

Biennial Strategy Review System: Logic Table

Environmental Literacy Planning and Metrics Logic Table

Long-term Target: Each participating Bay jurisdiction should develop a comprehensive and systemic approach to environmental literacy for all students in the region that includes policies, practices and voluntary metrics that support the environmental literacy Goals and Outcomes of this Agreement.

Two-year Target: Not established

KEY: Use the following colors to indicate whether a Metric and Expected Response have been identified.

Metric	Percent (and number) of public and charter schools in the Chesapeake Bay watershed certified sustainable
Expected Response	No timeline for progress for this action has been specified

Factor	Current Efforts	Gap	Actions (critical in bold)	Metrics
<i>What is impacting our ability to achieve our outcome?</i>	<i>What current efforts are addressing this factor?</i>	<i>What further efforts or information are needed to fully address this factor?</i>	<i>What actions are essential to achieve our outcome?</i>	<i>Optional: Do we have a measure of progress? How do we know if we have achieved the intended result?</i>
State Education Agency (SEA) Leadership	Attempting to gain support for focuses PSC agenda on formal education at least once every 2 years; Encouraging high level support within state education agencies; Maintain adequate staffing to drive MWEE implementation	Better engagement of SEA leaders; Dedicated staff support at SEA	3.1, 3.2	No.
Legislation and Policy	MD Graduation Requirement; DC Healthy Schools Act; ELIT survey	Collated information on districts to guide implementation; Additional state policies	2.1, 2.3, 3.3	
School District Implementation	Encourage the distribution of the ELIT	School district environmental literacy	1.1, 1.2, 1.4, 2.2	Yes. ELIT.

	<i>survey to better understand school district needs</i>	plans; Participation in ELIT survey		
Funding	<i>Identify existing state funding that could advance MWEE implementation</i>	Additional funding to support projects	1.2, 3.2, 3.3	No.
State agency and partner coordination	<i>Maintains interagency state workgroups;</i> <i>Work with states towards cross-agency “Collective Impact” efforts that include appropriate leadership and organization, metrics, and support</i>	Better collaboration; Established state plans	1.3, 3.1, 3.2, 3.3	No
School community (teachers, principals, staff) awareness and readiness	<i>Develop, improve, and expand partnerships as well as opportunities for professional development to increase MWEE implementation across jurisdictions</i>	Teacher and administrator professional development	2.2 See also Student Workplan	No

ENVIRONMENTAL LITERACY: 2018-2019 PLANNING WORK PLAN ACTIONS						
Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline	Partner organizations
Management Approach 1: Support school district efforts to embed locally appropriate environmental practices, content, and learning opportunities into curriculum and operations.						
1.1	Encourage and support school district efforts to develop K-12 environmental literacy frameworks that document in which grade(s) MWEEs and other environmental literacy programming occurs.					
		Collect examples of school district frameworks	CBP	Region	Nov 2019	CBT, CBF
		Complete a revision of the MD Environmental literacy standards.	MSDE	MD	Dec 2019	
		Promote environmental literacy instructional plans through high quality professional development.	Various	Region	Ongoing	VA DOE, CBF
		Provide technical assistance in curriculum development.	Various	Region	Ongoing	PDE, CBF, NOAA
		Assist and facilitate development of teaching units using MWEEs as a means to integrate environmental literacy standards with Next Generation Science Standards	UMCES Appalachian Lab	MD	Dec 2019	MSDE, MD DNR, CBF
		Build a STEM Toolkit in partnership with Intermediate Units and using the PA Department of Education literacy frameworks	Stroud	PA	Dec 2019	
		Review NGS Content Standards and Objectives for Science (Policy 2520.3C) for correlation to Bay MWEE's for rigorous science and environmental-related content.	Cacapon Institue	WV Bay Counties	Nov 2019	Experience Learning
1.2	Provide technical and/or financial assistance to support school districts with the integration and implementation of MWEEs and sustainable schools into appropriate grade level curriculum.					
		Fund the development of systemic MWEEs and related district plans	NOAA	Region	2019; 2019	
		Conduct statewide regional meetings and consistent communications with all 24 LEAs in support of MD Environmental Literacy graduation requirement.	MSDE	MD	Ongoing	LEAs
		Coordinate the development of an email distribution list that would allow for information to be disseminated to personnel within school divisions. This distribution list will serve as a conduit to provide technical support in the form of lessons, activities, etc that are aligned to grade level curriculum.	VDOE	VA	Ongoing	LEAs, DGIF, VDOF, VRUEC, DCR, DEQ, vASWCD, VIMS, CBF, SAV, CBNERR, NOAA, VAAE, VCE, DHR, DRBA
		Update current MWEE exemplars from website to reflect proposed 2018 Science Standards of Learning.	VDOE	VA	Dec 2021	LEAs, DGIF, VDOF, VRUEC, DCR, DEQ, vASWCD, VIMS, CBF, SAV, CBNERR, NOAA, VAAE, VCE, DHR

