

Summary –Washington Roundtable

Held Virtually April 15-16, 2021

Co-hosted by Interstate Council on Water Policy, Western States Water Council and National Water Supply Alliance

Welcomes were given by each of the 3 sponsoring organization's leadership:

Kirsten Wallace –ICWP Chair; Darren Gore – NWSA President and Jennifer Verleger – WSWC Chair. They recognized that an advantage of our virtual meeting format is that additional participants can join in without the need for travel. Over 200 registered for this 2-day event.

Panel 1 – Federal Water & Climate Programs Panel

Mary Erickson, Deputy Director of NWS; Deputy Assistant Administrator for Weather Services—Mary reviewed the various challenges of 2020 besides COVID. Huge wildfires, flooding in 2019 in Midwest, hurricane damage, and drought across the southwest. Mary described NOAA 's Mandates for Action—Weather Act (WRFIA) of 2017, Section 201; Executive Order—Tackling Climate Crisis at Home and Abroad; and Executive Order-Advancing Racial Equity and Support for Underserved Communities. She next discussed NOAA's Precipitation Prediction Grand Challenge—Analyzing methods for improving seasonal forecasting. The Five Key Objectives of NOAA's Water Initiative: Service Delivery; Decision Support; Modeling and Predictions; Research and Development; and Observations. She concluded saying the release of the President's budget for FY22 would likely be May and that her office is following the developments of the FLOODS and PRECIP legislation.

Dr. Thomas Graziano - Director, Office of Water Prediction (OWP), NWS, NOAA

Tom began with highlighting the NOAA NWS Strategic Plan - 2019-22, and provided details on the following bullet items:

- Deliver actionable water resources info from national to street level
- Provide minutes-to-months river forecasts
- Improve forecasts for total water in the coastal zone by linking terrestrial and coastal models in partnership with NOS
- Deliver forecasts of flood inundation linked with other geospatial info to inform life-saving decision
- National Water Center
 - Center of excellence for water resources science and prediction, catalyst to transform water prediction through enterprise collaboration
 - Water resources common operating picture and decision support services on all time scales
 - On pace to achieve full operating capacity in Sept 2022. 14 hr./7 to 24/7 by improving staff to work around the clock on decision support and technology, model-based guidance. Flood inundation mapping capability being demonstrated in real-time. 23 staff currently. Working with FEMA, who has liaison officer to work full time in office. New position - total water prediction specialist to coordinate with National Hurricane Center

Dr. Dave DeWitt - Director, Climate Prediction Center (NOAA/NWS)—Dave provided details on the following topics:

WRFIA 2017: S2S Forecasting Innovation (PL 115-25 Sec 201)

- Precipitation Prediction Grand Challenge - if funded, would address many concerns
- Legislation - required report be sent to Congress on NOAA's approach to S2S
 - Western water stakeholders provided feedback on high-level version of report
 - Authorization - no appropriation yet in relation to S2S
 - Focusing on the Precipitation Grand Challenge
- Key Content of report
 - Forecasts, research observations and monitoring
 - New Unified Forecast System
 - Pilot Projects
- Unified Forecast System
 - Community model
 - Single system that extends from “now-casting” out to seasonal, long-term forecasting (S2S). Tremendous investment intellectually and financially.
- Pilot projects
 - No silver bullet for improving S2S precipitation skill. Several science challenges that need to be addressed simultaneously
 - Winter S2S and Spring/Summer for agricultural interests in central US
 - Follow Hurricane Forecast Improvement Projects
 - High-performance computing, observing systems, transition of research innovation to operations
 - Need safe, creative space to try more risky things, but have them tied to science outcomes that are collaboratively generated by stakeholders and scientists together
 - We've done this before (e.g., El Nino predictions) - so we can do this, but need resources and collaboration
- Grand Challenge report will be the vehicle by which this all happens
 - 2011-17 - all models failed to predict the dramatic shift from drought (end of 2016) to no drought (beginning of 2017) with a 2-week lead time, all which occurred within 60 days.
 - Flash drought in northern plains in 2017 - all leading models failed to predict onset of drought beyond two-week lead time (May to August 2017)

Veva Deheza—Executive Director, NIDIS

NIDIS was established to create drought early warning systems and eight DEWS are now operating across the US. NIDIS was also to coordinate drought research. The Virtual Flash Drought Workshop held in Dec 2020 is an example of this coordination and it spurred discussion on developing products to predict flash drought. The

workshop brought together top researchers to understand research needs. Releasing report from workshop soon. NIDIS' work is focused into the following Action Areas:

- Drought and Public Health.
- Drought and Wildfire;
- Drought Impact Reporting and Analysis;
- Drought Indicators and triggers;
- National Soil Moisture Network

These are common to all DEWS regardless of region of the US. Developing strategy with tribal nations in Midwest/MO R basin. Total re-design to drought.gov website.

