refuge System Protection Act	Assigned Committee(s) Natural Resources, Appropriations	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4780	
Passed (S/H)	Hearing(s)		
Bill Sponsor Rep. Thompson, Mike [D-CA-5]	Co-sponsors 8 (7 Dem, 1 Rep) CA		
Bill Number S. 2517	Date Introduced 07/28/21	WSWC Keywords WOTUS	Summary of Bill Amends the CWA to define navigable waters, excluding groundwater, wetlands, ephemeral streams or intermittent flow.
Bill Title Defense of Environment and Property Act	Assigned Committee(s) Environment and Public Works	Congress.gov Link	
Passed (S/H)	Hearing(s)		
Bill Sponsor Sen. Paul, Rand [R-KY]	Co-sponsors Sen. Rubio, Marco [R-FL]* Sen. Cruz, Ted [R-TX]*		
Bill Number H.R. 4712	Date Introduced 07/27/21	WSWC Keywords Desalination	Summary of Bill To promote desalination project development and drought resilience
Bill Title	Assigned Committee(s)	Congress.gov Link	

Desalination Development Act	Natural Resources; Science, Space, and Technology	https://www.congress.gov/bill/117th-congress/house-bill/4712	
Passed (S/H)	Hearing(s) H.Rept. 117-419		
Bill Sponsor Rep. Levin, Mike [D-CA-49]	Co-sponsors Rep. Huffman, Jared [D-CA-2]*		
Bill Number H.R. 4614	Date Introduced 07/22/21	WSWC Keywords Water resources and wildfires	Summary of Bill To expedite under NEPA and improve forest management activities on National Forest System lands, on public lands under the jurisdiction of the Bureau of Land Management, and on Tribal lands to return resilience to overgrown, fire-prone forested lands
Bill Title Resilient Federal Forests Act	Assigned Committee(s) Agriculture; Natural Resources	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4614	
Passed (S/H)	Hearing(s)		
Bill Sponsor Rep. Westerman, Bruce [R-AR-4]	Co-sponsors 75 (74 Dem, 1 Rep) CA, TX, AZ, CO, ID, UT, NV, NM, WY, SD, WA		
Bill Number S. 2454	Date Introduced 07/22/21	WSWC Keywords water reuse	Summary of Bill Reauthorizes the CWA pilot program (33 USC 1300) for alternative water source projects.
Bill Title Water Reuse and Resilience Act	Assigned Committee(s) Environment and Public Works	Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/2454	
Passed (S/H)	Hearing(s)		
Bill Sponsor Sen. Padilla, Alex [D-CA]	Co-sponsors Sen. Feinstein, Dianne [D-CA]* Sen. Ossoff, Jon [D-GA]*		
Bill Number S. 2436/ H.R. 4664	Date Introduced 07/22/21	WSWC Keywords Water resources and wildfires	Summary of Bill To amend the Healthy Forests Restoration Act of 2003 to establish emergency fireshed management areas
Bill Title Forest Improvements through Research and Emergency Stewardship for Healthy Ecosystem Development and Sustainability (FIRESHEDS) Act	Assigned Committee(s) Energy and Natural Resources; House Natural Resources; Agriculture	Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/2436	
Passed (S/H)	Hearing(s) 10/21/21: SENR hearing		
Bill Sponsor Sen. Risch, James [R-ID]; Rep. Moore, Blake D. [R-UT-1]	Co-sponsors HR- 13 (11 Rep, 2 Dem)/ S- 3 Original sponsors		
Bill Number	Date Introduced	WSWC Keywords	Summary of Bill

S. 2430/ H.R. 4647	07/22/21	water conservation and stormwater management	Expands the exclusion for certain conservation subsidies to include subsidies for water conservation or efficiency measures and storm water management measures
Bill Title Water Conservation Rebate Tax Parity Act	Assigned Committee(s) Senate Finance; House Ways and Means	Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/2430	
Passed (S/H)	Hearing(s)		
Bill Sponsor Sen. Feinstein, Dianne [D-CA]; Rep. Huffman, Jared [D-CA-2]	Co-sponsors Sen. Padilla, Alex [D-CA]* Sen. Bennet, Michael F. [D-CO] /HR 21 Dems CO, AZ, CA, NV		
Bill Number H.R. 4597	Date Introduced 07/21/21	WSWC Keywords SRFs	Summary of Bill Amends the CWA to make certain projects and activities eligible for SRF financial assistance, including some POTW activities.
Bill Title Clean Water SRF Parity Act	Assigned Committee(s) Transportation and Infrastructure	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4597	
Passed (S/H)	Hearing(s)		
Bill Sponsor Rep. Garamendi, John [D-CA-3]	Co-sponsors 2 Rep. Bost, Mike [R-IL-12]* Rep. Spanberger, Abigail Davis [D-VA-7]		
Bill Number S. 2406	Date Introduced 07/21/21	WSWC Keywords PFAS	Summary of Bill Amends the SDWA to require EPA to set maximum contaminant levels for PFAS
Bill Title Protect Drinking Water from PFAS Act	Assigned Committee(s) Environment and Public Works	Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/2406	
Passed (S/H)	Hearing(s)		
Bill Sponsor Sen. Gillibrand, Kirsten [D-NY]	Co-sponsors 4 Democrats. Sen. Warren, Elizabeth [D-MA]* Sen. Feinstein, Dianne [D-CA]* Sen. Blumenthal, Richard [D-CT] Sen. Booker, Cory A. [D-NJ]		
Bill Number H.R. 4570	Date Introduced 07/20/21	WSWC Keywords WOTUS	Summary of Bill The bill defines navigable waters, excluding intermittent and ephemeral waters, groundwater, intrastate waters, and so on; and establishes a 60-day process for the Corps to determine, on request, whether certain waters are navigable.
Bill Title Define WOTUS Act	Assigned Committee(s) Transportation and Infrastructure	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4570	
Passed (S/H)	Hearing(s)		
Bill Sponsor	Co-sponsors		

Rep. Miller, Mary E. [R-IL-15]	None		
Bill Number H.R. 4569 Bill Title Action Versus No Action Act Passed (S/H) Bill Sponsor Rep. McClintock, Tom [R-CA-4]	Date Introduced 07/20/21 Assigned Committee(s) Natural Resources; Agriculture Hearing(s) Co-sponsors 9 Republicans, CA, CO, MT, OR, WA	WSWC Keywords Water resources and wildfires Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4569	Summary of Bill To require that only two alternatives be considered with respect to certain proposed collaborative forest management activities
Bill Number H.R. 4567 Bill Title Test Your Well Water Act Passed (S/H) Bill Sponsor Rep. Kildee, Daniel T. [D-MI-5]	Date Introduced 07/20/21 Assigned Committee(s) Energy and Commerce Hearing(s) H. Rept. 117-86 Co-sponsors 5 (4 Dem, 1 Rep)	WSWC Keywords water quality Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4567	Summary of Bill Requires EPA to establish a website that contains specific information relating to the testing of household well water, including a list of certified laboratories that analyze samples.
Bill Number S. 2404 Bill Title Western Wildfire Support Act Passed (S/H) Bill Sponsor Sen. Cortez Masto, Catherine [D-NV]	Date Introduced 07/20/21 Assigned Committee(s) Energy and Natural Resources Hearing(s) 10/21/21: SENR hearing 12/15/21: Banking, Housing, and Urban Affairs hearing Co-sponsors None	WSWC Keywords Water resources and wildfires Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/2404	Summary of Bill To improve Federal activities relating to wildfires, including detection and suppression support and post-fire recovery.
Bill Number S. 2393 Bill Title Fracturing Regulations are Effective in State Hands Act Passed (S/H) Bill Sponsor	Date Introduced 07/20/21 Assigned Committee(s) Energy and Natural Resources Hearing(s) Co-sponsors	WSWC Keywords Fracking Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/2393	Summary of Bill To clarify that a State has the sole authority to regulate hydraulic fracturing on Federal land within the boundaries of the State.

Sen. Inhofe, Jim [R-OK]	7 Republicans, WY, TX, ND		
Bill Number H.R. 4518 Bill Title Wildfire Prevention and Drought Mitigation Act Passed (S/H) Bill Sponsor Rep. Herrell, Yvette [R-NM-2]	Date Introduced 07/19/21 Assigned Committee(s) Natural Resources Hearing(s) Co-sponsors 14 Republicans AZ, CO, OR, SD, WA, CA	WSWC Keywords Water resources and wildfires Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4518	Summary of Bill To establish a categorical exclusion for certain forest management activities related to wildfire prevention and drought mitigation
Bill Number H.R. 4516 Bill Title Protecting and Restoring Our Trees by Enhancing Conservation and Treatments (PROTECT) Act Passed (S/H) Bill Sponsor Rep. Garcia, Mike [R-CA-25]	Date Introduced 07/19/21 Assigned Committee(s) Natural Resources; Agriculture Hearing(s) Co-sponsors 14 Republicans, CA, AZ, CO, OR, SD, WA, MT,	WSWC Keywords Water resources and wildfires Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4516	Summary of Bill Establishes categorical exclusions under NEPA for certain forest management activities, including reduction of hazardous fuel loads and protecting municipal water sources, among other things.
Bill Number S. 2369 Bill Title Tribal Access to Clean Water Act Passed (S/H) Bill Sponsor Sen. Bennet, Michael [D-CO]	Date Introduced 07/15/21 Assigned Committee(s) Indian Affairs Hearing(s) Co-sponsors 3 Democrats, CO, NM, MA	WSWC Keywords Tribal water infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/2369	Summary of Bill To provide access to reliable, clean, and drinkable water on Tribal lands
Bill Number H.R. 4413 Bill Title National Infrastructure Development Bank Act Passed (S/H) Bill Sponsor Rep. DeLauro, Rosa L. [D-CT-3]	Date Introduced 07/13/21 Assigned Committee(s) Energy and Commerce; Transportation and Infrastructure; Financial Services Hearing(s) Co-sponsors 25 Democrats. CA, TX, WA	WSWC Keywords Infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4413	Summary of Bill Establishes a bank to facilitate efficient investments and financing of infrastructure projects, including environmental projects that establish, maintain, or enhance any drinking water and wastewater treatment facility, storm water management system, flood gate, dam, levee, dredging, open space management system, wetland restoration, infill development, solid waste disposal facility, hazardous waste facility, or industrial site cleanup.

Bill Number S. 2334 Bill Title Large Scale Water Recycling Project and Drought Resiliency Investment Act Passed (S/H) Bill Sponsor Sen. Cortez Masto, Catherine [D-NV]	Date Introduced 07/13/21 Assigned Committee(s) Energy and Natural Resources Hearing(s) 5/25/22: Subcommittee hearing Co-sponsors 2 Rep.	WSWC Keywords Reuse and drought Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/2334	Summary of Bill Directs DOI to establish a grant program to provide grants on a competitive basis to eligible entities for large-scale water recycling and reuse projects, to amend the Omnibus Public Land Management Act of 2009 to make certain modifications to the Cooperative Watershed Management Program, and to provide emergency drought funding.
Bill Number H.R. 4375/ S. 2356 Bill Title Twenty-First Century Dams Act Passed (S/H) Bill Sponsor Rep. Kuster, Ann M. [D-NH-2]; Sen. Feinstein, Dianne [D-CA]	Date Introduced 07/09/21 Assigned Committee(s) Transportation and Infrastructure; Ways and Means; Energy and Commerce; Natural Resources; Science, Space, and Technology; Agriculture; Senate Environment and Public Works Hearing(s) Co-sponsors 49 (28 Dem, 1 Rep) CA, WA, AK, AZ, NV, OR, TX,	WSWC Keywords Infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4375	Summary of Bill To provide funding to rehabilitate, retrofit, and remove the Nation's dams to improve the health of the Nation's rivers, improve public safety, and increase clean energy production
Bill Number H.R. 4339/ S. 2518 Bill Title Military PFAS Testing Disclosure Act Passed (S/H) Bill Sponsor Rep. Slotkin, Elissa [D-MI-8]; Sen. Rosen, Jacklyn [D-NV]	Date Introduced 07/01/21 Assigned Committee(s) Armed Services Hearing(s) Co-sponsors 2 (1 Dem, 1 Rep) CA, OH	WSWC Keywords PFAS Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4339/	Summary of Bill Directs DOD to publicly disclose the results of testing for perfluoroalkyl or polyfluoroalkyl substances
Bill Number H.R. 4336 Bill Title NEPA State Assignment Expansion Act Passed (S/H) Bill Sponsor Rep. Schweikert, David [R-AZ-6]	Date Introduced 07/01/21 Assigned Committee(s) Natural Resources; Transportation and Infrastructure Hearing(s) Co-sponsors 3 Republican co-sponsors from AZ, WY and WA	WSWC Keywords NEPA Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4336	Summary of Bill To amend NEPA to provide for project delivery programs

Bill Number H.R. 4284 Bill Title Clean Drinking Water Equity Act Passed (S/H) Bill Sponsor Rep. Ruiz, Raul [D-CA-36]	Date Introduced 06/30/21 Assigned Committee(s) Energy and Commerce Hearing(s) H.Rept. 117-76 Co-sponsors None	WSWC Keywords drinking water Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4284	Summary of Bill Amends the SDWA re: assistance for disadvantaged communities. Related provisions in IIJA.
Bill Number H.R. 4253 Bill Title no title Passed (S/H) Bill Sponsor Rep. Green, Al [D-TX-9]	Date Introduced 06/30/21 Assigned Committee(s) Energy and Commerce Hearing(s) Co-sponsors None	WSWC Keywords drinking water Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4253	Summary of Bill Directs EPA to promulgate a national primary drinking water regulation for chromium-6
Bill Number H.R. 4224 Bill Title PFAS Transparency Act Passed (S/H) Bill Sponsor Rep. Delgado, Antonio [D-NY-19]	Date Introduced 06/29/21 Assigned Committee(s) Transportation and Infrastructure Hearing(s) Co-sponsors 2 (1 Dem, 1 Rep)	WSWC Keywords PFAS Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4224	Summary of Bill Would require CWA disclosure of the introduction of perfluoroalkyl or polyfluoroalkyl substances into treatment works.
Bill Number S. 2286 Bill Title Western Water, Jobs, and Infrastructure Act Passed (S/H) Bill Sponsor Sen. Tester, Jon [D-MT]	Date Introduced 06/24/21 Assigned Committee(s) Energy and Natural Resources Hearing(s) Co-sponsors None	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/2286	Summary of Bill Would authorize DOI to use designated funding to pay for construction of authorized rural water projects.
Bill Number S. 2285 Bill Title	Date Introduced 06/24/21 Assigned Committee(s)	WSWC Keywords Congress.gov Link	Summary of Bill Would require EPA, DOI, and the Department of Agriculture to maintain the Urban Water Federal Partnership Program

Urban Waters Federal Partnership Act	Environment and Public Works	https://www.congress.gov/bill/117th-congress/senate-bill/2285	
Passed (S/H)	Hearing(s)		
Bill Sponsor Sen. Sinema, Kyrsten [D-AZ]	Co-sponsors Sen. Cornyn, John [R-TX] Sen. Kelly, Mark [D-AZ]		
Bill Number S. 2272	Date Introduced 06/24/21	WSWC Keywords drinking water	Summary of Bill Amends the SDWA to increase funding for lead reduction projects
Bill Title Lead-Free Drinking Water for All Act	Assigned Committee(s) Environment and Public Works	Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/2272	
Passed (S/H)	Hearing(s)		
Bill Sponsor Sen. Padilla, Alex [D-CA]	Co-sponsors 8 Dem. CA, OR		
Bill Number H.R. 4099	Date Introduced 06/23/21	WSWC Keywords infrastructure	Summary of Bill Directs DOI to establish a competitive grant program for eligible entities with large-scale recycling and reuse projects.
Bill Title Large-Scale Water Recycling Project Investment Act	Assigned Committee(s) Natural Resources	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4099	
Passed (S/H)	Hearing(s) 6/29/21: Subcommittee hearing		
Bill Sponsor Rep. Napolitano, Grace F. [D-CA-32]	Co-sponsors 12 Dem. CA, NV, AZ, Northern Mariana Islands		
Bill Number H.R. 4069	Date Introduced 06/22/21	WSWC Keywords infrastructure	Summary of Bill Amends the CWA to provide additional subsidization assistance to a municipality to carry out on-site wastewater treatment system projects.
Bill Title Septic Upgrade Grant Act	Assigned Committee(s) Transportation and Infrastructure	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/4069	
Passed (S/H)	Hearing(s)		
Bill Sponsor Rep. Suozzi, Thomas R. [D-NY-3]	Co-sponsors Rep. Garbarino, Andrew R. [R-NY-2]*		
Bill Number S. 2177	Date Introduced 06/22/21	WSWC Keywords abandoned mines	Summary of Bill Amends the Mineral Leasing Act to ensure sufficient bonding and complete and timely reclamation of land and water disturbed by Federal and Indian oil and gas production.
Bill Title	Assigned Committee(s)	Congress.gov Link	

