

Western Governors Association Drought and Climate Workshop

Keynote Address

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Good afternoon, and thank you for inviting me to this important event. The Western Governors' Association and the Western States Water Council have a long history of leadership in championing environmental stewardship programs that balance caring for natural resources with protecting the economy and the way of life of affected citizens.

During my presentation today, I have a few exciting announcements and updates. NOAA has been in the vanguard of climate research, and the agency has been working hard to add a more prominent service dimension to better serve businesses, local governments and citizens. I will:

1. provide more details on where we stand in the development of these products,
2. introduce new key players who will strengthen the interface between NOAA and our regional partners,
3. describe our next steps as we move forward with climate services, and
4. ask your input to help us rank priorities for the new services, and your support for these new efforts.

Very few environmental events affect our economy, natural resources or citizens' lives more than climate. Up to one-third of the U.S. gross domestic product is directly influenced by weather and climate.

Climate variability and climate change are profoundly impacting human society as well as Earth's natural environment and resources. In the U.S., climate-related changes are already being documented, such as more frequent extreme weather events, longer growing seasons, shifting ranges of plant and animal species and record low Arctic sea ice coverage in the summer.

Future changes in climate are projected to be larger and more rapid than those experienced over the past century and will have impacts that extend across all economic sectors, including water resources, energy, transportation, agriculture, forestry, coasts, fisheries, and human health. Ecosystems as well as built infrastructure have ranges of tolerance that will be challenged as extreme events occur more frequently in a changing climate. All of these climate influences will exert a huge strain on the environment, the nation's economy and our way of life.

The United States extends from the Arctic Circle to equatorial Pacific, and encompasses nearly every type of climate and geography available on the Earth. Changes in climate will have a different set of impacts on each different region. Therefore, it is essential that we view adaptation to climate impacts in a regional context. A one-size-fits-all approach simply will not work.

That is one of the reasons why the National Integrated Drought Information System has been so successful to date. NIDIS is just a sample of the types of information and services that are possible through engagement and inclusion of the appropriate partners and all levels of government and providing services that are relevant and scalable to an issue and/or region. We thank the WGA for your initiative to help us realize a new paradigm for collaboration.

The NIDIS paradigm is being expanded beyond the initial pilot area, with new services under development in areas of the Southeast U.S., and a new scoping effort in the Carolinas and California. What began as a collaboration with a key partner – you! – has become a program with national relevance and importance.

Before I go farther, I want to take a moment to commend WGA for your proactive focus on adaptation. Your June 2009 policy initiative, *Supporting the Integration of Climate Change Adaptation Science in the West*, and the subsequent formation of a Climate Adaptation Work Group are firm steps to have a collective voice, identify priorities, and take action. It also gives the federal government a visible entity with whom we can collaborate.

The Administration has been working to take the same types of initiatives. As you know, the Council on Environmental Quality, the Office of Science and Technology Policy and NOAA co-chair the Interagency Climate Change Adaptation Task Force, designed to articulate the federal government's role to support the nation's adaptation needs. Over the past year, the Task Force has developed policy goals toward a national

framework for adaptation and is developing a foundation for a broader approach, which includes state governments, academia, bridging organizations and translators, the private sector, and others.

The Office of Science and Technology Policy leads the United States Global Change Research Program, which is chaired by Dr. Tom Karl from NOAA. USGCRP embarked on its monumental effort to develop the next National Climate Assessment, required by the Global Change Research Act of 1990. Rather than a finite set of activities that result in a report, we are looking to create a sustainable process, use a risk-based framework, provide new topics and cross-sectoral studies, and entrain regional and sectoral networks to build a comprehensive assessment capacity.

In both of these major Administration climate activities, we see the collaboration with the organizations like the Western Governors Association as essential to success.

WGA has also encouraged Congress and the Administration to create a National Climate Service, which is now being pursued within NOAA.

Growing concerns about the potential impacts of climate variability and change are fueling an exponential growth in the demand for climate related information from NOAA. State and local governments are calling for easy and timely access to scientific data and information about the state of our climate today, how it may change in the future, and what impacts any anticipated changes may have on our environmental, social and economic

systems. This information is crucial to help them make informed decisions in their lives, businesses, and communities.

We have heard loudly and clearly that the nation needs an authoritative and consistent source of timely and reliable climate information, based on the best available science, to support decision-making at national, regional, state, and local levels. Because of its operational mandate and experience in providing oceanographic and atmospheric related services, NOAA is uniquely positioned to help address this critical national need, and stands ready to make key contributions in the development and delivery of relevant climate science products.

