

Governor Martin O'Malley's  
**Maryland Partnership for Children in Nature**

**Joseph P. Gill, Chair**  
Secretary, Maryland Department of Natural Resources

**Lillian M. Lowery, Ed.D., Chair**  
State Superintendent of Schools, Maryland State Department of Education

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**Memorandum**

Date: December 16, 2014

From: Frank Dawson, Deputy Secretary, DNR, on behalf of the Maryland Partnership for Children In Nature

To: Co-Chairs, Maryland Partnership for Children In Nature:  
Joseph P. Gill, Secretary, Maryland DNR; and  
Lillian M. Lowery, Superintendent of Schools, Maryland State Department of Education

Re: Environmental Literacy Recommendations

I am sending this memorandum at the request and on behalf of the Maryland Partnership for Children In Nature – a statewide coalition involving 16 state, federal, and county agencies, school system representatives, and non-government organizations created to support State environmental literacy efforts by evaluating and providing recommendations on existing state programs, facilitating effective public-private collaborations, and implementing initiatives to overcome barriers to successful implementation. The memorandum recounts the background of the Partnership and memorializes the next steps that we have discussed with each of you for purposes of transitioning the Partnership's work to the incoming Administration of Governor-elect Larry Hogan.

Providing connections to nature for our youngest citizens is a wise investment in their future and that of our state. Numerous studies show that spending time in the outdoors and/or viewing nature has wide-ranging health and societal benefits, as it improves motor skills and promotes healthy activity; increases student achievement in science, mathematics, and English/Language Arts; increases self-discipline and leads to better life choices; and addresses a host of health problems such as ADHD, diabetes, obesity, asthma, heart conditions, stress, and sleep problems; and teaches life skills. Children with regular access to the outdoors have better skills in problem-solving, critical thinking, and conflict resolution – all important for real-world achievement, career readiness and innovation. Therefore, providing connections to the outdoors also benefits our economic health by reducing costs for health care and law enforcement/correctional services, and prepares our young people for 21<sup>st</sup> Century careers. Exposure to the outdoors and to new recreational activities, expanding a child's view of the world and opportunities available, can open doors to new career and life choices, benefiting the individual and potentially increasing workforce diversity in science and related fields.

We can and have accommodated these needs by working in two key areas: through our formal education system and its many partners, and through community planning and programs.

Maryland has a very long history of establishing and successfully implementing a variety of initiatives that have served to advance the environmental education of students in grades pre-K through 12. Maryland stands in the region and the Nation as a leader and an exemplar of achievement in this area, with a statewide Environmental Literacy Program that is well underway and growing:

- Maryland's bold action to greatly increase outdoor learning experiences for the state's youth and to elevate the role of environmental education resulted in adopting a statewide Environmental Literacy Graduation Requirement – the country's first. By spring 2015, the first milestone will be reached: certification that programs are in place in every school system.
- 20% of Maryland's schools have been awarded Green School status to date for their comprehensive best practices and student actions. The Maryland Green School program is one of the oldest, most rigorous and successful state programs in the nation.

- Schools are implementing STEM learning (Science, Technology, Engineering and Mathematics) throughout the curriculum; STEM and the newly adopted Next Generation Science Standards are proving a good fit for statewide progressive multidisciplinary integration of environmental literacy, all in support of Maryland College and Career Readiness standards.
- Maryland has begun to develop its management strategies to help achieve all of the environmental literacy outcomes outlined in the new 2014 Chesapeake Bay Watershed Agreement (Bay Agreement). A large network of formal educators and non-formal environmental education providers are working together to support these and other initiatives, raising the rigor and frequency of student outdoor learning experiences, providing increased opportunities for professional learning, and engaging school communities in practices toward healthy and sustainable schools.
- Public lands throughout the state, whether Maryland State Parks or other designated Natural Areas, or local/county/municipal parks, provide places to go to experience natural resources first hand. Staff at these facilities are partnering with schools to increase meaningful outdoor environmental education experiences for students at the parks, to help schools meet their environmental literacy and other curricular requirements. And both state and local agencies are prioritizing ways to provide, manage, and preserve more natural areas at their facilities.