Panel 2 – U.S. Geological Survey Programs Panel

Dr. Don Cline, Associate Director for Water Resources, USGS

Don provided an overview of Water Mission Area, setting up Chad and Mindi to provide additional details. Don began with some of the impacts of COVID and the initial challenges with getting staff to visit streamgages and other necessary work to keep the water science record intact. The National Water Dashboard has been unveiled . Don concluded with details on the HIF relocation.

- Responsible for calibration, testing, repair, warehousing, and distribution of water monitoring instrumentation and related equipment for entire USGS national water observing systems
- \$38.5M in FY2020 appropriation - located at U of Alabama, Tuscaloosa next to National Water Center

Chad Wagner, GWSIP

USGS Integrated Water monitoring Initiatives

Work and delivery of products in the Water Mission Area fall into the areas of:

Observe

Understand

Predict

Deliver

Integrated Water Science Initiative - 4 core integrated missions

- NGWOS, IWAA, IWP, NWIS Modernization

NGWOS has goal of 10 intensive reference basins to drive the future of integrated water science to be brought on-line over the next few years, if budget is received.

- Regional focus areas for intensive observation, assessments, modeling and prediction
- Develop a deep, integrated understanding that can be extended to a broader region
- Basin selection process includes quantitative metrics and extensive stakeholder engagement
 - Once hydrologic region targets are established, then each region is ranked on quantitative rankings. Solicit review input on basin

- nominations/priorities, engage national and local stakeholder to understand science and monitoring gaps
- Recommend potential basins to WMA leadership for final selection
- Will provide high-resolution, real-time data on water quantity, quality and use in integrated science basins to support national modern water-availability prediction and decision support systems
- Increasing network density
- Science issues - temp, streamflow, salinity/conductance biggest stakeholder concerns
- Just getting started in Illinois - focused on HABs, nutrients, urban hydrology and water chemistry

Mindi Dalton - USGS

Water Resources Availability Portfolio (WRAP) focusing on Water Resources Availability and Predictability

Strategic Priorities

- 7 cross cutting water challenges
 - Understanding the role of water in the earth system
 - Quantifying water cycle
 - Developing integrated modeling and prediction
 - Quantifying change in the socio-hydrological system
 - Securing reliable and sustainable water supplies
 - Understanding and predicting water-related hazards
 - Leverage emerging technologies

Water Use Reporting—making a complete shift in the methods for how water use is reported and estimated. By 2022, the 3 models which cover 90% of water use will be completed. By 2025 will have other 5 models done to get to 100% of water use being estimated by model results. Better integration of water quantity and quality as USGS in the past has viewed the two sectors in a siloed fashion. New Water Census in 2023

Vicki Lukas, USGS Chief of Topographic Data Services

3D National Topography Model

3D Nation - modern continuous elevation foundation. From peaks of mountains to depths of oceans

- 3D National Topography Model part of that goal. Integrates elevation and hydrography datasets to model the nation's topography in 3D

3D National Topography Model working with NOAA Comparing benefits of NHD Hi Res and 3DEP. Pilots Projects in Kobuk River Basin in Alaska and Southeast Texas High need for inland bathymetry. NHD portfolio cobbled together with data of differing sources, ages and scale. With the next generation of mapping, the goal of nationally consistent data. The modernization will be able to add connections to better model the water cycle such as groundwater interaction and wetlands. National Hydrography Infrastructure working with Internet of Water to not duplicate efforts and make sure the tools being added are of interest to the water data community.

Day 2, April 16, 2021

The 3 ICWP Interns (Aislinn McLaughlin, Katherine Tucker & Caroline Schwab) provided a summary of their projects for Spring Semester 2021.

Panel 3 – Federal Program Updates

Stephen Hill, USACE--Director of Contingency Operations and Chief, Homeland Security

- Mr. Hill started with stating LG Spellman's Command Philosophy
 - Deliver the program, promote and maintain a positive command climate, advance diversity, inclusion and belonging in our communities and formation,/growing our generation of leaders
 - Communication, listening, gaining input
- Goal 1 - support national readiness
- Goal 2 - modernize USACE
- Goal 3 - Improve partnering and strengthen relationships
- Goal 4 - Revolutionize Program and Project Delivery
 - Risk informed decision making, decentralizing water supply, financing, scheduling cost estimating
 - Driver is USACE increasingly tried to listen to partners. Expedite quality delivery of water
 - Accelerate project delivery
 - Transform project financing and budgeting - apply to USACE P3 Program
 - Improve permitting and regulation reform
 - Proactive engagement and communication with partners

