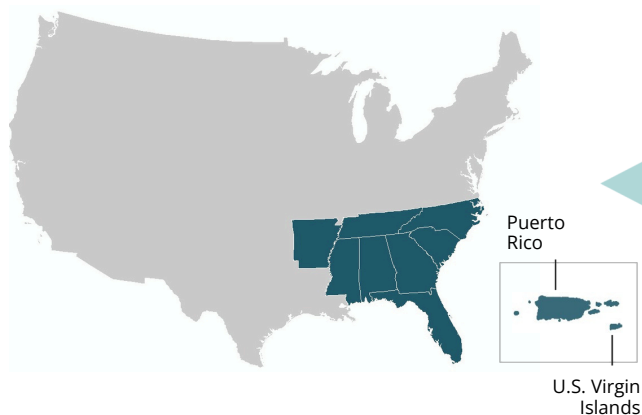




SOUTHEAST
Climate Adaptation Science Center

TENNESSEE



Southeast CASC Consortium Institutions

Host: North Carolina State University

Consortium:

Auburn University	University of South Carolina
Duke University	University of Puerto Rico
Savannah State University	University of Tennessee
United South & Eastern Tribes	University of Virgin Islands
University of Arkansas	

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Estimating Future Water Availability

Estimates of current and future streamflow are critical to understand water availability. Some streams have gauges taking real-time measurements, while others rely on models to estimate flow. Managers in the Southeast need integrated information from both gauges and models for a more complete picture of regional water availability.

WHAT:

The Southeast CASC developed a new method that incorporates ungauged streams into estimates of current and future streamflow across the Southeast, including in the Tennessee River Basin.

RESULTS:

Simulations were developed to estimate water budget and statistics of streamflow for historical and future conditions.

IMPACT:

This is the first effort to simulate how daily hydrological conditions at conterminous United States (CONUS) extent may change under climate scenarios, and the first that helps determine potential risks to hydroperiod, flooding, and rapid onset drought in river systems.



Ecological Impacts of Climate Change in State Wildlife Action Plans

State wildlife agencies and their partners use State Wildlife Action Plans to coordinate and guide management activities aimed at protecting species. To do so, they must find out what puts species and their habitats at risk.

WHAT:

The Southeast CASC compared two methods used by researchers and natural resource managers involved in wildlife action plans to understand threatened species' vulnerability to climate change.

RESULTS:

We examined where these two methods agree, evaluated what may cause any disagreements, and recommended how the two models can be used to come to a consensus about species vulnerability.

IMPACT:

We continue to provide data resources to state wildlife agency staff across the region in a format and at a time that can support the upcoming 2025 revision of wildlife action plans.