Chesapeake Bay Program
Science. Restoration. Partnership.

Riparian Forest Buffers

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Through the Chesapeake Bay Watershed Agreement*, the Chesapeake Bay Program has committed to…*

Vital Habitats Goal

Riparian Forest Buffer Outcome*:* Restore 900 miles per year of riparian forest buffer and conserve existing buffers until at least 70 percent of riparian areas throughout the watershed are forested.

What We Want

Focus on Improved Implementation

Elevate Buffer Needs

- MB/PSC involvement:
  All Hands!
- Improve CREP
- Develop non-CREP options

Align timing: Verification and Re-enrollment

1

Setting the Stage:

What are our assumptions?

Why Is Restoration of Forested Riparian Buffers So Important?

Before

After

FORESTED RIPARIAN BUFFERS ARE NECESSARY FOR ECOSYSTEM FUNCTIONING AND MEETING THE BAY TMDL.

Logic Behind Our Outcome

Factors	Current Efforts and Gaps	Management Approaches
• **Coordination** • **Leadership** • **Funding**	• RFB State Leads Need Help • Local offices can be disfunctional • Stable, effective staff need consistent funding	• Leadership • Stable Funding • Outreach and TA • Up Conservation • More action on non-Ag buffers

What Has Been Done to Meet the Forest Buffer Outcome?

CREP brings $$ (75% federal match) and the USDA Farm Service Agency has increased its support to Bay states since 2015, BUT it is complicated.

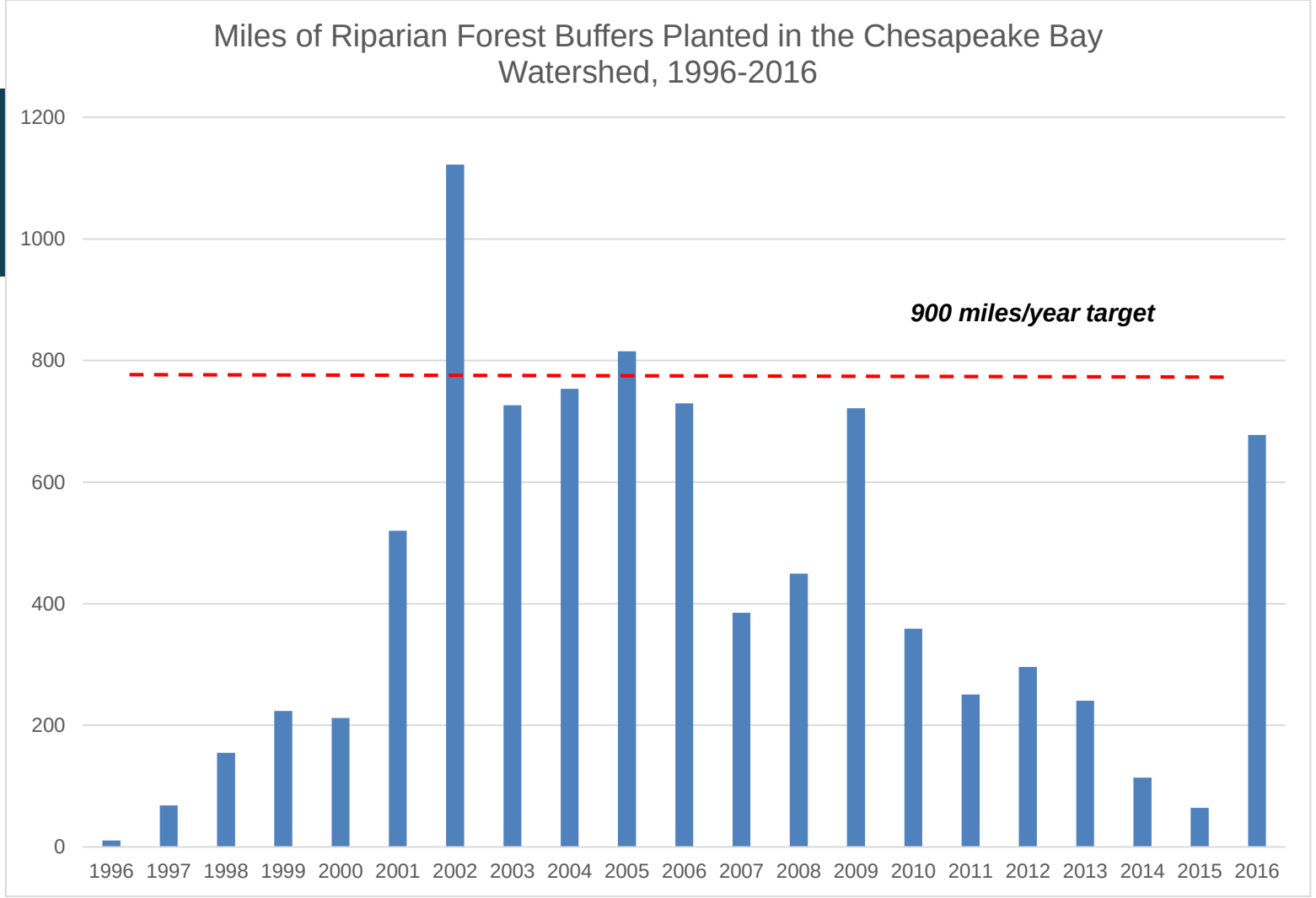
Riparian areas have competing uses, RFBs difficult to sell and specialists are required. BUT NRCS has other farm programs to administer, and doesn't give priority to CREP contracts.