Oil and Gas Bonding Reform and Orphaned Well Remediation Act	Energy and Natural Resources	https://www.congress.gov/bill/117th-congress/senate-bill/2177	
Passed (S/H)	Hearing(s)		
Bill Sponsor Sen. Bennet, Michael F. [D-CO]	Co-sponsors 5 Dem. CA, CO, NM, NJ		
Bill Number S. 2168	Date Introduced 06/22/21	WSWC Keywords WOTUS	Summary of Bill Amends the CWA to modify the definition of navigable waters, to include wetlands adjacent to permanent or continuously flowing bodies of water, and to exclude intermittent or ephemeral waters, groundwater, man-made canals or ditches, prior converted cropland, certain uplands, and other features. It also establishes a process for the U.S. Army Corps of Engineers to determine, upon request, whether certain waters are navigable waters.
Bill Title Define WOTUS Act	Assigned Committee(s) Environment and Public Works	Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/2168	
Passed (S/H)	Hearing(s)		
Bill Sponsor Sen. Braun, Mike [R-IN]	Co-sponsors 2 rep from IA		
Bill Number S. 2150	Date Introduced 06/21/21	WSWC Keywords	Summary of Bill Directs DOI, USDA, and FEMA to study wildland fire prevention, mitigation, suppression, management, and rehabilitation and make recommendations to improve policies. Also directs DOD and other agencies to inventory aircraft and parts available to use for wildland firefighting purposes.
Bill Title Wildland Fire Mitigation and Management Commission Act	Assigned Committee(s) Homeland Security and Governmental Affairs	Congress.gov Link	
Passed (S/H)	Hearing(s) 6/21/22: Committee hearing; S. Rpt. 117-121; placed on Senate Calendar		
Bill Sponsor Sen. Romney, Mitt [R-UT]	Co-sponsors		
Bill Number H.R. 3877	Date Introduced 06/14/21	WSWC Keywords infrastructure	Summary of Bill Amends the Reclamation Projects Authorization and Adjustment Act to authorize additional projects related to the Salton Sea.
Bill Title Salton Sea Projects Improvements Act	Assigned Committee(s) Natural Resources	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3877	
Passed (S/H)	Hearing(s) 6/29/21: Subcommittee hearing		
Bill Sponsor Rep. Ruiz, Raul [D-CA-36]	Co-sponsors 5 Dem. CA and FL		
Bill Number H.R. 3814	Date Introduced 06/11/21	WSWC Keywords NEPA	Summary of Bill This bill revises the environmental review process required under NEPA, including by (1) establishing deadlines for federal agencies to complete reviews of the environmental effects of proposed major federal actions; (2) establishing penalties for agencies that do not comply with these deadlines; (3) limiting the number of assessment documents required for proposed major federal actions, requiring agencies to reuse certain research or documents, and allowing agencies to adopt environmental documents prepared by states or third parties; (4) requiring agencies to only consider alternatives to proposed actions that are technically and economically feasible; (5) prohibiting agencies from considering whether proposed actions or alternatives to those actions will have an effect on climate change; and (6) establishing
Bill Title Undoing NEPA's Substantial Harm by Advancing Concepts that Kickstart the Liberation of the Economy (UNSHACKLE) Act	Assigned Committee(s) Natural Resources; Judiciary; Transportation and Infrastructure; Energy and Commerce	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3814	

Passed (S/H)	Hearing(s)		requirements concerning the judicial review of NEPA cases.
Bill Sponsor Rep. Cheney, Liz [R-WY-At Large]	Co-sponsors Rep. Bacon, Don [R-NE-2]		
Bill Number H.R. 3751 Bill Title Clean Water Infrastructure Resilience and Sustainability Act	Date Introduced 06/08/21 Assigned Committee(s) Transportation and Infrastructure	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3751	Summary of Bill Amends the CWA to establish a grant program for eligible entities to increase the resilience of POTWs in natural disasters.
Passed (S/H)	Hearing(s)		
Bill Sponsor Rep. Carbajal, Salud O. [D-CA-24]	Co-sponsors None		
Bill Number H.R. 3745 Bill Title Decentralized Wastewater Grant Act	Date Introduced 06/08/21 Assigned Committee(s) Transportation and Infrastructure	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3745	Summary of Bill Amends the CWA to establish a decentralized wastewater grant program.
Passed (S/H)	Hearing(s)		
Bill Sponsor Rep. Sewell, Terri A. [D-AL-7]	Co-sponsors None		
Bill Number H.R. 3722 Bill Title 21st Century Infrastructure Bank Act	Date Introduced 06/04/21 Assigned Committee(s) Transportation and Infrastructure; Financial Services	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3722	Summary of Bill Establishes a wholly owned Government corporation to provide financial assistance for qualified infrastructure projects, sponsored by states, tribes or other specified organizations, and involving the construction, maintenance, improvement, or repair of water, energy, or other specified facilities.
Passed (S/H)	Hearing(s)		
Bill Sponsor Rep. Maloney, Sean Patrick [D-NY-18]	Co-sponsors None		
Bill Number H.R. 3701 Bill Title Protecting Infrastructure and Promoting the Economy (PIPE) Act	Date Introduced 06/04/21 Assigned Committee(s) Transportation and Infrastructure; Energy and Commerce	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3701	Summary of Bill Establishes water infrastructure grant programs
Passed (S/H)	Hearing(s)		
Bill Sponsor Rep. Delgado, Antonio [D-NY-19]	Co-sponsors 4 Democrats, CA		

Bill Number H.R. 3700 Bill Title Clean Water for Rural America Act Passed (S/H) Bill Sponsor Rep. Delgado, Antonio [D-NY-19]	Date Introduced 06/04/21 Assigned Committee(s) Transportation and Infrastructure Hearing(s) Co-sponsors Rep. Van Drew, Jefferson [R-NJ-2]*	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3700	Summary of Bill Amends the CWA to reauthorize grants for technical assistance to rural, smal, and tribal municipalities.
Bill Number H.R. 3691 Bill Title Wastewater Infrastructure Modernization Act Passed (S/H) Bill Sponsor Rep. Bourdeaux, Carolyn [D-GA-7]	Date Introduced 06/04/21 Assigned Committee(s) Transportation and Infrastructure Hearing(s) Co-sponsors None	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3691	Summary of Bill Amends the CWA to establish a grant program for smart wastewater infrastructure technology.
Bill Number H.R. 3684 Bill Title INVEST in America Act > Infrastructure Investment and Jobs Act (IIJA) Passed (S/H) 7/2/21: House passed 221-201 8/10/21: Senate passed 69-30 (amended) 11/15/21: Became Law (P.L. 117-58) Bill Sponsor Rep. DeFazio, Peter A. [D-OR-4]	Date Introduced 06/04/21 Assigned Committee(s) Transportation and Infrastructure Hearing(s) Co-sponsors None	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3684	Summary of Bill The bill as introduced would authorize \$53B for the Drinking Water State Revolving Fund (SRF), and \$40B for the Clean Water SRF. It directs EPA to set PFAS national standards within two years. It would authorize \$45B to replace lead service lines, \$2B for stormwater and sewer overflow projects, \$2.5B for state water pollution control programs, and \$1B for alternative water source and water recycling projects to augment existing water supplies. It provides funding for technical assistance for small, rural, and tribal communities. It would also establish a new grant program for failing septic systems and communities that lack access to adequate sewage treatment systems. The \$1.2T amended version passed by the Senate includes both authorizations and appropriations for infrastructure relating to a variety of water supply, water quality, and watershed protections programs. See WSW #2465 Special Report.
Bill Number H.R. 3668 Bill Title Ensuring Water Investments Benefit Communities Act Passed (S/H) Bill Sponsor Rep. Moore, Gwen [D-WI-4]	Date Introduced 06/01/21 Assigned Committee(s) Transportation and Infrastructure; Energy and Commerce Hearing(s) Co-sponsors None	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3668	Summary of Bill Would require recipients of assistance for certain water infrastructure projects to provide job training, apprenticeships, and other employment opportunities for low-income persons
Bill Number H.R. 3622	Date Introduced 05/28/21	WSWC Keywords PFAS	Summary of Bill Directs EPA to develop PFAS effluent limitation guidelines and standards under the CWA, and to provide grants to states to implement them

Bill Title Clean Water Standards for PFAS Act	Assigned Committee(s) Transportation and Infrastructure	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3622	POTWs to implement them.
Passed (S/H)	Hearing(s)		
Bill Sponsor Rep. Pappas, Chris [D-NH-1]	Co-sponsors None		
Bill Number S. 1911	Date Introduced 05/27/21	WSWC Keywords Indian water rights	Summary of Bill Authorizes the water rights compact between the tribes, Montana, and the U.S., to make available the priority funding from the Reclamation Water Settlements Fund, authorizes various land transfers (30,844 acres), allocates 20,000 acre-feet per year stored in Lake Elwell, authorizes modifications to the Milk River Project, and various other provisions.
Bill Title Gros Ventre and Assiniboine Tribes of Fort Belknap Indian Community Water Rights Settlement Act	Assigned Committee(s) Indian Affairs	Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/1911	
Passed (S/H)	Hearing(s) 10/6/21: SIA hearing; S. Rept. 117-138.		
Bill Sponsor Sen. Tester, Jon [D-MT]	Co-sponsors None		
Bill Number H.R. 3293	Date Introduced 05/18/21	WSWC Keywords drinking water; wastewater	Summary of Bill Amends the SDWA and CWA to establish programs to assist low-income households in maintaining access to drinking water and wastewater services.
Bill Title Low-Income Water Customer Assistance Programs Act	Assigned Committee(s) Transportation and Infrastructure; Energy and Commerce; Ways and Means	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3293	
Passed (S/H)	Hearing(s) 6/21/21: Committee ordered reported (amended) by a vote of 32-24; H.Rpt. 117-77		
Bill Sponsor Rep. Blunt Rochester, Lisa [D-DE-At Large]	Co-sponsors 6 Democrat and 1 Republican co-sponsor, including from CA and NV		
Bill Number H.R. 3291	Date Introduced 5/18//21	WSWC Keywords PFAS; resilience	Summary of Bill Amends the SDWA to provide assistance for states, territories, areas affected by natural disasters, and water systems and schools affected by PFAS or lead, and directs EPA to promulgate national primary drinking water regulations for PFAS, microcystin toxin, and 1,4-dioxane
Bill Title Assistance, Quality, and Affordability Act	Assigned Committee(s) Energy and Commerce	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3291	
Passed (S/H)	Hearing(s) 6/23/21: Committee ordered reported with amendment, 32-24; H. Rept. 117-76, Calendar No. 52.		
Bill Sponsor Rep. Tonko, Paul [D-NY-20]	Co-sponsors 2 Democratic co-sponsors		

Bill Number H.R. 3267 Bill Title Protect Drinking Water from PFAS Act Passed (S/H) Bill Sponsor Rep. Boyle, Brendan F. [D-PA-2]	Date Introduced 05/17/21 Assigned Committee(s) Energy and Commerce Hearing(s) Co-sponsors 11 Democrats co-sponsors, including from CA and AZ	WSWC Keywords water quality; PFAS Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3267	Summary of Bill To amend the Safe Drinking Water Act to require the Administrator of the Environmental Protection Agency to publish a maximum contaminant level goal and promulgate a national primary drinking water regulation for total per- and polyfluoroalkyl substances, and for other purposes.
Bill Number H.R. 3238 Bill Title Colonia Infrastructure Improvement Act Passed (S/H) Bill Sponsor Rep. Escobar, Veronica [D-TX-16]	Date Introduced 05/14/21 Assigned Committee(s) Energy and Commerce; Transportation and Infrastructure Hearing(s) Co-sponsors None	WSWC Keywords water quality Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3238	Summary of Bill Amends the SDWA to reauthorize existing and establish new grant programs providing drinking water and wastewater assistance to colonias.
Bill Number H.R. 3228 Bill Title National Coastal Resilience Data and Services Act Passed (S/H) Bill Sponsor Rep. Velazquez, Nydia M. [D-NY-7]	Date Introduced 05/13/21 Assigned Committee(s) Natural Resources; Science, Space and Technology Hearing(s) 6/22/21: NR hearing 1/19/22: NR ordered reported and amended by voice vote Co-sponsors 4 Democrat co-sponsors, CA	WSWC Keywords data Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3228	Summary of Bill Directs NOAA to improve science, data, and services that enable sound decision-making in response to coastal flood risk, including impacts of sea level rise, storm events, changing Great Lakes water levels, and land subsidence
Bill Number H.R. 3218 Bill Title Wastewater Infrastructure Improvement Act Passed (S/H)	Date Introduced 05/13/21 Assigned Committee(s) Transportation and Infrastructure Hearing(s)	WSWC Keywords SRF Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3218	Summary of Bill Amends the CWA to reauthorize the Clean Water State Revolving Fund for the first time since 1994 and authorizes \$14B in spending for this fund over the next 5 years.

	7/13/21: House subcommittee hearing 10/19/21: Senate subcommittee hearing 11/18/21: SENR ordered reported, S. Rpt. 117-85 2/28/22: Placed on Senate Calendar with report No. 117-85. Co-sponsors 3 Republicans		
Bill Sponsor Rep. Rouzer, David [R-NC-7]			
Bill Number H.R. 3132/S. 1583 Bill Title Lake Tahoe Restoration Reauthorization Act Passed (S/H) Bill Sponsor Rep. Amodei, Mark E. [R-NV-2]	Date Introduced 05/13/21 Assigned Committee(s) Natural Resources; Transportation and Infrastructure; Agriculture; Energy and Natural Resources Hearing(s) 7/13/21: House subcommittee hearing 10/19/21: Senate subcommittee hearing 11/18/21: SENR ordered reported, S. Rpt. 117-85 2/28/22: Placed on Senate Calendar with report No. 117-85. Co-sponsors 4 Democrat co-sponsors in NV and CA	WSWC Keywords water quality Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3132	Summary of Bill Reauthorizes the Lake Tahoe Restoration Act
Bill Number S. 904/H.R. 3113 Bill Title Modernizing Access to Our Public Land Act Passed (S/H) 4/29/22: HR 3113 Became Public Law No: 117-114. Passed House 414-9; passed Senate by unanimous consent Bill Sponsor	Date Introduced 05/11/21 Assigned Committee(s) Natural Resources; Agriculture; Transportation and Infrastructure; Energy and Natural Resources Hearing(s) 6/16/21: SENR subcommittee hearing 7/14/21: HNR hearing; ordered reported by unanimous consent 11/18/21: SENR ordered reported with a substitute 2/28/21 report No. 117-83- Senate, Calendar No. 284. Co-sponsors	WSWC Keywords WOTUS(?), mapping, water resources, water ... Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3113; https://www.congress.gov/bill/117th-congress/senate-bill/904	Summary of Bill This bill directs the Department of the Interior, the Forest Service, and the U.S. Army Corps of Engineers to jointly develop and adopt interagency standards to ensure compatibility and interoperability among federal databases for the collection and dissemination of outdoor recreation data related to federal lands. Interior, the Forest Service, and the Corps of Engineers must digitize and publish geographic information system mapping data that includes federal interests, including easements and rights-of-way, in private land; status information as to whether roads and trails are open or closed; the dates on which roads and trails are seasonally opened and closed; the types of vehicles that are allowed on each segment of roads and trails; the boundaries of areas where hunting or recreational shooting is regulated or closed; and the boundaries of any portion of a body of water that is closed to entry, is closed to watercraft, or has horsepower limitations for watercraft.

