

Student Management Strategy

Introduction

The future well-being of North America's largest and most productive estuary, the Chesapeake Bay and its 64,000 square miles of watershed, will soon rest in the hands of its youth. We have a duty to impart to these young people—almost three million strong in kindergarten through 12th grade—a sense of individual responsibility and the skills to become stewards of the natural world.

It has been 20 years since the Chesapeake Executive Council adopted Directive 98-1 formally recognizing the importance of education to the partnership. The 2014 Chesapeake Bay Watershed Agreement elevated the significance of environmental literacy, acknowledging that a committed youth will help to determine the ultimate success of our protection and restoration efforts.

States, local school districts, and partners have made tremendous progress in recent years in establishing curriculum, policies, and model programs that advance environmental literacy. Our focus must now expand to direct and support the systemic implementation of environmental literacy teaching throughout the 405 school districts in the Chesapeake Bay watershed. We must support school districts in their efforts to provide students with Meaningful Watershed Educational Experiences, create sustainable schools, and embed environmental literacy curriculum and operating practices into their programs to ensure that every student has equitable access to this powerful approach to teaching and learning.

Because State Departments of Education set expectations, encourage innovation, and oversee accountability for school districts and schools, their leadership is essential for creating this broad vision and we welcome their leaders as engaged participants in the Chesapeake Bay Program partnership.

Goal, Outcome, and Baseline

This management strategy identifies approaches for achieving the following goal and outcomes:

Environmental Literacy Goal: Enable every student in the region to graduate with the knowledge and skills to act responsibly to protect and restore their local watershed.

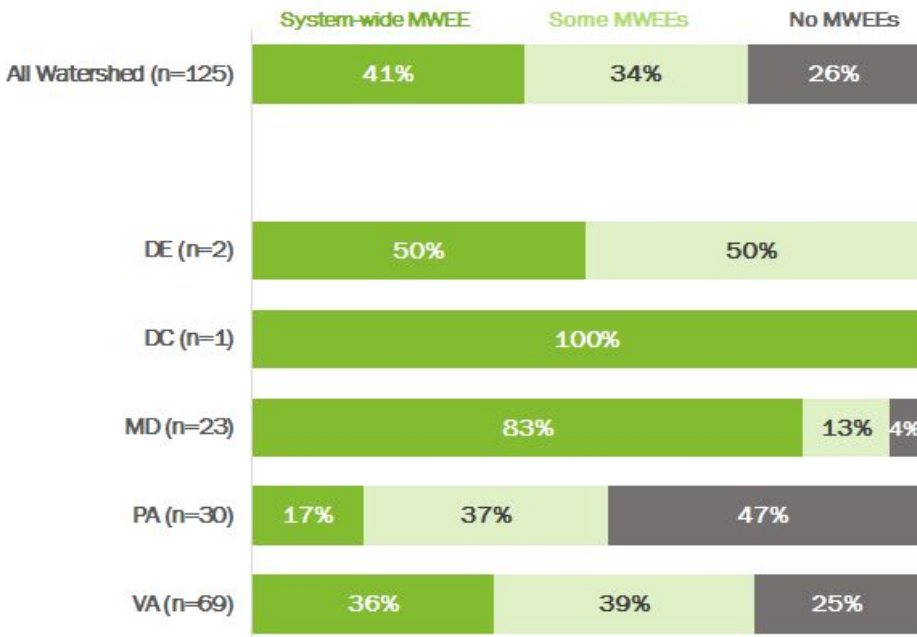
Student Outcome: Continually increase students' age-appropriate understanding of the watershed through participation in teacher-supported, meaningful watershed educational experiences and rigorous, inquiry-based instruction, with a target of at least one meaningful watershed educational experience in elementary, middle and high school depending on available resources.

Baseline and Current Condition

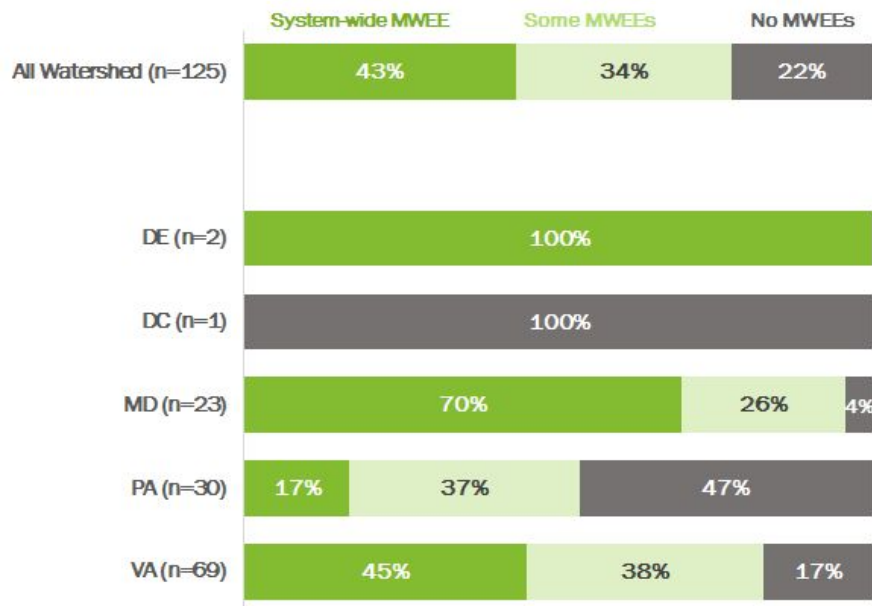
The Chesapeake Bay Watershed Environmental Literacy Indicator Tool (ELIT) was developed to monitor the capacity and progress of public school districts toward meeting the environmental literacy goal stated in the 2014 Chesapeake Bay Watershed Agreement. To assess the level of student participation in MWEEs within each school district, respondents were asked to assess the presence of MWEEs within curricular offerings within each grade level (K-12), considering if they were system-wide or isolated to schools or classes. The responses were grouped into one of three levels within each grade band:

- At least one system-wide MWEE provided in the grade band;
- Some MWEE programming in the grade band, but not system-wide;
- No MWEE programming provided in the grade band.

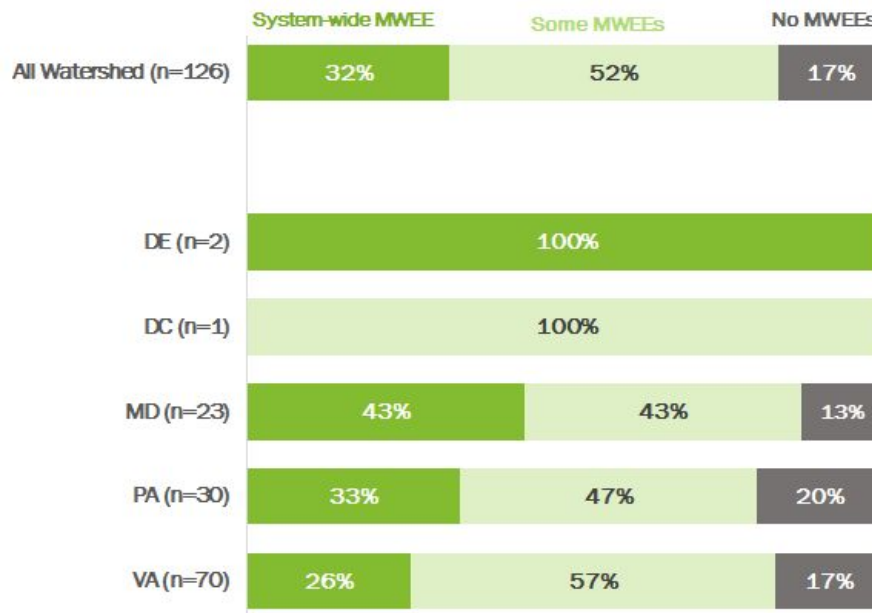
41% of responding LEAs in the watershed have a system-wide MWEE in place at the elementary grade levels.



43% of responding LEAs in the watershed have a system-wide MWEE in place at the middle school grade levels.



32% of responding LEAs in the watershed have a system-wide MWEE in place within required high school courses.



Participating Partners

The following partners have participated in the development of this strategy. A workplan to accompany this management strategy will be completed six months after this document is finalized. It will identify specific partner commitments for implementing the strategy.

Chesapeake Bay Watershed Agreement Signatories

- State of Delaware
- District of Columbia
- State of Maryland
- Commonwealth of Pennsylvania
- Commonwealth of Virginia
- Chesapeake Bay Commission
- U.S. Environmental Protection Agency

Other Key Participants

- National Oceanic and Atmospheric Administration (NOAA)
- U.S. Fish and Wildlife Service (USFWS)
- U.S. Geological Survey (USGS)
- National Park Service (NPS)
- U.S. Forest Service (USFS)
- Nongovernmental Organizations (e.g. Chesapeake Bay Foundation, National Wildlife Federation, NAAEE state affiliates, and many local and regional organization)

Local Engagement

While states have the primary responsibility to advance the Chesapeake Bay Program's environmental literacy efforts, this work is done in partnership with local education agencies or school districts. In most watershed jurisdictions, local education agencies are responsible for defining their own curriculums and implementation strategies to support state standards and priorities.

Factors Influencing Success

The following are natural and human factors that influence the Chesapeake Bay Program's ability to attain this outcome:

- **State Education Agency Leadership and Staffing for Environmental Literacy:** There is a need for a high level support for environmental literacy that flows from administrations or legislatures and is communicated to school systems so there can be a shared vision among stakeholders and state leadership. Organized support from stakeholders for such positions is also important in advancing any state policy initiatives.
- **Local Education Agency Implementation of MWEs:** Education in most of the states in the Chesapeake Bay watershed are controlled by local education agencies (600+ in the region), each with their own leadership and management structure. With the exception of state laws and regulations, education priorities are largely determined at the local level and may not mirror state priorities. MWEs and sustainable school practices are often left out of established accountability mechanisms between state and local education agencies.

