# ENVIRONMENTAL LITERACY INDICATOR TOOL
# FINAL REPORT—SEPTEMBER 2014

## INTRODUCTION

In spring 2013, Measurement Incorporated (MI) contracted with the Chesapeake Bay Trust (CBT) and NOAA Chesapeake Bay Office to develop metrics for the Mid-Atlantic Environmental Literacy Strategy. This initiative to develop an *Environmental Literacy Indicator Tool* was discussed during the Chesapeake Bay Program Education Workgroup meeting in June 2013. At that meeting, the timeline for constructing and piloting the instrument was proposed and approved by the group. A key assumption, at that time, was that the instrument would be constructed as a self-assessment tool. Administering that type of instrument would collect the data needed at the state and federal levels while also facilitating a self-study process at the LEA level that would lead to next steps for advancing their environmental literacy plan.

Data were to be collected on three key outcomes of the Chesapeake Bay Agreement: **student MWEE participation; high-quality Environmental Education (EE) for educators; and sustainable (green) schools.** Based on the Scientific and Technical Advisory Committee (STAC)-sponsored workshop held in August 2013, measurement of these outcomes was informed by best-practices from the field. In November 2013, a 2-day retreat was held for the Mid-Atlantic Region Environmental Education Leadership Group. MI was present to conduct multiple sessions working with the group to construct the scope and elements of the tool. From the beginning, it was clear that each state (Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia) and district (Washington, D.C.) was starting at a unique point in their environmental literacy planning capacity and each had a set of unique obstacles to overcome and infrastructure to work within. The work of the retreat led to an early version of the tool that would not only collect data for the three outcomes but also track the progress of LEAs toward establishing and implementing environmental literacy programs/curriculum. The *Environmental Literacy Indicator Tool* was then presented at the Education Summit in December 2013. In small break-out groups by state, participants further discussed the tool and suggested edits. The tool was revised based on their feedback and the near-final draft was prepared in January 2014. Over the next six months the new Chesapeake Bay Agreement was negotiated and signed on June 19, 2014. The signing of this new agreement by all Mid-Atlantic Region governors and the mayor from D.C. reaffirmed the goal of the Chesapeake Bay Program and prompted the piloting of the revised version of the *Environmental Literacy Indicator Tool.*

At the end of June 2014 the *Environmental Literacy Indicator Tool* was sent to state-level representatives to pilot with LEA-level contacts from their state or district. Eight responses were received from a total of four of the seven state or district partners: MD, VA, WVA and D.C. These data were shared with project staff and the evaluation team. After a thorough discussion of the pilot results, the project team reached consensus on a set of recommendations for changes to the indicator tool. It was then decided that the evaluation team would conduct focus groups with the pilot respondents to gather their perspectives about the suggested changes and the revised version of the tool. Everyone on the list of respondents was contacted; seven of those respondents participated in either a focus group or an interview. Additionally, two interviews were conducted with state and/or district-level representatives in an effort to include as many perspectives as possible. This report includes feedback from nine individuals representing MD, VA, and Washington D.C.

## "Big Picture" Perspective

The most important question to answer for the LEA-contacts who will complete the tool is "why are we doing this?" Without a clear understanding of the purpose, the tool calls for compliance rather than cooperation, collaboration, and constructive use. Essentially all of the respondents wrestled with this question and then most followed up with "and what will the data be used for?" Unless these two critical questions about purpose and use are answered, it is likely that the LEA-level person/group completing the tool will find this task difficult and burdensome. It would be a missed opportunity if something that was originally intended as a self-assessment tool to aid districts in identifying their strengths and advancing their next steps for planning their environmental literacy program, became something to check off a to-do list.

