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Submitted to the
United States Senate
Committee on Environment and Public Works
Subcommittee on Transportation and Infrastructure

Regarding Perspectives on U.S. Army Corps of Engineers' Authorities to Respond to Water Management Issues

May 16, 2023

Chairman Kelly, Ranking Member Cramer, and members of the Committee, thank you for holding this hearing and your efforts to achieve a balance between federal policies and programs and the role of the States in our federalist system.

My name is Jennifer Verleger. I am here today as the Chair of the Western States Water Council (WSWC), which is a bi-partisan organization representing eighteen western States, created by the Western Governors Association in 1965, to advise them on water-related issues.

I am also an Assistant Attorney General for the State of North Dakota, where I represent the State Water Commission and the Department of Water Resources. In that capacity, I'm also a delegate to the Conference of Western Attorneys General (CWAG).

Additionally, I sit on the board of the National Water Supply Alliance (NWSA), which is a national organization of state, regional, and local governments, as well as wholesale water providers and utilities, who rely on water supply stored in facilities maintained by the Corps of Engineers.[1]

Water Supply

Over the decades, western States and the Corps of Engineers have butted heads when State water law has conflicted with federal programs and priorities, particularly when it comes to water supply. The problem can be illustrated with an analogy.[2] Think of a kitchen sink. There are usually two sides to the sink, with a divider in the center and a faucet that swings between each

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[1] While I am not testifying in my capacity as a NWSA board member, the organization also has two policy positions related to this topic that are consistent with WSWC perspectives.
https://www.nationalwatersupply.org/_files/ugd/cdd48e_4144f6cb41d54011b9e821badec57a08.pdf.
https://www.nationalwatersupply.org/_files/ugd/cdd48e_fe818498d7f1430faf9ae446169460f6.pdf
See also, https://www.nationalwatersupply.org/water-supply-rule.

[2] For a different analogy regarding this same problem, see attached "Surplus Water and the Missouri River Moratorium," presented at the American Bar Association 31st Annual Water Law Conference, June 2013.

side. On one side, the drain is plugged. This is the Corps' storage reservoir. On the other side, there is no plug, which is the flowing river. The running faucet is the upstream river and surface runoff, which is controlled by mother nature. The Corps controls which side of the sink the faucet is running into by opening and closing the outflow of its reservoirs. Once the plugged side of the sink is full, the Corps must drain some of the water, or move the faucet to the uncontrolled, free-flowing side.

The Corps takes the position that ALL water in the sink is in storage and subject to their control and the fees they charge. The States take the position that the sink is in their own house and that even though the Corps gets to control which side of the sink is filling, it only gets to enter a water supply agreement or charge users when they take water from the plugged side of the sink. Water that is coming out of the faucet, before it gets to the sink – for example when you fill a glass – and water that flows into the open portion of the sink is the States' to appropriate.

The Corps bases its position on language in both the 1944 Flood Control Act and the 1958 Water Supply Act. Section 6 of the 1944 Flood Control Act allows the Corps to sell "surplus water," which the Corps loosely defines as reservoir water that is not required for an authorized purpose because the authorized need never developed or has changed, or water that could be more beneficially used as municipal and industrial water than for its authorized purpose and wouldn't affect other authorized purposes over some specified time period. To continue the sink analogy, if the water in the sink is supposed to be used to wash dishes, but you don't eat at home and so you don't have dishes, the Corps can sell that water for other uses as surplus water. Similarly, if someone wants a glass of water to drink or water plants, and more water will come out of the faucet before there's a need to wash dishes, the Corps can also sell that water as surplus, out of its side of the sink.

A problem unique to the Missouri River system regarding surplus water is that the water in the system has never been allocated to specific authorized purposes, and so the Corps is unable to make a determination of whether there is "surplus water." (To our knowledge, based on representations made by the Corps, all other reservoirs outside the Missouri River system have had their storage allocated to specific authorized purposes.) Imagine the frustration this caused in 2011, when the Missouri River was flooding downstream cities most of the summer, but the Corps was telling North Dakota that it was unsure whether there was "surplus water" available for use in the reservoir.