Dr. Cary Talbot, Division Chief, Flood and Storm Protection, US Army Engineer Research & Development Center; Update on Forecast Informed Reservoir Operations (FIRO)

- May 2016, update to Engineer Regulation 1110-2-240 Water Control Management
- "Forecasted conditions" added to the policy, first time. Before said "conditions on the ground"
- The policy tells what you can and can't do. FIRO effort is defining how this policy will be implemented. FIRO assessments setting important policy application precedents for USACE and other partner agencies.
 - Not talking about allocation, talking about improving water availability

When FIRO is being considered at a USACE reservoir, Research, Operations, Regulatory aspects are all brought together and managed by an interagency Steering Committee for each reservoir. Cary provided details on several projects, including, Lake Mendocino/Coyote Valley Dam; Prado Dam Santa Ana R. New Bullards Bar Dam and Oroville Dam Yuba and Feather Rivers; Howard Hanson Dam Green River Washington.

Final Viability Assessment done for Lake Mendocino. Others are not as far along in the planning process.

FIRO next steps—have developed an assessment tool for a quick look at the likelihood of FIRO being a good fit for a specific reservoir.

EPA Discussion—**Radhika Fox** unable to attend due to recently being named as EPA Administrator for Water. The group held an open discussion on questions they would like to see asked of her during her Senate confirmation.

Congressional Panel: John Anderson – Moderator, Van Scoyoc Associates

Senate Agriculture - **Peggy Browne**

- Member of Senate Sub Ag
- Ranking Member- Sen. John Boozman (AR)-- had served on EPW and cares deeply about water issues.
- PL566 - funds for reservoir storage (NRCS)
- Conservation - cropping practices, treatments, etc. Earth's ability to store water, changing the kinetic energy of water. How is it coming in? Going out? Getting pulled down into soil?
- RCPP, Title 2, working lands programs important to Ranking Member
- Moves from water quantity to water quality - great flagship projects through RCPP that depict this
 - Rice stewardship program in Arkansas
 - Alternate wetting and drying. Through pilot programs and continuous learning. Seeing 30% less water use and saving \$50/acre annually
 - CA Rice Commission working on waterbird habitat
 - Industry improvements for ranching
- Lots of discussion about increase in funding for these programs - EQIP, CRP, CSP
- Committee work - working with Sen. Stabenow's (MI) office to get to a point on growing climate solutions act to get it broadly supported by both Dems and Reps. Closing in on final product.
- Infrastructure/Climate - other priorities include livestock mandatory reporting, child nutrition reauthorization, commodity exchange act. Not water specific, but with broad authorities, these are what are being considered.
- Interesting Congress so far! - learning more from admin on climate and infrastructure every day.

Senate Commerce, Science & Transportation - **Alexis Rudd**

- Ranking Member Sen. Wicker—(MS) – sub-committee on Oceans, Fisheries, Climate Change & Manufacturing.
- Main bill we are working on is the FLOODS Act S. 558
 - Authorizes program at NOAA similar to the NIDIS program but for flooding. Long-term prediction of flood events and how they are communicated to public, in particular flash flooding
 - Directs NOAA to aggressively updating data under ATLAS 14 program, sets up fellowship for hydrologists

- Codifies an interagency committee on water
 - Asks group to make research recommendations to work better to manage water resources
- Hoping to markup FLOODS bill relatively soon, and have it signed by President asap

Senate Energy and Natural Resources Committee - **Melanie Thornton and Brian Clifford**

- Melanie - ENR Committee for Sen. Manchin (WV), includes western water and science issues
 - Priorities: track implementation of bipartisan western water package passed last Congress. BOR, Indian Affairs committees
 - Aging infrastructure account established
 - Aquifer recharge
 - Reauthorized BOR's WaterSMART programs
 - Established new programs - Snow Water Supply Forecasting Program, Aquatic
 - Technical changes to BOR's desal research program
 - Authorized 2 rural water supply projects in Montana
 - Sen. Manchin - home state WV, deferential to western colleagues on water issues and supporting what they are working on. Working with Sen. Barrasso
 - Anticipate working on western water infrastructure. Vehicle for action TBD, but broad - water recycling, desalination, ecosystem investments, infrastructure
 - Working on ways to address drought and climate resiliency, bringing 21st century solutions to water supply issues
- Brian - Principal deputy staff member for the minority. Ranking Sen. Barrasso (WY)
 - BOR portfolio - in WY, irrigation and water storage really important
 - Sen. Barrasso wants to work with Sen. Manchin's staff to figure out ways to build our water storage and storage facilities, dredge current facilities to fulfill water storage capacity (due to sediment). Want to work on these issues to bring more water to the west.
 - Addresses the drought issue as well
 - \$4B backlog with Reclamation - if talking about infrastructure, need to talk about addressing maintenance backlog

