

Legislative Approaches to Water Data as Public Policy

Lucas Stephens • March 2022

The work to modernize water data infrastructure often goes on under the radar as part of the tireless regular operations of state and federal agencies. But over the past few years, often in response to drought, several western state legislatures have devoted attention and funding to the issue. Recently, Oregon became the latest state to write new policy around water data.

OREGON INVESTS IN WATER AND WATER DATA

In June of 2021, the Oregon Legislature [passed several measures](#) aimed at improving water management throughout the state. The bills came out of a long engagement process led by Representative Ken Helm, Chair of the House Water Committee. An investment package of over 500 million dollars will support drinking water, wastewater, and groundwater infrastructure projects, and community water planning throughout the state to identify local water use needs. Included in this effort was 11.2 million dollars in funding to modernize Oregon's water data infrastructure.

Most of the funding will go to upgrading and increasing the monitoring technology that gathers data on Oregon's water supply, particularly groundwater. Oregon's Water Resources Department (OWRD) will receive increased funding for data collection.

Both OWRD and the Oregon Department of Environmental Quality (DEQ) will also receive money to make strategic improvements to their data and technology systems. This will increase access to the data they collect so that it can be used

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to better understand the state’s water systems. DEQ will apply some of the money to the development of a water data platform that will hopefully integrate multiple databases, presenting a single interface to the public and other systems. This unified hub should increase accessibility and reduce barriers to analysis by enabling data users to easily discover and retrieve interoperable water data.

Table 1: Breakdown of spending for data collection and technology

Contract with USGS to produce groundwater budgets for all major hydrologic basins	\$2,386,808
Modernization of OWRD IT systems and tools	\$818,781
Foundational data collection for groundwater studies	\$2,001,470
Surface & groundwater data collection equipment	\$3,000,000
Water Measurement Cost Share Program Revolving Fund	\$1,000,000
Modernize Clean Water State Revolving Fund system	\$1,599,000
Scoping and design of water and infrastructure database framework	\$350,000

WHY INVEST IN WATER DATA NOW?

A large portion of the funding shown in the table above is focused on groundwater monitoring. This makes sense because groundwater is such an important resource in Oregon. Over 70 percent of the population in the state relies on groundwater for drinking water. Groundwater also supports agricultural economies in many parts of Oregon and is vital for streams that support fisheries. During drought, groundwater supplies can [sometimes run dry](#), leading to [conflicts](#) between large water users and private well owners.

Climate change coupled with increasing water demand further complicates the situation and adds to the need for better planning and innovative solutions to face the challenges of an uncertain water future. OWRD’s data in its current state is not sufficient to provide estimates of water use or demand forecasts at regional scales. To secure future water supplies for communities across Oregon, OWRD needs better data systems to understand water resources, the demands on them, and how both are likely to change going forward.

The recent investments from the legislature will hopefully enable OWRD to collect, process, and analyze more water data, thereby better informing decision-making and management of Oregon’s water resources.

With these bills, Oregon joins other western states which have made similar investments in improving water data at the urging of legislatures.

