Biennial Strategy Review System: Logic Table and Work Plan

Environmental Literacy Planning Logic Table and Work Plan

Long-term Target: Each participating Chesapeake 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 the Watershed Agreement.

Two-year Target: Not established

KEY: Use the following colors to indicate whether a Metric and Expected Response have been identified.	
Metric	
Expected Response	No timeline for progress for this action has been specified

Factor	Current Efforts	Gap	Actions **(critical in bold)**	Metrics
What is impacting our ability to achieve our outcome?	*What current efforts are addressing this factor?*	*What further efforts or information are needed to fully address this factor?*	*What actions are essential to achieve our outcome?*	*Optional: Do we have a measure of progress? How do we know if we have achieved the intended result?*
State Education Agency (SEA) Leadership and Staffing for Environmental Literacy	1.1 1.2 1.3 1.8	Better engagement of SEA leaders; Dedicated staff support at SEA	*Adds state education secretaries as formal members of the PSC; Focuses PSC agenda on formal education at least once every 2 years;* Continue to push for high level support within state education agencies; *Maintain adequate staffing to drive MWEE implementation*	No.
Local Education Agency Implementation of Environmental Literacy Programs	4.2	School district environmental literacy plans; Participation in ELIT survey	*Encourage the distribution of the ELIT survey to better understand school district needs*	Yes. ELIT.
Education Reform	1.5 2.3 5.1 7.1	Curriculum alignment	See Student section for specific actions	No.
Funding	1.7	Additional funding to support projects	*Identify existing state funding that could advance MWEE implementation*	No.

Culture Disconnected from Nature	None	None	*None*	No
State agency and partner coordination (NEW)	1.4 2.1 2.2 3.1 3.2 4.1 6.1 6.2	Better collaboration; Established state plans	***Maintains interagency state workgroups;*** *Work with states towards cross-agency "Collective Impact" efforts that include appropriate leadership and organization, metrics, and support*	No
School community (teachers, principals, staff) awareness and readiness (NEW)	1.6 2.5 5.2	Teacher and administrator professional development	See Student section for specific actions	No

Action #	Theme	Description	Performance Target(s)	Responsible Party	Geographic Location	Expected Timeline	
Management Approach 1: Identify and advocate for the local and state resources (policy, programs, and staffing) necessary for all graduates to achieve science, citizenship, and environmental literacy.							
1.1.a	state coordination	Establish high level coordinating body for EL activities in Delaware		DE CIN, DE DOE	DE	Nov 2015	(yellow)
1.1.b	state coordination	Convene state education superintendents and natural resources cabinet members from Bay jurisdictions to discuss and garner improved support for e-lit implementation.	Host event in MD.	CBP, MD CIN	Regional	spring 2016 (by 6/1/16)	(green)
1.1.c	state coordination	Establish a new Environmental Literacy Advisory Group for the District of Columbia	Identify members and hold initial meeting.	OSSE	DC	Dec 2015	(green)
1.1.d	state coordination	The Virginia Environmental Literacy Challenge: Governor Terence McAuliffe announced the Environmental Literacy Challenge in April 2015, through Executive Order 42. The statewide effort consists of two complementary programs: (1) a classroom-level recognition program, the Conservation Classroom Challenge (CCC); and (2) at the school division level, the Environmental Literacy Challenge for Systemic Sustainability (ELCSS). (VDCR and VIEW)	1) The CCC will provide educators with resources to support students for environmental learning and action. Teachers will be recognized for engaging students in school-sustainability efforts and for participating in field investigations aligned with the state standards. 2) The ELCSS is designed to encourage school divisions to take systemic approaches to promoting environmental literacy (EL) by recognizing those that make significant commitments including school divisions that: a) develop division-level EL plans; b) identify EL lead educators to serve as contacts, participate in regional environmental professional development, and coordinate actions within a school division; c) conduct environment-related professional development and leadership training for teachers and principals; and identify, seek out, and dedicate funding for EL activities across grades levels system wide.	VDCR, VDGIF - VIEW agencies supporting	VA	Apr 2016	(yellow)
1.2.a	staffing/funding	Hire an Environmental Literacy Specialist at the Office of the State Superintendent of Education.	Create and fill position.	OSSE	DC	May 2015	(green)
1.2.b	staffing/funding	Explore feasibility of converting MSDE environmental literacy coordinator from a contract position to a permanent state position.	Hire contract position for environmental literacy; Convene internal conversation to determine priority for permanent position; Work with budget office to secure position (if appropriate).	MSDE	MD	Dec 2018	(red)
1.2.c	staffing/funding	Better align state administered funding sources with E-Lit goals and requirements, including MWEE implementation. Improve awareness of these resources.	Explore the targeted use of competitive funding programs to support E-Lit priorities. Continue to provide existing funding resources through partners, as feasible. Identify gaps and explore options for new/redirected funding opportunities and partnerships. Encourage LEA and partner applicants to use competitive programs to support E-Lit (ESSA, 21st CCLC), including transportation, instructional supplies, EE provider assistance, etc.	MSDE, DNR, MD CIN	MD	Dec 2018	(yellow)
1.3.a	promotion	Present at a series of superintendents' meetings to raise awareness of different components of CBP and E-Lit commitments and requirements.	Present on (1) sustainable schools/outdoor classrooms, (2) MWEEs, and (3) EL plans.	MSDE	MD	Dec 2018	(yellow)

