

On June 7, the Senate Energy and Natural Resources Subcommittee on Public Lands, Forests, and Mining held a hearing on several land and water bills, including the Open Access Evapotranspiration (OpenET) Data Act (S. 2568). The bill directs the U.S. Geological Survey to establish an Open ET program to provide satellite-based ET data, including field-scale estimates, to advance the quantification of evaporation and consumptive water use in cooperation with states and other organizations. The House Natural Resources Committee held a hearing on the companion bill, H.R. 4832, on November 4, 2021. See WSW #2477, #2466 Special Report.

Witnesses included Nada Culver, Deputy Director, Policy and Programs, Bureau of Land Management, U.S. Department of the Interior; and Sean McKenna, Executive Director, Division of Hydrologic Sciences, Desert Research Institute.

Culver noted DOI's support for OpenET. "The value of improved ET reporting is widely understood in the water resources science and management community. Accurate information on ET is required to balance water supply and water demand in a watershed and ensure that adequate water supplies for multiple uses are available over time. The USGS has actively engaged with an OpenET team to help develop and test a prototype system. This engagement has provided USGS with unique insights into the program and its potential as well as current limitations."

Culver expressed some concerns with the bill as written, noting that the report deadline may be too short and that the cost estimates for the program are not yet known. She also said DOI believes that "satellite-based methods of determining ET values should be combined with other types of ET estimation methods that can validate and augment satellite-based delivery of nationwide ET data."

Culver said that cooperative agreements with program partners is a productive way to research and test the applicability of various methods, "however, relying on these partners to continually deliver ET data as part of a plan to operationally deliver ET data nationally is uncertain for the long term. External partners are an important contributor to researching potential techniques and methods, but the responsibility for operational delivery, and the mechanisms with which to do so, should belong to USGS to ensure long-term continuity and success."

McKenna testified in support of S. 2568 as a member of the OpenET Consortium. He said: "OpenET is a consortium that has worked over the past five years to build a satellite-based ET cloud computing and data services platform that begins to address this critical data gap for water management. The OpenET team looks forward to working with the USGS and other partners under this bill to continue to advance this important work.... Sustaining and advancing the underlying science, automated production of transparent and consistent ET data at national scales, and stakeholder engagement with water agencies and agricultural producers are core components of this legislation and underscores the need for the federal government's support and participation. Additional collaboration with federal agencies, extension specialists, agricultural producers, and university partners to conduct additional accuracy assessment for key crops and regions is also needed. A primary goal for OpenET going forward is to continually provide the best available science-based estimates of ET at scale and with consistency and transparency. This requires teams of researchers and software developers from across the federal government and working collaboratively with the academic community, water resource managers and agricultural producers to maintain and update software and data archives as the science, underlying input data, validation sites, and computing platforms advance and evolve." McKenna concluded: "The biggest threat to U.S. agricultural producers today is drought and lack of data to develop accurate water use and budget information. We must find the most cost-effective ways to support and sustain water supplies for agricultural production."

McKenna's written testimony also included support for OpenET from several Western water agencies, councils, and agricultural producers.

Tony Willardson, Executive Director, Western States Water Council: “Tools to measure and monitor agricultural and other outdoor water uses and needs are increasingly important for present and future management of scarce water resources, particularly given recurring drought. OpenET will provide credible, transparent, automated, easily accessible consumptive water use data, through a broad network of collaborators also developing and refining operational applications. No such system can provide more easy access to more timely data with more refined spatial coverage. Currently, access to satellite and ET data is limited and expensive to process and interpret for many water users and decisionmakers.”

Bart Leeflang, Central Utah Water Conservancy District, Colorado River Program Manager: “The development of OpenET is fundamental to filling a data black hole related to consumptive use of water. We are thrilled with the prospects it provides for improved, informed water management at the scale of basin and farm, alike. The passage of S. 2568 is crucial to making every drop count, at a time when every drop really does count.”

E. Joaquin Esquivel, Chair of the California State Water Resources Control Board: “We learned from the last major drought in California that reliable water data is almost as critical to farmers and water managers as the water supply itself. The launch of OpenET during our current, even more severe drought will be invaluable in helping farmers and water managers plan for agricultural water needs in a way that just wasn’t possible before.”

Adam Sullivan, Nevada State Engineer, Nevada Division of Water Resources: “The Nevada Division of Water Resources strongly supports the continued development and public accessibility of OpenET. This outstanding program directly benefits water users throughout Nevada and the west who strive to improve efficiency and conserve water. Public access to these data will be increasingly vital to support water users and responsible water management needs into the future.”

Greg Lanning, Wyoming State Engineer, Wyoming State Engineer’s Office: “As a headwater state with seven interstate compacts and three court decrees prescribing the flow of water out of state, the State of Wyoming has numerous obligations for reporting water use. Yet, like many states, Wyoming has limited access to data or resources helpful in meeting our needs. OpenET would provide the State of Wyoming with more accurate estimates of key variables needed for reporting water use and consumption. If funded as proposed and made available to users at little or no cost, we would have a tremendous tool for calculating and reporting water use while helping meet our compact requirements.”

Zane Marshall, Director, Water Resources, Southern Nevada Water Authority: “OpenET will allow water managers to assess how much water is being used via a cost-effective and easy-to-use web-based platform, filling a critical data gap in water management across the U.S. The Authority believes OpenET is a valuable tool for federal, state, and local policymakers and water users.”