



B-WET Chesapeake:

*Meeting the Needs of the Regional
Environmental Education Community*

2011 Gulf of Mexico B-WET Regional Workshop
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Kevin Schabow, Education Coordinator
(kevin.schabow@noaa.gov)



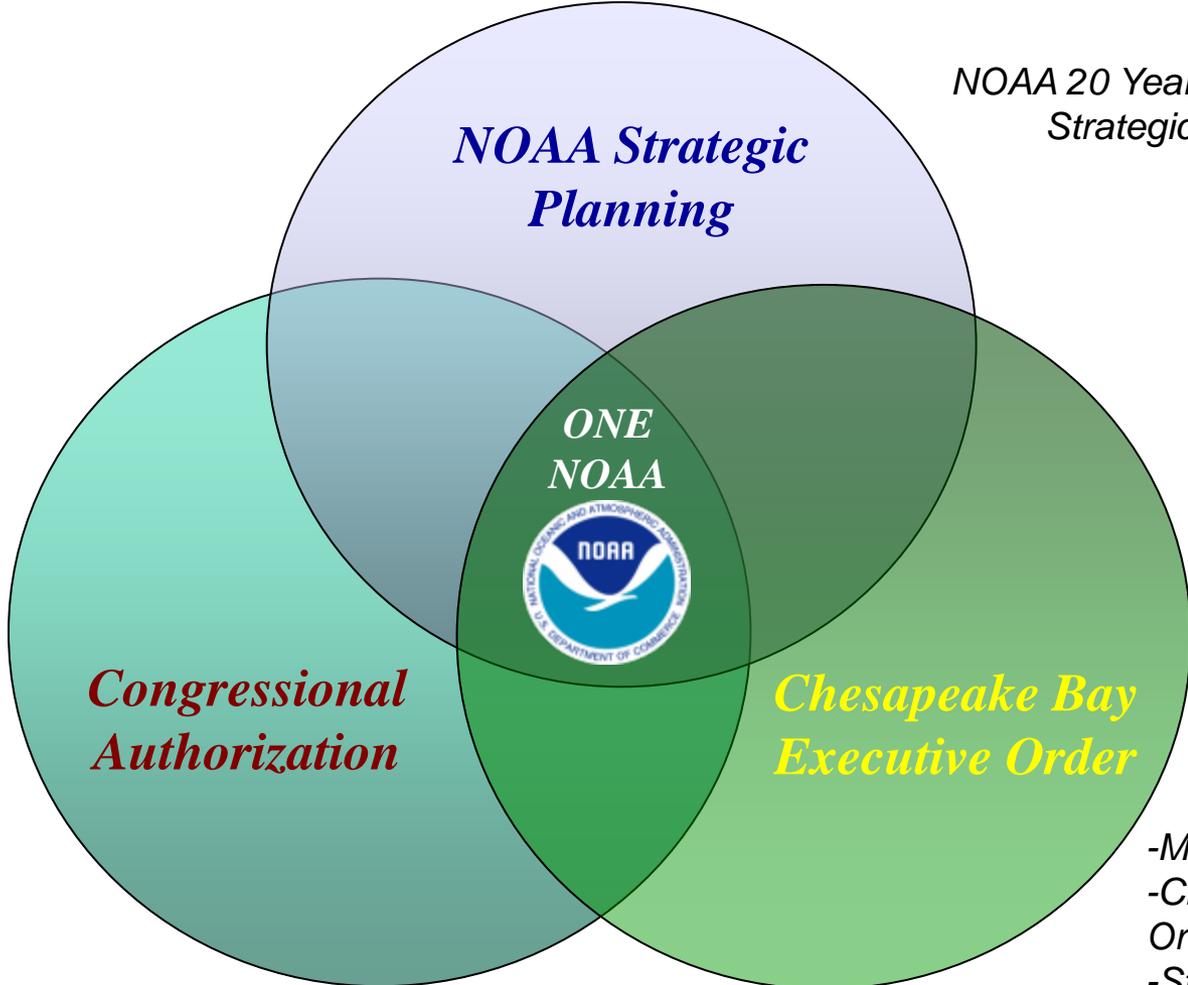
Presentation Overview



- Brief history of B-WET Chesapeake
- Program Evolution
- Regional “drivers”:
 - *Chesapeake Bay Program*
 - *Chesapeake Bay Executive Order**
- Regional Environmental Literacy Planning
- Meeting regional needs



