



UNIVERSITY OF
MARYLAND
COLLEGE OF AGRICULTURE AND NATURAL RESOURCES



MARYLAND
COOPERATIVE
EXTENSION
UNIVERSITY OF MARYLAND
COLLEGE PARK • EASTERN SHORE

**Speaking in One Voice:
Developing a Universal
Agricultural Conservation
Language within the Chesapeake
Bay Watershed**

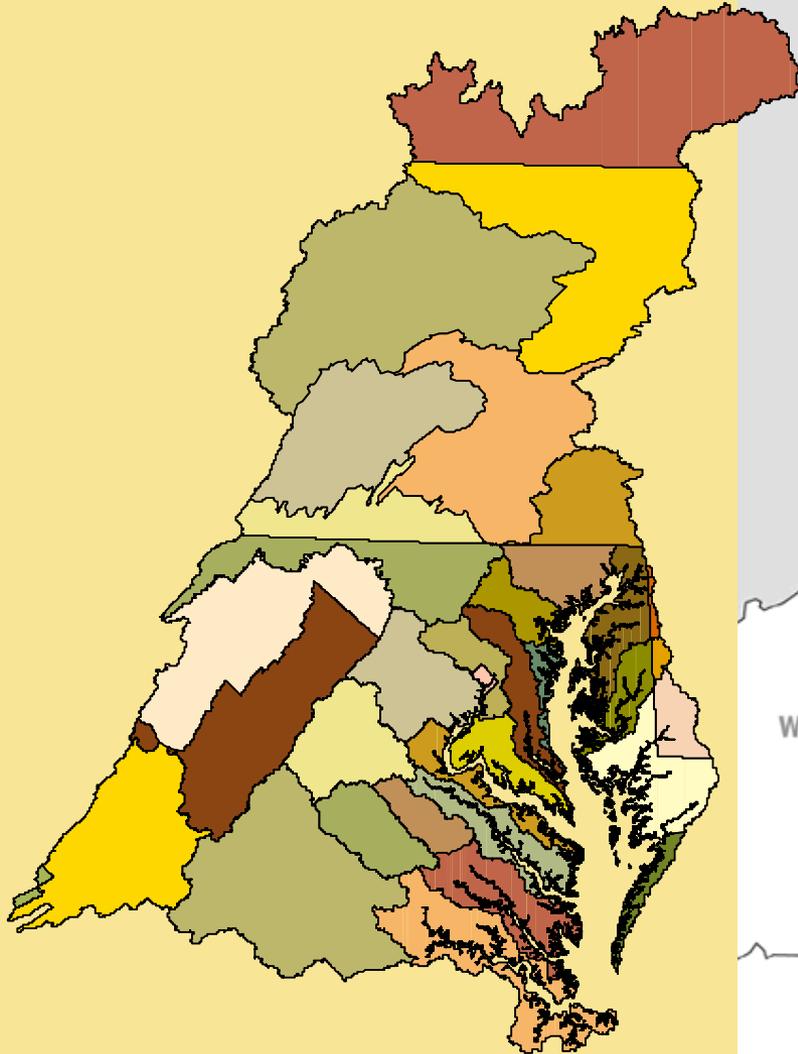
MARYLAND

Mark Dubin

Agricultural Technical Coordinator



Chesapeake Bay Watershed





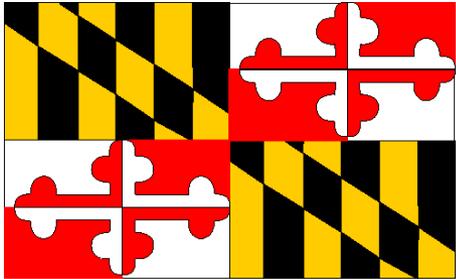
The Chesapeake Bay Program



- Established in 1983 under the first Chesapeake Bay Agreement
- Subsequent Agreements Signed
- Goals Established to Improve Water Quality and Aquatic Habitat by Reducing Pollutant Loading and Protecting Natural Resources

The Chesapeake Bay Program Partnership

Governor of MD



Governor of VA



Governor of PA



Mayor of DC



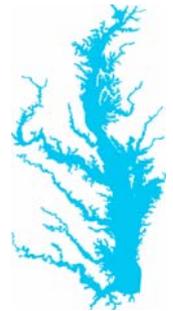
EPA Administrator



Executive Council



**Chair of
Chesapeake
Bay
Commission**



Who's involved?

- Bay Program partners in this effort include the signatories to the Chesapeake Bay agreement -- EPA (representing the Federal government), the jurisdictions of MD, PA, VA and DC, and the Chesapeake Bay Commission (representing MD, PA and VA state legislatures).