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A well-crafted "marketing strategy" would facilitate buy-in at the state and LEA level. This strategic plan would need to incorporate an element of giving something back to the person/group completing the tool. To be successful there needs to be benefits at all levels: clear purpose for the LEA-level person; more reliable data and credible information for the state-level contact; and useful data for NOAA Chesapeake Bay Program about the outcomes of the Chesapeake Bay Agreement. In the absence of a strong strategy, the proposed data collection activity runs the risk of frustrating and alienating the grassroots people who lead their districts in building environmental literacy programs. Based on the group of respondents in the focus groups/interviews, these individuals are knowledgeable about and committed to environmental education. They are eager to cooperate with efforts that will promote environmental literacy and achieve the goal of the Bay Agreement: *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, sustainable schools outcome, environmental literacy planning outcome.***

Each of the following subheadings of this report addresses a **Section** of the *Environmental Literacy Indicator Tool.* The **Sections** have been re-ordered in this report (and in the attached revised version of the tool) to be consistent with the order of the outcomes as they appear in the above goal: **student participation, sustainable schools, and environmental literacy planning.** Within the tool itself, the data collected for an *outcome* are often *outputs*. When developing the strategic "marketing" plan, it would be helpful for respondents to know that these outputs are *proxy measures*. Based on the body of knowledge from best-practices in environmental education, an increase in these outputs indicates progress toward the desired long-term outcome.

## Section I: Student Participation in MWEEs

All respondents indicated that reporting student participation in Meaningful Watershed Educational Experiences (MWEEs) by grade level is near impossible. Tracking these data would require an excessive amount of time and resources. Respondents suggested that tracking participation in MWEEs by grade band for middle school and high school students, with a specific point in time (e.g., by April or May of an academic year) would be possible with advance notice. There are fewer schools at the middle

and high school level and, generally speaking, there are curricular teams in these schools with regularly scheduled meetings throughout the academic year. If notified in advance about the data that need to be tracked, LEA contacts could more reliably provide MWEE participation numbers. Overall, there was strong agreement among the respondents about the "new" definition of MWEE—identifying the four essential components. Respondents offered only minor changes to the definition and expressed agreement with the elements that were suggested.

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While tracking MWEE participation is difficult in elementary schools, these respondents were not suggesting that participation in the younger grades is less important. In general, the suggestion is to start with tracking middle and high school student participation and from the time of baseline data collection (in 2015) to the next administration of the tool, allow participating LEAs to establish a means of tracking participation data at the elementary school level. To that end, ask respondents in this first administration to describe the planned curriculum in the elementary schools. Describing where the MWEE experience is part of intended curriculum in the elementary grade levels is a first step to figuring out how to track student participation at this level.

In each state or district the mechanism for tracking participation in MWEEs is likely to vary. In some instances it may be easier to track participation via systems outside the public schools. For example in PA data collection may be dependent on informal environmental education centers across the state or through other statewide mechanisms that are connected with schools but are not part of the public school system. Additionally, it was noted that where there are existing state requirements for data collection (e.g., Maryland) the indicator tool needs to be aligned and incorporated into that activity.

## Section II: Sustainable Schools

Reporting the number of schools and students by grade or by grade band is relatively easy. Reporting the number of certified sustainable schools is more difficult. Respondents indicated that there needs to be a definition of "certified sustainable school" and/or a list of accepted or preferred certifying entities. Furthermore, they suggest that Chesapeake Bay Program is in the best position to develop this definition/list.

At a minimum there needs to be an established goal or criteria for "green" measures that matter to the Environmental Literacy Initiative. In short, what should be counted when completing this section of the tool? A list of designated certifications could include state specific programs (such as Maryland Green Schools) or national programs (such as Eco Schools or National Wildlife Habitat schools). In any case, there needs to be a clear definition of what qualifies as a certified sustainable school.

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Among the respondents, there was general

agreement that the three pillars of the Green Ribbon Schools provide a solid basis for establishing the definition of programs that qualify and/or promote the values that need to be emphasized. However, while the USDE Green Ribbon School Award is exemplary as a certification, the process for being nominated and then awarded this certification is more extensive than most schools can accomplish. With awards being limited to only a few schools and those certified being posted on the national website, the respondents that were part of our feedback group, indicated that it was unnecessary to count this certification. Instead they would suggest that the definition of *sustainable schools* and the qualifying list be developed to track progress on this indicator beyond USDOE Green Schools Certification.

## Section III: Environmental Literacy Program Capacity

As indicated by respondents, this section of the tool seemed "administratively heavy" and subjective. They question why these data are being collected and how they will be used. If the purpose for completing this tool is to track progress toward establishing and implementing an environmental literacy program, what is the incentive or reward to the LEA for making improvements? One possibility would be to tie program capacity results to possible grant funding being careful to not limit funding to the lowest or the highest scores. Applying for a grant could be categorical, for example, emerging, developing, or established environmental literacy plans.

