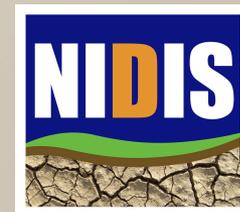


About NIDIS and the Coastal Carolinas DEWS Strategic Plan

Courtney Black
Regional Drought Information Coordinator
The National Integrated Drought Information System
NOAA
Boulder, CO



June 2, 2016
Wilmington, NC



History of the National Integrated Drought Information System (NIDIS)

Authorized in 2006

- **Why:**
 - Recognition that better informed and more timely drought-related decisions lead to reduced impacts and costs.
 - **Goal:** *“Enable the Nation to move from a reactive to a more proactive approach to managing drought risks and impacts”* PL 109-403

Reauthorized in 2014

- Authorizes the appropriation of funds (via NOAA) through FY2018
- Builds off the President’s Climate Action Plan
- Develop and expand the Regional Drought Early Warning Systems



What is NIDIS?

- NIDIS is congressionally authorized with specific mandates (Public Laws 109-430 and 113-86)
- Brings drought information, research, education, policy and networking together
- NOAA program that operates on an inter-agency level

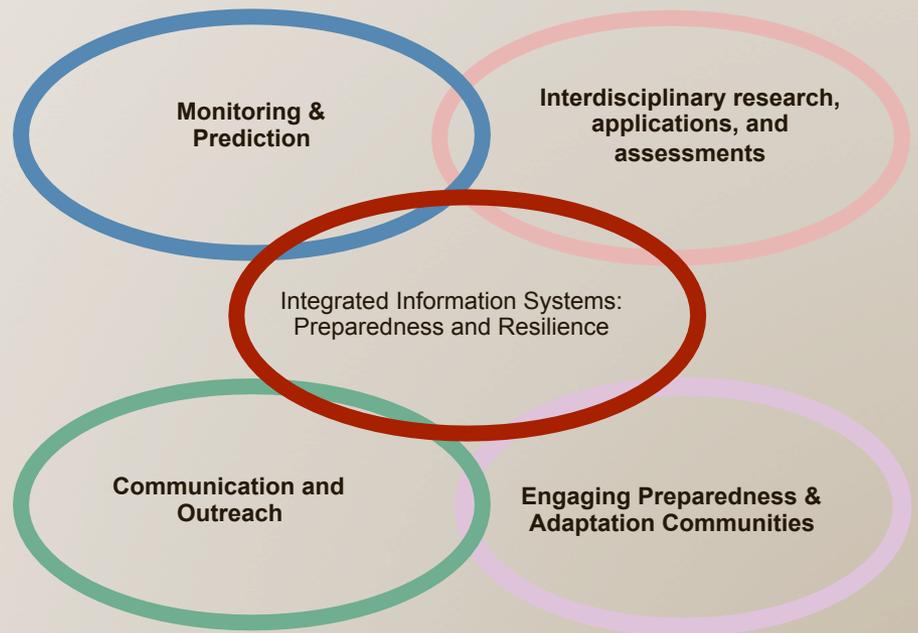


NIDIS is congressionally authorized and mandated to: (Public Laws 109-430 and 113-86)

