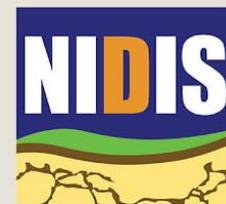




2ND NATIONAL

DROUGHT FORUM



JULY 30-31, 2019 | WASHINGTON, DC

*Co-hosted by the National Integrated Drought Information System (NIDIS)
and the National Drought Resilience Partnership (NDRP)*

About the National Drought Forum

The first National Drought Forum was held in December 2012 to assess the status of national drought readiness, understand the extent of the 2012 drought impacts and response, and help provide new information and guidance for coordination to improve the nation's preparedness to drought. The second National Drought Forum will convene high-level drought experts and decision-makers from drought-impacted regions and economic sectors of the country, along with the private sector, research institutions, and officials across all levels of government to discuss priority actions around emerging drought early warning and long-term resilience issues.

Meeting Goals

- Take stock of lessons learned and progress towards U.S. drought readiness since the last Forum in 2012.
- Strengthen the state-federal relationship to realize greater collaboration and promote, where appropriate, cooperative partnerships with U.S. businesses to address drought across time scales and across levels of government and sectors.
- Discuss new information and opportunities for coordination that help move the Nation from a reactive to a proactive approach to drought risk management.
- Produce a list of clear "action items" that could improve U.S. drought readiness and resilience.

AGENDA

Tuesday, July 30

8:00 AM Registration Opens

8:30 AM Continental Breakfast

9:00 AM **Welcome and Introductions**

The forum co-chairs will lead introductions and will present the forum goals and objectives.

Speakers:

- Veva Deheza, Executive Director, NOAA's National Integrated Drought Information System (NIDIS)
- Bill Northey, Undersecretary for Farm Production and Conservation, USDA
- Tony Willardson, Executive Director, Western States Water Council
- Chuck Chaitovitz, Vice President for Environmental Affairs and Sustainability, U.S. Chamber of Commerce

9:15 AM

Linking National Security and Drought

At its core, national security is about the protection of lives, livelihoods, property, and the environment. The Nation depends on vital, up-to-the-minute drought information for preparedness, response, and recovery for both public safety and the protection of the Nation's critical infrastructure and natural resources. These themes will resonate throughout the course of the event.

Moderator: Sherri Goodman, Senior Fellow with the Wilson Center, member of the USWP National Executive Committee

Speakers:

- Vice Admiral Lee Gunn USN (Ret), member of the CNA Military Advisory Board
- Gerry Galloway, Jr., Research Professor, Glenn L. Martin Institute Professor of Engineering, University of Maryland

9:45 AM

Drought Conditions: Past, Present, and Forecasted

This panel will take stock of where we've come since the first National Drought Forum, looking back on the 2012 Great Plains Drought, the California Drought, the accomplishments and milestones we've realized, and the role of intergovernmental coordination in drought response. Current drought conditions and the forecasted outlook will also be highlighted. Speakers will share the progress made and opportunities that remain across sectors and levels of government.

Moderator: Peter Grevatt, Chief Executive Officer, Water Research Foundation

Speakers:

- Honorable Mike Bawden, Mayor, Riverdale, IA and Mississippi River Cities and Towns Initiative
- Honorable Daron McDaniel, Supervisor, District 3, County of Merced, CA, and Director, Rural County Representatives of California

- Brad Rippey, Meteorologist, U.S. Department of Agriculture and co-author, U.S. Drought Monitor (Current Conditions)
- David DeWitt, Director, Climate Prediction Center, National Oceanic and Atmospheric Administration (Forecasted Outlook)

10:45 AM

Break

11:00 AM

Drought Decisions around the New (Ab)Normal: Water Scarcity, Drought, and Aridity

This panel will discuss the implications of water management decision-making under increasingly arid conditions. In particular, panelists will explore: (1) the role of existing water infrastructure in arid environments and investment-based opportunities of infrastructure for drier conditions; (2) opportunities consistent with the Presidential Memorandum on Promoting the Reliable Supply and Delivery of Water in the West; (3) the use of natural water storage as an effective response to a more arid future; (4) the U.S. Farm Bill and opportunities for Western irrigated agriculture; and (5) associated research priorities.

