What's going on?

What is the National Integrated Drought Information System doing in the Carolinas?

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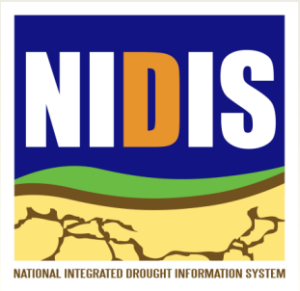


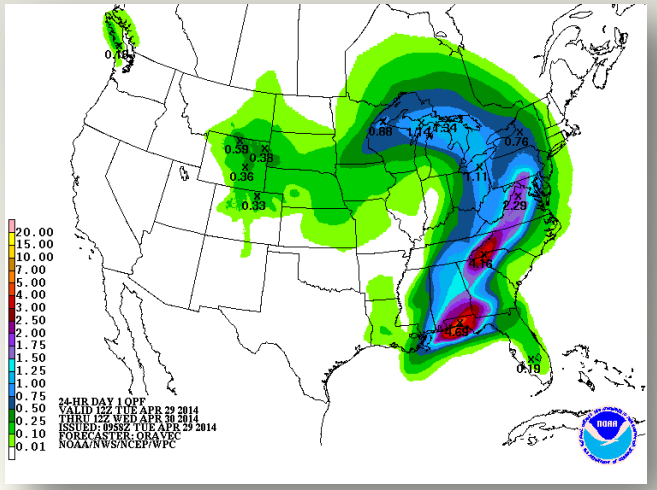
Carolinas Climate Resilience Conference, Charlotte, NC, May, 2014

National Integrated Drought Information System

NIDIS

Outline

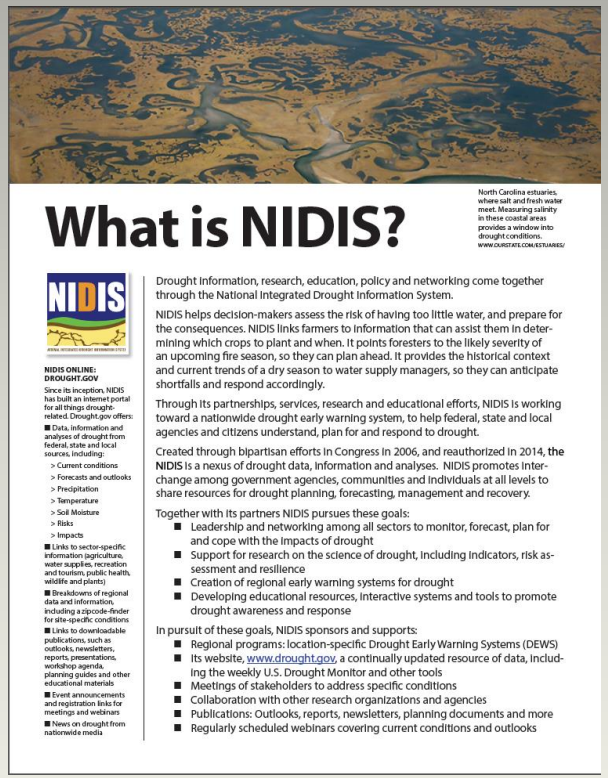
- What is NIDIS?
- Carolinas Coastal Ecosystems Drought Early Warning Information System
  - What we're currently working on
  - What we'd like to be working on in the future
  - What drought information…
    - do you need?
    - could you contribute?



National Integrated Drought Information System

What is NIDIS?

- Established by Public Law 109-430 (The NIDIS Act of 2006), which was reauthorized by Congress in March, 2014!
- Multi-agency program
- Drought early warning
- Drought research
- Drought outlooks (regional and national)
- www.drought.gov



North Carolina estuaries, where salt and fresh water meet. Measuring salinity in these coastal areas provides a window into drought conditions. WWW.OURSTATE.COM/ESTUARIES/

What is NIDIS?