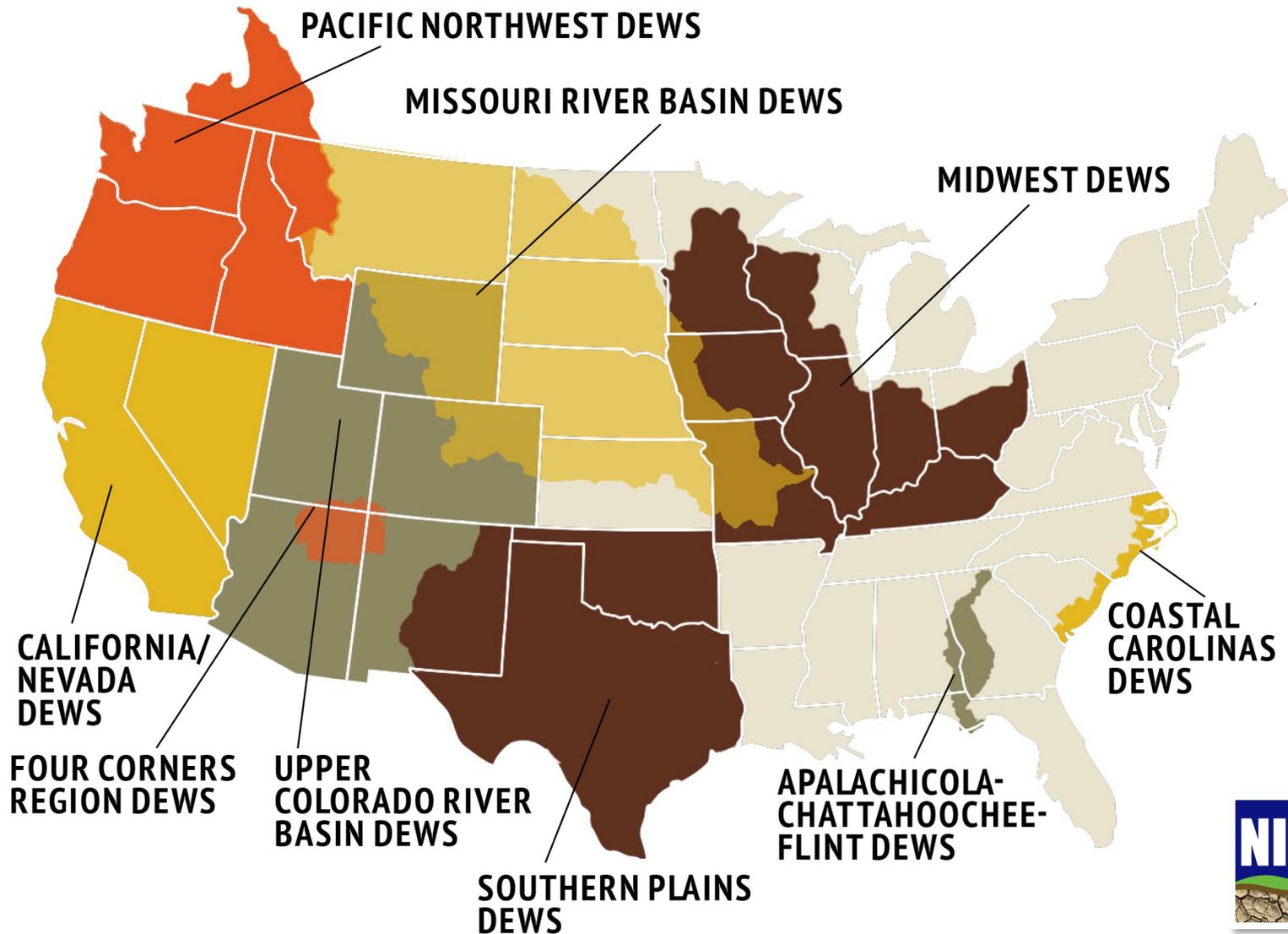
1. Provide an effective drought early warning system that:
 - (A) collects and integrates information on the key indicators of drought and drought impacts in order to make usable, reliable, and timely forecasts of drought, including assessments of the severity of drought conditions and impacts; and
 - (B) provides such information, forecasts, and assessments on both national and regional levels
2. Communicates drought forecasts, drought conditions, and drought impacts on an ongoing basis to decision-makers at the Federal, regional, State, tribal, and local levels of government; and the private sector

NIDIS Public Laws

3. Engenders better informed and more timely decisions thereby leading to reduced impacts and costs
4. Includes timely (where possible real-time) data, information, and products that reflect local, regional, and State differences in drought conditions
5. Continues research activities relating to length, severity, and impacts of drought and the role of extreme weather events and climate variability in drought.



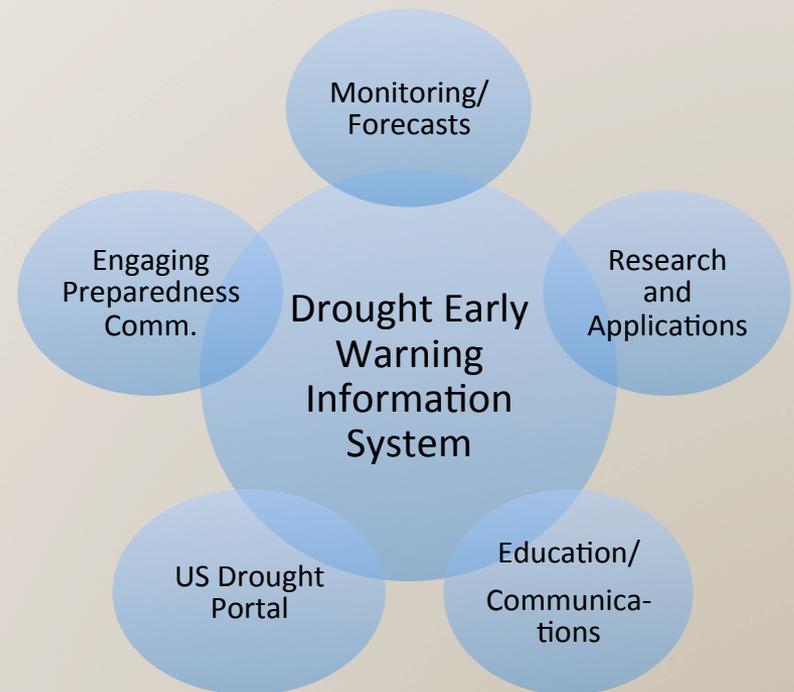
Regional Drought Early Warning Information Systems



