









Panelists



Nick Dilks

Managing Partner,

Ecosystem Investment

Partners



Bill Kilby
President,
Cecil Land Trust



Craig Highfield
Chesapeake Forests
Director, Alliance for the
Chesapeake Bay

Overview

- 1. Introduction
- 2. Environmental Offsets and the Chesapeake Bay
- 3. Case Study #1
- 4. Case Study #2
- 5. Q&A, Moderated discussion



Public funding in Maryland

Maryland State Funding for Land Conservation



(Forthcoming in the new "State of Chesapeake Conservation" report from the Chesapeake Conservation Partnership)



Conservation Finance Sources

Donations and Grants

- Individuals, Foundations, and Corporations
- Voluntary Surcharges
- Voluntary Private Transfer Fees
- Donor-Advised Funds and Aggregators

Tax Benefits

- Federal/State Tax Deductions
 - Bargain Sale/Easement Donations
- State Tax Credits
- New Market Tax Credits

Public Funding

- Federal/State Conservation Programs, Other Funding
- State/Local Ballot Measures
- State/Local Specific Use Taxes/Fees/Incentives
- State/Local Conservation Programs
- Local Improvement Districts

Private Capital

Ecosystem Services Payments:

- Trading (water, nutrients, carbon)
- Habitat, Forest, Species Mitigation/Banking
- Natural Resources Damage, other Settlements
- Tradable Land Use/Development right (TDRs, etc.)
- Conservation Development/Buyers
- Agriculture, Timber, Energy, and other income
- Water Transactions
- Cause-related Marketing
- Impact Investing

Bridge Financing and Loans

- Philanthropic
 - External Revolving Loan Funds
 - Internal Land Trust Protection Funds
 - Foundations, including PRIs
 - Conservation Lenders and Guarantors

Private

- Commercial and Farm Credit Lending
- Seller Financing
- Public
 - Federal/State Revolving Loan Funds
 - Tax-Exempt Debt

List compiled by Conservation Finance Network





Case studies

#1:

Private capital investment in restoration projects

-- outcomes purchased by public funding sources under a pay-for-success model to meet regulatory compliance requirements (TMDL)

#2:

Environmental mitigation banking (specifically for forest loss); in-lieu fee-funded projects to meet compliance requirements (Forest Conservation Act)

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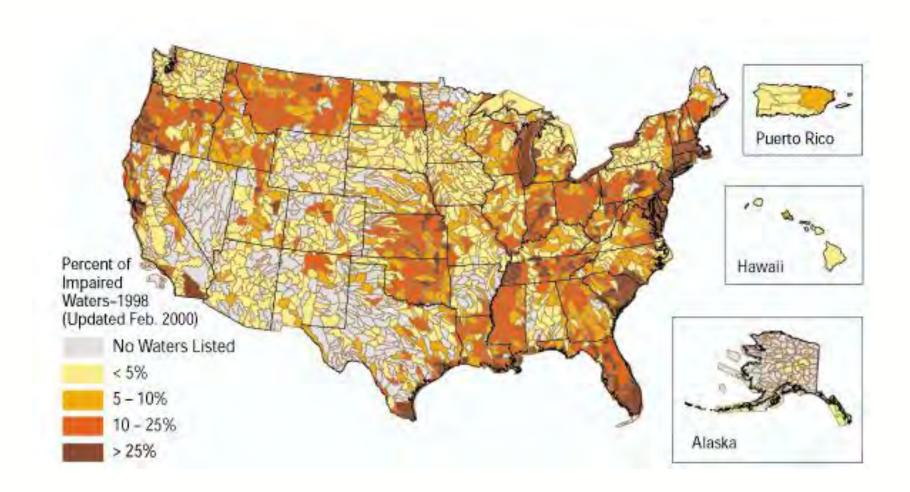
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Impaired waters in the US (percent by watershed)





