



Larry Hogan, Governor
Boyd Rutherford, Lt. Governor
Jeannie Haddaway-Riccio, Secretary

December 30, 2020

The Honorable Larry Hogan
State House, 100 State Circle
Annapolis, MD 21401

Re: Submission of Maryland Project Green Classrooms Initiative
Agency: Maryland Department of Natural Resources
Report Authority: Executive Order 01.01.2017.12 E (6), MSAR 11837

Dear Governor Hogan:

In accordance with Executive Order 01.01.2017.12 E (6), MSAR 11837 the Maryland Department of Natural Resources hereby submits the attached report regarding the annual progress report and recommendations for the project green classrooms initiative.

If you would like any additional information or should you have any questions regarding this report, please feel free to contact me or James W. McKittrick, DNR's Legislative Director, at 410-260-8112 or via email sent to at jamesw.mckittrick@maryland.gov.

Sincerely,

Jeannie Haddaway-Riccio
Secretary

Attachment

cc: Sarah Albert (5 copies)

Maryland Project Green Classrooms Initiative Annual Progress Report and Recommendations – January 2021

The statewide Project Green Classrooms (PGC) initiative was established in June 2017 by Governor Larry Hogan's [Executive Order 01.01.2017.12](#). The executive order directs the Maryland Department of Natural Resources (DNR) to provide an annual report to discuss PGC's activities and make recommendations to advance the priorities of the initiative.

BACKGROUND

The executive order identified a coalition of government agencies and nonprofit partners to ensure that Maryland's youth experience, understand, and learn to conserve the natural environment. The initiative was established to promote outdoor activities and environmental education in schools, communities and on public lands to benefit Maryland's young people. The membership is more diverse and robust than previous efforts, presenting new and exciting opportunities to work more effectively across state government and with our public and private sector partners.

Responsibilities

The following initiatives' responsibilities are specified in the executive order:

- Recommend and facilitate statewide actions needed to meet established priorities, convening partners to address gaps, recommending realignment of resources such as funding and improvement of coordination among and across public and private programs to efficiently advance outcomes;
- Develop recommendations to help shape state policy and stakeholder practices to address barriers, needs and opportunities identified by the initiative; and
- Broaden engagement of stakeholders in the initiative's work and help establish the tools and resources necessary to advance the work of the group.

Focus Areas

The PGC initiative is an advisory body tasked with making recommendations to state decision-makers in three main areas including:

1. Supporting environmental literacy programs in schools;
2. Increasing access to nearby nature; and
3. Promoting the use of the outdoors for learning, discovery, healthy play and career exploration.

PGC has been working collectively to identify gaps and barriers and develop solutions that will bring about change in these areas.

Defining Green Classrooms

The term "green classrooms" is used by the group in its broadest sense to mean all opportunities to learn, discover and experience the environment and natural resources in Maryland. This includes both indoors and outdoors; during normal school day hours and outside of the school; at home and in the community.

Outdoor experiences are critical to learning about the environment, developing empathy and encouraging environmental stewardship. While outdoor experiences should be foundational to academics, child development and wellness, opportunities continue to be lacking for our youth. Going forward, PGC will focus additional efforts on bridging gaps to support academic achievement and wellness.

RECOMMENDATIONS:

In June 2019, PGC submitted the following recommendations to the governor:

1. Support converting the existing Environmental Literacy Program Specialist position at the Maryland State Department of Education (MSDE) from a contractual to a permanent position.
2. Develop and promote guidance to local education agencies on environmental literacy programs, identify effective professional development components and support implementation.
3. Prepare pre-service teachers to facilitate environmental literacy learning with Maryland students.
4. Establish a sustainable schools team at the state level to support school districts in developing and implementing sustainability plans.
5. Identify public and private funding sources to support field-based outdoor educational experiences for students at public lands (such as local, state, and federal parks, forests, natural areas, and reserves) or other nature-based sites away from school campuses.
6. Establish a panel or other means to identify and invest in a sustainable model of environmental education implementation at our parks.
7. Address equitable access to parks and green space, working with communities.
8. Establish formal policies that encourage and facilitate all public and private early learning facilities to designate space for children to interact with nature.
9. Identify how best to include health considerations into all programs and services for children/youth/families.
10. Direct, encourage and guide intentional coordination among PGC and a variety of existing state boards, commissions and other entities.