CREP contracts have begun to expire, and there is an added workload for re-enrollment + verification of buffer status for the Bay Program.

2

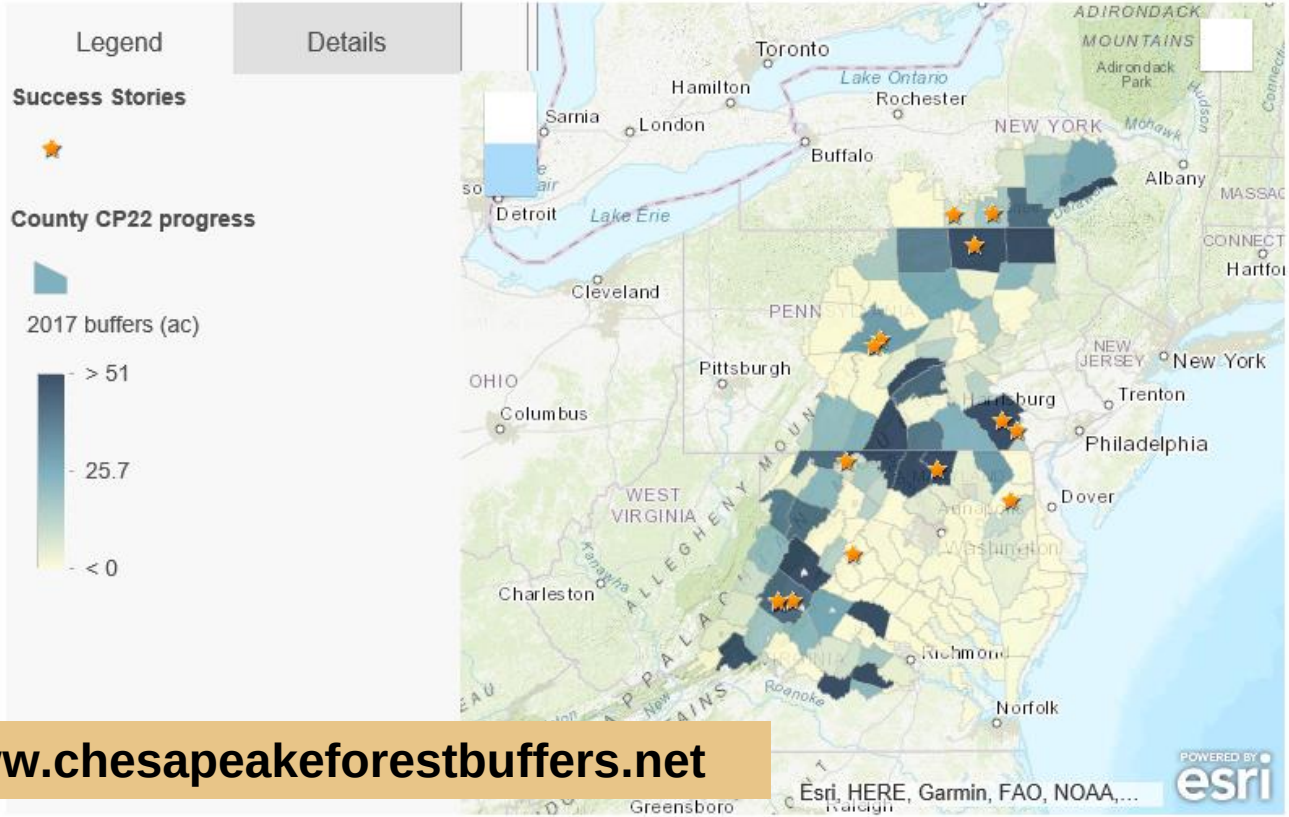
Progress:

Are we doing what we said we would do?


Miles of Riparian Forest Buffers Planted in the Chesapeake Bay Watershed, 1996-2016
1200
1000
800
600
400
200
0
900 miles/year target
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016

Riparian Forest Buffer Progress in the Chesapeake Bay Watershed

Find out 2017's new acres of forest buffers in your county to date and learn about forest buffer initiative success stories from across the watershed.



www.chesapeakeforestbuffers.net

Analysis

What has worked:

- PA leadership example
- Teamwork in dark blue counties
- When the landowner is asked and educated
- When there is additional $ incentive
- When there is outside assistance to maintain the buffer
- These steps have shown near perfect enrollment success

Analysis

There are ~1.4 million acres of riparian area in crop, pasture or turf in the watershed

3

Challenges:

Are our actions having the expected effect?

New Analysis by ARS/PennState shows Buffer By-pass (aka concentrated flow): Need for improved whole farm planning.

Site 2, Hydrology and Waters Quality Highlights

Catchment Analysis (Carlington Wallace)

Concentrated flowpaths reduced the potential contributing area to the buffer by ***32%*** (18.4 ha – 12.4 ha).

SWAT Watershed Modeling (Tamie Veith)

Without CREP (hypothetical)		With CP22 (reality)	
N	P, kg/ha	N	P, kg/ha
20	6.7	14	5.0
		30%	25%

Ag Buffer Builder Analysis (Erik Hagan)

As designed, CP22 buffer achieves *70%* of potential trapping efficiency of sediment. Approx. ***32%*** of buffer accounted for ***49%*** of total sediment removal.

Challenges

(What hasn't worked)

- Lack of sustained leadership support
- Keeping CREP fully operational in each state
- Staff turnover, low numbers of TSPs
- Competing programs for critical riparian area
- Many localities and TSPs still don't get it
- Slow pace-- need to greatly accelerate efforts
- No concerted buffer program for non-Ag lands

Buffers remain at record lows--increasing acreage is very doable but lacks strong, high-level leadership and focused implementation.

4

Adaptations:

How should we adapt?

Based on what we've learned, we plan to…

Focus on Improved Implementation

- Create fully-functioning local teams everywhere needed
- Integrate RFB upfront - part of whole farm planning
  --Address farm flow issues that create buffer by-pass
- Increase TSPs through SWCDs and trusted farm consultants (e.g., TU, Red Barn, CBF, ACB) …akin to *Boots on the Ground*
- Make It Easy-- provide comprehensive services to farmers (sign-up, maintenance, etc.)
- Notch up conservation of RFBs

Based on what we've learned, we plan to…

Elevate Buffer Needs Through Policy/Leadership

- Have top WQ person join with RFB lead in each state
- Find stable funding/plan to keep RFB trained staff
- Develop State Programs to RFBs on non-Ag lands (i.e., suburbia, other non-CREP) using state funding, 319, SRF, etc.
- Revisit State Task Force Reports
- Meet regularly with State Con
- State CREP programs/policy should reflect WIP Phase 3 needs

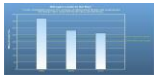
Agreement Goals and Outcomes

Sustainable Fisheries

- Blue Crab Abundance
- Blue Crab Management
- Oyster
- Forage Fish
- Fish Habitat

Vital Habitats Goal

- Wetlands
- Black Duck
- Stream Health
- Brook Trout
- Fish Passage
- Submerged Aquatic Vegetation (SAV)
- Forest Buffer
- Tree Canopy