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		Increase/continue funding for MWEE programs (Overnight MWEE for grade 5 and Trash-focused MWEE for grades 4-8).	DOEE	DC	2019	OSSE, nonprofit grantees, LEAs
		Continue to offer funding through the PA DEP EE Grant Program and provide technical assistance to LEAs in support of MWEE across K-12.	PA DEP	PA	Ongoing	
		Distribute "Guide to Field Trips" to all Delaware teachers.	DNREC	throughout state	Ongoing	informal educators
		Report on MWEE and stormwater BMP installation at schools.	Cacapon Institue	WV Bay Count	Nov 2019	Experience Learning, WVDEP, WVCA, WVDOF
		Provide leadership and technical assistance to schools and non-school organizations in developing environment and ecology, agriculture and society, sustainability, and STEM lesson plans, instruction material, and program criteria by establishing content standards for the EEP which meet or exceed Environment and Ecology and Environmental Education, Agricultural Education, and STEM standards.	PDE	PA		
1.3	Collect examples of model planning documents (e.g. environmental literacy frameworks, sustainability plans, curriculum integration tools) and broadly share with school districts.					
		Post example of model planning documents on Bay Backpack	CBP	Region	Jun 2019	
		Create school snapshots for Environmental Literacy Leadership Cadre cohort 2 (11 DCPS schools and 5 charter LEAs) and post on the OSSE website.	OSSE	DC	2019	DCEEC, nonprofit mentors, LEAs
		Request district/grade level instructional plans that integrate all components of MWEE to serve as exemplars for distribution.	VDOE	VA	Ongoing	
		Update VDOE web page to include vetted MWEE instructional plans aligned to Science Standards of Learning.	VDOE	VA	Ongoing	
		Meet with formal and non-formal educator leaders to determine best practices in environmental education and create vetting process for determining state exemplars.	VRUEC	VA	Twice a year	VRUEC, DGIF, VMNH, SWCD, DCR, VAE, VIMS, SAV, CBF, VDOF, DRBA
		Develop and expand repositories of resources for formal and non-formal, and pre-service educators.	PDE	PA	2020	PDE, DCNR, PADEP, PACTE
		Develop EE Curriculum Framework and related tools to support EE learning in formal and non-formal spaces.	PDE	PA	2020	EEAC, PDE, DCNR, DEP, Stroud Water Research Center