For some, this section would be easier to complete if there were fewer ratings with broader descriptions. For example, the phrase "fulfills essential elements of PD" could be interpreted to mean that the PD program consists of at least 120 hours, has a component of follow-up and is integrated into the classroom. That understanding of "essential elements" would disqualify many PD experiences and set a very high standard not likely in place for any of the educational content areas, e.g., mathematics, science, English language arts, social studies, etc.

## Summary and Recommendations

The groups of environmental educators that we spoke with when gathering information for this report were eager to share their perspectives about the *Environmental Literacy Indicator Tool.* They expressed appreciation for both the recommended changes based on their pilot data and for being contacted for their opinion about those changes. That said, there is an apparent disconnect between respondents at the LEA-level and the State-level members of the Education Workgroup in terms of understanding the purpose and use for the *Environmental Literacy Indicator Tool.* The practical issues of finding the time and resources to complete this data collection activity are universal across the LEA contacts of the piloting process. With that as a clear message from piloting respondents, this first round of data collection needs to be kept as simple as possible, supported by technical assistance from the state-level contact, and convey a message that promotes and/or celebrates LEA progress toward advancing environmental literacy curriculum.

Based on discussions and interviews with pilot contacts and MI's experience with the development team, the following strategies are recommended:

**Develop a state-by-state action plan:** As previously noted in the report, each state has a unique context for administering the tool and collecting the data. This challenge would best be addressed by working with State-level contacts - in each state or district – to develop technical assistance and/or supports for roll-out of the *Environmental Literacy Indicator Tool.* Each action plan needs to include incentives for LEA-level contacts to complete the instrument. Where possible, incorporate this instrument into existing state or district data collection

activities and inform the LEA contacts about the data collection purpose and timeline as early as possible.

**Section I: Start with a manageable plan to collect data about student participation in MWEEs**: In the baseline year (2015) collect data about MWEE participation by grade band for middle school and high school students. Keep the format as simple as possible (see Section I of the attached revised tool). After the data are collected, work with State and LEA-level contacts to improve the data collected for the next administration. The frequency of data collection should be part of the initial state-by-state action plan. While the frequency of data collection is not likely to vary state by state, the "marketing" of the timeline could be relevant to specific statewide context.

**Section II: Define "certified" sustainable schools**: This section of the instrument, while not an easy fix, has a straightforward solution. There needs to be a definition for "certified sustainable schools" that conveys the priority criteria of the Chesapeake Bay Program. Once the definition is developed, a list of certifications that qualify could be identified. The list needs to be developed to include a variety of certifications – that may well vary state-by-state – and exemplify the value/priority set by the Chesapeake Bay Program (see Section II of the attached revised tool).

**Section III: Create incentive for LEA environmental literacy planning:** This section of the instrument will be difficult to ground in "truth". While there was general consensus among the respondents about not requiring evidence for each of the elements, without that documentation there is no way to verify the status of the elements of the district's environmental literacy plan. Some LEA contacts suggested that the ratings for elements become "yes" or "no" responses. As a compromise we are recommending modifications to the language and format to simplify the process (see Section III of the revised tool). Additionally, there needs to be meaning (incentive for the LEA) for showing improvement or indicating a plan to show improvement. A discussion about how to use these data to reward districts for making progress could be part of developing the state action plan.

**Support continuous improvement efforts through a technical assistance plan:** The respondents that were part of this feedback process were more inclined to support a plan for focus group type webinars with their colleagues than site visits by a "ground truth" team. They indicated that learning and problem-solving with others who have similar challenges would be valuable if those discussions were well-orchestrated. This type of discussion in advance of this first administration will be critical. In the off years following baseline data collection, these discussions could be a mechanism for developing buy-in and giving something back to the LEA contacts who are taking on the task of completing the *Environmental Literacy Indicator Tool.*

As the CBT-NOAA Chesapeake Bay Program team moves forward toward adoption of this instrument, it would be useful to consider these recommendations for the final instrument and for planning roll-out in spring 2015.