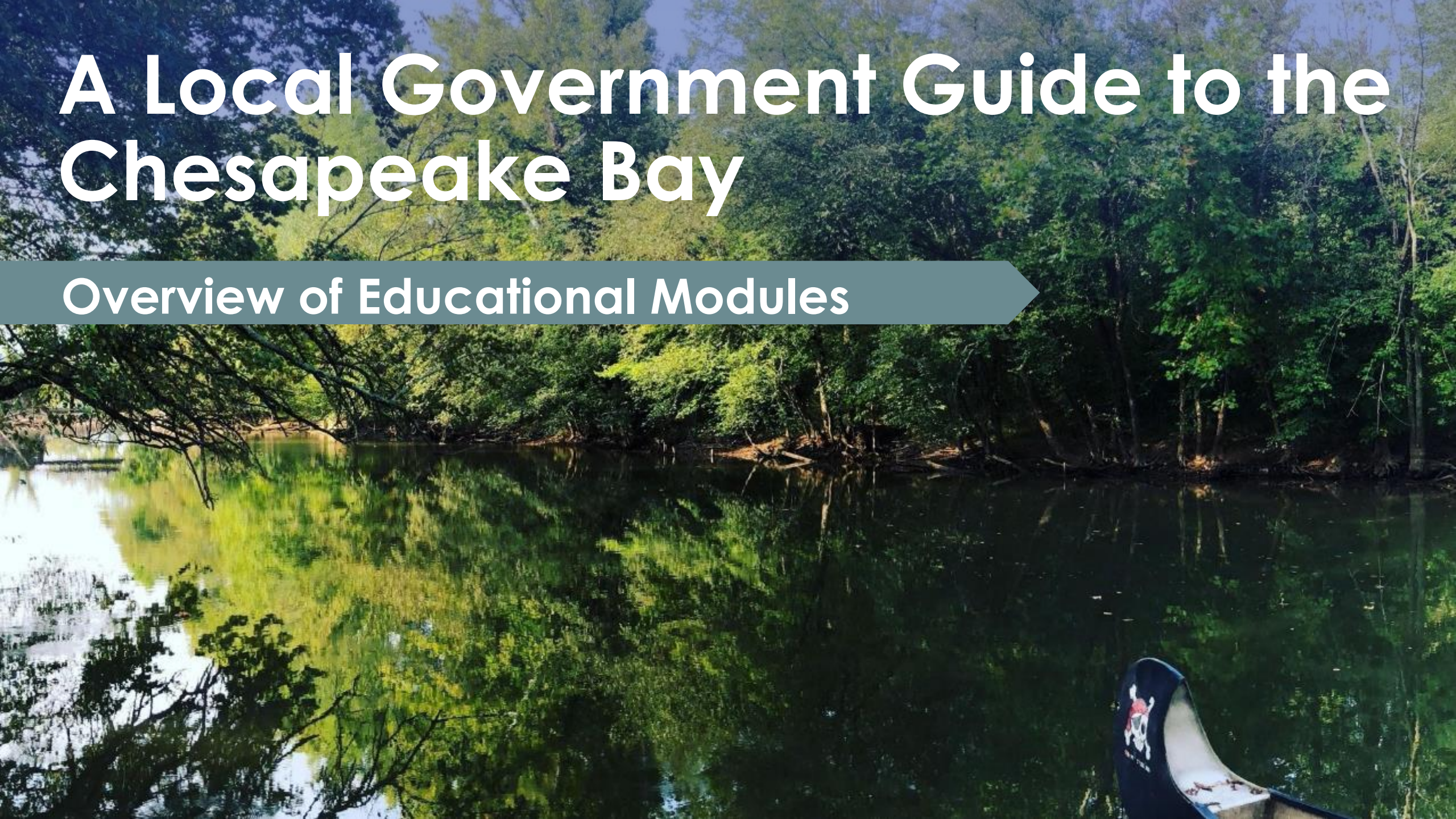# A Local Government Guide to the Chesapeake Bay

Overview of Educational Modules

A Local Government Guide to the Chesapeake Bay is a series of seven educational modules to inform and empower decision at local levels.