Sen. Risch, James E. [R-ID], Rep. Moore, Blake [R-UT-1]	17 (10 Dem, 1 Rep, 1 Independent) Rep. Fulcher, Russ [R-ID-1], Rep. Neguse, Joe [D-CO-2], Rep. Schrier, Kim [D-WA-8] CA, AZ, CO, NM, TX, ID, NV,		
Bill Number H.R. 3112 Bill Title Western Water Recycling and Drought Relief Act Passed (S/H) Bill Sponsor Rep. McNerney, Jerry [D-CA-9]	Date Introduced 05/11/21 Assigned Committee(s) Natural Resources Hearing(s) Co-sponsors Rep. Swalwell, Eric [D-CA-15], Rep. Panetta, Jimmy [D-CA-20], Rep. Eshoo, Anna G. [D-CA-18]	WSWC Keywords water reuse Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3112	Summary of Bill To amend the Reclamation Wastewater and Groundwater Study and Facilities Act to authorize certain recycled water projects, and for other purposes.
Bill Number H.R. 3023 Bill Title Restoring WIFIA Eligibility Act Passed (S/H) Bill Sponsor Rep. Costa, Jim [D-CA-16]	Date Introduced 05/07/21 Assigned Committee(s) Transportation and Infrastructure; Energy and Commerce Hearing(s) Co-sponsors Rep. Curtis, John R. [R-UT-3] and Rep. Garamendi, John [D-CA-3]	WSWC Keywords WIFIA Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/3023	Summary of Bill To amend WIFIA 2014 with respect to budgetary treatment of certain amounts of financial assistance as a non-federal loan or loan guarantee if the eligible entity is not a federal entity, agency, or instrumentality, and the dedicated sources of repayment of that financial assistance are non-federal revenue sources.
Bill Number H.R. 2979 Bill Title no title Passed (S/H) Bill Sponsor Rep. Garamendi, John [D-CA-3]	Date Introduced 05/04/21 Assigned Committee(s) Transportation and Infrastructure; Energy and Commerce Hearing(s) Co-sponsors 3 (2 Rep 1 Dem) Rep. Newhouse, Dan [R-WA-4]*, CA	WSWC Keywords water supply, water resources, WIFIA Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/2979	Summary of Bill To amend the Water Infrastructure Finance and Innovation Act of 2014 with respect to the final maturity date of certain loans, and for other purposes. Would extend length of loan repayment to 55 years (from 35 years) and open the program to water supply projects such as reservoirs and aquifer storage
Bill Number H.R. 2952 Bill Title Water Infrastructure Sustainability and Efficiency (WISE) Act Passed (S/H)	Date Introduced 05/03/21 Assigned Committee(s) Transportation and Infrastructure Hearing(s)	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/2952	Summary of Bill To amend the CWA to require at least 20% of funds appropriated for revolving fund capitalization grants be used for green projects

Bill Sponsor Rep. Williams, Nikema [D-GA-5]	Co-sponsors None		
Bill Number S. 1455 Bill Title Revitalizing the Economy of Coal Communities by Leveraging Local Activities and Investing More (RECLAIM) Act Passed (S/H) Bill Sponsor Sen. Manchin, Joe, III [D-WV]	Date Introduced 04/29/21 Assigned Committee(s) Energy and Natural Resources Hearing(s) Co-sponsors 4 Democrats	WSWC Keywords abandoned mines Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/1455	Summary of Bill To amend the Surface Mining Control and Reclamation Act of 1977 (30 USC 1231) to provide funds to States and Indian tribes for the purpose of promoting economic revitalization, diversification, and development in economically distressed communities through the reclamation and restoration of land and water resources adversely affected by coal mining carried out before August 3, 1977. Authorizes \$200M annually for FY22-26.
Bill Number H.R. 2895 Bill Title Reinventing Economic Partnerships And Infrastructure Redevelopment (REPAIR) Act Passed (S/H) Bill Sponsor Rep. Peters, Scott H. [D-CA-52]	Date Introduced 04/28/21 Assigned Committee(s) Transportation and Infrastructure; Ways and Means; Budget Hearing(s) Co-sponsors 1 Republican OH	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/2895	Summary of Bill To facilitate efficient investments and financing of infrastructure projects and new, long-term job creation through the establishment of an Infrastructure Financing Authority
Bill Number H.R. 2810 Bill Title Build America, Buy America Act Passed (S/H) Bill Sponsor Rep. Ryan, Tim [D-OH-13]	Date Introduced 04/22/21 Assigned Committee(s) Transportation and Infrastructure; Energy and Commerce Hearing(s) Co-sponsors 11 (8 Dem, 3 Rep) CA	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/2810	Summary of Bill To ensure that certain Federal infrastructure programs require the use of materials produced in the United States
Bill Number H.R. 2781 Bill Title Water Resources Research Amendments Act Passed (S/H) Bill Sponsor Rep. Harder, Josh [D-CA-10]	Date Introduced 04/22/21 Assigned Committee(s) Natural Resources Hearing(s) Co-sponsors 1 Dem CA, 1 Rep VA	WSWC Keywords water resources Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/2781	Summary of Bill To amend the Water Resources Research Act of 1984 to reauthorize grants for and require applied water supply research regarding the water resources research and technology institutes established under that Act

Bill Number S. 1341 Bill Title Water Resources Research Amendments Act Passed (S/H) Bill Sponsor Sen. Cardin, Benjamin L. [D-MD]	Date Introduced 04/22/21 Assigned Committee(s) Environment and Public Works Hearing(s) Co-sponsors 3 (2 Rep, 1 Dem)	WSWC Keywords water resources Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/1341	Summary of Bill To amend the Water Resources Research Act of 1984 to reauthorize grants for and require applied water supply research regarding the water resources research and technology institutes established under that Act
Bill Number H.R. 2660 Bill Title Withstanding Attempts to Encroach on our Resources (WATER) Act Passed (S/H) Bill Sponsor Rep. Latta, Robert E. [R-OH-5]	Date Introduced 04/19/21 Assigned Committee(s) Transportation and Infrastructure Hearing(s) Co-sponsors 21 Republican co-sponsors, TX	WSWC Keywords WOTUS Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/2660	Summary of Bill To amend the CWA to codify the definition of "waters of the United States" Includes language on congressional findings regarding the infringements of the 2015 Clean Water Rule, and Section 502(7) of the Federal Water Pollution Control Act (33 U.S.C. 1362(7)) is amended by striking “, including the territorial seas.” and inserting “(as such term is defined in section 120.2 of title 40, Code of Federal Regulations, as in effect on June 22, 2020).”
Bill Number S. 1214 Bill Title State Grazing Management Authority Act Passed (S/H) Bill Sponsor Sen. Lee, Mike [R-UT]	Date Introduced 04/19/21 Assigned Committee(s) Energy and Natural Resources Hearing(s) 10/19/21: SENR Subcommittee hearing Co-sponsors None	WSWC Keywords grazing Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/1214	Summary of Bill Amends FLPMA section 402 (43 USC 1752) to authorize the Departments of Interior and Agriculture to enter into cooperative agreements with states to provide for state administration of allotment management plans.
Bill Number S. 1179 Bill Title Canal Conveyance Capacity Restoration Act Passed (S/H) Bill Sponsor Sen. Feinstein, Dianne [D-CA]	Date Introduced 04/15/21 Assigned Committee(s) Energy and Natural Resources Hearing(s) 5/25/22: Subcommittee hearing Co-sponsors None	WSWC Keywords groundwater Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/1179	Summary of Bill To provide financial assistance for projects to address certain subsidence impacts in the State of California
Bill Number H.Res. 320 Bill Title	Date Introduced 04/15/21 Assigned Committee(s)	WSWC Keywords tribal drinking water Congress.gov Link	Summary of Bill Recognizing the critical importance of access to reliable, clean drinking water for Native Americans and Alaska Natives and confirming the responsibility of the Federal Government to ensure such water access.

No title	Natural Resources; Energy and Commerce	https://www.congress.gov/bill/117th-congress/house-resolution/320	
Passed (S/H)	Hearing(s) 11/4/21: Subcommittee hearing		
Bill Sponsor Rep. Neguse, Joe [D-CO-2]	Co-sponsors 5 Dem CA, NM		
Bill Number H.Res. 318 Bill Title Expressing the sense of the House of Representatives that clean water is a national priority and that the April 21, 2020, Navigable Waters Protection Rule should not be withdrawn or vacated. Passed (S/H) Bill Sponsor Rep. Miller-Meeks, Mariannette [R-IA-2]	Date Introduced 04/14/21 Assigned Committee(s) Transportation and Infrastructure Hearing(s) Co-sponsors 125 Republican	WSWC Keywords WOTUS Congress.gov Link https://www.congress.gov/bill/117th-congress/house-resolution/318	Summary of Bill Expressing the sense of the House of Representatives that clean water is a national priority and that the April 21, 2020, Navigable Waters Protection Rule should not be withdrawn or vacated.
Bill Number H.R. 2513 Bill Title Lead Abatement for Families Act Passed (S/H) Bill Sponsor Rep. Garcia, Jesus G. "Chuy" [D-IL-4]	Date Introduced 04/14/21 Assigned Committee(s) Financial Services Hearing(s) Co-sponsors 43 Democrats CA, WA, OR	WSWC Keywords water quality Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/2513	Summary of Bill Authorizes HUD grants to replace lead-based water service pipes for federal assisted housing.
Bill Number H.R. 2468 Bill Title Made in America Act Passed (S/H) Bill Sponsor Rep. Garamendi, John [D-CA-3]	Date Introduced 04/13/21 Assigned Committee(s) Transportation and Infrastructure; Agriculture; Energy and Commerce; Financial Services; Homeland Security; Natural Resources Hearing(s) Co-sponsors 11 (10 Dem, 1 Rep.)	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/2468	Summary of Bill To ensure that certain materials used in carrying out Federal infrastructure aid programs are made in the United States
Bill Number H.R. 2467 Bill Title	Date Introduced 04/13/21 Assigned Committee(s)	WSWC Keywords water quality Congress.gov Link	Summary of Bill To require EPA to designate PFAS as hazardous substances under CERCLA

PFAS Action Act Passed (S/H) 7/21/21: Passed House 241-183 Bill Sponsor Rep. Dingell, Debbie [D-MI-12]	Energy and Commerce; Transportation and Infrastructure; Environment and Public Works Hearing(s) 6/23/21: Ordered reported 33-20 Co-sponsors 49 (44 Dem, 5Rep) CA, AZ, CO,	https://www.congress.gov/bill/117th-congress/house-bill/2467	
Bill Number H.R. 2202 Bill Title Fracturing Responsibility and Awareness of Chemicals Act Passed (S/H) Bill Sponsor Rep. DeGette, Diana [D-CO-1]	Date Introduced 03/26/21 Assigned Committee(s) Energy and Commerce Hearing(s) Co-sponsors 37 Dem. CA, OR, AZ, CO, WA	WSWC Keywords fracking Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/2202	Summary of Bill To repeal the exemption for hydraulic fracturing in the Safe Drinking Water Act
Bill Number H.R. 2197 Bill Title Innovative Materials for America's Growth and Infrastructure Newly Expanded (IMAGINE) Act Passed (S/H) Bill Sponsor Rep. Cicilline, David N. [D-RI-1]	Date Introduced 03/26/21 Assigned Committee(s) Transportation and Infrastructure; Science, Space, and Technology; Energy and Commerce Hearing(s) Co-sponsors 2 (1R, 1D) IL, WA	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/2197	Summary of Bill To encourage the research and use of innovative materials and associated techniques in the construction and preservation of the domestic transportation and water infrastructure system. Establishes an Interagency Innovative Materials Standards Task Force, provides grants for the design and installation of water infrastructure projects.
Bill Number S. Res. 141 Bill Title No title Passed (S/H) Bill Sponsor Sen. Bennet, Michael F. [D-CO]	Date Introduced 03/25/21 Assigned Committee(s) Indian Affairs Hearing(s) Co-sponsors 11D, NM, OR, WA, AZ, MT	WSWC Keywords tribal drinking water Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-resolution/141	Summary of Bill A resolution recognizing the critical importance of access to reliable, clean drinking water for Native Americans and Alaska Natives and confirming the responsibility of the Federal Government to ensure such water access.
Bill Number S. 953 Bill Title Water for Conservation and Farming Act Passed (S/H)	Date Introduced 03/24/21 Assigned Committee(s) Energy and Natural Resources Hearing(s)	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/953	Summary of Bill Establishes a Bureau of Reclamation Infrastructure Fund and transfers \$300M annually from the Reclamation Fund from FY2031-FY2061. A third of that amount would be spent annually on each of (1) water reclamation and reuse projects, (2) water management (WaterSMART) grants under 42 USC 10364, and (3) dam safety. It expands and extends the WaterSMART program and authorizes \$700M to be available until expended. It establishes a program to compensate the eligible agricultural producers for the creation and maintenance of waterbird and shorebird habitats. It reauthorizes the Cooperative Watershed Management Program (16 USC 1015a). It establishes a competitive grant program for the design, implementation, and monitoring of conservation outcomes of habitat restoration projects that improve watershed health. It directs EWS to develop a drought plan for critically important fisheries. And it reauthorizes

Bill Sponsor Sen. Wyden, Ron [D-OR]	5/25/22: Subcommittee hearing Co-sponsors Sen. Merkley, Jeff [D-OR]		improve watershed health. It directs FWS to develop a drought plan for critically important fisheries. And it reauthorizes the Fisheries Restoration and Irrigation Mitigation Act.
Bill Number S. 939 Bill Title Innovative Materials for America's Growth and Infrastructure Newly Expanded (IMAGINE) Act Passed (S/H) Bill Sponsor Sen. Whitehouse, Sheldon [D-RI]	Date Introduced 03/24/21 Assigned Committee(s) Environment and Public Works Hearing(s) Co-sponsors Sen. Collins, Susan M. [R-ME]	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/939	Summary of Bill (1) to encourage the research and use of innovative materials, in concert with traditional materials, and associated techniques in the construction and preservation of the domestic infrastructure network; (2) to accelerate the deployment and extend the service life, improve the performance, and reduce the cost of infrastructure projects; and (3) to improve the economy, resilience, maintainability, sustainability, and safety of the domestic infrastructure network. Directs EPA to establish a "Water Infrastructure Innovation Program", to provide grants for the design and installation of water infrastructure projects, including wastewater transport and treatment systems and drinking water treatment and distribution systems, that use innovative materials to reduce total costs, including operation and preservation expenses, and extend the service life of installed structures.
Bill Number S. 914 Bill Title Drinking Water and Wastewater Infrastructure Act Passed (S/H) 4/29/21: Senate passed 89-2 Bill Sponsor Sen. Duckworth, Tammy [D-IL]	Date Introduced 03/23/21 Assigned Committee(s) Environment and Public Works Hearing(s) 4/14/21: EPW reported with amendment; S. Rept. 117-20 Co-sponsors 6 Democrat and 7 Republican co-sponsors, including AK, AZ, CA, ND, OK, WY	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/914	Summary of Bill This bill reauthorizes through FY2026 or establishes a variety of programs for water infrastructure. Specifically, it supports programs to provide safe drinking water or treat wastewater, such as sewer overflows or stormwater. For example, the bill reauthorizes and revises the clean water state revolving fund (SRF) and the drinking water SRF.
Bill Number H.R. 2173 Bill Title Wastewater Workforce Investment Act Passed (S/H) Bill Sponsor Rep. Stanton, Greg [D-AZ-9]	Date Introduced 03/23/21 Assigned Committee(s) Transportation and Infrastructure Hearing(s) Co-sponsors	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/2173	Summary of Bill To amend the CWA with respect to wastewater infrastructure workforce development; allows states to reserve CW SRFs funds to address POTW workforce development needs.
Bill Number H.R. 2164 Bill Title Safe Hydration is an American Right in Energy Development Act Passed (S/H) Bill Sponsor	Date Introduced 03/23/21 Assigned Committee(s) Energy and Commerce Hearing(s) Co-sponsors	WSWC Keywords fracking Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/2164	Summary of Bill To amend the Safe Drinking Water Act to require testing of underground sources of drinking water in connection with hydraulic fracturing operations.

Rep. Schakowsky, Janice D. [D-IL-9]	37 Democrats including CA, CO, OR, AZ, WA		
Bill Number H.R. 2155 Bill Title Toxic Health Threat Warning Act Passed (S/H) Bill Sponsor Rep. Mast, Brian J. [R-FL-18]	Date Introduced 03/23/21 Assigned Committee(s) Transportation and Infrastructure Hearing(s) Co-sponsors	WSWC Keywords HABs Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/2155	Summary of Bill To require the Corps of Engineers to notify affected communities before releasing water contaminated with cyanobacteria from flood risk management projects.
Bill Number H.R. 2133 Bill Title Focused Reduction of Effluence and Stormwater runoff through Hydrofracking Environmental Regulation (FRESHER) Act Passed (S/H) Bill Sponsor Rep. Cartwright, Matt [D-PA-8]	Date Introduced 03/23/21 Assigned Committee(s) Transportation and Infrastructure Hearing(s) Co-sponsors 39 Democrats from CA, NY, VA, CO, CT, OR, AZ, DC, FL, IL, MD, MA, MN, NJ, TN, VT, WA	WSWC Keywords water quality Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/2133	Summary of Bill To amend the CWA and direct the Secretary of the Interior to conduct a study with respect to stormwater runoff from oil and gas operations. It would allow EPA to issue NPDES permits for stormwater discharges for certain collected runoff from mining, oil, and gas operations. The DOI study would analyze (1) measurable contamination, (2) groundwater resources, and (3) the susceptibility of aquifers to contamination from stormwater runoff associated with operations.
Bill Number S. 855 Bill Title Water Rights Protection Act Passed (S/H) Bill Sponsor Sen. Barrasso, John [R-WY]	Date Introduced 03/18/21 Assigned Committee(s) Energy and Natural Resources Hearing(s) Co-sponsors 2R, ID	WSWC Keywords water rights Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/855	Summary of Bill Prohibits Departments of the Interior and Agriculture from conditioning permits, leases, etc., on the transfer of any water right to the United States or on any impairment of title granted or otherwise recognized under state law by federal or state action. Any related rules or actions: (1) shall recognize the longstanding water use authority of the states and coordinate with the states to ensure that any federal action is consistent with applicable state water law, and (2) shall not adversely affect the authority of a state in permitting the beneficial use of water or adjudicating water rights.
Bill Number H.R. 1954 Bill Title Harmful Algal Bloom Essential Forecasting Act Passed (S/H) Bill Sponsor	Date Introduced 03/17/21 Assigned Committee(s) Science, Space, and Technology; Committee on Natural Resources Hearing(s) Co-sponsors	WSWC Keywords HABs Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/1954	Summary of Bill To amend the Harmful Algal Bloom and Hypoxia Research and Control Act of 1998 to clarify that during a lapse in appropriations certain services relating to the Harmful Algal Bloom Operational Forecasting System are excepted services under the Anti-Deficiency Act.

