Chesapeake Bay Program Ag Workgroup
April 16, 2020

Report on Multi-Functional Buffer Workshop (2018)

Establishment of multifunctional riparian buffers: How do we accelerate the path to 95,000+ acres with the greatest economic, social, and environmental impact?

Presenters:

Lara Fowler, STAC member, Penn State (lbf10@psu.edu)

Veronika Vazhnik, Penn State (vzv6@psu.edu)

Steph Herbstritt, Penn State (smh412@psu.edu)

The Bay is making progress but is still behind in meeting buffer goals (900 miles/year of new riparian forest buffers until at least 70% of riparian areas in watershed forested)

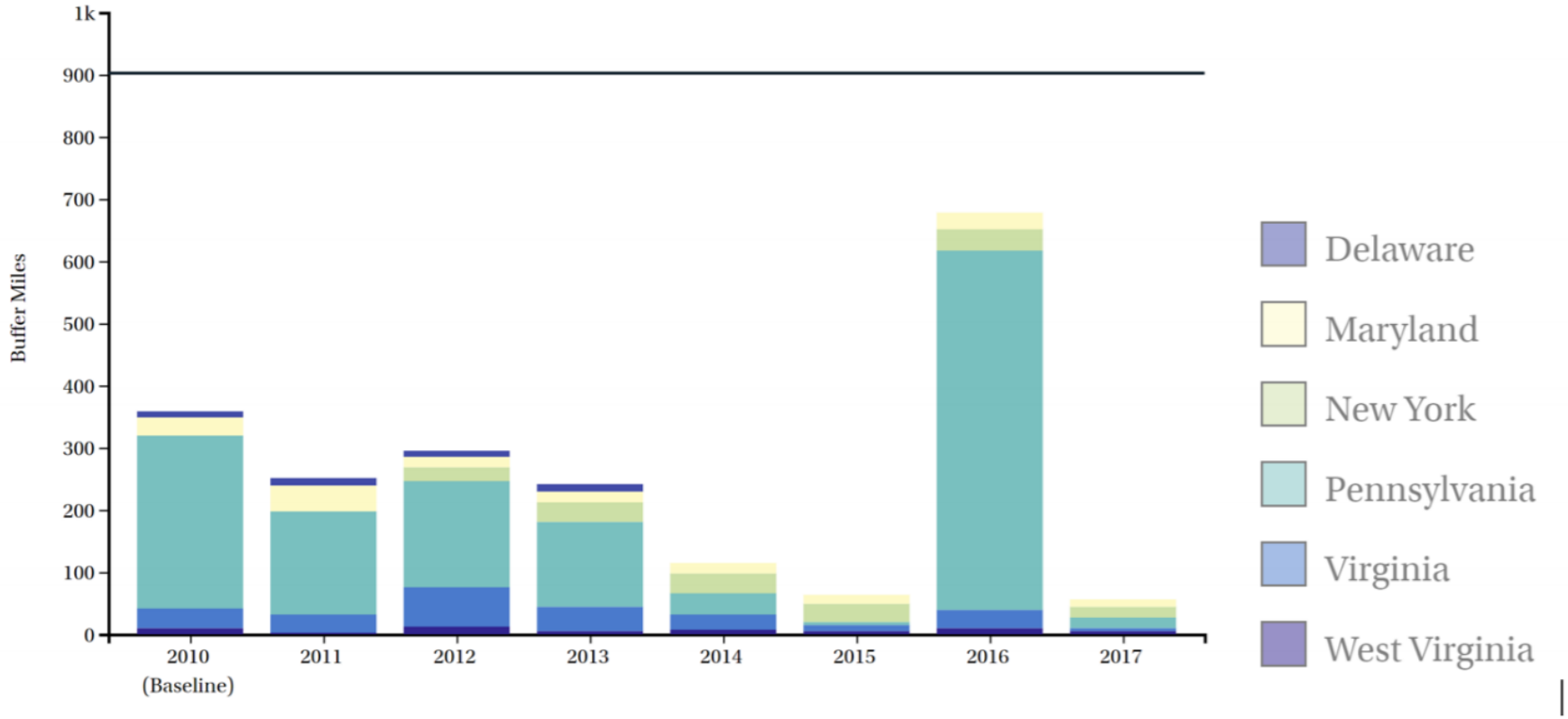
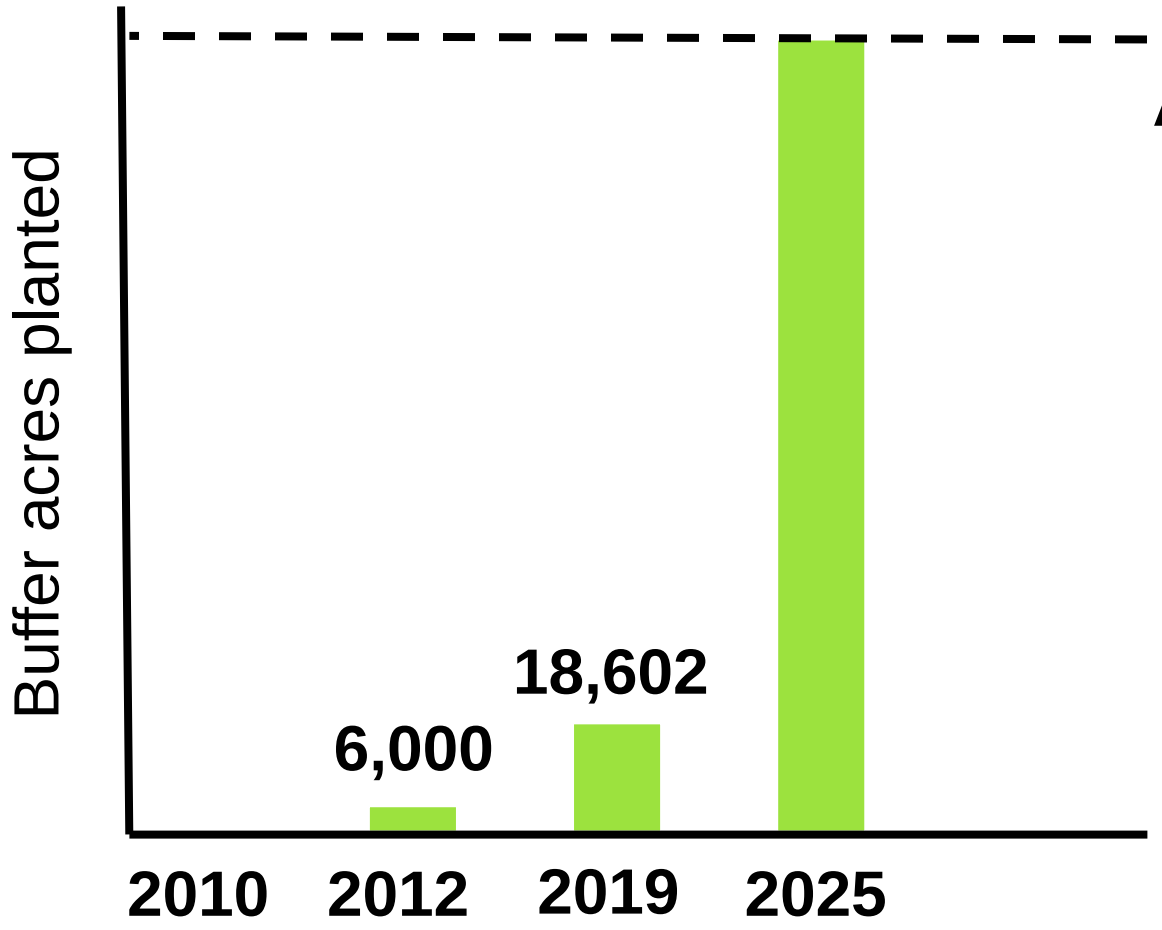