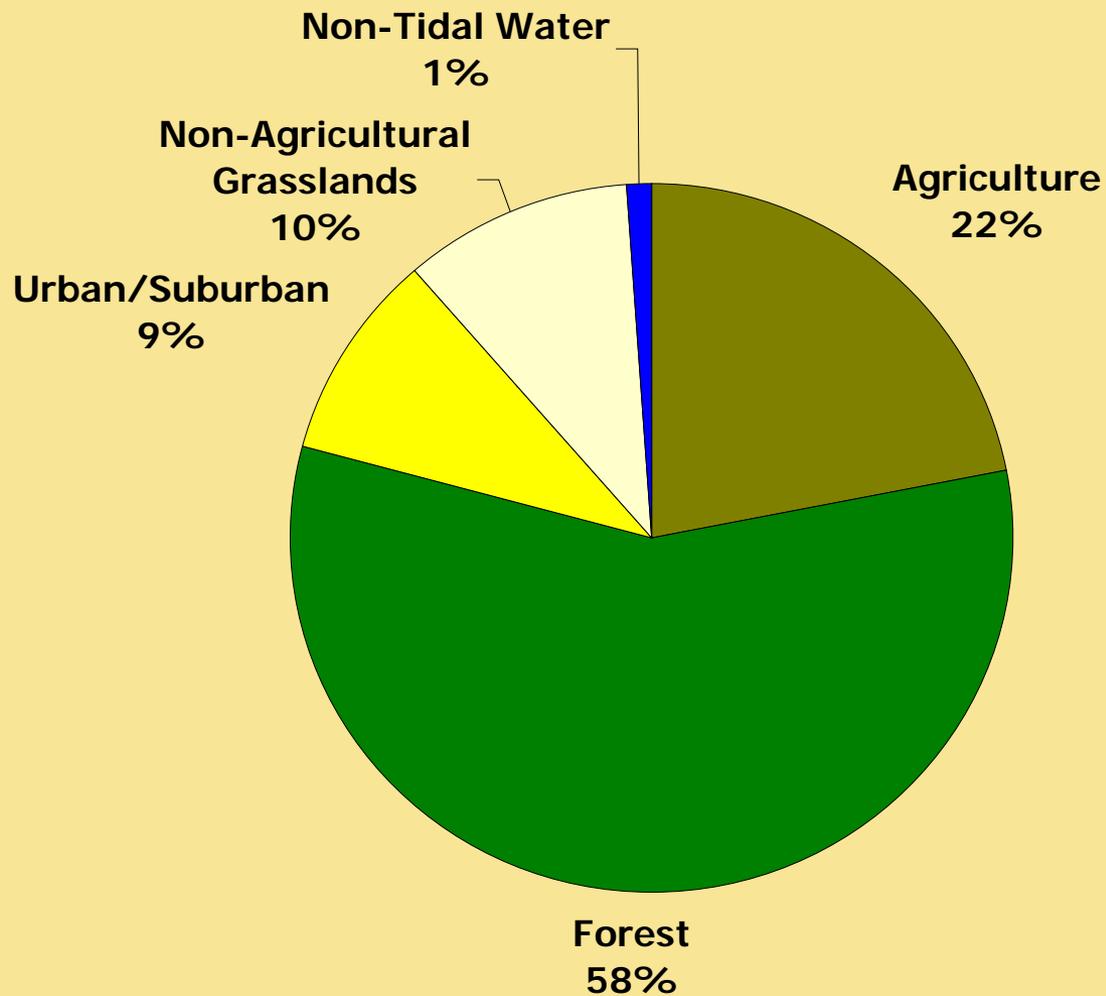


- The partnership for this effort was expanded through a Memorandum of Understanding to include the jurisdictions of DE, NY and WV.





