Addressing Water Needs and Strategies for a Sustainable Future

ADMINISTRATION/WATER RESOURCES

Soil and Climate Analysis Network (SCAN)

On January 24, the U.S. Department of Agriculture (USDA) hosted a meeting of federal, academic and other interests on SCAN Potential and Possibilities. William (Bill) Northey, Under Secretary for Farm Production and Conservation (FPAC), welcomed participants and remarked: “As a farmer, I certainly understand the importance of soil and moisture.” He noted the challenge is pulling all this information together (so it is more valuable). The goal is to gather real time data, as close as it can be, to make the best decisions possible. How can we be more efficient, and less duplicative, to make the best use of the limited dollars we have? How can we best link existing systems together? That includes SCAN, SNOTEL (snow), State mesonets, and the work of the National Oceanic and Atmospheric Administration (NOAA). Also, how do we connect with private industry?

William Hohenstein, USDA Director of the Office of Energy and Environmental Policy, Office of the Chief Economist, echoed Northey’s endorsement: “You don’t need to convince me about the importance of soil moisture data.” He referred to a National Research Council report entitled, Observing Weather and Climate from the Ground Up: A Nationwide Network of Networks. However, because there is no national network tying many of these systems together, data collection methods are inconsistent and public accessibility is limited. Such a network of networks would help multiple decisionmakers better anticipate, plan for and manage risk. He added that the National Drought Resiliency Partnership (NDRP) has called for a national soil moisture network, given multiple multi-billion dollar economic losses due to drought. “Climate and soil moisture information are strategically important to agriculture.”

Kevin Norton, Associate Chief, Natural Resources Conservation Service, addressed the group. SCAN was started in 1991 and there are now 223 sites, but USDA would like see 3000 sites nationwide. It can be done. However, the goal is not only to expand the network, but ensure we can collaboratively maintain an expanded network. He compared SCAN to the accepted importance of snowpack information for water supply in West Coast and Intermountain cities. How can we connect and collaborate to achieve improvements to irrigation, water quantity and sustainability? We can set standards and, through cost sharing and financial assistance, connect systems. There are opportunities for systems to start talking to each other. He said that the growth in precision agriculture and advanced technology is moving the needle. We can take data from SCAN and SNOTEL and other systems and incorporate it into planting and other land and water management decisions. How do we include on-farm private monitoring systems? We must find ways to generate the revenue to build and maintain a nationwide system.

Mike Strobel, USDA Director of the National Water and Climate Center, declared: “It seems like we have been training for a marathon and now the race is here!” Drought is a critical issue – the reason NRCS is here – coming out of the Dust Bowl. USDA leads natural resources assessments and planning activities, as well as monitoring activities, such as SCAN, to help farmers know when to plant, what to plant, when to irrigate and when to harvest. This is critical information that has an impact on agricultural economics. However, soil moisture and trends are also of interest to drought and climate change research scientists. SNOTEL data covers about a 30-year record, but SCAN sites are more recent. We are not just looking to build a network of “weather stations,” but looking to build a consistent future long-term record. https://www.wcc.nrcs.usda.gov/scan(scan potential possibilities.html.

CONGRESS

Infrastructure

On January 29, Chairs of the House Committees on Transportation and Infrastructure, Energy and Commerce, and Ways and Means released a framework for a $760B investment in infrastructure spread over five years. The framework covers highways, railways, airports, and broadband, but also includes investments in water, energy, and the environment.

The framework notes: “The vast majority of drinking water and wastewater systems were built more than 50 years ago. The Environmental Protection Agency (EPA)
estimates that we need $655B in water infrastructure investments in the next 20 years, and every year, thousands of water systems are found in violation of EPA lead standards." Clean water and wastewater infrastructure would receive $50.5B under the framework. The bulk of that amount, $40B, would go toward Clean Water State Revolving Funds (SRFs), for new water infrastructure, addressing water quality challenges, water and energy-efficient technologies (with a requirement that states utilize a minimum of 15% of Clean Water SRFs toward these projects), sewer overflow and stormwater, and establishing programs to deal with industrial contaminants such as perfluorinated chemicals (PFAS). This includes $1B to make permanent a pilot program to aid municipalities in addressing stormwater and nonpoint source management projects, and increases the annual federal investment to $1B (over five years) for states and municipalities to address ongoing nonpoint source pollution. It also includes $600M toward alternative water source projects to address critical water supply needs, particularly in arid parts of the Nation.