The Corps also has authority under the 1958 Water Supply Act. It states that storage may be included in Corps and Bureau of Reclamation reservoirs "for present or anticipated future demand or need for municipal or industrial water, and the reasonable value thereof may be taken into account in estimating the economic value of the entire project." The Act further places a condition that "before construction or modification of any project including water supply provisions for present demand is initiated, State or local interests shall agree to pay for the cost of such provisions." Again returning to the sink analogy, the Corps takes the position that because there is a sink in your house, the Corps is allowed to recoup initial construction and any subsequent repair costs no matter which side of the sink is being used. The States take the position that only if a State asks for a larger or upgraded sink, then the State is responsible for the extra cost.

After several years of the States' unsuccessful attempts to resolve their differences with the Corps over this issue, a provision in WRDA 2014 prohibited the Corps from charging surplus water fees in the Upper Missouri River Basin for 10 years.

Undeterred, in 2016, the Corps published its Proposed Water Supply Rule in the Federal Register (COE-2016-0016). Generally, the rule set forth the Corps' policies for interpreting its authorities under the 1944 and 1958 Acts, defined key statutory terms, and discussed water pricing mechanisms. The States had several issues with the proposed rule.

Despite the Corps' insistence that it sells "storage" (as opposed to selling water), the rule never defined "storage," nor do top officials agree on what that term even means. This is the fundamental crux of the States' disagreement with the Corps, and until this conflict is resolved, consensus remains unlikely. To the States, "storage" means the area on the plugged side of the sink, and there is general agreement that the Corps has the authority to charge for use of that storage space (except for in the Missouri River basin).[3] However, the Corps continued to assert through the rule that all the water behind the reservoir is its to manage – in other words, the entire kitchen sink. In the rule, the Corps specifically stated that it was aware of North Dakota (and other States') position that "users should not be required to pay for benefits they do not receive," but the law "does not require the Corps to undertake such an analysis." The problem with this position is that in attempting to exercise control over the unplugged portion of the sink, the Corps is also usurping the States' role in appropriating its own water. In other words, the Corps is controlling who is allowed to take a glass of water from the parts of the system outside the plugged area of the sink. This is contrary to State water laws and the doctrine of cooperative federalism.[4]

Not only did the proposed rule require States to pay for benefits they do not receive, it usurped the States' rights and authority to control and allocate their own water resources and completely ignored multiple declarations from Congress that States are to have the primary responsibility for water supply and water management decisions. Congress and the courts have unequivocally established and repeatedly affirmed the doctrine of cooperative federalism regarding water management issues.

Further, different States have different water laws regarding the rules for filling the plugged portion of the sink. Some States only allow "one fill" per water season. This means that the plugged portion of the sink can be filled once at the beginning of the water year with the spring run-off, and that amount of water needs to last the year. Other States would allow the faucet to be switched between the plugged and unplugged portions of the sink freely, depending on stated variables. By claiming the entire sink for themselves, the Corps disregards these State law principles.

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[3] The pricing mechanisms and payment terms are likely the subject of additional conflict, but until the underlying definition of storage is resolved, those are problems for the future.

[4] A more detailed technical and legal analysis can be found in the attachment labeled "Position Paper on Missouri River Allocations Within Corps' Reservoir Take Line Boundaries," dated October 2014.

There was bi-partisan opposition to Proposed Water Supply Rule from the Western States Water Council, Conference of Western Attorneys General, and Western Governors Association. There was bipartisan opposition to the rule from 19 Senators, including Senators Cramer and Merkley. Ultimately, the Proposed Water Supply Rule was withdrawn in 2020, though the underlying conflict remains unresolved.

The prohibition on fees was extended from 10 years to 12 years in Section 1138 of WRDA 2018, and further extended to 16 years in Section 306 of WRDA 2020. Most recently, Senator Cramer successfully incorporated Section 8388 into WRDA 2022, which permanently banned the Corps from charging surplus water fees from the Upper Missouri River Basin. While this solves a portion of the problem for some of our members, the larger problem regarding authority over water allocations remains.

