

CAROLINAS CLIMATE CONNECTION

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Photo Source: Elijah Charette

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CISA FEATURED RESEARCHER

MEET JORY FLEMING

Jory grew up in South Carolina, and recently returned to the Palmetto State after receiving an MPhil in Environmental Change & Management from the University of Oxford. He is a graduate of the University of South Carolina, where he pursued degrees in Marine Science and Geography.

Jory started as a research associate with CISA in February, and his role as a climate solutions specialist will be focused on helping communities access the climate data they need and support their local climate adaptation and policy decisions. He is looking forward to contributing to CISA research as well as assisting with science translations and communications.

Jory is looking forward to learning about and giving back to people and places across the Carolinas as they respond to climate change. Alongside his service dog Daisy, Jory loves giving back through investing in children's education and disability advocacy, and enjoys bird watching and Scottish country dancing in his spare time.



CAROLINAS CLIMATE RESILIENCE CONFERENCE UPDATE

The **Carolinas Climate Resilience Conference** has been postponed to **May 10-12, 2021**. The conference location in Durham, NC will remain the same.

The primary goal of the CCRC is to help support a network of climate adaptation practitioners by providing a forum to share new ideas and resources and pass along lessons learned from personal experience. We felt that this is best achieved through an in-person gathering, motivating the decision to postpone the event.

We look forward to welcoming you in Durham next Spring. The call for presentations and sessions will be re-opened at a later date. To be sure you receive notice when the call opens, and for additional updates about the conference, be sure to sign up to our conference mailing list from the [conference web-page](#).



VIRTUAL ENGAGEMENTS

The COVID-19 pandemic has altered work arrangements across the Carolinas and changed what a typical stakeholder engagement looks like, with meetings, workshops, and trainings moving to a virtual environment. Opportunities to engage communities and stakeholders are a crucial component of local and regional climate adaptation efforts. To effectively respond to the new virtual norm, CISA collaborated with partners to host a virtual engagement group discussion in late May. The purpose of the group is to learn from one another's experiences and build best practices for virtual engagements.

The initial discussion led to the creation of a shared drive to connect members with digital resources where group members share tips and tricks from courses, trainings, and resource guides. The group also invited Cameron Rhodes and Julia Byrd from the South Atlantic Fishery Management Council to share how they address the challenges of virtual engagements with a variety of communities across the Southeast. The council virtually solicits public comment for new rules and regulations, and has built up expertise in virtual engagement over time from these pre-pandemic experiences.



From virtual training: Jordan Clark demonstrates how to use a wet bulb globe thermometer in a video demo.

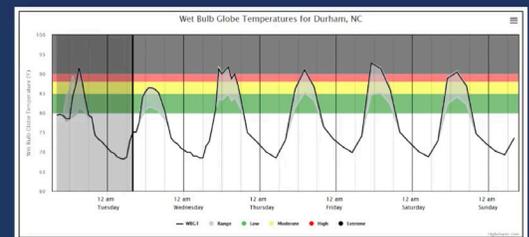
What have we learned so far? Video conferencing software has the potential to intimidate, hide means of communication (e.g. body language and gestures), be more tiring than in-person engagements, or present technology problems. Technology problems can be addressed by using an agenda, communicating with attendees before the meeting (e.g. sending a video, screen shots, or FAQ for video conferencing software), and by assigning support roles for team members during the meeting.

Communication is another challenge to address in a virtual setting, as open-ended questions can lead to people speaking over one another with sound delay and the necessity to un-mute. Strategies that change this dynamic include speaking in rounds or using breakout rooms to create smaller groups working on problems or answering a question. Maintaining engagement in a virtual environment can be improved through feedback via audience polling software such as [Mentimeter](#) or collaborative brainstorming software such as [Google Jamboard](#).

CISA has already employed these strategies in recent engagements, including moving a course for athletic trainers on heat health to a virtual setting. If you would like to discuss virtual engagements or participate in our discussion group, let us know!

Chip Konrad explains how to interpret wet bulb globe temperature forecasts to determine the safest time to hold athletic practices during a virtual training.

Advising coaches & athletic directors on WBGT forecasts for planning practices



Adaptations

- Schedule most (least) rigorous workouts on the coolest (hottest) days
- Move practice to a cooler area or, even better, a shaded area of the school campus
- Move practice to earlier or later in the day

ANNUAL REPORT HIGHLIGHTS

The 2019 – 2020 CISA Annual Report has been released, which gives a full picture of CISA’s projects and activities over the course of the past year. CISA releases an annual report each June to document our progress, share new ideas and partnerships, and celebrate milestones. The stories below share some highlights from the past year, the full report is available now and can be found on our [web page](#).



