

## Maryland Environmental Literacy Update

### June, 2021

#### **BACKGROUND DATA**

##### **ELIT Summary** [[Full Report](#)]

More than 80% of Maryland LEAs are well prepared to implement high quality environmental education in 2019. This was a substantial increase from 2017 (61%). A large majority of Maryland LEAs have system-wide MWEEs in place for all three grade levels. System-wide MWEEs were most common in elementary school, and least common in high school. Over 80% of Maryland LEAs encourage their schools to seek sustainable school certification. Another 67% have designated staff responsible for coordinating sustainable school efforts. Maryland LEAs reported that their greatest need for improving EE was funding followed by teacher professional development. This data represents 100% of Maryland districts.

#### **Standards of Learning**

- [Maryland Environmental Literacy Standards \(Code of Maryland Regulations \(COMAR\) 13A.04.17.01C\)](#)
- [Global Climate Change](#) is a Disciplinary Core Idea within the Next Generation Science Standards (NGSS) with grade banded endpoints for grades 5, 8, and high school. Maryland adopted NGSS in 2013.
- Maryland Integrated Science Assessment in grades 5 and 8 assess students in physical science, life science and Earth and space science, which includes climate change concepts.

#### **Teacher preparation**

- Maryland's Project Green Classrooms Initiative (PGC) identified a need to increase and more consistently provide teacher preparation in environmental literacy through the state's higher education institutions. This was one of ten recommendations PGC prepared and submitted in 2019 to the Governor's Office in its annual report. On June 18, 2020, PGC hosted a gathering of members of the broader professional community to discuss the situation and exchange ideas for solutions.
- Following the 6/18/20 event, a participant who is a course instructor at one institution, reports that the college agreed to add environmental literacy (ELit) standards and pedagogy to their Fall 2020 Science Methods for Elementary Educator Course, after many previous attempts at suggesting changes to pedagogy. The timing of this event was fortuitous in securing positive changes in the content for this course.
- Beginning fall 2021 and continuing through 2022, work will progress on a framework to help guide environmental literacy instruction in teacher preparation programs, and it will align with Maryland Environmental Literacy Standards guidance. Plans are underway to hold another meeting and connect peers among and within IHEs and the partners to share best practices and ideas, and formulate solutions to increase E-Lit preparation.

#### **RECENT ACCOMPLISHMENTS**

- In May 2020, revised Environmental Literacy Standards were presented to the state Board of Education and were adopted.
- In 2020, the Maryland Park Equity Tool was expanded to include environmental justice and health disparity data. The tool is intended to assist with state and local planning efforts as well as inform potential resource and assistance programs and funding efforts.

#### **CURRENT ENVIRONMENT**

##### **Existing Environmental Education Efforts/Priorities**

- The Maryland Green Schools Act of 2019 calls for a significant increase in the number of schools that become certified under the Maryland Green Schools program to help curb greenhouse gas emissions and meet the environmental education goals established by COMAR.
- A workgroup to develop an instructional framework to guide implementation of the MD Environmental Literacy Standards has been developed with work continuing through the summer of 2021.

##### **Existing Climate Change Education Efforts/Priorities**

- Plans to compile and share Environmental Literacy Models and MWEs developed through grant funded programs that work with Maryland teachers, including examples that are multidisciplinary and that incorporate climate change are underway.

### **Connections with Natural Resource agencies**

- DNR funded Minister Brian Bordley, in partnership with the Recreational Boating and Fishing Foundation, to engage Baltimore City minority youth and families in fishing programs and aquatic environmental education and provided a Covid safe in-person fishing clinic.
- DNR partnered with Howard County through the Chesapeake and Coastal Bays Trust Fund to restore a stream adjacent to Mayfield Woods Middle School which will offer opportunities for science education and greater access to greenspace through a nearby public pathway.
- DNR sponsored the virtual “Conservation during Covid” professional development workshop that showcased SAV restoration, River otter research and beaver restoration of streams.
- In October 2019, Lt. Governor Boyd Rutherford joined Secretary Jeannie Haddaway-Riccio in announcing that for the fifth year in a row, DNR will provide free admission to Maryland State Parks for fourth grade students and their families through the “Every Kid Outdoors” partnership with the U.S. Department of Interior.
- MD DNR applies to EPA for funding to support multiple programs, one of which is environmental literacy. Since 2014, this funding has supported a contractual position to develop and conduct a streams education program and materials. Additional annual competitive funding has been made available to award to other partners to expand the reach of the DNR streams program and other environmental education to more schools/ teachers. Required components have varied but include teacher professional development, student field investigations and stewardship projects. The emphasis is on supporting getting students outdoors away from school campuses (such as on public lands) for hands-on, experiential learning, and stewardship projects at school, community, elsewhere.