1.3.b	promotion	Present at state conferences to showcase the connection between US Department of Education priorities and environmental literacy		CBP	Regional	Dec 2017	
1.3.c	promotion	The Chesapeake Bay Commission will work collaboratively with the Bay Program partners to identify legislative, budgetary and policy needs to advance the goals of the Chesapeake Watershed Agreement. We will, in turn, pursue action within our member state General Assemblies and the United States Congress. See CBC Resolution #14-1 for additional information on the CBC's participation in the management strategies.	Work with the blue crab management jurisdictions to identify any policy, legislative and/or budgetary needs and identify potential actions where feasible.	Chesapeake Bay Commission, MD DNR, PRFC, VMRC	MD, VA	Ongoing	
1.4.a	partnerships	Work with the Virginia Resource-Use Education Council, the Virginia No Child Left Inside Coalition, and other appropriate umbrella groups to encourage nonprofit, nongovernmental organizations to formulate specific actions to support the goal of student environmental literacy		VIEW state agency staff	VA	Ongoing	
1.5.a	standards	Review Next Generation Content Standards and Objectives for Science (Policy 2520.3C) for correlation to Bay MWEEs with rigorous science and environmental-related content	Create focus groups to identify needs and interests and/or barriers and challenges to federal, state, and local natural resource agencies; and NGOs, engagement in Bay MWEEs	Cacapon Institute, The Mountain Institute	WV Bay Counties	Dec 2016	
1.5.b	standards	Review current E&E Standards, Science and Technology Standards as stated in Chapter 4.	Review to reflect currrent research in teaching and learning of E&E and Science and Technology.	PDE	PA	Dec 2016	
1.6.a	training/implementation	Provide access to training and models for integrating E-Lit / MWEEs with State Standards, STEM, etc.	Provide through existing and new venues for PD, through partners and other resources.	PDE, working w/ various EE partners statewide	PA	ongoing	
1.6.b	training/implementation	Establish recommendations for pre-service teachers in environmental literacy.	Work with PACTE to determine feasibility and process of implementing environmental literacy for pre-service teachers.	PACTE, PDE, EEAC	PA	Dec 2017	
1.6.c	training/implementation	Promote high quality teacher professional development for implementation of E&E Standards.	Utilize SAS, Science Matters	PDE, PAEE, PSTA	PA	ongoing	
1.6.d	training/implementation	Extend school level implementation of Environmental Literacy Framework to ensure EL is taught in every grade level	Develop and implement Environmental Literacy Pilot Program	OSSE, DCEEC	DC	Feb 2016	
1.7.a	funding	Explore the periodic use of Math Science Partnership (MSP) and other Title II funding to support system-wide teacher PD.		MSDE	MD	Dec 2017	
1.7.b	funding	Develop recommendations to address transportation and other funding gaps and present them to state superintendent for education and other high level state leadership.		MD CIN, with partners	MD	Dec 2017	
1.8	legislature	The Chesapeake Bay Commission will work collaboratively with the Bay Program partners to identify legislative, budgetary and policy needs to advance the goals of the Chesapeake Watershed Agreement. We will, in turn, pursue action within our member state General Assemblies and the United States Congress. See CBC Resolution #14-1 for additional information on the CBC's participation in the management strategies.	Work with the blue crab management jurisdictions to identify any policy, legislative and/or budgetary needs and identify potential actions where feasible.	Chesapeake Bay Commission, MD DNR, PRFC, VMRC	MD, VA	Ongoing	

Management Approach 2: Support the development and implementation of clearly-defined, attainable objectives necessary for all students to achieve science, citizenship, and environmental literacy by graduation.