Just this morning, Secretary Locke issued a press released about the recent report from the National Academy of Public Administration, or NAPA, which, at the request of Congress, undertook an analysis of the organizational options for a National Climate Service in NOAA, emphasizing maximum effectiveness and efficiency. It is important to note, that part of NAPA's outreach included conversations with WGA

So, what does the NAPA report say?

First, NAPA gives a nod to the Administration for its actions, such as the Adaptation Task Force and the USGCRP. It also encourages the Administration to do more to strengthen and expand its interagency structures to ensure appropriate coordination among the federal agencies.

Second, NAPA is strongly supportive of a NOAA Climate Service as a new line office within NOAA. It suggests that it is essential to have one federal

agency designated to be the center of gravity for aggregating and rigorously providing an authoritative roadmap or portal to the best available science that can be harnessed to support public policy decision making.

Third, the Panel concludes that a NOAA Climate Service, properly configured and implemented, would be uniquely qualified to serve the public and private sectors as a lead federal agency for climate research and services, and to provide an ongoing accessible, authoritative clearinghouse for all federal science and services related to climate.

Next and very importantly, the report provides guidance on internal reorganization options and implementation strategies.

And finally, NAPA recommends NOAA identify and prioritize opportunities to build capacity of end users and expert intermediaries and the importance of engagement and communication channels at the state, local, and tribal government level. I see WGA providing assistance in this process.

With this new from NAPA, combined with the very useful input from many users and partners and our employees over the past year, the U.S. Department of Commerce and NOAA are fine tuning our proposal to establish a NOAA Climate Service that will combine the agency's world-class climate science and technical capabilities with a scalable capacity to develop, deliver and communicate information services. The result is a service-oriented organization that advances scientific understanding, engages users and delivers services.

The objective of creating a climate service within NOAA is to increase the agency's ability to understand climate, anticipate changes and provide

Americans the information they need today to meet the challenges of being competitive and resilient in the climate of the future. It will bring together longstanding NOAA capabilities -- world-class researchers, together with observations, predictions, assessments and training -- into a single, more coordinated and efficient organization and leverage the existing on-the-ground service delivery across the agency.

Extensive collaboration with other federal agencies, as well as local and state agencies and stakeholders at the regional level will enhance NOAA's capacity to distribute to the end-user decision-support resources.

Businesses, resource managers and communities will have access to the climate information they need to be more climate resilient in the future.

Establishing the NOAA Climate Service will help ensure that climate science is effectively communicated, and that useable information is available to inform decisions and choices. The goal is to minimize impacts to the economy to our quality of life, and to prevent or reduce the loss of natural resources and minimize ecosystem damage. The NCS will develop new and improved services through constant interaction and dialogue with stakeholders and climate-information consumers.

Potential benefits include:

1. **Improved planning.** Better information on the likelihood of climate extremes such as heat waves or storm surges will help cities identify vulnerable populations or areas, improve planning to lessen risk, and develop emergency response strategies.
2. **Natural resource management.** Information provided by the NCS will help natural resource managers make more informed decisions in fulfilling requirements to protect ecosystems and species. For

example, NCS will work with partners to characterize current climate conditions of species' habitats as well as future changes.

3. **Management of critical infrastructure.** Planners will use NCS information to manage critical infrastructure, resulting in more durable, resilient, and cost effective water systems, dams, runways, roads, and bridges.
4. **Evaluation of greenhouse gas mitigation strategies.** NCS will project the response of the Earth system to policies proposed to address greenhouse gas emissions and climate change. NCS will use state-of-the-art science to improve the resolution of those projections, moving toward the regional scales at which many decisions are made.
5. **Support for national security.** National security decision makers will use NCS information to help identify geopolitical areas of potential near-term upheaval and long-term conflict in response to changes in food and water availability, climate-related health issues, coastal sea-level rise, and other climate impacts.
6. **Fostered innovation.** A robust NOAA Climate Service will help stimulate and strengthen the U.S. economy by fueling research and development, cutting-edge technology, innovation, efficiency, and international leadership. It will also help to build resilience and inform decisions as people, businesses, and governments adapt to changes in climate.

The NCS will build upon NOAA's achievements gained over decades of engagement with interagency, academic, and private-sector partners. To effectively meet user demands, NOAA must work seamlessly across spatial scales from local and regional to national and international levels. The

NCS will spearhead, participate in and provide leadership for collaboration frameworks to leverage existing and projected capabilities and achieve these goals. The NCS will continue to play an important part in interagency bodies, such as the Adaptation Task Force and USGCRP, as NOAA has historically done alongside its peer science agencies.