Action Plan

Annual plans have been developed to guide PGC's work, and the plans used to help keep track of the many collaborative efforts through each year. Because this group functions as the primary means for Maryland to implement its commitments under the Environmental Literacy Goal of the [2014 Chesapeake Bay Watershed Agreement](#), it has become more efficient to align the PGC workplan primarily to the two-year environmental literacy action plan, developed by PGC as part of the regional process and submitted to the Chesapeake Bay Program. The partners worked throughout much of 2020 to develop an updated work plan that serves the regional strategy and that addresses the 2019 Recommendations and associated needs throughout all of the actions. The resulting [action plan](#) for 2021-2022 outlines specific, actionable items to advance work in all of the priority areas. At the root of these actions are the following questions:

1. *Does every child in Maryland have the means, access, opportunity, knowledge, support, encouragement, desire and inclination to play, explore and learn outdoors – both during and outside of the school day?*
2. *What can be done to increase the time youth spend outdoors during and outside of the school day?*
3. *Do enough places exist to experience nature, are they sufficient and are they in the right locations? Can they get there?*
4. *How can we do more to build good stewards for the 21st century and prepare youth for life and careers?*
5. *What are some avenues of outreach and additional best practices that can help with all of the above, while also intentionally increasing equity and inclusion of young people in all communities?*

The recommendations and the action plan collectively support PGC's priorities in meaningful ways and are designed to create a pathway to more efficient and effective implementation. By engaging and cutting across multiple disciplines, we can coordinate resources and provide increased benefits for Maryland youth.

Implementation

Simultaneously with planning for future efforts, the PGC partners have been working to implement current commitments and the recommendations through the appropriate entities. In the remainder of this report, each recommendation is listed along with brief information about the actions and implementation strategies undertaken in 2020. The [full set of recommendations](#) as submitted in 2019, including supporting information on the goals and rationale for each, can be reviewed in the 2019 report, accessed through the [PGC website](#).

PGC has also continued to work toward the numerous actions supporting Environmental Literacy under the Chesapeake Bay Agreement and other statewide needs as they are identified. Achievements in 2020 on this ongoing work are also summarized in this report in the section outlining committee activities.

1. Environmental Literacy Programs in Schools

RECOMMENDATION: *Support converting the existing Environmental Literacy Program Specialist position at MSDE from a contractual to a permanent position.*

The state should support converting the existing Environmental Literacy Program Specialist position at the MSDE from a contractual to a permanent position during the next fiscal year. This position is critical to the state's achievement of its commitments under both the Chesapeake Bay Watershed Agreement and the governor's Executive Order for PGC. It plays a necessary role in ensuring local education agency support and implementation of the Environmental Literacy Standards (a graduation requirement). Experience in neighboring states shows that without this position, success and growth in these areas suffers.

PROGRESS: **This recommendation has been achieved.** MSDE converted this to a permanent position in November 2019 and hired a new specialist to begin work in February 2020.

2. Environmental Literacy Guidance to Local Education Agencies

RECOMMENDATION: *Develop and promote guidance to local education agencies on environmental literacy programs, identify effective professional development components and support implementation.* MSDE should develop and promote guidance for local education agencies on what constitutes a "comprehensive, multidisciplinary environmental education program infused within current curricular offerings," as outlined in the Code of Maryland Regulations (COMAR). MSDE should also identify effective professional development program components and support implementation by local education agencies by:

- Providing models
- Sharing information on funding opportunities
- Recommending partners
- Highlighting existing and available professional learning opportunities
- Identifying resources for both classroom-based and field-based educators

PROGRESS: **This recommendation is underway.** In May 2020, the revised Environmental Literacy Standards were presented to the state Board of Education and were adopted. To support implementation of the Environmental Literacy standards, an instructional framework is being developed to provide local educational agencies with interdisciplinary connections for whole school community implementation. In cooperation with PGC partners, MSDE will then conduct professional learning focused on implementation of the standards and framework with an emphasis on the benefits of having a comprehensive, effective Environmental Literacy Plan to improve communication and consistency of elements.

In collaboration with the Chesapeake Bay Program (CBP) Mid-Atlantic Environmental Literacy Workgroup, during spring 2020, the *Facilitators' Guide to Meaningful Watershed Educational Experience (MWEE) Trainings* was converted into an online course, referred to as MWEE 201. This course is more in-depth than the existing introductory "101" course and walks participants through the process of completing their own Environmental Literacy Model (ELM). Emphasis is placed on planning and conducting outdoor investigations and incorporating student voice and choice. At the completion of MWEE 201, participants will upload a completed, and self-audited ELM. The course is currently live and some groups have started using lessons/parts with their virtual teacher trainings. Additionally, the course will become registered with MSDE to provide one continuing professional development (CPD) credit for its completion.

3. Preparation of Pre-Service Teachers

RECOMMENDATION: *Prepare pre-service teachers to facilitate environmental literacy learning with Maryland students.* Pre-service teacher requirements should include preparation for Maryland teachers to support students on their journey toward environmental literacy. It is recommended that relevant entities incorporate an environmental literacy pre-service component into teacher education curricula at Maryland higher education institutions. This may include infusing effective content into coursework in different disciplines, creating credential opportunities and adding environmental literacy to certification requirements and regulations.