Chesapeake Bay





Chesapeake Bay TMDL

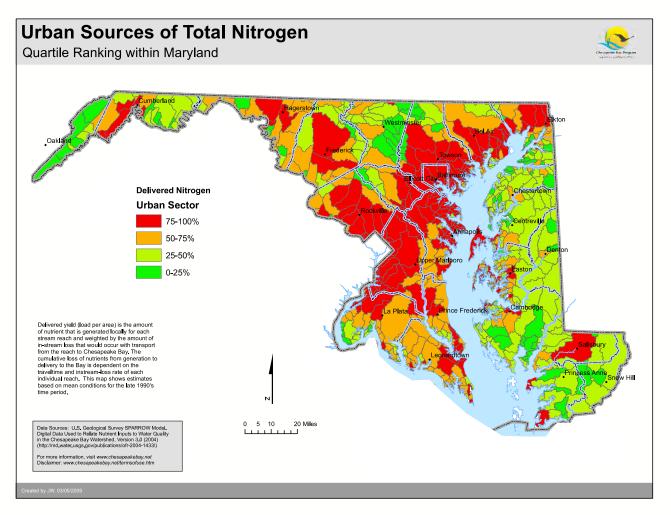
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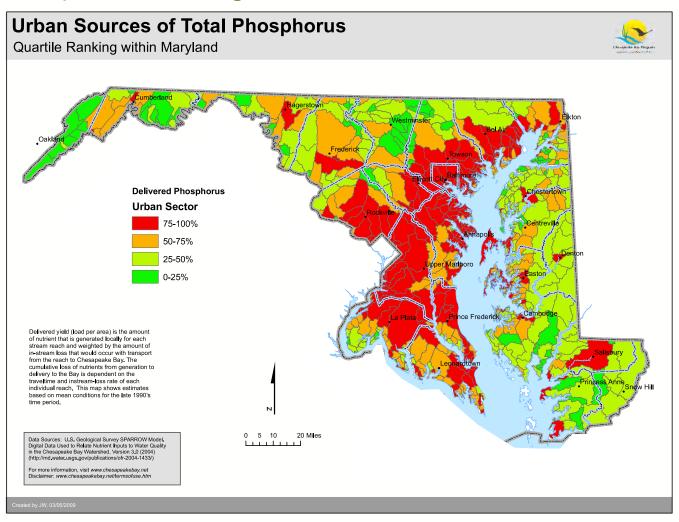


Chesapeake Bay





Chesapeake Bay





Principio Creek

Cecil County





Horst Property – before restoration



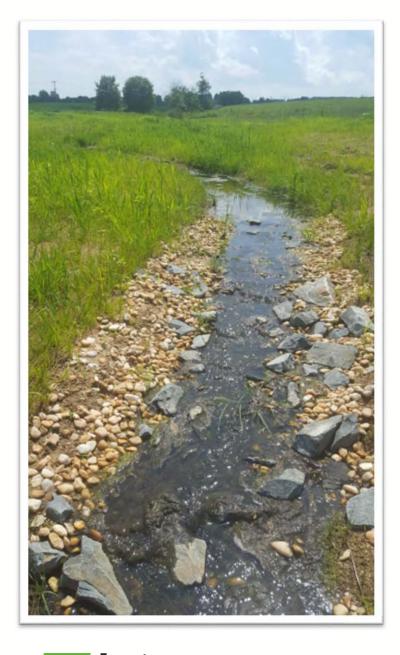


Construction















Results









Paying for long-term success and accountability

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Post Construction as built	75%
1st year monitoring	12.5%
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A Team Effort













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- Landowner outreach
- Land protection (riparian easements)
- Long-term stewardship

