

About NOAA's National Estuarine Research Reserve Education Program

Presentation to the NOAA Education Council
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Coreen Weilminster
Education Coordinator
Chesapeake Bay NERR (MD)



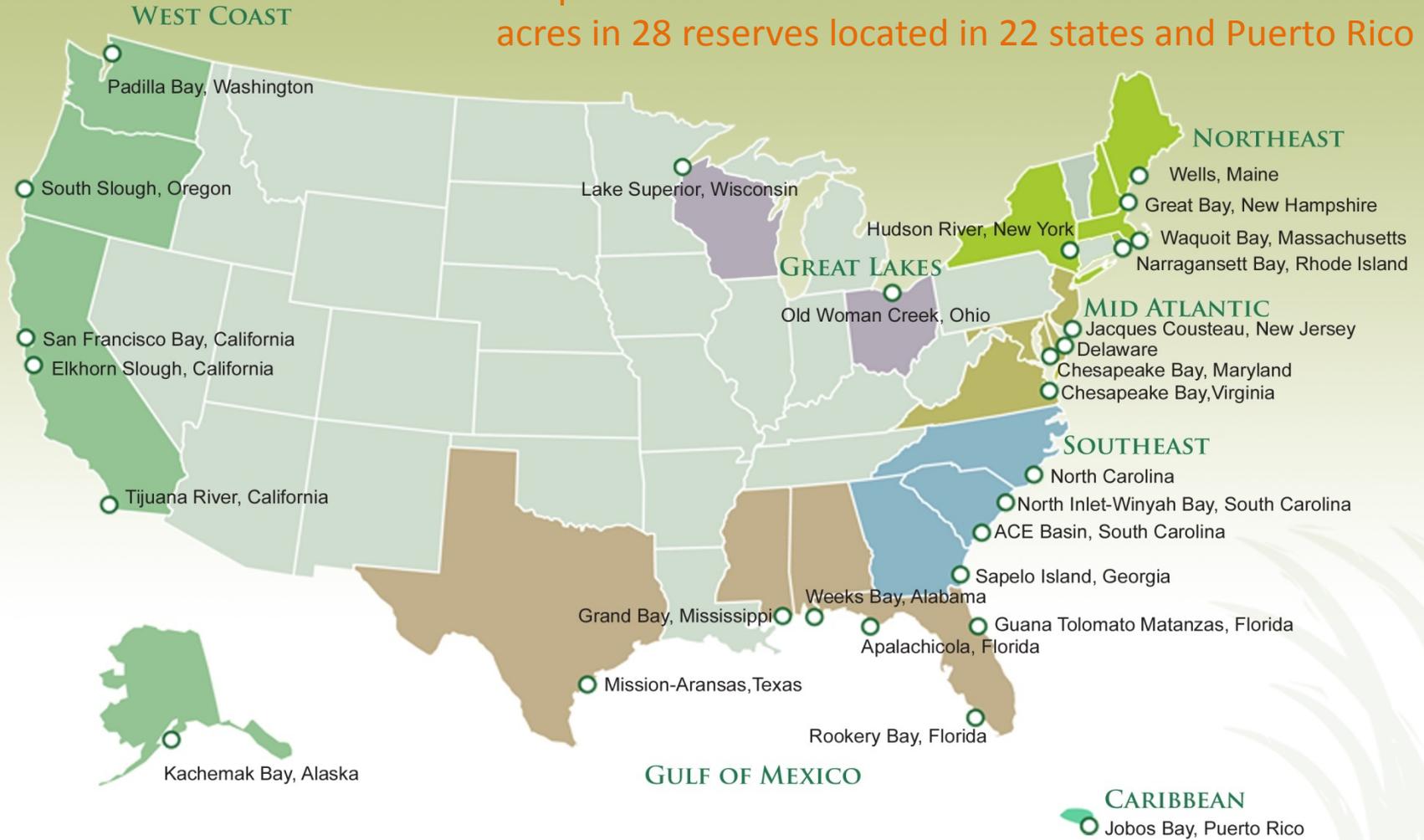
Carolyn Rose
Education Coordinator
Mission Aransas NERR (TX)



