



Department of the Environment

Addressing Stormwater MS4 Permits & Maryland Chesapeake Bay Watershed Implementation Plan

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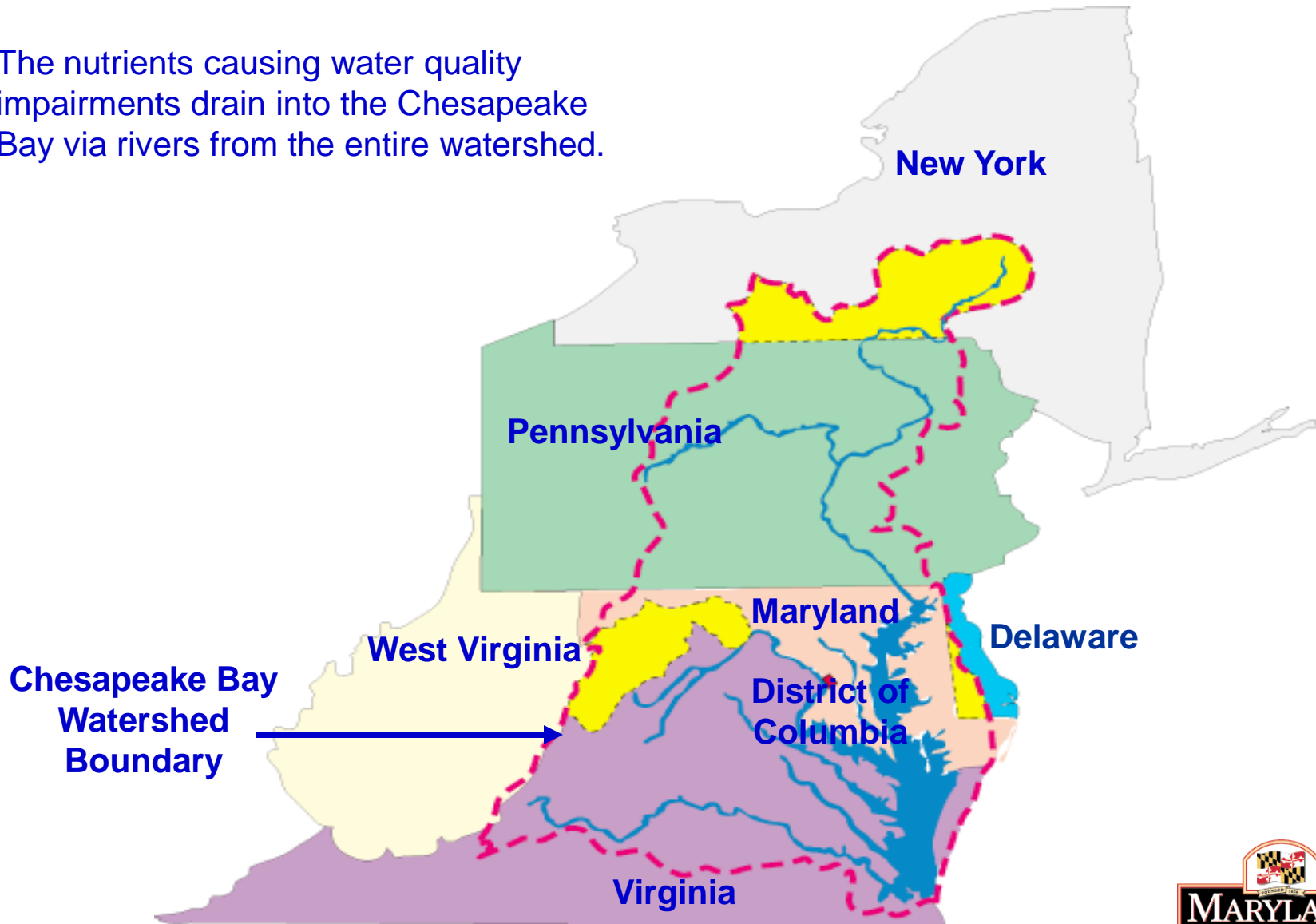
Maryland Water Quality Financing Administration

CIFA – May 18, 2015



Chesapeake Bay Watershed

The nutrients causing water quality impairments drain into the Chesapeake Bay via rivers from the entire watershed.





CB Watershed Implementation Plan

Max Nitrogen Load (Million lbs/yr) by State

State	Baseline 1985	Interim Goal 2017	Final Target Goal 2025
DC	6.23	2.57	2.37
DE	5.39	3.82	3.39
MD	81.31	45.48	41.17
NY	15.72	9.60	8.85
PA	137.7	94.05	79.00
VA	90.17	58.80	52.59
WV	7.17	5.20	5.02
Total CBWS	343.69	219.53	192.39





Maryland Chesapeake Bay Total Maximum Nitrogen Loading Goal

Total Nitrogen (TN) Loading by Sector (WIP Phase-II - 03/2012)
(million lbs per year)