Drinking water would receive $25.4B under the framework, with $22.9B invested in the Drinking Water SRFs, lead testing and water line replacement, and water system supervision and resilience grants. The provisions include requirements for American-made iron and steel products and protects the prevailing wages of workers. It creates a new $2.5B grant program to assist drinking water systems with PFAS contamination.

Flood protection and navigation infrastructure would receive $10B to tackle the Army Corps of Engineers’ (Corps) backlog of authorized but unconstructed projects – estimated at over $100B – with a focus on projects designed to protect communities from the impacts of flooding and severe weather events. Water resources development projects would receive $7B, with $3B toward investments in modernizing inland waterway navigation. Over half of the structures in the inland waterway system “are more than 50 years old, and nearly 40% are more than 70 years old. Many of these projects are approaching the end of their design lives and need modernization or major rehabilitation.”

Harbor infrastructure would receive $19.7B for dredging and other maintenance, ensuring fees collected from maritime shippers go toward regular harbor maintenance. “According to the Congressional Budget Office (CBO), the Harbor Maintenance Trust Fund will collect an additional $10.2B in new revenue (including interest) over the next five years – on top of the estimated $9.5B in previously collected but unspent revenue.”

Investments in clean energy total $34.3B and include infrastructure aimed at reducing greenhouse gases and improving energy efficiency. There is $15M to promote energy-efficient water distribution systems.

The framework also includes $2.7B for brownfields restoration and investment. EPA’s redevelopment grants program for reclaiming and reusing abandoned and contaminated properties would receive $2.45B. States with approved brownfield cleanup programs would have access to a reauthorized federal assistance program, with a total of $250M. https://transportation.house.gov/imo/media/doc/Moving%20Forward%20Framework.pdf.

WATER QUALITY
Arizona/Waters of the State

The Arizona Department of Environmental Quality’s (ADEQ) website covers protection of both Waters of the United States and Waters of Arizona, with links to frequently asked questions, explanations about how changes to the WOTUS definition will impact protections for Arizona waters, and information about upcoming stakeholder meetings to engage local communities as to how Waters of Arizona should be protected. ADEQ held stakeholder meetings when the new federal definition was proposed, gathered input, comments, and collaborated with other state agencies.

ADEQ notes: “The State supports the narrower definition in the Navigable Waters Protection Rule. The waters of the State are unique, and ADEQ believes it is best for Arizona to address Arizona waters locally in practical and pragmatic ways.” The agency is reviewing the new rule to understand how it impacts the State, recognizing that the new definition “creates a gap in protection for many Arizona waterways….” The agency estimates that the number of drainages, lakes, ponds, and ephemeral waterways protected under the Clean Water Act may be reduced by 85% or more in the arid state. “Determining which of these waterways or sections of these waterways are regulated under a new WOTUS definition will required a comprehensive review by ADEQ, EPA and other agencies.” However, all surface and groundwater resources within the State’s jurisdiction are Waters of Arizona, and non-WOTUS waters may still be regulated by the State. See http://azdeq.gov/woaz.

PEOPLE

Garland Erbele, WSWC Member and North Dakota State Engineer, has announced that he will retire on March 31, 2020. Garland was appointed to the WSWC in March 2000 while serving as the State Engineer for the State of South Dakota. Garland served as the WSWC’s Vice-Chair from 2006-2008; and as Chairman from 2008-2010. He retired in March 2013 to take a position as a consultant with Wenck Associates. In April 2016, the North Dakota State Water Commission appointed Garland as North Dakota’s 18th State Engineer. In June 2016, former North Dakota Governor Jack Dalrymple appointed Garland to the WSWC. Garland has been serving on the Executive and Water Resources Committees. We thank Garland for his dedicated service and wish him the best in retirement.