

...

# Environmental Literacy in COG Districts

5.19.23



**Chesapeake Bay Program**  
*Science. Restoration. Partnership.*



# What is Environmental Literacy?

Having the knowledge, skills, and disposition to solve problems and resolve issues individually and collectively in a way that creates and maintains environmental and social well-being.

# ENVIRONMENTAL LITERACY GOAL

Enable students in the region to graduate with the knowledge and skills to act responsibly to protect and restore their local watershed



## STUDENTS ● ● ●

Hands-on student experiences (MWEEs)

## SCHOOLS ● ● ●

Sustainable school buildings, grounds, & operations

## PLANNING ● ● ●

Supportive policies and metrics at state & district level

# OUR CORE PRINCIPLES

## SYSTEMIC

Reaches the entire student population in one or more grades within a school district

## EQUITABLE

Accessible to all students with thoughtful differentiation

## SUSTAINABLE

Embedded into school district curriculum and supported with district resources



**SCHOOL DISTRICT LEADERSHIP IS ESSENTIAL!**

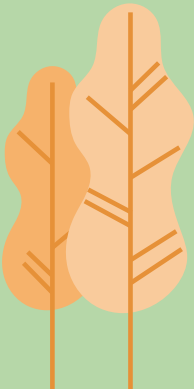
# IMPORTANT COMPONENTS TO INCLUDE IN EL PLANNING

MWEEs

SUSTAINABLE SCHOOLS

CLIMATE

WORKFORCE



# OTHER STEWARDSHIP GOALS

## STEWARDSHIP GOAL

Increase the number and diversity of local stewards and local governments for conservation and restoration activities.

## PUBLIC ACCESS GOAL

Expand public access to the Bay and its tributaries.

## LAND CONSERVATION GOAL

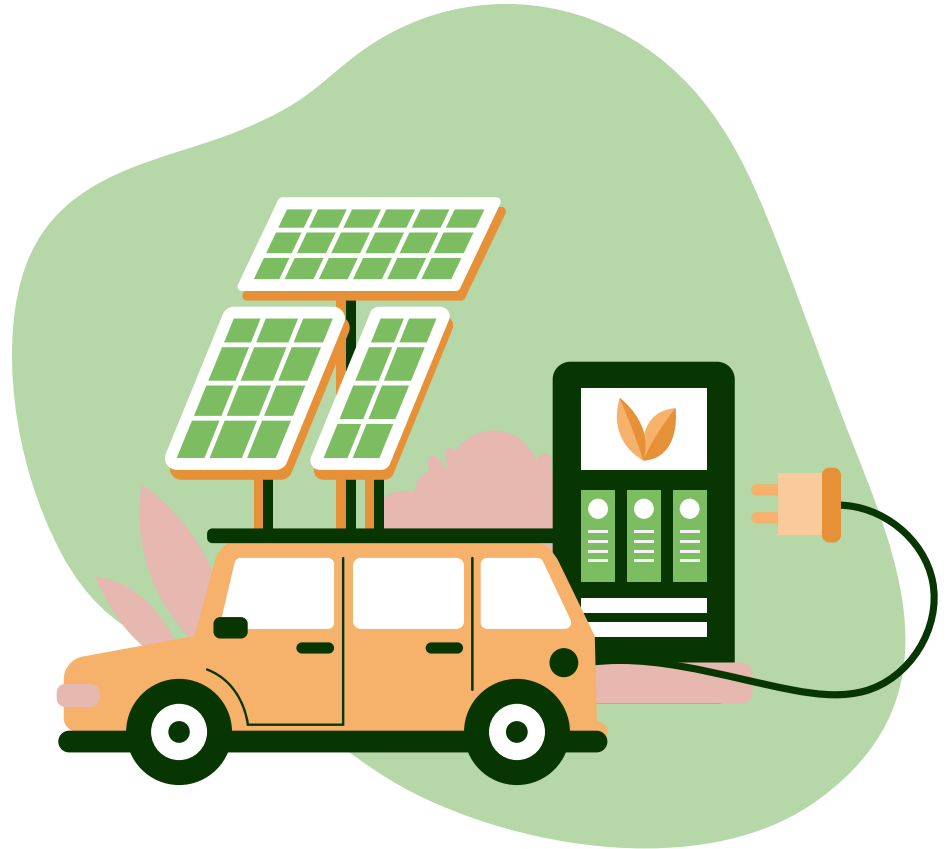
Conserve treasured landscapes.