Additionally, Major General Spellmon withdrew a policy (Guidance Letter No. 26), which prohibited the Corps from granting access to reservoirs until water storage agreements were executed. In North Dakota and South Dakota, the majority of the Missouri River contains reservoirs. Because of the conflict over whether water supply agreements were even necessary, Guidance Letter No. 26 meant in practicality that those States had no access to Missouri River water, the primary water supply source in both States. We are appreciative to General Spellmon for listening to our concerns and taking this positive step.

Western Water Cooperative Committee

WRDA 2022 established the Western States Cooperative Committee, which requires the Corps to annually meet with delegates from each of the Western States to develop and make recommendations to avoid or minimize conflicts between Corps projects and water rights and water laws of Western States and provide a written report to Congress. WSWC and CWAG are working diligently with their membership to facilitate committee appointments. Notably, the Corps has indicated it does not believe it can fulfill its obligation to participate in this committee without additional financial authorization. While there is no expectation the committee will be the end-all solution to States' conflicts with the Corps, there is hope that with this additional Congressional oversight, the Corps will take the "cooperative" portion of its cooperative federalism responsibilities more seriously.

Forecast Informed Reservoir Operations and Drought

Western States experience great variability in precipitation, with serious impacts and consequences for the operation of water projects, from maximizing water supply storage through multi-year droughts to flood control operations that protect life and property through intense storm systems. Optimizing operations at reservoirs to effectively manage through both of these extremes requires enhanced weather forecasting abilities, innovative strategies, necessary federal authority to enable flexibility while ensuring safety, and coordination across federal, state, tribal, and local agencies.[5]

[5] WSWC Position #460, supporting the use of FIRO, https://westernstateswater.org/wp-content/uploads/2021/04/460_Forecast-Informed-Reservoir-Operations-Position_2021Mar25.pdf

Congress has authorized and appropriated funding for pilot projects of Forecast-Informed Reservoir Operations (FIRO), enabling the Corps to work with the U.S. Geological Survey, the National Oceanic and Atmospheric Administration, the Bureau of Reclamation, and state and local agencies on a limited number of demonstration projects at reservoirs in California, the Pacific Northwest, the Upper Missouri River Basin, and the North Platte River Basin. These projects illustrate how water that would otherwise be released based on a fixed rule curve to create space in the flood control pool may instead remain in storage to help alleviate drought conditions, without compromising flood risk management.[6]

The California Department of Water Resources has noted that FIRO is a key water management tool that takes "advantage of scientific improvements in forecasting atmospheric rivers to better anticipate and manage large storm events while maximizing opportunities to increase water supply. Atmospheric rivers like those we've seen in January 2023 have a profound impact on water management in California." The State and federal agencies and local entities have been working together on pilot projects at Lake Mendocino, the Prado Reservoir, Lake Oroville, and New Bullards Bar. "The use of a steering committee of key agency and science partners enabled a collaborative approach to developing strategies to maximize the benefit of a flexible storage and release schedule while improving flood mitigation benefits…. These pilot projects have demonstrated significant value for the U.S. Army Corps of Engineers to develop a program to evaluate using FIRO in all new water control manual updates. This superior level of coordination nurtures knowledge-sharing and improvements in tools and technologies."[7]

WRDA 2018, Section 1222, directed the Corps to submit a report on the first pilot project to use FIRO operations in California (Coyote Valley Dam at Lake Mendocino and the Russian River Basin), with "an assessment of the viability of using [FIRO] at other dams owned or operated" by the Corps, identifying dams for future optimization or studies. WRDA 2020, Section 157, further directed the Corps to submit a report that identifies additional opportunities for applying FIRO across the United States, specifically naming the Upper Missouri River Basin and the North Platte River Basin.