PROGRESS: This recommendation is underway. PGC formed a committee that is pursuing implementation of this recommendation, both to meet PGC priorities as well as to contribute to actions under the Chesapeake Bay Agreement Environmental Literacy Goal's Student Outcome. The group is researching the process of and authorities for setting teacher certification requirements, to determine if the group can affect appropriate change in the requirements and/or in associated pre-service preparation program content.

Simultaneously, the committee is working with institutions of higher education (IHEs) to share best practices and build course content among interested teacher preparation program faculty and partners. A first step in this process was to host a gathering of members of the broader professional community to discuss the situation and exchange ideas for solutions. This was held June 18, 2020 as a virtual meeting. Participants were asked about skills teachers need in order to facilitate environmental literacy learning, gaps and barriers, potential solutions, and other stakeholders to include to help implement solutions.

Beginning fall 2020 and continuing through 2021, work will progress on a guidance document to help inform environmental literacy instruction in teacher preparation programs, and it will align with the Maryland Environmental Literacy Standards framework. Participants from the June 2020 convening will be invited to contribute to the document through small committee work and/or review of a draft when ready.

4. Sustainable Schools

RECOMMENDATION: *Establish a sustainable schools team at the state level to support school districts in developing and implementing sustainability plans and sharing statewide best practices as an important component of environmental literacy.*

The sustainability plans should guide schools to gain environmental benefits by aligning to the three pillars of the U.S. Green Ribbon Schools program:

- Conforming to green standards
- Benefiting the health of students and staff
- Complementing and supporting the academic curriculum

This will assist the state in achieving its goals under the Chesapeake Bay Watershed Agreement, the Maryland Greenhouse Gas Reduction Plan and Maryland's Climate Adaptation plans by increasing the number of sustainable Maryland Green Schools. It will also support the goal of the Maryland Association for Environmental and Outdoor Education to go from 25% of Maryland schools certified to 50% by the year 2026.

The sustainable schools team should consist of individuals who can advise in the various disciplines applicable to the three pillars such as facilities and maintenance, health and wellness, curriculum and instruction, contracting, and budgeting. It would likely include partners from agencies and organizations outside of the formal school system and it would work in coordination with the Interagency Commission on School Construction and the School Safety Commission. A team at the state level would have the ability to assess practical measures and establish guidance and would serve as a model for teams at the local level to improve implementation.

PROGRESS: This recommendation is underway. During a 2019 briefing on all PGC recommendations, the Chesapeake Bay Cabinet noted that the sustainable schools work offered the most opportunity for cross-disciplinary collaboration among the agencies. Maryland's Bay Workgroup worked with the sustainable schools committee to identify agency contacts and will provide an avenue for reporting to the Bay Cabinet.

The convening of a multi-disciplinary group is being planned for early 2021 and will consist of state agency representatives and stakeholders covering diverse areas of expertise ranging from facility management, curriculum integration, health matters, habitat and water quality restoration, budget and finance. The team will examine effective drivers, incentives, and guidance that could be put in place to facilitate and increase sustainable practices in schools and contribute to student environmental literacy programs. PGC's sustainable schools committee has prepared background material and a list of suggested participants to use for inviting participants.

The Maryland Department of Planning (MDP) is the lead state department for this recommendation. An MDP intern gathered information regarding connections between student and school sustainable practices, state plans,

related policies and goals (such as the Chesapeake Bay Watershed Agreement, Maryland's Greenhouse Gas Reduction Plan, and Maryland's Climate Adaptation Plan), and identifying co-benefits that can be achieved.

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. Beginning in FY21, the act authorizes roughly \$270,000 in grants per year for six years (a total of \$1.6 million) to support environmental learning and student action projects. Eligible items include teacher professional development, transportation to and from outdoor learning experiences for students, outdoor classrooms, and student conservation/stewardship projects. The act will assist with implementation of this recommendation by providing resources and encouraging administrative support to institute sustainable practices and achieve certification.

5. Funding For Outdoor Learning Experiences

RECOMMENDATION: *Identify public and private funding sources to support field-based outdoor educational experiences for students at public lands (such as local, state, and federal parks, forests, natural areas, and reserves) or other nature-based sites away from school campuses.* The state should consider identifying private and public funding sources to support a field-based outdoor educational experience for students in at least one grade level in each school district at public lands (such as local, state, and federal parks, forests, natural areas, and reserves) or other nature-based sites away from school campuses.

PROGRESS: This recommendation is underway. A committee was convened to determine a basic cost analysis and to enumerate the magnitude of need for funding statewide. Information from key environmental education funders, including the Chesapeake Bay Trust and the National Oceanic and Atmospheric Administration, was compiled to identify a preliminary cost for student outdoor learning experiences as part of the MWEE. The next step is to ground truth and refine the cost calculations through consultation with school districts.