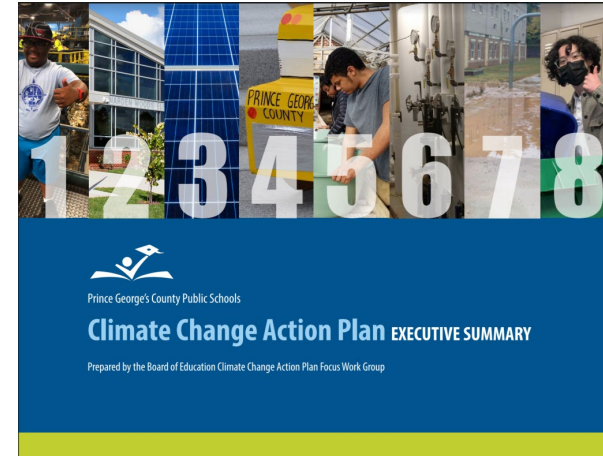
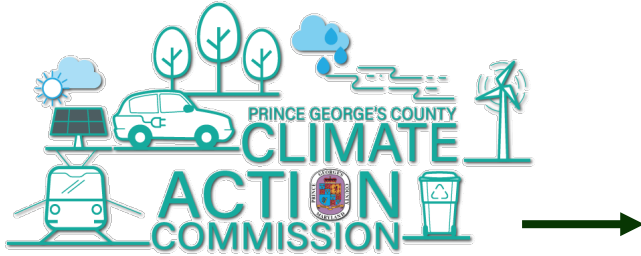
# WHAT DOES THIS LOOK LIKE?

PG COUNTY PUBLIC  
SCHOOLS

ARLINGTON PUBLIC  
SCHOOLS



# PGCPS CLIMATE CHANGE ACTION PLAN





The logo features a blue shield with the lowercase letters 'aft' in white script. To the right of the shield, the words 'Back to School for All' are written in a blue, sans-serif font, with 'Back to' on the top line, 'School' in a larger font on the second line, and 'for All' on the third line.

**aft** Back to  
School  
for All

A photograph of a modern school building with a mix of brick and large glass windows. In the foreground, there is a playground with colorful equipment and a landscaped area with plants and a concrete path.