One of the challenges of implementing FIRO response to drought conditions[8] is the need to update the Water Control Manuals. These manuals, governed by Engineer Regulation (ER) 1110-2-240 and ER 1110-2-8156, specify how to balance the congressionally-mandated purposes of each reservoir, and should be updated at least every ten years. However, these updates compete for funding alongside all the other Corps Operations and Maintenance requirements. Recent

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[6] "Short- and Long-Term Solutions to Extreme Drought in the Western United States," CRS Report (June 2022), https://www.energy.senate.gov/services/files/EC3FC7B6-59DF-4944-8DA8-534D85A8D951

[7] "California's Forecast-Informed Reservoir Operations Are Key to Managing Floods and Water Supplies," CDWR Update (January 2016), https://water.ca.gov/News/Blog/2023/Jan-23/Californias-Forecast-Informed-Reservoir-Operations-Are-Key-to-Managing-Floods-and-Water-Supplies

[8] "Army Corps of Engineers: Additional Steps Needed for Review and Revision of Water Control Manuals," GAO Report (July 2016), https://www.gao.gov/assets/gao-16-685.pdf

explanatory statements in appropriations legislation[9] have directed the Corps to apply specified funds from the Scheduling Reservoir Operations (SRO) line item to update water control manuals for non-Corps owned high hazard dams where: (1) the Corps has a responsibility for flood control operations under section 7 of the Flood Control Act of 1944; (2) the dam requires coordination of water releases with one or more other high-hazard dams for flood control purposes; and (3) the dam owner is actively investigating the feasibility of applying forecast-informed reservoir operations technology.

In WRDA 2022, section 8109, the Corps was authorized to update water control manuals for water resources development projects in States where the governor declared a statewide drought disaster in 2021, at the request of the governor, and prioritizing projects that include water supply or water conservation as an authorized purpose. The WSWC supports these continuing efforts to innovate and use forecast informed reservoir operations by public and private entities at all levels to maximize the effective and efficient use of our existing and future infrastructure to benefit our communities, economic prosperity, and our environment, while balancing and protecting our need for public health and safety.

Aging and Inadequate Infrastructure and Dam Safety

The arid Western States depend on an intricate and aging system of water infrastructure, including dams, reservoirs, and levees to store, manage, conserve, and deliver water supplies and control water during both floods and droughts. Existing and new infrastructure is critical to meet drinking water, municipal and industrial, hydropower, flood control, international treaty, and fish and wildlife habitat needs. This infrastructure is financed and maintained under a complex network of state, tribal, local, private, and federal ownership, benefiting a broad segment of water users. These systems frequently outlive their expected lifecycle by many decades, but require thoughtful planning for future safety and continued operation. Instead, much of our nation's water infrastructure is deteriorating due to underfunded and deferred maintenance and repair. Substantial and sustained investments in water project construction, maintenance, rehabilitation, and replacement are necessary. Existing state, local, and federal programs to finance these projects are crucial, but have been insufficient to meet our water quality and water resources management challenges.[10]

The WSWC supports continued and increased funding across all dam safety programs, including Corps Water Infrastructure Financing Program (CWIFP), and supports federal legislative and administrative actions that provide a continuous funding stream for maintenance, repair, and rehabilitation or replacement of local, state, and federal dams and related infrastructure. The WSWC supports the creation and maintenance of dedicated water infrastructure funding through special accounts with dedicated receipts to be promptly appropriated for authorized purposes, as well as a variety of grant, loan, credit enhancement, and other financial incentive programs to help meet diverse needs at all scales.

[9] See, e.g., FY2020, 165 Cong. Rec. H11233 (2019); FY2022, 168 Cong. Rec. H2225 (2022)
[10] See WSWC Positions #448, 462, https://westernstateswater.org/resolutions-summary/

The long-awaited CWIFP, expected to launch in Spring 2023, provides long-term, low-cost loans for maintaining, upgrading, and repairing non-federal dams listed in the National Inventory of Dams (NID). Notably, the Corps has indicated that around 16,000 of the dams in the NID are identified as high hazard potential dams, meaning that in the event of a failure or mis-operation of the dam, the subsequent damage is likely to include loss of life. Congress has appropriated $81M to leverage $7.5B in loans to help meet this need.

The WSWC also supports a method of congressional budget scoring that considers the unique timing of the costs and benefits of water infrastructure investments, and accounts for long-term public health and safety, economic and environmental benefits, with fair and appropriate discounting.