Figure 1. Miles of Riparian Forest Buffers planted in the Chesapeake Bay Watershed, 2010-2017 (Chesapeake Progress 2018) *Note the spike in 2016 is not due to new plantings in 2016 but rather historically planted buffers being reported in 2016.*

https://www.chesapeakeprogress.com/abundant-life/forest-buffers

Pennsylvania in particular is behind in buffers goals



Phase 3 WIP Goal

Add 35’ forest buffer on 25% unbuffered farmland & 35’ grass buffer on 15% unbuffered farmland

~133,000 acres

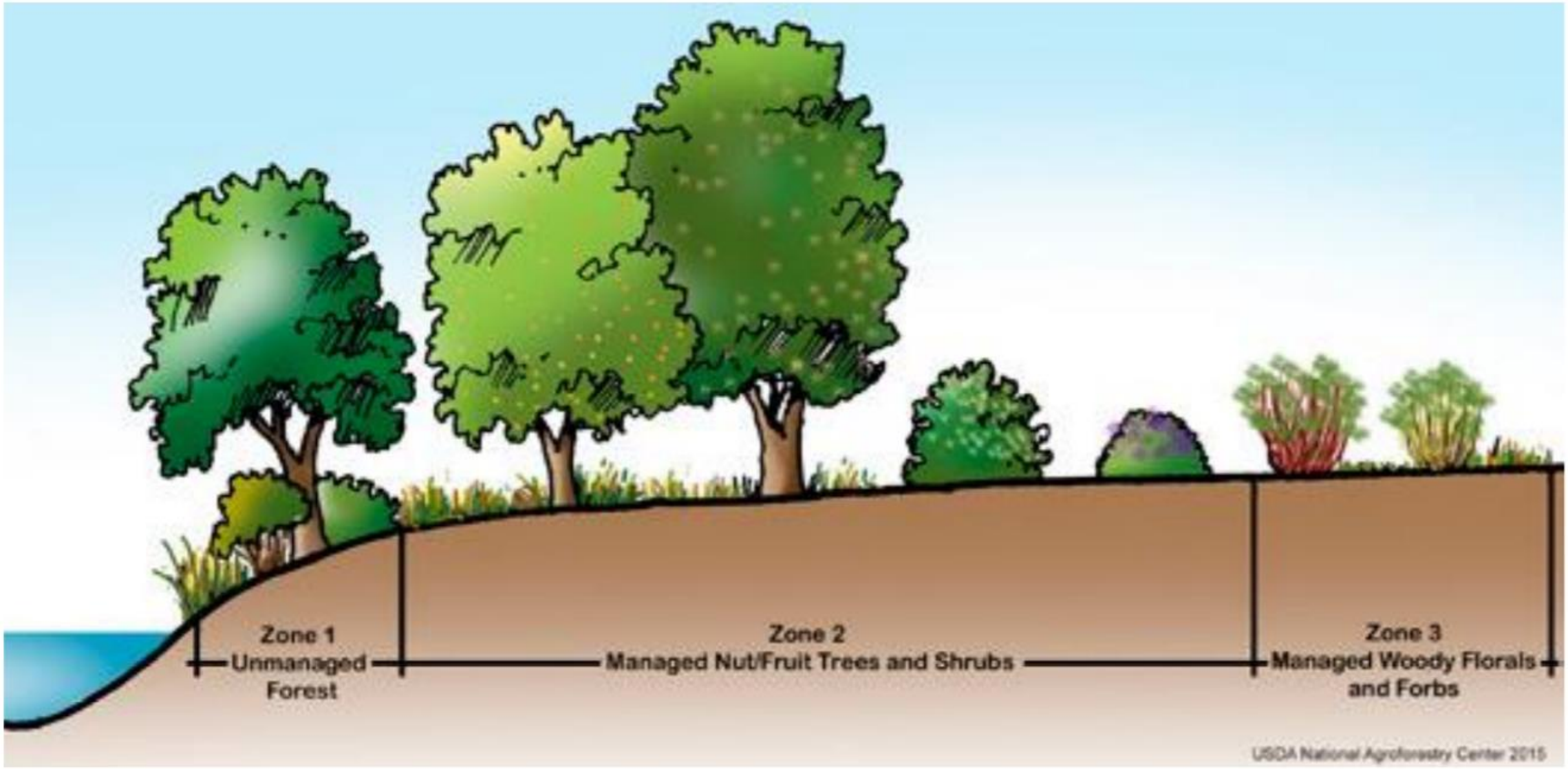
(83K forest, 50K grass)

PA DCNR concept for “multifunctional buffers”

Purpose: **To help Pennsylvania meet the goal** of installing an additional 95,000 acres of forested buffers by 2025.

Definition: **A riparian forest buffer that provides opportunities for harvesting products** such as nuts, berries, woody florals, forbs, and potentially woody biomass. Inputs such as fertilizer or manure would not be permitted, and harvesting would not be permitted in the first 15 feet of the buffer from the edge of the streambank. An overall minimum width of 35 feet is recommended.