Moderator: Roger Pulwarty, Senior Scientist, National Oceanic and Atmospheric Administration

Speakers:

- Upmanu Lall, Alan and Carol Silberstein Professor of Engineering; Chair, Department of Earth and Environmental Engineering; and Director, Columbia Water Center
- David Raff, Science Advisor, Bureau of Reclamation
- Laura Ziemer, Senior Council and Water Policy Advisor, Trout Unlimited
- Astor Boozer, Regional Conservationist - West, U.S. Department of Agriculture

12:15 PM

Lunch with California Water Resources Control Board Chair Joaquin Esquivel

1:45 PM

Economics of Drought Part I: Understanding the Cost of Drought

This panel will feature representatives from sectors and communities impacted by drought and water scarcity whose impacts have yet to be fully quantified and well understood. Featured representatives from diverse sectors will discuss how drought is impacting bottom lines and ecosystems throughout the country and how we can better measure those economic impacts.

Moderator: Tracy Rouleau, President, TBD Economics

Speakers:

- Colby Pellegrino, Director of Water Resources, Southern Nevada Water Authority
- Tom Iseman, Director, Freshwater Conservation Program, The Nature Conservancy
- Nathan Allen, Executive Director, WaterStart
- Jan Stoddard, Bureau Chief for Sales and Constituent Services, Montana Office of Tourism and Business Development

2:45 PM

Break

3:00 PM

Preparing for 2020 and Beyond

These breakout sessions will identify forward-looking, solution-oriented, practical actions that can be undertaken in the next 5 years to build greater drought resilience in the United States. Each group will envision and articulate implementable initiatives, honing in on those activities that will generate the highest sustainable return on investment to economic, societal, and environmental outcomes.

GROUP 1: COORDINATION: Gaps in access to information, siloes, institutional barriers, and conflicting rules and regulations can get in the way of coordination among entities with a stake in drought mitigation and resilience. Identify strategies achieved through partnerships and coordination that help mitigate investment risks, reduce costs and uncertainties associated with drought, scale effective local solutions, and/or spur innovation.

Moderators: Shaun McGrath, Director, Montana Department of Environmental Quality; Fernando Miralles-Wilhelm, Lead Scientist, Global Water, The Nature Conservancy

Coordination Key Questions:

- What are the incentives and disincentives to improving coordination across levels of government? What is the value proposition for different entities (e.g. private sector, academia, non-profit sector) to engage in these strategies?
- What did we learn about coordination from droughts in recent years?

GROUP 2: FLEXIBILITY: Across levels of government and sectors, initiatives, programs, and policies exist to support communities looking to manage water more efficiently, build resilience, protect resources, and

mitigate damages. Identify existing initiatives, programs, and policies that could more flexibly incorporate drought into their purview, and in doing so, drive innovation.

Moderators: Claudia Nierenberg, Deputy Division Director, Climate and Social Interactions, Climate Program Office, NOAA; Bevin Buchheister, Senior Policy Analyst - Environment, Energy, and Transportation Division, National Governors Association

Flexibility Key Questions:

- Are there flexibilities within federal and state government programs without a drought focus to expand scope or realize co-benefits?
- Where are there opportunities for leveraging with private sector partnerships? Where are there barriers?

GROUP 3: RESILIENCE: To improve our readiness, responsiveness, and overall resilience against drought, we must build capacity across the country - from East to West, and across levels of the economy. Negative impacts of drought and related cascading hazards may disproportionately affect vulnerable communities, sectors, ecosystems, small businesses, and geographic regions in our country, creating an elevated risk for system failure. Identify key areas for drought investments to transform social, economic, and ecosystem adaptive capacity and recovery so that the most vulnerable impacted by drought “rebuild better.”

Moderators: Katherine Zitsch, Manager, Natural Resources, Atlanta Regional Commission; Meredith Muth, NIDIS Regional Drought Information Coordinator, NOAA

Resilience Key Questions:

- What are the underlying factors that accelerate or exacerbate drought risk and how do we go about reducing them? Who doesn't have adaptive capacity?
- How do we strengthen knowledge of drought risk reduction?
- How do we ensure that long-term investments and financing build natural, economic, social, and scientific capital assets?

GROUP 4: INNOVATION: What's next? What is on the horizon that offers promise in addressing water scarcity and helping communities and businesses manage their drought risk? Identify emerging technologies, innovations, and areas of research (including social science) that may contribute to building long-term drought resilience.

Moderators: Dori Stiefel, Co-Founder, Thrivner; Justin Huntington, Research Professor, Desert Research Institute

Innovation Key Questions:

- What are the possible outcomes of investing in these innovative technologies? Are there opportunities for co-benefits (addressing drought + wildfire, drought + flooding, etc.) to be realized?
- How would those outcomes (tools/data/information) help your bottom line?

