

Welcome!



This presentation is being live-streamed to the Chesapeake Bay Program Facebook page.



All participants have been muted. Please use the Q&A function to ask any questions you have! They will be answered during the discussion section after the presentation.



This webinar will be recorded. It can be accessed at https://www.chesapeakebay.net/who/group/communications_workgroup by 5:00 p.m. on Friday, May 21.



Having technical issues? Please email mbaldine@chesapeakebay.net.

Exploring Chesapeake Wetlands, a Critical Habitat for a Healthy Ecosystem

May 17, 2021 | 12:00-12:45 PM
ZOOM & FACEBOOK LIVE



WELCOME!



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Will Parson / Chesapeake Bay Program

WETLAND RESTORATION

Amy Jacobs

The Nature Conservancy



Wetlands have:

Wetland
Soils

Water at
or near
Surface

Wetland
Plants

• @KentMason



Headwater Riverine Wetland

Slope wetland



Depressional Wetland





Depressional Wetland



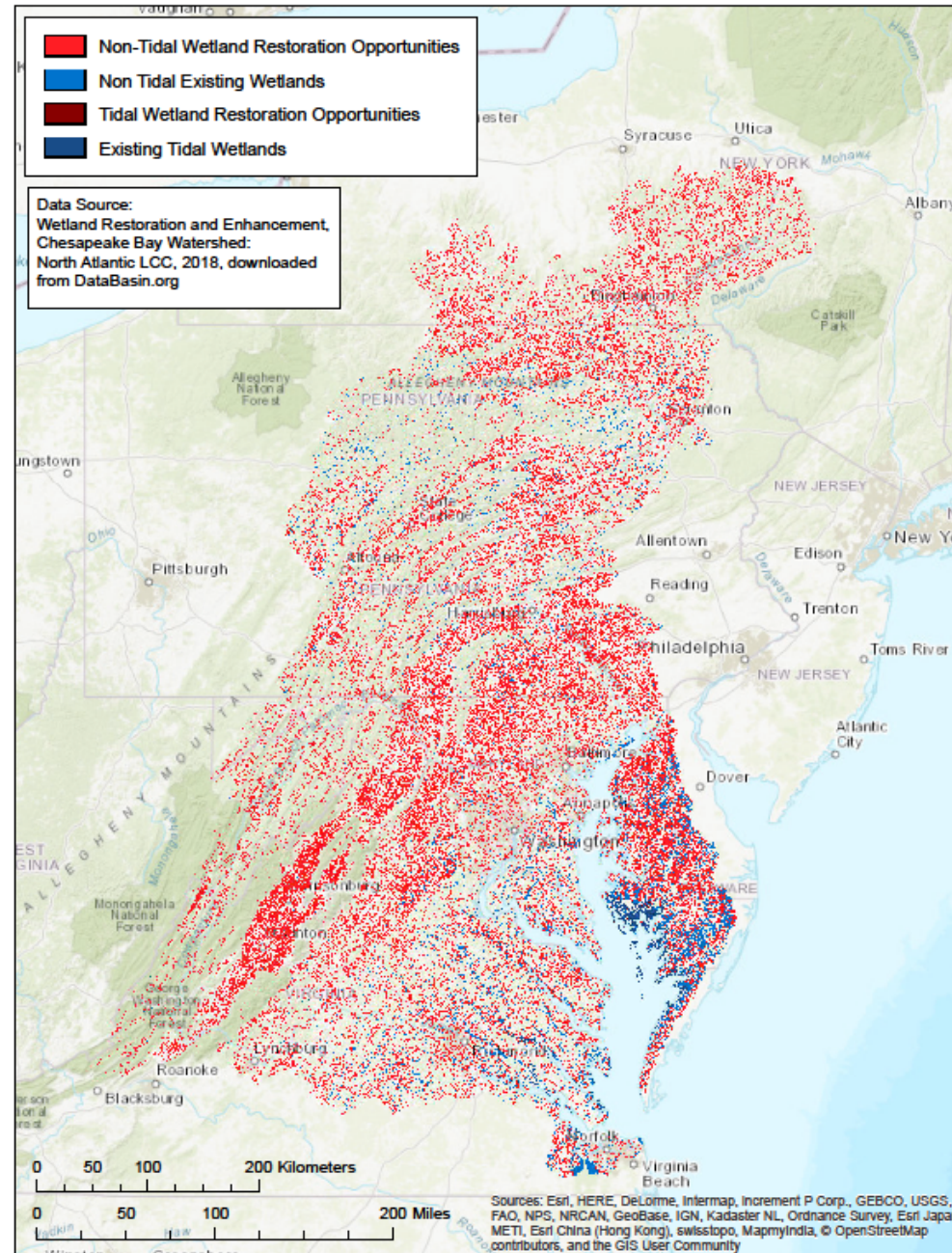
Riverine Wetland



Tidal Fringe Wetland

Of the Chesapeake watershed's 3 million historic acres of wetlands,

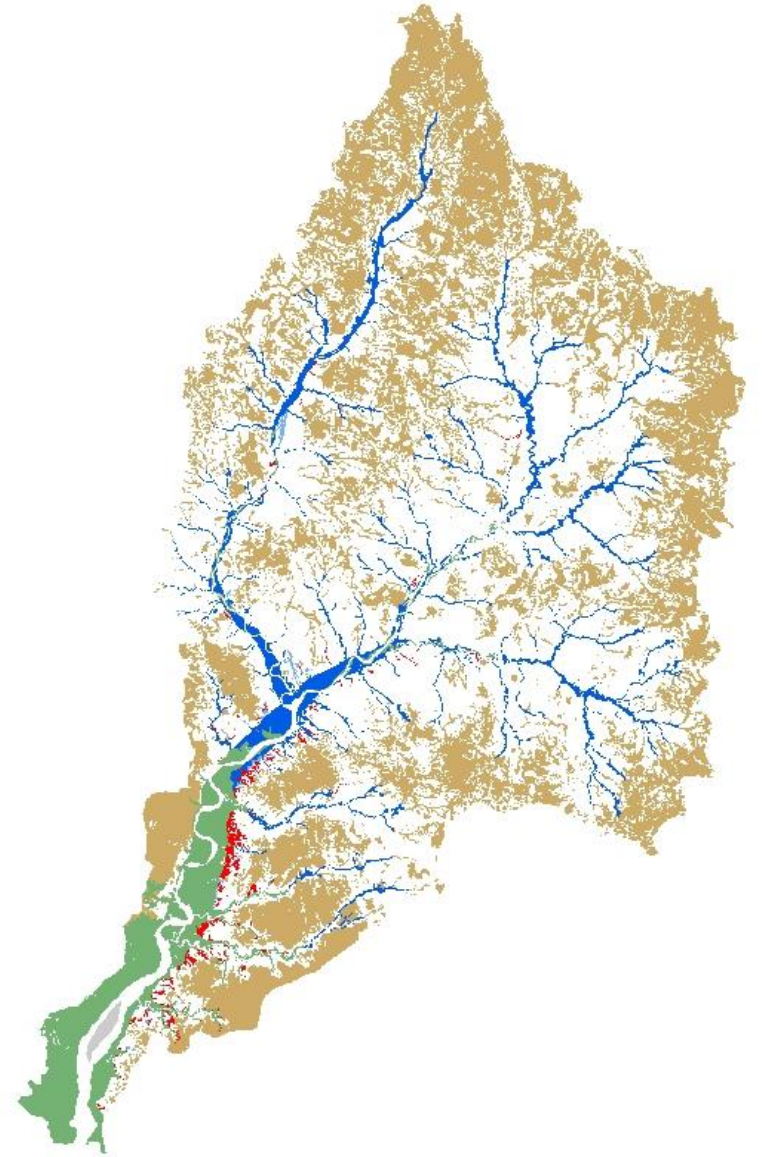
50% have been converted to other land uses.



1 million acres of these wetlands have the potential to be restored.