Rationale: Pennsylvania has led the nation for many years in establishing forested riparian buffers, but recently, **enrollments have declined**. Without additional tools beyond what is currently available, Pennsylvania is unlikely to meet its goal. **This program offers an additional way to meet the goal**.

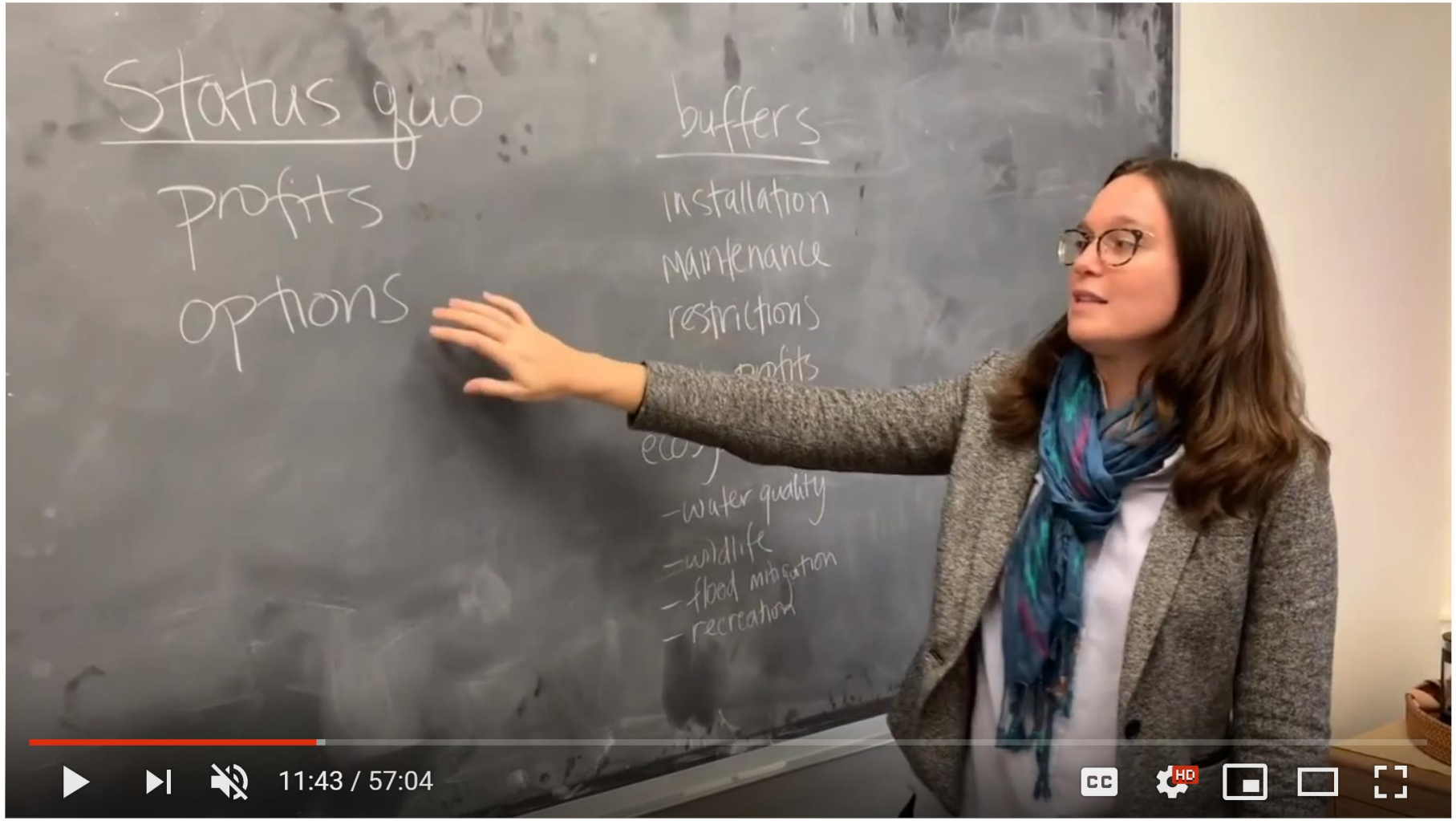

Zone 1
Unmanaged
Forest
Zone 2
Managed Nut/Fruit Trees and Shrubs
Zone 3
Managed Woody Florals
and Forbs
USDA National Agroforestry Center 2015

Overarching workshop goal: how do we accelerate implementation of buffers as a critical BMP?

- Actionable solutions to accelerate buffer plantings across the Bay with minimal government subsidies?

- Potential for “multi-functional” buffers to speed adoption?
  - Water quality benefits
  - Harvestable/diversified products
  - Flood resiliency
  - Aesthetics
  - Habitat
  - More

Pre-workshop webinar: what experiences have people had with multi-functional buffers?



Link to webinar: https://www.youtube.com/watch?v=QqBH1dSuZBg&amp=&feature=youtube

2018 workshop: 50+ stakeholders, 2 intensive days of conversation

Link to workshop materials:
https://www.chesapeakebay.net/what/event/stac_workshop_multifunctional_riparian_buffers_day_1

Participants:

- Farmers/producers
- Researchers
- Extension personnel, agricultural consultants
- Nonprofit organizations
- State agencies, government representatives