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Action #	Description	Performance Target(s)	Responsible Party (or Parties)	Geographic Location	Expected Timeline	Partner organizations
1.4	Encourage the development of local networks that include school district(s), environmental education providers, and local community groups to provide in-school and out-of-school opportunities to foster youth engagement.					
		Support the development of local networks to support MWEE design and implementation in underserved areas	CBF	Region	Dec 2019	CBT, NOAA, CBFN
		Create one central, online communication hub for young people to access information on green career opportunities, training and resources in Maryland, working with the Alliance for the Chesapeake Bay to develop a youth section of the Chesapeake Network online (www.chesapeakenetwork.org).	Project Green Classrooms	MD	Dec 2018	CBT, DNR, others
		Promote the new Delaware Outdoor Classroom Network on DCIN website and to schools, environmental education providers and community groups and highlight schools with outdoor classrooms. Promote Youth Environmental Career Opportunities in Delaware on DCIN website.	Delaware Children in Nature	DE	Dec 2018	Delaware Association for Environmental Education, DNREC, Delaware State Parks
		Create Environmental Literacy teams composed of one formal and one non-formal educator in each Superintendents region. Each team will communicate environmental opportunities specific to their region and will serve as a resource for both formal and nonformal educators in the area. Each team will also serve as a conduit between the localities, VRUEC, environmental organizations, and state agencies.	VRUEC	VA	Dec 2018	VRUEC, DGIF, VMNH, SWCD, DCR, VAEE, VIMS, SAV, CBF, VCE, VDOF, DRBA, Science support organizations
		Provide the leadership necessary to address the responsibilities of the PDE in the Environmental Education Act, including serving as the PDE liaison to the Advisory Council on Environmental Education, promoting the components of the Pennsylvania Environmental Literacy Plan, meeting the requirements of 22 Pa. Code Chapter 4 and serving on the Pennsylvania State Outdoor Recreation Plan, as assigned by the Secretary of Education.	PDE	PA		DCNR, PDE, DEP, DAG
		A key aspect of the NOAA PA Environmental Literacy Capacity Building Task Force is the development of a statewide environmental education providers listing.	PA DEP	PA	2020	PA DEP, DCNR, PDE, Stroud Water Research Center
		Develop a statewide environmental education providers listing.	Stroud, CBF	PA	2020	CBF, PA DEP, DCNR, PDE, Stroud Water Research Center

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		Provide professional development for EE Providers annually.	Stroud	PA	2020	PA DEP, DCNR, PDE, Stroud Water Research Center
		Hold Quarterly CIN Meetings.	DOE/DNREC	DE	Ongoing	95 partners
		Maintain the DAEE's outdoor classroom Network.	DAEE	DE	Ongoing	
		Continue to support the Next Gen Teacher Leaders network	DE DOE	DE		
		Provide leadership and technical assistance to schools in developing the EEP planned instruction and program criteria through content standards for Environment and Ecology and Environmental Education, Agricultural Education, and STEM.	PDE	PA		
		Provide technical assistance, guidance and support to schools by providing learning experiences for teachers and students as outlined in the "An Educator's Guide to the Meaningful Watershed Educational Experience" and the Environmental Stewardship and Watershed Protection Act, 27 Pa.C.S. §6101 et seq., along with the CBA.	PDE	PA		CBF
		Through the NOAA PA Environmental Literacy Capacity Building Task Force document MWEE implementation and through professional development. Through a collaboration with Intermediate Units and the PDE literacy frameworks can be part of a statewide effort launching summer 2018 to build a STEM Toolkit for SAS and OER Commons.	PA DEP	PA	Ongoing	PA DEP, DCNR, CBF
Management Approach 2: Use available data and information to strategically and equitably focus resources to support school district level environmental literacy planning and implementation.						
2.1	Create reports, data visualizations, and progress indicators using data from the Environmental Literacy Indicator Tool and other pertinent information (e.g. socioeconomic, natural resource, etc.) to better inform policy and resource allocation decisions.					
		Administer the Environmental Literacy Indicator Tool, and analyze and distribute regional and state level data.	CBP	Region	Dec 2019	NOAA, MSDE, VDOE, PDE, DDOE, OSSE
		Work with CBP GIS team to develop maps and information to inform conversations about targeting environmental literacy work	CBP	Region	Dec 2019	NOAA, MSDE, VDOE, PDE, DDOE, OSSE

