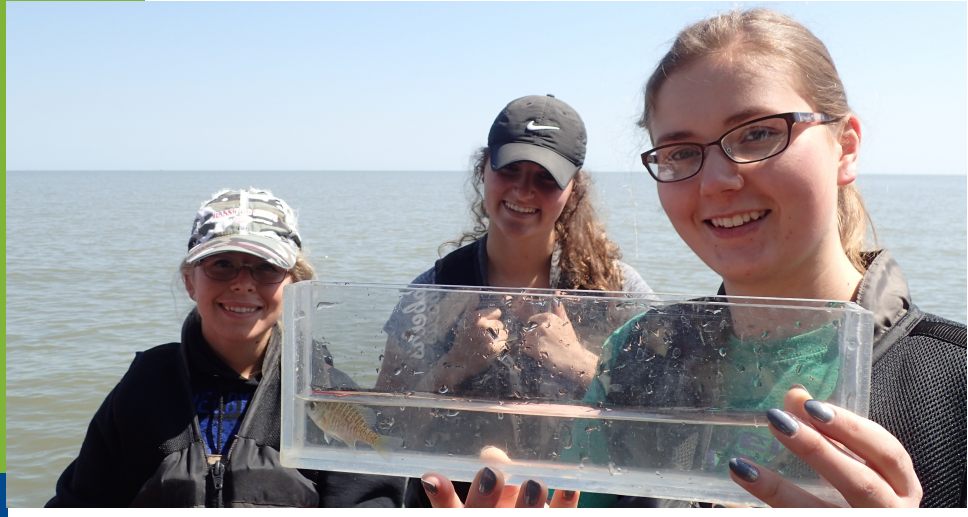
FLORIDA

# GTM Research Reserve Education is Change on the Ground



## 2017

### Connect

73,352 acres

4,745 visitors

43 public programs

### Prepare

101 teachers trained

2,720 students engaged

12,355 student contact hours

### Improve

82 education volunteers

1,729 volunteer hours

*"I am greatly appreciative of all of the staff for their helpful suggestions and interactive activities that were great uses of material and time, and were thought producing for students to stay engaged. Thanks for all of the wonderful ideas!"*

Informal Educator, NOAA Marine Fisheries

*"We thought this was a well run camp! Our child loved the teachers and the content!*

Summer Camp Parent

## Education and Interpretation are Fluid, Just Like Our Tides

Using the art of interpretation we are able to connect to our communities. This is essential for building coastal resilience. In 2016, we completed the GTM Research Reserve's first Interpretive Master Plan. The plan has provided a framework for how visitors intellectually and emotionally connect with the GTM Research Reserve, and how they find meaning in the Reserve's landscape, experiences, objects, and people.

The plan has led to development on 31 updated interpretive panels that have been installed at our outdoor kiosks, four large digital interactive explorations, and six small digital interactions. Currently, two of these interactions are installed in the Visitor Center.

## Bringing Students Closer to Nature through Technology

In an increasingly digital world, educators sometimes struggle to get students to put down their devices and get outside to explore the world of science in the natural environment. Instead of fighting technology, education staff members at the GTM Research Reserve have embraced it as an igniter to spark students' interest in environmental science. "We are past the point of telling students to put down the devices," said Kenneth Rainer, director of education. "It's time to show them how to use it as a resource, as the powerful tool that it really is."

Through the use of devices such as water quality probes, students are able to read measurements of various environmental elements. In addition, students can explore components and details of the estuarine water column—an area otherwise inaccessible—with underwater cameras. Data and video are transmitted to Google apps on iPads in the field. Driven by their strong attraction to the technology, students are more willing to engage with the science and environmental education offered at the reserve.

Article provided by https://coast.noaa.gov/estuaries/.

Florida's GTM Research Reserve is one of 29 sites in the National Estuarine Research Reserve System. Each site is a state federal partnership that combines research, monitoring, and education to advance the understanding and management of estuarine environments.

GTM RESEARCH RESERVE

Florida Department of Environmental Protection

NERRA
National Estuarine Research Reserve ASSOCIATION

NOAA

National Estuarine Research Reserve **Education**

# Change on the Ground in 2017

## Connects

**People to Estuaries**

**1 million+ ACRES**

of natural classrooms & living laboratories with

**28 INTERPRETIVE CENTERS**


*Aloha to our Hawai'i Reserve, designated in 2017!*

**650,340 VISITORS**

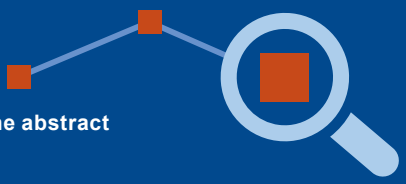
learn about estuaries through Research Reserve outreach & education

## Prepares

**the Next Generation**

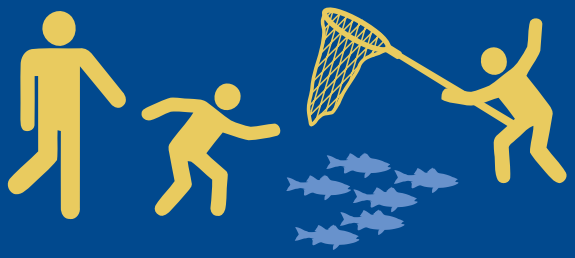
**87,899 STUDENTS**

take learning out of the abstract & into the outdoors



**3,079 TEACHERS**

are trained in the estuary & supported in the classroom



**SKILLS BUILT**

- ✔ Observation
- ✔ Asking research questions
- ✔ Problem solving
- ✔ Data driven decision making

ESTUARY SCIENCE — LOCAL DATA — LAB WORK — FIELD INVESTIGATION

## Improves

**the Environment**

**12,849 CITIZENS**

are trained & inspired to protect their coasts & estuaries

**VOLUNTEER ACTIONS**

- ✔ Protect wildlife
- ✔ Monitor water quality
- ✔ Plant native species
- ✔ Clean up the coasts

**28 RESEARCH RESERVE EDUCATORS**

lead programs that foster coastal stewardship in communities in 23 states


Creating value through education
39,035 volunteer hours = $942,305*

*Value of a volunteer hour is calculated at $24.14 based on data from the Independent Sector.

coast.noaa.gov/estuaries