

Project Nighthawk: Spring 2019 Update

Innovating Drought Communications with North Carolina Decision Makers

About The Project

In the aftermath of recent droughts in North Carolina, including the exceptional drought of 2007-08, decision makers across the state have articulated needs for information and communications that enhance existing resources. These needs include a better understanding of how drought is monitored, the environmental conditions that can cause or worsen drought conditions, and the effects of drought on North Carolina resources.

This project focuses on improving the usability of drought information for the agriculture, forestry, and water resources sectors, based on feedback from groups such as the North Carolina Drought Management Advisory Council (DMAC), Cooperative Extension agents, and public water system managers.

Why "Project Nighthawk?"

Our project's name is inspired by nature. The common nighthawk, *Chordeiles minor*, is a bird species native to North Carolina that is one of nature's best examples of drought resilience. Just as these iconic birds have learned to live with and recover from drought, our goal in Project Nighthawk is to help decision makers across North Carolina become better informed about and prepared for drought.



Common nighthawk
Photo by Andy Reago and Chrissy McClarren
Shared under CC BY 2.0

Objectives

- Develop tailored, sector-specific information relevant for drought decisions in North Carolina
- Deliver information in accessible and actionable formats
- Improve the transparency of the drought monitoring process

Methods and Engagement

This project has been designed as an iterative process that engages decision makers through various stages of product development, evaluation, refinement, and implementation.

Phase 1 - Fall 2018 <i>Identify</i>	We conducted online surveys and webinars to identify and refine priorities for enhancing existing, or developing new, resources and products.
Phase 2 - Winter 2019 <i>Develop</i>	We developed tailored information and communication prototypes based on Phase 1 results.
Phase 3 - In Progress <i>Evaluate & Refine</i>	Using focus group discussions and eye tracking studies, we are engaging with stakeholders to assess and further refine the prototypes.
Phase 4 - In Progress <i>Implement & Integrate</i>	Based on Phase 3 feedback, we will develop strategies to support the integration of new resources into decision making processes.
Phase 5 <i>Evaluation</i>	We will disseminate a final survey to assess potential use of newly developed resources.

In our **recent and upcoming engagements** with stakeholders in our target sectors, we have shared details about Project Nighthawk and provided opportunities to evaluate our resource prototypes

NC DMAC

Annual In-Person Meeting
Raleigh, April 4

Forestry

NC Fire Environment Committee Meeting
Waynesville, May 20

Water Resources

NC Water Resources Research Institute Annual Conference
Raleigh, March 21-22

Agriculture

Workshop at the Chatham County Center for Cooperative Extension
Pittsboro, February 22
Workshop at the Union County Center for Cooperative Extension
Monroe, May 30
NC Assoc. of County Agricultural Agents Annual Meeting
Southern Pines, June 17-19

Phase 1 Results

Communication Formats and Channels

Participants reported that they prefer information that is clear, concise, and easily shareable through a variety of media, such as email alerts, fact sheets, and infographics.

Drought Monitoring Processes

Approximately half of survey respondents were unaware of the NC drought monitoring process, the NC Drought Map, and/or the US Drought Monitor. Approximately half of respondents indicated they consider the NC and US Drought Monitor maps only moderately accurate or are unsure of their accuracy.

Use of Climate Information

The most useful types of information would clearly convey current and anticipated conditions, including 1-2 week and seasonal time frames, and place drought into local geographic and management contexts.

Phase 2 and 3 Activities

Based on Phase 1 results, the following priorities guided the development of new prototypes to share with information users from the agriculture, forestry, and water management sectors.

- Narratives that synthesize the weekly drought status and how this status was determined for the **NC Drought Map**.
- Resources that relate **short- and long-range forecasts** to drought conditions and local- and sector-specific effects.
- **Agriculture and Forestry:** Information that explains how to access, interpret, and apply more technical types of information.
- **Water Resources:** Resources aggregating statewide or basin-wide conditions including reservoir levels and precipitation totals.
- Resources that describe the NC Drought Management Advisory Council and **weekly drought monitoring processes**.

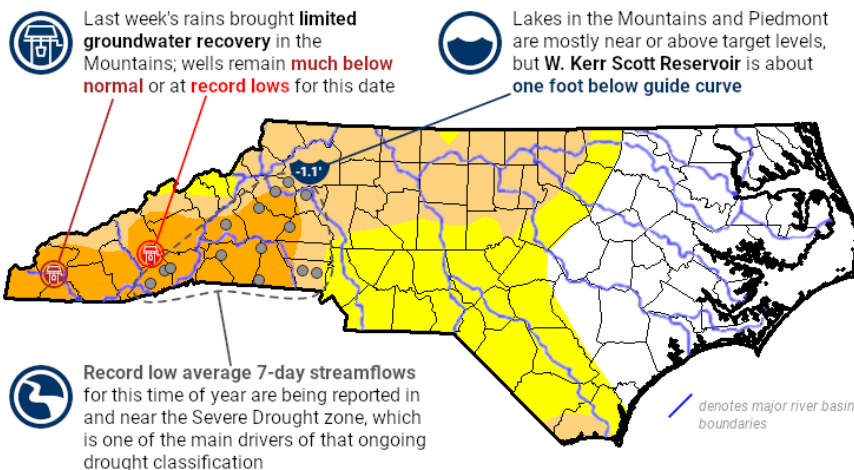
Prototype Example

North Carolina Drought Update

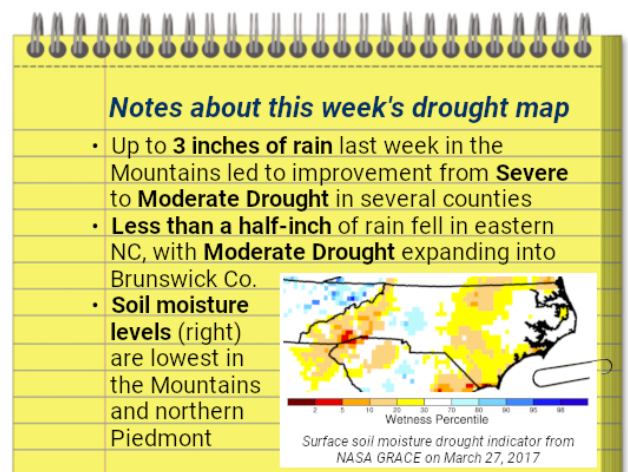
For the week ending March 28, 2017

This Week's Drought Monitor of North Carolina Map

From the US Drought Monitor, authored by Eric Luebehusen (USDA) with input from the North Carolina Drought Management Advisory Council



Water Resources Summary



Drought Monitor Intensity:

- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)

This infographic is a product of



<http://climate.ncsu.edu/nighthawk>



For more information, please visit the project website (climate.ncsu.edu/nighthawk)

This project is supported by the NOAA Sectoral Applications Research Program, award number NA18OAR4310258, and by the the National Integrated Drought Information System.