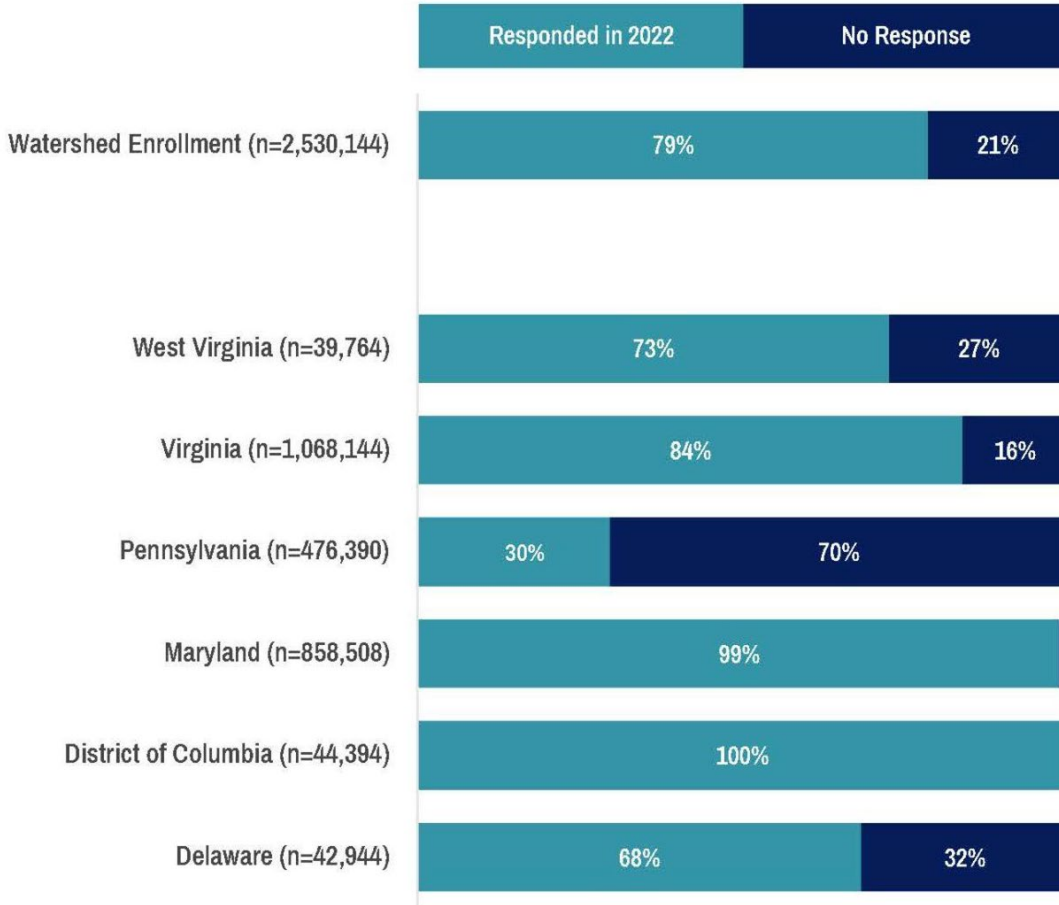
WITH  
K12 CLIMATE ACTION

# HOW IS IT GOING?

## ENVIRONMENTAL LITERACY INDICATORS



## ELIT Response Rate: Percentage of Total Enrolled Students Represented by LEAs



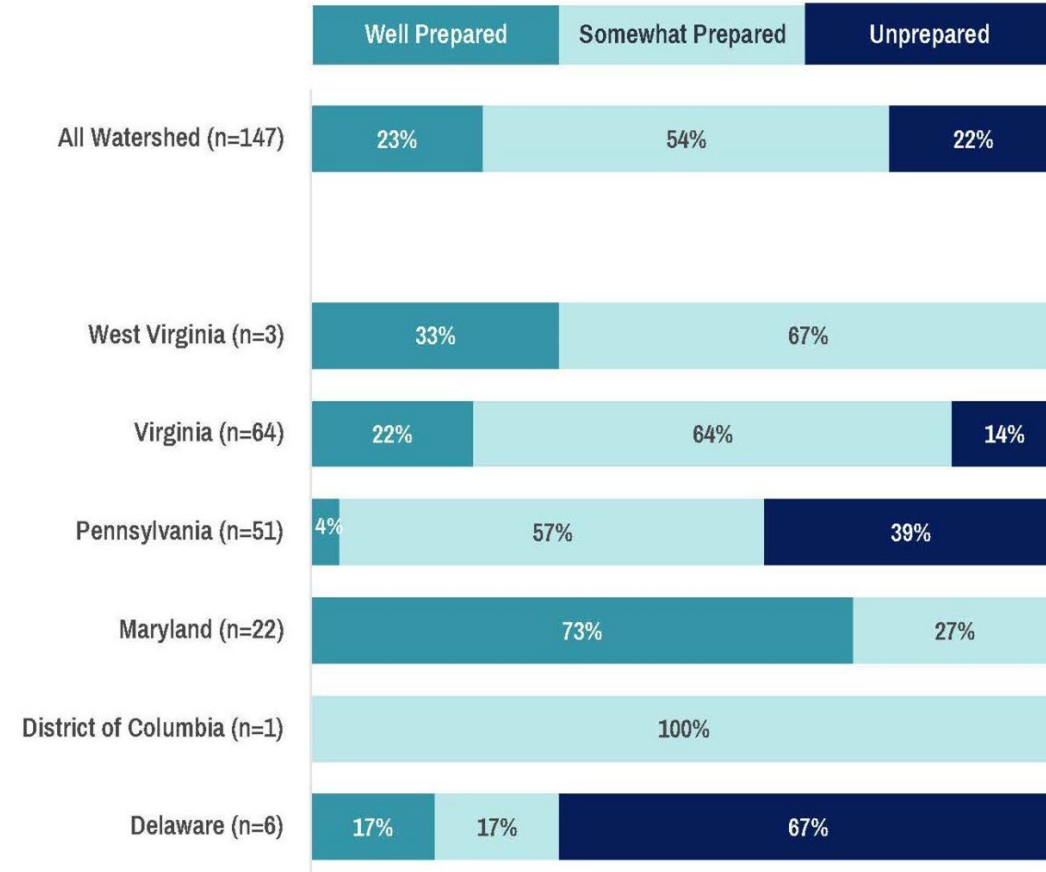
### ***Responses from:***

- District of Columbia
- Maryland
  - Charles County
  - Frederick County
  - Montgomery County
  - Prince George's County
- Virginia
  - Arlington County
  - Fairfax County
  - Loudoun County
  - Prince William County
  - Manassas Park City

### ***No Responses from:***

- Alexandria City Public Schools
- City of Fairfax Schools
- Manassas City Public Schools
- Falls Church City Public Schools

## Self-Reported Levels of Preparedness to Implement Environmental Education



- District of Columbia: Somewhat Prepared
- Maryland
  - Charles County: Well Prepared
  - Frederick County: Somewhat Prepared
  - Montgomery County: Somewhat Prepared
  - Prince George's County: Well Prepared
- Virginia
  - Arlington County: Well Prepared
  - Fairfax County: Well Prepared
  - Loudoun County: Somewhat Prepared
  - Prince William County: Somewhat Prepared
  - Manassas Park City: Somewhat Prepared