Margaret Sedlecky
Education Coordinator
Weeks Bay NERR (AL)



NERRS protects more than 1.3 million coastal and estuarine acres in 28 reserves located in 22 states and Puerto Rico



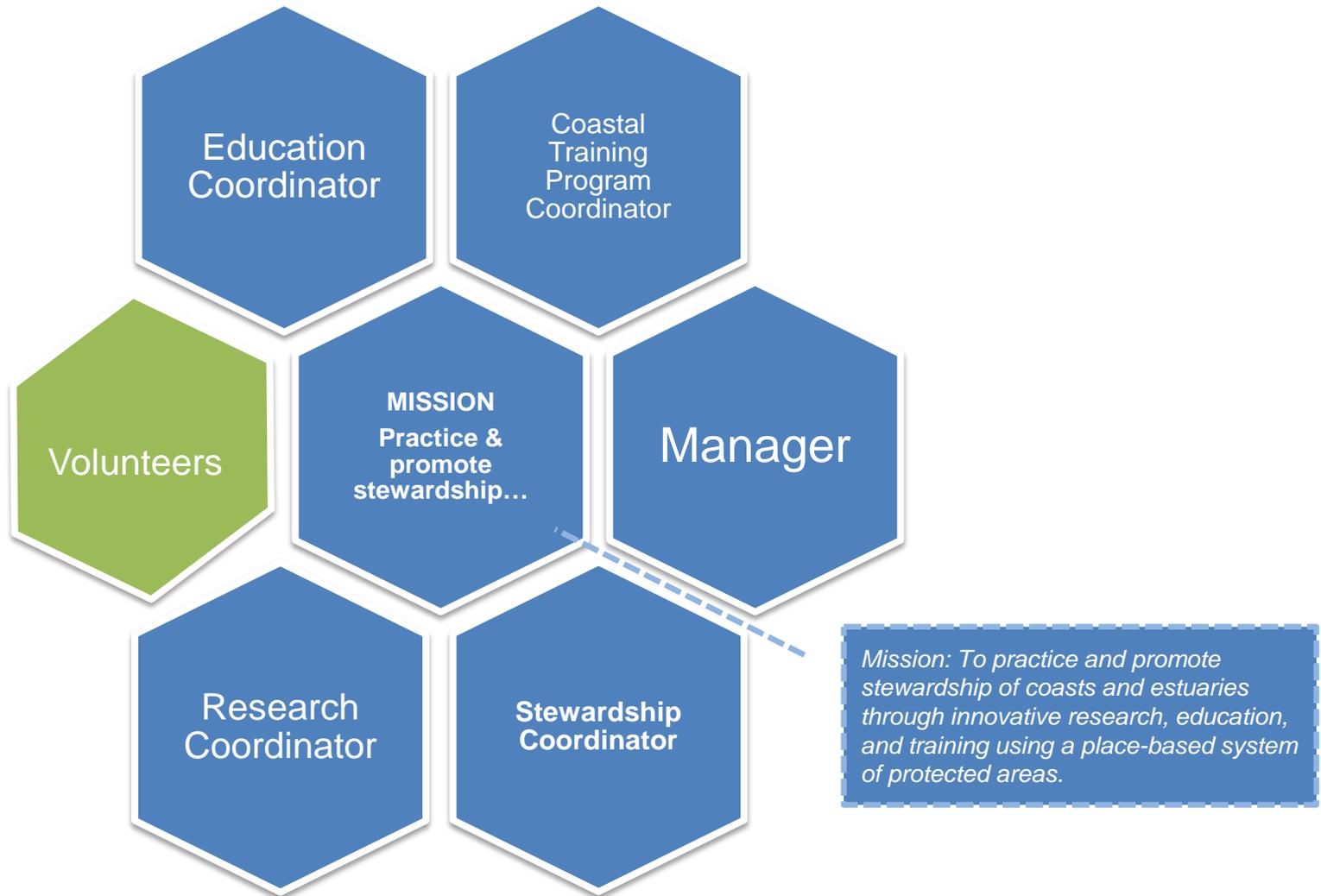


Nationally significant...

