



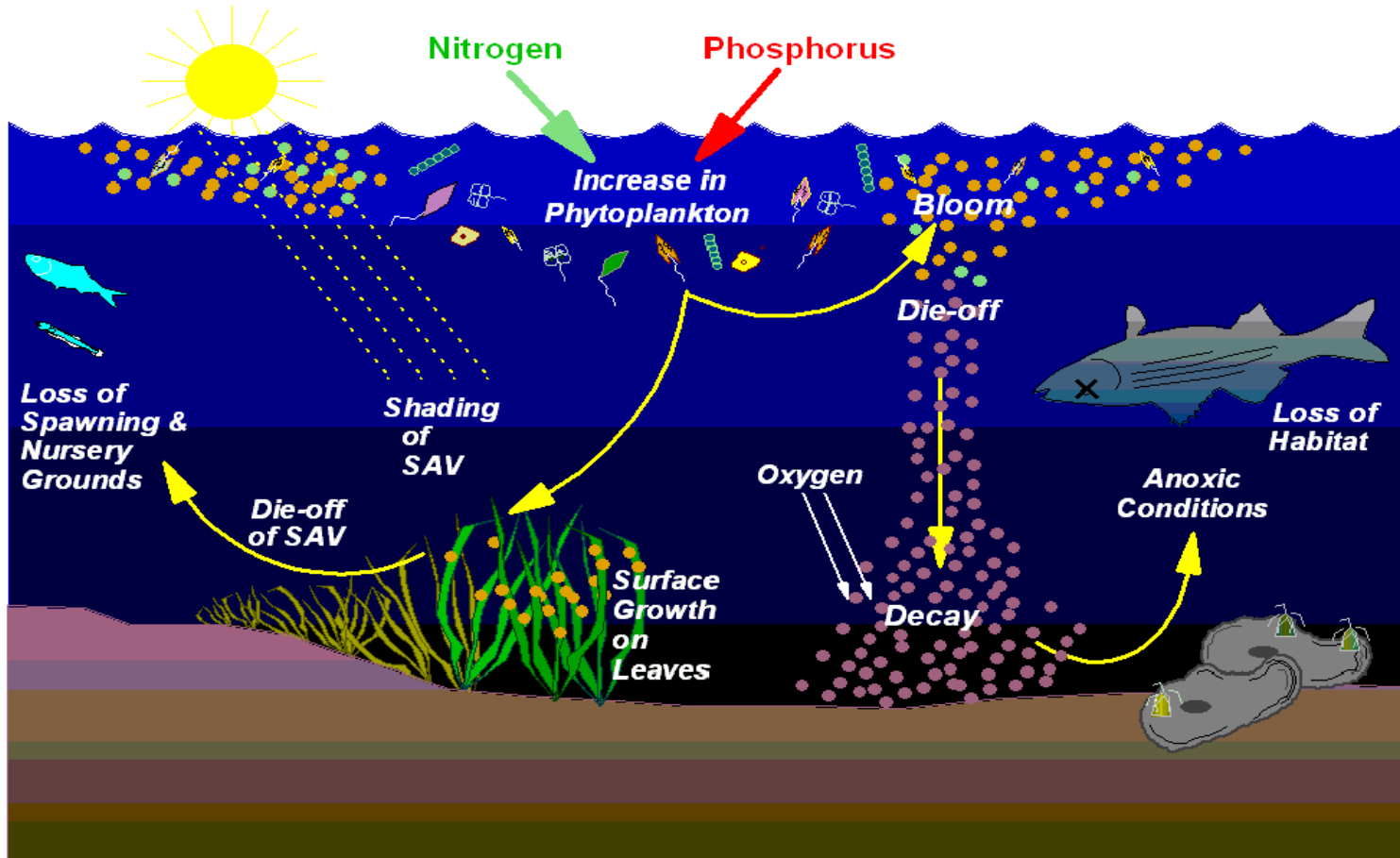
Department of the Environment

Maryland's
Bay Restoration Fund

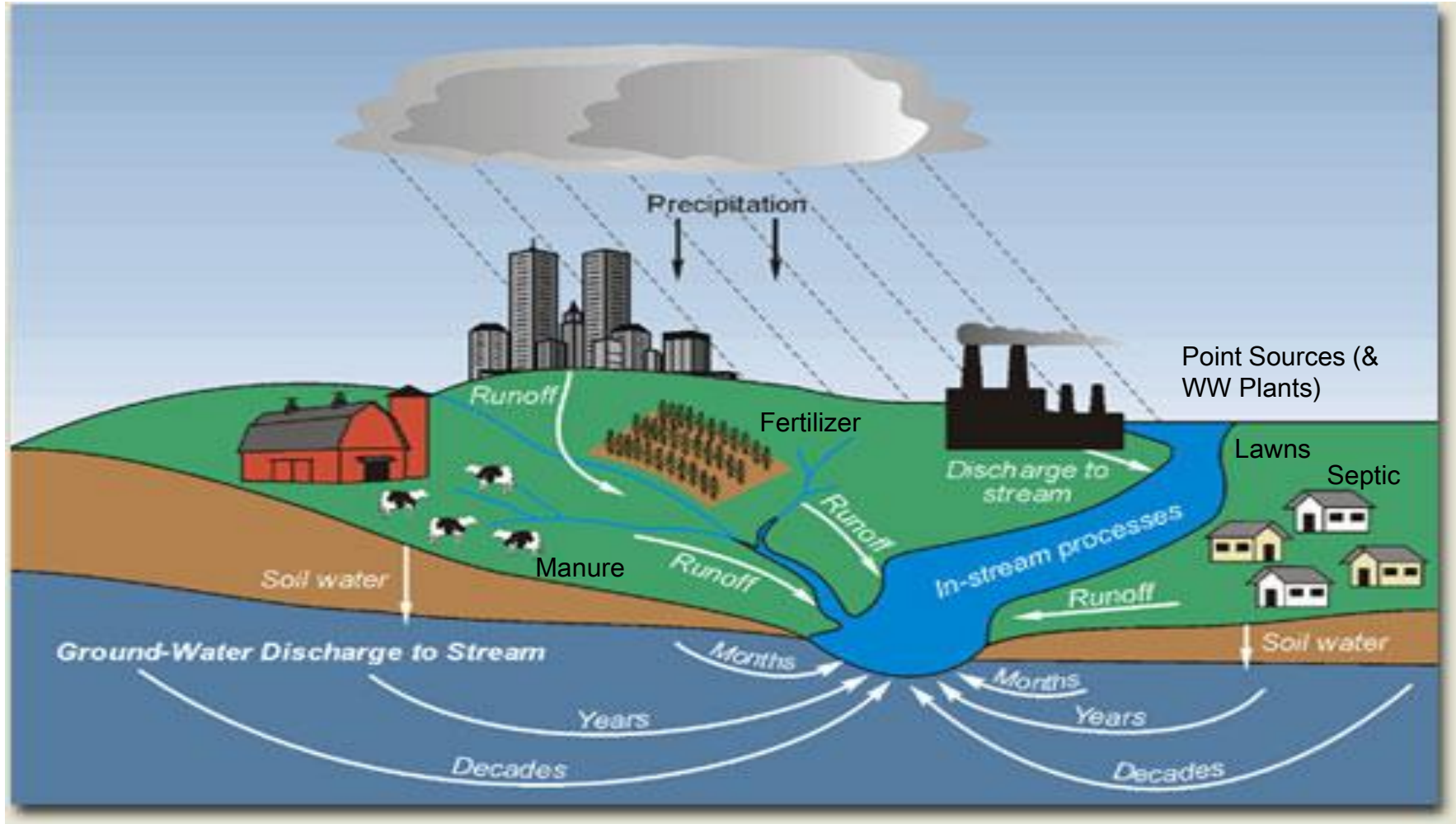
Robert M. Summers, Secretary
Maryland Department of
Environment



Chesapeake Bay suffers from too Many Nutrients (eutrophication)