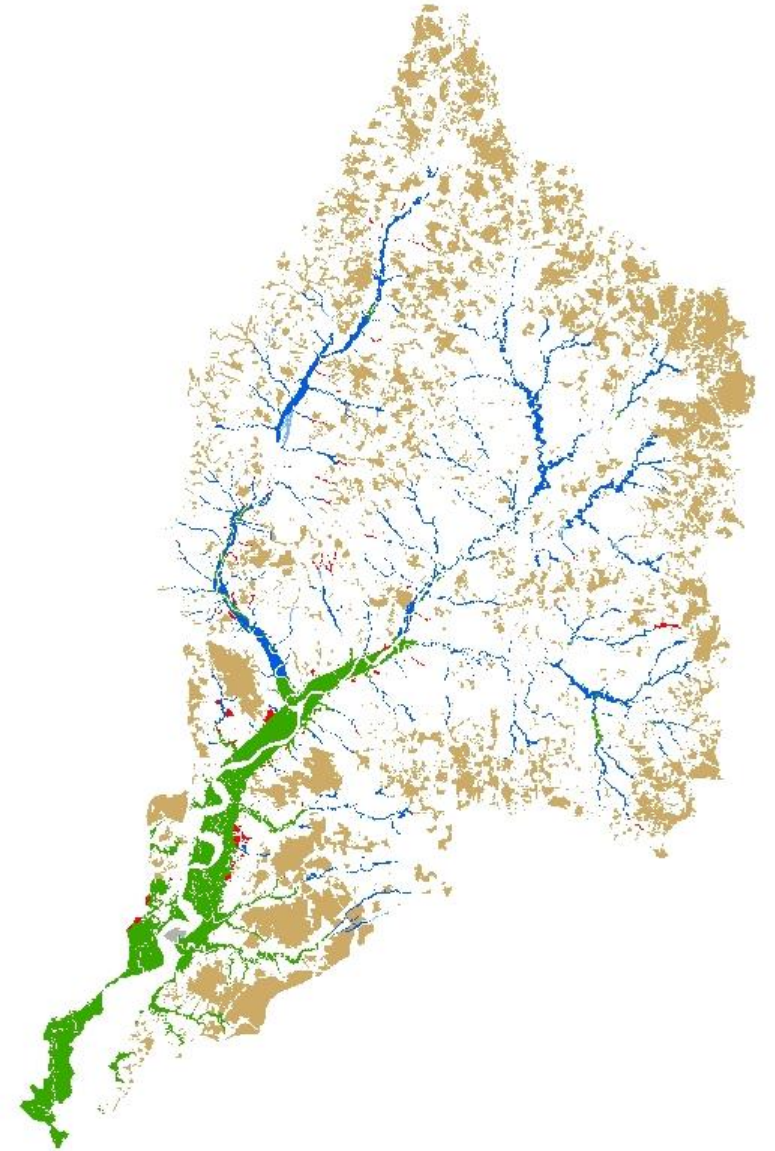
Nanticoke River Watershed Pre-settlement