Locally relevant

- **Protected areas for:**
 - Long term Research
 - Education
 - Stewardship
- **State and Federal partnership**
 - State: Land ownership, staff, program implementation
 - Federal: Funding (70%), national coordination, technical assistance

Each Reserve Site includes...



NERRS Education

28 Education
Coordinators

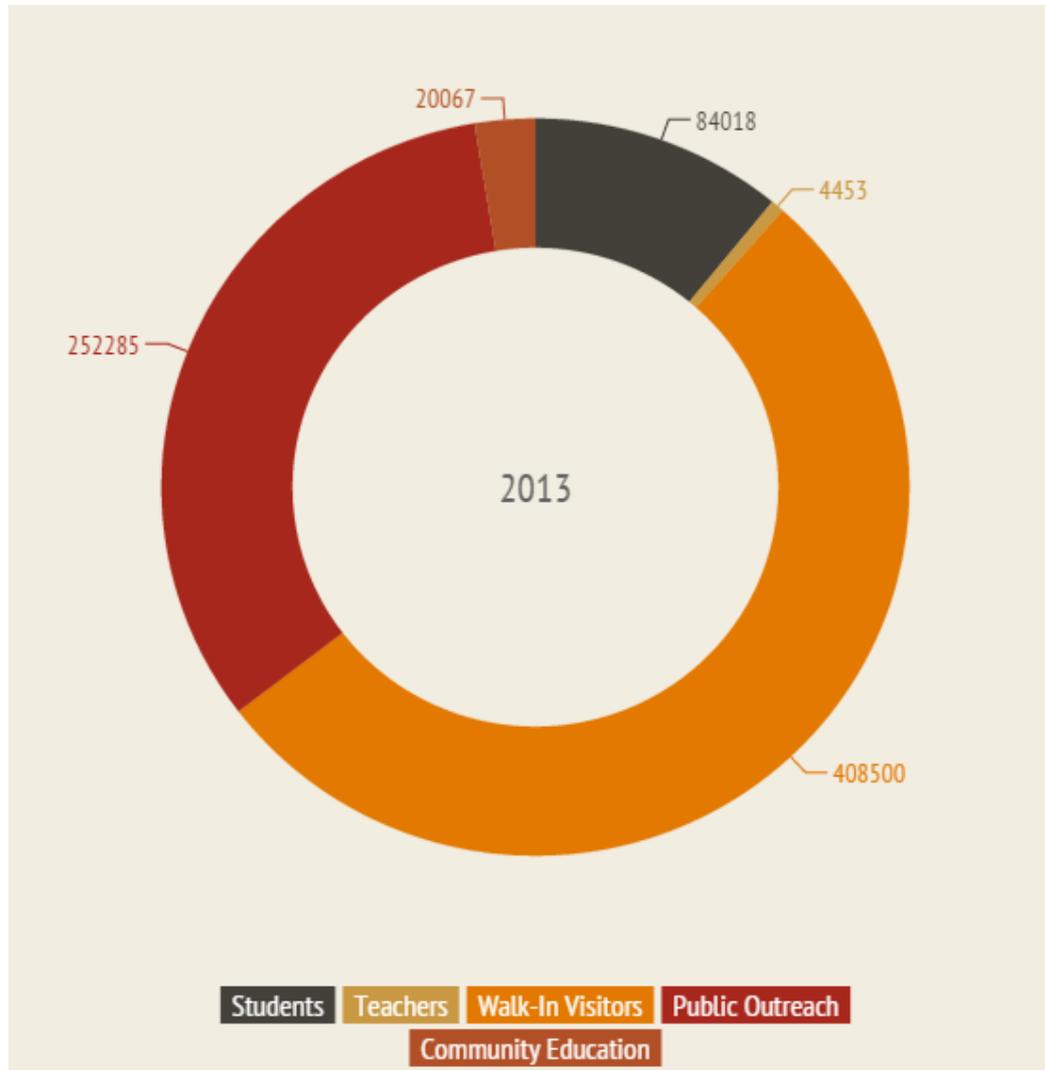
Plus ~150
education
specialists

~ \$40K to
\$250K spent
by site on
education

\$ 82,713.00
in value
added by
volunteers



Audiences Targeted



Students – 84,018 (11%)

Teachers – 4453 (1%)