Mandates & Drivers



NOAA 20 Year Education Strategic Plan

America COMPETES Act

- MWEE commitment*
- Chesapeake Bay Executive Order*
- State Environmental Literacy Efforts*

Chesapeake Bay Program

Governor of MD



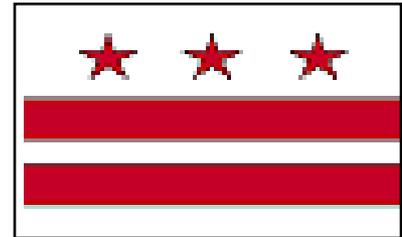
Governor of VA



Governor of PA



Mayor of DC



EPA Administrator



Executive Council



Chesapeake Bay Program
A Watershed Partnership

Chair of Chesapeake Bay Commission



Chesapeake Bay Program- “MWEE is born”



- CBP Education Workgroup forms in 1998
- “MWEE” Commitment signed in 2000 as part of overarching C2K Agreement
 - *“Beginning with the class of 2005, provide a meaningful Bay or stream outdoor experience for every school student in the watershed before graduation from high school.”*
- Stand-alone MWEE commitment endorsed in 2005 by governors & departments of education for states and D.C.
- Progress towards goal continues to be tracked by Chesapeake Bay Program Education Workgroup (NOAA coordinates workgroup)





Chesapeake Bay Program Education Workgroup

STEWARDSHIP AND MEANINGFUL WATERSHED EDUCATIONAL EXPERIENCES

The “Stewardship and Community Engagement” Commitment of the *Chesapeake 2000* agreement clearly focuses on connecting individuals and groups to the Bay through their shared sense of responsibility and action. The goal of this Commitment, included below, not only defines the role of the jurisdictions to *promote* and *assist*, but formally engages schools as integral partners to *undertake initiatives* in helping to meet the Agreement. This goal commits to:

Promote individual stewardship and assist individuals, community-based organizations, businesses, local governments and schools to undertake initiatives to achieve the goals and commitments of this agreement.

Similarly, two objectives developed as part of this goal describe more specific outcomes to be achieved by the jurisdictions in promoting stewardship and assisting schools. These are:

Beginning with the class of 2005, provide a meaningful Bay or stream outdoor experience for every school student in the watershed before graduation from high school.

Provide students and teachers alike with opportunities to directly participate in local restoration and protection projects, and to support stewardship efforts in schools and on school property.

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Evolution of BWET

Early Years: 2002-04

- Began in 2002 as a MWEE funding mechanism
- Initial projects provided either professional development (PD) to teachers or direct programming to students (MWEE)
- Projects ranged broadly in scope and size in early years
 - *Projects ranged from less than \$10K to over \$150*
 - *Both state departments of education and individual schools were among recipients.*



Evolution of BWET



2005-09

- Additional priorities added to meet emerging issues, such as incorporation of technology into projects in 2007
- Programs combining PD and MWEE (“Exemplary”) were requested in RFP in 2006
- Most funded projects were exemplary by 2008





Proving Success: MWE Evaluation-released 2007

- **Purpose:** Evaluate the effectiveness of the program design
- **Goal:** To determine if meaningful watershed experiences supported by NOAA B-WET increase the stewardship ethic and/or academic achievement of students
- **Students** receiving meaningful experiences increased in environmental stewardship qualities
 - *Intention to Act to protect Chesapeake Bay*
 - *Knowledge of issues confronting watershed*
 - *Knowledge of actions in which they can engage to protect watershed*
- **Teachers** receiving B-WET training:
 - *Increased confidence in their ability to deliver experiences*
 - *Increased likelihood of implementing experiences*
 - Almost all teachers taught about the Bay after the PD, including large majority of teachers who had not done so before training
 - 3/4 of teachers used the outdoors to teach about the watershed
 - 1/3 implemented complete meaningful watershed experiences

Continue B-WET Evolution

2010: Responding to Environmental Literacy Needs:

- Capacity building priority was added to 2010, responding to a need to grow env. literacy within the region
- In 2011, no longer accepted projects that did not contain PD (eliminated stand alone MWEE category)
- Now require applicants to inquire sustainability plan i.e. plans beyond B-WET funding