45% wetlands



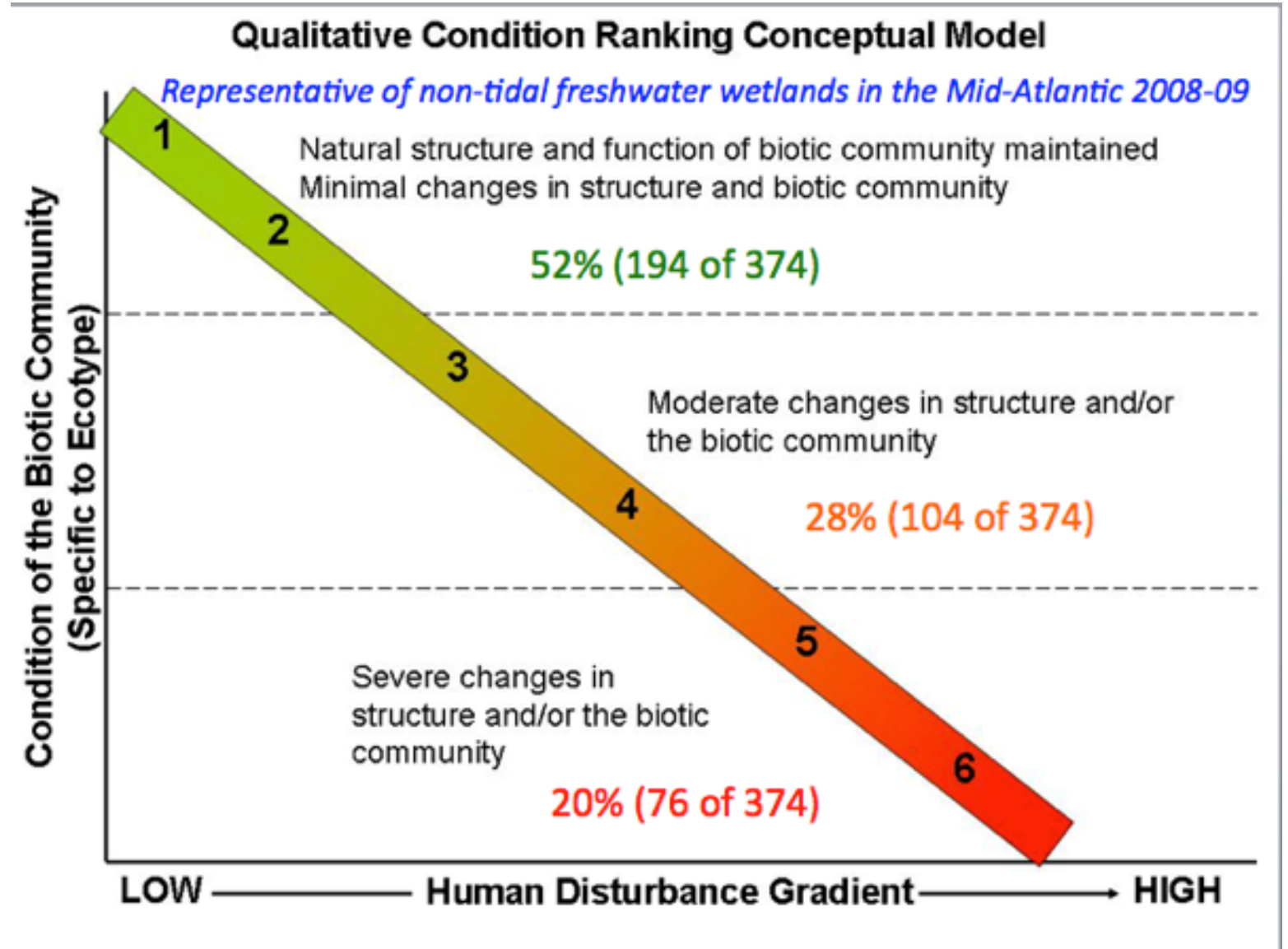
Nanticoke River Watershed 1998

28% wetlands



MidAtlantic Wetland Condition Assessment

- Human disturbance impacts function
- Half of regional wetlands are degraded
- Restoration can repair wetlands and enhance function
- High quality wetlands and their benefits should be protected



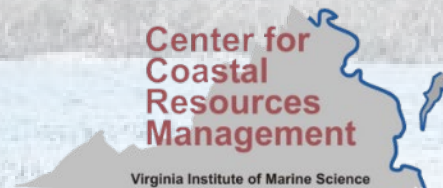
Brooks, RP, K Havens, H Ingram, K Angstadt, D Stanhope, A Jacobs, M Nassry, and D Wardrop. 2018. Creating a Unified Mid-Atlantic Rapid Condition Assessment Protocol for Wetlands. Pages *in press*, Chapter xx in Dorney, J, R Tiner, R Savage, and P Adamus (eds.). *Wetland and Stream Rapid Assessments: Development, Validation, and Application*. Elsevier, Inc. Accepted, *in press*.

WETLANDS: Benefits, Stressors and Fun Facts

Pam Mason

Center for Coastal Resources Management

Virginia Institute of Marine Science



Wetlands provide benefits

An aerial photograph showing a vast wetland area. A large, calm blue lake occupies the upper portion of the frame. Below the lake, a dense network of winding, dark blue channels meanders through vibrant green marshland. The channels vary in width and form, creating a complex, interconnected waterway system. In the background, beyond the lake, there are green fields, a line of trees, and a small building, suggesting a rural or agricultural setting. The overall scene is a mix of natural water features and managed land.