Water Quality Goal

- 2017 Watershed Implementation Plans (WIP)
- 2025 WIP
- Water Quality Standards Attainment and Monitoring

Toxic Contaminants Goal

- Toxic Contaminants Research
  Toxic Contaminants Policy and Prevention

Healthy Watersheds Goal

- Healthy Waters

Stewardship Goal

- Citizen Stewardship
- Local Leadership
- Diversity

Land Conservation Goal

- Protected Lands
- Land Use Methods and Metrics Development
  Land Use Options Evaluation

Public Access Goal

- Public Access Site Development

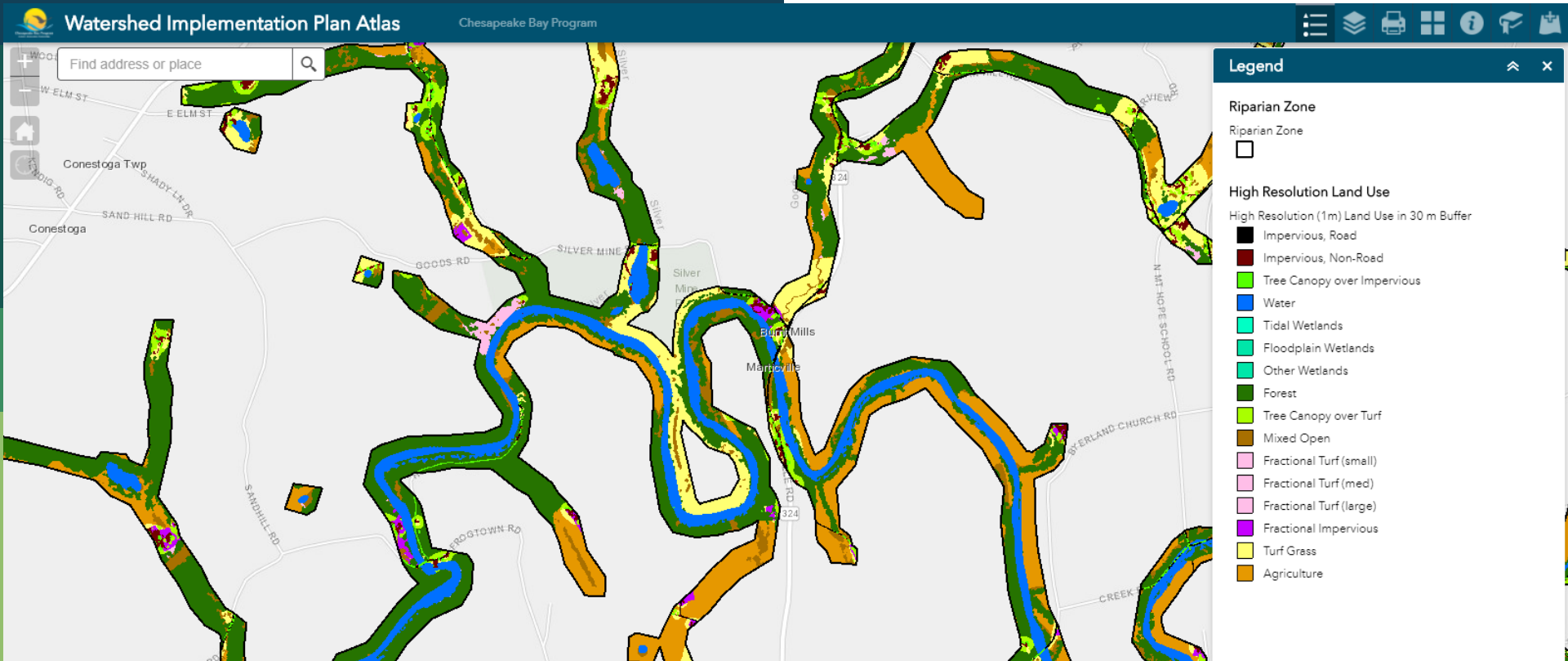
Environmental Literacy Goal

- Student
- Sustainable Schools
- Environmental Literacy Planning

Climate Resiliency Goal

- Monitoring and Assessment
- Adaptation Outcome

Cross-Outcome Considerations



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Discussion