### **Existing Educational Equity Efforts/Priorities**

- Using existing MD Environmental Justice screening data to overlay previously funded projects and identify priority zones (areas of lower state funding support)
- Incorporate diversity, equity, inclusion, justice and education connections into future funding sources and support environmental education capacity with state environmental educator resources (ie. DNR staff as well as local environmental education providers)

### **Opportunities**

- *What are the opportunities that you see coming out of the COVID pandemic, STEM, CTE, statewide Corps programs, etc.?*
  - Greater collaboration between school systems and partners to provide students with virtual environmental education experiences.
  - Created training videos and conducted virtual classroom presentations on aquatic organisms, fish dissection, fishing regulations, stream function and water quality monitoring for students participating in the Maryland Envirothon competition and several K-12 schools.
  - Provided “live, virtual” field experiences with Jug Bay Wetlands Sanctuary staff for students that were unable to visit this year.
- *Is there federal, state, and/or local funding related to the pandemic, climate change, infrastructure investment, etc. that could support this work?*
  - Elementary and Secondary School Emergency Relief Fund
  - DNR’s Resiliency Through Restoration funding supports restoration projects that increase community resilience to climate change. Over the last few funding years, the project has increased scoring for incorporation of connections to EE as well as communities of need based on EJ scoring.

### **Challenges**

- Consistent Instructional time for environmental literacy, especially at the elementary school level, given competing priorities
- Supporting families and schools at state parks given limited human capital on site

## **ENVIRONMENTAL LITERACY NETWORK**

**State Working Group:** Project Green Classrooms

**NAAEE Affiliate:** Maryland Association for Environmental and Outdoor Education

### **Other Major State Environmental Literacy Partners:**

- Alice Ferguson Foundation
- Audubon Maryland-DC
- Chesapeake Bay Trust
- Chesapeake Bay Foundation
- Maryland Agricultural Education Foundation
- Maryland Association for Environmental and Outdoor Education
- MD Department of Agriculture
- MD Department of Education
- MD Department of Health
- MD Department of Natural Resources
- MD Department of Planning
- MD Department of Transportation (MDOT)
- MD Department of the Environment
- MD Higher Education Commission
- Maryland Recreation and Parks Association
- National Aquarium
- National Oceanic and Atmospheric Administration
- National Wildlife Federation
- U.S. Fish and Wildlife Service

## **FUNDING**

### **Major State Funding Programs Supporting MWEE**

- Funding made available through DNR, from the U.S. Environmental Protection Agency Chesapeake Bay Implementation Grants, supported student experiences in four school districts -- Prince George's, Montgomery, and Caroline Counties and Baltimore City (\$100,000 awarded in 2019, for the 2019-2020 school year, and extended for an additional school year due to COVID school closures). A second round of competitive funding was opened in late 2019 offering an additional \$100,000, which was awarded in 2020 to serve three more districts -- Queen Anne's, Talbot, and Dorchester Counties.

### **Active NOAA B-WET Grants**

- ShoreRivers (NA19NMF4570162) Systemic MWEEs in Dorchester County Public Schools and Talbot County Public Schools
- Towson University (NA19NMF4570072) Teacher professional development for supporting systemic MWEEs in Baltimore City Public Schools
- University of Maryland Eastern Shore (NA18NMF4570316) Systemic MWEEs in Calvert County Public Schools and St. Mary's County Public Schools
- Pickering Creek Audubon Center (NA18NMF4570322) Systemic MWEE in Wicomico County Public School
- National Aquarium (NA18NMF4570312) Systemic MWEE in Baltimore City Public Schools
- Charles County Public Schools (NA17NMF4570165) Systemic MWEE in Charles County Public Schools

### **Other Major Funding (federal, private, etc.)**

- The Chesapeake Bay Trust Environmental Education Grant Program awards funding to expand and enhance Bay environmental education programs for pre-K through 12 grade student in Maryland that provide meaningful outdoor learning experiences.
- Safe Routes to School - Programs are federally-funded, sustained efforts by community members and governments to enable and encourage children to safely walk, roll, or bike to school. Federal funds allocated to

this program are reimbursable and available for infrastructure and non-infrastructure projects that benefit elementary and middle school children in grades K-8. Requirements include a 20 percent cash match, must benefit elementary and middle school children in grades K-8, and must be located within a 2-mile radius of a school.

- Maryland's Aquatic Resources Education (ARE) Grants Program assists public and private schools (pre-K -12) and environmental education centers that are part of the public school system by providing funding for aquatic based projects.
- Land and Water Conservation Fund Act of 1965 established a federally funded program to provide 50/50 matching grants to state and local governments for the purpose of acquiring and/or developing public outdoor recreational areas and facilities. The money can not be spent on school grounds but in parks and recreation areas that school children and families visit for recreation and educational purposes.
- MDOT partners with the Maryland Environmental Trust to award grant funding to nonprofits, community groups and schools to carry out environmental projects across the state. The grants – given through the Keep Maryland Beautiful Program – support environmental education and demonstration projects that enhance and maintain the environment. The grants are provided for two categories:
  - Margaret Rosch Jones Award – provided to non-profit groups or communities for an ongoing project or activity that has demonstrated success in solving an environmental issue, including actively education people about litter prevention, community beautification, or elimination or reducing the causes of a local environmental problem.
  - Bill James Environmental Grant – awarded to school groups, science and ecology clubs, and other nonprofit youth groups for proposed environmental education projects.
- EPA Environmental Education Grants:
  - 2020:
    - Maryland Coastal Bays Foundation Inc. (\$70,000) - "Living Local"
  - 2019:
    - The Living Classrooms Foundation (\$60,000) - "Masonville Cove Environmental Education Programming"
    - Parks & People Foundation (\$60,000) - "Baltimore Schoolyards Greening Project"

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