WETLANDS IMPROVE WATER QUALITY

Wetlands act as a
filter for surface
water,
groundwater and
tidal water

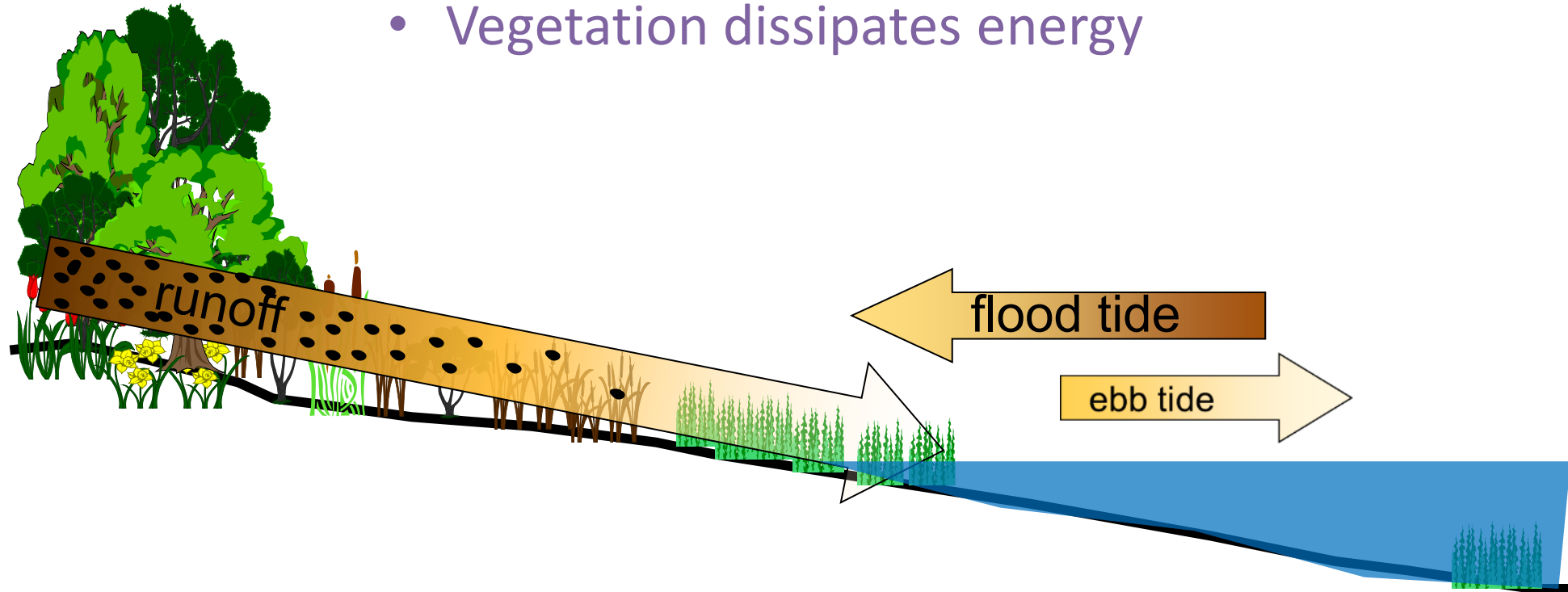


Keith Rutowski / Chesapeake Bay Program

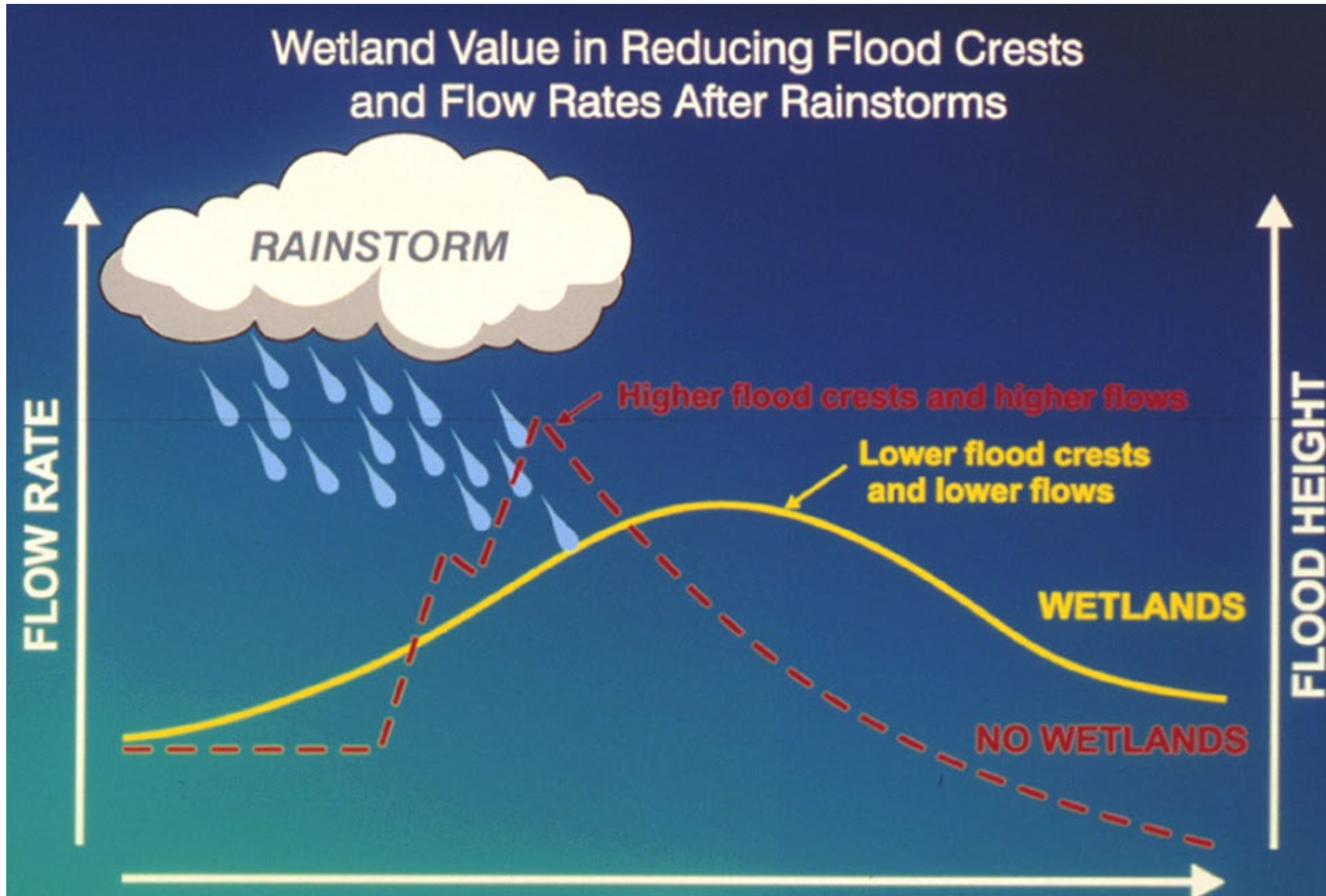
WETLANDS TRAP POLLUTANTS AND REDUCE EROSION



- Vegetation slows runoff
- Slower flow holds onto sediment
- Vegetation dissipates energy



Flood benefit



WETLANDS PROVIDE FOOD

Blueberries
Vaccinium
corimbosum



Cranberries
Vaccinium
macrocarpon

Rice:
Zizania. Wild
rice. Found
throughout
Eastern US
Oryza. “Asian”
rice. Cultivated
in subtropical
locales
worldwide



Taro Native to
Southeast Asia
and cultivated
worldwide.
Known as “Poi”
in Hawaii

WETLANDS PROVIDE RESOURCES

Common Reed

Roofing material and fuel



Salt Meadow Hay

Used as Pasture for Grazing
Used as landscape material
Used as fuel



Atlantic White Cedar

Found in coastal swamps
Timbered for building material
Locally rare and under restoration

WETLANDS ARE FOR RECREATION

- Boating
- Fishing
- Hiking
- Bird Watching



WETLANDS FORM THE BASE OF THE AQUATIC FOOD CHAIN

Tidal wetland plants convert sun's energy into glucose stored in plant tissues.



Plants and plant material supports microorganisms like bacteria, algae, and fungi.



Detritus and microorganisms provide food for marsh snails, worms, fiddler crabs and shrimp. These small animals are food for blue crabs, fish, birds, and mammals.