Supporting Drought Planning and Preparedness in South Carolina

CISA partnered with the South Carolina State Climatology Office in hosting a series of drought tabletop exercises, with the second state-wide event occurring in 2019. The event drew together 92 participants from 48 different organizations, including members of the state Drought Response Committee and representatives from a wide swath of sectors. The goal of the exercise was to simulate the South Carolina drought monitoring and response progress, allowing participants to identify gaps and potential solutions as well as increasing awareness of each participant’s role in drought response and planning.

Participants greatly valued the ability to be immersed in the process and identified several courses of action for their own individual organizations. These included hosting their own tabletops for knowledge sharing, participating in national drought reporting programs, reviewing local ordinances and plans, and revising public communications materials. The event also provided CISA opportunities to meet emerging needs, such as a [drought guide](#) for emergency managers produced with input from the SC State Climatology Office and SC Emergency Management Division.

Increasing Adaptive Capacity for Sea Level Rise and Coastal Flooding

In 2019, CISA continued our partnership with Beaufort County SC to address impacts of recurrent flooding and sea level rise. Earlier work in designing a vulnerability assessment and adaptation strategy led into continued engagement this year when the county requested CISA's assistance in exploring potential ordinances that could be adopted. Building further on this earlier work, CISA developed a vulnerability assessment for the City of Beaufort that combined a flooding model with local economic and demographic data for neighbourhood zones. Combining these data allowed the city to explore the effects of sea level rise and flooding on groups of residents, business districts, and cultural and historical sites.

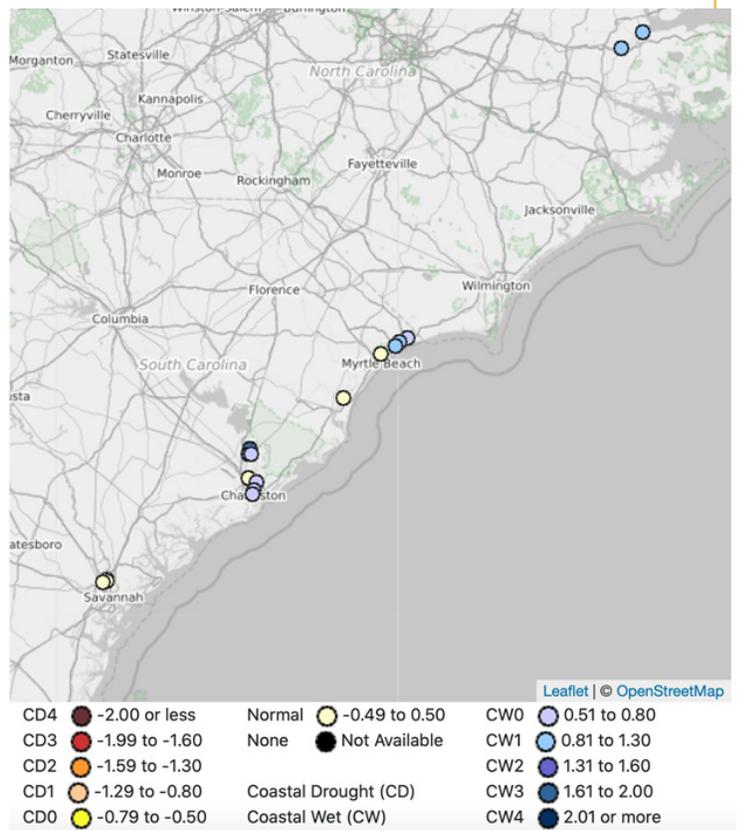
CISA is also conducting a research project alongside the National Institute of Standards and Technology (NIST) to assess business impacts of hurricanes and flooding in Charleston SC. This case study takes a deep look into how flooding impacts small- and medium-sized enterprises (SMEs). SMEs are critical to local job creation and provision of community services. CISA's work exploring the dynamic relationship between businesses and climate hazards has the potential to inform business recovery strategies across the coastal zone.

CISA's work in coastal adaptation is set to continue this year. Hearing about our work with Beaufort, CISA is now exploring partnerships with the towns of Hilton Head, Port Royal, and Edisto Beach. CISA is analyzing the results of a phase I study of business disruption with NIST, with a follow-up study planned in response to emergent findings.

