WESTERN STATES WATER COUNCIL
www.westernstateswater.org
Policy Position #2026-01

Support for Critical Federal Water Data, Forecasting, and Applied Research Programs

Policy Summary

The West depends on accurate, timely, and accessible water, weather, and climate data to protect lives and property, manage scarce water supplies, operate critical infrastructure, administer water rights, and support agriculture, energy, ecosystems, and economic growth.

Federal water data, forecasting, and applied research programs are essential to state water management and protection. They should be treated as core public-safety and water-management infrastructure, not optional or expendable programs.

Senate Committees of Jurisdiction

- Agriculture, Nutrition & Forestry
- Commerce, Science & Transportation
- Energy & Natural Resources
- Environment & Public Works

House Committees of Jurisdiction

- Agriculture
- Energy & Commerce
  - Communications & Technology Subcommittee
- Natural Resources
- Science, Space & Technology

Relevant Appropriations Subcommittees

- Agriculture, Rural Development, & FDA
- Commerce, Justice, & Science
- Energy & Water Development
- Interior & Environment

Relevant Federal Agencies

- National Aeronautics & Space Administration
- National Oceanic & Atmospheric Administration
- Natural Resources Conservation Service
- U.S. Army Corps of Engineers
- U.S. Bureau of Reclamation
- U.S. Environmental Protection Agency
- U.S. Geological Survey

WSWC Urges Congress and the Administration to:

1. Fully fund, maintain, and modernize core federal water data and observing programs.

Critical federal programs that collect, analyze, and deliver water, weather, snowpack, streamflow, groundwater, evapotranspiration, soil moisture, and water quality information must receive stable authorization, appropriations, maintenance, and modernization support.

2. Strengthen drought, flood, and extreme-weather forecasting and early warning.

The federal government should improve forecasting skill and decision support at all time scales—from hours to seasons—to better support drought preparedness, flood risk reduction, forecast-informed reservoir operations, and water-supply planning.

*The **Western States Water Council (WSWC)** is a government entity representing western state water agencies with members appointed by their respective governors. The WSWC's 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.*

3. Support applied water research and research-to-operations.

Congress and the Administration should maintain and strengthen programs that help move water research into practical use, including the Water Resources Research Institutes, the USGS Water Resources Research Act program, and related federal-state-university partnerships.

4. Protect the infrastructure and spectrum that water forecasting and monitoring depend on.

The nation must protect observation networks, remote sensing systems, data communications, and radio frequencies necessary for weather forecasting, satellite observations, streamgaging, and water management.

5. Strengthen federal-state partnership and data collaboration.

Federal programs should work with, not around, the states by improving coordination, consultation, interoperability, and data-sharing, recognizing regional differences and respecting state authority over water allocation and administration.

Core Message

For the West, these programs are not abstract science programs. They are operational tools that help prevent loss of life, reduce economic damage, improve water management, strengthen drought and flood preparedness, and support sound state decision-making.

What WSWC Is Asking For

1. Provide sufficient appropriations and durable support for core federal water, weather, drought, and climate observation, forecasting, and data-delivery programs.
2. Prioritize maintenance, modernization, and restoration of aging or damaged observation networks and associated communications systems.
3. Support legislation and administrative actions that improve data availability, quality, interoperability, accessibility, and usability.
4. Strengthen applied research, research-to-operations, and state-university-federal partnerships, including WRRIs and the Water Resources Research Act program.
5. Improve drought prediction, early warning, and preparedness through coordinated research, forecasting, and implementation.
6. Advance forecasting capabilities needed for flood protection, water supply planning, and forecast-informed operations.
7. Protect spectrum and technical infrastructure necessary for satellite observations, remote monitoring, and weather and water forecasting.
8. Work with states through strong federal-state partnership and data collaboration that respects state water authority.

Closing Statement

WSWC supports a strong federal-state partnership to ensure that the West and the Nation have the data, forecasting, research, communications infrastructure, and practical tools needed to manage water wisely, prepare for extremes, and protect the public. These investments are foundational to water security, public safety, and the long-term resilience of western communities, economies, and ecosystems.