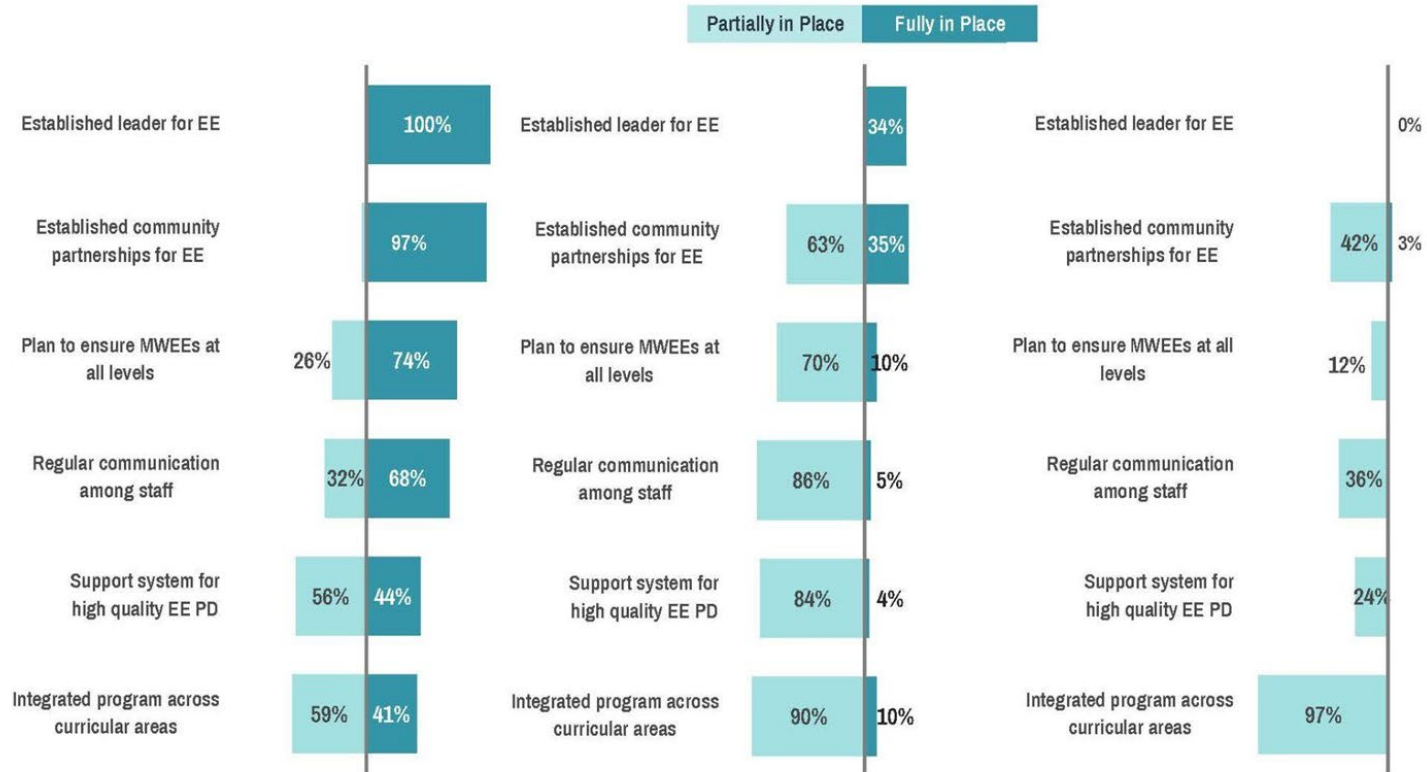
# Elements Fully or Partially in Place

## Comparing Strategies between Levels of Preparedness

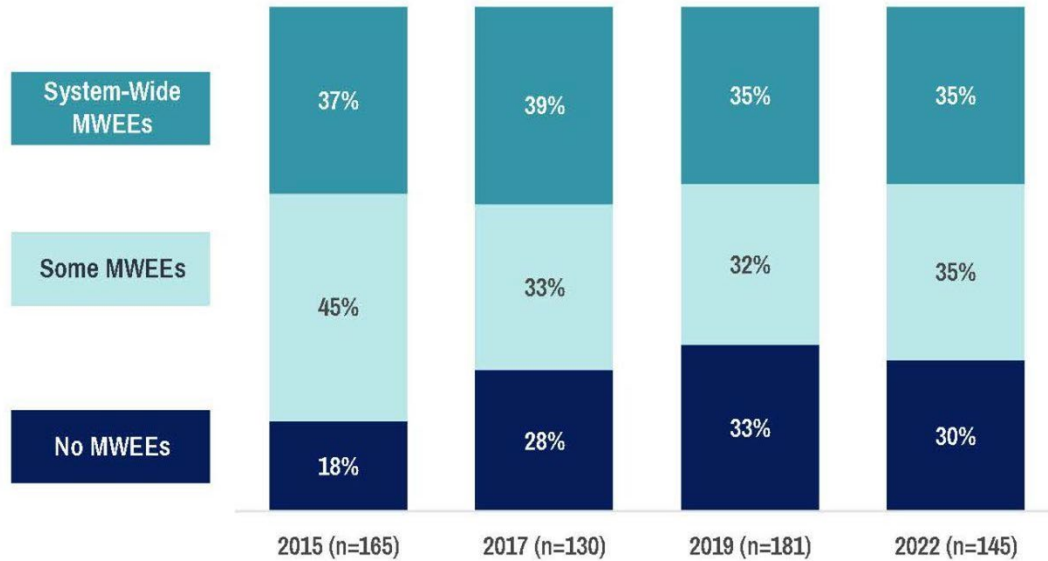
Strategies at Well-Prepared LEAs (n=34)

Strategies at Somewhat Prepared LEAs (n=80)

Strategies at Unprepared LEAs (n=33)