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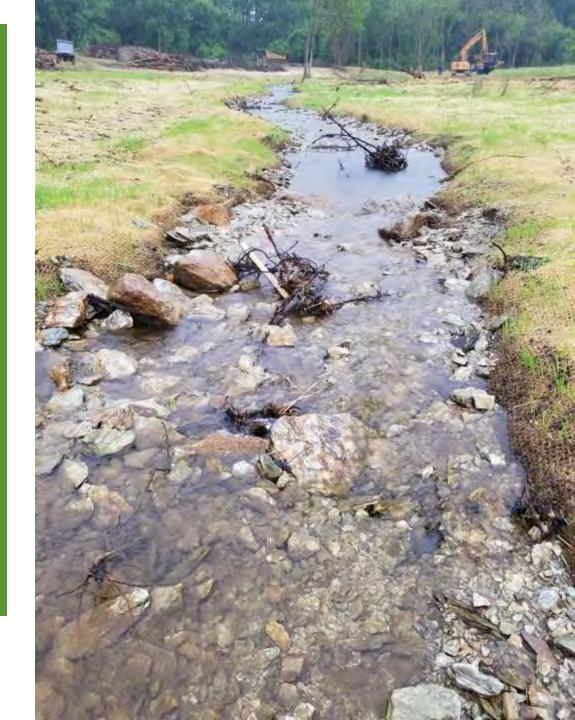
Regulator

- Sets standards and compliance requirements
- Determines whether success has been achieved or not



Thank You

Questions?





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Contacts



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Bill Kilby
President
c/o Executive Coordinator Alisa Webb
alisa@cecillandtrust.org



Jennifer Miller Herzog Chesapeake Program Manager <u>jmillerherzog@lta.org</u>



Forest Mitigation Banking

Addressing the barriers to entry



Craig Highfield
Director of Forests Programs
chighfield@allianceforthebay.org





157,500

THE MARYLAND FOREST CONSERVATION ACT:

the law that conserves forests during development

1991







Land Use Type	Conservation Threshold	Afforestation Threshold
Agricultural and Resources Areas	50%	20%
Medium Density Residential Areas	25%	20%
Institutional Development Areas	20%	15%
High Density Residential Areas	20%	15%
Mixed Use and Planned Unit Development Areas	15%	15%
Commercial and Industrial Use Areas	15%	15%

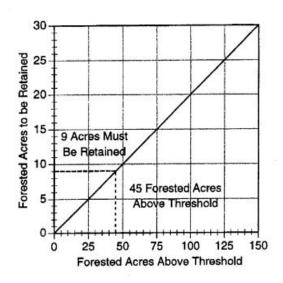
Agricultural and Resource Areas – undeveloped areas zoned for densities of less than or equal to one dwelling unit per five acres.

Medium Density Residential Areas – areas zoned for densities greater than one dwelling unit per five acres and less than or equal to one dwelling unit per acre, including both existing and planned development and their associated infrastructure, such as roads, utilities, and water and sewer service.

Institutional Development Areas – schools, colleges, universities, military installations, transportation facilities, utility and sewer projects, government offices and facilities, golf courses, recreation areas, parks, and cemeteries.

High Density Residential Areas – areas zoned for densitites greater than one dwelling unit per acre, including both existing and planned development and their associated infrastructure, such as roads, utilities, and water and sewer service.

Mixed Use Development Areas – single, relatively high density development projects, usually commercial in nature, which include two or more types of uses.



A simple relationship exists between the number of forested acres above the Conservation Threshold and the amount of forests required to be retained in order to be exempt from reforestation requirements. One acre of retention is required for every 5 acres of forest above the threshold (1:5 = 20%) The dashed lines above indicate how an applicant would calculate the break even point for the site used as an example

Source: Adapted from Forest Conservation Manual, 1991

State regulation administered at the county level

Reforestation mitigation options

- On site
- Off site
- Fee in lieu
- Credit from a established Forest Bank

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Perceived Landowner Barriers to Entry

- High upfront costs to establish forest credits.
- Lack of reliable and easy-to-understand resources on the local forest banking programs.
- Insufficient number of services providers in the region available to guide interested landowners through the process.
- Risk of no economic return.