WETLANDS HOUSE RARE SPECIES

The U.S. Fish and Wildlife Service estimates that up to **43% of the federally threatened and endangered species rely directly or indirectly on wetlands for their survival** (e.g., the wood stork, bog turtle, Florida panther, whooping crane, swamp pink, and Canby's dropwort). Many other species use wetlands at some point in their lives.



WETLANDS ARE HOMES

- 💧 Spawning Area
- 💧 Nursery For Juvenile Fish/Crabs
- 💧 Shelter From Predators
- 💧 Food/ Forage Area
- 💧 Nesting Sites



WETLANDS ARE STRESSED



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- **Development**
 - Roads
 - Agricultural conversion
 - Building sites
 - Dredging for water access
- **Sea level rise**
 - Drowned plants and wildlife
- **Water Management**
 - Ditching and draining
 - Water withdrawal
 - Reservoir construction



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WETLAND MYTHS AND TAKING ACTION

Kevin Du Bois

Department of Defense Chesapeake Bay Program Coordinator

WETLAND MYTH #1

MYTH: “Having a wetland on my land stops me from developing my property! If I touch it, I’ll be fined.”

TRUTH: Wetland properties can still be developed and used.



WETLAND MYTH #2

MYTH: “Wetlands will spread uncontrollably and take over my land!”



TRUTH: Wetlands must meet specific criteria for hydrology, soil, and vegetation.



WETLAND MYTH #3

MYTH: “Wetlands are filled with just a boring bunch of grass.”

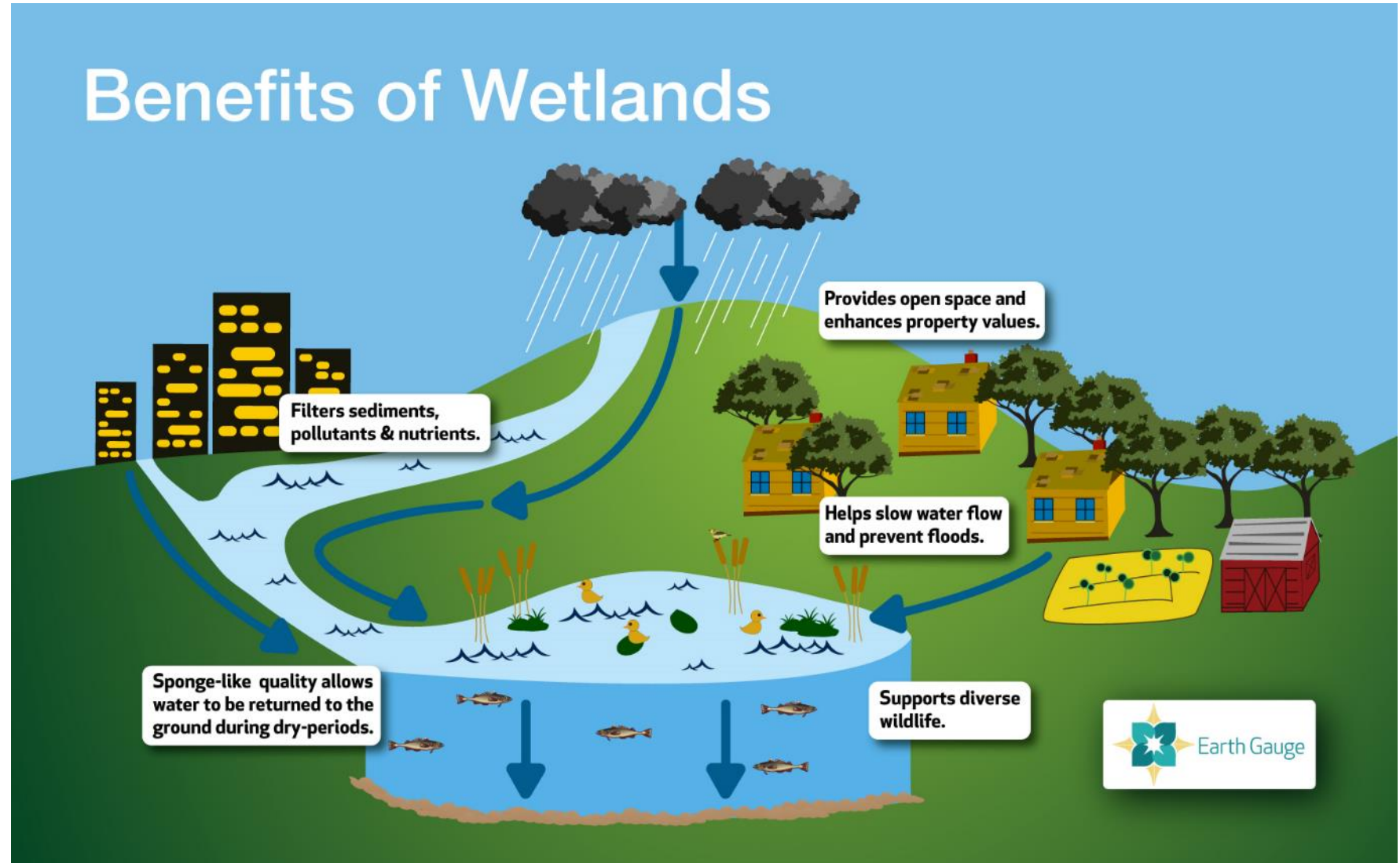
TRUTH: Wetlands support hundreds of diverse species.