## Changes in MWEE Availability in the Watershed: Elementary Grades (2015-2022)



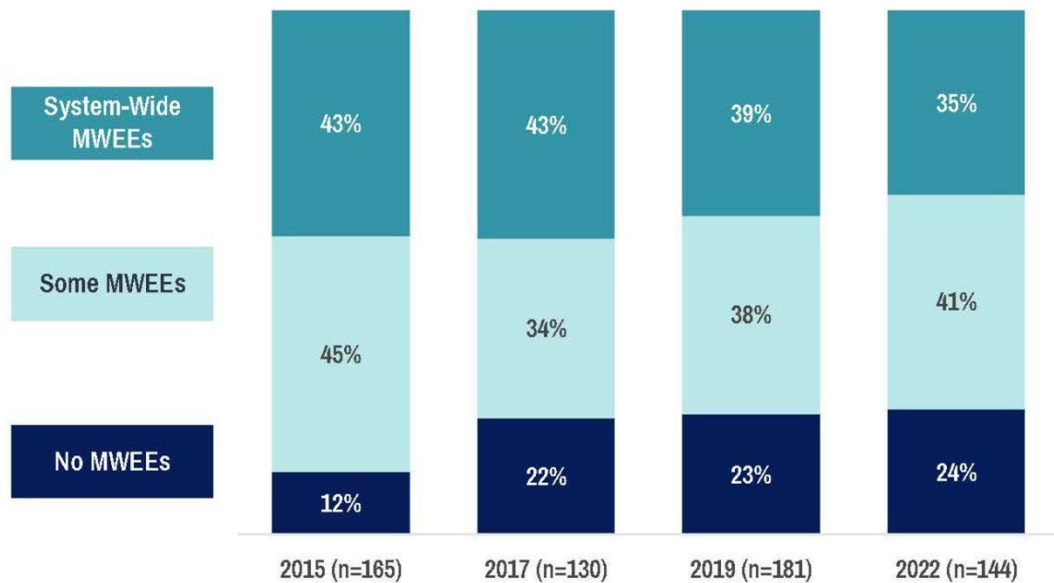
- District of Columbia: System-wide
- Maryland
  - Charles County: System-wide
  - Frederick County: System-wide
  - Montgomery County: System-wide
  - Prince George's County: System-wide
- Virginia
  - Arlington County: System-wide
  - Fairfax County: No evidence
  - Loudoun County: Some classes
  - Prince William County: Some classes
  - Manassas Park City: Some classes

### Comparing Paired 2019 and 2022 Data

Changes in availability of elementary-level MWEEs within individual LEAs for which we have paired data. (n=115)



## Changes in MWEE Availability in the Watershed: Middle School Grades (2015-2022)



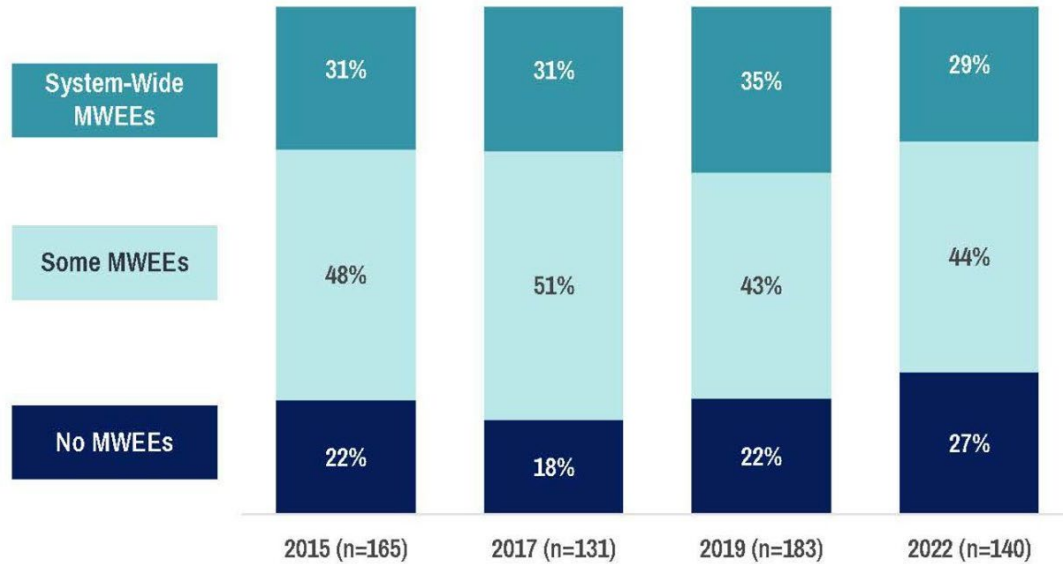
### Comparing Paired 2019 and 2022 Data

Changes in availability of middle school-level MWEEs within individual LEAs for which we have paired data. (n=115)



- District of Columbia: Some classes
- Maryland
  - Charles County: Some classes
  - Frederick County: System-wide
  - Montgomery County: System-wide
  - Prince George's County: System-wide
- Virginia
  - Arlington County: System-wide
  - Fairfax County: System-wide
  - Loudoun County: Some classes
  - Prince William County: Some classes
  - Manassas Park City: Some classes

