



Marine Heat Wave Student Position Opportunity



This award will be provided to one graduate student or post-doc. The goal is to examine ocean temperature regimes in the Southeast United States, specifically offshore of NC, SG, GA, and FL. This project will support a student to extract surface and subsurface temperature data from the SECOORA data portal, identify any data gaps, and conduct preliminary analysis. The student will also collaborate with the [CARICOOS Regional Association](#) and [GCOOS Regional Association](#) to create a more holistic understanding of nearshore oceanic temperature changes. The research shall include:

Stage 1. Data Mining

The student will identify and write code to collect temperature data, specifically from FACT-associated receivers from the SECOORA data portal but will also include nearshore temperature data from other sources. Deliverables will include a code package in either R or Python published in the [SECOORA GitHub](#) that is able to replicate the data harvest. In addition, the student will develop a database of the temperature data collected as part of this project.

Stage 2. Data Gathering

The student will create a new workflow to harvest information from temperature sensor tags and publish the information to the SECOORA data portal. The student will identify projects and tag owners that have deployed temperature sensor tags, ensure that tag specifications have been provided to calculate temperatures or follow up with tag owners to request the specifications. Deliverables will be a Jupyter notebook that harvests tag temperatures from the FACT database, recorded in GitHub, and publication of dataset in the SECOORA data catalog.

Stage 3. Data Collation

The student will assess, format, and combine data streams from tags, receivers, and other sources based on standards identified in collaboration with CariCOOS and GCOOS. The student will identify and remove outliers, including cross-referencing temperatures from multiple sites in close proximity for accuracy. The student will format all data streams to provide consistency in units and timestamps.

Stage 4. Data Analysis

The student will conduct preliminary analysis on the temperature data. The analysis will be primarily focused on summarizing the data so that it may be combined with efforts in other regions. Analysis will include, but is not limited to, summary information (e.g. number of stations, length of time of data collection) and average changes in temperature over the past

five years. In addition, the student will identify areas of data gaps where future temperature sensors may need to be deployed and areas of importance (highest variability in temperature) where permanent sensors are needed.

Stage 5: Data Sharing

The workflow will be published in GitHub via SECOORA. Data products including but not limited to rasters, point data and climatologies will be packaged and expressed via [ERDDAP](#).

Interpretive output will be published in a peer reviewed paper and publicized via SECOORA and FACT social media outlets.

Request for Applications/Proposal

Proposals must follow the required proposal format. Proposals that do not follow the required format will not be evaluated. Funds must be used within 18 months of the project start date. The proposal must be uploaded as a PDF document via the [SECOORA eGrants proposal system](#). Apply under the “2025 Marine Heat” opportunity. The anticipated start date is February 17, 2025 and completion by June 30, 2026 with possible extension.

Maximum page length is 4 pages (does not include the title page or appendices). Text should be 12-point font, all margins 1-inch, and must include the following components:

Title Page (1-page limit, does not count towards the 4 page limit) should include:

- Proposal title
- Applicant’s name and complete contact information
- Supervisor or university advisor name and contact information
- Project summary (1 paragraph)

Description of research project (maximum of 4 pages)

- Description of marine heatwaves and potential impacts in the southeast ocean and coastal waters
- Project description including objectives and methodology
- Geographic location of study site must include coastal and ocean waters offshore of NC, SC, GA, and FL (coastline out to 50 nm, as feasible)
- Project deliverables and project timeline

The following proposal appendices are required but do NOT count towards the four-page proposal limit:

- Literature Cited
- Two-page CV or resume
- One signed letter of support from a faculty member familiar with the student’s academic career

- A one-page Data Management Plan is required for projects that include the generation of new data. This plan must describe the data being collected, including temporal and spatial resolution, how the data will be processed, how and when the data, data products, and corresponding code will be uploaded to GitHub and the timeline for sharing the data with SECOORA and the FACT Network. For information on data management plans, please email dmac@secoora.org.

Eligibility

An eligible applicant is any graduate student or post doc in a marine science or computer science field. Applicants must reside in, and attend, an academic institution in the United States.

Compensation

This is a part time position based on an hourly wage. The student will be compensated \$35 per hour for up to 1,000 hours.

Travel - The student will be expected to attend the SECOORA annual meeting in May 2025 in Atlantic Beach, NC or the SECOORA annual meeting in 2026 (location and date TBD) depending on the status of the project. The student will also be expected to attend the FACT Winter 2026 meeting, location TBD. Travel costs are covered under the grant, separate from time compensation.

Submission

Please submit the entire application package electronically in PDF format no later than **5:00 PM ET, January 15, 2025** via <https://egrants.secoora.org/>. You must complete the eGrants registration process to upload a proposal to egrants.secoora.org. This is a two-part verification system (phone and email confirmations are required). Once you have registered, please select the RFP “2025 Marine Heat”, complete the required fields, and upload your proposal and appendices as one document.

Application/Proposal Review Process and Terms

1. Proposal package is due by **5:00 PM ET on January 15, 2024.**
2. SECOORA and FACT will convene a 3-5 person review panel. The review panel will rank proposals based on their relevance to marine heat waves as stated in this RFP and adherence to the instructions provided in this request for proposals.
3. Anticipated project start date is February 15, 2025. All work in the proposal must be completed no later than two years after the project start date.
4. 6-month progress reports and a final report submitted via eGrants.
5. The awardee will also be required to provide a webinar on their project at the end of the award period.