A discussion with district science and environmental literacy supervisors in late 2019 has driven a need to clarify questions so that responses will be comparable. In 2020, the committee planned to develop an effective tool to guide the inquiry and analysis, and to work with the district contacts to gather information about current experiences, costs, needs, and gaps. This data will be used to help quantify needs statewide and assist with future specific funding requests. This task has transitioned to one that is being led as a regional effort with the Chesapeake Bay Program's Environmental Literacy Workgroup. A survey draft was started in early 2020, however, school closures and continual upheaval with schools due to the pandemic has stalled this project through the end of the year. It has been added to the new two-year workplan and will be re-started in 2021.

The CBP conducted its 2019 ELIT Survey with assistance from MSDE. All 24 Maryland school districts submitted responses characterizing their progress toward fully implementing systemic environmental literacy programs. Data collected was reviewed and compiled, and has been used by agency partners to better understand progress and help determine needs statewide. This information is helping to inform funders for strategically targeting districts and grade levels that currently lack programming and to increase offerings to students. It is helping funders to work together in a more coordinated manner so that various funding programs can complement each other and help to collectively provide effective support to close gaps.

6. Environmental Education Experiences on Public Lands

RECOMMENDATION: *Establish a panel or other means to identify and invest in a sustainable model of environmental education implementation at our parks.* The state should establish a panel to examine how our parks might be utilized more effectively to support environmental literacy. The panel should identify a sustainable model and consider ways to pair natural resources professionals with environmental educators from nonprofits, universities and other relevant partners. Training should be included in the model to assure that program offerings are aligned to the needs of our schools and are thus more effective. The model should also identify options for funding to support and sustain the model long term, benefiting all involved partners.

PROGRESS: This recommendation is underway. The Maryland Park Service, a unit of the DNR, is taking steps to implement this recommendation. MPS has planned an internal analysis of existing environmental education efforts on public lands, highlighting its most successful programs that can offer replicable components. DNR educators will work with MSDE to identify where school district needs and interests align with opportunities to grow environmental education efforts. The analysis will ultimately lead to a strategy for expanding

environmental education, improving marketing and schools' awareness of existing programs, and reaching out to potential partners to assist with enhancing program offerings. Initial efforts began in early 2020, with DNR education and parks staff collaborating, and state parks interpretation and education staff were engaged in a discussion about their needs and capabilities regarding schools. This was to inform a draft strategy toward this recommendation. However, the parks staff discussion occurred a week before the COVID shutdown and parks have seen record numbers of visitors throughout the remainder of the year, pulling staff away from progressing on this plan. The draft strategy work will be revisited in 2021.

7. Equitable Access to Green Space

RECOMMENDATION: *Address equitable access to parks and green space, working with communities.* The state and its partners should identify and promote existing incentives and help communities prioritize projects that establish and maintain equitable access to parks and green space. This includes developing, sharing and using available federal, state and local resources to identify gaps and best practices and engaging community members in the planning process. Special emphasis should be placed on efforts for communities that historically have had obstacles connecting to open nature spaces.

PROGRESS: This recommendation is underway. DNR worked with the University of Maryland School of Public Health to reevaluate and relaunch the Maryland Park Equity Tool. The revamped mapping and decision-support tool is based on an updated model and incorporates active and passive recreation data for parks statewide. In 2020, the 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. In 2021, the tool will continue to be made available to local partners as we identify ways to bring more parks and green spaces to identified park-poor areas. Use of the tool with students is also planned. DNR continues to evaluate internal policies and practices that can further implementation of this recommendation. Staff continues to identify possible opportunities for effective changes and presented them to agency leadership in 2020.

8. Outdoor Play and Learning Environments

RECOMMENDATION: *Establish formal policies that encourage and facilitate all public and private early learning facilities to designate space for children to interact with nature.* The state should establish formal policies that encourage and facilitate all public and private early learning facilities to designate space as an enhanced outdoor play and learning environment. The designated space should include features that allow interaction with nature and related activities to benefit children's health and well-being. Guidelines for a high quality outdoor learning environment should come from well-established local and national leaders such as the U.S. Forest Service, National Wildlife Federation and Natural Learning Initiative collaborative. This can be facilitated through leadership direction, guidance materials, identifying and promoting funding resources, establishment of partnerships and other support.

PROGRESS: This recommendation is underway. PGC has added [guidelines and tools](#) to its website that support early childhood outdoor natural learning environments. Additional efforts are underway to determine needs and opportunities for policies and practices that will increase nature connections at early learning facilities. PGC's Nature Play Spaces committee hosted a Chesapeake Outdoor Nature Play workshop in October 2020 on the topics of design, maintenance, addressing "green fear" (among caregivers, teachers) and how to use outdoor spaces in the time of COVID-19.