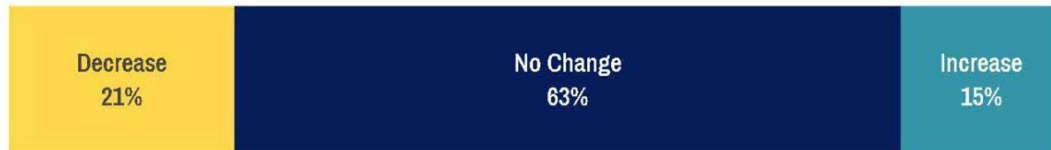
## Changes in MWEE Availability in the Watershed: High School Grades (2015-2022)



- District of Columbia: Some classes
- Maryland
  - Charles County: Some classes
  - Frederick County: System-wide
  - Montgomery County: System-wide
  - Prince George's County: Some classes
- Virginia
  - Arlington County: System-wide
  - Fairfax County: No evidence
  - Loudoun County: Some classes
  - Prince William County: Some classes
  - Manassas Park City: Some classes

### Comparing Paired 2017/19 and 2022 Data

Changes in availability of high school-level MWEEs within individual LEAs for which we have paired data. (n=112)





# Greatest Needs for Support: State-by-State

The seven highest-rated need statements within each jurisdiction

<b>Maryland (n=22)</b>	Median rating	<b>District of Columbia (n=1)</b>	Median rating	<b>Virginia (n=51)</b>	Median rating
Funding for transportation	7	Funding for PD	7	Funding for programs / supplies	6
Funding for PD	6	Funding for programs / supplies	7	PD to facilitate outdoor field exp.	6
PD to facilitate student action	5.5	Funding for transportation	7	PD to use outdoor learning spaces	6
Funding for programs / supplies	5	PD to use outdoor learning spaces	7	PD for student investigations	5
Curriculum / standards alignment	5	Central Office support	5	PD to facilitate student action	5
PD for student investigations	5	Instructional tech for investigations	5	Funding for PD	5
PD to use outdoor learning spaces	5	Partnerships with EE providers	5	Funding for transportation	5

**WHAT CAN YOU  
DO TO HELP?**



# CONNECT WITH YOUR DISTRICT EL CONTACT!

- District of Columbia: *Grace Manubay (grace.manubay@dc.gov)*
- Maryland
  - Charles County: *Tim Emhoff (temhoff@ccboe.com)*
  - Frederick County: *Kim Day (kim.day@fcps.org)*
  - Montgomery County: *Lee Derby (Lee\_F\_Derby@mcpsmd.org)*
  - Prince George's County: *Donald Belle (donald.belle@pgcps.org)*
- Virginia
  - Arlington County: *Dat Le (dat.le@apsva.us)*
  - Fairfax County: *Elaine Tholen (elaine@tholen.us)*
  - Loudoun County: *Michael Barancewicz (Michael.Barancewicz@lcps.org)*
  - Prince William County: *Melinda Landry (landryma@pwcs.edu)*
  - Manassas Park City: *Pam Kalso (pam.kalso@mpark.net)*



# TALK WITH THEM ABOUT...

- Environmental Improvements @ Schools
  - Energy Savings
  - Water Quality Improvements (WIPs/TMDLs)
  - Nearby Nature Infrastructure
- Workforce Development
- Climate Action Plans for Jurisdiction
- Barriers to Public Access for Schools
- Student Leadership/Engagement Opportunities
- Upcoming Projects for Students to Study and/or Help Implement
- Budget Requirements
  - Transportation
  - Outdoor Classrooms
  - Teacher Professional Development
  - Equipment/Supplies