As a local leader, *your decisions set the course for your community*. Your actions determine the health and vitality of your jurisdiction, as well as that of your local waterways and the Chesapeake Bay. You can achieve mutually beneficial outcomes by prioritizing local economic development, infrastructure resiliency, public health, and education, while also protecting your environment.
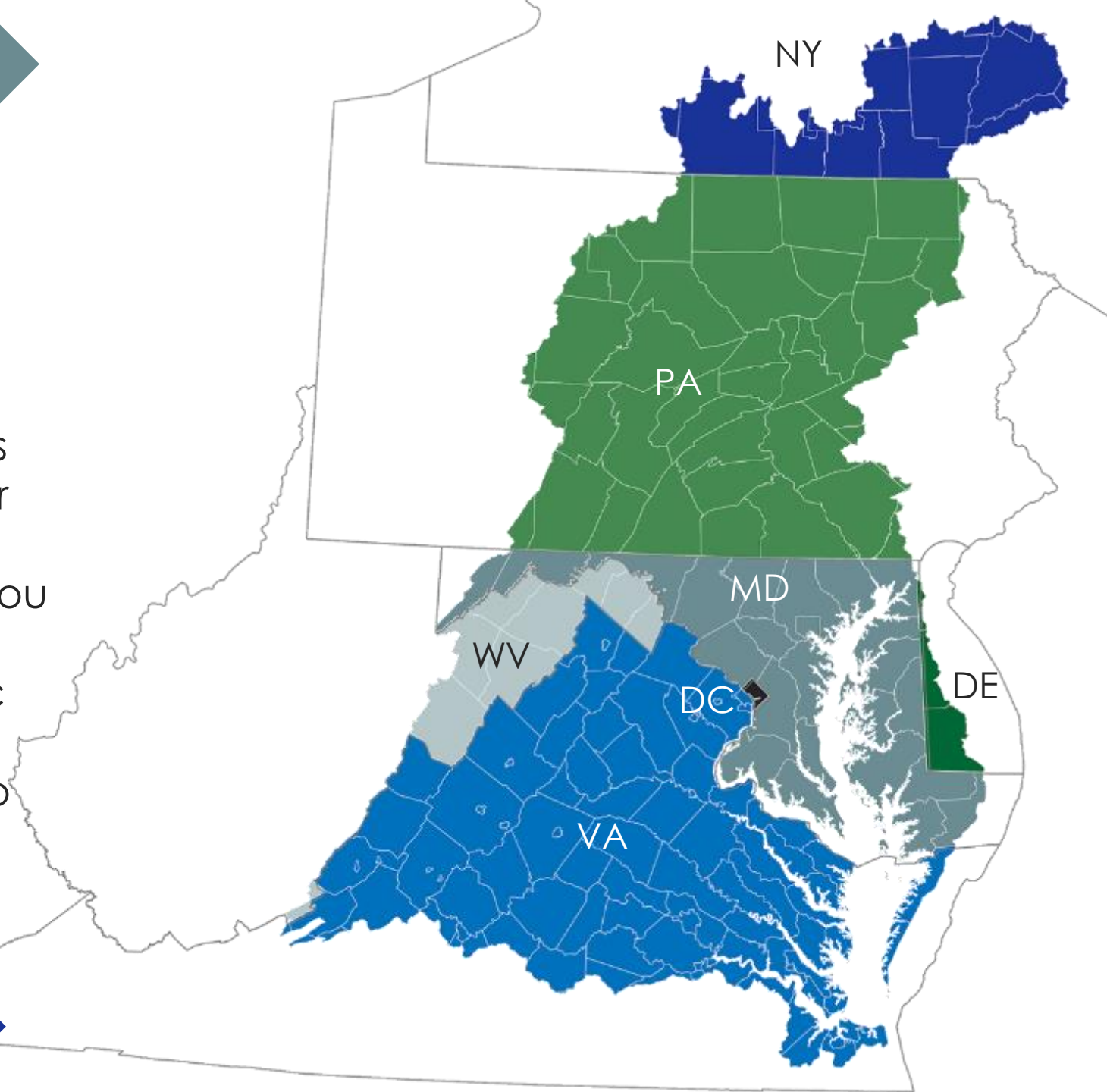
About the modules

Developed as self-guided, very visual PowerPoint presentations. Each module is under 30 slides, <u>designed to be easily customized and shared</u>, along with a companion one-page handout. The icons below represent key local government priorities and are used throughout the modules to help you better understand how the information in the modules aligns with your specific priorities and interests.