Yet even with such laudable achievements, there are still barriers to the full realization of the State's long term vision for its citizens of all ages, and to fulfillment of the Environmental Literacy goals and outcomes committed to under the Bay Agreement. These barriers can be overcome through policy, budgetary and operations decisions as recommended below by the Maryland Partnership for Children In Nature ("the Partnership").

*A critical component of environmental literacy programs, and one which the Partnership emphasizes, involves connecting students to nature for hands-on, meaningful outdoor learning experiences. Maryland has traditionally done well in this area, though more efforts are needed, as all new mandates call for increases to serve every student.* To make a significant impact on providing students with effective outdoor experiences will require an enhanced level of cooperation and interaction among traditionally disparate entities. Innovative partnerships among agencies at the State, local, and even Federal levels will need to bring to bear resources that exist but which need to be reallocated and/or redirected to support educational initiatives while also meeting agency goals. This presents an opportunity to work cabinet to cabinet to develop creative solutions (e.g., transportation working with education and environment) that will improve efficiencies and combine fiscal and staff resources for improved outcomes. Solutions for high achievement toward environmental literacy, just like every aspect of life, require crosscutting strategies and involvement of a variety of disciplines.

The Partnership's work has highlighted gaps or needs commonly faced by schools and communities that must be filled in order to better reach the intended outcomes statewide. Areas of focus noted here are in support of school environmental literacy and other education requirements, and helps meet the specific environmental literacy outcomes of the [2014 Chesapeake Bay Watershed Agreement](#). In addition, the Partnership is responsible for addressing ways to connect children and families to nature in their communities, further contributing to developing environmentally literate citizens and improving quality of life. Because schools and school grounds are considered a community resource, these efforts can be considered contiguous and complementary. Solutions may include filling funding gaps as well as changing policy or practices.

#### **Recommendations / Priorities –**

- **Increase transportation for students to experience natural areas away from school grounds:** Many schools do not have adequate opportunities onsite to provide meaningful outdoor environmental investigations; and a visit to a truly natural setting has additional benefits. Most schools have locations within close proximity to provide these experiences, though transportation is required. Lack of funding and administrative support for off-site outdoor experiences is commonly reported as a pronounced gap in implementing environmental literacy programs. In order to take advantage of these opportunities, additional means for transportation, primarily funding, needs to be made available (or redirected from existing sources) in addition to changing school policies to allow and support off-campus field experiences. This in turn must be supported with teacher professional development to lead field experiences and/or support them instructionally.
- **Increase opportunities for students to engage in outdoor environmental investigations on or near school grounds:** This contributes to the overall goal of achieving sustainable schools, including the building, grounds, and daily habits among the school community. Expanding opportunities on school grounds for students to engage in

outdoor environmental investigations will both increase the frequency of outdoor learning and alleviate some of the cost of offsite transportation. In urban settings where green space is limited, this is a particular benefit as well as a challenge; though it is needed in all settings. This can be accomplished by reconfiguring school grounds to include natural features as outdoor study areas, and incorporating the design process and use of these areas into student instruction. A necessary and beneficial component of providing these areas involves establishing partnerships with natural resources professionals, departments of public works, and others, to engage students in design, installation, and use of on-the-ground projects on or near school grounds. Examples may include stormwater facilities, wetlands, or reforestation areas – serving student learning needs as well as fulfilling environmental management or remediation requirements. In addition, best success in instruction has been achieved when schools connect the outdoors to the practices used indoors. Modeling sustainable practices at school teaches personal responsibility for conserving our resources that can be continued at home, and provides proven ways to save money and improve efficiency in our schools. As with the above, this effort should be supported and complemented by teacher professional development.