What is Drought Early Warning?

WHAT IS A DROUGHT EARLY WARNING SYSTEM?

A Drought Early Warning System (DEWS) utilizes new and existing partner networks to optimize the expertise of a wide range of federal, tribal, state, local and academic partners in order to make climate and drought science readily available, easily understandable and usable for decision makers; and to improve the capacity of stakeholders to better monitor, forecast, plan for and cope with the impacts of drought.



From Risk to Resilience: Research-based Integrated Information Systems

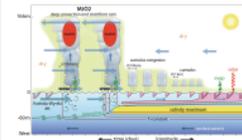


- Develop and coordinate partnerships: networks of practitioners public-private: map decision-making arrangements
- Advance earth system observations and prediction capabilities
 - Construct risk profiles: the role of rates of change in trends, frequency, and magnitude of extremes at different scales
- Capacity and Coordination: Integrate Research, Observations, and Assessments into early warning information on critical transitions and capacity for response
- Overcoming impediments
 - Do this for a long time

Science for Resilience

NOAA Climate Program Office's research programs and expertise help the nation understand, anticipate and respond to climate-related changes in water resources and water-related hazards.

Prediction Skill

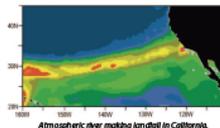


NOAA works to advance understanding and modeling of the climate system to improve forecast reliability—and usability—for droughts and floods.

LINKS AND RESOURCES

- CPO's Climate Observations and Monitoring Program: bit.ly/ClimateObs
- CPO's Climate Variability & Predictability Program: bit.ly/ClimateCVP
- Modeling, Analysis, Predictions, & Projections Projects: bit.ly/NAIPProjects
- Madden-Julian Oscillation: bit.ly/ExplainingMJO
- North American Multi-Model Ensemble: bit.ly/NA-MME

Better Understanding

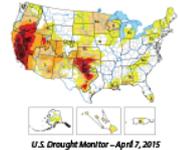


NOAA aims to improve understanding of the role precipitation events and land surface conditions have on amplifying or reducing drought and flood impacts.

LINKS AND RESOURCES

- Report: Origins of the 2012 Great Plains Drought: bit.ly/2012Drought
- SARP Case Studies: Water Resource Strategies and Information Needs in Response to Extreme Weather and Climate Events: bit.ly/ExtremeEventsCaseStudies
- Pacific Northwest RISAP: powerinc.org/projects

Communication Tools

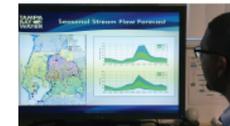


NOAA is developing timely, accessible communication tools to inform preparedness and adaptation

LINKS AND RESOURCES

- U.S. Drought Monitor: droughtmonitor.unl.edu
- Managing Drought Risk on the Ranch: bit.ly/RanchDrought
- Colorado Floods: Western Water Assessment: bit.ly/ColoradoFloods
- Climate and Water Resources Data in the Klamath Basin: bit.ly/KlamathClimate
- SEC's Climate of the Southeast United States: bit.ly/SEC2014Report

Improved Coordination



NOAA coordinates across multiple partners, sectors, and regions to inform drought and flood risk management from watersheds to the nation's coasts.

LINKS AND RESOURCES

- Floodplains by Design: www.floodplainsbydesign.org/partnerships
- Regional Integrated Sciences and Assessment (RISA): bit.ly/RISAS
- Weekly Colorado Drought Assessment Webinars: bit.ly/ColoradoDroughtWebinars
- Drought Impacts Reporter: droughtreporter.usd.edu/
- NDIS portal: www.ndis.gov

Crafting an Integrated Information System



To make the best decisions, stakeholders need access to more than just one piece of the puzzle. Integrated Information Systems are designed to evolve over time, offer opportunities for diverse participation, and integrate what we learn through practice.