The NOAA Climate Service will also rely on constant two-way relationships with the external stakeholder community and bring together diverse scientific and service communities. The NCS depends on these strong partnerships because no one agency or community can provide climate services alone.

Recognizing that most climate adaptation-related efforts will occur at regional to local levels – just as all politics is local, so too are adaptation actions. NOAA will seek out partnerships with regional, state and local agencies and organizations to determine the types of information and the scale needed to inform local decision making and planning efforts. Many state agencies and local governments are developing adaptation plans and processes, and making adaptation decisions for their own jurisdictions. The NCS will regionalize its efforts by working closely with state, emergency management, and other natural resource agencies, as well as non-governmental organizations and academia to minimize the risks and impacts of a changing climate in a more focused context.

Also in Secretary Locke's press release this morning, was the formal announcement of our six Regional Climate Services Directors. Co-located with the Weather Service Regions, there are six Regional Climate Service Directors. I am excited to say, we have four here with us today. I will ask that they stand so that all of you can know who they are.

Dewayne Cecil from the Western Region
Doug Kluck from the Central Region
James Partain from the Alaska Region and David Brown from Southern Region

Eastern Region's Ellen Mecray and Pacific Region's John Marra regret that they were not able to attend because of a previous commitment.

We are extremely fortunate to have such a strong team of experts to lead the way as we begin this new program. NOAA's new regional directors are community liaisons. They will work with our many partners to identify new and emerging regional climate issues and help NOAA develop products or services to address those issues. Whether the need is to assess local climate forecast needs, identify health risks, adapt to coastal challenges, combat drought, map flood risks or identify yet to be determined needs, a major goal is to deliver targeted, reliable regional resources. This regional structure will support the well-being of people, communities and economies across the U.S.

Their responsibilities are significant. First among them is to establish and sustain user engagement and user input on climate science and services. They will foster collaboration on climate science and services between states, and coordinate with other federal agencies in their regions on climate-related issues.

In a letter sent from Governors Richardson and Schwarzenegger to the secretaries of Agriculture, Commerce and Interior on behalf of WGA, the governors requested cooperation with the WGA's newly created Climate Adaptation Work Group I previously mentioned. Specifically they asked for Federal partners to:

1. Coordinate with Western states in implementing climate adaptation initiatives
2. Provide representatives to serve on the WGA Climate Adaptation Work Group
3. Help to secure federal resources, including funding, to support climate adaptation modeling and planning in the Western states.

I think that the development of a climate service delivery system in NOAA, and the recruitment of our six regional directors is a very good start to addressing the requests. The good news is that we will provide these not only for the western states, but for all U.S. states and territories. And as the service matures and interactions with user groups increase, the depth of our interactions will increase.

In addition to the networks that they will build, these regional directors have an extensive set of resources that already exists, including the National Weather Service information delivery service, the Regional Integrated Sciences and Assessments (RISA) program, our partnerships with State Climatologists, Sea Grant, and many others.

We are hoping that all of you in this room will help to build new linkages. We are counting on you to point to dots on the map that these regional directors will help to connect with the greater stakeholder network of climate users.

The first six months of work for the regional directors have a clear set of critical first steps as they establish their role in the region as coordinators of climate activities. First and foremost is to foster communications with

internal NOAA and external partners through individual and region-wide meetings.

The other steps are to form a region-specific leadership steering group made up of traditional and non-traditional partners to support the emergence of an integrated regional climate service program.

They will complete a thorough inventory of information needs, assets, gaps and priorities. Finally, they will develop a regional climate services Implementation Plan of Action, building on their survey of needs and assets.

Your participation is critical every step of the way. This is your opportunity to help tailor the types of information and services that NOAA will provide you on a regional, state and local level. The regional directors will be your advocate in the field, your ally in developing services and coordinating stakeholders, and your peer in climate science and service delivery.

Most importantly, we are operating in a resource-limited environment, and every dollar of our budget must be optimized. We need your input on prioritizing the services and information that will be most useful to the end-users. While we work toward long-term benefits resulting from our efforts, we also must focus on successes in the short-term. We want to hear from you at every stage of the development process to ensure that we are on target in our planning. It is important that you and your peers around the country feel some ownership in this new activity because it is intended to be in service to you.

We look forward to engaging you and hearing your feedback either directly through our longstanding relationship with the WGA or through the new directors.

Again, thank you for inviting me today, and thank you for all of the hard work that you've been doing.