Rep. Donalds, Byron [R-FL-19]	4 Democrats and 5 Republicans from MI, FL, OH, NJ, VA		
Bill Number H.R. 2008 Bill Title Local Water Protection Act Passed (S/H) 6/15/21: House passed under suspension of the rules Bill Sponsor Rep. Craig, Angie [D-MN-2]	Date Introduced 03/18/21 Assigned Committee(s) Transportation and Infrastructure; Environment and Public Works Hearing(s) 3/24/21: Ordered reported by voice vote; H. Rpt. 117-45, referred to Senate Co-sponsors Rep. Mast, Brian J. [R-FL-18]	WSWC Keywords water quality Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/2008?q=%7B%22search%22%3A%5B%22H.R.+2008%22%2C%22H.R.%22%2C%222008%22%5D%7D&s=3&r=1	Summary of Bill This bill reauthorizes through FY2026 grants to states for (1) programs that manage and control nonpoint source pollution (e.g., runoff from a variety of sources) added to navigable waters, and (2) groundwater quality protection activities to advance state implementation of such programs. Directs \$200M for programs in FY22-26.
Bill Number S. 755 Bill Title Emergency Water Infrastructure Improvements Act Passed (S/H) Bill Sponsor Sen. Hyde-Smith, Cindy [R-MS]	Date Introduced 03/16/21 Assigned Committee(s) Environment and Public Works Hearing(s) Co-sponsors None	WSWC Keywords infrastructure Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/755	Summary of Bill Authorizes funds for public water systems damaged by Winter Storms Uri and Viola, or not fewer than five Presidentially declared disasters. Eligible states would be authorized to use SRF funds to address contaminants in drinking water, including repair and replacement of water distribution systems. Authorizes \$150M for additional DWSRF capitalization grants. Requires states file an intended use plan with EPA and not duplicate work already undertaken by another federal agency.
Bill Number H.R. 1915 Bill Title Water Quality Protection and Job Creation Act Passed (S/H) Bill Sponsor Rep. DeFazio, Peter A. [D-OR-4]	Date Introduced 03/16/21 Assigned Committee(s) Transportation and Infrastructure Hearing(s) 6/9/21: T&I markup session, ordered reported, vote 42-25; H. Rpt. 117-69. Union Calander No. 48 Co-sponsors 67 (65D, 2R) CA, OR, NV, KS, AZ, TX, WA,	WSWC Keywords water quality Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/1915	Summary of Bill Amends the CWA to authorize various programs and funding: CWA 106(a) state management assistance grants are authorized at \$500M annually FY22-26; CWA 122 watershed pilot projects are authorized at \$200M for FY22-26; it deletes the western regional consideration for the CWA 220(d) alternative water source pilot projects and authorizes \$200M annually FY22-26. It authorizes CWA 221 sewer overflow and stormwater reuse municipal grants at \$400M annually for FY22-26. It adds a section on grants for POTWs implementing pretreatment standards for PFAS or any contaminant of emerging concern, and authorizes \$200M annually for FY22-26. For SRFs, CWA 607 would be amended to authorize \$8B annually for FY22-26. It also authorizes \$500M annually (FY22-26) for CWA 518(c)(3) grants to tribes for projects, training, technical assistance and O&M educational programs.
Bill Number H.R. 1869 Bill Title	Date Introduced 03/12/21 Assigned Committee(s)	WSWC Keywords Indian water rights Congress.gov Link	Summary of Bill This bill directs the Department of the Interior to deposit specified interest payments into the Shoshone-Paiute Tribes Water Rights Development Fund and the Shoshone-Paiute Tribes Operation and Maintenance Fund. These funds were established under the water rights settlement agreement for the Shoshone-Paiute Tribes of the Duck Valley

Technical Correction to the Shoshone-Paiute Tribes of the Duck Valley Reservation Water Rights Settlement Act Passed (S/H) Bill Sponsor Rep. Amodei, Mark E. [R-NV-2]	Natural Resources Hearing(s) 6/29/21: Subcommittee hearing Co-sponsors None	https://www.congress.gov/bill/117th-congress/house-bill/1869	Established under the water rights settlement agreement for the Shoshone-Paiute Tribes of the Duck Valley Reservation.
Bill Number H.R. 1881 Bill Title To amend the Federal Water Pollution Control Act with respect to permitting terms, and for other purposes. Passed (S/H) Bill Sponsor Rep. Garamendi, John [D-CA-3]	Date Introduced 03/12/21 Assigned Committee(s) Transportation and Infrastructure Hearing(s) Co-sponsors 5 (4R 1D) Rep. Calvert, Ken [R-CA-42], Rep. LaMalfa, Doug [R-CA-1], Rep. Schiff, Adam B. [D-CA-28]	WSWC Keywords water quality Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/1881	Summary of Bill To amend the CWA with respect to permitting terms.
Bill Number H.R. 1851 Bill Title St. Mary's Reinvestment Act Passed (S/H) Bill Sponsor Rep. Rosendale Sr., Matthew M. [R-MT-At Large]	Date Introduced 03/12/21 Assigned Committee(s) Natural Resources Hearing(s) 6/29/21: Subcommittee hearing Co-Sponsors None	WSWC Keywords Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/1851	Summary of Bill Authorizes Reclamation to use funds through FY2032 to rehabilitate the St. Mary Diversion Dam and Canal Headworks, which are part of the Milk River Project in Montana; also to (1) coordinate with the Blackfeet Tribe with respect to the replacement activities that are carried out for the rehabilitation, (2) study the ability of project beneficiaries (i.e., water users) to pay for the costs of the rehabilitation, and (3) establish repayment terms based on the study; 26% federal cost share.
Bill Number H.R. 1820 Bill Title Revoking EPA's Tyrannical Ruling Over Approved Commercial Tasks Involving no Violations of Environmental (RETROACTIVE) Policy Act Passed (S/H) Bill Sponsor Rep. Gibbs, Bob [R-OH-7]	Date Introduced 03/12/21 Assigned Committee(s) Transportation and Infrastructure Hearing(s) Co-sponsors Rep. McKinley WV	WSWC Keywords wetlands Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/1820	Summary of Bill To amend the CWA to clarify when the Administrator of the Environmental Protection Agency has the authority to prohibit the specification of a defined area, or deny or restrict the use of a defined area for specification, as a disposal site under section 404 of such Act.
Bill Number S. 722 Bill Title	Date Introduced 03/11/21 Assigned Committee(s)	WSWC Keywords energy-water nexus Congress.gov Link	Summary of Bill To amend the Energy Policy Act of 2005 to establish a program to provide grants and loan guarantees to improve the energy efficiency of publicly owned wastewater treatment facilities. It authorizes \$5M each fiscal year for grants up to \$25 000 to carry out energy audits and projects to replace equipment or update components based on the results of the

Wastewater Efficiency and Treatment Act	Energy and Natural Resources	https://www.congress.gov/bill/117th-congress/senate-bill/722	\$25,000 to carry out energy audits and projects to replace equipment or update components based on the results of the audit. Intended for facilities that serve populations under 10,000 or disadvantaged communities.
Passed (S/H)	Hearing(s)		
Bill Sponsor Sen. Merkley, Jeff [D-OR]	Co-sponsors None		
Bill Number H.R. 1821	Date Introduced 03/11/21	WSWC Keywords FifRA	Summary of Bill To amend FIFRA and CWA to clarify Congressional intent regarding the regulation of the use of pesticides in or near navigable waters (so that pesticides covered by FIFRA are not also regulated by CWA).
Bill Title Reducing Unnecessary Regulations on Agricultural Lands (RURAL) Act	Assigned Committee(s) Transportation and Infrastructure; Agriculture	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/1821	
Passed (S/H)	Hearing(s)		
Bill Sponsor Rep. Gibbs, Bob [R-OH-7]	Co-sponsors None		
Bill Number H.R. 1734	Date Introduced 03/10/21	WSWC Keywords abandoned mines	Summary of Bill Authorizes Interior to delegate certain emergency reclamation activities relating to abandoned mines to states and tribes
Bill Title Surface Mining Control and Reclamation Act Amendments	Assigned Committee(s) Natural Resources; Budget	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/1734	
Passed (S/H)	Hearing(s) 3/18/21: Subcommittee hearings 5/26/21: NR Ordered reported		
Bill Sponsor Rep. Cartwright, Matt [D-PA-8]	Co-sponsors 31 (25D, 6R) CA, AZ, NM, OR		
Bill Number S. 668	Date Introduced 03/10/21	WSWC Keywords ESA	Summary of Bill To amend the Endangered Species Act of 1973 to permit Governors of States to regulate intrastate endangered species and intrastate threatened species, to amend the Migratory Bird Treaty Act to permit the taking of certain black vultures and ravens.
Bill Title Endangered Species Management Self-Determination Act	Assigned Committee(s) Environment and Public Works	Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/668	
Passed (S/H)	Hearing(s)		
Bill Sponsor Sen. Paul, Rand [R-KY]	Co-sponsors None		
Bill Number H.R. 1679	Date Introduced 03/09/21	WSWC Keywords water rights	Summary of Bill To prohibit the Secretary of the Interior and the Secretary of Agriculture from conditioning any permit, lease, or other use agreement on the transfer of any water right to the United States
Bill Title Western Water Security Act	Assigned Committee(s) Natural Resources; Agriculture	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/1679	
Passed (S/H)	Hearing(s)		

Bill Sponsor Rep. Boebert, Lauren [R-CO-3]	Co-sponsors 16 Republican co-sponsors from AZ, CA, CO, UT, KS, NV, NM, WA, WY, ID		
Bill Number S.648 Bill Title Technical Correction to the Shoshone-Paiute Tribes of the Duck Valley Reservation Water Rights Settlement Act Passed (S/H) Bill Sponsor Sen. Cortez Masto, Catherine [D-NV]	Date Introduced 03/09/21 Assigned Committee(s) Indian Affairs Hearing(s) 10/6/21: IA hearing 11/17/21: IA ordered reported, S. Rept. 117-93. Calendar No 306 Co-sponsors 3 (2R, 1D) ID, NV	WSWC Keywords Indian water rights Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/648	Summary of Bill This bill directs the Department of the Interior to deposit specified interest payments into the Shoshone-Paiute Tribes Water Rights Development Fund and the Shoshone-Paiute Tribes Operation and Maintenance Fund. These funds were established under the water rights settlement agreement for the Shoshone-Paiute Tribes of the Duck Valley Reservation.
Bill Number H.R. 1663 Bill Title Border Water Quality Restoration and Protection Act Passed (S/H) Bill Sponsor Rep. Vargas, Juan [D-CA-51], 5 CA (4Dem 1rep)	Date Introduced 03/08/21 Assigned Committee(s) Transportation and Infrastructure; Energy and Commerce; Natural Resources; Foreign Affairs; Budget Hearing(s) Co-sponsors None	WSWC Keywords water quality Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/1663	Summary of Bill Directs EPA to establish the Tijuana River Public Health and Water Quality Restoration Program. Under the program, the EPA must plan, implement, coordinate, and provide grants for public health and water quality restoration and protection activities in the Mexican Tijuana River watershed and the American Tijuana River watershed in California. In addition, the EPA must establish the California New River Public Health and Water Quality Restoration Program to plan, implement, coordinate, and provide grants for water quality restoration and protection activities in the New River watershed. Finally, the bill provides statutory authority for the U.S.-Mexico Border Water Infrastructure Program to provide assistance for activities related to the construction of infrastructure for drinking water treatment or distribution, wastewater management, or stormwater management.
Bill Number H.R. 1660 Bill Title Stop Sewage Overflow Act Passed (S/H) Bill Sponsor Rep. Trahan, Lori [D-MA-3]	Date Introduced 03/08/21 Assigned Committee(s) Transportation and Infrastructure Hearing(s) Co-sponsors NH, IL, MA	WSWC Keywords water quality Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/1660	Summary of Bill Amends CWA 221 (33 USC 1301) for sewer overflow and stormwater reuse municipal grants up to 75% of the cost for eligible municipalities
Bill Number S. 572 Bill Title	Date Introduced 03/03/21 Assigned Committee(s)	WSWC Keywords floods, data, NOAA, water resources Congress.gov Link	Summary of Bill A bill to provide for the water quality restoration of the Tijuana River and the New River.

Border Water Quality Restoration and Protection Act Passed (S/H) Bill Sponsor Sen. Feinstein, Dianne [D-CA]	Environment and Public Works Hearing(s) Co-sponsors Sen. Padilla, Alex [D-CA]	https://www.congress.gov/bill/117th-congress/senate-bill/572	
Bill Number S. 558 Bill Title Flood Level Observation, Operations, and Decision Support (FLOODS) Act Passed (S/H) 9/30/21: Passed Senate by unanimous consent Bill Sponsor Sen. Wicker, Roger [R-MS]	Date Introduced 03/03/21 Assigned Committee(s) Commerce, Science and Transportation Hearing(s) 4/28/21: CST ordered reported with an amendment Co-sponsors Sen. Peters, Gary [D-MI], IA, NJ	WSWC Keywords floods, data, NOAA, water resources Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/558	Summary of Bill A bil to establish a national integrated flood information system within NOAA.
Bill Number H.R. 1588 Bill Title Hydropower Clean Energy Future Act Passed (S/H) Bill Sponsor Rep. McMorris Rodgers, Cathy [R-WA-5]	Date Introduced 03/03/21 Assigned Committee(s) Energy and Commerce, Oversight and Reform Hearing(s) Co-sponsors 7 Republicans, Rep. Lesko AZ, Re Burgess, TX, Rep. Newhouse, Dan [R-WA-4], Rep. Curtis, John [R-UT-3], Rep.. Duncan, Jeff [R-SC-3], Rep. Bucshon, Larry [R-IN-8]	WSWC Keywords energy, hydropower Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/1588	Summary of Bill To modernize the hydropower licensing process and to promote next generation hydropower projects.
Bill Number H.R. 1563 Bill Title No title Passed (S/H) Bill Sponsor Rep. Garcia, Mike [R-CA-25]	Date Introduced 03/03/21 Assigned Committee(s) Natural Resources, Science, Space and Technology Hearing(s) Co-sponsors 10 Republicans, all from CA	WSWC Keywords drought, water financing Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/1563	Summary of Bill To extend the authorities under the Water Infrastructure Improvements for the Nation Act of 2016 providing operational flexibility, drought relief, and other benefits to the State of California.
Bill Number H.R. 1352	Date Introduced 2/25/2021	WSWC Keywords infrastructure	Summary of Bill Establishes the WATER Trust Fund with \$35B/year to go towards the CWSRF, DWSRF and other water grant

Bill Title Water Affordability, Transparency, Equity and Reliability Act (WATER Act) of 2021 Passed (S/H) Bill Sponsor Rep. Lawrence, Brenda [D-MI-14]	Assigned Committee(s) Transportation and Infrastructure, Energy and Commerce, Ways and Means, Agriculture Hearing(s) Co-sponsors 98 Democrats, including Representatives from AZ, CA, NM, OR, TX, CO, NV, WA, OR,	Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/1352	programs, funded by a 3.5% increase on the corporate tax rate. Expands use of SRF funds to acquire private water treatment works, or change/cancel contract terms with operators of publicly owned treatment works. Proposes several changes to the DWSRF program, including requiring 50% of capitalization grants to go towards disadvantaged communities (depending on applications), and allowing funds to be used for lead service line replacement and PFAS treatment. Increases funding for technical assistance to rural and tribal communities to \$175M/year. Commissions a study on equity in water and sewer services industry.
Bill Number S. 421 Bill Title Western Tribal Water Infrastructure Act Passed (S/H) Bill Sponsor Sen. Ron Wyden	Date Introduced 2/24/2021 Assigned Committee(s) Indian Affairs Hearing(s) 3/24/21: SIA ordered reported, S. Rept. 117-17 Co-sponsors Sen. Jeff Merkley	WSWC Keywords drinking water, tribes, AWIA Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/421	Summary of Bill A bill to amend the America's Water Infrastructure Act of 2018 to reauthorize and expand the Indian reservation drinking water program. It directs EPA to connect, expand, or repair existing public water systems that are on Indian reservations or off-reservation sites that serve tribes in the Columbia River Basin or its adjacent coastal river basins. Currently, only projects that are on Indian reservations in the Upper Missouri River Basin or the Upper Rio Grande Basin are eligible for the program.
Bill Number H.R. 1146 Bill Title Community Reclamation Partnerships Act Passed (S/H) Bill Sponsor Rep. LaHood, Darin [R-IL-18]	Date Introduced 2/18/2021 Assigned Committee(s) Natural Resources Hearing(s) 3/18/21: Subcommittee hearing 5/26/21: NR hearing; H.Rept. 117-293 Co-sponsors None	WSWC Keywords water quality, mining Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/1146	Summary of Bill To amend the Surface Mining Control and Reclamation Act of 1977 to authorize partnerships between States and nongovernmental entities for the purpose of reclaiming and restoring land and water resources adversely affected by coal mining activities before August 3, 1977
Bill Number H.R. 1144 Bill Title Promoting United Government Efforts to Save Our Sound (PUGET SOS) Act Passed (S/H) 6/15/21: passed House Bill Sponsor Rep. Kilmer, Derek [D-WA-6]	Date Introduced 2/18/2021 Assigned Committee(s) Transportation and Infrastructure; Environment and Public Works Hearing(s) 3/24/21: T&I ordered reported, H. Rept. 117-42, passed 54-3 Co-sponsors 4 Democrats -All WA	WSWC Keywords water quality Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/1144	Summary of Bill To amend the CWA to provide assistance for programs and activities to protect the water quality of Puget Sound, including a replacement federal task force.
Bill Number	Date Introduced	WSWC Keywords	Summary of Bill