- Education Reform/Curriculum Alignment: While national education reform efforts including STEM, Common Core, and Next Generation Science Standards lend themselves to using the environment as an integrating context for learning, the extensive efforts to support and implement the necessary shifts in teaching and learning required by these reforms pose ongoing challenges to systemic approaches to environmental education.
- Funding and Staffing: A major limiting factor is funding, including teacher professional development and transportation.
- State agency and partner coordination: MWEE implementation requires the support of many state and local partners who often are the educators conducting teacher professional development and supporting student programming.
- School community (teachers, principals, staff) awareness and readiness: Ultimately the success of MWEEs *depends on the ability of educators to understand the essential elements and be comfortable delivering them and the permission and support of principals and the school community.*

Current Efforts and Gaps

- Encouraging the adoption of a new Education Directive
- Working at the State level to put in place policy drivers
- Using ELIT to track MWEEs and the needs of school districts
- Working with states and school districts to integrate MWEEs into curriculum to reduce perceived burden on educators
- Pursuing private and innovative funding to support regional and local efforts
- Training “MWEE Ambassadors” using the new MWEE Guide to support the development of more and better MWEEs
- Creating online training
- Maintaining educational resources on Bay Backpack
- Encouraging adequate staff at the state level to drive MWEE development and implementation

Management Approaches

The Chesapeake Bay Program will work together to carry out the following actions and strategies to achieve the Environmental Literacy Goal and Outcomes. These approaches seek to address the factors affecting our ability to meet the goal and the gaps identified above. Work will be coordinated through the Education Workgroup of the Chesapeake Bay Program, which provides a forum for cross- jurisdictional coordination and support on all aspects of environmental education. These groups will work towards shared priorities as follows:

Management Approach 1: Increase professional development opportunities for educators (pre-service, teachers, and non-formal) to support the development and implementation of MWEEs

Management Approach 2: Increase the visibility and adoption of MWEEs as an educational best practice

Cross Outcome Collaboration and Multiple Benefits

Future work for this management strategy will include coordination with all related goals and outcomes, including Water Quality, Public Access, Citizen Stewardship, and the Employment and Professional Engagement Workgroup under the Diversity Action Team. The resulting work will be captured in action plans.

Monitoring Progress

The Chesapeake Bay Program maintains a Student MWEE indicator that tracks progress towards MWEE implementation at elementary, middle, and high school. It is based on the Chesapeake Bay Watershed ELIT survey, which was developed to monitor the capacity and progress of public school districts toward meeting the environmental literacy goal stated in the 2014 Chesapeake Bay Watershed Agreement. ELIT is administered biennially to all school districts in six jurisdictions: the District of Columbia, Delaware, Maryland, Pennsylvania, Virginia, and West Virginia. The survey was administered in 2015 and again in 2017. The Chesapeake Bay Program manages data collection for the survey and collates and reports data at the watershed and state levels. While the survey is voluntary, the 2017 ELIT data collected data from 39% of school districts (DC-100%, MD-96%, VA-74%, DE-25%, PA-16%, WV-0%) representing 76% of all students in the watershed portions of these jurisdictions.

In addition, the state of Maryland requires school districts to report every 5 years on how they are meeting the state-mandated requirements related to an environmental literacy graduation requirement and integrated program. In 2015, the Bay Program worked with the Maryland State Department of Education to use ELIT to collect this information to increase efficiency of the related data collection efforts. This partnership should continue in the future.

Assessing Progress

There are no numeric goals in place for this indicator, but the Workgroup anticipates a continued upward trend in the data.

Adaptively Managing

The Leadership Team of the Education Workgroup, which is chaired by the National Oceanic and Atmospheric Administration (NOAA) and the Chesapeake Bay Foundation and includes federal representatives from the U.S. Forest Service and the Environmental Protection Agency along with two representatives per state (generally from the state departments of education and lead natural resource agencies) and key partner organizations, convenes monthly to discuss priorities and progress towards meeting the Environmental Literacy Goals and Outcomes. The full Education Workgroup, which includes broader representation from federal agencies, state agencies, nonprofits, local education agencies, and others, meets several times a year. The group also convenes an Environmental Literacy Forum every two years around specific issues or priorities, which include outside experts and constituents. These convenings serve as good opportunities to re-assess where the group is in achieving the outcomes of the agreement and adjusting strategies as appropriate.

In addition, the Principals Staffing Committee of the Chesapeake Bay Program plans to convene high-level leaders from throughout the Bay Partnership to discuss progress towards meeting the Environmental Literacy goal and outcomes. These meetings will include State Superintendents of Education as well as leaders from state natural resource agencies, U.S. Department of Education, NOAA, U.S. EPA, national and regional nonprofit organizations, institutions of higher education, local education agencies, Chesapeake Bay Commission, and the Chesapeake Bay Program Education Workgroup. The Management Board will be responsible for tracking the agreements and commitments generated by these meetings.

Biennial Workplan

A 2018-2019 biennial workplan is available that outlines work towards this outcome. Where appropriate, State-specific commitments are listed as performance targets.