In addition, the committee will continue to work with the National Wildlife Federation to explore establishing a funding and guidance program for early childhood outdoor learning spaces in Maryland as part of a statewide partnership. In 2021, the committee will continue to compile guidance on establishing and using outdoor classroom and play spaces for both play and COVID safety.

9. Improve Connections to Health and Wellness:

RECOMMENDATION: *Identify how best to include health considerations into all programs and services for children/youth/families.* The state and its partners should identify how best to include health considerations in all programs and services for children, youth and families. This involves the broad school community as defined by the [2006 Maryland Nutrition and Physical Activity Plan](#) and encompasses the full spectrum of learning institutions at all levels as well as family and community settings. An accompanying resource portfolio should be created that

includes information around physical and mental health benefits of nature-based recreation and made available in an accessible format. Special emphasis should be placed on schools and communities with lower levels of outdoor activity.

PROGRESS: This recommendation is underway. A draft resource portfolio was developed in 2019, and shared at the October 2019 PGC meeting. It includes a summary of the scientific evidence of the many benefits of nature to academics, mental and physical health, and other topics related to children; and resources for outreach and building awareness. A section outlining existing policies that support outdoor time awaits completion, and a section is to be added that features a 'white paper' style article on the health benefits of outdoor time that will draw from the scientific evidence references. An additional section may be added in the future to highlight pilot efforts in two school districts (Anne Arundel and Montgomery Counties) to make green space available in schools as a means to enhance student wellness (e.g., to serve as de-escalation or calming areas and to benefit behavior and readiness to learn). Lessons learned from these districts can contribute to formulating guidance or shared resources so similar practices can be deployed at more schools, and potentially to inform future recommendations on possible changes to policy or practice on a larger scale. The ultimate goal of this project is to use the resulting portfolio as a means to build support for outdoor time in various settings, align practices with health goals and highlight the need for and opportunities for changes in guidance, practices, and policies.

This is an ongoing project, and next steps include adding the noted sections to complete the guide and making it available through the PGC website. Progress on this has been stalled in 2020 due to changes in staff at the Maryland Department of Health who were serving as leads on this project, followed by the coronavirus pandemic that has understandably usurped the attention of MDH. Likewise, schools' efforts in this area have been stalled. The project was included in the new 2021-2022 work plan and will be completed when feasible.

10. Coordination Among Complementary Groups

RECOMMENDATION: *Direct, encourage and guide intentional coordination among PGC and a variety of existing state boards, commissions and other entities.* PGC should coordinate intentionally with existing state boards, commissions and other entities to integrate implementation of complementary goals and plans and share resources, as appropriate. Entities involved may include the Maryland Climate Change Commission, the Maryland Outdoor Recreation and Economic Commission, and other groups that assist and support sustainable schools actions as identified in the original recommendations.

PROGRESS: This recommendation is underway. All of the aforementioned organizations have played a role in the work of PGC. Partners have either participated in, consulted with, or become informed about these other groups and initiatives. Wherever feasible, partners have actively shared information and resources to achieve co-benefits as effectively and efficiently as possible. Actions, commitments, and participating partners are shared among PGC, the CBP Environmental Literacy Workgroup and the Maryland Climate Change Commission resulting in cross-programmatic and mutual strategies.

ADDITIONAL STRATEGIES AND ACCOMPLISHMENTS OF 2020 (Committee Activities)

A large portion of PGC's work is centered around the recommendations. The standing committees are pursuing the recommendations as noted above, and a significant amount of ongoing work continues, addressing the Bay Agreement actions and other identified needs. This work is described here.

Each standing committee is led by a steering committee member. The committee membership also includes other steering committee members, partners and interested parties outside of the official membership. The work plan and work of the committees is approved annually by the Voting Members (state agency heads or their representatives), and updates are presented at the two full membership meetings held annually.

The standing committees continually strive to address barriers and challenges by identifying solutions and actions to affect change. Intentional efforts are made throughout all of their work to infuse recommendations for inclusivity, agriculture and health and to explore possibilities for funding. All of the strategies have multiple components that are cross-cutting, with strong coordination to prevent "silos."

The standing committees are as follows:

Environmental Literacy and Learning Outdoors

[Committee led by MSDE]

Partners are engaged in many ongoing activities that support environmental literacy programs in schools. As a main driver this year, this committee has been working to elevate connections between multiple content standards and the Environmental Literacy standards to recommend best instructional strategies to target student achievement and environmental stewardship in Maryland. Critical to this goal is networking key stakeholders and increasing their capacity to integrate environmental learning across disciplines, with the expectation that outdoor learning experiences are fundamental. This work entails actions such as guiding professional learning, advising instructional content, or recommending best practices. Stakeholders include but are not limited to: (1) higher education entities preparing or certifying pre-service teachers, or classroom based educators serving as mentors for interns and environmental-related departments (environmental studies, conservation, agriculture, etc.); (2) field and classroom-based educators; (3) curriculum writers and program developers; and (4) administrators at various levels.

