**CORI CARLSTON, M.S.** **Research Planning, Inc.**
Environmental Scientist

Ms. Carlston is an environmental scientist specializing in marine ecology, coastal restoration, and human impacts on natural systems. She has experience working in coastal ecosystems including the Northeastern and Southeastern US, the Pacific Northwest, and the Caribbean. As an environmental scientist at RPI, she aims to mitigate environmental degradation amidst climate and human-related events.

Prior to joining RPI, Ms. Carlston worked as a research technician in collaboration with the Massachusetts Division of Marine Fisheries and Northeastern University where she analyzed restoration effectiveness through the lens of seagrass-pathogen interactions. She has also designed and presented several restoration and conservation plans. Her work spans an array of habitats and analytical techniques, equipping her with adaptable knowledge that can be applied to projects across distinct regions. In addition to Ms. Carlston's experience working with state agencies, she has collaborated with a variety of non-profit organizations to conduct environmental research, restoration, management, and outreach, emphasizing her ability to effectively communicate with a range of stakeholders.

## EDUCATION

M.S., Marine Biology, Three Seas Program - Northeastern University, Boston, MA (2023). Thesis Title: Eelgrass-pathogen interactions and the implications for seed-based restoration.
B.S., Marine Science, Biology Minor, Coastal Carolina University, Conway, SC (2020)

## PROFESSIONAL EXPERIENCE

2024 - Present: Environmental Scientist/Ecologist, Research Planning Inc., Tallahassee, Florida

2023: Research Technician, Massachusetts Division of Marine Fisheries and Hughes Marine Biodiversity and Conservation, Northeastern University, North Shore, MA

2019 - 2020: Technician, Harding Marine Ecology Lab, Coastal Carolina University, Conway, SC

2019: Volunteer, Van Hoewyk Cell Biology Lab, Coastal Carolina University, Conway, SC

## SELECTED PROJECT EXPERIENCE

**U.S. Coast Guard (USCG) Programmatic Environmental Impact Statement (PEIS) for Shipping Safety Fairways along the U.S. Atlantic Coast.** (2024 – ongoing). Ms. Carlston provides technical support in the analysis of the USCG's proposed establishment of shipping safety fairways and other routing measures along the Atlantic Coast of the U.S. The fairways are designed to keep traditional navigation routes free from fixed structures that could impact navigation safety and impede other shared offshore activities. She is responsible for analyzing biological resources such as marine mammals, corals, and endangered species, including preparation of the relevant chapters and analysis of impacts under the Endangered Species Act, Essential Fish Habitat under the Magnuson-Stevens Fishery Conservation and Management Act, the Marine Mammal Protection Act, and the Migratory Bird Treaty Act. She is also leading federal consistency reviews under the Coastal Zone Management Act for all states along the Atlantic Seaboard. Responsibilities also include participation in team meetings, meetings with the USCG, public scoping meetings, review and responses to public comments, and RPI's draft and final PEIS deliverables.

**NOAA Marine Debris Program Infrastructure Grant Environmental Compliance.** (2024 – ongoing). Ms. Carlston is a Scientist supporting NOAA's Marine Debris Program to provide environmental compliance support for grants that are being funded for marine debris assessment,

removal, disposal, interception, and restoration efforts. Her support includes identifying and assessing the potential environmental impacts associated with NOAA-funded marine debris activities, which have included multiple locations across the U.S., Territories, and Freely Associated States. RPI conducts the analysis, documentation, and interagency coordination and/or consultation for ESA Section 7 with USFWS and NMFS; Essential Fish Habitat with NMFS; National Historic Preservation Act Section 106 consultation with States and Tribes; state coastal zone consistency reviews under CZMA; Coastal Barrier Resource Act reviews with USFWS; permitting with the NOAA National Marine Sanctuaries; and various other environmental review and coordination activities as needed.

**T&T Salvage Damaged Vessel Disposal Project, Apra Harbor, Guam.** (2024). Ms. Carlston provided technical support to the proposed disposal plan for a typhoon-damaged grounded container barge on the coast of Guam. She provided analysis of potential environmental impacts of the proposed disposal as well as best management practices (BMPs) for contractors to ensure safe disposal of the vessel with minimal impact to the environment. This support aided in the application for an EPA ocean dumping permit to carry out the vessel disposal.

**Seagrass Restoration and Seed-Based Pathogens Research.** (2023). Ms. Carlston worked with the Massachusetts Division of Marine Fisheries (MA-DMF) and Northeastern University where her focus was on seagrass restoration and the implications of seed-based pathogens. During her time at MA-DMF and Northeastern University, she conducted seagrass field work across multiple Northeastern States, investigating the prevalence of a novel pathogen in eelgrass meadows, and elucidated pathogen effects on seed-based eelgrass restoration through mesocosm experiments.

**Geographic Information Systems Analysis of Cook Inlet Beluga Whale Critical Habitat and Human-Use Activities.** (2022). Ms. Carlston led analyses of the endangered Cook Inlet beluga whale using geographic information systems. She gathered and analyzed spatial datasets for beluga whale critical habitat, coastal ports, and oil exploration areas to conduct a vulnerability assessment for the ESA-listed species. Using the NOAA Fisheries Cook Inlet beluga whale recovery plan, she identified potential impacts of shipping and energy exploration on the endangered species and generated a minimal-impact solution to these conflicts. Using ArcGIS online, she generated maps of the proposed ocean-use solution and presented recommendations in storymap.

## RELEVANT SKILLS AND CERTIFICATIONS

*Field:* Pulse-amplitude modulated (PAM) fluorometry, underwater field surveying (transects, quadrats, rugosity chains, measurements), species identification (Caribbean corals and reef fish), seagrass structural metrics and phenology staging, seine net fish survey, SCUBA diving, including seagrass and fish data collection, marine bird & mammal density surveys, longline setting, freshwater macroinvertebrate collection, marsh and seagrass plant density measurements, dragonfly catch-release population analysis, ecotone species composition analysis, sediment vibracore collection, tidepool community metabolism analysis, water quality using YSI, shellfish community filtration assessment.

*Lab:* Oomycete culturing and subculturing, selective agar media preparation, protein assays, Western blots, PCR, gel electrophoresis, marine invertebrate identification & counts, coral tissue zooxanthellae counts, microscope slide mounting & imaging, pulse-amplitude modulated (PAM) fluorometry, phytoplankton identification & counts, marine invertebrate dissections, water quality analysis (pH, dissolved oxygen, salinity, temperature, chlorophyll, turbidity, nitrate concentration, phosphate concentration), spectrophotometer, titrations, micro pipetting, microscopy, seed storage & maintenance.

*Other:* SOP development, materials list generating, training peers, fieldwork planning, mesocosm experiments, research proposal presentation, research project manuscript, restoration project proposal presentation, species' conservation storymap development.

*Software:* RStudio, ArcGIS Pro, ImageJ, Microsoft Office Suite (Advanced Excel), Google Suite, Vortex, Canva, Cygwin command line.

*Certifications:* AAUS Scientific Diver, Divers Alert Network Diving First Aid for Professional Divers, CPR and AED, SDI Open Water and Dry Suit Diver.

## AWARDS AND FELLOWSHIPS

**Coastal Carolina University**

Marine Science Student of the Year May 2020