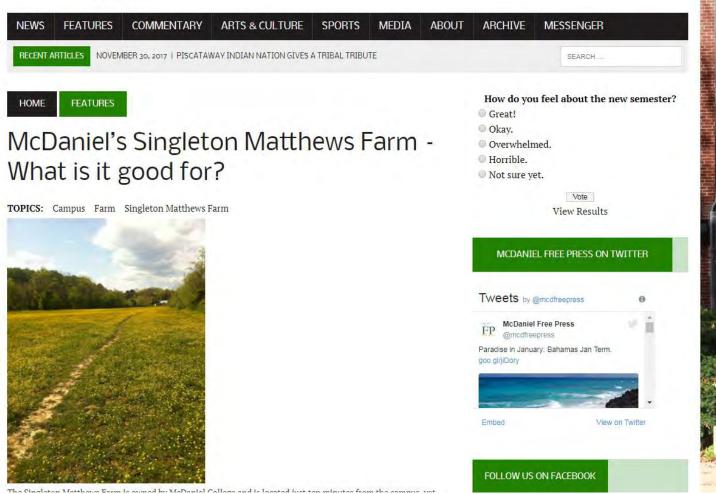
Investing in the Chesapeake
Bay's Conservation Marketplace







McDaniel students know what to read.

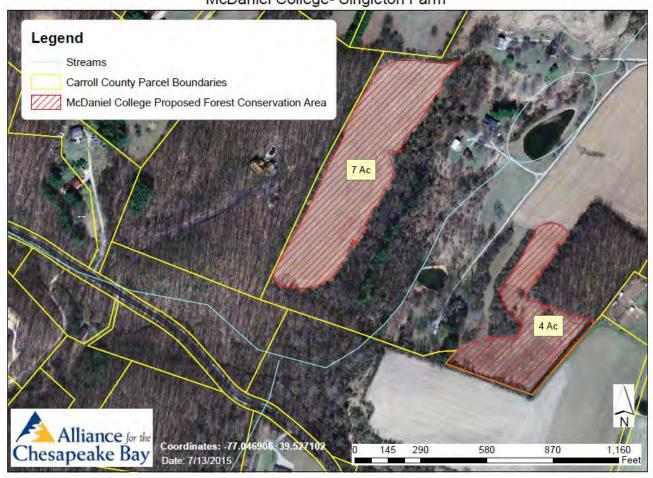


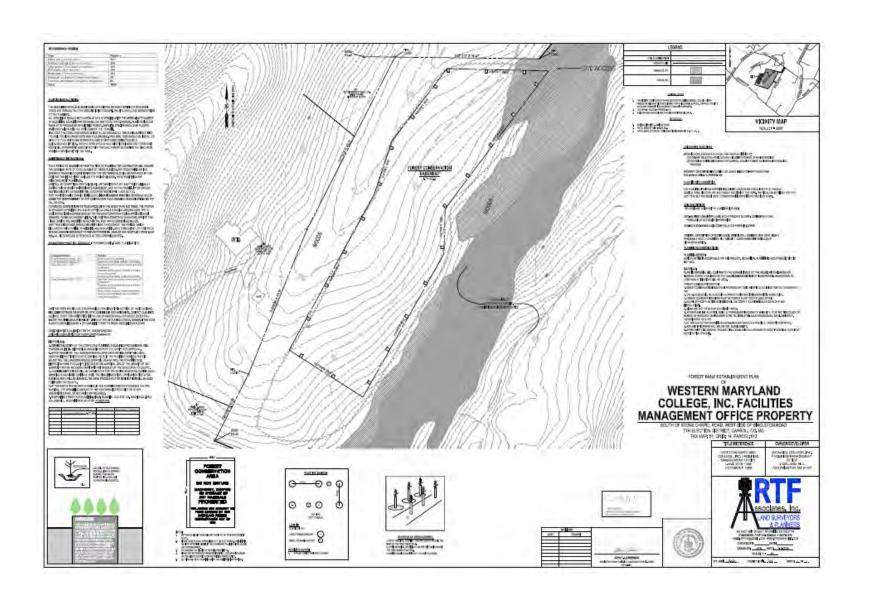


Carroll County Forest Conservation Ordinance

- On site
- Off site
- Fee in lieu
- Credit from a established Forest Bank
- Afforestation only