- PGC partners are working with Baltimore City Public Schools to maximize use of outdoor spaces during hybrid learning models due to COVID-19 restrictions. This includes professional learning for teachers to increase their comfort teaching outdoors and identifying best practices for keeping students safe while also engaging students in content instruction. Lessons learned may be able to be shared with and replicated in other areas.
- The environmental education professional community has worked hard throughout the pandemic to provide support for schools in pivoting to virtual learning experiences that can contribute to environmental literacy in new ways, even while students can't come together in person. Some innovative new practices and tools have resulted, such as creating interactive platforms that help students visualize natural spaces, participate in monitoring water quality, and share environmental messages with others. These will be used to enhance learning even once schools are back to in-person learning. These efforts have served to strengthen partnerships.

Sustainable Schools

[Committee led by MDP]

Sustainable schools efforts connect conservation practices, health and wellness policies and real-world student stewardship experiences with the schoolyard and the school building as learning laboratories. Partners aim to increase the ability of schools to utilize their buildings and grounds as a means for authentic hands-on learning and a place to practice stewardship toward an eventual culture shift to embrace practices at school and in the community that benefit the environment and human health.

While Maryland is a regional leader in sustainable schools programs, including Maryland Green Schools, Eco-Schools, and the U.S. Green Ribbon Schools Program, there is still a long way to go before benefiting students at every school. The efforts of this group strive to support exponential growth in this area. PGC partners continue to support sustainable schools efforts through professional learning; sharing guidance, information, instructional resources, and project examples; and increasing awareness of funding sources -- to help schools link their buildings and grounds to curriculum in environmental literacy. The sustainable schools committee is working to identify the means to encourage and facilitate higher level support for planning that will help to scale up efforts to involve more schools throughout a school district. The committee work has been focused primarily on preparing background material and identifying co-benefits of multiple state efforts, and to convene a stakeholder group to inform implementation of the sustainable schools recommendation. The committee's work also includes planning, supporting and tracking Maryland's actions under the Chesapeake Bay Watershed Agreement Environmental Literacy Goal - Sustainable Schools Outcome.

Healthy Outdoor Time / Wellness

[Committee lead to be determined]

Through partnerships, programming and technical support, partners work together to encourage healthy outdoor play and learning for all children in Maryland. Health benefits for children are maximized when their outdoor environment is safe and healthy and there is equitable access. More benefits can be realized when planning

considers the needs of all children within the context of health and community safety. The committee strives to increase awareness of the value of active time outdoors in nature settings for health, wellness and academic success. By combining knowledge, planning and data tools available among the partners we can maximize benefits and success. The committee will also work to promote and guide development of safe and inclusive outdoor programming and activities, providing recommendations and guidance resources for educators, caregivers, facility managers, local planners and others; identifying areas of need in Maryland; and considering avenues to address challenges. These actions overlap with and require coordination with multiple PGC committees. This year, the committee has been responsible for:

- Developing the resource portfolio noted above and making it available online through PGC's website so that others can use it to build awareness and identify opportunities to change practices and/or policies as appropriate.
- Keeping abreast of pilot efforts among schools/ school districts to test feasible practices to make green space available to students as part of a whole-child wellness approach and tool for behavioral solutions, trauma-informed care, and to serve needs of different learners; and facilitating how the professional community shares lessons learned to encourage replication, and used them to help inform future development of these practices.

Access to Nature

[Committee led by the MDOT]

To increase children's access to nature, the committee works together to find synergies and develop a set of guidance materials that outline methods and resources for successfully getting children to nature, both during and outside of school hours. Each of the partners have various programs, funding sources, data and mapping resources that can be used to help advance children's access to nature, but they have typically worked independently of one another. By identifying potential collaborations, the partners are working more efficiently and effectively in administering current programs; communicating to teachers, administrators and parents about how to take advantage of these programs; identifying where resources are still needed; and exploring mechanisms across programs to carry out effective solutions.