Walk-In Visitors - 408,500 (52%)

Public Outreach – 252,285 (33%)

Community Education – 20,067 (3%)

Visitor & Learning Centers

**Mission Aransas NERR
Wetlands Education Center (TX)**



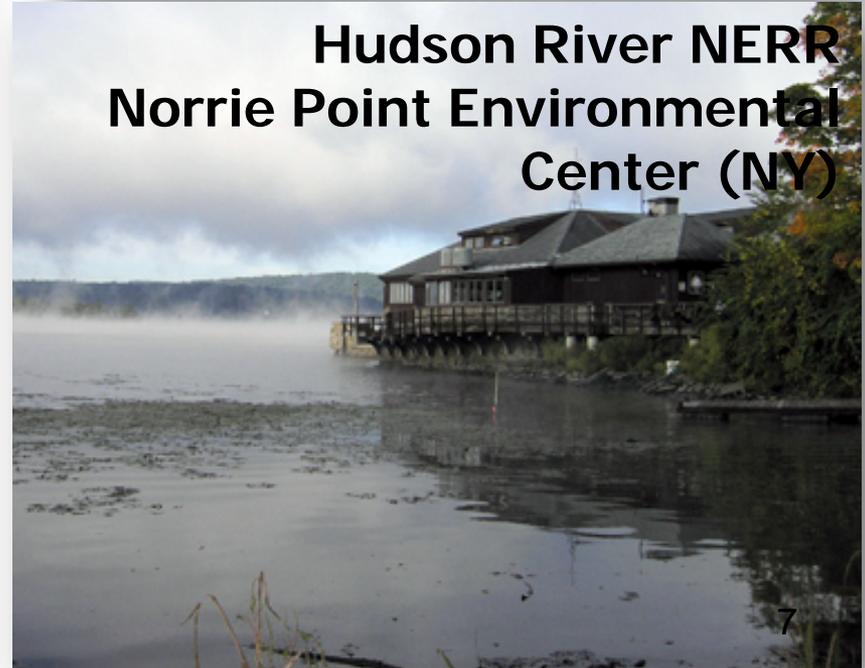
**Weeks Bay NERR
Interpretative Center (AL)**



**GTMNERR Environmental
Education Center (FL)**



**Hudson River NERR
Norrie Point Environmental
Center (NY)**



NERRS Strategic Plan (2011 – 2016)

Education Objectives:

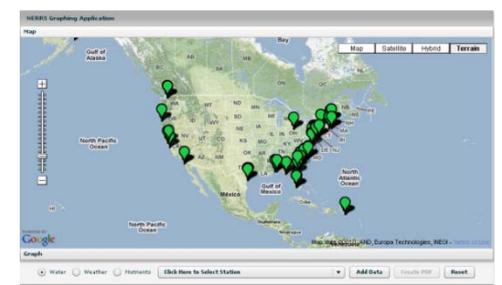
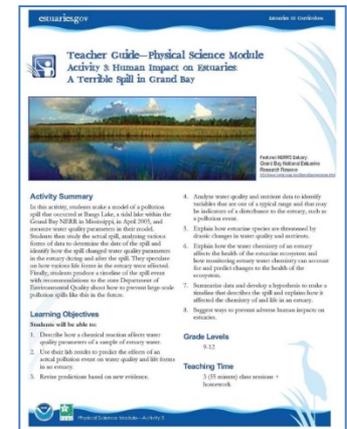
- **Enhance the capacity and skills** of teachers and students to understand and **use NERRS data** and information for inquiry-based learning.
- **Increase estuary literacy and promote active stewardship** among public audiences through the development and delivery of tools and programs addressing ***climate change, habitat protection, and water quality.***



What are the NERRS network priorities?