H.R. 1015 Bill Title Water Recycling Investment and Improvement Act Passed (S/H) Bill Sponsor Rep. Napolitano, Grace F. [D-CA-32]	2/11/2021 Assigned Committee(s) Natural Resources Hearing(s) Co-sponsors 25 Democrats, CA (21), AX, NV, TX	water reuse, water financing Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/1015	The bill revises and makes permanent the Bureau of Reclamations grant program (43 USC 390h) for funding water recycling and reuse projects. It removes drought and disaster declarations as priorities, and replaces them with projects that (A) provide more reliable water supply for states and local governments; (B) increase water management flexibility and reduce environmental impacts; (C) are regional in nature; (D) have multiple stakeholders; and (E) provide multiple benefits. It increases funding from \$50M to \$500M, available until FY2025.
Bill Number H.R. 988 Bill Title Recreational Lands Self-Defense Act Passed (S/H) Bill Sponsor Rep. Gibbs, Bob [R-OH-7]	Date Introduced 2/11/2021 Assigned Committee(s) Transportation and Infrastructure Hearing(s) Co-sponsors 28 Republicans, including Representatives from TX, AZ, CA, WA, AK, KS, NM, SC, FL, MN, OH, NC, NE, AL	WSWC Keywords water resources, Corps, Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/988	Summary of Bill To protect the right of individuals to bear arms at water resources development projects administered by the Corps.
Bill Number H.R. 931 Bill Title Public Water Supply Invasive Species Compliance Act Passed (S/H) Bill Sponsor Rep. Gohmert, Louie [R-TX-1]	Date Introduced 2/8/2021 Assigned Committee(s) Natural Resources, Judiciary Hearing(s) Co-sponsors	WSWC Keywords water transfers Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/931	Summary of Bill To exempt from the Lacey Act and the Lacey Act Amendments of 1981 certain water transfers between any of the States of Texas, Arkansas, and Louisiana.
Bill Number S. 277 Bill Title Public Water Supply Invasive Species Compliance Act Passed (S/H) Bill Sponsor Sen. Cruz, Ted [R-TX]	Date Introduced 2/8/2021 Assigned Committee(s) Environment and Public Works Hearing(s) Co-sponsors Sen. Cassidy, Bill (R-LA)	WSWC Keywords water transfers Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/277	Summary of Bill To exempt from the Lacey Act and the Lacey Act Amendments of 1981 certain water transfers between any of the States of Texas, Arkansas, and Louisiana.
Bill Number	Date Introduced	WSWC Keywords	Summary of Bill

H.R. 895 Bill Title Emergency Assistance for Rural Water Systems Act Passed (S/H) Bill Sponsor Rep. Rouzer, David [R-NC-7]	2/5/2021 Assigned Committee(s) Agriculture Hearing(s) Co-sponsors 5 bipartisan co-sponsors, including CA and TX	water resources Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/895	To provide for assistance to rural water, wastewater, and waste disposal systems affected by the COVID-19 pandemic.
Bill Number H.R. 866 Bill Title Federally Integrated Species Health (FISH) Act Passed (S/H) Bill Sponsor Rep. Calvert, Ken [R-CA-42]	Date Introduced 2/5/2021 Assigned Committee(s) Natural Resources Hearing(s) Co-sponsors Rep. Costa, Jim [D-CA-16], Rep. McClintock, Tom [R-CA-4], Rep. Simpson, Michael K. [R-ID-2], Rep. Steel, Michelle [R-CA-48], Rep. Valadao, David G. [R-CA-21]	WSWC Keywords environment, fish Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/866	Summary of Bill To amend the Endangered Species Act of 1973 to vest in the Secretary of the Interior functions under that Act with respect to species of fish that spawn in fresh or estuarine waters and migrate to ocean waters, and species of fish that spawn in ocean waters and migrate to fresh waters.
Bill Number H.R. 803 Bill Title Protecting America's Wilderness and Public Lands Act Passed (S/H) 2/26/21: House passed with amendments, 227-200 Bill Sponsor Rep. DeGette, Diana [D-CO-1]	Date Introduced 2/4/2021 Assigned Committee(s) Natural Resources, Armed Services, Energy and Natural Resources Hearing(s) H.Rept.117-6 Co-sponsors 3 Democrat co-sponsors from CO	WSWC Keywords reserved water rights Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/803	Summary of Bill Designates certain lands (managed by BLM, USFS, Reclamation) in the State of Colorado as components of the National Wilderness Preservation System. The bill explicitly states that it does not create or impose any new federal reserved water rights, nor a relinquishment of existing federal reserved water rights. Any water rights needed to fulfill the purposes of the designated wilderness areas are to be acquired and administered under state law. DOI "may appropriate and seek adjudication of water rights to maintain surface water levels and stream flows on and across the wilderness" areas, and directs DOI to engage in "cooperative enforcement" of federal instream flow water rights. As amended, the bill provides for the preservation, conservation, and recreational use of public lands, including in Arizona, California, Maine, North Carolina, Oregon, Virginia, Washington, and the U.S. Virgin Islands. It also withdraws specific federal lands in AZ and OR, and designates wild and scenic rivers, wilderness, and recreational rivers in WA. Similar provisions on respecting state processes and not creating new water rights are included in the new sections of the amended bill.
Bill Number H.R. 751 Bill Title Protecting American Energy Production Act Passed (S/H) Bill Sponsor	Date Introduced 2/3/2021 Assigned Committee(s) Natural Resources, Energy and Commerce Hearing(s) Co-sponsors	WSWC Keywords Hydraulic Fracturing Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/751	Summary of Bill To prohibit a moratorium on the use of hydraulic fracturing.

Rep. Duncan, Jeff [R-SC-3]	44 Republicans, including Representatives from AZ, CA, CO, KS, ND, NM, OK, TX, WA, WY		
Bill Number S. 192 Bill Title River Democracy Act Passed (S/H) Bill Sponsor Sen. Shaheen, Jeanne [D-NH]	Date Introduced 2/3/2021 Assigned Committee(s) Energy and Natural Resources Hearing(s) 6/23/21: Subcommittee hearing Co-sponsors Sen. Merkley, Jeff [D-OR]	WSWC Keywords water resources, environment Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/192	Summary of Bill A bill to amend the Wild and Scenic Rivers Act to designate certain river segments (numerous creeks and tributaries) in Oregon as components of the National Wild and Scenic Rivers System. It authorizes \$30M for FY22 to restore components of the system that provide drinking water for downstream communities or have been degraded by catastrophic wildfire. The bill explicitly states that nothing in the Act affects any existing valid or vested water right, or preempts Oregon's ability to administer water rights pursuant to state law.
Bill Number S. 209 Bill Title Emergency Assistance for Rural Water Systems Act Passed (S/H) Bill Sponsor Sen. Shaheen, Jeanne [D-NH]	Date Introduced 2/3/2021 Assigned Committee(s) Agriculture, Nutrition and Forestry Hearing(s) Co-sponsors Sen. Tillis, Thom [R-NC]	WSWC Keywords water resources, water quality Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/209	Summary of Bill A bill to provide for assistance (grants and no interest loans, forgiveness, or term modifications) to rural water, wastewater, and waste disposal systems affected by the COVID-19 pandemic. The bill authorizes \$1B through FY22, with 3% for administrative expenses.
Bill Number H.R. 737 Bill Title Responsible, No-Cost Extension of Western Water Infrastructure Improvements (RENEW WIIN) Act Passed (S/H) Bill Sponsor Rep. Valadao, David G. [R-CA-21]	Date Introduced 2/2/2021 Assigned Committee(s) Natural Resources Hearing(s) Co-sponsors 10 Republican co-sponsors	WSWC Keywords water resources Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/737	Summary of Bill This bill extends the January 2021 deadline (WIIN Act section 4007, PL 114-322) for DOI to determine which federally-owned or state-led water storage projects are feasible for construction or expansion with a 50% federal cost share, to 2031.
Bill Number H.R. 660 Bill Title Shovel-Ready Restoration Grants for Coastlines and Fisheries Act Passed (S/H) Bill Sponsor	Date Introduced 2/1/2021 Assigned Committee(s) Natural Resources; Transportation and Infrastructure Hearing(s) 6/22/21: NR held hearings Co-sponsors	WSWC Keywords environment, fish Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/660	Summary of Bill Establishes a NOAA grant program (\$3B for FY21) to provide technical assistance and funding to benefit coastal habitats, resiliency, and the economy

Rep. Plaskett, Stacey E. [D-VI-At Large]	Rep. Young, Don [R-AK-At Large]		
Bill Number H.R. 616 Bill Title Emergency Water is a Human Right Act Passed (S/H) Bill Sponsor Rep. Tlaib, Rashida [D-MI-13]	Date Introduced 02/28/21 Assigned Committee(s) Energy and Commerce, Education and Labor Hearing(s) Co-sponsors 114 Democrat co-sponsors	WSWC Keywords water resources Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/616	Summary of Bill This bill creates a grant program, administered by the Department of Health and Human Services, to provide funds to states and Indian tribes to assist low-income households that pay a high proportion of household income for drinking water and wastewater services. Further, any entity receiving financial assistance under this grant program must ensure that no home energy service or public water system service is or remains disconnected or interrupted during the COVID-19 public health emergency.
Bill Number H.R. 610 Bill Title San Francisco Bay Restoration Act Passed (S/H) 6/15/21: Passed House Bill Sponsor Rep. Speier, Jackie [D-CA-14]	Date Introduced 01/28/21 Assigned Committee(s) Transportation and Infrastructure, Budget, Environment and Public Works Hearing(s) 3/24/21: T&I ordered reported with an amendment;H. Rept. 117-51 Co-sponsors 10 Democrats, all Representatives from CA	WSWC Keywords water quality, environment Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/610	Summary of Bill Directs EPA to establish a San Francisco Bay Program Office and establishes a grant program with a list of project priorities that must be reviewed every five years. The list must include projects and studies for water quality improvement; wetland restoration and protection; endangered species recovery; and adaptation to climate change.
Bill Number H.R. 587 Bill Title Ocean Pollution Reduction Act II Passed (S/H) 6/15/21: House passed, suspension of rules Bill Sponsor Rep. Peters, Scott H. [D-CA-52]	Date Introduced 1/28/2021 Assigned Committee(s) Transportation and Infrastructure; Environment and Public Works Hearing(s) 3/24/21: T&I ordered reported H. Rpt 117-41, passed 54-2 Co-sponsors 4 bipartisan co-sponsors from CA	WSWC Keywords water quality Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/587	Summary of Bill To modify CWA 402 permitting requirements with respect to the discharge of any pollutant from the Point Loma Wastewater Treatment Plant (CA) in certain circumstances, including monitoring requirements and milestones toward full compliance by 2035.
Bill Number H.R. 519 Bill Title Safeguarding Oil and Gas Leasing and Permitting Act Passed (S/H) Bill Sponsor	Date Introduced 1/28/21 Assigned Committee(s) Natural Resources Hearing(s) Co-sponsors	WSWC Keywords water quality, wells Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/519	Summary of Bill Provides that any order by the President or DOI imposing a moratorium on Federal oil and gas leasing or permitting on BLM lands--in violation of its statutory requirements to process permits, approve permits within permitting deadlines, and hold quarterly lease sales, with respect to Federal oil and gas leasing and permitting--shall not take effect unless a joint resolution of approval is enacted.

Rep. Cheney, Liz [R-WY-At Large]	32 Republicans, including Representatives from CO, KS, OK, TX, WA		
Bill Number H.R. 543 Bill Title Protecting Our Wealth of Energy Resources (POWER) Act Passed (S/H) Bill Sponsor Rep. Herrell, Yvette [R-NM-2]	Date Introduced 01/28/21 Assigned Committee(s) Natural Resources, Agriculture Hearing(s) Co-sponsors 41 Republicans, including Representatives from AZ, CA, CO, ID, NE, NV, OK, OR, TX, WA, WY	WSWC Keywords water quality, wells Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/543	Summary of Bill To prohibit the President from issuing moratoria on leasing and permitting energy and minerals (oil and gas, coal, hard rock, and new critical minderals) on certain Federal lands. It would also prohibit the President from withdrawing federal lands unless approved by an act of Congress.
Bill Number S. 140 Bill Title BLUE GLOBE Act Passed (S/H) Bill Sponsor Sen. Whitehouse, Sheldon [D-RI]	Date Introduced 01/28/21 Assigned Committee(s) Commerce, Science and Transportation Hearing(s) 5/12/21: CST ordered reported with an amendment 12/17/21: Placed on Senate calendar 2/15/22: Sen. Cantwell filed written S.Rept. 117-74 Co-sponsors 4 bipartisan co-sponsors (AK, OR, OH, CT)	WSWC Keywords water quality, data, monitoring Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/140	Summary of Bill A bill to improve data collection and monitoring of the Great Lakes, oceans, bays, estuaries, and coasts, and for other purposes
Bill Number H.R. 565 Bill Title South Florida Clean Coastal Waters Act Passed (S/H) Bill Sponsor Rep. Mast, Brian J. [R-FL-18]	Date Introduced 01/28/21 Assigned Committee(s) Natural Resources, Science, Space and Technology Hearing(s) Co-sponsors Rep. Soto, Darren [D-FL-9], Rep. Posey, Bill [R-FL-8]	WSWC Keywords water quality, harmful algal blooms Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/565	Summary of Bill Directs the Inter-Agency Task Force on Harmful Algal Blooms and Hypoxia (33 U.S.C. 4001) to develop a plan for reducing, mitigating, and controlling harmful algal blooms and hypoxia in South Florida.
Bill Number S. Res. 17 Bill Title	Date Introduced 01/27/21 Assigned Committee(s)	WSWC Keywords WOTUS Congress.gov Link	Summary of Bill Expressing the sense of the Senate that clean water is a national priority and that the April 21, 2020, Navigable Waters Protection Rule (85 Fed. Reg. 22250) should not be withdrawn or vacated.

No title	Environment and Public Works	https://www.congress.gov/bill/117th-congress/senate-resolution/17	
Passed (S/H)	Hearing(s)		
Bill Sponsor Sen. Ernst, Joni [R-IA]	Co-sponsors 27 Republican co-sponsors		
Bill Number H.R. 491 Bill Title California New River Restoration Act	Date Introduced 01/25/21 Assigned Committee(s) Natural Resources, Transportation and Infrastructure	WSWC Keywords water resources Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/491	Summary of Bill Requires EPA to establish a restoration program for the New River, which starts in Mexico and drains into the Salton Sea. EPA would implement projects, plans, and initiatives supported by the California-Mexico Border Relations Council and provide grants and technical assistance.
Passed (S/H)	Hearing(s)		
Bill Sponsor Rep. Vargas, Juan [D-CA-51]	Co-sponsors None		
Bill Number S. 29 Bill Title Local Water Protection Act	Date Introduced 01/22/21 Assigned Committee(s) Environment and Public Works	WSWC Keywords water quality Congress.gov Link https://www.congress.gov/bill/117th-congress/senate-bill/29	Summary of Bill This bill reauthorizes EPA programs through FY2025 that award grants to states for managing nonpoint source water pollution or protecting groundwater quality. Water pollution from nonpoint sources is caused by precipitation picking up pollution as it moves over or through the ground.
Passed (S/H)	Hearing(s)		
Bill Sponsor Sen. Klobuchar, Amy [D-MN]	Co-sponsors None		
Bill Number H.R. 74 Bill Title Protecting Local Communities from Harmful Algal Blooms Act	Date Introduced 01/04/21 Assigned Committee(s) Transportation and Infrastructure	WSWC Keywords HABs Congress.gov Link https://www.congress.gov/bill/117th-congress/house-bill/74	Summary of Bill Amends Section 102(2) of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5122) to include algal blooms as a major disaster.
Passed (S/H)	Hearing(s)		
Bill Sponsor Rep. Buchanan, Vern [R-FL-16]	Co-sponsors Rep. Hastings, Alcee L. [D-FL-20]		

Litigation Update
200th WSWC Meeting
Sulphur, OK
Compiled By:
Michelle Bushman
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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 2021.