Senate Environment & Public Works - **Max Hyman**

- Works under Sen. Capito-Ranking member (WV)
- Focus on Corps - Drinking Wastewater Act - movement soon
 - Reauthorize SRFs, WIFIA (colleague Jess deals with this)
 - Sticking to 2-year WRDA reauthorization timeline
 - Passed WRDA in Dec 2020. Focused on implementation now with USACE.
 - In coming months, looking for FY22 reauthorization with solicitation for projects this summer

- More generally, Sen. Capito very interested in working across the aisle. Good relationship with Chairman of committee. (Sen. Carper (DE)). Interested in what western states have to say about issues

House Natural Resources

- **Matt Muirragui** – Sub-comm on Water Oceans and Wildlife
 - Infrastructure major focus
 - Above and below ground storage
 - Water reuse and recycling, recharge
 - Ecosystem restoration
 - Tribal infrastructure
 - Streamgages
 - Lots to be done in all of these areas!
 - Also focus on implementation of authorities enacted in the end of last Congress
 - Including Aging infrastructure account
 - ASO and snowpack measurement and aquifer recharge authorities passed
 - Aquatic ecosystem restoration
 - Tribal water settlements
- **Kiel Weaver** - Senior policy advisor Water, Oceans and Wildlife subcommittee
 - Largest subcommittee of all 5 subcommittees
 - Bruce Westerman (AR) ranking member committee, Cliff Bentz (OR) ranking member on subcommittee
 - Goal to provide water abundance. Can't conserve way out of water supply issue. Need all of the above strategy. Recycling, desal, above and below storage. Congress can't prescribe what will work
 - Debating infrastructure and what it means
 - First hearing - fairly non contentious hearing, given history of committee. Wildfire big focus - impact on supply and quality. Rolling out wildfire initiatives very soon.

House Transportation & Infrastructure

- **John Pawlow**
 - Senior Counsel on Water Resources and Environment subcommittee on House T&I
 - Prelim things - new ranking member at subcommittee level - David Rouzer from NC
 - Has a lot of interest in clean water act related issues and USACE civil works issues
 - Minority side
 - It's clear that both majority and minority on the House T&I committee want to do WRDA 2022. Continue the 2-year cycle. Things will ramp up later in year - mid fall. Not all that different from recent past WRDA bills. Including an online portal that was utilized for WRDA 2020 to receive member submissions for project and policy related issues

- Alexa (counterpart on majority side)
- WRDA 2020 implementation - recent hearing. More oversight soon.
- Wastewater infrastructure on CWA. Introduced bill and hearings on Wastewater Infrastructure related issues
 - Focusing on some sort of water infrastructure
 - Direction and timing unsure - ask Alexa
 - Hoping that majority and minority are able to sit down and produce a bipartisan bill. Will improve chances to get over finish line with product good for economy and country.
- **Alexa Williams** - Water Resources and Environment sub-committee
 - Introduced in mid-March - water quality and job protection act of 2021 - HR 1915 - Reauthorization of CW SRF
 - Focused on dollar amounts currently. Focused on meeting identified need - \$2.7B (??) backlog in wastewater needs. No one mentioned opposition to the numbers.
 - Working with Rep. Graves and Rep. Rouzer on more bipartisan support. Working through committee
 - Green infrastructure, codifying green requirements
 - Water reuse and recycling
 - Equity and accessibility concerns to get to the people that need it
 - Excited to get support within American Jobs Plan
 - Called for large investment in plan.
 - Chari DeFazio has been pushing for
 - Hoping to move through senate next year. Broader because also includes drinking water side. Want to get to President's desk asap
 - Looking for vehicles, process to determine next steps. Targeting for May.
 - WRDA - implementation and 2022. Making sure policy wins are utilized by the Corps and developing the implementation guidance - resiliency, natural and nature-based infrastructure, affordability for communities to utilize Corps programs. Quickly implement PR&G - consider wide range of factors when developing cost-benefit analysis
 - Harbor Maintenance Trust Fund, Inland water ways bipartisan
 - Water supply considerations for Corps, better implementation
 - Not expecting Corps policies/projects in infrastructure package - sticking to WRDA
- Waiting to see how admin's review proceeds with regulatory issues

Many thanks to Jessica Reimer, Policy Analyst, WSWC for her contributions to this Meeting Summary.

We thank our generous 2021 Roundtable sponsors!