$ Economic Development

♥ Public Health & Safety

🏠 Infrastructure Maintenance & Finance

📄 Education

Each module consists of a customizable presentation, one page handout, a .pdf and video versions of the presentation. In addition to the module themes below, we have included connections to Diversity, Equity, Inclusion, and Justice, and Climate throughout the modules. Each features an overview of the full list of modules and a bottom of slide tracker.

1. How Your Watershed Works

Foundational knowledge of the Chesapeake Bay watershed and water cycle and connects the importance of a healthy watershed to the economic development, public health and safety, infrastructure maintenance and finance, and education priorities of local government officials.

2. Foundations of Clean Water

An overview of the laws and agreements relevant to protecting and restoring the Chesapeake Bay. These protections are the foundations for healthy local waterways across the region.

3. Clean Water for the Economy

Highlights the economic importance of clean water and healthy habitats to lucrative fisheries, like blue crab and oyster, and recreational activities, like hunting, bird watching, and fishing.

4. Capitalizing on the Benefits of Trees

Presents how tree canopy, forest buffers, and forest conservation can provide a broad spectrum of benefits for local communities, from economic development to significant public health and safety benefits.

5. Preserving Local Character and Landscapes

Highlights the economic, ecological, cultural, and recreational value of the conserved landscapes around the Chesapeake Bay watershed to the people and communities of the region. Conserving these landscapes protects water quality, quality of life, and the many community values associated with these lands.

6. Protecting Community Infrastructure Through Stormwater Resiliency

An overview on how managing stormwater runoff and increasing resiliency can mitigate flooding and flood-related damages to local community infrastructure, while also improving water quality.

7. Building the Workforce of Today and Tomorrow

Highlights the growth in stormwater management and green infrastructure projects and the importance of educating a strong and diverse workforce in operating and maintaining projects.

Module Features

The modules are developed to be cohesive but can be taken any order. For consistency, each identifies learning objectives, local case studies, and resources for local implementation.

- *What You'll Learn* - learning objectives and questions that will be answered throughout the module.

- *What You Can Do* - actionable items to engage your community and where applicable, financial assistance to support local actions.

- *To Learn More* - additional resources for further learning about each of the module topics.

Each module references a variety of statistics and data to support its learning objectives. **Reference sources** for statistics, data, and photos can be found along with photo credits within the notes for each of the individual slides. **Glossaries** defining keywords can also be found at the end of each module.

Left Page

A Local Government Guide to the Chesapeake Bay
EDUCATIONAL MODULES OVERVIEW

A Local Government Guide to the Chesapeake Bay is a seven-module series created by the Chesapeake Bay Program to support decision making by local officials. As a local leader, your decisions set the course for your community. Your actions determine the health and vitality of your jurisdiction, as well as that of your local waterways and the Chesapeake Bay, which spans more than 64,000 mi² and includes seven jurisdictions. You can achieve mutually beneficial outcomes by prioritizing local economic development, infrastructure resiliency, public health, and education, while also protecting your environment.

ABOUT THE MODULES

Each module is a self-guided PowerPoint presentation, designed to be easily customized and shared. The icons below represent key local government priorities and are used throughout the modules to help you better understand how the information in the modules aligns with your specific priorities and interests.
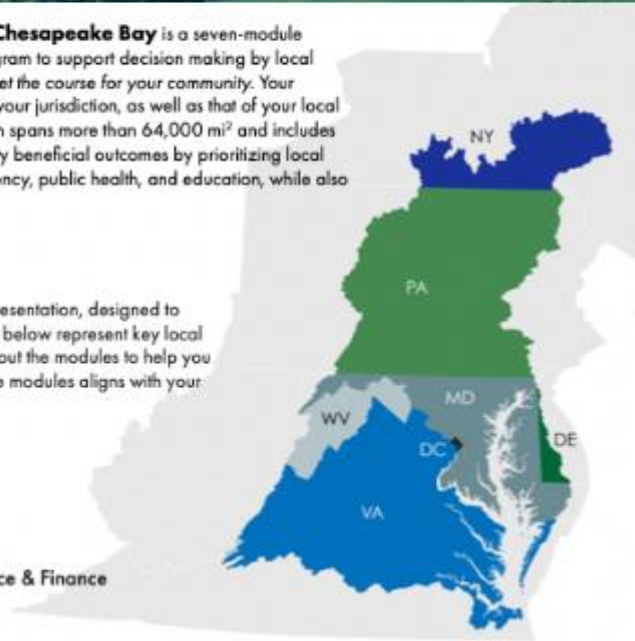
- $ Economic Development
- Public Health & Safety
- Infrastructure Maintenance & Finance
- Education