Advancing the Development and Use of the Coastal Salinity Index

CISA is collaborating with the U.S. Geological Survey (USGS) to [deploy the coastal salinity index](#) (CSI) as a new way to monitor coastal drought. The index characterizes short- and long-term coastal drought using salinity values along the freshwater-saltwater interface and helps users understand the effects of changing salinities on fresh and saltwater habitats, fisheries, and freshwater availability for municipal and industrial use.

This year, the index was released on a web portal which provides real-time CSI values for 17 sites in NC, SC, and GA alongside other products (salinity data, maps, graphs, user guides) that help make the CSI information accessible to a variety of audiences. Decision makers are starting to report use cases of the CSI, including in predicting commercial fishery productivity, land management and water quality monitoring, and ecosystem restoration. The real-time network will expand this year to cover the entire eastern seaboard and Gulf of Mexico. CISA will co-lead the investigation of user feedback on new CSI products, data visualizations, and web-based resources as part of this expansion.



CISA BY THE NUMBERS

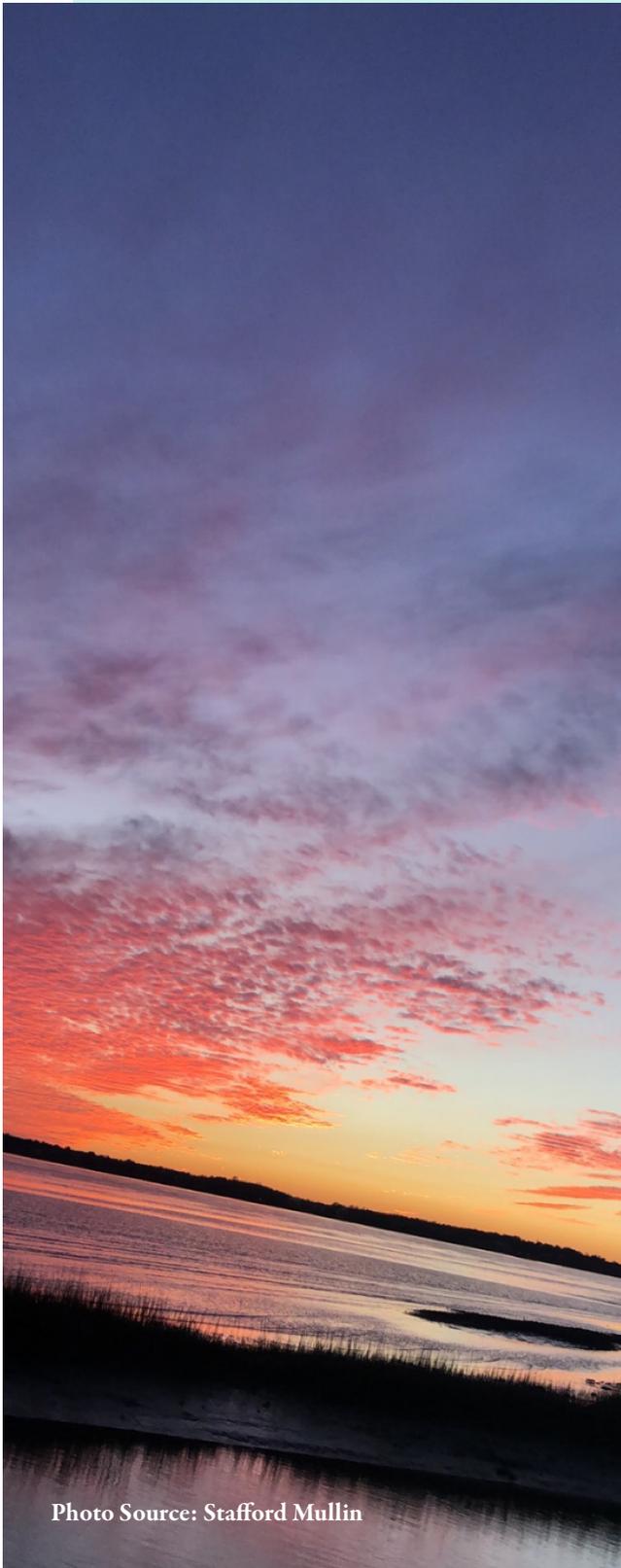


Photo Source: Stafford Mullin

11 journal articles

15 project reports

16 newsletters

52 presentations

13 student
researchers

45 collaborating
investigators

14 stakeholder
conferences,
training sessions,
and workshops

\$700,684

leveraged
grant funds