Sector	Progress Thru 2010	Final Target Load (2025)	% Reduction Needed
Stormwater	9.48	7.55	20%
Agriculture	19.95	15.22	24%
Septic	3.00	1.85	38%
Forest	5.29	5.31	0%
Atmospheric	0.66	0.66	N/A
Wastewater *	14.37	10.58	26%
Total	52.76	41.17	22%

MD1985 Baseline Load: ~81 million lbs/year

* Maryland expects to achieve ENR upgrades at the major WWTPs by 2017, and exceed the 3.79 million lbs/yr nitrogen reduction target needed (achieve 5.45M lb/yr with capacity available for future growth)

WIP: Watershed Implementation Plan





Costs to Meet the 2025 Target from 2010 Loading Levels

Source Sector	Target Nitrogen Reduction (million pounds/yr)	Est. Phase II- WIP Capital Cost (millions)	Capital Cost per pound of Nitrogen Reduction/Yr
Wastewater Plants	5.45	\$2,368	\$ 400
Agriculture	4.73	\$ 928	\$ 200
Urban Retrofits - SW	1.93	\$7,388	\$ 3,800
Septic Systems	1.15	\$3,719	\$ 3,200
TOTAL	13.26	\$14,403	\$ 1,100

Wastewater sector is assigned a reduction of 3.79 million lbs/yr. The 5.45 million pounds/yr reduction includes about 1.66 million lbs/yr for growth.





Ten Jurisdictions

Baltimore City and Counties of Anne Arundel, Baltimore, Carroll, Charles, Frederick, Harford, Howard, Montgomery, and Prince George's.





Stormwater Legislation - 2012

During the 2012 State legislative session (House Bill 987) required that the 10 MS4 Phase I permitted jurisdictions must establish a dedicated watershed protection and restoration Fund by charging a local stormwater fee (Rain Tax).





Stormwater Fee Implementation

New Fees: 6 Jurisdictions established significant new fee where none existed before - Baltimore City, Anne Arundel, Baltimore, Harford, Howard, and Prince George's Counties.

Revised Fees: 2 Jurisdictions revised fees -
Charles County: separated stormwater fee from existing environmental service fee and increased it;
Montgomery County: restructured existing fee to comply with law, but kept it at about the same level.

Small/No Fees: 2 Jurisdictions - Frederick County established one cent per property fee; Carroll County: did not establish a fee.





SW Fee/Yr – Residential & Non-Residential*

<u>Jurisdiction</u>	<u>Residential</u>
Anne Arundel	\$34 - \$170
Baltimore City	\$48 - \$144
Baltimore County	\$18 - \$36
Harford	\$125
Howard	~\$60 (e.g., 2,000 sq ft)
Montgomery	\$31 - \$278
Prince George's	~\$42

* Most jurisdictions established a nonresidential fee rate based on the amount of impervious surface on the property converted to equivalent residential unit (ERU) or impervious unit (IU)





Stormwater Fee Revenue - Local

<u>Jurisdiction</u>	<u>Est. SFY14 (\$M)</u>
Anne Arundel	\$13.900
Baltimore City	\$16.700
Baltimore County	\$24.300
Carroll County	\$0.000
Charles County	\$1.416
Frederick County	\$0.001
Harford County	\$1.050
Howard County	\$10.800
Montgomery County	\$22.882
Prince George's County	\$12.000
TOTAL	103.049

Fee Collection Mechanism: 8 jurisdictions collecting on property tax bills; 1 through quarterly water bills





Local Est. 5-yr MS4 SW Management Costs

<u>Jurisdiction</u>	<u>Fiscal 2014-2018 Projected Costs</u>	<u>Projected Costs Annualized</u>
Anne Arundel	\$402,700,000	\$80,540,000
Baltimore City	228,500,000	45,700,000
Baltimore	167,000,000	33,400,000
Carroll	34,069,366	6,813,873
Charles	47,440,600	9,488,120
Frederick	112,000,000	22,400,000
Harford	90,000,000	18,000,000
Howard	210,000,000	42,000,000
Montgomery	332,904,709	66,580,942
Prince George's	449,000,000	89,800,000
Total	\$2,073,614,675	\$414,722,935



Repeal of Mandatory SW Fee Requirement

SB-863: Changed “shall” to “may” for MS4 - Phase I permit holders to establish a fee for deposit in a dedicated watershed protection and restoration Fund.

Added other requirement:

- Financial Assurance Plan every 2-year (starting 2016). For review and approval by Maryland Department of the Environment.
- 1st Offence: \$ 5,000/day State fine.
- 2nd Offence: \$10,000/day State fine.



P3: Public Private Partnership

Prince George's County - Example





State Financial Support - Stormwater

- Chesapeake Bay 2010 Trust Fund: ~\$25M per year in Grant Funds.
- Bay Restoration Fund: ~\$25M in Grant Funds starting FY 2018, after the WWTPs are funded for Enhanced Nutrient Removal (ENR) upgrades.
- Maryland Water Quality Revolving Loan Fund: Annual funding capacity ~\$130M per year in cash (without bond leveraging) to provide low interest rate loans for both Wastewater (WW) and Stormwater (SW) sectors. Funding demand for WW sector expected to decrease after larger WWTPs complete ENR upgrades.





Maryland Department of the Environment

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