HOW TO USE THE MODULES

Each module is a self-guided PowerPoint presentation, designed to be easily customized and shared. All modules contain the slides listed below to identify learning objectives, local case studies, and resources for local implementation.

- **What You'll Learn** provides learning objectives and questions that will be answered throughout the module.
- **What You Can Do** identifies actionable items to engage your community and where applicable, financial assistance to support local actions.
- **To Learn More** provides additional resources for further learning about each of the module topics.

Each module references a variety of statistics and data to support its learning objectives. **Sources** for any referenced statistics, data, and photos can be found within the notes for each of the individual slides. A **glossary** defining keywords can also be found at the end of each module.

Right Page

A Local Government Guide to the Chesapeake Bay
EDUCATIONAL MODULES OVERVIEW

The modules include the following:

1. How Your Watershed Works
How Your Watershed Works provides foundational knowledge of the Chesapeake Bay watershed and water cycle and connects the importance of a healthy watershed to the economic development, public health and safety, infrastructure maintenance and finance, and education priorities of local government officials.

2. Foundations of Clean Water
Foundations of Clean Water provides an overview of the laws and agreements relevant to protecting and restoring the Chesapeake Bay. These protections are the foundations for healthy local waterways across the region.
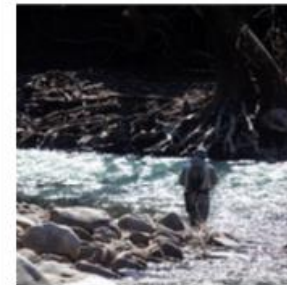
3. Clean Water for the Economy
Clean Water for the Economy highlights the economic importance of clean water and healthy habitats to lucrative fisheries, like blue crab and oyster, and recreational activities, like hunting, bird watching, and fishing.

4. The Benefits of Trees
The Benefits of Trees explains how tree canopy, forest buffers, and forest conservation can provide a broad spectrum of benefits for local communities, from economic development to significant public health and safety benefits.

5. Preserving Local Character and Landscapes
Preserving Local Character and Landscapes highlights the economic, ecological, cultural, and recreational value of the conserved landscapes around the Chesapeake Bay watershed to the people and communities of the region. Conserving these landscapes protects water quality, quality of life, and the many community values associated with these lands.

6. Protecting Community Infrastructure Through Stormwater Resiliency
Protecting Community Infrastructure Through Stormwater Resiliency provides an overview on how managing stormwater runoff and increasing resiliency can mitigate flooding and flood-related damages to local community infrastructure, while also improving water quality.

**7. Building the Workforce of Today and Tomorrow**
Building the Workforce of Today and Tomorrow highlights the growth in stormwater management and green infrastructure projects and the importance of educating a strong and diverse workforce in operating and maintaining projects.