NIDIS

NIDIS ONLINE: DROUGHT.GOV

Since its inception, NIDIS has built an Internet portal for all things drought-related. Drought.gov offers:

- Data, information and analyses of drought from federal, state and local sources, including:
  - > Current conditions
  - > Forecasts and outlooks
  - > Precipitation
  - > Temperature
  - > Soil Moisture
  - > Risks
  - > Impacts
- Links to sector-specific information (agriculture, water supplies, recreation and tourism, public health, wildlife and plants)
- Breakdowns of regional data and information, including a zipcode-finder for site-specific conditions
- Links to downloadable publications, such as outlooks, newsletters, reports, presentations, workshop agenda, planning guides and other educational materials
- Event announcements and registration links for meetings and webinars
- News on drought from nationwide media

Drought information, research, education, policy and networking come together through the National Integrated Drought Information System.

NIDIS helps decision-makers assess the risk of having too little water, and prepare for the consequences. NIDIS links farmers to information that can assist them in determining which crops to plant and when. It points foresters to the likely severity of an upcoming fire season, so they can plan ahead. It provides the historical context and current trends of a dry season to water supply managers, so they can anticipate shortfalls and respond accordingly.

Through its partnerships, services, research and educational efforts, NIDIS is working toward a nationwide drought early warning system, to help federal, state and local agencies and citizens understand, plan for and respond to drought.

Created through bipartisan efforts in Congress in 2006, and reauthorized in 2014, **the NIDIS** is a nexus of drought data, information and analyses. NIDIS promotes interchange among government agencies, communities and individuals at all levels to share resources for drought planning, forecasting, management and recovery.

Together with its partners NIDIS pursues these goals:

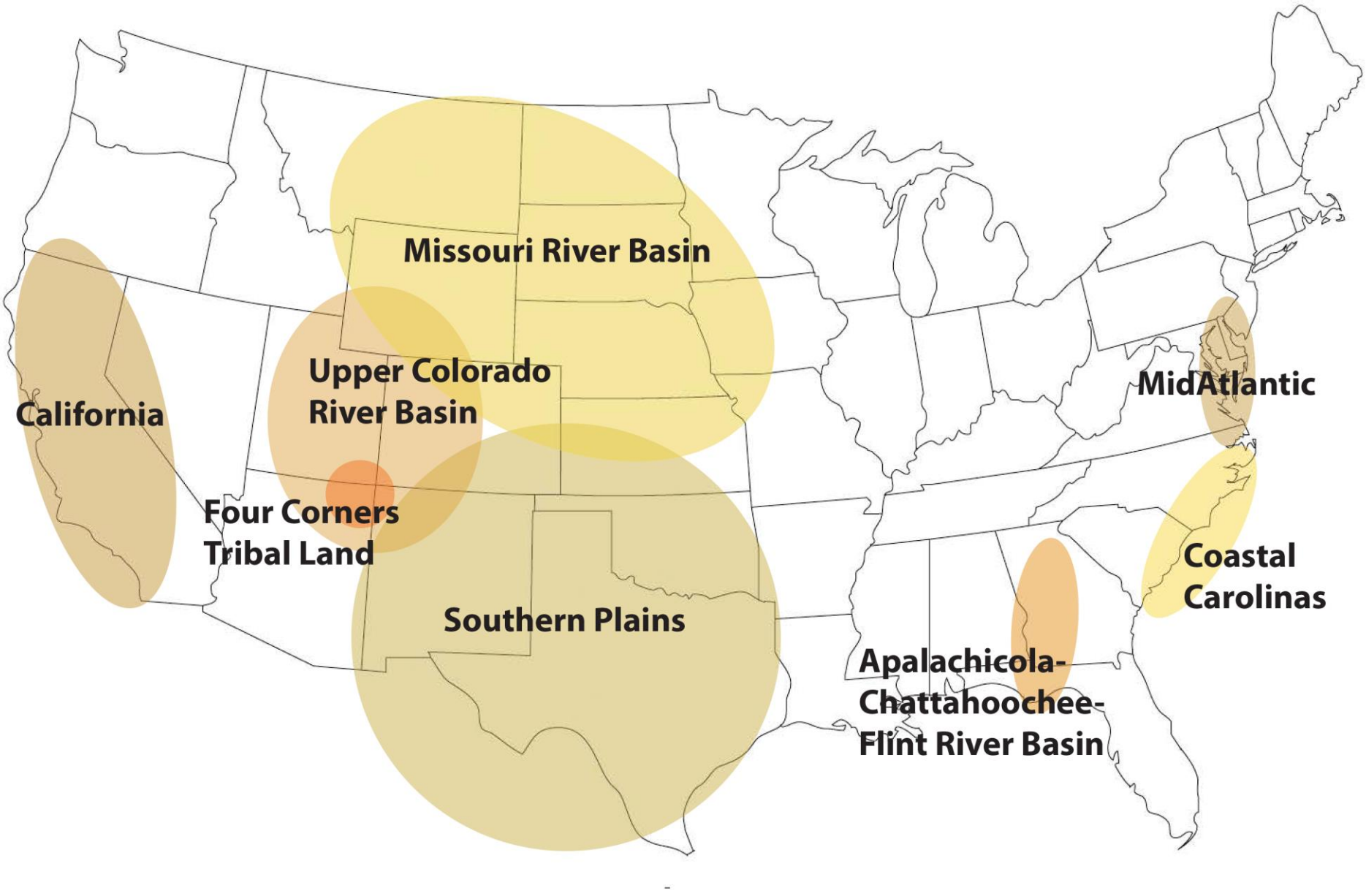
- Leadership and networking among all sectors to monitor, forecast, plan for and cope with the impacts of drought
- Support for research on the science of drought, including indicators, risk assessment and resilience
- Creation of regional early warning systems for drought
- Developing educational resources, interactive systems and tools to promote drought awareness and response

