

CHESAPEAKE BAY Research Reserve Education is Change on the Ground



2017

Connect



6,363 acres of protected land & water
59,457 visitors
3 Distinct Visitor Centers



Prepare

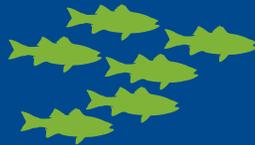
289 teachers trained
10,492 students engaged
27,139 student contact hours

Improve



17 research and monitoring programs
16,126 volunteer hours

"I really want to bring this into my department when I have preservice with my teachers. As we implement NGSS in all of our classes I am determined to make them all Environmentally literate and climate change is a great way to engage students and teach many science concepts in Biology, Chemistry and Physics"



"Great Professional Development - took me out of my comfort zone, stretched my strengths, will remain an influence on my teaching and my life!

Thank you!!"

Summer Roark,
Science Teacher
Montgomery Blair High
School
TOTE Alumni

Jessica McGuire
7th grade teacher
Halifax Area Middle
School
TOTE Alumni

A "SURE" Project

Shoring Up Resiliency through Education (SURE): Building understanding of how environment, science, and cultural heritage work together to strengthen community. SURE aims to support Somerset County in addressing regional vulnerability and community resilience through understanding the ways environment, science, and cultural heritage work together to strengthen community. Students in fifth, seventh, and ninth grades experience, study, and understand trends in local conditions such as weather and water quality that affect the natural resources upon which much of their local economy depends.

Over 600 students will be introduced to resiliency by interacting with local storytellers -- farmers, watermen, and scientists -- who can depict for students meaningfully through personal stories how aspects of local culture and livelihood are now and will be in the future affected by changing environmental conditions.

National Estuaries Day Event - 25th Year

Wetlands and Wildlife Field Day: A Celebration of National Estuaries Week since 1993, celebrates the many ways we benefit from healthy, thriving, coastal ecosystems. Over 25 years, approximately 5000 fourth grade students from Somerset County have spent a day at Monie Bay marshes where they explore the richness and value of our coastal communities through 6 educational stations. Wetlands and Wildlife Field Day is a great example of how communities benefit when federal, state and local partners collaborate to raise awareness of the importance of estuaries.

CBNERR In Maryland

- High school students study plankton through place-based learning at Jug Bay to understand how nutrients impact water quality.
- Middle School students grow and plant native wild rice to help restore acres of vital habitat for migrating marsh birds at Jug Bay.
- Families join hands and "Wade In" annually at Otter Point Creek, using a "sneaker index" to measure water clarity and raise awareness of a healthy land-water connection throughout the Bay.
- Teachers from around the watershed spent a week learning systems thinking and data literacy at Teachers On The Estuary (TOTE)

Maryland's Chesapeake Bay 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.



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**



**650,340
VISITORS**

learn about estuaries through Research Reserve outreach & education



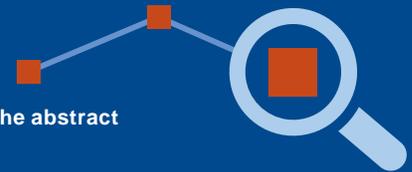
Aloha to our Hawai'i Reserve, designated in 2017!

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*