The Water Cycle

Clean water is essential for people. How water moves, and what it brings with it, is at the heart of community and watershed health. Let's start the water cycle as water evaporates from land and water. The water vapor cools and forms clouds through condensation. **Precipitation then falls on land and drains into the creeks, streams, and rivers that flow into the Bay.**

Condensation

Transpiration

Precipitation

Evaporation

Runoff
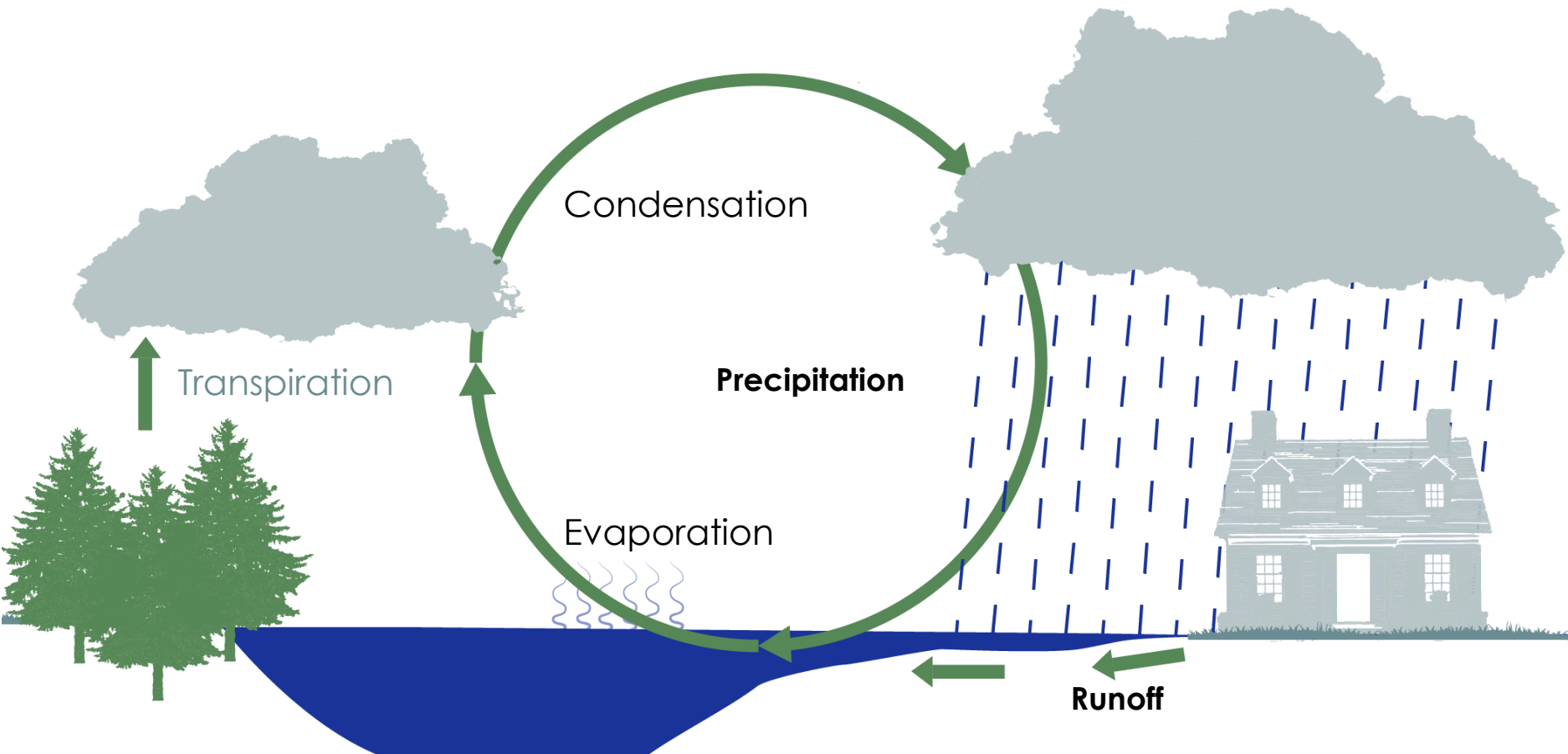
Climate Connection

Warmer air holds more moisture which means more intense and frequent precipitation events as the climate warms. Increased rainfall has the potential to overwhelm waterways and stormwater systems, increasing flood and erosion risks. Rising sea levels and storm surge also increase flood and erosion risks.