2.1.a	partnerships	Convene DE CIN to determine teams of partners around core projects	Identify key tasks and match to partners	DE CIN Coordinator, and follow up CIN Committees on ELP implementation	DE	Ongoing	
2.1.b	partnerships	Actively participate in the DC STEM Network to share and be a resource for information about environmental literacy.	Attend Call to Action (March 2015), STEM Leadership Academy(August 2015), and STEM Summit (November 2015)	OSSE, DOEE, DCEEC	DC	on-going	
2.2.a	planning/metrics	Develop a District of Columbia Environmental Literacy Action Plan	Create guidance document to inform next steps in developing sustainable schools in DC.	DCEEC, OSSE	DC	Sep 2015	
2.2.b	planning/metrics	Complete District of Columbia Environmental Literacy plan revision	Create working group and revise the ELP with stakeholders.	OSSE	DC	Jul 2017	
2.2.c	planning/metrics	Increase number of schools implementing the EL Framework	At least eight additional schools will implement EL Framework	OSSE	DC	Jun 2016	
2.3.a	standards	Provide access to training and models for integrating E-Lit / MWEEs with State Standards, STEM, etc.	Provide through existing and new venues for PD, through partners and other resources.	PDE, working w/ various EE partners statewide	PA	ongoing	
2.3.b	standards	Review current E&E Standards, Science and Technology Standards as stated in Chapter 4.	Review to reflect currrent research in teaching and learning of E&E and Science and Technology.	PDE	PA	Dec 2016	
2.4.a	training/implementation	Establish recommendations for pre-service teachers in environmental literacy.	Work with PACTE to determine feasibility and process of implementing environmental literacy for pre-service teachers.	PACTE, PDE, EEAC	PA	Dec 2017	
2.4.b	training/implementation	Promote high quality PD for implementation of E&E Standards.	Utilize SAS, Science Matters	PDE, PAEE, PSTA	PA	ongoing	

Management Approach 3: Promote the implementation of the Environmental LIteracy Indicator Tool (ELIT) and related data visualization tools to assess progress toward student science, citizenship, and environmental literacy.

3.1.a	decisionmaking	Distribute data from ELIT at appropriate levels to state and national partners		NOAA, CBT	Regional	Mar 2016	
3.1.b	decisionmaking	Analyze and make recommendations based on baseline ELIT data		CBP Leadership Team	Regional	Feb 2016	
3.1.c	decisionmaking	Use and share data from the 2015 CBP "ELIT" tool to facilitate development of collaborative approaches to further developing and implementing school E-Lit programs.	Establish baseline and distribute information from the survery to LEAs. Distribute the information to providers of services in developing/promoting programs.	PDE, CSIU, EEAC	PA	Jun 2016	