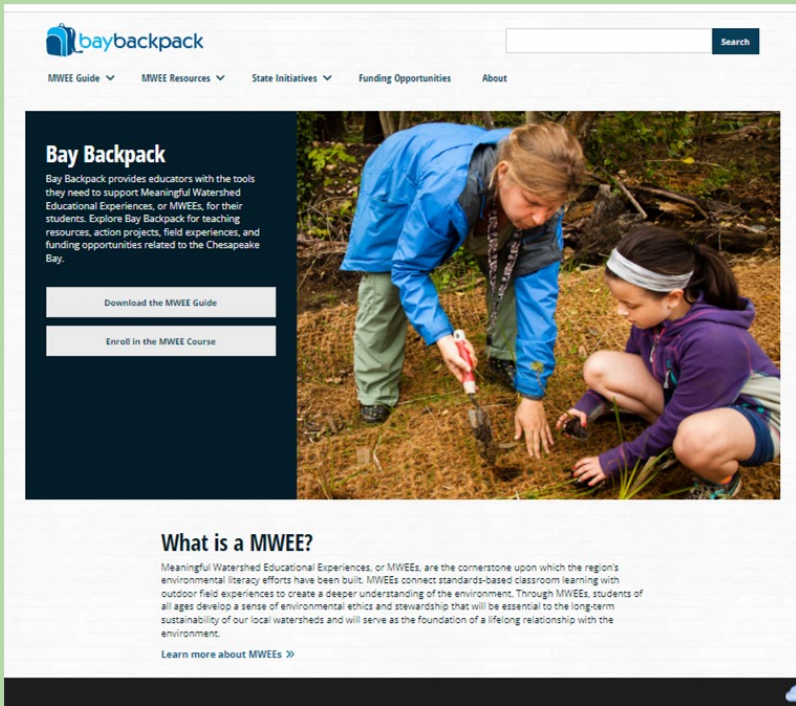


**WHAT RESOURCES  
ARE AVAILABLE?**



# INFORMATION, RESOURCES, & TRAINING

[www.baybackpack.com](http://www.baybackpack.com)



**Bay Backpack**  
Bay Backpack provides educators with the tools they need to support Meaningful Watershed Educational Experiences, or MWEs, for their students. Explore Bay Backpack for teaching resources, action projects, field experiences, and funding opportunities related to the Chesapeake Bay.

[Download the MWE Guide](#)

[Enroll in the MWE Course](#)

### What is a MWE?

Meaningful Watershed Educational Experiences, or MWEs, are the cornerstone upon which the region's environmental literacy efforts have been built. MWEs connect standards-based classroom learning with outdoor field experiences to create a deeper understanding of the environment. Through MWEs, students of all ages develop a sense of environmental ethics and stewardship that will be essential to the long-term sustainability of our local watersheds and will serve as the foundation of a lifelong relationship with the environment.

[Learn more about MWEs >>](#)

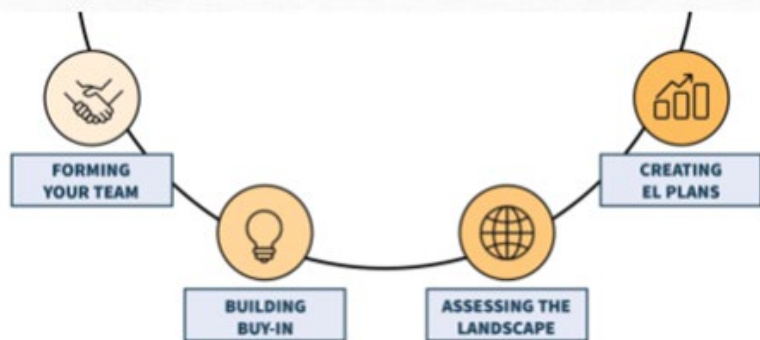
Funding: NOAA B-WET,  
CBT EE, & State Programs



## District Environmental Literacy Planning Toolkit

This Toolkit provides some waypoints and important considerations for building systemic, equitable, and sustainable environmental literacy within a school district by developing and implementing an environmental literacy plan.

District environmental literacy plans can be transformational for school districts when they consider the many aspects of school life, particularly campuses (facilities and operations), curriculum, community, and culture. These efforts generally happen in a series of phases that we are calling the “phases of change,” which start with forming a team and come to fruition when a district has systemic, equitable, and sustainable implementation of its plan.



### District Toolkit

#### ^ District Environmental Literacy Planning Toolkit

##### Overview

The Big Vision: Systemic, Equitable, and Sustainable Environmental Literacy

#### ▾ Forming a Team

#### ▾ Building Buy-in and Support

##### Assessing the Landscape

#### ▾ Creating District Environmental Literacy Plans

Implementing Environmental Literacy Plans

# QUESTIONS?

Shannon Sprague, NOAA  
[shannon.sprague@noaa.gov](mailto:shannon.sprague@noaa.gov)