Outdoor Recreation

Nationally, outdoor recreation contributes:

$887 BILLION
in consumer spending

7.6 MILLION
American jobs

$65.3 BILLION
in federal tax revenue

$59.2 BILLION
in state & local taxes

Within the watershed states:

NY:
$29.2 billion
291,429 jobs

PA:
$13.2 billion
170,565 jobs

DE:
$1.3 billion
18,186 jobs

WV:
$1.5 billion
22,543 jobs

MD:
$7.1 billion
89,335 jobs

VA:
$9.3 billion
123,369 jobs

DC:
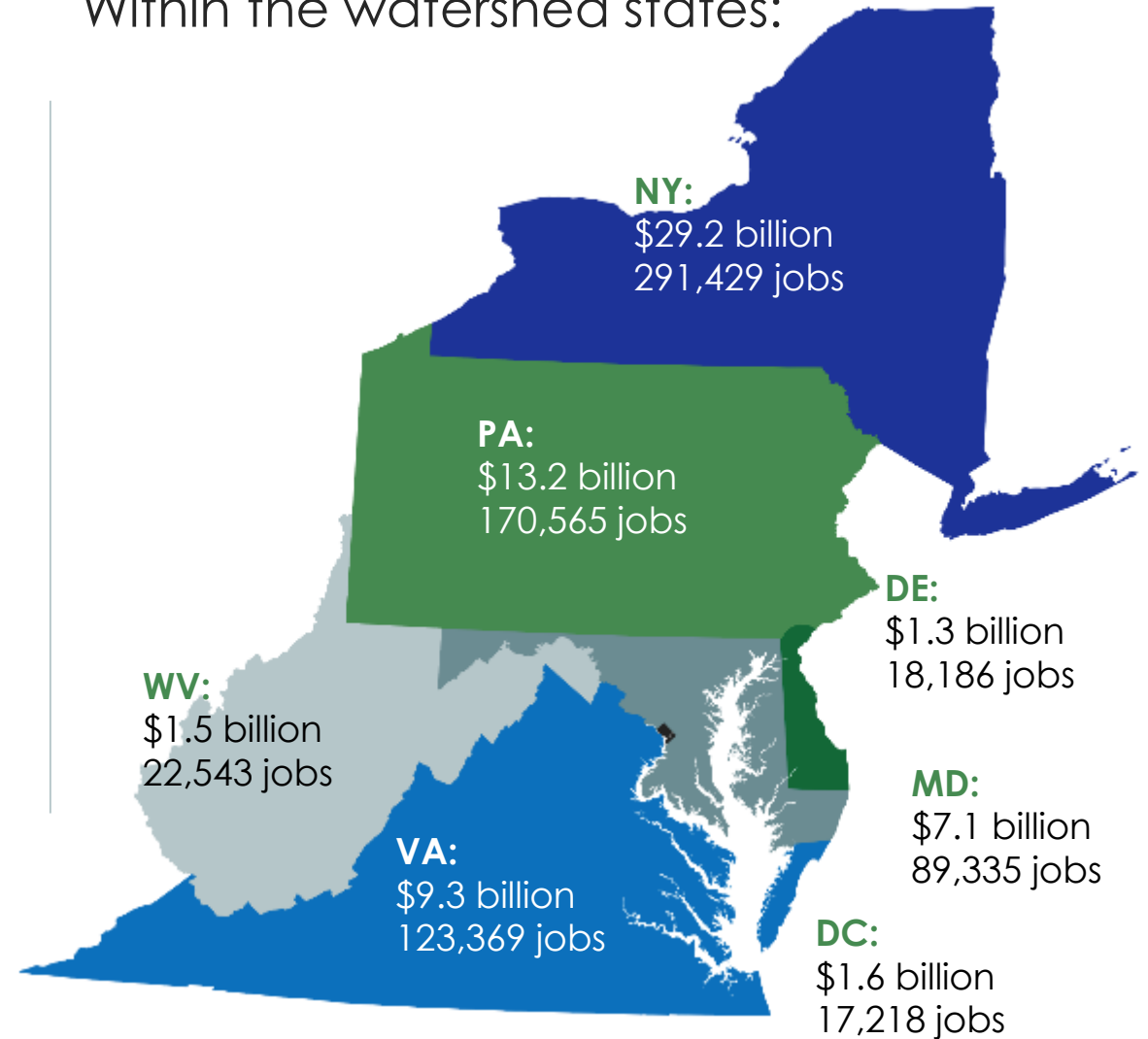$1.6 billion
17,218 jobs

Interpretive Outdoor Experiences

Outdoor recreation opportunities foster a more meaningful connection with nature. Nature centers and environmental educators play important roles in inspiring an appreciation for nature, which leads to more stewardship.