Chesapeake Bay Executive Order 13508



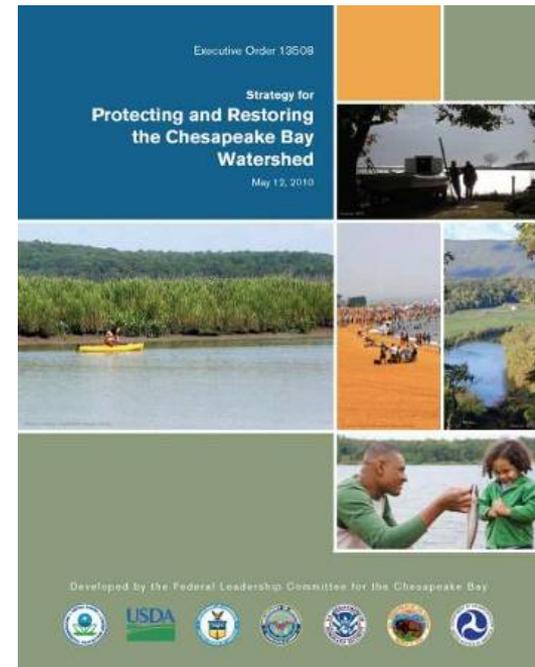
- **May 15, 2009: President Obama issues Executive Order 13508 “Chesapeake Bay Protection and Restoration”**
 - *Established a Federal Leadership Committee (FLC) for the Chesapeake Bay*
 - *Required the FLC to “publish a strategy for coordinated implementation of existing programs and projects to guide efforts to protect and restore the Chesapeake Bay.”*
 - *Requires the development of an annual Chesapeake Bay Action Plan “describing how Federal funding proposed in the President’s Budget will be used to protect and restore the Chesapeake Bay.”*
 - *Requires the development of an annual Progress Report to assess “implementation of the Action*
- Environmental Literacy/Stewardship not in original E.O.



Chesapeake Bay Executive Order 13508



- **May 12, 2010: FLC releases the Strategy for Protecting and Restoring the Chesapeake Bay Watershed**
 - *Identified four specific goals: Restore Water Quality; Recover Habitat; Sustain Fish and Wildlife; and Conserve Land and Increase Public Access.*
 - *Identified four supporting strategies: Expand Citizen Stewardship; Environmental Markets; Respond to Climate Change; and Strengthen Science.*
 - *Within each of the goals and supporting strategies, specific “Strategy Actions” were identified to meet stated objectives and outcomes.*



Chesapeake Bay Executive Order 13508



Expand Citizen Stewardship Strategy

- Initiate robust elementary and secondary environmental literacy initiative.
 - *Support and enhance outdoor student environmental education programs.*
 - *Provide high-quality professional development, tools and resources for educators.*
 - *Encourage the creation and maintenance of green schools, including schoolyard habitat and green facilities programs.*

NOAA tasked with leading efforts to develop an elementary and secondary environmental literacy plan based on input from stakeholders, and following an evaluation of current efforts in the region, to allow for better coordination of federal and state environmental education programs



Environmental Literacy Planning in the Mid-Atlantic

Chesapeake Bay Program Education Workgroup



Federal Strategy

- To ensure that federal programs and resources are coordinated, informed by state priorities, and fully available to and used by state partners
- Federal agencies in partnership with state DOEs, natural resource agencies, and NAAEE affiliates
- NOAA with EPA, FWS, NPS

Regional Roundtable

- To compare the status of environmental education in each state, identify gaps and create a regional action plan
- State NAAEE affiliates in partnership with state DOEs, natural resource agencies, non-profits, and federal agencies
- PAEE through EPA Region 3

State Literacy Plans

- To provide the framework for school systems to expand and improve their environmental education programs
- State DOEs in partnership with state natural resource agencies, non-profits, and the public
- State governments

2011 B-WET adapts to Env. Literacy Landscape



“Successful projects advance the goals of the NOAA Education Strategic Plan and Citizen Stewardship components of Chesapeake Bay Executive Order Strategy”

Applications must address one of the following priority areas:

1. Integrated MWEEs-combine PD and student programming
2. Capacity Building- build the capacity of agencies and organizations to develop, deliver, and sustain STEM/EE programs that advance MWEEs at a state or regional level