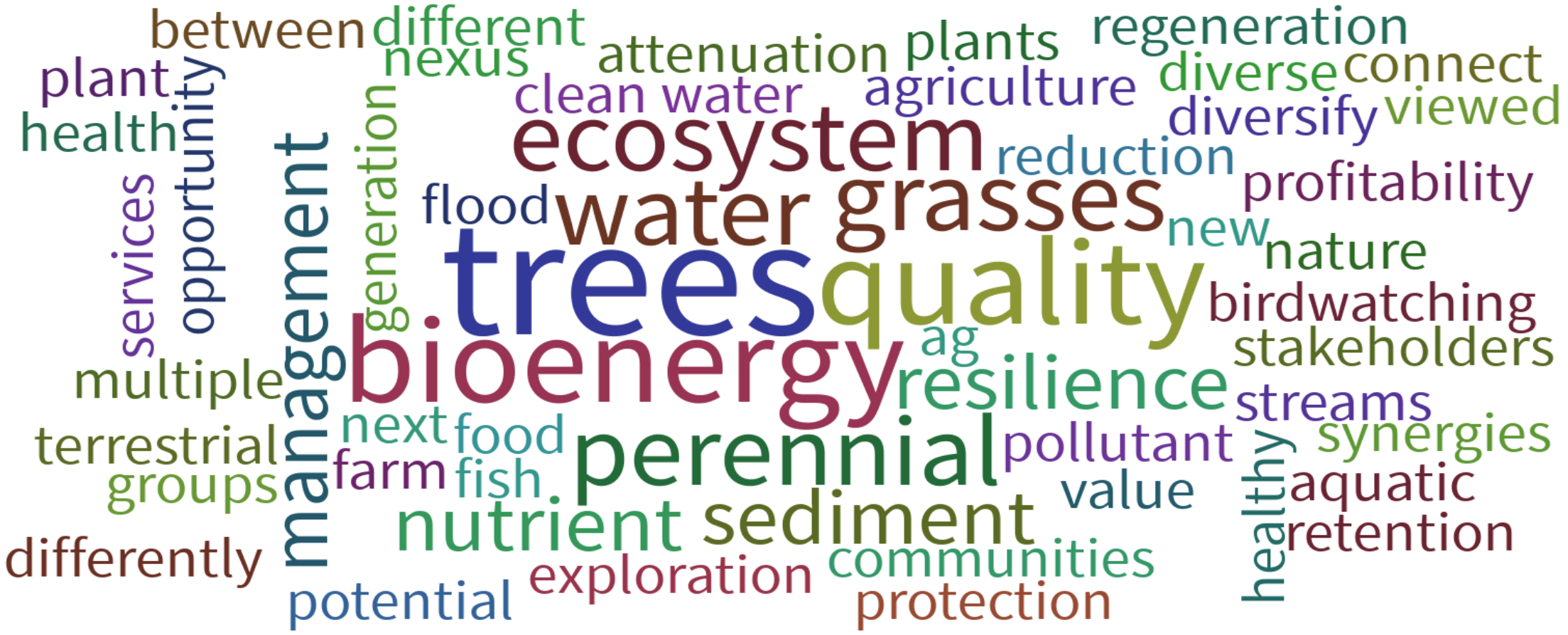
Day 1 Agenda:

- Ice breaker/word cloud
- 2 break out sessions: Barriers? Solutions? Implementation?
- Case study session: Examples?
- Summary/general discussion
- Workshop dinner

Day 2 Agenda:

- General discussion
- Rotating panel discussion
- Wrap up

Initial exercise: “What does a multi-functional buffer mean to you?”
Outcome: focus more on conservation oriented approach.



Top words distilled from 100 pages of notes.
Outcome = somewhat different focus (farmers, markets, funding)

Largest problem?

Lack of legacy of successful multifunctional buffers to look to.

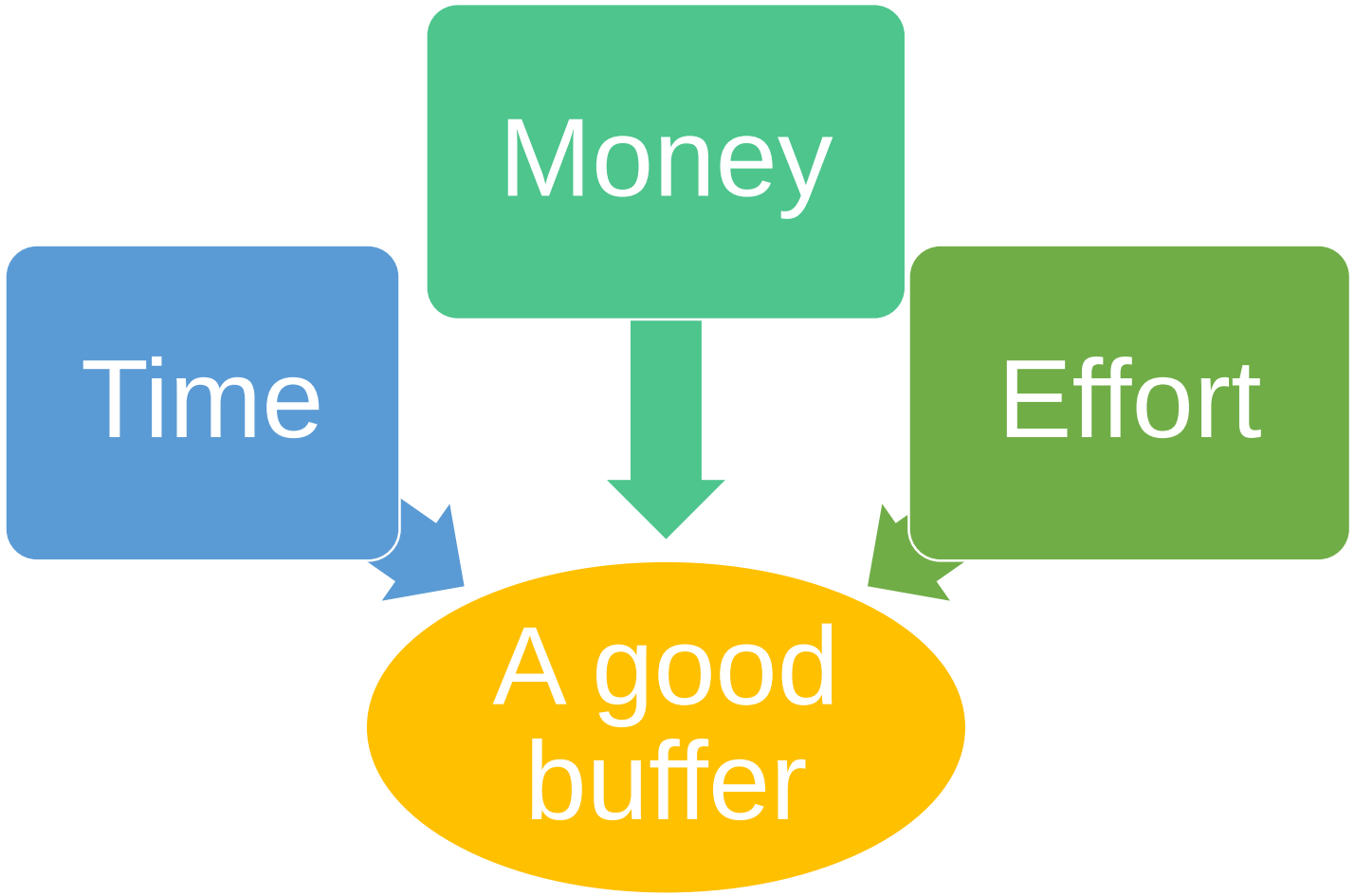
Best solution?

