

Cape Fear Arch Conservation Collaborative Quarterly Meeting

Tuesday, November 10, 2015
Learning Center at the Museum of Coastal Carolina
210 East Second Street Ocean Isle, NC 28469
<http://museumplanetarium.org/>
[Map](#)

Meeting Agenda

8:30 – 9:00 Coffee and Conversation

9:00 – 9:30 Attendee Introductions and Updates

9:30 – 10:00 **Introduction to CISA & the NIDIS Carolinas DEWS Program**
Amanda Brennan, CISA

The Carolinas Integrated Sciences & Assessments (CISA) is collaborating with the National Integrated Drought Information System (NIDIS) to develop a drought early warning system (DEWS) for the unique coastal ecosystems in the Carolinas. Amanda will give a brief introduction to both of these programs.

10:00 – 10:30 **Ecological Indicators of Drought in Coastal Ecosystems**
Casey Nolan, East Carolina University

Casey Nolan will share findings from a series of interviews conducted with coastal land and resource managers to identify opportunities for drought early warning and monitoring in the Carolinas. Interviewees provided feedback on the use of existing or potential new indicators or indices as well as additional data and research needed to effectively understand and monitor drought in coastal ecosystems.

10:30 – 11:00 **Development of a Coastal Drought Index**
Paul Conrad, USGS South Atlantic Water Science Center

Salinity is a critical coastal response variable that integrates hydrological and coastal dynamics including streamflow, precipitation, sea level, tidal cycles, winds, and tropical storms. The location of the freshwater-saltwater interface in surface water bodies along the coast is an important factor in determining the freshwater and saltwater aquatic communities, fisheries spawning habitat, and the freshwater availability for municipal and industrial water intakes. Paul will give an overview of the Coastal Drought Index which uses salinity data as a measure of wet and dry conditions in coastal surface waters.

11:00 – 11:30 **Assessment of Drought Indicators for Coastal Zone Fire Risk**

Ryan Boyles, State Climate Office of North Carolina

Fire plays an integral part in terrestrial ecosystem management across the Carolinas. Controlled burns are used to reduce the risk of wildfire and manage species diversity in forest ecosystems. Ryan Boyles will share the results of research conducted by the State Climate Office of North Carolina to evaluate which, if any, drought indices are most suitable in representing local risk of fire in the organic soils of the coastal Carolinas region.

11:30 – 12:00 **Understanding Rapid Environmental Change at Alligator River National Wildlife Refuge**

John King, North Carolina State University

Rising sea levels are impeding draining in the Alligator River National Wildlife Refuge, leading to a cascade of ecosystem transitions, affecting wildlife habitat quality in the Refuge. John King will describe research his team is conducting to understand the effects of historical ditching and draining on soil water dynamics and salinity.

12:00 – 1:00 **Networking Lunch**

Lunch will be provided for free