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		Combine the state partners' GIS data, overlaying schools, parks, trails, open space, transportation systems, communities, etc., to provide a more comprehensive understanding of existing access to nature across Maryland. Understanding this will help focus efforts to identify specific needs such as new transportation links or expanded trail systems, and explore mechanisms across programs to carry out effective solutions [in schools, e.g., looking at alternative transportation options for field experiences].	Project Green Classrooms	MD	Dec 2018	MDOT, MD DNR, MDH, MDP, etc.
		Develop White Papers to provide scientific and policy basis for recommendations and actions moving forward in regards to the public health / health benefits to increased time for outdoor activities: (1) Policy -- Current state of policy and regulations in Maryland that cover the concept of outdoor time in schools; (2) Science -- Scientific summary of benefits to students from outdoor time. Include in annual report to Governor; use as a foundation to further work into 2019 to dive into case studies, and programming in Maryland including more data to help guide decision making.	Project Green Classrooms	MD	Dec 2018	MD Dept of Health (MDH), MD DNR, etc.
		Create a succinct report reflecting data obtained through the ELIT that reflects Virginia's progress with environmental literacy. This report would be shared with stakeholders and would inform professional development.	VDOE	VA	Jun 2018	
		Developing a GIS DEP EE Grant Map to highlight successful grant recipients and their projects by action and location.	PA DEP	PA	Ongoing	PA DEP
		Complete a statewide survey of all environmental education providers to develop a network of MWEE utilizing BMPs.	PA DEP	PA	Jul 1905	PA DEP, PDE, DCNR, Stroud Water Research Center
2.2	Work with school districts to collect standardized data and information using the Environmental Literacy Indicator Tool.					
		100% participation in Maryland Local Education Agencies (LEA).	MSDE	MD	As Needed	MD LEAs
		Continue to integrate E-LIT questions into the yearly School Health Profile questionnaire.	OSSE	DC	2019	
		Communicate to district leaders the need to complete the Environmental Literacy Indicator Tool.	VDOE	VA	As Needed	LEAs
		Establish baseline and distribute information from ELIT Survey to LEAs and EE Providers to develop and promote programs.	PDE	PA	2019	PDE, DEP, DCNR, EEAC
		Document MWEE implementation and through professional development.	PA DEP	PA	Ongoing	PA DEP, DCNR,

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		Develop, improve and expand partnerships for advancing environmental literacy in PA.	PA DEP	PA	Ongoing	PA DEP, DCNR
		Collect data from Laurel and CR school district.	DNREC	DE	Jun 2018	
2.3	Create recommendations to advance environmental literacy, including budget projections for cost-effective approaches to strategically and equitably provide recognition, technical assistance, and financial support to local school districts.					
		Identify existing and perceived institutional barriers that prevent or discourage educators from bringing children to nature spaces, and provide guidance on best practices to overcome them. Support preparation of principals, teachers, and EE partners to appropriately facilitate quality learning experiences outdoors.	Project Green Classrooms	MD	Dec 2019	MDOT, MSDE, others
		Use report developed using ELIT data to inform stakeholders of perceived gaps in environmental education and to create recommendations that may be used to inform policy and budget considerations.	VRUEC, MSDE	VA, MD	Ongoing	VRUEC, DGIF, VMNH, SWCD, DCR, VAEE, VIMS, SAV, CBF, VDOF, VCE, DRBA, VANCLI
		Continue to support these efforts through the PA DEP EE Grant Program.	PA DEP	PA	Ongoing	
Management Approach 3: Ensure broad understanding at the state and regional level of the progress, gaps, and opportunities related to the Environmental Literacy Goal.						
3.1	Regularly convene partners around key issues through interagency state working groups, the CBP Education Workgroup, and working with the Principals' Staff Committee to convene high-level leaders.	Work with the CBP Principals Staffing Committee to engage state Superintendents of Education and focus agenda on formal education at least once every 2 years.	NOAA	Region	Apr 2019	EPA, CBF
		Meet with formal and non-formal science educators through VRUEC twice a year or as needed.	VRUEC	VA	Twice a year	VRUEC, DGIF, VMNH, SWCD, DCR, VAEE, VIMS, SAV, CBF, VAS, VCE, VDOF, VDOE
		Attend CBP Education Workgroup meetings and disseminate meeting notes to state groups	Various	VA, WV, PA, M	Ongoing	
		Continue convening Maryland's Project Green Classrooms in part as a means to achieve and track commitments under the Chesapeake Bay Watershed Agreement's Environmental Literacy goal; use a subset of Project Green Classrooms actions that address environmental literacy opportunities through formal education as the state's contribution of actions toward the regional strategies, so that both work plans are in alignment with each other where appropriate.	Project Green Classrooms	MD	Ongoing	MD DNR and MSDE, with many partners