Clean Water for the Economy

Healthy Habitats, Healthy Economy

Tree Canopy

Tree canopy is the area of the leaves of a tree or group of trees when viewed from above. Chesapeake watershed communities now have access to highly detailed data, tools, and maps of tree canopy to determine how much they have and help set goals for the future.
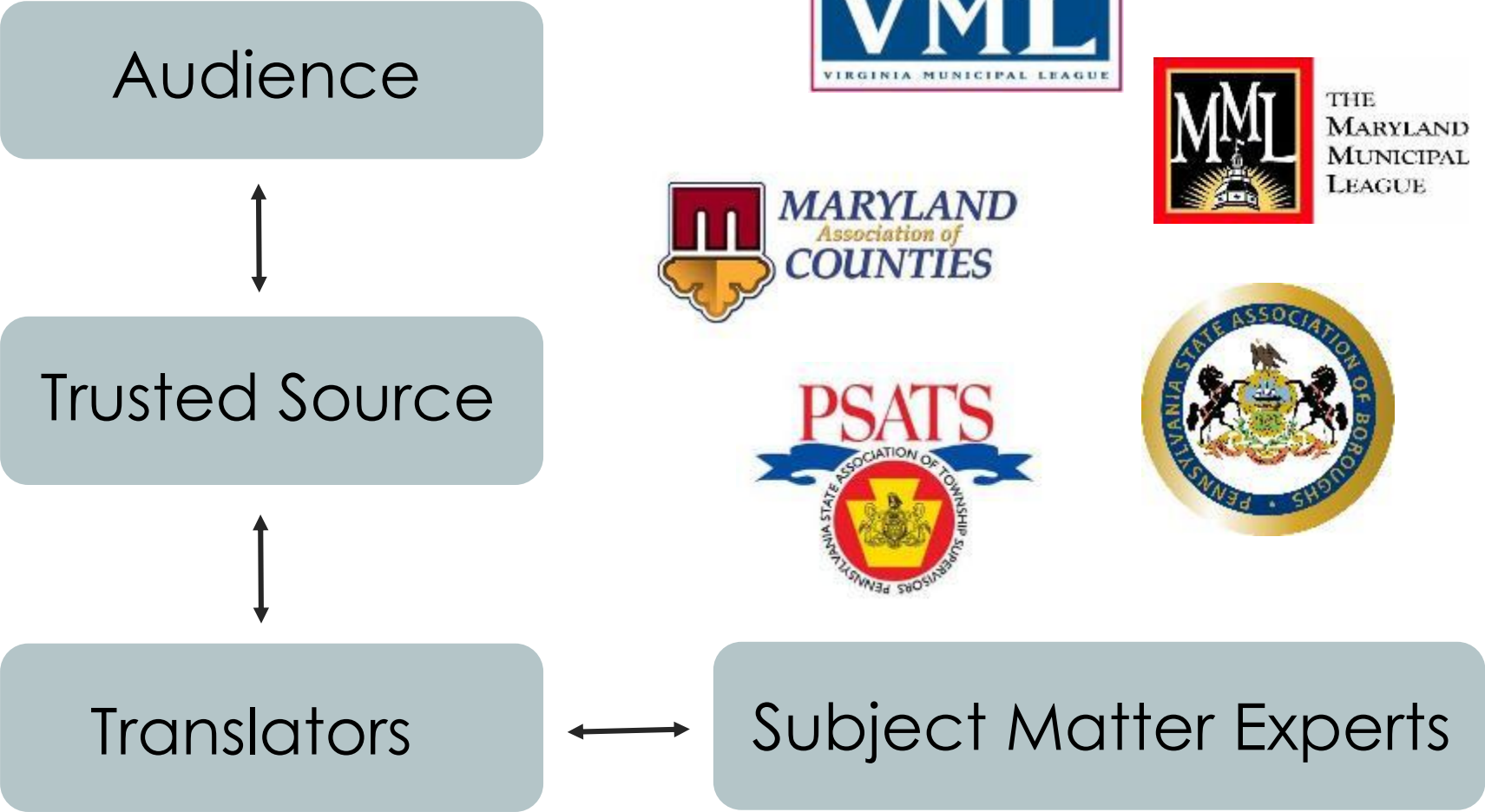

Watch this video from the Forest Service to learn more.

