

DEEP DIVE TOPIC: WATER DATA

DRAFT REPORT

Western States Water Council
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Council members selected priority topics for state discussion as part of a 2025 strategic planning process. This deep dive discussion centered on growing concerns regarding the reliability and funding of federal water data programs, which are critical for state decision-making and planning. Participants from various states highlighted their heavy reliance on federal agencies for essential information like stream gaging, snow surveys, and water quality monitoring. There is significant concern regarding recent federal budget reductions and the potential for agencies to scale back these services, which forces states to fill these gaps despite already contributing substantial cost-shares to these collaborative programs.

The states emphasized that the true value of this data lies in long-term historical trends, which are indispensable for managing drought, planning for future water use, and mitigating natural disasters like floods. They noted that maintaining consistent, federal-level data collection is more efficient and reliable than individual states attempting to replicate these complex systems. Consequently, there is strong support for developing a unified, high-level policy resolution to effectively communicate the critical nature of these programs to Congress and federal partners, stressing that this is a matter of public safety, economic stability, and essential infrastructure resilience rather than just an administrative preference.

To strengthen their advocacy, the committee discussed the importance of using specific stories or case studies that demonstrate the real-world impact of water data, such as successful flood early warning systems or agricultural management outcomes. This narrative approach is intended to help congressional staff and state legislators connect technical data to tangible results like protecting human lives, sustaining agriculture, and safeguarding communities. The group plans to move forward by refining a policy resolution, exploring opportunities for survey-based data collection on state-level needs, and emphasizing the power of multi-level partnerships—across local, state, and federal entities—in maintaining these essential networks.

USGS

Participants in the discussion expressed several specific concerns regarding the reliability, funding, and management of USGS water data programs:

- **Shifting Financial Burden:** States are seeing a significant increase in the cost-share burden for USGS cooperative agreements. Several participants noted that agreements historically split costs 50/50, but funding has not kept pace with inflation, shifting the burden to states (e.g., 60/40) and forcing them to cover more costs or reduce the number of funded stations.

- **Privatization of Contracts:** California noted concerns regarding the Bureau of Reclamation moving to privatize data contracts previously held by the USGS. This raises uncertainty about data quality, data ownership, and the ability to maintain long-term trends tracked by USGS.
- **Operational Instability:** Participants described existing federal observing systems as being held together by "baling wire and duct tape." There are concerns that budget reductions are leading to the cutting of stream gages precisely when states need increased data density to manage issues like flooding and drought.
- **Reduced Capacity and Coverage:** Because of rising costs, states are forced to fund fewer stations, which reduces the datasets available to inform critical state functions, such as permit development and establishing Total Maximum Daily Loads (TMDLs) for water quality. Additionally, the consolidation of local USGS offices was identified as a challenge to completing necessary work.
- **Lack of Reliable Trends:** The group emphasized that the value of the data lies in long-term historical records. There is significant concern that scaling back USGS services will break the continuity of these trends, which are essential for emergency planning, drought management, and state water planning.

NRCS

Specific concerns regarding NRCS data—particularly the SNOTEL (Snow Telemetry) network—center on operational capacity and potential service disruptions, as detailed in the discussions and related briefing materials:

- **Staffing Shortages:** There are significant concerns regarding high vacancy rates within state snow offices, such as the Washington/Oregon regional office and the Idaho office, due to recent terminations. This loss of specialized staff directly threatens the maintenance of the SNOTEL network and the ability to provide essential forecasts.
- **Network Maintenance Risks:** Because of these staff reductions, the SNOTEL system—which tracks snowpack across the region—is at risk of failing, as there are insufficient personnel to manage the ongoing, labor-intensive maintenance of these remote stations.
- **Facility and Equipment Threats:** There are reports of potential facility lease cancellations for SNOTEL equipment and concerns that vehicles and supplies essential for monitoring network maintenance could be put up for sale or liquidated, which would further hinder operations.
- **Forecasting and Planning Impacts:** Without reliable snowpack data, states are unable to accurately forecast water supplies. This inability disrupts critical decision-making processes, including drought declarations, reservoir operations, and the management of water supplies for agricultural and municipal use.

Other Agencies

The discussion highlighted several other critical federal and state-supported data programs used for water management:

- **U.S. Bureau of Reclamation (USBR):** Participants noted the use of HydroMet and AgriMet programs, which provide data for water administration, irrigation, and farming practices.
- **National Oceanic and Atmospheric Administration (NOAA) & National Weather Service (NWS):** The group discussed the importance of weather, climate, and drought data provided by these agencies, including information from River Forecast Centers and drought monitoring.
- **National Aeronautics and Space Administration (NASA):** Satellite missions—specifically Landsat and NISAR—were identified as essential for measuring evapotranspiration and land subsidence (groundwater extraction impacts), as well as providing land surface deformation data.
- **Environmental Protection Agency (EPA):** Discussion included the Safe Drinking Water Information System, as well as data supported by 106 grants, which inform water quality assessments and programs such as those monitoring Harmful Algal Blooms (HABs).
- **Local and State-Level Infrastructure:** Participants highlighted the importance of Mesonet stations, rain gages, and low-level radar for flood early warning systems.
- **Biological and Specialized Data:** Participants mentioned specialized data sets, including those tracking invasive species like Quagga and zebra mussels, as well as other biological monitoring.
- **Communication Infrastructure:** Participants emphasized the importance of maintaining the satellite communication systems used to publish real-time data, which would be difficult and costly for states to duplicate.

Key Takeaways

- **Funding Erosion:** Federal cost-sharing for programs like USGS stream gages is not keeping pace with inflation, effectively shifting a larger financial burden to states. This forces states to either fund the gap or lose critical data monitoring sites.
- **Infrastructure Instability:** Federal observing systems are described as fragile, and there is significant concern that budget reductions and potential privatization of data contracts will break the continuity of long-term data trends essential for state water planning and drought management.
- **The "Partnership" Gap:** States are not looking for federal handouts; they are active, significant financial partners. The discussion highlighted that states are often bearing a substantial portion of the cost for federal data collection, a contribution that needs to be better quantified and credited.

Proposed Strategies

- **Develop a Succinct Policy Resolution:** The committee aims to create a high-level "omnibus data resolution"—a one-pager that can be used for lobbying Congress and federal agencies. This document would serve as an umbrella policy that cites specific, supporting data initiatives rather than focusing on a single, narrow issue.
- **Utilize "Storytelling" for Advocacy:** Members agreed that technical data must be connected to tangible human impacts to resonate with policymakers. Strategies include using specific

case studies—such as flood early warning systems that saved lives or agricultural management improvements—to illustrate the real-world utility of the data.

- **Leverage Data and Technology:** There is interest in modernizing data collection by using satellite technology and AI-driven models "ground-truthed" by existing gages. The group also discussed auditing various monitoring programs to identify opportunities for leveraging data across different agencies to reduce costs and increase efficiency.
- **Gather Data on Data:** To strengthen their lobbying position, the committee plans to survey members to catalog which federal data programs are critical to their operations and to quantify the state-level financial contributions currently sustaining these networks.