3.2.a	survey implementation	Collective Impact Tool Implementation. Meets management approaches SS3, SS4, ELP1, ELP3, ELP4, and ELP5. (VDCR)	Develop common language for describing work related to environmental education; beta-test collection tool for state-wide survey; conduct state-wide survey; prepare and distribute first annual assessment; annually recruit additional provider groups to submit data via collection tool. Completed work: June 2014 - developed common language for work related to environmental education; August 2014 - distributed beta version of collection tool; September 2014 - revised data collection tool based on feedback from the field; November 2014 through July 2015 - recruited agency participation in state-wide survey of environmental education activities; August/September 2015 - drafted initial results of calendar year 2014 environmental education activities; October 2015 - published and presented results of state-wide survey. Additional agencies and provider groups will be recruited to participate in this state-wide effort on an annual basis.	VDCR VAEE	VA		🟥
3.2.b	survey implementation	Establish data collection protocol for state partners about participation in outdoor learning	Quarterly meetings of DE CIN and DNREC stakeholders	DE CIN Coordinator, DSP Chief of Interpretation	DE	Ongoing	🟥
3.2.c	survey implementation	Distribute second ELIT survey		NOAA, CBT	Regional	Jun 2017	🟩
3.2.d	survey implementation	Finalize and publish new Environmental Literacy indicators based on data collected in ELIT		CBP Leadership Team	Regional	Jun 2016	🟩
3.2.e	survey implementation	Compile, analyze and distribute needs summary from ELIT and COMAR reporting to determine progress and identify gaps.	Use baseline data collected from the required COMAR survey and the voluntary CBP ELIT tracking tool to develop a needs summary to help refine and prioritize actions/ services. Analyze surveys completed in 2015 by LEAs.	MSDE, CBP	MD	Feb 2016	🟨
3.2.f	survey implementation	Support outreach on NCBO ELIT and related data collection regarding MWEE providers and participation in RESA8 schools	Report on MWEE and stormwater BMP installations at RESA8 schools	CI, TMI, and NGO EE providers	WV Bay Counties	Dec 2017	🟨
Management Approach 4: Disseminate information to state formal and informal education stakeholders on the policies, programs, and practices that promote science, citizenship, and environmental literacy.							
4.1.a	partnerships	Establish a membership-based environmental education organization (Virginia Association for Environmental Education). Meets management approaches S1, S2, S3, S4, S5, S6, SS4, ELP1, ELP2, ELP4, and ELP5. (VDCR)	Develop draft by-laws for organization, recruit founding board members, hold first membership meeting for association. July 2015 - Draft by-laws and Founding Board established.	VDCR VAEE	VA		🟩
4.1.b	partnerships	Rejuvenate WV Environmental Education Association and convene EE providers to review WV Sustainable Schools for science, citizenship, and EL opportunities.	Report on WV Sustainable Schools EL opportunities state wide.	TMI, CI, and NGO collaborators	WV	Dec 2017	🟩
4.2.a	technical assistance	Children in Nature Coordinator and DE State Parks informal educators maintain presence at Next Gen Lead Teacher Meetings to support implementation	Continue assistance in encorporating ELP principles, Seek team members from other CIN partners, Create task team to continue process	DDOE, DE CIN, DSP	DE	Ongoing	🟥
4.2.b	technical assistance	Assist schools in developing Environmental Literacy plans (as suggested by the Local Wellness Policy)	Revise guidance for Local Wellness Policies to include more consistent environmental sustainability indicators.	OSSE	DC	Dec 2015	🟥
4.2.c	technical assistance	Use and share data from the 2015 CBP "ELIT" tool to facilitate development of collaborative approaches to further developing and implementing school E-Lit programs.	Establish baseline and distribute information from the survery to LEAs. Distribute the information to providers of services in developing/promoting programs.	PDE, CSIU, EEAC	PA	Jun 2016	🟥

| 4.2.d | technical assistance | Host regular briefings for Local Education Agency (LEA) leads such as Science Supervisors, E-Lit coordinators to disseminate information about requirements and resources, and discuss systemic E-Lit implementation. | | MSDE | MD | | |

Management Approach 5: Maintain an up-to-date suite of definitions and best practices documents for regional practitioners, funders, and administrators to inform program development and funding following research-based best practices.

ID	Type	Description	Steps	Lead	Region	Timeline	Status
5.1.a	tool development	Habitat team from DE CIN partners: inventories existing habitats, upgrades maintenance practices and resources, and develops criteria measures of success in terms of both function of habitat in the environment, and unitlization of habitat in education	Form Team, Set goals and timeline,	DE Cin Coordinator and Partners	DE	Ongoing	🟥
5.1.b	tool development	Develop a practitioners guide to the Meaningful Watershed Educational Experience		NOAA, CBT, CBF	Regional		🟩
5.1.c	tool development	Guidance Document: Effective Life-, Environmental-, and Earth-Science Field Work: The science office of the VDOE will develop a guidance document for formal K-12 educators concerning the implementation of watershed and other science-related, out-of-doors field work with public school students. (VDOE)	1) The science office will share the guidance document through science-education professional associations and the office's contacts in each of Virginia's 134 school divisions and conduct at least one informational webinar with state school division representatives. 2) The guidance document will be posted on the VDOE's Environmental Literacy Web page and distributed statewide at professional education conferences.	VDOE Science Director and staff	VA	The science office has targeted the completion of the guidance document for July 2016.	🟨
5.1.d	tool development	Identify and distribute successful models of integrating E-Lit with STEM and NGSS; share good models of MWEEs occurring across state, including successful solutions for funding, staffing, integrating, and implementing all MWEE elements.		MSDE, CBT, NOAA-BWET, MD CIN	MD		🟩
5.2.a	websites	Environmental literacy education resource- VIEW agencies' Web sites	View agencies will update key resources and environmental literacy materials and links on their respective Web sites. VDCR's "Virginia Naturally" site serves as a center hub for the combined state efforts.	VIEW Agencies	VA	Ongoing	🟩
5.2.b	websites	Create a presence on Bay Backpack for research on the benefits of environmental education and outdoor learning experiences (e.g., increased stewardship, improved test scores, career readiness).		CBP	Regional		🟨
5.2.c	websites	Support and maintain a streamlined set of online resources for educators at the state and regional level.	Designate websites to house certain info centrally such as Bay Backpack, MSDE website, CIN, and MAEOE -- and link to one another. Aim for consistency of information/guidance.	CBP, state partners	CBP	ongoing	🟩

Management Approach 6: Maintain the Chesapeake Bay Program Education Workgroup and related state workgroups that include state department of education participation to oversee implementation of the Environmental Literacy Management Strategy.