4:15 PM Open Discussion with all Attendees, Public Comment, Adjourn

Moderator: Veva Deheza, Executive Director, NIDIS

Wednesday, July 31

8:00 AM Continental Breakfast

8:30 AM **Highlights and Findings**
The forum co-chairs will share insights so far and, again, will present the forum goals and objectives. They will then invite the moderators from each of the previous day's breakout sessions to share the insights from the breakout sessions.
Speakers: Veva Deheza, Executive Director, NIDIS
Breakout Session Moderators

9:00 AM **Opening Remarks: NOAA Administrator**
Speaker: Dr. Neil Jacobs, Assistant Secretary of Commerce for Environmental Observation and Prediction and performing the duties of Under Secretary of Commerce for Oceans and Atmosphere, National Oceanic and Atmospheric Administration

9:30 AM **Economics of Drought Part II: Risk Analysis and Investments that Drive Innovation**
This panel of private sector and government representatives will discuss drought risk analysis and decision-making, illuminating new financing solutions for drought resilience, cost of drought to cities and bond ratings for flood and drought resilience, and insights into how industry metrics are changing in the context of drought.

Moderator: Tracy Rouleau, President, TBD Economics

Speakers:

- Jon Radtke, Water Sustainability Program Manager, The Coca-Cola Company
- Warren Preston, Deputy Chief Economist, U.S. Department of Agriculture
- Jim Lochhead, CEO/Manager, Denver Water
- Greg Browder, Global Lead for Water Security, World Bank Group

10:30 AM

Break

10:45 AM

Drought Policies: Congressional Perspectives

Congressional staffers will discuss recent and potential legislation, including the Farm Bill, NIDIS Reauthorization, the Water Resources Development Act, and legislation tackling water infrastructure, soil moisture monitoring, and other issues.

Moderator: Nicole Carter, Specialist in Natural Resources Policy, Congressional Research Service

Speakers:

- Rosalyn Brummette, Professional Staff, U.S. Senate Agriculture, Nutrition, & Forestry Committee
- Fern Gibbons, Policy Director, U.S. Senate Committee on Commerce, Science, and Transportation
- Camille Calimlim Touton, Professional Staff, U.S. House Committee on Transportation and Infrastructure

11:45 PM

Drought Coordination: Federal Water Officials and the National Drought Resilience Partnership

Each Federal Water Official will share his or her key drought issues and opportunities.

Moderator: Aubrey Bettencourt, Senior Advisor, Office of the Assistant Secretary for Water & Science, U.S. Department of the Interior

Speakers:

- David Ross, Assistant Administrator for the Office of Water, Environmental Protection Agency
- Bill Northey, Undersecretary of Farm Production and Conservation, U.S. Department of Agriculture
- Dr. Tim Petty, Assistant Secretary for Water and Science, U.S. Department of the Interior

- Daniel Simmons, Assistant Secretary, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy
- Rear Admiral Timothy Gallaudet, Assistant Secretary of Commerce for Oceans and Atmosphere, and Deputy Administrator, National Oceanographic and Atmospheric Administration
- R.D. James, Assistant Secretary of the Army for Civil Works

1:30 PM

Monitoring and Forecasting of Drought

Over the past seven years, advances have been made in monitoring and forecasting of drought, but many challenges remain, particularly in the areas of flash drought, and how we connect observations like soil moisture with models. This panel will identify priority needs for strengthening existing capabilities in monitoring and forecasting, as well as applied research, to build our nation's drought early warning capacity.

Moderator: Doug Hilderbrand, Weather-Ready Nation Ambassador Lead, National Weather Service, National Oceanic and Atmospheric Administration

Speakers:

- Dr. Don Cline, Associate Director for Water Resources, U.S. Geological Survey
- Dr. Angela Bowman, Research Scientist, John Deere Intelligent Solutions Group
- Dr. Justin Huntington, Associate Research Professor, Hydrology, Desert Research Institute
- Dr. Mark Svoboda, Director, National Drought Mitigation Center

2:30 PM

Break

2:45 PM

Priority Actions for Improving National Drought Readiness

The session facilitators will share insights and recommendations so far. They will then invite participants to share the recommendations they heard over the previous two days.

Facilitators: Peter Colohan, Executive Director, Internet of Water; Dori Stiefel, Co-Founder, Thrivner

4:15 PM

Public Comment, Adjourn

Moderator: Veva Deheza, Executive Director, NIDIS

Speakers: Roger Pulwarty, Senior Scientist, National Oceanic and Atmospheric Administration; Tony Willardson, Executive Director, Western States Water Council