North Carolina Institute for Climate Studies

NC STATE UNIVERSITY

November 17, 2025

MEMORANDUM

TO: Jess Beck-Stimpert
Chief of Staff, NCEI

FROM: Otis Brown
Director, NCICS

SUBJECT: **Weekly Report (11/10/25–11/14/25)**

NCICS Highlights

- N/A.

Administrative

- Steven Marcus and Scott Wilkins performed monthly IT maintenance.
- Marcus installed Wi-Fi access points, addressed Jamf Mobile Device Management (MDM) issues, and tested declarative tools for pushing out macOS updates.
- NCICS staff observed the November 11 Veteran's Day holiday.

Science and Project Updates

Assessments

- *State Climate Summaries* work continued, including
  - James Anheuser completing OCONUS precipitation projection data,
  - Mark Essig reviewing alt text,
  - April Lamb working on metadata documentation,
  - Andrea McCarrick preparing documents for the web team and updating bar graph values in alt text,
  - Laura Stevens continuing text and figure updates, finalizing several summaries for the web team, and providing additional data and information to NEMAC's Dave Michelson and Jeff Bliss for the Data Explorer tool, and
  - Stevens, Essig, Alexis Visovatti, and Liz Cox discussing potential post-release engagement activities.
- *United By Nature* activities continued, with
  - Essig editing second drafts of chapters, and
  - Lamb participating in figure discussions and continuing development work.
- *Assessment Collaboration Environment* (ACE) V2 finalization continued, with
  - Ryan Cox completing Monday.com API integration, and
  - Angel Li finalizing the new metadata viewer.

- Stevens, Tom Maycock, Douglas Rao, Jen Runkle, and Haiyan Teng participated in the November 12 North Carolina Climate Science Report project kick-off meeting led by Jared Bowden (NC State Climate Office).
- Maycock, Lamb, Stevens, Visovatti, Jessicca Allen and Allison Whitaker (NC State Climate Office) discussed Assessment project management and processes.

Access Development and Information Technology Services

- Dhruv Patel continued to explore SpatioTemporal Asset Catalog (STAC) tools and services used for implementation, and reviewed the PySTAC library.

Science and Services

- Alethia Kielbasa completed Optimum Interpolation Sea Surface Temperature (OISST) v3 calibration coefficient calculations for the sea ice concentration to SST conversion equation over a period of two years, and initiated validation before applying to the entire record.
- Iype Eldho continued working on measuring chi scores for precipitation distributions.
- Carl Schreck computed quantile regression maps for tropical cyclone intensification rates and maximum intensities using ADT-HURSDAT.
- Ronald Opio worked on fine-tuning temperature and precipitation neural process models over North America.
- Emma Scott updated plots to be used in upcoming papers, reworked the precipitation extremes paper text, and began onboarding work for the State of the Flood project team.
- Haiyan Teng continued to coordinate MAPP project activities.
- Kyle Wodzicki continued wildfire prediction project model training and technical report.

Communications, Outreach, and Engagement

- N/A.

Partnerships and Collaborations

- Douglas Rao attended the November 14 World Climate Research Programme (WCRP) Earth System Modeling and Observations Project Climate Emulator Task Team virtual meeting and continued work on the AI for short-to-medium range weather forecasting paper with collaborators from National Center for Atmospheric Research, European Centre for Medium-Range Weather Forecast, NVIDIA, Colorado State University, and University of Connecticut.
- *14th Weather Squadron* work continued, with
    - Alethia Kielbasa continuing Cloud pipeline development work for bias-correcting GFDL-SPEAR,
    - Shuhai Li optimizing the bias-correction workflow performance by enabling the reading of Kerchunked NetCDF files,
    - Carl Schreck matching CMIP6 models with each output variable, and
    - Kyle Wodzicki updating STAR downscaling code.
- Charlie Reed worked on cleaning Gulf Research Project caller narratives for future bidirectional encoder representations from transformers (BERT) modeling and continued work on the hypertensive disorders of pregnancy case-control study.

Publications

- N/A.