Achieving a tree canopy goal **=** **Existing canopy** **+** **Planting** **+** **Growth (protection & maintenance)** **-** **Losses (mortality, removal, etc.)**

To achieve a tree canopy goal, taking care of your existing trees is just as important as planting new trees. To learn more, visit https://chesapeaketrees.net/understand-your-canopy/.

How can the modules being used?

Audience

Trusted Source

Translators ⟷ Subject Matter Experts

- **Conference Panel Handouts**
  - *Ex. County Commissioners Association of Pennsylvania Aug 9th Panel on "The Outdoor Recreation Economy"*

- **Presentation Slides**
  - *Ex. Rivanna River Basin Commission Conference Sept 24th on Stormwater Resilience*

- **Handbook for Local Governments**
  - *Ex. Delaware tailored the materials for their local officials and are sharing them via town managers in an educational series*
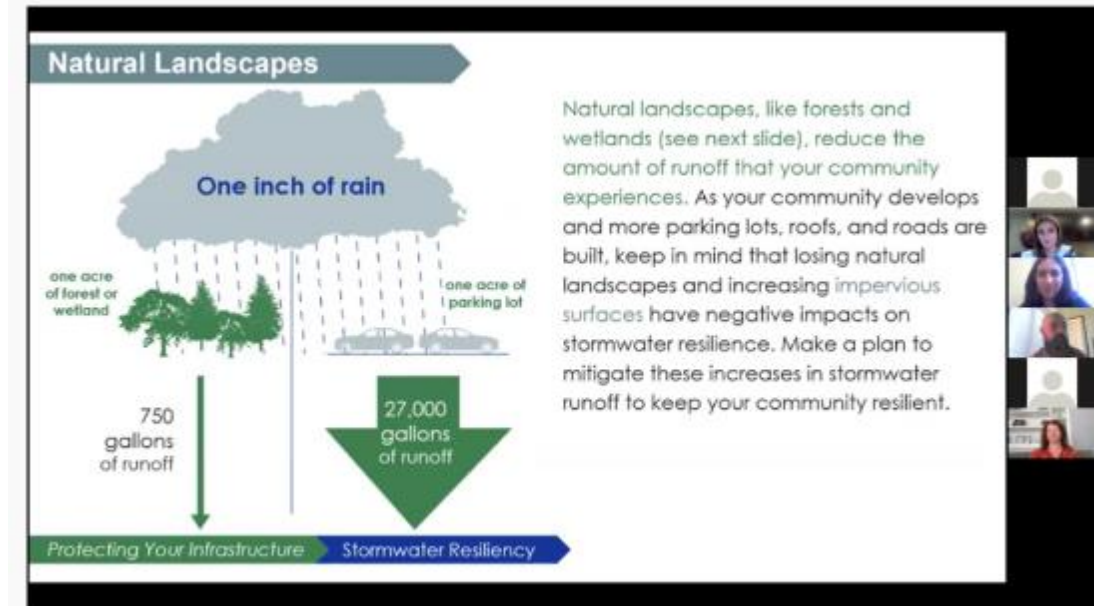
- **Magazine Article**
  - *Ex. Resource listed in article in May 2021 Boroughs Magazine (Pennsylvania State Association of Boroughs)*

- **Local Government Professional Development Course**
  - *Ex. Maryland Municipal League and Maryland Association of Counties elective course on "How Your Watershed Works" on Nov 4th*

Impact to Date

- **300+ people** have accessed the editable versions of the modules

- Modules have been utilized in **Delaware, Maryland, New York, Pennsylvania, and Virginia**

- Modules have directly reached an estimated **1,500 local government officials and staff**

How could YOU use *A Local Government Guide to the Chesapeake Bay?*

Laura Cattell Noll

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ALLIANCE
for the Chesapeake Bay