McDaniel College- Singleton Farm





Size	Number Required Per Acre	Approximate Spacing feet on center	Survivability Requirement At the end of the second growing season	
Bare Root Seedlings or whips	700	8 x 8	55% 385	
When using Tubex	436	10 X 10	75%	327
Bare Root Whips Container grown seedling tubes (minimum cavity width 1.5")	450	10 x 10	65%	290
When using Tubex	350	12 X 12	75%	263
Container Grown 1, 2, 3 Gallon	350	12 x 12	75%	260
Container Grown 200 5, 7 Gallon or 1" Caliper B & B		15 x 15	85%	170
Container Grown 100 15, 25 Gallon or 1.5 - 2" Caliper B & B		20 x 20	100%	100













Sustainable Conservation Investment Fund: An impact investment Approach for Chesapeake Farms and Forests







CONSERVATION INNOVATION GRANTS



Our Goals

- Plant more forests
- Use existing markets as a conservation opportunity for agricultural producers and landowners
- Revolving loan (investment)
- Work in collaboration with Land Trusts
- Benefit both

Ecosystem Markets

- Virginia Nutrient Trading Program
- Maryland Forest Conservation Banking programs
- Maryland Critical Areas Banking Program
- Maryland Nutrient Trading Program*

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		Eligibility Requirements [In addi	tion to the	following state elgibility criteria: (1)	Establishing or enhancing	a ripa
Jurisdiction	Allows Private Landowner Banking (Y/N)	MUST be a forest buffer along streams and floodplains with a minimum width of 50 feet on each side of the stream.	May not be enrolled in CREP	Buffers between conflicting land uses, e.g. industrial and residentials, or adjacent to highways or utility rights- of-way.	Increase contiguous forest cover by adding new forest adjacent to an existing forest.	Fore cor
1 Allegheny	N					
2 Aberdeen	N			x	x	
3 Annapolis	N					
4 Anne Arundel	Υ			x	х	
5 Baltimore County	Υ					
6 Baltimore City	N					
7 Bel Air	N					
8 Calvert	Υ			х	х	
9 Charles	Y					
10 Caroline	Υ					
11 Carroll	Y		X	x	x	
12 Cecil	Y		X	x	x	
13 Elkton	Y					
14 Gaithersburg	N					
15 Garrett	N					
16 Harford	Υ			x	х	
17 Havre de Grace	Y				X	
18 Howard	Υ				x	
19 Dorchester	Y		x		x	
20 Frederick	Y	х	X			
21 Kent	Y	www.forestsforthebay.org				
22 Montgomery	Y			X	x	
23 Prince George's	Υ			x	X	