In pursuit of these goals, NIDIS sponsors and supports:

- Regional programs: location-specific Drought Early Warning Systems (DEWS)
- Its website, www.drought.gov, a continually updated resource of data, including the weekly U.S. Drought Monitor and other tools
- Meetings of stakeholders to address specific conditions
- Collaboration with other research organizations and agencies
- Publications: Outlooks, reports, newsletters, planning documents and more
- Regularly scheduled webinars covering current conditions and outlooks

Pick up the NIDIS handout for more information

"Enable the Nation to move from a reactive to a more proactive approach to managing drought risks and impacts"


Missouri River Basin
Upper Colorado
River Basin
California
Four Corners
Tribal Land
Southern Plains
MidAtlantic
Coastal
Carolinas
Apalachicola-
Chattahoochee-
Flint River Basin

NIDIS Carolinas Coastal Ecosystems Drought Early Warning Information System

Kirstin Dow

Kirsten Lackstrom

Amanda Brennan

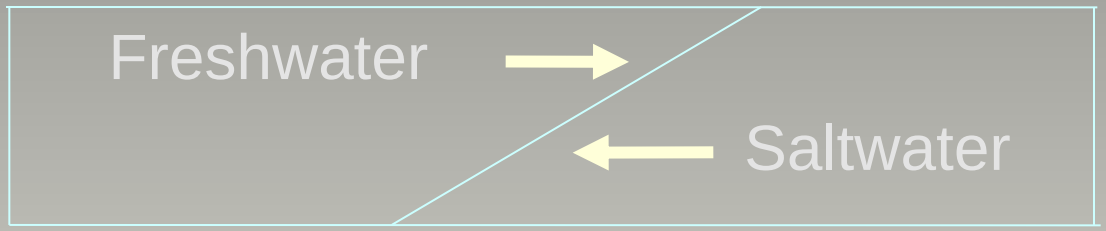
carolinas integrated sciences & assessments cisa

http://www.cisa.sc.edu/

Carolinas Scoping Workshop
Wilmington, NC July 31/Aug 1 2012

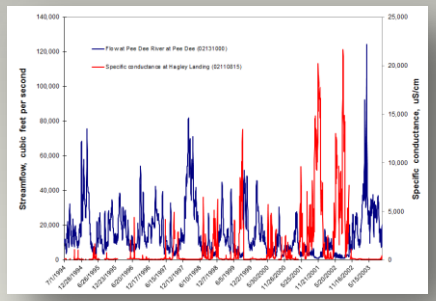
- Speaker presentations to discuss implications of drought in coastal ecosystems
- World Café style breakout sessions to brainstorm pilot project ideas
- Participants used the Turning Technologies Audience Response System to vote for pilot project ideas
- The original 4 projects
  - Drought indicators & indices
  - Seafood safety
  - Drought forecasting
  - Drought impact reporting
- Updates