- A GIS story map, "[Get Kids Outside in Maryland](#)," was created in 2018, and includes destinations, schools and transportation linkages (bicycle/pedestrian, trains, buses). A rail trails GIS layer was added to the map to identify separated bike trails. The online resource is available for practitioners and the public to use to help identify places to go to access green space and how to get there by various means; and for decision-makers to use to identify where there are gaps that need to be addressed. A comprehensive bike trails/trails layer was added in 2020. Additional layers have been identified and are currently being used to develop an interactive story map that will connect students to all of the outdoor spaces dynamically, in real time, and with the option to provide feedback on experiences in outdoor spaces. This tool will be aligned with the expanded Park Equity Analysis noted below (ceejhlabs.org/mid-atlantic/projects/2019/2/2/md-ejscreen).
- The committee continues to gather information on existing state programs with funding sources that support off-site field experiences, specifically for transportation from schools to nature sites (coordinated with actions noted below and those toward Recommendation #5). The committee continues to gather information on the use of public spaces, generally, as outdoor spaces for learning.
- PGC partners and the larger environmental education community continue to identify and strive to overcome barriers that prevent or discourage educators from bringing children to nature spaces. Through a variety of actions, partners continue to support preparation of principals, teachers and environmental education partners to appropriately facilitate quality learning experiences outdoors. While the pandemic has temporarily suspended school off-site field activities, it has opened up some new ways of connecting with nature. The professional community is also beginning to "capitalize" on the heightened awareness in 2020 of the tremendous value of nature and ready access to nature to benefit people. Some examples:
 - The CBP Environmental Literacy Leadership Summit, held June 2019 in Virginia, was one example of engaging agency leaders with educators in discussing these barriers and challenges, while highlighting best practices, raising awareness and support, and collaborating on proposed solutions. The challenges identified during this event have helped to shape actions in 2020 and for the 2021-2022 action plan.

- DNR is developing a variety of means to encourage and facilitate more use of public lands by schools. To this end, the following have been implemented this year:
 - 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. This continued throughout 2020. With the pandemic situation, Maryland State Parks saw sustained record attendance. While schools have not been able to go on field trips, families have taken advantage of the opportunity to visit parks for recreation and “at home” learning.
 - A webpage was prepared to help teachers find state parks and know how to arrange site visits, and instructional resources are being developed to add to the website. All DNR units offering education programs added to their web pages lessons and activities that could be conducted with children at home, in the community, and at parks. The Maryland Park Service hosted a new activity, Create Your Own State Park, that was very popular with families, and a number of schools also engaged their students and participated in the contest, highlighting cultural, natural, and historical resources.
 - 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. A third round of funding was offered in the last quarter of 2020 offering another \$100,000 for decisions in early 2021. While the last two rounds have placed increased emphasis on outdoor learning utilizing public lands, and on student stewardship projects, due to the ongoing pandemic, accommodations have been made to support virtual learning alternatives and increased teacher professional development so that environmental education can continue for current students.

Green Space

[Committee led by DNR]

In order to connect more children and communities to Maryland's natural resources, it is critical to increase the quantity, quality and accessibility of green spaces available for exploration, recreation and learning. The committee will continue to work with local, state and federal agencies, nonprofits and industry representatives to highlight design practices, share tools for green space planning and programming and advocate for incorporation of these policies into long-term planning efforts. The committee will work with partners to identify needs and build resources to support the design, creation, maintenance and use of green infrastructure, including nature play spaces, pocket parks and rain gardens, as well as larger parks and public lands. This will include efforts to increase awareness of the value of green space to the economy, human health, education, community building, climate resiliency and overall ecological benefits as well as future policy recommendations.

- In 2020, Project Green Classrooms partnered with the Maryland Department of Transportation to celebrate the month of “Walktober.” As part of the month long walking campaign, PGC celebrated getting kids outdoors with a social media campaign that promoted how to find a park, what to do when you get to a park, the health benefits of walking, and even drew attention to the equity of who has access to parks.
- The Nature Play Spaces committee compiled a listing of outdoor space guidelines for early childhood education centers. The guidelines include national and regional guidance documents, how it fits into the Maryland COMAR and MSDE framework, as well as connections to design, maintenance and curriculum resources and how to use the outdoor spaces.
- Members of the Nature Play Spaces committee participated in a national effort led by the Green Schoolyards of America on how to use outdoor spaces for educational and recreational purposes safely with COVID-19. The effort compiled resources on how to connect schools with parks, how to set up classroom spaces outside and more. Resources can be found at the National Outdoor Learning Initiative <https://www.greenschoolyards.org/covid-learn-outside>.

Career Pathways

[Committee led by DNR]

The initiative aims to help provide a clearer picture of what conservation careers look like and support a robust pipeline into successfully pursuing them. Through connecting numerous environmental career development programs in Maryland, including opportunities in agriculture and less-traditional areas of natural resources conservation, and listening to youth participants, the committee is working to identify and address gaps and needs; and is exploring ideas on how to improve the pathway into conservation jobs and careers in Maryland. Ideas have been identified for tools, resources and other opportunities for collaboration. By continuing to connect the various youth career development programs as a singular community, the group will facilitate intentional strategies to: increase and improve outreach to youth, better communicate and define green careers, strengthen and simplify the pathways between programs, increase diversity and equitable access to these opportunities, strengthen the alignment of program elements with workforce demand; and continue to identify where tools and resources are still needed.