Nothing in this position is intended to alter or affect the authority of western states over the allocation, administration, development, or protection of waters within their borders, or the interpretation or application of any interstate compact, court decree, international treaty, tribal settlement agreement, or state water law.

Supporting Documentation

Why This Matters

In the West, water is a vital and limited resource. Sound decision-making depends on reliable data regarding precipitation, temperature, snowpack, soil moisture, evapotranspiration, streamflow, groundwater, water quality, and related conditions.

Those data are used every day by federal, state, tribal, and local agencies, as well as by water users, utilities, agricultural producers, hydropower operators, environmental managers, researchers, and private businesses to:

- forecast floods, droughts, wildfires, and other extreme events;
- plan for municipal, agricultural, industrial, and environmental water needs;
- operate reservoirs, canals, hydropower systems, and flood-control facilities;
- administer water rights, decrees, compacts, and settlement obligations;
- improve drought response, water conservation, and irrigation efficiency; and
- reduce risks to life, property, infrastructure, and the environment.

Without timely and accurate data, the risks to public safety, economic activity, infrastructure, and natural resources increase significantly.

Western states also continue to face greater hydrologic variability, aging infrastructure, prolonged drought, flood risk, and rapidly evolving demands on water systems. These pressures make reliable observing systems, modern forecasting, and applied research more important, not less.

Priority Federal Programs and Capabilities

WSWC supports strong federal investment in the following categories of programs and capabilities.

A. Core observing systems, water data programs, and modernization

Federal programs that gather, maintain, analyze, and share foundational water, weather, and climate information should be preserved, modernized, and adequately funded. These include, among others:

- the NRCS Snow Survey and Water Supply Forecasting Program and SCAN;
- USGS streamgage, groundwater, water-quality, and related monitoring programs, including GWSIP and the National Streamflow Network;
- NOAA weather, climate, hydrologic, and drought observation, forecasting, and information programs;
- NASA and USGS earth-observation missions and related remote-sensing applications relevant to water management;
- Bureau of Reclamation AGRIMET and similar observing systems; and
- EPA data-sharing and environmental information exchange systems that support timely decision-making.

These programs should be treated as part of the Nation's water-management and public-safety infrastructure. WSWC also supports adequate and consistent federal funding to maintain, restore, and modernize aging systems, improve real-time or near-real-time data delivery and interoperability, identify and address data gaps and unnecessary overlap, deploy new monitoring technologies, and restore capabilities lost to wildfire, floods, and other disasters.

B. Drought & flood preparedness, forecasting, and water operations

The West needs stronger and more coordinated drought monitoring, prediction, preparedness, and response, along with better forecasting at operational, subseasonal, and seasonal time scales. Improvements in observations, computing, research, and forecasting can directly improve reservoir operations, flood preparedness, water-supply planning, and drought response.

WSWC supports federal efforts to:

- maintain and improve drought early warning systems;
- strengthen monitoring networks for snow, streamflow, groundwater, soil moisture, evapotranspiration, and related climate conditions;
- improve drought, hydrologic, precipitation, and extreme-event forecasting through research, modeling, paleoclimate work, pilot projects, and stronger forecasting skill at subseasonal and seasonal time scales;
- strengthen research-to-operations investments that move improved forecasting tools into practical use by end users;
- support forecast-informed reservoir operations and other innovative operational strategies; and
- update water-control tools, manuals, and operating approaches where better data and forecasting can improve outcomes.

C. Applied research, climate adaptation, and research-to-operations

WSWC supports state and federal applied research that helps water managers adapt to hydrologic variability and make sound scientific decisions. This includes research on:

- climate adaptation relevant to water planning and management;
- extreme precipitation and flood risk;
- probable maximum precipitation methodologies and related extreme-rainfall tools;
- remote sensing and new monitoring technologies;
- reconstructed paleoclimate and drought analysis;
- evaluation of hydroclimate networks and data gaps;
- water-use data and evapotranspiration tools; and
- other research that improves water planning, infrastructure design, and operations.