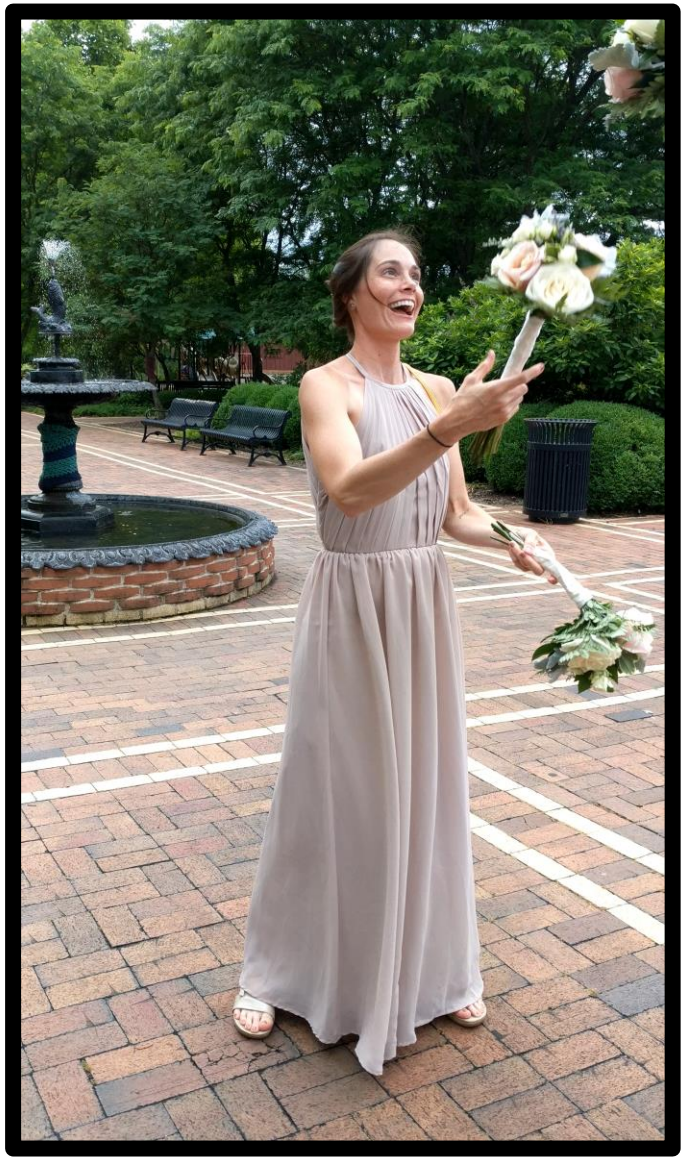
A legacy of successful multifunctional buffers that can be copied and scaled to Bay goals.

Important finding: multi-functional buffers key part of the solution; working together = critical

- Multi-functional approach allows for local & Bay goals
- Economics key– need viable farms
  - diversifying crops/outputs
  - protecting against loss (flood)
- # of practical considerations
  - Needs of landowner (farm, urban)
  - Buffer as part of larger system (uplands also critical)
  - One size does not fit all: niche crops, biomass production, conventional ag
  - Local markets, options for outputs
  - Maintenance, operation

One workshop participant noted that “a good buffer is like a pet”… but this is also a lot to juggle.





Overall findings/needs:

1. Pursue scalable & flexible solutions.
2. Focus on planting successful, low maintenance plants.
3. Plant and share information about successful buffer installations on well-operated farms.
4. Create strong, stable partnerships across the Bay watershed that include linking farmers to private and industry-based funding opportunities.
5. Engage students.

5. Engage students (primary, secondary, university) and young professionals in buffer planting and maintenance. Create support programs that incentivize students and young professionals to plant and maintain buffers in their communities.

4. Create strong, stable partnerships across the Bay that include linking farmers to private and industry funding opportunities.
- Business models that work (advertising, tech support)
- Loan programs

3. Normalize multi-functional buffers through demonstrations on successful, well operated farms.

2. Focus on plants that are proven successful. Intentionally design for success with low maintenance plants.

1. Pursue scalable solutions!

FEATURED

Stream Buffers Make Financial Sense

Philip Gruber Nov 30, 2018 Updated Nov 30, 2018

Mill Creek flows through a riparian buffer on the Mahlon Stoltzfus farm in New Holland, Pennsylvania. Trees and shrubs along stream banks prevent erosion and shade the water.

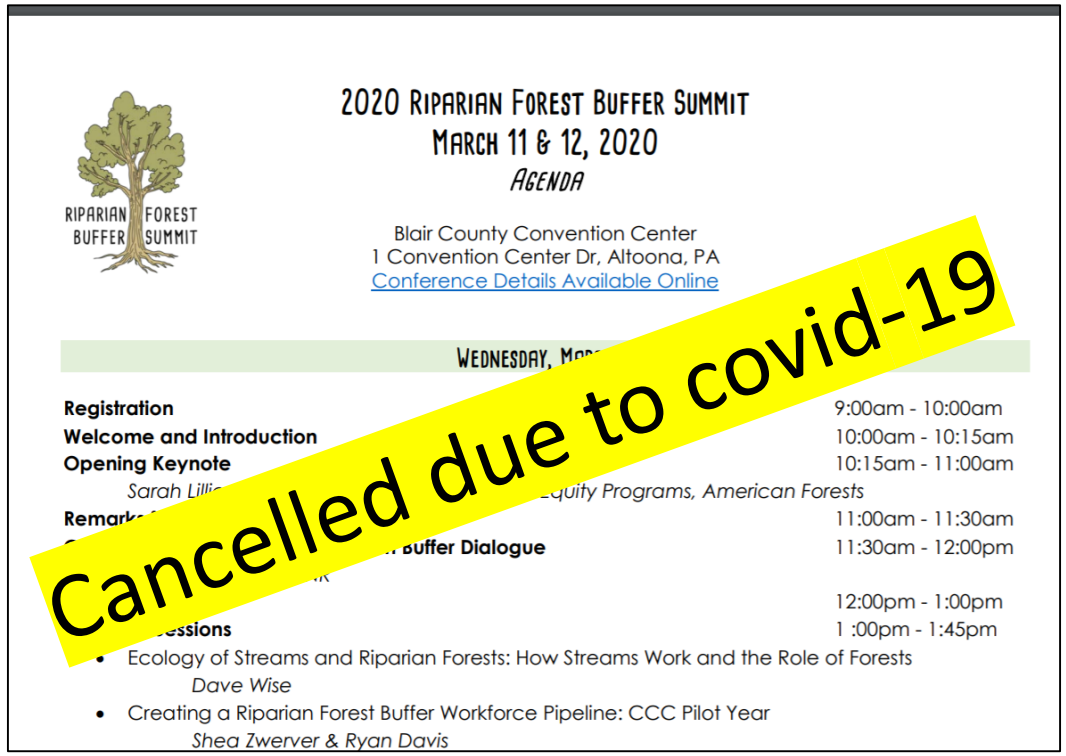
Photo by Philip Gruber

Lancaster Farming
THE FARMER'S CHOICE

Article about workshop published in Lancaster Farming (2018)