WETLAND MYTH #4

MYTH: “Wetlands on my property are bad news.”

TRUTH: Wetlands can be a boon for your property!



WETLAND MYTH #5

MYTH: “Wetland loss is a thing of the past.”

TRUTH: Wetlands are in trouble.

“Even though wetlands act as the Bay watershed's kidneys to absorb and cleanse polluting runoff, protecting them and increasing their acreage continues to be a struggle.”

“Wetland losses due to sea level rise and illegal and unregulated activities degrade the health and functioning of existing wetlands.”

Chesapeake Bay Foundation
2020 Habitat Indicator Score



Image courtesy of the Chesapeake Bay Foundation

DON'T: WETLAND FILLING



DON'T: WETLAND MOWING



WHAT CAN LANDOWNERS DO?

#1. Wetland Delineation

- Know your wetland boundary
- Do not mow the wetland



Image courtesy of Ecobot

WHAT CAN LANDOWNERS DO?

#2. Restore your wetland and increase biodiversity

- Reduce maintenance
- Create habitat
- Improve water quality
- Stabilize shoreline



WHAT CAN LANDOWNERS DO?

#3. Control invasive species

- Make room for dormant native seeds to grow



WHAT CAN THE COMMUNITY DO?

#1. Explore wetlands

- Experience the biodiversity
- Discover the plants
- Learn about the critters
- Pick up trash



WHAT CAN THE COMMUNITY DO?

#2. Get involved

- Become active in community partnerships
- Learn how to restore wetlands on public lands



Connecting landowners with the people and programs who can support wetlands restoration on their land

The Benefits of Wetlands



Clean Water



Wildlife



Economy



Need Help?

Find funding programs and planners near you.

State	Select a state	▼	County	Select a county	▼	SEARCH
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RESOURCES

Virginia Institute of Marine Science

<http://www.ccrm.vims.edu/>

Restore a Wetland – Citizen Toolkit

<https://www.yorkcounty.gov/DocumentCenter/View/493/Restoring-Virginias-Wetlands-A-Citizens-Toolkit-PDF>

Wetland Plant Guide

<https://www.fws.gov/chesapeakebay/pdf/NativePlantsforWildlifeHabitatandConservationLandscaping.pdf>

Chesapeake Bay Program – wetlands to visit

<https://www.chesapeakebay.net/news/blog/get-to-know-these-five-chesapeake-bay-wetlands>

Wetlands Work

<https://www.wetlandswork.org/>

Wetlands Watch

<http://www.wetlandswatch.org/>

Recommended books:

- Wetlands. 4th ed. 2007. W. Mitsch and J. Gosselink. John Wiley and Sons, Inc. Hoboken, NJ.
- Common Plants of the Mid-Atlantic Coast: A field guide. 1999,. G. Silberhorn. The Johns Hopkins University Press. 308 pp.
- Wildflowers of Tidewater Virginia. 1982. O. Gupton and F. Swope. University Press of Virginia. Charlottesville, VA. 208 pp.
- Field Guide to Coastal Wetland Plants of the Southeastern United States. 1993. R. Tiner. University of Massachusetts Press. 328pp.