WSWC also supports stronger research-to-operations pathways so that scientific advances are translated into tools that agencies can actually use.

D. Water Resources Research Institutes and state-university partnerships

WSWC supports continued federal authorization and financial support for the Water Resources Research Institutes and the USGS Water Resources Research Act program.

These institutes provide valuable university-based research capacity, technology transfer, outreach, and training that directly support western state water agencies in planning, policy development, and management. They are an effective federal-state-university partnership that helps ensure research investments are relevant to state needs and useful in practice.

E. Protection of spectrum and data communications

Water forecasting and management rely on the uninterrupted transmission of satellite, weather, streamflow, groundwater, and emergency information.

WSWC supports protecting the radio frequencies, observation systems, and data communication pathways necessary for weather forecasting, earth observation, streamgaging, water monitoring, and related public-safety functions. Spectrum decisions should account for the operational importance of these systems, the risks of interference, and the potentially severe consequences for forecasting, emergency response, and water management.

F. Federal-state partnership and state-centered implementation

Western states have invested heavily in their own monitoring programs, observing systems, and decision-support tools. Federal policy should build on these investments through partnership and collaboration.

WSWC supports federal policies and programs that:

- improve coordination among federal, state, tribal, and local partners;
- increase consultation with states and affected stakeholders;
- recognize regional differences and western conditions;
- improve interoperability and open sharing of reliable data;
- support state-federal data partnerships, including water-use data improvement efforts; and
- consider governance tools such as a federal water data council, national framework, advisory mechanisms, and grant support where they improve coordination and implementation.

[Internal] Additional Supporting Context

The following discussion preserves important context from prior Council positions and provides additional language that members may wish to use in their own state and intergovernmental work; it will be removed from public-facing versions.

A. Water data is operational, not abstract

The federal programs addressed in this position are not merely research or information programs. They are operational tools used by water managers and emergency officials to make real-time and long-range decisions affecting communities, agriculture, hydropower, ecosystems, and public safety.

B. The West faces compounding risks

Western states experience wide swings in precipitation and runoff, prolonged drought, major flood events, wildfire impacts, and increasing pressure on aging infrastructure. Better data and forecasting improve preparedness, reduce damages, and help make better use of existing storage and conveyance systems.

C. Observation networks and data continuity matter

Data continuity is critical. Interruptions caused by underfunding, equipment failure, disaster losses, or interference can reduce forecast quality, weaken early warning, impair water-right administration, and undermine infrastructure operations and planning.

D. Forecasting improvements have practical value

Improved forecasting can support better flood-risk management, more efficient reservoir operations, drought response, and more informed operational decisions. The value of forecasting is greatest when it is paired with tools, policies, and institutional capacity that allow managers to use it.

E. Research must reach practice

Applied water research, technology transfer, and research-to-operations matter because states need usable tools, not just technical reports. University partnerships, testbeds, pilot programs, and agency coordination all help turn scientific advances into practical water-management improvements.

F. State-federal partnerships should be strengthened

WSWC supports federal programs that complement state investments, respond to regional needs, and are designed with input from the states. A one-size-fits-all federal approach will not meet the needs of western water management.

[Internal] Legacy Crosswalk

This section may be retained as an internal appendix or removed from public-facing versions.

This consolidated policy is intended to carry forward the substance of WSWC's prior positions on:

- subseasonal to seasonal weather research, forecasting, and innovation (#491);
- NOAA data, forecasting, and research programs (#500);
- Water Resources Research Institutes and the USGS Water Resources Research Act program (#502);
- probable maximum precipitation standards (#508);
- forecast-informed reservoir operations and innovations (#509);
- weather station networks (#510);
- federal research on climate adaptation (#513);
- federal water and climate data collection and analysis programs (#522);
- drought preparedness, prediction, and early warning programs (#523);
- preservation of radio frequencies necessary for weather forecasting and water management (#532); and
- strengthening resilience to extreme weather events (#533).