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		Convene EE Advisory Council twice a year.	PDE	PA	Ongoing	PA DEP, DCNR, PDE, Dept of Ag, PFBC, PGC
3.2	Raise visibility and encourage new funding opportunities by working with national and regional environmental education organizations and funders.	Pursue funding from private foundations to support regional education structure and programs	CBT	Region	Dec 2019	CBF, NOAA, EPA, CBFN, Pisces Fdn
		Transition some leadership responsibilities for Delaware Children in Nature to the Delaware Association for Environmental Education.	Delaware Children in Nature	DE	May 2019	DAEE
		Communicate environmental science grant opportunities through non-formal educator channels.	VRUEC	VA	Ongoing	VRUEC, DGIF, VMNH, SWCD, DCR, VAEE, VIMS, SAV, CBF
		Communicate environmental science grant opportunities through VDOE Teacher Direct, VDOE Science Update, and VDOE Environmental Web site.	VDOE	VA	Ongoing	
		Maintain, update and revise all components of Pennsylvania's Virtual Professional Learning Community for teachers, and establish a social media presence for the effort	PDE	PA	Dec 2019	
		Through the NOAA PA Environmental Literacy Capacity Building Task Force, address the historically low participation of PA organizations in the NOAA Chesapeake B-WET grants and implementation of MWEEs.	PA DEP	PA	Ongoing	
		Increase participation of PA organizations in the NOAA Chesapeake B-WET grants and implementation of MWEEs.	PA DEP	PA	Ongoing	
3.3	Identify and promote means to secure the resources (policy, programs, and staffing) necessary to achieve the Environmental Literacy Goal.					
		Identify funding sources that support off site field experiences – specifically for transportation from schools to nature sites. Develop a user-friendly resource for existing funding sources that directly and indirectly support transportation from schools to nature sites. Develop guidance on how to successfully secure the identified funding resources.	Project Green Classrooms	MD	Dec 2018	MDOT, others
		Secure dedicated funding to support field experiences for students at sites away from school campuses.	Project Green Classrooms	MD	2019	MD DNR, NAAEE, CBT
		Explore options to secure permanent position for state environmental literacy specialist (currently contractual) at MD State Dept of Education.	Project Green Classrooms	MD	2019	MD DNR / state agencies, NAAEE, CBF working w/ MSDE

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		Evaluate and revise Environmental Literacy Plan with Delaware Association for Environmental Education. Seek funding to have paid internship or staff to move initiative forward in DAEE.	DAEE	DE	2020	DAEE/DCIN
		Advocate for resources at the state and regional level to support formal and nonformal environmental education.	NCLI	VA	Ongoing	
		Hire Environmental Protection Specialist who will work on environmental education at least 75% of the time.	DOEE	DC	2018	
		Hire PDE State Environmental Education Advisor.	PA DEP	PA	2018	PA DEP, DCNR, PDE, Dept of Ag

****Note:** As a member of the Chesapeake Executive Council and a signatory to the Chesapeake Bay Watershed Agreement, the Chesapeake Bay Commission (CBC) functions as the legislative arm of the Chesapeake Bay Program working within Maryland, Pennsylvania and Virginia and at the federal level to identify specific Bay management concerns requiring intergovernmental coordination and cooperation. CBC makes recommendations to the federal, state and local governments on legislative and administrative actions necessary to effectuate coordinated and cooperative management for the Bay watershed. The Commission will work collaboratively with Bay Program partners to identify legislative, budgetary and policy needs to advance the key actions identified in this outcome and to anticipate those needed in the future. The CBC's work is supported by the annual appropriations of its three member states totaling \$675,000 and is, on occasion, supplemented by project-specific grants.