



Undergraduates Develop Job Skills by Creating Interactive Software for Reserve Visitors

Overview

This project will support the development of new, innovative visitor displays at three national estuarine research reserves. The visitor's centers at the Guana Tolomato Matanzas, Mission-Aransas, and Delaware National Estuarine Research Reserves currently have hands-off exhibits with limited interactive components. The reserves will partner with students at the University of Delaware to produce gesture controlled, educational computer games that promote interactive, learning opportunities. The experiential games will be designed for use on interactive screens that will be available for public use in each reserve's exhibit hall. Participants will be able to freely navigate through different experiences, providing them with a better understanding that an estuary is a dynamic place upon which plants, animals, and people depend, and that everyone plays a part in shaping the past and protecting the future. This project will provide communities with relevant, accessible science while offering civic-minded solutions and resources that encourage participants to take conservation-based action promoting ecosystem resilience.

Project Location

Delaware National Estuarine Research Reserve
Guana Tolomato Matanzas National Estuarine Research Reserve
Mission-Aransas National Estuarine Research Reserve

Project Duration

September 2016 to August 2018

Project Lead

Kenneth Rainer
Guana Tolomato Matanzas National Estuarine Research Reserve
(904) 823-4500
kenneth.rainer@dep.state.fl.us

Project Type

Science Transfer – promoting the use of science

Project Partners

- Delaware National Estuarine Research Reserve
- Guana Tolomato Matanzas National Estuarine Research Reserve
- Mission-Aransas National Estuarine Research Reserve
- University of Delaware



Anticipated Benefits

- Reserve visitors will have access to new, innovative interpretive resources that share locally relevant science.
- Reserve visitors will have an improved awareness of estuarine conservation.
- Participating undergraduate students will gain valuable experience in the fields of software engineering and graphic design.

Project Approach

This project will significantly update the interpretive exhibits at three reserves: Guana Tolomato Matanzas, Mission-Aransas, and Delaware. Guided by a reserve education coordinator, participating University of Delaware undergraduate students will develop introductory wire frameworks for new, reserve-specific interpretive exhibits and interactive tools for on-site testing. Focusing on the sub-themes of climate change, estuarine dynamics, people, and actions, trial testing of the interpretive tools will be complemented by user surveys to inform software refinement. The project team will share the product development process and lessons learned with the broader reserve network through an online webinar. The project team will employ software design and graphic design students during the summers to produce testable and final products allowing for regular information updates. The project approach and products will also be shared more broadly with the reserve system.

Targeted End Users and Anticipated Products

- Reserve communities are provided relevant, accessible science through new interactive technology.
- Undergraduate students gain real-world experiences, preparing them for a competitive workforce.

About the Science Collaborative

The National Estuarine Research Reserve System's Science Collaborative supports collaborative research that addresses coastal management problems important to the reserves. The Science Collaborative is managed by the University of Michigan's Water Center through a cooperative agreement with the National Oceanic and Atmospheric Administration (NOAA). Funding for the research reserves and this program comes from NOAA. Learn more at nerrs.noaa.gov or graham.umich.edu/water/nerrs.