Case Name	Issues	Water rights adjudication (groundwater), SGMA 2014, federal water rights and groundwater
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.	The original complaint was filed by Mojave Pistachios, LLC. The cross-complaint by the Indian Wells Valley Water District (IWWVD) 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.” IWWVD’s website noted that water use in the basin has exceeded groundwater supply for years, resulting in an “overdraft” condition. IWWVD 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. IWWVD’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.”	
Case Number		
30-2021-01187275-CU-OR-CJC		
Court		
Orange County Superior Court, California		
Relevant Dates		
6/16/21: IWWVD 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		
3/15/22: Case Management Conference		
5/20/22: filing fee (\$1,000) waived through 7/31/22		
[12/2/22: Status Conference scheduled]		
Related Cases		
Mojave Pistachios, LLC v. IWWVD		
Comprehensive adjudication of the Cuyama Valley Groundwater Basin, another basin in an overdraft condition. (9/2/21)		
Notes		
See: https://www.iwwvd.com/basin-adjudication/		
Case Name	Issues	WOTUS, wetlands
Sackett v. EPA	On January 24, 2022, the U.S. Supreme Court granted the petition for certiorari in Sackett v. EPA (21-454). The Sackett’s filed the lawsuit over the Environmental Protection Agency’s (EPA) administrative compliance order “determining that their home construction violated the [CWA] because their lot contains wetlands that qualify as regulated ‘navigable waters.’” The Sacketts argued that the lot has no surface water connection to any body of water. The limited issue on appeal is whether the 9th Circuit should have applied Justice Kennedy’s “significant nexus” test set forth in Rapanos v. United States, 547 U.S. 715 (2006). BACKGROUND: The Plaintiff-petitioners appealed a 9th Circuit decision from August 16, 2021. The question presented is whether Rapanos v. United States (2006) should be revisited to adopt the test for CWA wetlands jurisdiction under the Justice Scalia plurality opinion. On October 25, 2021 the States of Alabama, Alaska, Arizona, Arkansas, Georgia, Indiana, Kansas, Kentucky, Louisiana, Missouri, Montana, Nebraska, New Hampshire, North Dakota, Oklahoma, South Carolina, South Dakota, Texas, Utah, West Virginia and Wyoming filed an amicus brief in support of the petition. The States emphasized their residual and inviolable sovereignty, the division of powers between state and federal governments, and the states’ interest in protecting their authority over local water management matters. “The CWA has an important role to play in ensuring clean water for our country’s interstate waters. But it should not be allowed to engulf every other water law.” The States noted the inconsistent interpretations of Rapanos and the onerous process of identifying a water of the United States (WOTUS), particularly under the indefinite “significant nexus” standard. In the argument summary, the States said: “Given these problems, the Court should grant the petition and embrace the Rapanos plurality’s test: ‘the waters of the United States’ include only relatively permanent, standing or flowing bodies of water.” That construction is most consistent with the text that Congress chose. And it gives an understandable, appropriately constrained scope to the Act. The federal government retains its role as the guardian of truly national, navigable waters; the States retake their place as guardians of state waters; and citizens can move forward knowing what, when, and how the various rules apply. The CWA promises an opportunity for genuinely cooperative federalism while advancing the important objective of clean water for all.”	
Case Number		
21-454		
(19-35469)		
Court		
U.S. Supreme Court		
(9th Circuit)		
Relevant Dates		
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 scheduled		
Related Cases		

Notes https://www.supremecourt.gov/search.aspx?filename=/docket/docketfiles/html/public/21-454.html		
Case Name	Issues	Nationwide Permits, ESA
Center for Biological Diversity et al. v. Spellmon	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. 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.	
Case Number		
4:21-cv-00047		
1:22-cv-02586		
Court		
U.S. District Court for Montana		
U.S. District Court for the District of Columbia		
Relevant Dates		
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: One round of briefing deadline for DC court]		
Related Cases		
Northern Plains Resource Council et al. v. U.S. Army Corps of Engineers, No. 4:19-cv-00044 (D. Mont.), appeal pending, (9th Cir. #20-35412)		
Notes		
Case Name	Issues	NEPA Rule
Wild Virginia et al. v. CEQ et al.	Requested that the court vacate the new NEPA regulation issued by the Council on Environmental Quality on July 15, 2020 for various violations of the Administrative Procedures Act and reinstate the 1978 NEPA regulations. The court dismissed after finding that the plaintiffs claims were not justiciable, whether the claims are unripe (lack of concrete harm) or the plaintiffs lack standing to bring their claims. Environmental groups filed a notice of appeal.	
Case Number		
3:20-cv-00045		
#21-1839		
Court		
US District Court for the Western District of Virginia		
4th Circuit Court of Appeals		
Relevant Dates		
7/29/20: Complaint filed		
9/11/20: Motion for Preliminary Injunction denied		
9/21/20: Motions to Dismiss for lack of jurisdiction denied		
10/22/20: Administrative record lodged		
11/19/20: Motion for Summary Judgment filed by environmental plaintiffs		
12/21/20: Cross Motions for Summary Judgment filed by CEQ and intervenor industry (farm, cattle, oil, transportation, commerce) defendants		
3/17/21: CEQ Motion to Remand the rule		
4/21/21: Hearing on MSJs and Motion to Remand		
6/21/21: case dismissed without prejudice		
7/30/21: Notice of Appeal (#21-1839)		
2/18/22: Briefs, Responses, Replies filed in the Appeal		
[10/26/22: Oral argument scheduled]		
Related Cases		
Notes		

Case Name	Issues	ESA
Center for Biological Diversity et al. v. Interior et al.	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.	
Case Number		
4:20-cv-106		
22-15809		
Court		
U.S. District Court for the District of Arizona		
9th Circuit		
Relevant Dates		
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 [11/14/22: DOI/FWS Answering brief due]		
Related Cases		
Notes		
Case Name	Issues	Indian Reserved Water Rights
Agua Caliente Band of Cahuilla Indians v. Coachella Valley Water Dist.	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.	
Case Number		
5:20-cv-00174		
Court		
U.S. District Court for the Central District of California		
Relevant Dates		
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 3/23/21: Stay extended 10/6/21: Stay extended 2/3/22: Stay extended 6/1/22: Stay extended 9/1/22: State extended (12/1/22)		
Related Cases		
Agua Caliente Band of Cahuilla Indians v. Coachella Valley Water District, et al., 13-883		
Notes		
Case Name	Issues	WOTUS
New Mexico Cattle Growers' Association (CGA) v. EPA et al.	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 complaint expands 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	
Case Number		
1:19-cv-00988		
Court		
U.S. District Court for the District of New Mexico		

Relevant Dates 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) 5/26/21: Stay continued 10/5/21: Stay continued 3/29/22: Stay continued pending new WOTUS rule. Related Cases 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) Notes		perennially present, and to begin 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.”	
Case Name Save the Colorado, et al. v. DOI Case Number 3:19-cv-8285 Court U.S. District Court for the District of Arizona Relevant Dates 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 6/2/20: Administrative record filed 7/2/20: State joinder to answer 10/9/20: Addition to Admin record filed 4/2/21: Briefing on Motion to Supplement Administrative Record complete 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 June 2022: Responses and replies to motions and cross motions filed 10/7/22: Oral Arguments held Related Cases	Issues Colorado River	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.	
Case Name Agua Caliente Band of Cahuilla Indians v. Coachella Valley Water District, et al. Case Number 5:13-cv-883 Court U.S. District Court for the Central District of California Relevant Dates	Issues Indian Reserved Water Rights	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 August 19, 2019, the court denied DOJ's motion to reconsider. On October 12, 2019, the tribe filed a motion to amend and supplement its complaint, modifying its claims and allegations regarding ownership of pore spaces in the aquifer, providing additional information about the amounts of natural and artificial water recharge, pumping, and overdraft in the valley, the tribes efforts to resume groundwater production and intention to store its reserved water rights in the aquifer, which would be frustrated by the water districts' continuous pumping and their assertion of jurisdiction over the tribe's aquifer pore space for	

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 10/12/19: Tribe's motion for amended complaint 11/25/19: DWA's opposition to amended complaint 7/17/20: Agua Caliente filed its amended complaint 7/31/20: Answers to amended complaint 10/6/20: Case stayed pending private mediation 3/23/21: Stay extended 10/6/21: Stay extended 2/2/22: Stay extended 6/1/22: Stay extended 9/1/22: State extended (12/1/22)	non-tribal aquifer recharge programs. On November 25, 2019, the DWA filed a motion opposing the amended complaint, arguing that the tribe still lacks standing because it hasn't alleged facts that show actual or imminent harm from the water districts' actions. On July 17, 2020, the tribe filed its amended complaint. 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 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.) 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.	
Related Cases		
9th Circuit #15-55896		
Agua Caliente Band of Cahuilla Indians v. Coachella Valley Water Dist., 5:20-cv-00174		
Notes		
For more information see: http://www.scotusblog.com/case-files/cases/coachella-valley-water-district-v-agua-caliente-band-cahuilla-indians/ and https://www.narf.org/cases/agua-caliente-v-coachella/		
Case Name	Issues	Hydraulic fracturing
California v. Bureau of Land Mgmt.	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.	
Case Number		
18-521		
20-16157		
Court		
U.S. District Court for the Northern District of California		
9th Circuit		
Relevant Dates		

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 6/3/19: CA filed Motion for Summary Judgment 8/2/19: BLM filed Cross Motion for Summary Judgment 8/23/19: WY and petroleum organizations filed Cross MSJs 1/22/20: Hearing on MSJs 3/27/20: BLM and WY's Cross MSJ's granted, CA's MSJ denied 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 conference scheduled for March 1 3/19/21: Case administratively closed for mediation 5/20/21: Closure for mediation extended 8/16/21: Closure extended 11/12/21: Closure extended 2/10/22: Closure extended 5/11/22: Closure extended to 8/15/22 Mediation status reports on 8/8/22, 9/7/22, 10/7/22, with closure extended in shorter timeframes Related Cases Sierra Club et al. v. Zinke, No. 18-524 (consolidated) Notes	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." 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.	
Case Name 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	Issues	Abandoned Hard Rock Mines Discovery and motions have 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 through mid-May 2022. 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. EPA filed a Motion to Dismiss in February 2017, arguing (1) that CERCLA does not waive EPA's sovereign immunity to suit when its sole connection to the site at issue arises from exercising its authority under CERCLA to respond to other entities' legacy contamination; (2) that EPA does not fit the definitions of a liable party under CERCLA; and (3) that EPA is already engaged in remediation efforts, and that judicial review of those efforts is premature or prohibited, and that the parties have other means of participating in and commenting on the agency remediation process. On December 11, 2017, defendant Environmental Restoration filed a motion with the U.S. Judicial Panel on Multi-District Litigation, requesting a transfer of the cases for coordinated or consolidated pre-trial proceedings. This request was granted on April 4, 2018, and on June 19, 2018, a Special Master was appointed. (MDL-2824). On July 25, 2018, the federal defendants filed a Motion to Dismiss the state and tribal claims for lack of jurisdiction over the CERCLA,

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 7/25/18: EPA filed MTD 2/28/19: MTD denied 10/4/19: Environmental Restoration LLC filed interlocutory appeal re applicable SOL 9/1/20: Court granted Utah's motion to dismiss its claims against EPA and certain contractor parties 1/13/21: NM (\$10M) and NN (\$10M) settled claims against mining defendant Sunnyside/Kinross 1/20/21: 10th Cir. appeal argued (Allen v. Environmental Restoration, 19-02197) 2/22/21: Court granted MTD on the Navajo Nation's tort claims against the mining defendants 4/29/21: Kinross (mining) MSJ granted against NM, NN, UT, Allen P's 5/3/21: Kinross MSJ partially granted against EPA's cross-claims 5/24/21: EPA partial MSJ against Kinross personal jurisdiction defense 5/28/21: Weston partial MSJ to dismiss tort claims 6/3/21: Allen plaintiffs requested Rule 54(b) certification to appeal decision on Kinross partial MSJ (denied) 7/21/21: Utah and the mining defendants dismissed their claims against one another with prejudice 7/30/21: Consent decree entered between New Mexico, Navajo Nation, and various mining defendants 8/6/21: Federal defendants sanctioned for spoliation of evidence (P's and mining motions granted in part) Aug/Sept 21: Various partial MSJs between parties completed briefing 3/2/22: Court granted motions to stay for NM and NN claims against the US through 5/17/22 for settlement negotiations. April 22: Various MSJs 5/2/22: Court order denying various motions as moot 5/10/22: Court orders denying various motions 5/31/22: Court order denying motion 6/14/22: NM, NN, and US EPA signed a settlement agreement; payment pending June/July 22: Various motions re: testimony and exhibits 7/12/22: Court granted motion to stay NM and NN claims against the US, pending settlement completion [11/2/22: Phase I trial scheduled] 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		RCRA, CWA, and tort claims. On February 28, 2019, the Special Master denied the motion. The DOJ argued that the court lacked jurisdiction to hear the claims due to the sovereign immunity of the United States, asserting that the waiver provisions of the statutes did not apply to EPA's actions in this case. The Court disagreed, finding 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, and the federal defendants could file a motion for summary judgment after jurisdictional discovery. Subsequent motions to dismiss from other parties were largely denied, and after the Answers were filed, on June 5, 2019, the Court issued a scheduling order and set the scope of discovery. On October 4, 2019, Environmental Restoration LLC filed interlocutory appeal on whether NM or CO statute of limitations applied (potentially impacting claims of 300 Allen v. US plaintiffs and the scope of discovery)	
Case Name	Issues	Rio Grande Compact	
Texas v. New Mexico and Colorado	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, and on March 1, 2022, the parties agreed that trial dates should be scheduled for mid- to late-Fall 2022 for the second half of the trial issues, to encourage them to conduct settlement negotiations in an efficient manner. They noted that the case still presents complex and longstanding issues.		
Case Number			
#220141			
Court			
U.S. Supreme Court	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		
Relevant Dates			

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 [10/25/22: Status Conference scheduled]	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. Two political subdivisions (water districts supplied by and the sole direct beneficiaries of the Rio Grande Project) of New Mexico and Texas also sought to intervene on the grounds that they have compelling interest in the case not properly represented by their respective states. On February 9, 2017, the Special Master submitted the First Interim Report with recommendations on several preliminary motions, including: (1) denying New Mexico's Motion to Dismiss Texas' complaint, which alleges a claim under the text and structure of the compact; (2) rejecting the United States' federal Reclamation claims as outside the interstate compact, but recommending that the Supreme Court exercise its discretion to hear the claims together since they impact the same project; and (3) denying the motions to intervene from the Elephant Butte Irrigation District and the El Paso County Water Improvement District No. 1, as both districts failed to satisfy the burden to establish compelling interests separate from the interests of New Mexico or Texas. On March 5, 2018, the Supreme Court ruled that the United States may pursue its complaint as an intervenor, asserting its claim that New Mexico has violated the Rio Grande Compact, and remanded the case back to the Special Master. 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."
Related Cases	
Notes	
For more information, see https://www.ca8.uscourts.gov/texas-v-new-mexico-and-colorado-no-141-original and https://www.scotusblog.com/case-files/cases/texas-v-new-mexico-and-colorado/	

Tab Q – State Reports

Arizona State Report for October 2022 Western States Water Council Meeting

Legislative Update:

The 2022 general legislative session of the Arizona Legislature adjourned Sine Die with several water related bills enacted. In an historic act (SB 1740), the Legislature provided over \$1B to the Water Infrastructure and Finance Authority, an Arizona state agency, to expand and provide funding for projects to augment water supplies, including importation of new supplies and conservation of existing water supplies. Additional information, including ADWR-relevant enacted legislation can be found on our [Legislative Affairs web page](#).

Agency Activities Update:

Ahead of the August 24-Month Study announcement, the Arizona Department of Water Resources endorsed a letter from Southern Nevada Water Authority General Manager John Entsminger to Secretary Haaland, Assistant Secretary Trujillo, and Commissioner Touton, which recommended the Department of Interior undertake several actions, including charging each contractor in the Lower Basin for evaporative and system losses, and to create new beneficial use criteria for Lower Basin water users.