Heishman Forest Bank Westminster, MD Carroll County





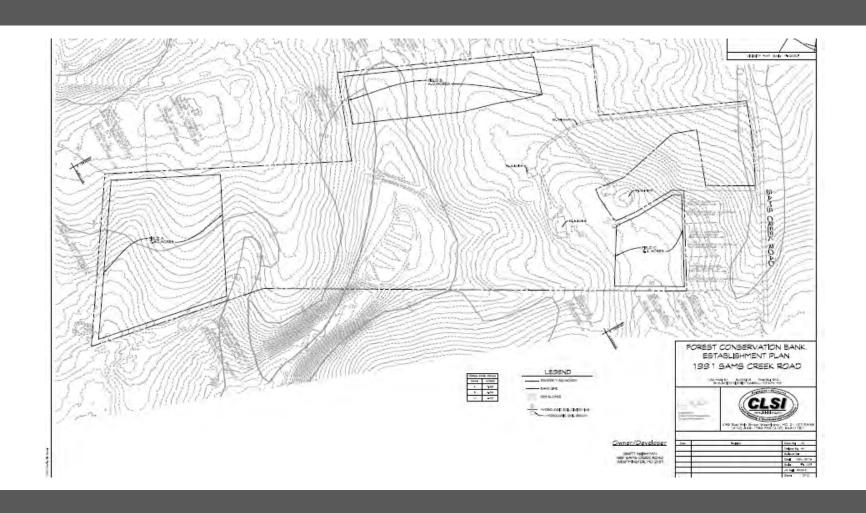


Landowner Agreement for the

Alliance for Chesapeake Bay (Alliance) Chesapeake Forest Fund Program

This Forest Conservation Bank Agreement ("FCBA"), dated this ______ day of _____ 20___ is made by and among the Alliance for the Chesapeake Bay, Inc. (Alliance) 501 6th Street, Annapolis, MD and Brett Hardon Cooperator") of 1991 Sams Creek Road, Westminster, MD. The Alliance and Cooperator are hereinanter referred to jointly as the "Parties". This FCBA sets forth the agreement of the Parties regarding the establishment, use, operation and maintenance of the Heishman Forest Conservation Bank (the "Bank") that is to be certified in Carroll County's Forest Conservation Banking Program.

- A. The Cooperator is the owner of real property (the "Property"), located at 1991 Sams Creek Road, Westminster, MD: Tax Map 61, Block 18, Parcel 502. The Property is shown on the Forest Conservation Bank Establishment Plan (Exhibit A) attached hereto.
- B. The Cooperator desires to create the Bank on 14 acres of the Property (the "Bank Property"). The Bank Property is shown legally described in the Forest Conservation Bank Establishment Plan. The Cooperator agrees to record an easement on the Bank Property with the Carroll County Attorney's Office in accordance to Carroll County's Forest Banking Program (Carroll County Forest Conservation Ordinance: Chapter 150)
- C. Alliance offers to invest <u>S*******</u> ("Investment") from its Chesapeake Forest Fund to pay for expenses supporting the establishment of the Bank on the Bank Property. The Investment will be used for payment of 1) the requisite Forest Conservation Bank Establishment Plan submitted to the Carroll County Bureau of Resource Management and 2) implementation and maintenance of the forest planting as described in Exhibit B in accordance with the Forest Conservation Bank Establishment Plan. The Alliance will assume all responsibility for hiring contractors and administering the Investment for the <u>aforementioned limited</u> purposes. All other expenses associated with establishing the Bank will be incurred by the Cooperator.
- D. Once the Bank becomes certified by the Carroll County Bureau of Resource Management, the Cooperator agrees to initiate repayment of the Alliance's \$***** investment from the Cooperator's sale of forest bank credits or by other means. Once the reimbursement to the Alliance has been made, the Cooperator is entitled to all proceeds from the sale of remaining forest bank credits.