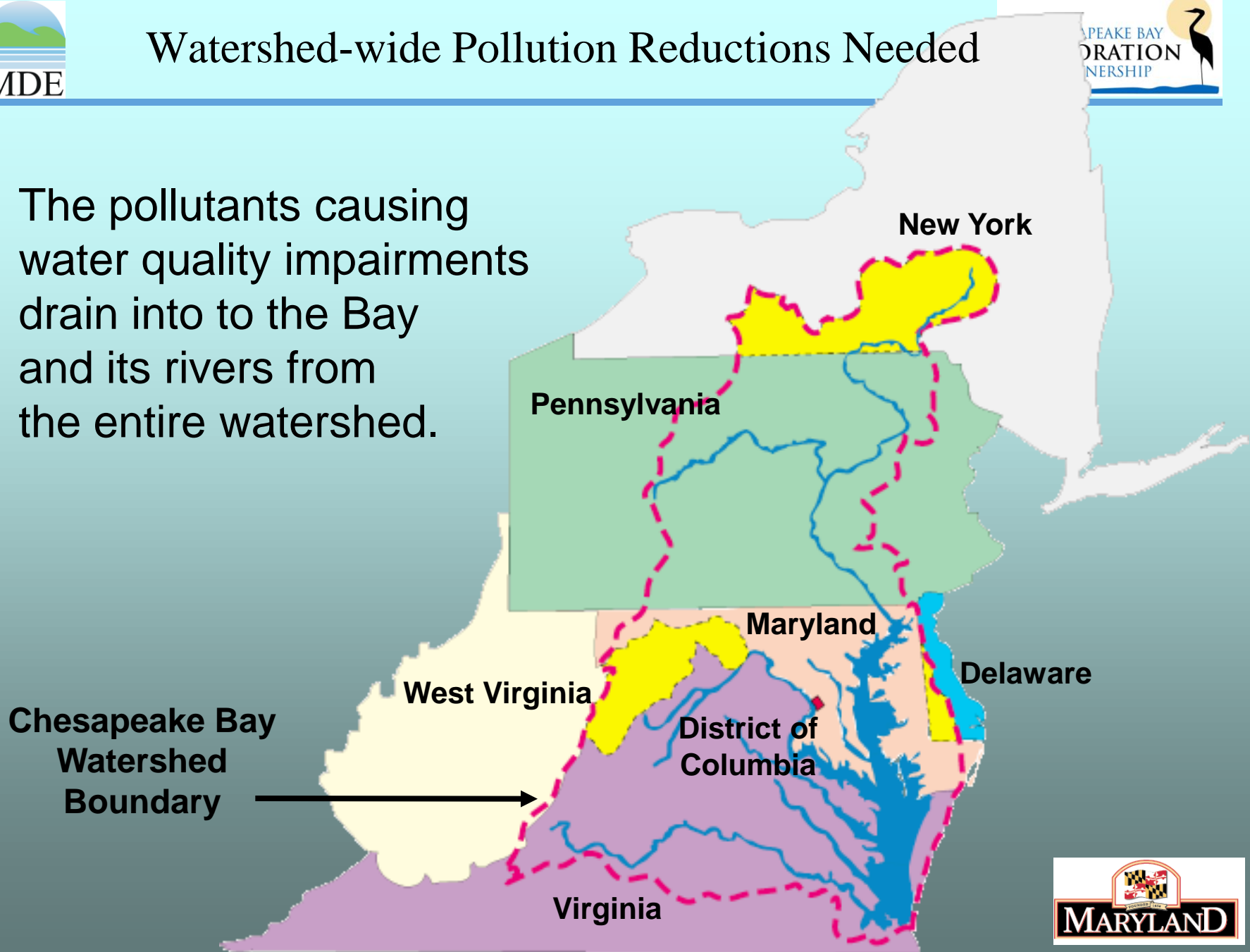
Sources of nutrients to the Bay



- Requires states to set water quality standards
 - Designated uses and water quality criteria
- Requires states to monitor and report
 - Section 305(b) report prepared bi-annually
- Requires states to identify waters not meeting standards
 - Section 303(d) list of impaired waters
- Requires states to determine what pollutant levels will not violate standards
 - Total Maximum Daily Loads (TMDLs)
- Requires states to ensure that TMDLs are implemented through PS (NPDES) and NPS controls

Watershed-wide Pollution Reductions Needed

The pollutants causing water quality impairments drain into to the Bay and its rivers from the entire watershed.