Data for Water Allocation, Supply, and Demand

WRDA 2020, section 158, authorized a "study on the ability of Federal agencies to coordinate with other Federal agencies, State and local agencies, Indian Tribes, communities, universities, consortiums, councils, and other relevant entities with expertise in water resources to facilitate and coordinate the sharing among such entities of water allocation, supply, and demand data, including: (a) any catalogs of such data; (b) definitions of any commonly used terms relating to water allocation, supply, and demand; and (c) a description of any common standards used by those entities." The Corps was directed to work with the National Academy of Sciences and submit a report to Congress on the results of the study, with "recommendations for ways to streamline and make cost-effective methods for Federal agencies to coordinate interstate sharing of data, including recommendations for the development of a publicly accessible, internet-based platform that can allow entities described in paragraph (1) to communicate and coordinate ongoing data collection efforts relating to water allocation, supply, and demand, and share best practices relating to those efforts…"

The WSWC has long supported water data programs at federal and state levels, advocated for increased funding for essential water science and monitoring data programs, and encouraged greater data-sharing and transparency among its own member states. States allocate and administer rights to the use of water in the West and are therefore in the best position to provide data on water rights and water use. However, water rights, uses, and associated data are managed separately and distinctly by each state, which makes regional analysis cumbersome. Analyses across regions and multi-state basins are becoming increasingly relevant, especially given the unprecedented drought and population growth that the West is experiencing. With changing and ever-greater demands on limited water resources, complicated by an increasingly complex overlay of federal laws and regulations, the importance of cooperative efforts and exchanges by and among states has likewise been magnified.

To address this challenge, Water Data Exchange (WaDE) program (begun in 2011) created a database and application programming interface (API) to streamline sharing of water rights and water use data via standardized and machine-readable formats. Making this data accessible enables users to answer regional and national questions about water availability, scarcity, and resilience in a cost-effective, sustainable, and consistent way. The WaDE program is made possible through funding from various state and federal agencies, private philanthropic funding, and in-kind support

through participation from our member States that committed staff and resources, as well as sharing their water data, without which WaDE would not be possible.

On April 25, 2023, the WSWC kicked off the public release of its Western States Water Data Access and Analysis Tool (WestDAAT),[11] the latest phase of the WaDE program. WestDAAT provides user-friendly access to data, where available in machine-readable format, for over 2.2 million water rights across the West. At present, WestDAAT includes a number of filters that can be used to visualize the data by owner, point of diversion, place of use, priority date, beneficial use (purpose), source of supply (surface water or groundwater), permitted flow or volume, and basin or watershed.

WSWC appreciates the efforts of various federal agencies that have worked with the WaDE program, including the Environmental Protection Agency, the Department of Energy, the U.S. Geological Survey, and the Bureau of Reclamation. We look forward to the results of the Corps congressionally-directed study on data for water allocation, supply, and demand, and hope to find greater synergy as we learn to share data across platforms.

Expediting Hydropower and Energy and Water Conservation

WRDA 2022, section 8123, directs the Corps to increase the development of hydroelectric power at projects with existing facilities, and develop new hydroelectric power at nonpowered projects. Hydropower is a prominent component of electricity generation in a number of our Western States, and is the primary source of renewable energy in the United States. The WSWC supports hydropower projects that enhance our electric generation capacity and promote economic development, while appropriately protecting environmental resources, the rights of existing water and power users, and respect State's authority over water allocation and CWA section 401 certification authority. Further, the WSWC supports the development and implementation of appropriate energy and water conservation programs at all levels to minimize demands placed our natural resources and ecosystems.[12]

Intergovernmental Collaboration

The WSWC strongly supports collaboration and leadership at all government levels – federal, state, tribal, and local – and the private sector – to address the Nation's infrastructure needs and establish water infrastructure improvements as a public policy priority.

One example in WRDA 2022 is the Secretary of the Army's expanded authority (section 8106), at the request of the non-Federal interests, as part of the scope of feasibility studies to formulate alternatives to maximize net benefits from the reduction of the comprehensive flood risk that is identified through a holistic evaluation of the isolated and compound effects; including water supply, water conservation, and drought risk reduction benefits.