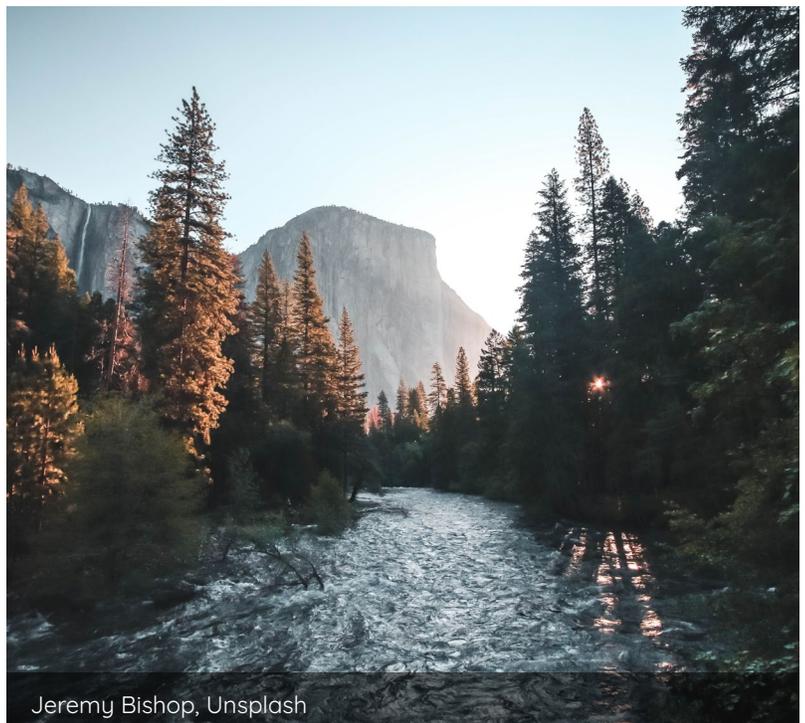
CALIFORNIA'S OPEN AND TRANSPARENT WATER DATA ACT

In 2016, emerging from years of historic drought during which water managers found basic questions about supply unanswerable, California passed [The Open and Transparent Water Data Act \(AB-1755\)](#). The law, written by Senator Bill Dodd, required numerous water-related agencies to collaborate on creating, operating, and maintaining an integrated water data platform and develop protocols for sharing, public access, and quality control. The goal was to ensure that water resources could be managed more efficiently and that water users would have access to the data they needed to make informed decisions.

In the years since, members of eight state agencies formed a Partner Agency Team that has been collaborating with a new nonprofit organization – the California Water Data Consortium – to [implement](#) the requirements of the law. After a process of public outreach and feedback, several pilot projects have begun to improve California's water data.

A Groundwater Accounting and Data Reporting Pilot Project is expanding an open-source [Water Accounting Platform](#) while developing data reporting best management practices, dovetailing with the more recent Sustainable Groundwater Management Act.

Other projects include a collective action plan to create statewide LiDAR data, and two water use reporting projects – one focused on urban water reporting, and another dealing with water use in the Delta.



NEW MEXICO'S WATER DATA ACT

Similarly concerned with freshwater availability, New Mexico passed its own [Water Data Act \(HB651\)](#) in 2019. Legislators, led by Representative Melanie Stansbury, tailored California's example to New Mexico's needs and incorporated lessons learned to support a single, standardized water data portal. The Act designated

a specific lead agency – The Bureau of Geology and Mineral Resources of the New Mexico Institute of Mining and Technology – to determine the scope of the project and coordinate with other agencies.

In the brief period since passage of the bill, the Bureau of Geology and Mineral Resources instantiated the [Water Data Initiative](#) (WDI), which is led by a steering committee of representatives from partner agencies, and formed working groups to carry out the various technical tasks. They are actively building the basic digital infrastructure needed to integrate all of the public water data from each of the partner agencies. The WDI has initially focused on making data available and findable online and will work in the future to make data more accessible and interoperable.



Tom Nora, Unsplash

One of the Initiative’s first pilot projects is currently underway in the Pecos Valley. The Pecos Valley Artesian Conservancy District is partnering with the WDI to improve collection and access to groundwater data. The goal is to help groundwater and surface water management in the valley by enabling decision-making with real-time data.

NEW FEDERAL FUNDING FOR INTERSTATE DATA SHARING

Legislation at the federal level has authorized a program that, if funded, would send more money to states to improve water data sharing, especially across state lines.

The recently passed [Infrastructure Investment and Jobs Act](#) authorizes a pilot program for states to create systems to better share water information between themselves. The grants would be administered by the EPA and would amount to \$15 million over 2022 – 2026. The authorized program is flexible in terms of recipients of the funds in that states, counties, local governments, or even

regional consortia formed by states may carry out the data-sharing projects.

The [Internet of Water Principles](#), developed by the Nicholas Institute for Environmental Policy Solutions, were specifically singled out as an important guide for the water data-sharing efforts under the pilot program. These principles call for public water data to be FAIR – Findable, Accessible, Interoperable, and Reusable – to enable equitable, sustainable, and resilient water planning, management, and stewardship.

WATER PROJECT FUNDING FOR TRIBES

New Mexican Representative Melanie Stansbury, who spearheaded New Mexico’s water data act in 2019, is now a Congresswoman and finding ways to enhance water funding opportunities for Tribal communities as well. She recently introduced the [WaterSMART Access for Tribes Act](#), which would increase access to funds for drought and water projects for Tribes.

The WaterSMART program at the Bureau of Reclamation focuses on increasing water supply in the west through conservation and modernization of water infrastructure. The grants are frequently spent on water data systems that help better understand fluctuations in water supply during drought.

Very few dollars have gone to western Tribes through the WaterSMART program, even though secure water management is a vital issue for many. If passed, this act could reduce or eliminate cost-share barriers that have prevented more Tribal governments from accessing the program’s funds.

Photo by Katie Musial
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