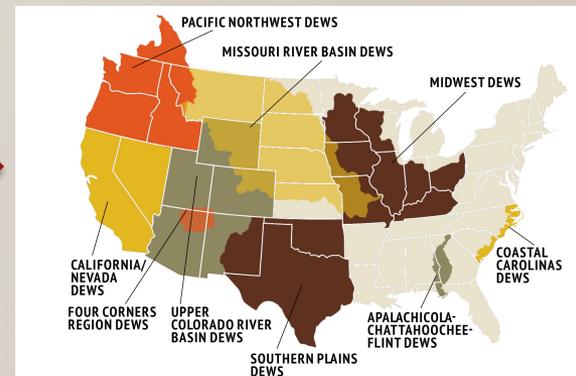
Strategic Plan

- Roadmap for moving forward with the Coastal Carolinas DEWS
- Identify existing and new drought- related activities throughout the region
- 2-year time frame yet live document where can be updated
- Focus on the coastal Carolinas yet other regional concepts/activities are encouraged



Benefits of a DEWS Strategic Plan

- Fostering a regional network
- Collaboration and coordination
- Reference to help generate policy and governmental support
- Resource to assist with leveraging funds
- Foster sharing of activities and info across DEWS



Strategic Plan and Leveraging Resources

1. What is going to be done?
2. Who is leading and other involved?
3. How is it going to be funded?
4. What are the deliverables?
5. What is the timeframe?



Task 3 – Across Basin Activities

Subtask 3.1 –Midwest/Great Plains Early Warning Webinars (monthly)

Regular coordination of federal entities and outlooks/data in the MRB

Subtask 3.2 –Regional Monitoring

Subtask 3.3 –USDA Northern Plains Climate Hub

Subtask 3.4 –US Army Corps of Engineers: Working with USACE Outlooks and Monitoring Interaction

Subtask 3.5 –Identify federal funding streams and ways to leverage them for supporting drought planning

NIDIS and the Strategic Plan

- Leading development of strategic plan in collaboration with CISA
- NIDIS/NOAA funding opportunities
 - RISA/CISA – Carolinas Integrated Sciences & Assessments
 - SARP – Sectorial Application Research Program
 - MAPP – Modeling, Analysis, Predictions and Projections
 - Additional NIDIS resources
- General beneficial qualities of a project proposal for NIDIS resources
 - Compatible with DEWS objectives & priorities in region
 - Furthers drought early warning
 - Research – how may it be applied
 - Demonstrate leveraging of resources
 - Transferability to other regions



Contact Information

Courtney Black, P.E.