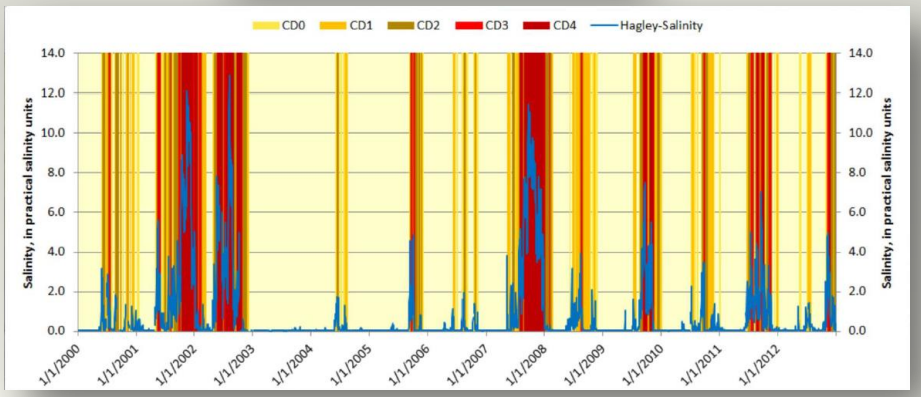
Evaluation of Drought Indicators & Indices



Project Goals

- Investigate the benefits and feasibility of creating a drought index based on real-time salinity data (Conrads)
- Relate coastal drought index to impacts (Tufford)
- Funding for “Assessment of Drought Indicators for Coastal Zone Fire Risk” (Boyles)
- Funding for “Forecasting S.C. Blue Crab Fishery using Real-time Freshwater Flow Data (Childress)
- Determine which current drought indicators and indices are appropriate for assessing drought in coastal ecosystems
- Collaborate with work being done on the North American Drought Indices and Definitions Study





Development of a salinity index based on real-time USGS data – Paul Conrads USGS

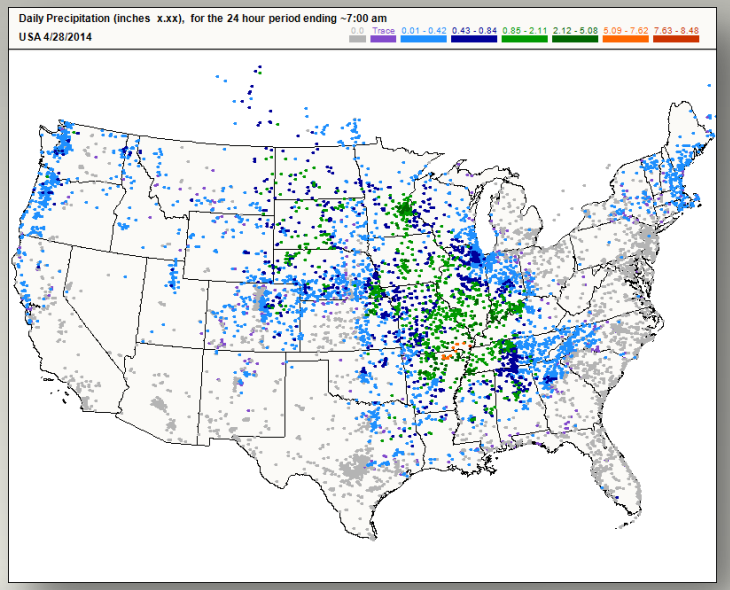
Drought Impact Monitoring

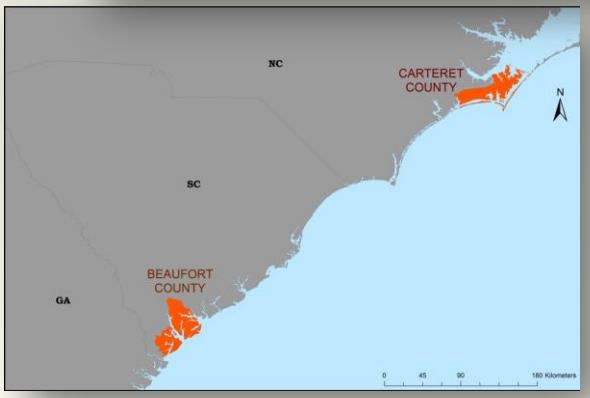
Condition Monitoring

To improve understanding of drought impacts in coastal ecosystems and connect with decision makers

Project Components:

- Citizen science ‘condition monitoring’ through the Community Collaborative Rain, Hail and Snow (CoCoRaHS) network
- Interviews with local business owners, commercial and recreation fishermen, and land/resource managers
- Project report is underway (CISA)
- Re-evaluate pilot goals based on what was learned in the interviews





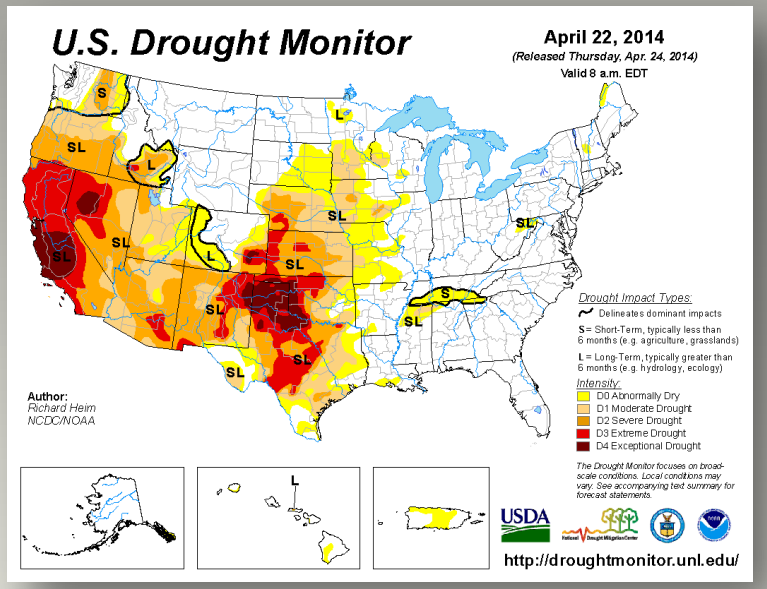
Original Project Goal

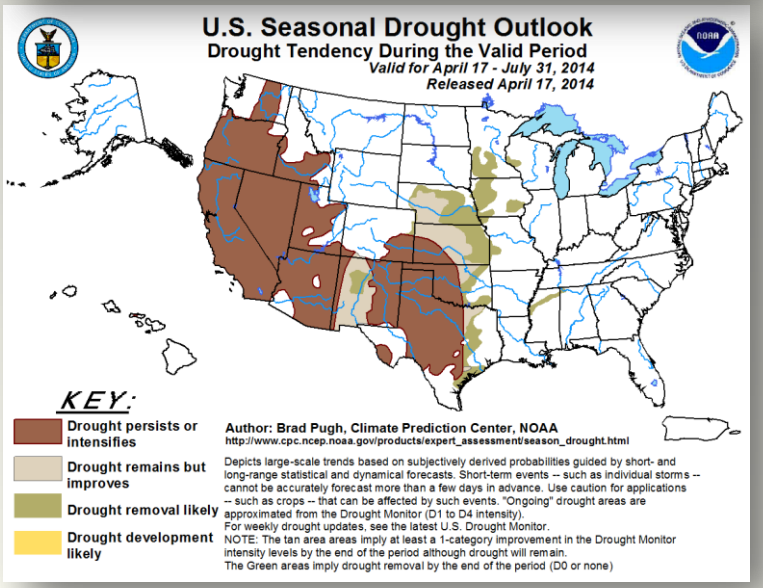
- Provide an early warning system for commercial, recreational and subsistence fishermen who harvest drought-sensitive seafood in both fresh and salt waters in the coastal regions of the Carolinas
  - Vibrio – contaminates shellfish
  - HABs
  - “Drought buster” events
  - Outreach

Drought Forecasting Communications

Original Project Goals

- Introduce stakeholders to current products used for drought forecasting, step them through the process of how a drought outlook is prepared, and educate them on the caveats and uncertainties in the outlook
- Ascertain what additional drought forecasting products stakeholders need and what time scales are of most interest to them





NIDIS Carolinas Coastal Ecosystem Drought Early Warning Pilot

- ✓ Evaluation of drought indicators & indices
- ✓ Drought impact reporting/condition reporting
- ➢ Public health and water quality
- ➢ Drought forecasting communications

Thoughts, ideas, comments?

Thank you

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NIDIS

NATIONAL INTEGRATED DROUGHT INFORMATION SYSTEM