We also strongly encourage applicants to:

- Integrate of Data and Technology
- Implement on a Systemic level and align their programming with any overarching environmental literacy efforts

Meeting Regional Needs:

Maryland Partnership for Children in Nature (CIN)

- Created by State executive order in 2008 to address “no child left inside”
- Tasks Dept of Ed and Natural Resources to create Environmental Literacy Plan.
- Increasing B-WET funding is recognized as an action in CIN report to ensure all students have meaningful outdoor experiences



The screenshot shows the website for the Maryland Department of Natural Resources (DNR) with a focus on the Children in Nature program. The header includes the Maryland state logo and the text "DEPARTMENT OF NATURAL RESOURCES". A navigation menu contains links for "DNR HOME", "PARENTS", "CHILDREN", "EDUCATORS", "PARTNERSHIP", and "EVENTS". The main content area features a collage of photos showing children participating in outdoor activities like kayaking and fishing. Below the photos, there is a quote from Governor Martin O'Malley:

We created the Partnership for Children in Nature to make sure all Maryland young people have the opportunity to learn about their environment, connect with their natural world and grow to become responsible stewards.

Thanks to the hard work of the Partnership and the support of the national No Child Left Inside Coalition, our program is being heralded as a national model. Together we are laying the groundwork for programming that will forever change the lives of Maryland's children and the future of our planet.

Martin O'Malley Governor

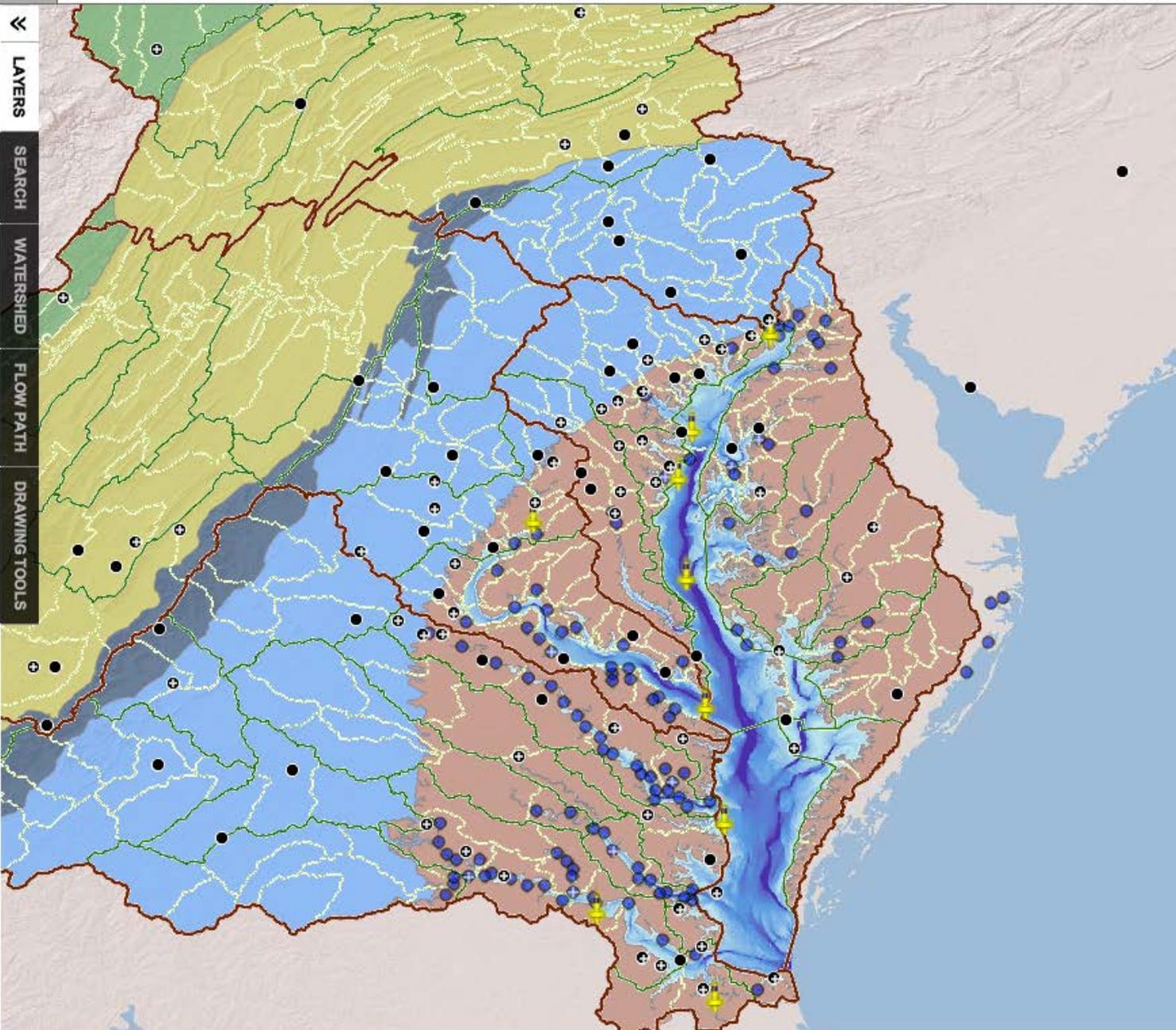
On the left side of the screenshot, a green sidebar lists the following links under the heading "BACKGROUND":