Regional Drought Information Coordinator

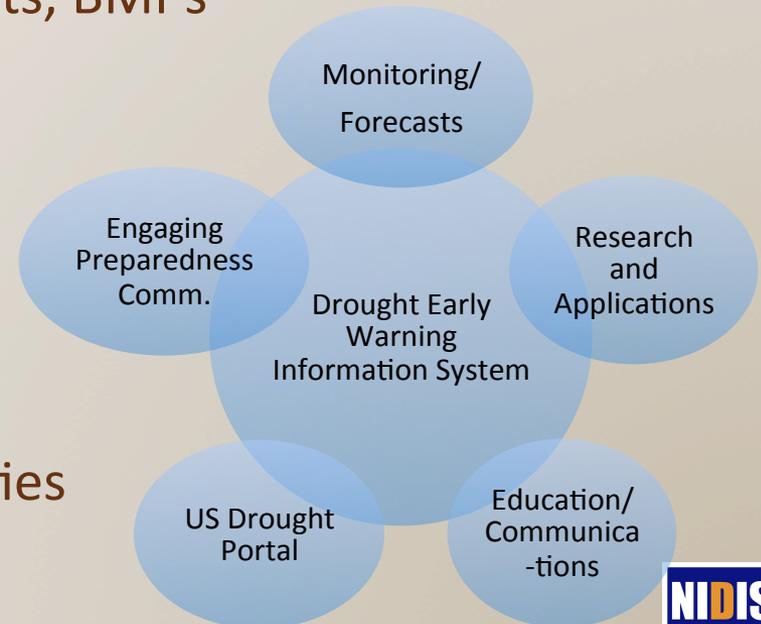
NOAA/NIDIS

courtney.black@noaa.gov

303-497-6447

DEWS Activities

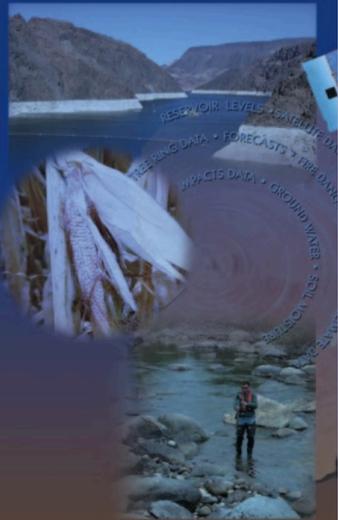
- Primarily coastal related although regional activities encouraged
- Focus on ecosystems yet other sectors encouraged (ag, forestry)
- Audience – decisions makers/managers, practitioners and public
- Types of activities
 - Data – climate, hydrologic, impacts, BMPs
 - Drought planning & indicators
 - Forecasts (short and long-term)
 - Communication – 2 way
 - High precip where relate to drought
- Assessment & implementation activities
- Existing and new activities



The creation of NIDIS began with a partnership

Creating a Drought Early Warning System for the 21st Century

The National Integrated Drought Information System



Western Governors' Association • June 2008

Water Needs and Strategies for a Sustainable Future



Western Governors' Association ♦ June 2009

Water Needs and Strategies for a Sustainable Future: Next Steps



Western Governors' Association ♦ June 2010

SPECIAL REPORT
JUNE 2015

Western Governors' Drought Forum

Chairman's Initiative of Nevada Gov. Brian Sandoval



WESTERN GOVERNORS' ASSOCIATION

westgov.org/drought-forum



What is a DEWS?

A DEWS utilizes new and existing partner networks to optimize the expertise of a wide range of federal, tribal, state, local and academic partners in order to make climate and drought science and impact data readily available, easily understandable and usable for decision makers; and to improve the capacity of stakeholders and economic sectors to better monitor, forecast, plan for and cope with the impacts of drought at all spatial and time scales.



First Two Years of a DEWS

Year 1

Scoping the DEWS

- Gap analyses
 - What info exists?
 - How is it being coordinated and used?
- Identify 2-3 critical issues
- Characterize and communicate risks across timescales for these critical issues

Year 2

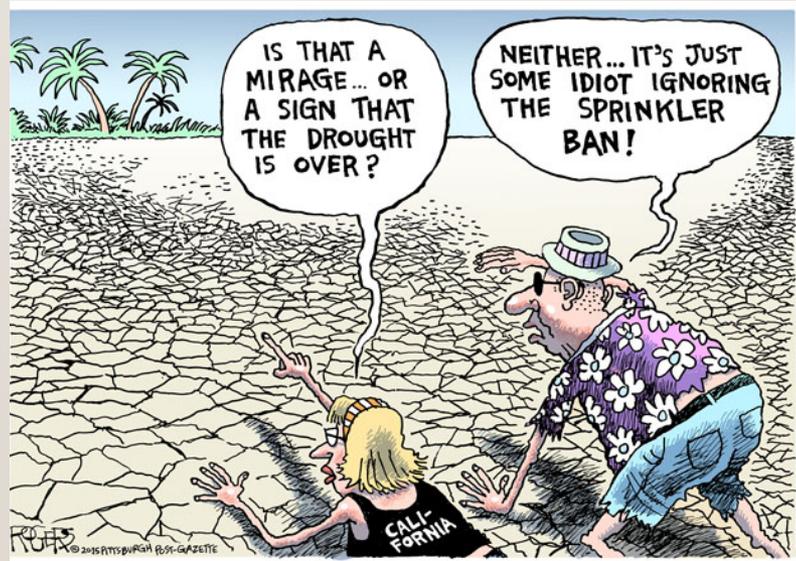
Implementation of the DEWS

- Consider seasonal, multi-year, longer term trends
- Develop drought sub-portals
- Embed information into preparedness & adaptation plans
- Establish network for ongoing briefings on impacts and projections



NIDIS Goals

- Leadership and networking among all sectors of the economy and services to monitor, forecast, plan for and cope with the impacts of drought
- Support drought research- including indicators, risk assessment and resilience
- Develop educational resources, interactive systems, and tools to promote sound decision making, drought awareness, and response



How? Development of Early Drought Warning Systems



This is what we want to avoid!