Priorities for NERRS Education

- Advance K-12 Education
- Increase use of best practices to foster coastal stewards
- Provide place-based educational experiences that facilitate hands-on exploration of estuary environments
- Include relevant research & data in reserve education programs
- Strengthen our capacity to evaluate & measure performance



K-12 Estuarine Education Program

"Keep our Estuaries Healthy"

Technology and web-based learning

- Estuaries 101 Curriculum
- Data Exploration Tools

Standards, Evaluation

Experiential learning

- Field studies
- Site-based programs

Research Integration

Teacher Training Programs

- Teachers on the Estuary Training (TOTE)
- Site-based programs

Teachers on the Estuary





“Protecting Our Bays One Backyard at a Time”

Community Education fosters behavioral change to promote resource conservation

Example programs:

- Reduce your nitrogen footprint
- Build a better backyard series
 - Native Plants
 - Bird houses
 - Rain Gardens
- Climate Stewards Community Volunteer Program
- Cool Communities



Numerous studies document that education alone often has little or no effect upon sustainable behavior.

~ Doug McKenzie-Mohr



What actions can
the Council take to
support the
network's priorities?

The Education Council could...

- **Provide a seal of approval for Teacher Training programs**

- To increase interest from teachers & help them justify their participation to their Administrators
- *Ideas on how to do this: Develop some kind of recognition for NOAA education certified programs*
 - (Goal 5; Objective 5.3; Strategy 5.C. / NERRS TOTE Priority)

- **Develop a cross-agency strategy to sustain its education programs**

- Reliance on external funds is limiting and not sustainable.
- *Ideas on how to do this: Engage Line Office leadership in discussion & develop a joint strategy to sustain teacher training programs. Build partnerships with the private sector, where applicable.*
 - (Goal 5; Objective 5.1; Strategy 5.B. / NERRS TOTE Priority)



The Education Council could...

- **Provide training on how to communicate science more effectively to others outside of our own disciplines**
 - *Ideas on how to do this: Contract with the [Alan Alda Center for Communicating Science](#)*
 - (Goal 1; Objective 5.3; Strategy 5.C. / NERRS Place-based... priority)
- **Help develop the capacity to better publicize/market our messages to the public**
 - Enlist the expertise of professionals in the marketing field to assist us in developing and implementing a marketing strategy/plan to convey our messages
 - *Ideas on how to do this: Pool resources (\$ and/or expertise) from other organizations within and outside of NOAA (RAE, Sierra Club, Ocean Conservancy, Ducks Unlimited, etc...) that have similar messages they would like to share with the public.*
 - (Goal 1; Objective 5.3; Strategy 5.C. / NERRS Place-based... priority)

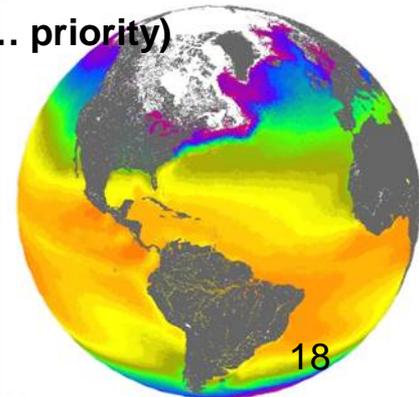


The Education Council could...

- **Identify best practices and provide support towards the design & delivery of stewardship programs**
 - *Ideas on how to do this: Create a forum where educators can learn from each other. Enlist the expertise of professionals.*
 - (Goal 2; Objective 2.2; Strategy 2.B. / NERRS Stewardship & Evaluation priority)
- **Help NERRS educators connect with other local / regional NOAA network educators to facilitate collaboration in the development and delivery of:**
 - teacher professional development, K-12, and public education programs to increase the teaching of NOAA-related content.
 - (Goal 1; Objective 1. 2; Strategy 1.C / NERRS TOTE priority)
 - outreach programs for K-12 students, particularly from underrepresented groups, to increase their knowledge of career pathways in disciplines that support NOAA's mission.
 - (Goal 4; Objective 4.1; Strategy 4.A / NERRS Place-based... priority)

The Education Council could...

- **Help NERRS educators better understand how to access NOAA data and science content and to translate the data into meaningful education materials.**
 - Educators must be able to access relevant NOAA data and research in order to integrate them into education materials.
 - *Ideas on how to do this: Provide training in how to translate NOAA data and research into meaningful education materials which would increase the capacity of educators to highlight NOAA science content in their programs.*
 - **(Goal 1; Objectives 1.1-3; Strategy 1.C / NERRS Include data ... priority)**



THANK YOU!

Questions?



NERRS Education