ID	Type	Description	Steps	Lead	Region	Timeline	Status
6.1.a	regional coordination	Convene Chesapeake Bay Program Education Workgroup leadership to review progress towards 2016-2017 work plan		CBP	Regional	Nov 2016	🟩
6.1.b	regional coordination	Convene monthly leadership team meetings and biannual meetings of the full membership of the CBP Education Workgroup		CBP	Regional		🟩
6.1.c	regional coordination	Convene regional biennial Summits focused on policy aspects of the Environmental Literacy Goal.	Disseminate findings from 2015 Summit; Plan for 2017 Summit; Conduct Summit	NOAA	Regional	Nov 2017	🟩

6.1.d	regional coordination	Attend CBP EWG and EWG Leadership Committee meetings to represent WV Bay counties.	Monthly attendance and ongoing engagement.	WVDE, CI, TMI	WV Bay Counties	Monthly (ongoing)	
6.2.a	state coordination	Children in Nature Coordinator and DDOE representative to coordinate meetings with relevant stakeholders.	Attendance at CBT scheduled workgroup sessions	NOAA, CBT, DE CIN	DE	Ongoing	
6.2.b	state coordination	Ongoing functional work of the VIEW and VRUEC	The VIEW will further formalize its environmental literacy efforts in conjunction with the state's Chesapeake Bay workgroup operation. VIEW will meet face to face three times yearly and electronically as needed. VRUEC partners will assist as pertinent.	VDCR VDEQ VDGIF VDOE DOF	VA	ongoing	
6.2.c	state coordination	Continue the Maryland Partnership for Children In Nature (CIN) to serve as a key convener and incubator to help align, coordinate, and advance initiatives of CIN itself and its individual partners, and to serve the Chesapeake Bay Agreement priorities.		MD CIN (chaired by DNR and MSDE)	MD	ongoing	
Management Approach 7: Ensure the implementation of Environmental Literacy outcomes includes a focus on diverse and underserved students with an emphasis on career and college readiness and STEM.							
7.1.a	equitable programming	Advocate for equitable watershed and environmental education grant funding	The Virginia Interagency Education Workgroup (VIEW) will develop a set of advocacy goals and strategies to address inequitable access (availability) of watershed and environmental literacy grant funding across the state.	VDOE, VIEW agencies, and other partners TBD	Statewide	Ongoing with 2017	
7.1.b	equitable programming	Environmental literacy outcomes: 1)Environmental literacy outcomes are largely defined in the Science and Health SOL are for all students. 2)CBP ELIT provides useful school division information on EE program infrastructure and learning supports.	1)Student learning outcomes across grades and science disciplines will be analyzed for achievement gaps in environment-related strands. 2)Statewide participation rates for MWEE and other key indicators of school division program supports will be monitored via CBP ELIT analysis.	VDOE, VIEW agencies, and other partners TBD	Statewide	Ongoing	
7.1.c	equitable programming	Collaboration between DDOE, private sector, and state agencies to identify and offer expanded work experience and pathways to employment in STEM careers.		DE CIN, DDOE, DSP, WRA, TNC, STEM Council	DE	ongoing	
7.1.d	equitable programming	Support state efforts to identify and develop strategies to address needs for underserved schools/ populations.	Use ELIT results to better understand where the needs are. Distribute information about available funding support for low income and underserved audiences (eg Title I, 21st CCLC, etc.). Convene a group to identify and develop a strategy to increase awareness of how to address needs for underserved schools/ populations (MD CIN).	CBP	Regional	Dec 2016	
7.1.e	equitable programming	Identify and develop a strategy to address needs for underserved schools/ populations.	Align results from COMAR survey and ELIT tool with identified underserved areas and/or Title I schools, to determine needs for/gaps in awareness, training, administrative support, and funding. Identify solutions and add to state planning strategies. Analyze surveys completed in 2015 by LEAs.	MSDE, CBP	MD		