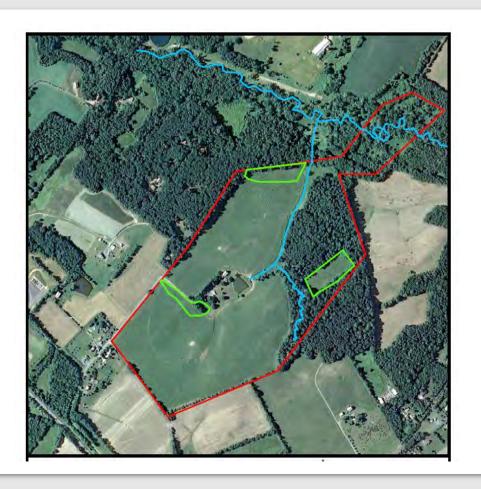






Empty Cupboards Farm Westminster, MD Carroll County



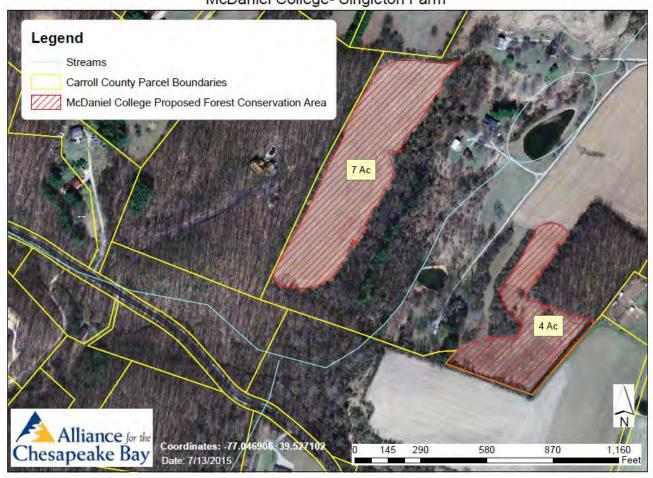


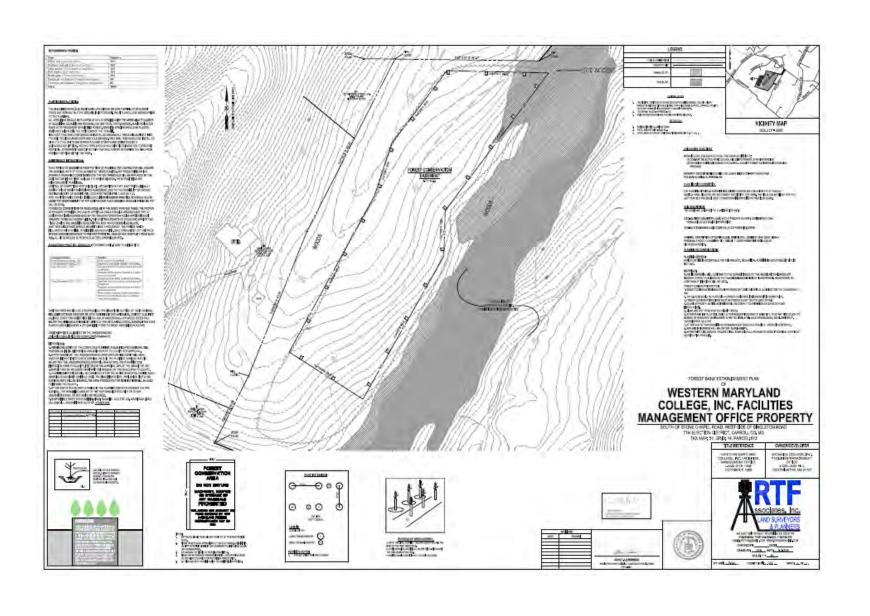
Pikesville, MD Baltimore County





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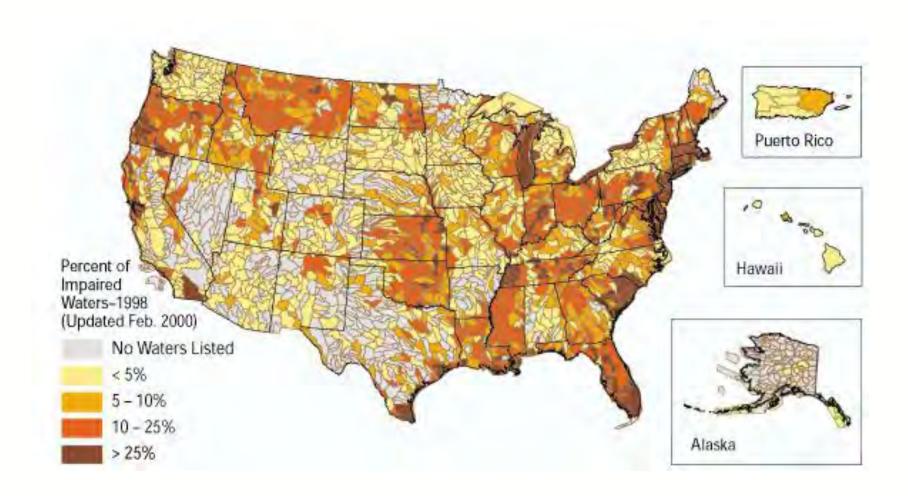
