

# National Estuarine Research Reserve Education Change on the Ground in 2018

## Connects

People to Estuaries

**1 million+  
ACRES**

of natural classrooms & living laboratories with



**29 INTERPRETIVE  
CENTERS**



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



**613,523  
VISITORS**

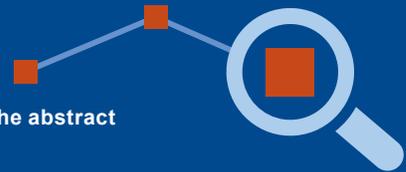
learn about estuaries through Research Reserve outreach & education

## Prepares

the Next Generation

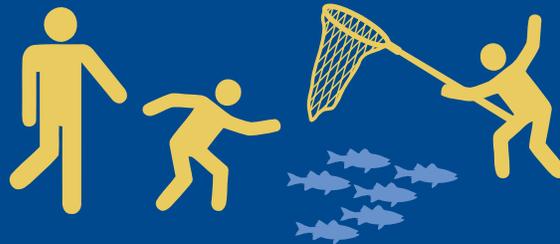
**86,377  
STUDENTS**

take learning out of the abstract & into the outdoors



**2,983  
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

**11,309  
CITIZENS**

are trained & inspired to protect their coasts & estuaries



### VOLUNTEER ACTIONS

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

**29 RESEARCH RESERVE  
EDUCATORS**

lead programs that foster coastal stewardship in communities in 23 states



Creating value through education  
48,229 volunteer hours = \$1,190,774\*

# Chesapeake Bay Research Reserve Education is Change on the Ground



2018

## Connect



961 participants reached through public outreach activities  
834 contact hours



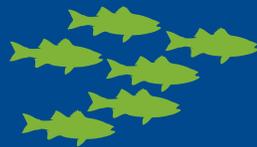
## Prepare

198 teachers and pre-service teachers trained  
929 contact hours  
2,136 students participated in education programs  
5,545 student contact hours  
38 education volunteers assisted with programs



*I enjoyed this so much. I feel like I am taking a vast amount of information back to my county for the entire science department (in all schools)! Thank you to the VIMS/NOAA workshop leaders and educators for the wonderful experiences and knowledge gained through this experience."*

-TOTE Teacher



*"I would definitely suggest other people to go to VIMS (field trip) because you can learn a lot more, it is a good opportunity for a marine biologist in the making, and the people are so nice. Thank you for an awesome experience!"*

-6th grade field trip participant

## Teachers on the Estuary

K-12 teachers, as well as future teachers and graduate students, are a priority audience for CBNERR. Teacher training workshops are conducted at the reserve throughout the year, providing teachers with new insight into the Chesapeake Bay ecosystem through topics such as water quality, habitat restoration, estuarine aquarium keeping, and curriculum training. The Teachers on the Estuary (TOTE) program is a multi-day, in depth look at the Chesapeake Bay each summer. With teachers participating from the entire state, and funding from the Virginia Department of Education, teachers are able to visit research sites, conduct experiments, and practice hands-on activities that can be utilized in the classroom

## Virginia Scientists and Educators Alliance (VASEA)

Through the VA SEA program, graduate students get hands-on experience creating lesson plans for middle and high school students, utilizing teacher feedback to fine tune each lesson. This program, co-led by CBNERR and the Virginia Institute of Marine Science, builds lesson plans around the graduate student's research, and also helps the students to increase their science communication skills. Currently, there are 20 lesson plans available from the VA SEA project, representing students from three different universities.

*"This program gave me the opportunity to do outreach to public and new stakeholders...and maybe find a different possibility of career not necessarily a professor."*

– Virginia Scientists and Educators Alliance (VASEA) graduate student

The Chesapeake Bay Virginia 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.