https://www.lancasterfarming.com/farm_life/conservation/stream-buffers-make-financial-sense/article_1c024bbe-db50-5971-9926-541fcb9b075d.html

Continued buffer work in PA and beyond



2020 Riparian Forest Buffer Summit
March 11 & 12, 2020
Agenda

Blair County Convention Center
1 Convention Center Dr, Altoona, PA
Conference Details Available Online

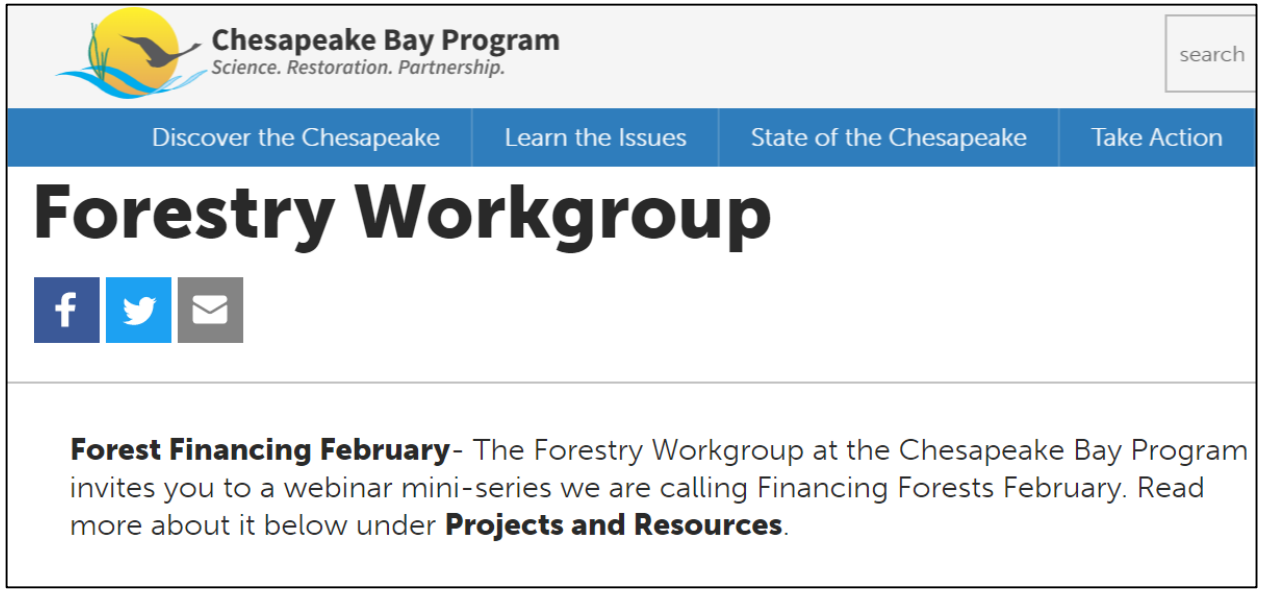
Cancelled due to covid-19

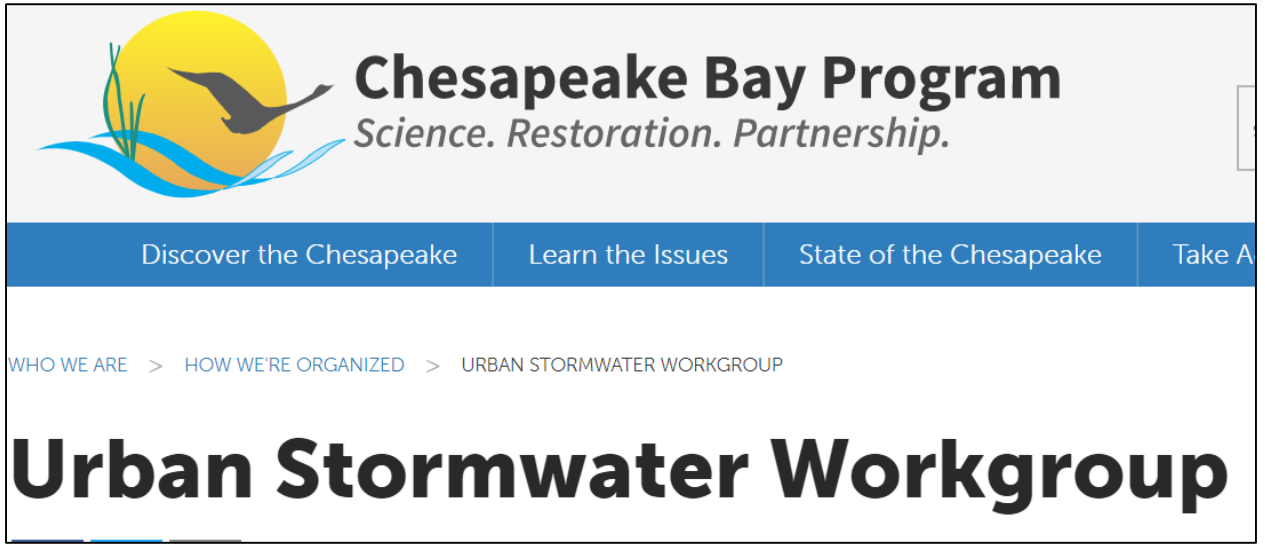
Wednesday, Mar

Registration	9:00am - 10:00am
Welcome and Introduction	10:00am - 10:15am
Opening Keynote	10:15am - 11:00am
Sarah Lilli… …quity Programs, American Forests	
Remark…	11:00am - 11:30am
… Buffer Dialogue	11:30am - 12:00pm
	12:00pm - 1:00pm
…essions	1 :00pm - 1:45pm