- **Enhance professional development of teachers to support environmental literacy initiatives:** Because many of our teachers have not been prepared to conduct lessons on environmental topics or in an outdoor setting, there is a need to provide, enhance and/or increase available opportunities for professional learning for in-service teachers. Funding and administrative support is needed to provide professional development sessions (including to support staff from partner entities to conduct them), release time for classroom teachers, substitute teachers and/or summer stipends. A portion of this need is met through school budgets and outside grants, though more could be earmarked for environmental programs, and could be implemented over multiple years. To improve teacher preparation (future teachers earning degrees in education) in these areas, a collaborative, integrated effort is needed to incorporate environmental learning into teacher pre-service programs at institutions of higher education.
- **Provide access to green space -- safely walkable from home or school -- for every child in every community:** Focus more resources and attention on providing access to green space for all – positioning greenscapes as a more essential infrastructure component, as with roads and utilities. Nature is valuable to human well-being and quality of life, in particular to early childhood/ child development, and nature experiences are conducive to learning on a variety of levels. Innovative, progressive, collective means are needed to support acquiring, developing or enhancing green spaces, including in urban areas that will serve the surrounding community. Green space is defined as / includes areas for free play, trails, natural areas, natural features, nature play spaces (alternative playgrounds using natural materials); and could include schoolyards and community vegetable and flower/native plant gardens. Access is intended as unobstructed ability to safely reach and use a park or other green space, equally available within all communities. Where parks and recreation facilities exist, natural features can be emphasized more, and use of facilities expanded for teacher professional development and outdoor educational experiences for students, as well as for enhanced after school and summer programs for youth and families. These programs would contribute to a healthy sense of community for its residents.

The Partnership for Children In Nature has been working to identify possible specific policy and funding solutions for these priorities, and we look forward to collaborating with new leadership at the state level to determine feasible strategies. We encourage continued support of the Partnership, perhaps renewing under a new Executive Order and considering elevating its role to one with a higher level presence in the Governor's Office. The strength of the Partnership lies in its collective experience and the diversity of entities involved, including non-government organizations with added value toward efficiently advancing our efforts. We plan to further increase and expand innovative partnerships in pursuit of advancing these priorities, identifying shared goals as well as policy mechanisms and opportunities to connect partners. We will advocate for efficient use of funding that can accomplish multiple outcomes, potentially recommending redirecting funds from sources with shared outcomes, for example, supporting schoolyard greening and providing incentives for projects via the school construction program; engaging state transportation funding to support student transportation for field experiences; or tapping stormwater programs as a source to fund and implement on-the-ground projects engaging students, that will also create readily available outdoor learning areas for future instructional use while serving environmental goals.

Further, because Maryland is well-established as a model for successful environmental education as well as for collaboration among government and non-government entities, we would encourage state leaders to take an intentional regional leadership role in this area. This may assist us in leveraging additional resources to further advance our goals. The Chesapeake Bay Program is a ready arena for this. The Partnership has played and will continue to play a key role in developing and implementing required management strategies to achieve the Bay Agreement's outcomes. To ensure

improved implementation Bay-wide, we recommend bringing leadership level participants into the ‘conversation’ from education agencies/authorities in the other jurisdictions in the watershed (Bay Agreement signatories). Chesapeake Bay Program work currently has staff level participation in education, but would benefit from involving higher level decision makers with the authority to implement change. Maryland, serving as a leader, could convene a regional meeting of leadership, with high level education representatives from Bay jurisdictions. Mirroring this elevation of education leaders at the state level, an additional suggestion is to add the State Superintendent of Schools to the Bay Cabinet. These efforts will serve to further align Maryland priorities with those of its Federal Government partners who have “connecting people with nature” among their priority goals.

The Maryland Partnership for Children In Nature encourages you to offer these ideas to the new Administration in your documents and communications. We would welcome the opportunity to brief Governor’s Office staff on our goals and actions, to establish new priorities for 2015 and beyond, and to work together to identify innovative and creative solutions in these areas.