- Children in Nature Home Page
- Report & Recommendations
- Executive Summary
- State Work Plan
- Governor's NCLI Testimony
- Executive Order
- No Child Left Inside
- Outdoor Bill of Rights
- The Partnership
- Community Resources

Layers

- Student Observations
- Student Photos
- CBIBS
- Shallow Water Monitoring
- MBSS
- ▶ Chesapeake History
- ▼ Boundaries
 - Watershed Boundaries
 - State Boundaries
 - Physiographic Provinces
- ▼ Human Geography
 - Land Cover
 - Impermeability
 - Impervious Surfaces
 - Nutrients & Sediment
 - Dissolved Oxygen
- ▶ Maryland Greenprint Data
- ▼ Basemap
 - Wetlands
 - Elevation
 - Water Depth
 - Boundaries & Places
 - Terrain Map

LAYERS SEARCH WATERSHED FLOW PATH DRAWING TOOLS



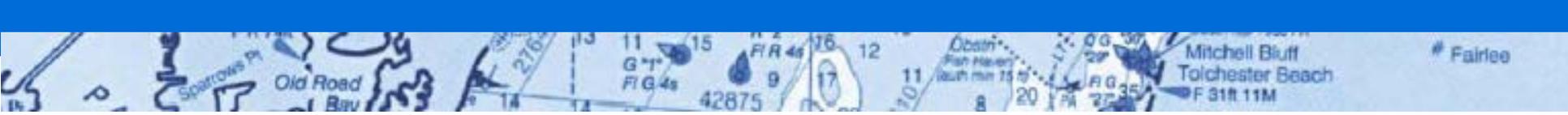


Meeting Regional Needs:

National Geographic's Chesapeake FieldScope

- Meets a recognized need to create a “one stop shop” GIS/data collection website
- Worked with NGS staff prior to development to incorporate NOAA buoy data
- Encourage FS use in grants RFP
- Provide capacity building grant to U of MD to create FS user group amongst watershed states





Meeting Regional Needs:

Encouraging “systemic” programs

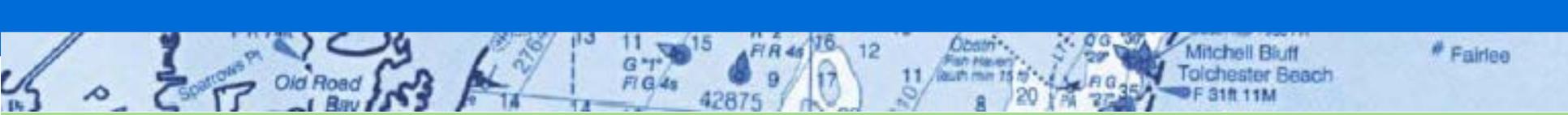
- Programs implemented at the county/district level
- Meet all students and/or teachers of a certain grade level(s)



Supporting mini-grant programs

- Funds provided to organizations in VA, PA, and MD
- Provide competitive grants of about \$500-\$1000 primarily to individual schools conducting MWEEs





Thanks for having me!



Kevin Schabow
Kevin.schabow@noaa.gov
410-295-3145

Shannon Sprague
Shannon.sprague@noaa.gov
410-267-5664