- A centralized repository of green career opportunities and resources in Maryland, the [Chesapeake Youth & Young Professionals Portal](#) has been developed and its use is growing. The comprehensive resource is made available on the Alliance for the Chesapeake Bay's Chesapeake Network site, and is intended as a one-stop-shop, especially for youth and those seeking entry level jobs, to easily access the vast number of opportunities available to build knowledge, skills, experience, and preparedness to enter the green career field. In 2020, the committee focused its efforts on promoting the new resource and working with the broader community to populate the clearinghouse with information and current opportunities for training and jobs, as well as to encourage K-12 schools and higher education institutions to share it with students and other job-seekers.
- The committee has been exploring effective means to share best practices and improvements for recruitment and retention of youth and young professionals to conservation job positions in various sectors. This includes identifying improved means for communication, connecting youth with information about the various conservation-related fields and conservation jobs, preparing them for the workforce, and working to improve efforts in these fields to engage in practices that will increase equity and inclusion. To this end, in 2020 the committee has made significant progress on developing a comprehensive Guide to Conservation Careers in Maryland, which includes information, guidance and resources regarding potential conservation jobs and professions in Maryland, including the future outlook of conservation careers in Maryland, different pathways to a conservation career, where to find and how to apply for jobs in the field, existing academic and certification programs in Maryland, and more. It will also include brief profiles on a number of professionals currently working in a variety of jobs, to help put faces on the many roles, talents, skills, and diversity of backgrounds that make up the field. Students and other young people have been engaged in interviewing the professionals for these highlights. Once completed (in 2021), the guide will be made available through the Youth & Young Professionals Portal and promoted through school guidance offices, workforce development programs, career centers, and more.

Policy and Planning Considerations

[Facilitated by the PGC co-coordinators - MSDE and DNR]

Since the committee has been charged with serving in an advisory role, with the call to make recommendations to state decision-makers and with some of those decision-makers engaged as the leadership of the initiative, we have the capacity to recommend and explore options for potentially influencing policy and operations as appropriate to support the stated priorities. As committees identify areas of need that might be helped by higher level requests for solutions, this committee will assist them by researching opportunities and mechanisms. In addition, as PGC is the vehicle to plan and achieve commitments under the Chesapeake Bay Watershed Agreement, actions needed to address and track that parallel work are noted here.

- The North American Association for Environmental Education (NAAEE) continues to provide updates to the partners on the national landscape of activities surrounding increasing outdoor discovery/learning and environmental literacy, including sustainable schools efforts. Several examples of new and/or innovative policies and practices from other states have informed the recommendations and the work of the committees. More recently, NAAEE, in partnership with the National Caucus of Environmental Legislators

(NCEL) and several other organizations, have launched a [Youth Outdoor Policy Playbook \(youthoutdoorpolicy.org/\)](https://youthoutdoorpolicy.org/) to inform state-level policies for advancing youth outdoor engagement and environmental literacy. In January, 2020, the Youth Outdoor Policy Partnership convened stakeholders and legislators for a conversation about environmental literacy and outdoor engagement priorities. The discussion resulted in a request from one Delegate for a written summary of environmental literacy and youth outdoor engagement landscape across the state. NAAEE is working with PGC and NCEL to respond to this request.

- PGC actions and many of its partners are actively supporting and contributing to progress toward the Chesapeake Bay Watershed Agreement Environmental Literacy goal. This goal calls for states to have a comprehensive and systemic approach to environmental literacy that includes policies, practices, funding and tracking metrics. Several of the achievements reported here support the actions identified in the two-year action plan for Maryland (2019-2020), and steady progress is ongoing. Meanwhile, partners worked throughout the last half of 2020 to develop the new two-year action plan for Maryland (2021-2022).

Retrospect and Looking Ahead

PGC's work through 2020 was shifted in many unanticipated ways due to the pandemic, with changes expected to continue into 2021 and possibly for the foreseeable future. Some of these changes are resulting in positive actions for the future. The situation has raised/heightened awareness of the disparities that exist across the state in technology/ internet access and access to green spaces, and the lack of solid strategies in place to adequately address equity and inclusion. This has forced the professional community to focus more intentionally on finding new and equitable ways to support young people in all communities. Much of the work in the coming years will include a more informed effort to address these needs, as well as to weave together multiple actions for more comprehensive outcomes. In addition, the new practices and tools utilized during the pandemic are likely here to stay, offering new ways to engage more teachers in professional development and more students in "experiencing" their environment. While there is no question that students must be able to learn together outdoors in various settings in the future when it is safe to do so, new tools will be able to help orient students before visiting and to be used to continue and enhance the learning as a sustained effort. The pandemic has also highlighted the importance of time outside as an essential component of maintaining both physical and mental health. This will be upheld as a positive approach to engaging more people in environmental learning, stewardship, and outdoor recreation. These are the silver linings of this most unusual year.