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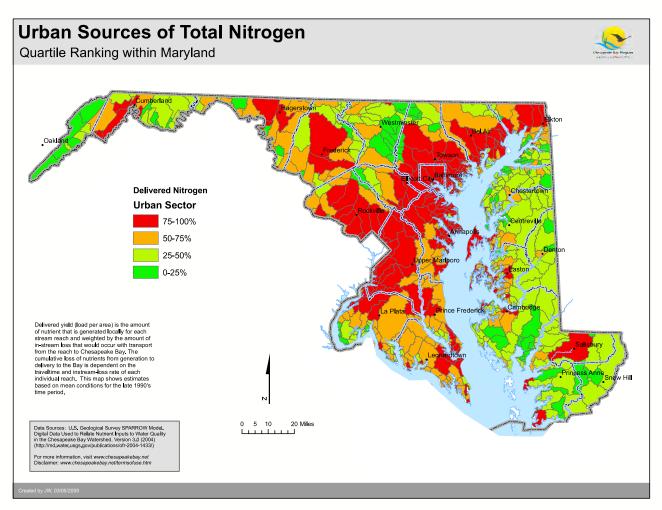
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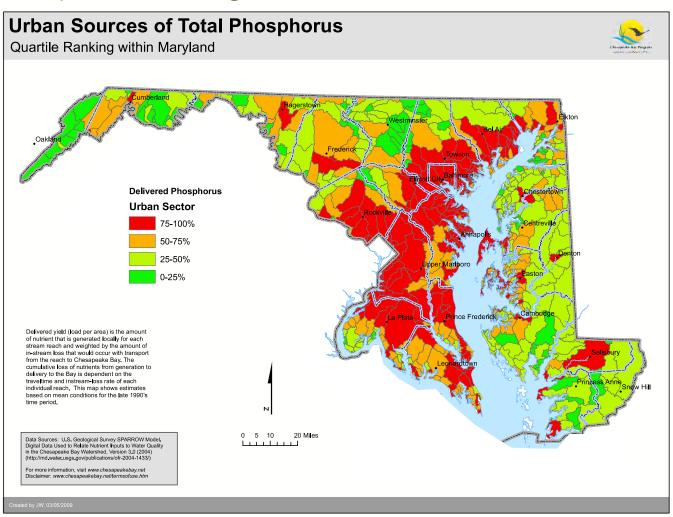


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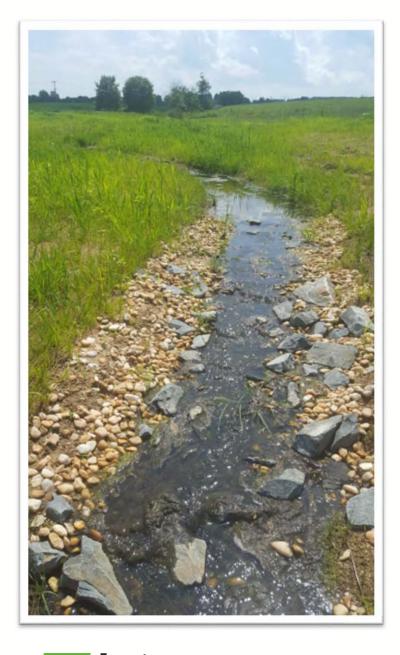


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