- Ecology of Streams and Riparian Forests: How Streams Work and the Role of Forests
  Dave Wise
- Creating a Riparian Forest Buffer Workforce Pipeline: CCC Pilot Year
  Shea Zwerver & Ryan Davis

http://www.docs.dcnr.pa.gov/cs/groups/public/documents/document/2020BufferSummit_Agenda.pdf





Post workshop work continues- successful grant application for buffer implementation in PA

Admin
Dec 4, 2019 • 1 min

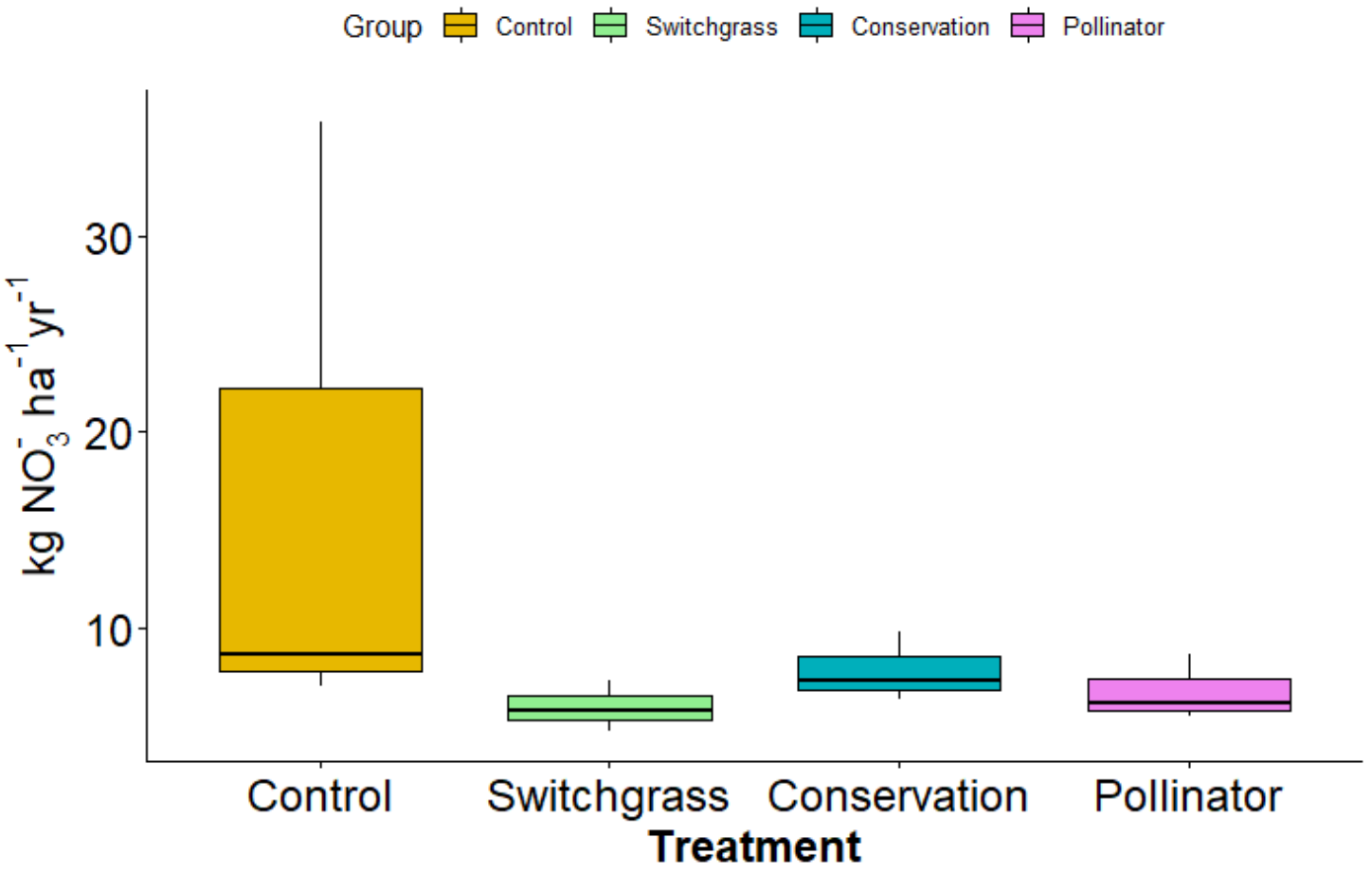
ClearWater Conservancy plants one of the region's first multi-functional stream buffers in Warriors