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[11] https://westdaat.westernstateswater.org/

[12] See WSWC Position #479, https://westernstateswater.org/wp-content/uploads/2022/04/479_Renewable-Hydropower-Development_2022Apr6.pdf

Another is section 8119, Planning Assistance to States, authorizing the Secretary to carry out activities, at full Federal expense – "to inform and educate States and other non-Federal interests about the missions, programs, policies, and procedures of the Corps of Engineers; and to engage with States and other non-Federal interests to identify specific opportunities to partner with the Corps of Engineers to address water resources development needs." The Secretary is directed to designate staff in each district office to provide such assistance. There is always an important role for the States in the conduct of appraisal investigations and feasibility studies, preparation of feasibility reports, and identifying funding sources.

Section 8104, Floodplain Management Services, specifically directs the Secretary to identify specific opportunities to partner with the Corps to address flood hazards. Opportunities exist to leverage non-federal funding through federal loan guarantees and other financial instruments that access private sources of financing. Planning and continuing compliance with state water laws and interstate compacts is also vital.

Section 8150 created a Non-Federal Interest Advisory Committee comprised of members representing interests related to harbors, including inland harbors, flood and coastal storm risk management, aquatic ecosystem restoration, as well as inland waterborne transportation, water supply, recreation, hydropower, and emergency preparedness stakeholders. In addition, it would include representatives with expertise in conservation, environmental policy, and rural water resources.

The Western Water Cooperative Committee provisions in section 8158 are addressed above.

Under section 8208, the Secretary was directed to "'consult' with applicable Federal, State, and local agencies; Indian Tribes; non-Federal interests; and other stakeholders, as determined appropriate in the conduct of a comprehensive study to evaluate the effectiveness of carrying out additional measures, including measures that utilize natural features or nature-based features at or upstream of reservoirs for the purposes of – (1) sustaining operations in response to changing hydrological and climatic conditions; (2) mitigating the risk of drought or floods, including the loss of storage capacity due to sediment accumulation; (3) increasing water supply; or (4) aquatic ecosystem restoration…. [T]he Secretary shall include all reservoirs owned and operated by the Secretary and reservoirs for which the Secretary has flood control responsibilities under section 7 of the Act of December 22, 1944…."

An integrated, collaborative, and grassroots approach to water resources management is critical to the environmentally sound and efficient use of our water resources in the arid West. States, federal agencies, tribes, and local communities should work together to identify water problems and develop optimal solutions at the lowest appropriate level. Striving for cooperation rather than litigation, we must recognize and respect national, state, regional, local, and tribal differences in values related to water resources. State primacy is fundamental to a sustainable water future. Federal water planning, policy development, regulation, protection, and management must recognize, defer to, and support state water laws, plans, policies, programs, water rights administration, adjudication, and regulation, compacts, and settlements. Rather than attempt to dictate water policy, the federal government should engage states early in meaningful consultation

and contribute its fair share of funding to support implementation of state water planning and management, thus avoiding, or at least minimizing, the need for federal regulatory mandates.[13]

Drought Authorities

On July 28, 2022, Assistant Secretary of the Army (Civil Works) Michael Connor issued a memorandum[14] directing the Corps to provide a comprehensive brief to his office regarding the ongoing, planned, and potential civil works actions that can further drought resilience at local and regional scales. He noted the increasing trend of extreme drought across the nation and expressed the need for the Corps to use its existing authorities and programs to support drought resilience, particularly in the drought-prone western U.S. The memo on drought resilience described several examples of programs and policies already in place, then went on to describe advancements needed to integrate solutions as part of a whole-of-government approach in areas such as: (1) collaborative agreements with federal, state, and local agencies; (2) additional FIRO pilot projects; (3) water supply proposals and requests, particularly those integrating managed aquifer recharge features; (4) technical assistance to states under the Planning Assistance to States (PAS or "section 22") program; (5) working with tribal nations under the Tribal Partnership Program or other authorities; (6) emergency response and recovery assistance for drought and wildfires to help stabilize watersheds; and (7) improving permitting timelines for facilities and infrastructure important to drought resilience strategies.

We appreciate the opportunity to testify on these important efforts and look forward to continuing to work with the Assistant Secretary's office and the Corps of Engineers.

[13] https://westernstateswater.org/mission/

[14] https://api.army.mil/e2/c/downloads/2022/07/28/3f0183ec/asacw-guidance-on-drought-28jul2022.pdf