Jurisdiction Allocations



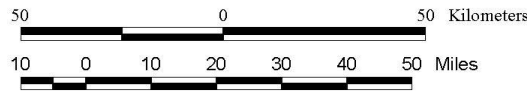
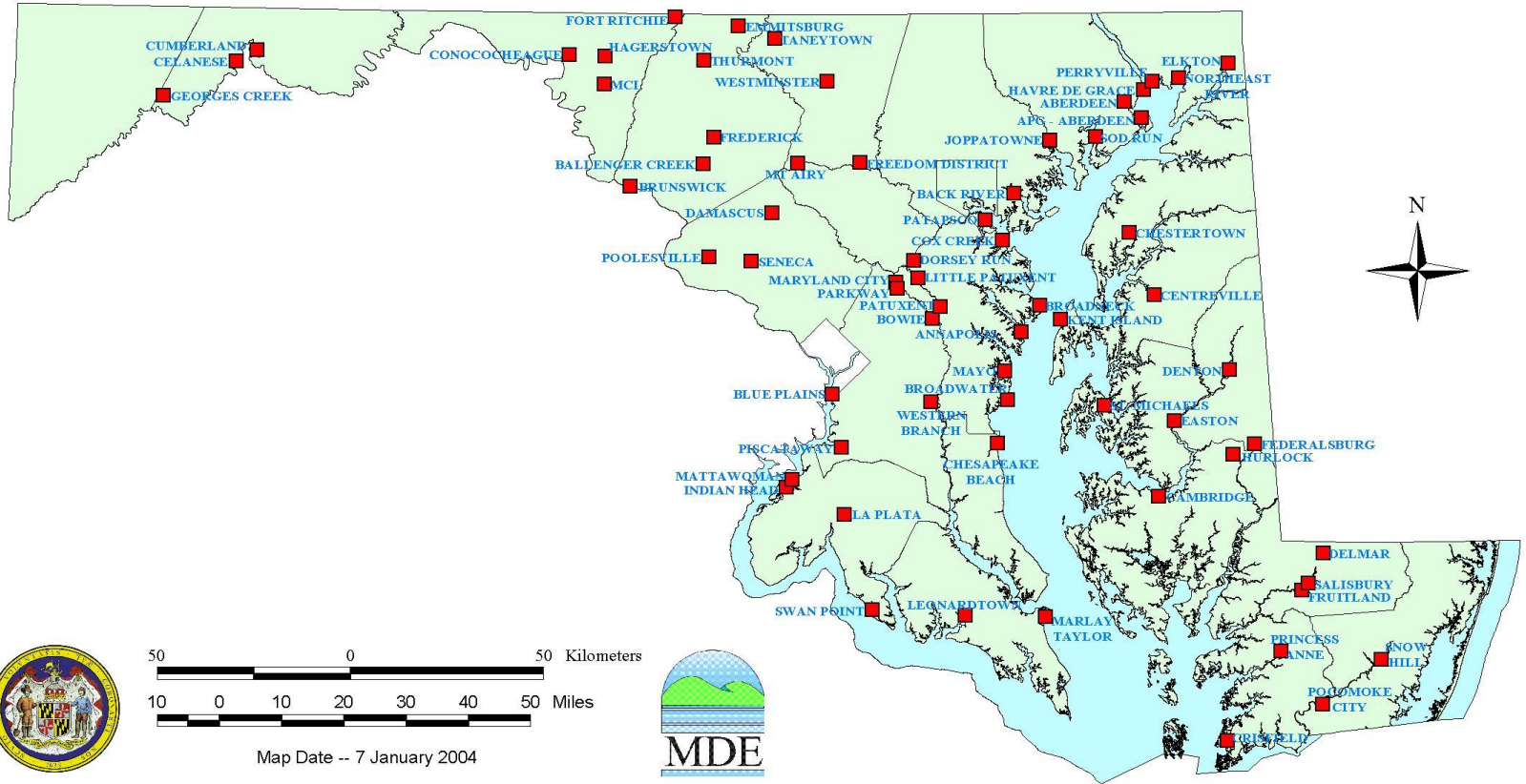
Jurisdiction	Nitrogen	Phosphorus
Maryland	39.09	2.72
New York	8.23	0.52
Pennsylvania	76.77	2.74
DC	2.32	0.12
West Virginia	4.68	0.75
Delaware	2.95	0.26
Virginia	53.40	5.41
TOTAL	187.4	12.52

Note: Atmospheric deposition is an additional 15.7 million lbs for N



- In support of Maryland's commitment under the 1983 Chesapeake Bay Agreement, the State implemented the Biological Nutrient Removal (BNR) Program.
- The BNR program called for sewage treatment plants with design capacity of 500,000 gallons per day or more to upgrade to achieve 8 mg/l total nitrogen in effluent discharge water quality.

Maryland's Major Wastewater Treatment Plants in the Chesapeake Bay Watershed



Map Date -- 7 January 2004



The Bay Restoration Fund makes it possible for Maryland to achieve over 1/3 of the necessary additional nutrient reductions by:

- upgrading wastewater treatment plants with Enhanced Nutrient Removal facilities,
- upgrading septic systems in the Critical Area, and
- implementing cover crop on agricultural land.