With the release of its August 24-Month Study on August 16, 2022, the Bureau of Reclamation announced the Lower Basin will operate in a Tier 2a Shortage condition in Calendar Year 2023. Under a Tier 2a Shortage, Arizona is required to forego 592 kaf of its Colorado River entitlement, an increase of 3% from its required contribution of 512 kaf under the Tier 1 Shortage in 2022. Reclamation also announced several steps it will undertake in the coming months to continue to address the dropping elevations at Lake Powell and Lake Mead. ADWR is supportive of implementation of federal actions that will implement equitable sharing of the burden to protect the Colorado River system.

On January 31, 2019, as a corollary to the Drought Contingency Plan legislation, Governor Ducey signed an Executive Order creating a Water Augmentation, Innovation, and Conservation Council (Council). Membership includes legislators as well as water managers and stakeholders. Committee meetings have been on hold since January 2022 while efforts were focused on the water-intensive legislative session. Updates on the legislative session and the Colorado River were provided to the Council at the June 2021 meeting. All Council and Committee meetings are open to the public and additional information, including recordings of previous meetings, can be found on the [ADWR website](#).

At the end of September, ADWR reached a milestone when the formal hearing for the final 5th Management Plans, which contain the mandatory groundwater conservation programs for the Arizona Active Management Areas (AMA), was held. After releasing [drafts](#) in January 2022, ADWR began the legal promulgation and adoption process for the 5th management plans. All five plans are set to be adopted by the end of the year, with the conservation requirements going into effect on January 1, 2025.

Elections have been called for local initiatives to designate the Douglas and Willcox groundwater basins as subsequent AMAs, and at the request of the Mohave County Board of Supervisors, the Director of ADWR is initiating procedures to consider designating the Hualapai Valley groundwater basin as a subsequent Non-Irrigation Area (INA). Staff have been actively working with stakeholders, providing information and presentations. If the INA and AMAs are passed, they will be the first subsequent management areas under the Groundwater Management Act.

SB1740 includes funding for a mandatory supply and demand assessment for each of Arizona's groundwater basins every 5 years. Staff has been actively recruiting staff ahead of the first assessment due on December 1, 2023.

Drought Status Update:

In August, most of the state received average to above average precipitation. Short term drought has improved throughout Arizona with all exceptional drought removed; however, moderate to severe drought still covered over 95% of the state. Below normal precipitation results are expected during the winter due to La Nina conditions.

DRAFT State Report – Utah

Prepared by Todd Stonely | John Mackey | Renee Spooner
October 12, 2022

DIVISION OF WATER RESOURCES

Legislative Summary & Highlights

This has been a busy year for the water agencies in Utah. With the unprecedented federal and state expenditures for water infrastructure and resources protection, the Division of Water Resources and other agencies have several new programs to implement and literally \$100s of millions of dollars to spend. Below is a summary of some of the highlights:

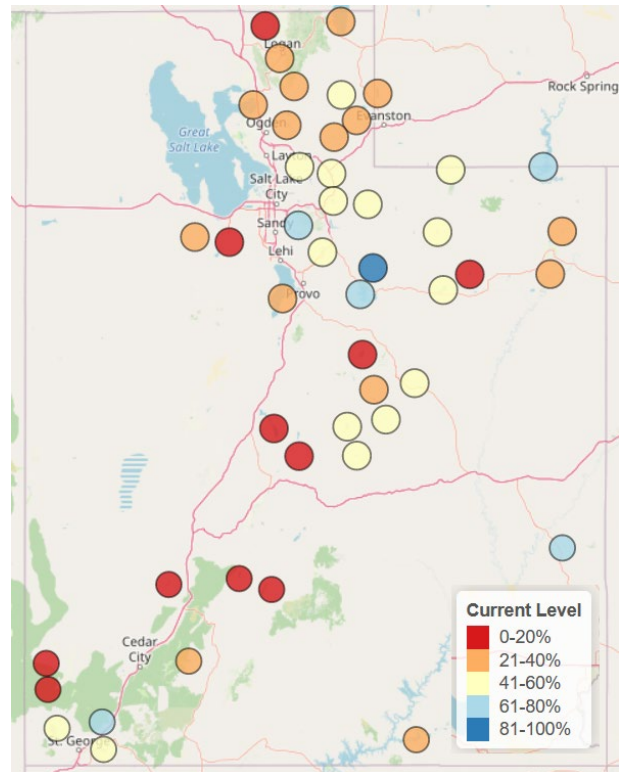
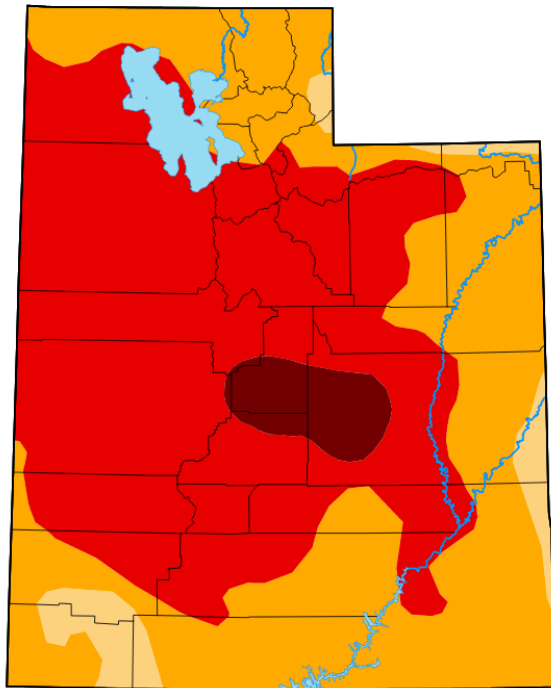
- \$190 million of the \$250 million in ARPA funds that were allocated for the installation of secondary water meters have been authorized for over 70 projects. The remaining funds are likely to be authorized later this year and early next year.
- The Utah Department of Agriculture and Food is working to award \$70 million of funding made available for agriculture optimization projects throughout the state.
- The responsibility to oversee a new Great Salt Lake Water Trust with seed money of \$40 million has been awarded to a joint venture of the Audubon Society and The Nature Conservancy.
- A statewide turf replacement program is being developed by the Division of Water Resources in concert with major Water Conservancy Districts to make \$5 million in ARPA funds available to households.
- The Division of Water Resources has contracted with Jacobs Engineering to begin work on an integrated water assessment of Great Salt Lake. \$5 million in general funds was allocated toward this effort. The division has also applied for technical support the Bureau of Reclamation's WaterSMART program to conduct a Basin Study of the Great Salt Lake watershed. If awarded, the general funds could be used towards a cost mast required by the Basin Study.

Water Conditions

The entire State of Utah is currently experiencing drought. Approximately 56% of the state is shown by the U.S. Drought Monitor to be experiencing extreme (52%) or exceptional drought (4%). The situation has slowly improved over the course of the summer when 83% of the state was experiencing these conditions, and is much better than last year when 57% of the state experienced the worst possible drought category, exceptional drought.

While drought conditions have improved since last year, reservoir storage is about the same. Current statewide reservoir capacity is only 42%, whereas it was 41% at this time last year. Despite the improving drought conditions, the low reservoir levels remain a significant concern for water suppliers throughout the state. If the state experiences another winter with below-average snowpack, reservoirs will not fill and cutbacks and water restrictions will likely resume again next year.

September 29, 2022



DIVISION OF WATER QUALITY

Water Quality Summary & Highlights

In 2022, both the Governor's office and the legislature actively supported and invested in water quality programs, projects, studies and other planning initiatives. Highlights include:

- Governor Cox's "Coordinated Action Plan for Water" team released its first three chapters with a fourth chapter underway:
 - Infrastructure
 - Vibrant Communities
 - Productive Agriculture
 - Healthy Waters and Watersheds (Oct. 30, 2022 completion)
- \$30M in ARPA funds were allocated for Utah Lake Water Quality Preservation
- \$15M in ARPA funds were allocated for Southern Utah Water Reuse Projects
- \$5M in ARPA funds were allocated for West Weber County sewer infrastructure
- HB269 all wastewater service providers participate in EPA's Clean Water Needs Survey. The law further requires that all water utilities receiving state and federal financial assistance implement an approved asset management plan.

Jordan River E. coli TMDL

The Jordan River Watershed E. coli Total Maximum Daily Load Study (TMDL) addresses the E. coli impairment in 14 impaired Assessment Units encompassing most of the tributaries and the main stem of the Jordan River. Due to a complex hydrology and numerous point and nonpoint sources in this highly urbanized watershed, the TMDL uses a concentration-based approach

instead of a load based one. The concentration-based TMDL uses the water quality numeric criteria as the daily TMDL target such that all sources are expected to meet the water quality criteria at the point of discharge. The public comment period closes October 15, 2000.

2022 Coordinated Monitoring Season

In the 2022 water year the division completed 18 distinct field monitoring projects with 190 distinct trips including:

- Intensive ambient monitoring in the Weber River Watershed from October 2021-September 2022. This work consisted of nearly 1200 unique sampling events from 110 sites throughout the watershed. Intensive monitoring efforts in the Uinta Basin starts October 2022.
- Participated in the National Lakes Assessment (NLA) survey under the National Aquatic Resource Surveys (NARS) program. The NLA is a statistical survey of the condition of our nation's lakes, ponds, and reservoirs. Utah DWQ sampled 16 sites in Utah; 1227 sites were sampled across the country.
- 164 waterbodies and 439 sites were monitored as part of the Recreational Monitoring Program (HABs and E. coli)
- 7 remotely deployed water quality buoys in northern and eastern Utah; 10 remotely deployed sondes in the Jordan River as part of the High Frequency Data Program
- Nearly 10,000 samples submitted for analysis from January - September

ATTORNEY GENERAL'S OFFICE

Pending Litigation

The Ute Indian Tribe of the Uintah and Ouray Indian Reservation brought suit in the District of Columbia federal District Court in March of 2018 against the United States alleging a variety of water-related claims, many of which implicated the Utah's interests. The Court granted Utah's motion to intervene in the suit. Thereafter the Tribe amended its complaint and named the State and the Central Utah Water Conservancy District defendants in addition to the United States. Each defendant subsequently filed a motion to dismiss the amended complaint. The court dismissed most of the Tribe's claims as against all three defendants. The court transferred certain Administrative Procedures Act claims relating to the Green River Block exchange to the federal court in Utah. Subsequently the Tribe again moved the court to allow amendment of its complaint. The Magistrate Judge granted the Motion to Amend. The Ute Indian Tribe filed the Third Amended Complaint. The Defendants anticipate filing a motion to dismiss by November 18, 2022.

Utah and other five states have intervened in *Save the Colorado v. U.S.*, 3:19-cv-08285-MTL (*D. Ariz.*). The plaintiffs filed a motion for summary judgment asserting the inadequacy of the United States environmental compliance related to the Glen Canyon Dam Long-Term Experimental and Management Plan. The United States has filed a competing motion for judgment on the pleadings or, in the alternative, cross motion for summary judgment. The intervening states will join in this motion. The hearing on the motions for summary judgment are scheduled for October 7, 2022.

DIVISION OF WATER RIGHTS

Water Rights Summary & Highlights

Utah/Navajo Water Settlement

The signing of the conformed settlement agreement occurred on May 27, 2022, in Monument Valley at the Welcome Center. The Navajo Nation Subdivision (Area 09, Book 1) adjudication of the water rights is proceeding. The Division of Water Rights has sent the notice to file claims to all parties. It is anticipated that the hydrographic survey will be completed in 2023. A proposed determination will be submitted to the district court in 2023.

Federal Reserved Water Rights Claims

Ute Mountain Ute and Confederated Tribes of the Goshutes - Discussions are occurring with the tribes to determine the status of a federal reserve water right.

Capitol Reef National Park and Wild and Scenic Rivers - Discussions are occurring with the federal agencies to determine the status of federal reserve water rights claims.

Telemetry

During this last legislative session, the Division of Water Rights received \$380,000 for the installation of water diversion measurements with telemetry. The Division is actively working to purchase and install these devices.

Distribution

The Division is continuing our work to build water distribution accounting models and enhance the Division's existing accounting tools on our distribution systems. The data collected from the measuring will link directly to our accounting models.

The Division has partnered with the Colorado River Authority of Utah to conduct a GAP analysis of needed measurements in the Colorado River basin. In addition, work is beginning to create a comprehensive UCRAF model (Utah Colorado River Accounting and Forecasting) that will be used by both the agencies as a state-of-the-art management tool.

Tab R – V (Intentionally Blank)

Tab W – Newsletter Index

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**RESOLUTION
of the
WESTERN STATES WATER COUNCIL
Urging Congress to Support**

**SUBSEASONAL to SEASONAL
WEATHER RESEARCH, FORECASTING, and INNOVATION**

**Adopted by Executive Committee Action
March 6, 2020**

WHEREAS, Western States experience great subseasonal, seasonal, and annual variability in precipitation, with serious impacts and consequences for water supply planning and management, drought and flood preparedness and response, water rights administration, operation of water projects, and aging water infrastructure; and

WHEREAS, sound decision-making to protect life and property by reducing flood risks and to inform decisions involving billions of dollars of economic activity for urban centers, agriculture, hydropower generation, and fisheries depends on our ability to observe, understand, model, predict, and adapt to precipitation variability on operational time scales ranging from a few weeks to a season or more; and

WHEREAS, investments in observations, modeling, high-performance computing capabilities, research, and operational forecasting of precipitation provide an opportunity to significantly improve planning and water project operations to reduce flood damages, mitigate economic and environmental damages, and maximize water storage and water use efficiency; and

WHEREAS, operating aging water infrastructure in the face of growing and often competing water supply and water management demands requires that state, federal, tribal, and local agencies optimize operations for maximum efficiency and seek innovations, such as improved subseasonal to seasonal forecasting (S2S), to support their decision-making; and

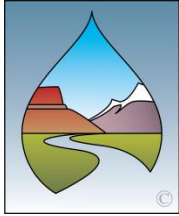
WHEREAS, the responsibility for operational weather forecasting rests with the National Weather Service (NWS), and currently NWS has minimal skill in making S2S outlooks; and

WHEREAS, there is a need to prioritize National Oceanic and Atmospheric Administration (NOAA) research and weather modeling to improve operational sub-seasonal and seasonal precipitation forecasts, with attention to Western needs; and

WHEREAS, the Congress enacted the Weather Research and Forecasting Innovation Act of 2017, which requires NOAA to take specified actions regarding S2S forecasting and to submit a report on improving S2S predictions to Congress by October 2018; and

WHEREAS, that report has not yet been submitted to Congress.

NOW, THEREFORE, BE IT RESOLVED that the Western States Water Council supports the implementation of the legislation, authorizing federal action to improve precipitation forecasting at S2S scales in the West, and urges NOAA to move forward with pilot projects for improving S2S winter precipitation forecasting in the mountain west and summer precipitation forecasting in the Great Plains.



Position No. 442
Revised and Readopted
(Originally Position #360 adopted April 3, 2014
See also Position #400, 4/14/17)

**RESOLUTION
of the
WESTERN STATES WATER COUNCIL
regarding the
BUREAU OF RECLAMATION'S
MAINTENANCE, REPAIR AND REHABILITATION NEEDS**

**Adopted by Executive Committee Action
March 6, 2020**

WHEREAS, the Bureau of Reclamation's mission is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public; and

WHEREAS, Reclamation operates hundreds of dams, reservoirs, and related infrastructure in the West, supplying water and power to millions of people, irrigating millions of acres for food and fiber, providing flood control and recreation, and supporting wildlife and habitat; and

WHEREAS, the importance of maintaining these projects cannot be overstated; and

WHEREAS, many of Reclamation's facilities are nearing, or have already exceeded, their original design lives and are in need of maintenance, repair, and/or rehabilitation (MR&R), in order to minimize risk; and

WHEREAS, MR&R needs refer to both maintenance that has been deferred and future projections or anticipated maintenance, repair and rehabilitation work; and

WHEREAS, Reclamation's funding and the funding from non-federal partners which operate two-thirds of Reclamation's infrastructure under contract is not sufficient to address all MR&R needs; and

WHEREAS, in 2015, Reclamation's Infrastructure Investment Strategy estimated that the total funding needed to address its MR&R needs is \$2.9 billion;¹ and

WHEREAS, Congress and the Administration must have access to consistent and accurate information on Reclamation's MR&R needs to address these needs through investments that are based on long-term capital planning and budgeting strategies; and

¹ See page 6 of https://www.usbr.gov/live/8-20-15/Infrastructure_Investment_Strategy_Final_Report_May2015-2.pdf

WHEREAS, state water managers require this information to carry out their water planning and other water administration activities; and

WHEREAS, in recent years, Reclamation has made progress in developing and improving estimates of MR&R needs for infrastructure under its jurisdiction as well as standard asset management criteria that evaluate risks to: (1) human health and safety; (2) economic growth; and (3) the environment; and

WHEREAS, Reclamation also continues to work with non-federal operating entities to clarify the processes for providing non-federal input into compiling and reporting MR&R needs; and

WHEREAS, notwithstanding these improvements, much of the currently available information regarding Reclamation's MR&R needs for Reclamation's infrastructure under contract is inconsistent and difficult to obtain; and

WHEREAS, a process is needed to evaluate Reclamation's MR&R needs for facilities under contract pursuant to standard asset management criteria that evaluate risks.