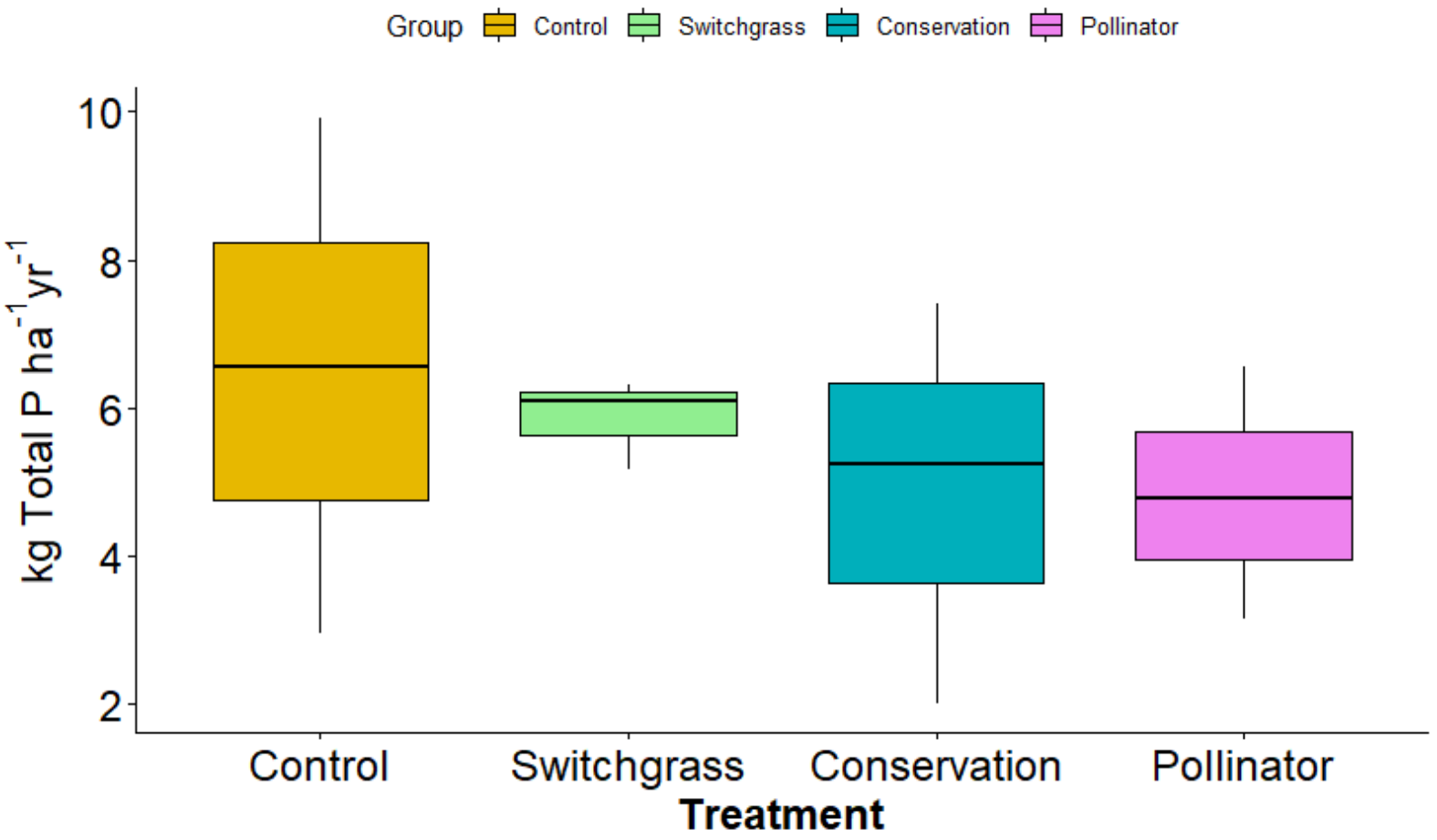
STATE COLLEGE, Pa, NOVEMBER 20, 2019 – ClearWater Conservancy recently completed a unique stream buffer planting on a farm in Warriors...

37 views Write a comment

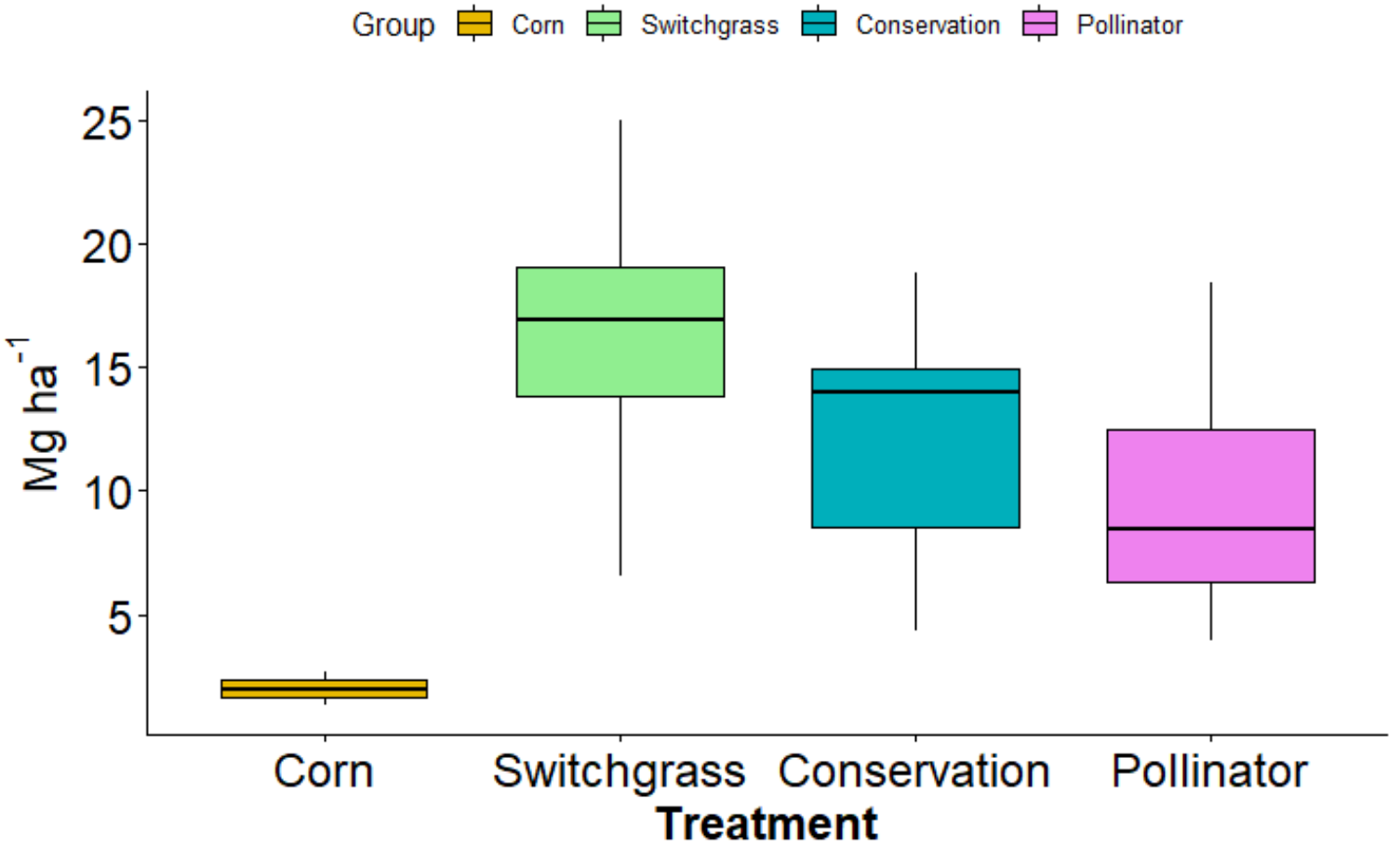
Development of 2 demo sites in PA to monitor yield & water quality

Initial data from demo sites




Group
Control
Switchgrass
Conservation
Pollinator
kg Total P ha-1yr-1
10
8
6
4
2
Control
Switchgrass
Conservation
Pollinator
Treatment

Yields that allow for harvesting/sale of grasses on marginal lands in buffers– for profit



Questions? Discussion?