ENR is defined in the law as:

- An enhanced nutrient removal technology that is capable of:
 - *3 mg/l total nitrogen*
 - *0.3 mg/l total phosphorus*
 - *calculated on an annually averaged basis*
- Or, the lowest level the Department determines is practicable for a facility

- 66 major plants discharging to Chesapeake Bay will be upgraded first to reduce the nitrogen loading to the Bay by 7.5 million pounds per year
 - *These plants represent over 95% of Maryland's wastewater flow into the Bay*
 - *It is most cost-effective to upgrade the larger plants*
 - *Upgrading these plants alone will meet MD's wastewater nutrient reduction goals for the Bay*
- Other facilities may be upgraded later, based on consideration of:
 - *Cost effectiveness, water quality benefit, readiness to proceed, and nitrogen and phosphorus loading*

Bay Restoration Fund

- Two dedicated funds created:
- One, financed by sewage treatment plant users, will raise \$60 million per year to upgrade Maryland's wastewater treatment plants to achieve enhanced nutrient removal (ENR)
- A second, financed by users of onsite sewage disposal systems, will raise \$12.6 million per year to upgrade septic systems and implement cover crop activities to reduce nitrogen loading to the Bay

- Estimated to generate \$60 million annually from sewage treatment plant users
 - *Will be used to back revenue bonds to fund the upgrade of 66 major sewage treatment plants. Maryland will continue to seek federal funding to cover funding gaps.*
- Estimated to generate \$12.6 million from septic system users
 - *60% to be used for septic system upgrades, 40% for cover crop activities*

- Supported by a \$2.50 per month per household surcharge on sewer bills
- For commercial and industrial users, \$2.50 per month per “equivalent dwelling unit” (EDU) based on wastewater flow
- \$30 annual fee for users of septic systems, holding tanks or other onsite sewage disposal systems (OSDS)

- The surcharge on sewer bills and for septic system users that receive a water bill began on January 1, 2005.
 - *Collected by the water or sewer authority*
- The surcharge for septic systems began on October 1, 2005.
 - *Collected by county governments*

“Full Speed Ahead”

- Since 2004, the Fund has received over \$431 million that has been invested in upgrading the State’s major wastewater treatment plants (\$352 million), upgrading onsite sewage disposal systems (\$42 million) and planting cover crops on Maryland’s farms (\$37 million).

- To carry out billing and fund management
 - *Comptroller's Office – up to 0.5%*
 - *Local governments/billing authorities – up to 5%*
- To implement the upgrade programs at the Department of the Environment
 - *up to 1.5% of wastewater treatment plant funds*
 - *up to 8% of septic system funds*

- Up to 100% of the costs of planning, design, and construction of ENR upgrades for flows up to the design capacity
- Up to \$5 million per year for Combined Sewer Overflow abatement and existing sewer rehabilitation (Fiscal Year 2005-2009)
- After Fiscal Year 2009, up to 10% for ENR operation and maintenance costs

- Twenty two plants have been upgraded and are in operation. Another 17 facilities are under construction, 14 are in design and the remaining 14 are in planning.
- When completed in 2017 the upgrades will result in an additional 8 million pounds per year nitrogen loading reduction to Chesapeake Bay, which is over 1/3 of the nutrient reduction needed to achieve Bay water quality goals.

- There are over 420,000 septic systems in Maryland
- State and local agencies to develop and implement an upgrade program
 - *Identify the owners' names and addresses*
 - *Establish education and outreach to explain the program and availability of funding*
 - *Implement system upgrade program*
 - *Develop regulations to govern program*

- With priority given to failing systems in the Critical Area, up to 100% of the cost of:
 - *upgrades of existing systems to best available technology for nitrogen removal*
 - *the cost difference between a conventional system and a system that uses best available technology for nitrogen removal*
- Implementation of the cover crop activities by the Maryland Department of Agriculture

- Over 3,000 septic systems have been upgraded to cut nitrogen loading by 36,000 pounds per year
- In 2011, over 400,000 acres of cropland were planted in cover crops, reducing another 2.4 million pounds per year.

- Evaluate the cost, funding and effectiveness of the wastewater treatment plant upgrades
- Recommend future changes to the restoration fee, if necessary
- Consult with and advise the counties and the Department regarding the septic system upgrade program

- Recommended doubling the fee in 2013 to complete upgrades of major facilities and large minor facilities
- Make fee more progressive, with higher users paying higher fee

- Raise fee from \$2.50 to \$5.00 per month per EDU
- Hold fee level for basic residential user and apply water consumption surcharge
- Assess different fee for different size residences (apartment, row home, single family, etc.)
- Household income based fee
- Assessed value based fee

- Governor's Executive Order established a legislative/stakeholder Advisory Committee to review options and make recommendation
- Legislature to consider options and revise State law in 2012
- Fee increase (if approved) takes effect in 2nd quarter of Fiscal Year 2013 (Oct. 2012).