NOW, THEREFORE, BE IT RESOLVED that the Western States Water Council urges Congress and the Administration to work together to develop a standardized process to evaluate Reclamation's MR&R needs for facilities under contract and a process to ensure Reclamation can receive from partners/operating entities, and provide, the most up-to-date, consistent, and accurate information, including the estimated costs of those needs and the relative priority or importance of addressing those needs; and

BE IT FURTHER RESOLVED that Reclamation should ensure that appropriate information on its MR&R needs is readily accessible and easy to understand by Congress, state policy makers, and the public.



Position No. 443
Revised and Readopted
(Originally Position #361 adopted April 3, 2014
See also Position #401, 4/14/17)

**RESOLUTION
of the
WESTERN STATES WATER COUNCIL
regarding the
RECLAMATION SAFETY OF DAMS ACT OF 1978**

**Adopted by Executive Committee Action
March 6, 2020**

WHEREAS, the Bureau of Reclamation's dams and reservoirs are the primary source of water for numerous regions and communities throughout the West; and

WHEREAS, Reclamation's dams and reservoirs provide essential benefits such as drinking water, irrigation, hydropower, flood control, and recreation, while also supporting wildlife and habitat; and

WHEREAS, the safe operation and maintenance of Reclamation's dams is critical to sustaining these benefits and preventing dam failure, which threatens lives as well as private and public property; and

WHEREAS, most of Reclamation's dams are older than 50 years, with an average age of 70 years, and the agency has identified recommended modifications to prevent safety or performance issues; and

WHEREAS, maintaining and rehabilitating dams and related infrastructure is one of the most serious problems that Reclamation currently faces; and

WHEREAS, the Reclamation Safety of Dams Act of 1978 provides Reclamation with authority to preserve and maintain the structural safety of dams under its stewardship; and

WHEREAS, in FY2016, the Congress provided an additional \$1.1 billion in budget authority (P.L. 114-113, Section 204), giving Reclamation several more years before reaching its spending ceiling; and

WHEREAS, failure to appropriate such sums as are necessary for Reclamation's dam safety activities will increase the chances of dam failures by hindering the agency's ability to carry out critical dam safety rehabilitation and modernization efforts, risking loss of life and public and private property.

NOW, THEREFORE, BE IT RESOLVED that the Western States Water Council urges the Administration and Congress to work together and determine such sums as may be necessary for Reclamation to effectively carry out its dam safety program in a timely manner.



**RESOLUTION
of the
WESTERN STATES WATER COUNCIL
regarding
THE TRANSFER OF FEDERAL WATER AND POWER PROJECTS
and
RELATED FACILITIES**

**Adopted via Executive Committee Conference Call
March 6, 2020**

WHEREAS, the John D. Dingell, Jr. Conservation, Management and Recreation Act (P.L. 116-9) was signed into law on March 12, 2019 and Title VIII provides the Bureau of Reclamation with authority to transfer title to certain eligible facilities to qualifying entities without separate and individual acts of Congress; and

WHEREAS, on May 22, 2019 U.S. Secretary of the Interior David Bernhardt announced actions to expedite the transfer of eligible Reclamation facilities into local ownership and management with a new Categorical Exclusion and an update of Reclamation's operating manual procedures to streamline the title transfer process; and

WHEREAS, such transfers may offer important benefits, but many are necessarily very complex and involve many different interests, including important public and third-party interests protected under various state and federal laws; and

WHEREAS, many of these projects serve multiple purposes and were built (and their capital costs are being repaid) under longstanding agreements with water, power, and other users; and

WHEREAS, some single-purpose projects might be appropriately transferred under an expedited review process to their non-federal sponsors/operators by mutual agreement; and

WHEREAS, the many potential public benefits and costs related to transfers involve state and local governments and other interests, in addition to the federal government; and

WHEREAS, present and potential benefits may be lost unless there is a careful analysis of the transfer of individual projects; and

WHEREAS, federal project transfers require a careful project-by-project analysis of expected costs and benefits; and

WHEREAS, states have the primary responsibility for the comprehensive development, administration, and protection of their water resources for all purposes.

THEREFORE, BE IT RESOLVED that the Western States Water Council supports the careful evaluation of the transfer of federal water and power assets and urges the Administration and Congress to work together, with strong state involvement and protections for state water laws and water rights.



Position #445
Revised and Readopted
(Originally Position #363 adopted April 3, 2014
See also Position #403, 4/14/17)

**POSITION
of the
WESTERN STATES WATER COUNCIL
regarding
THE NATIONAL LEVEE SAFETY PROGRAM**

**Adopted by Executive Committee Action
March 6, 2020**

WHEREAS, floods are among the Nation’s most frequent and costliest hazards – every year the costs to taxpayers are in the billions and continue to increase; and

WHEREAS, all 50 states confront levee safety issues; and

WHEREAS, Congress enacted the National Levee Safety Act of 2007 (the Act) in the aftermath of Hurricane Katrina and the failure of the levees and flood water conveyance canals in New Orleans, Louisiana;¹ and

WHEREAS, the Act created the “National Committee on Levee Safety” (NCLS) to develop recommendations for a national levee safety program, including a strategic plan for implementation of the program; and

WHEREAS, in January 2009, the NCLS released, “Recommendations for a National Levee Safety Program – A Report to Congress;” and

WHEREAS, the report’s core recommendation calls for the creation of an independent National Levee Safety Commission to: (1) develop national safety standards for levees for common, uniform use by all federal, state, and local agencies; (2) inventory and inspect all levees on a periodic basis; and (3) develop national tolerable risk guidelines for levees; and

WHEREAS, the Water Resources Reform and Development Act (WRRDA) of 2014 subsequently redefined the term “levee” as an embankment or flood wall (i) “the primary purpose of which is to provide hurricane, storm, and flood protection...;” and (ii) “that normally is subject to water loading for only a few days or weeks during a year;” and further defined “canal structures” to mean an embankment, wall or structure along a canal or manmade watercourse that (i) constrains water flows; (ii) is subject to frequent water loading; and (iii) “is an integral part of a flood risk reduction system that protects the leveed area from flood waters” associated with weather-related events; and

WHEREAS, water supply canals that are part of an irrigation or municipal or industrial water supply system are appropriately excluded from the National Levee Safety Program; and

¹ 121 Stat. 1288, P.L. 110-114.

WHEREAS, one objective of the National Levee Safety Act of 2007 was to promote sound technical practices in levee design, construction, operation, maintenance, inspection, assessment, and security; and

WHEREAS, the U.S. Government Accountability Office (GAO) released a June 2016 report that found that WRRDA 2014 directed the U.S. Army Corps of Engineers (USACE) and Federal Emergency Management Agency (FEMA) to: (1) reconvene the National Committee on Levee Safety; (2) develop a national levee inventory; (3) implement a multifaceted levee safety initiative; (4) report to Congress by June 10, 2015; (4) report on the feasibility of a joint dam and levee-safety program by June 10, 2017; and (5) submit a report with recommendations identifying and addressing legal liabilities of engineering levee projects; and

WHEREAS, GAO found that with the exception of continuing to develop a national levee inventory that the FEMA and USACE had made little progress in implementing key WRRDA requirements, given resource constraints; and recommended that they develop a plan with milestones for implementing the required activities using existing resources or request additional resources as needed.

WHEREAS, the National Levee Database (NLD), developed by USACE, is the focal point for comprehensive information about our nation's levees and the NLD continues to be a dynamic database with ongoing efforts to add levee data from federal agencies, states, and tribes; and

WHEREAS, USACE and the U.S. Bureau of Reclamation published "Best Practices in Dam and Levee Safety Risk Analysis," in July 2019; and

WHEREAS, USACE is developing an Engineer Circular (EC), which is an agency policy document that will outline its Levee Safety Program and guidance consolidating and formalizing the principles, policies, and key processes used by USACE in the program; and

WHEREAS, the Circular is expected to be temporary, expiring two years after publication, with USACE working with its partners to implement and improve this guidance during this two-year period and issue more permanent agency guidance based on input and lessons learned.

NOW, THEREFORE, BE IT RESOLVED, that the Western States Water Council supports the implementation and improvement of our national program of safety standards for levees, flood walls and flood water conveyance canals; and

BE IT FURTHER RESOLVED, that such a program should not apply to federal or non-federal water supply canals that are part of an irrigation or municipal or industrial water supply system; and

Position #445
Revised and Readopted
*(Originally Position #363 adopted April 3, 2014
See also Position #403, 4/14/17)*

BE IT FURTHER RESOLVED, that the Western States Water Council encourages the Administration and Congress to work together and with States to strengthen the National Levee Safety Program and provide adequate resources for implementing the requirements of the National Levee Safety Act of 2007, WRRDA 2014, and the Aging Water Infrastructure and Maintenance Act (Subtitle G of the Omnibus Public Lands Management Act of 2009).



Position #446
Revised and Readopted
(See also Position #364 adopted April 3, 2014
and Position #404, 4/14/17)

**POSITION
of the
WESTERN STATES WATER COUNCIL
regarding the
CLEAN and DRINKING WATER STATE REVOLVING FUNDS
and
WATER INFRASTRUCTURE FINANCE and INNOVATION ACT
LOANS and STATE and TRIBAL ASSISTANCE GRANTS**

**Adopted by Executive Committee Action
March 6, 2020**

WHEREAS, the economies of every State and the Nation as a whole depend upon sufficient water supplies of suitable quality, which require adequate water and sewer infrastructure; and

WHEREAS, the Environmental Protection Agency's (EPA) Clean Water State Revolving Fund and Drinking Water State Revolving Fund (SRF programs) provide states with capitalization grants that are leveraged with state contributions to offer financial assistance to cities, towns, communities, and others for the planning, design, construction and rehabilitation of built and green water and wastewater-related infrastructure to improve source and drinking water quality; and

WHEREAS, each state administers the SRF programs in coordination with EPA, and these programs are one of the principal tools that states use to pursue the goals of the Clean Water Act and Safe Drinking Water Act; and

WHEREAS, the nation's wastewater and drinking water infrastructure is aging and in need of repair and replacement; and

WHEREAS, the Environmental Protection Agency (EPA) by law estimates infrastructure needs every four years and the most recent estimates show a total capital investment need of at least \$271 billion for wastewater and stormwater infrastructure and \$472.6 billion for drinking water infrastructure nationwide over the next 20 years, and a significant funding gap under current spending and operation practices; and

WHEREAS, the 2017 American Society of Civil Engineers' (ASCE) Infrastructure Report Card and updated Failure to Act Report estimates that by 2025 there will be a \$105 billion gap in needed new capital investments for water and wastewater projects, as well as a potential loss of up to 500,000 jobs, and by 2040 a capital funding gap of \$152 billion with 956,000 jobs at risk; and

WHEREAS, ASCE recommends a minimum commitment of \$20B per year over five years; and

WHEREAS, these estimates do not include anticipated operation and maintenance costs, typically funded by ratepayers, nor an estimated \$30 billion unfunded gap related to calls for replacing some 6.1 million homes with lead water service lines; and

WHEREAS, proposed federal appropriations and budget requests that reduce SRF funding ignore the multitude of needs identified by EPA, particularly given that many states and communities are struggling to meet their water and wastewater challenges in the face of growing populations and aging infrastructure; and

WHEREAS, to the extent federal law has established certain nationwide levels of treatment for drinking water and wastewater, the federal government has an obligation to provide states with the necessary financial and technical assistance needed to comply with such requirements, including the appropriation of adequate funding for SRF capitalization grants; and

WHEREAS, EPA's Clean Water and Drinking Water Infrastructure Sustainability Policy mandates that state SRF programs promote sustainable water infrastructure and overall system sustainability; and

WHEREAS, the SRF Programs have measures in place to help ensure system sustainability and account for individual state needs and priorities; and

WHEREAS, the SRF programs are one of the most successful delivery mechanisms for federal assistance; and

WHEREAS, new competing water and wastewater infrastructure funding programs should not come at the expense of the SRFs, which are a proven model for addressing water and wastewater infrastructure needs; and

WHEREAS, it is the sense of Congress through the Water Infrastructure Finance and Innovation Act of 2014 (WIFIA), the Water Infrastructure Improvements for the Nation Act (WIIN Act) of 2016 and America's Water Infrastructure Act of 2018 (AWIA) to provide robust funding of capitalization grants for States' drinking water revolving loan fund and the clean water revolving loan fund; and

WHEREAS, Congress has approved a number of additional requirements on the states' management and use of SRF funds, including but not limited to: (1) mandating the use of between 20% and 30% of appropriated funds for principal forgiveness, negative interest loans, grants, or a combination thereof; (2) setting aside 10% of funds for green infrastructure, water or energy efficiency, or other environmentally innovative activities; (3) "American Iron and Steel" provisions that limit the use of SRF funds to purchase certain types of materials and services; and (4) Davis-Bacon Prevailing Wage that requires payment of locally prevailing wages and fringe benefits to contractors and subcontractors at the site of work; and

WHEREAS, although often well-intended, these requirements are generally aimed at advancing policy objectives that are unrelated or contrary to the SRFs' primary purpose of providing funding for basic water infrastructure, and reduce the flexibility of the States to manage SRFs in a cost-effective manner; and

WHEREAS, additional restrictions on state SRF management represent unfunded federal mandates that impose significant regulatory burdens, make state SRF programs less attractive to local entities, and reduce the capacity of a State to leverage their SRF programs and address infrastructure needs; and

WHEREAS, the State and Tribal Assistance Grants (STAG), including Performance Partnership Grants (PPG) and other grants, are critical to the support of state programs that assure that the Nation's drinking water and water quality remain safe for the public health of the citizens.

NOW, THEREFORE, BE IT RESOLVED, that the Administration and Congress should work together to ensure that stable and continuing federal appropriations are made to the SRF capitalization grants, WIFIA loans and State and Tribal Assistance Grants at funding levels that are adequate to help States address their water infrastructure needs and protect public health and the environment for the benefit of the people; and

BE IT FURTHER RESOLVED, that the SRF programs should allow for greater flexibility and require fewer restrictions on state SRF management.

See also Position #330 adopted April 15, 2011 in Santa Fe, New Mexico.



Position #447
Revised and Readopted
(Originally Position #405 adopted 4/14/17)

RESOLUTION
of the
WESTERN STATES WATER COUNCIL
regarding the
RURAL WATER and WASTEWATER PROJECT/INFRASTRUCTURE NEEDS
and
U.S. DEPARTMENT of AGRICULTURE PROGRAMS

Adopted by Executive Committee Action
March 6, 2020

WHEREAS, in the West, water is indeed our “life blood,” a vital and scarce resource the availability of which has and continues to circumscribe growth, development, our economic and environmental well-being and quality of life; and

WHEREAS, across the West, many small, rural and tribal communities are experiencing water supply shortages due to drought, declining streamflows and groundwater supplies, and inadequate infrastructure, with some communities hauling water over substantial distances to satisfy their potable water needs; and

WHEREAS, often water supplies that are available to these communities are of poor quality and may be impaired by naturally occurring and man-made contaminants, including arsenic, copper, lead, and carcinogens, which impact communities’ health and their ability to comply with increasingly stringent federal water quality and drinking water mandates; and

WHEREAS, many small, rural and tribal communities (including colonias) also face challenges related to meeting federal mandates for wastewater treatment; and

WHEREAS, at the same time, many small, rural and tribal communities in the West suffer from significant levels of unemployment and simply lack the financial capacity and expertise to plan, finance and construct needed drinking water and wastewater system improvements; and

WHEREAS, there is a Federal responsibility to assist these communities in meeting related federal mandates to achieve water and wastewater public health goals; and

WHEREAS, USDA’s water and wastewater grant and loan programs help provide financing for clean and reliable drinking water systems, sanitary sewage disposal, solid waste disposal and stormwater drainage for individual households, businesses, cooperatives, private non-profits, and state and local governmental entities and tribal communities – many without access to private, commercial credit on reasonable terms or other federal financial assistance (including the SRFs); and

WHEREAS, these programs help very small, financially distressed communities by providing long-term low interest loans (up to 40 years at fixed rates determined by need), loan guarantees, and grants (if funds are available), and related programs provide technical assistance and training grants; and

WHEREAS, these wise investments of federal dollars can help businesses and manufacturers to locate or expand operations in these communities, providing an economic boost, as well as environmental improvements and other long-term returns.

NOW THEREFORE BE IT RESOLVED, that the Western States Water Council urges the Administration and Congress to carefully consider the needs of small, rural and tribal communities and businesses and provide or otherwise ensure they have access to financial and technical assistance sufficient to ensure they can meet federal water quality and drinking water mandates, as well as achieve public health goals.