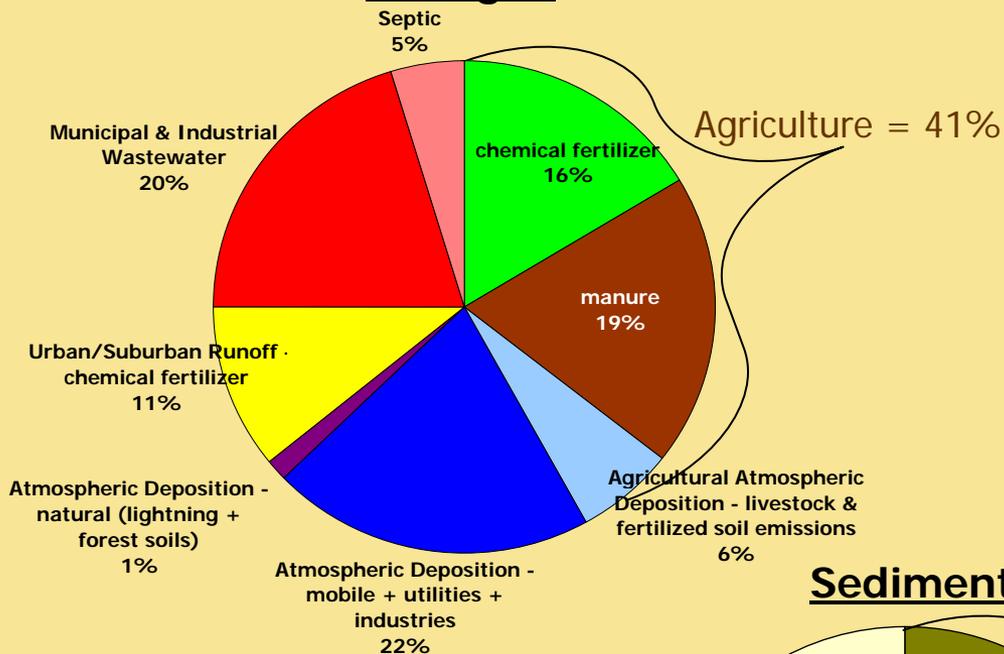
Agricultural Lands in the Watershed



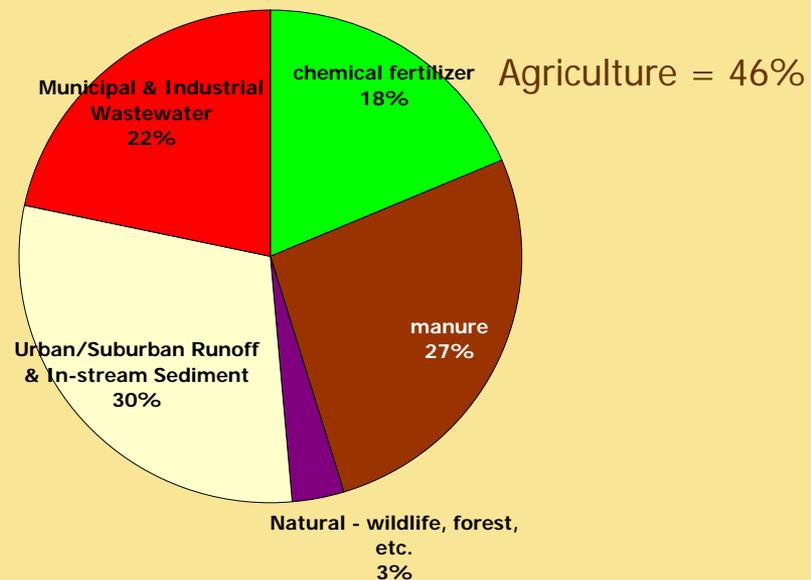


Agricultural Nutrient and Sediment Loads to the Chesapeake Bay

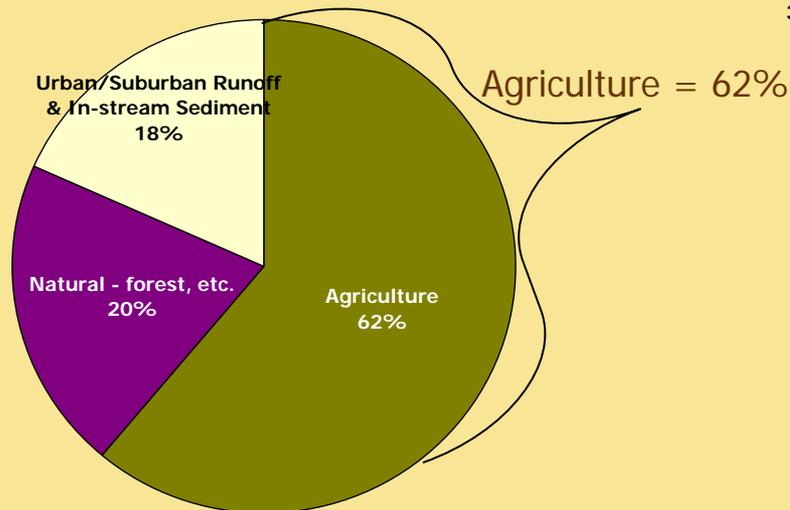
Nitrogen



Phosphorus



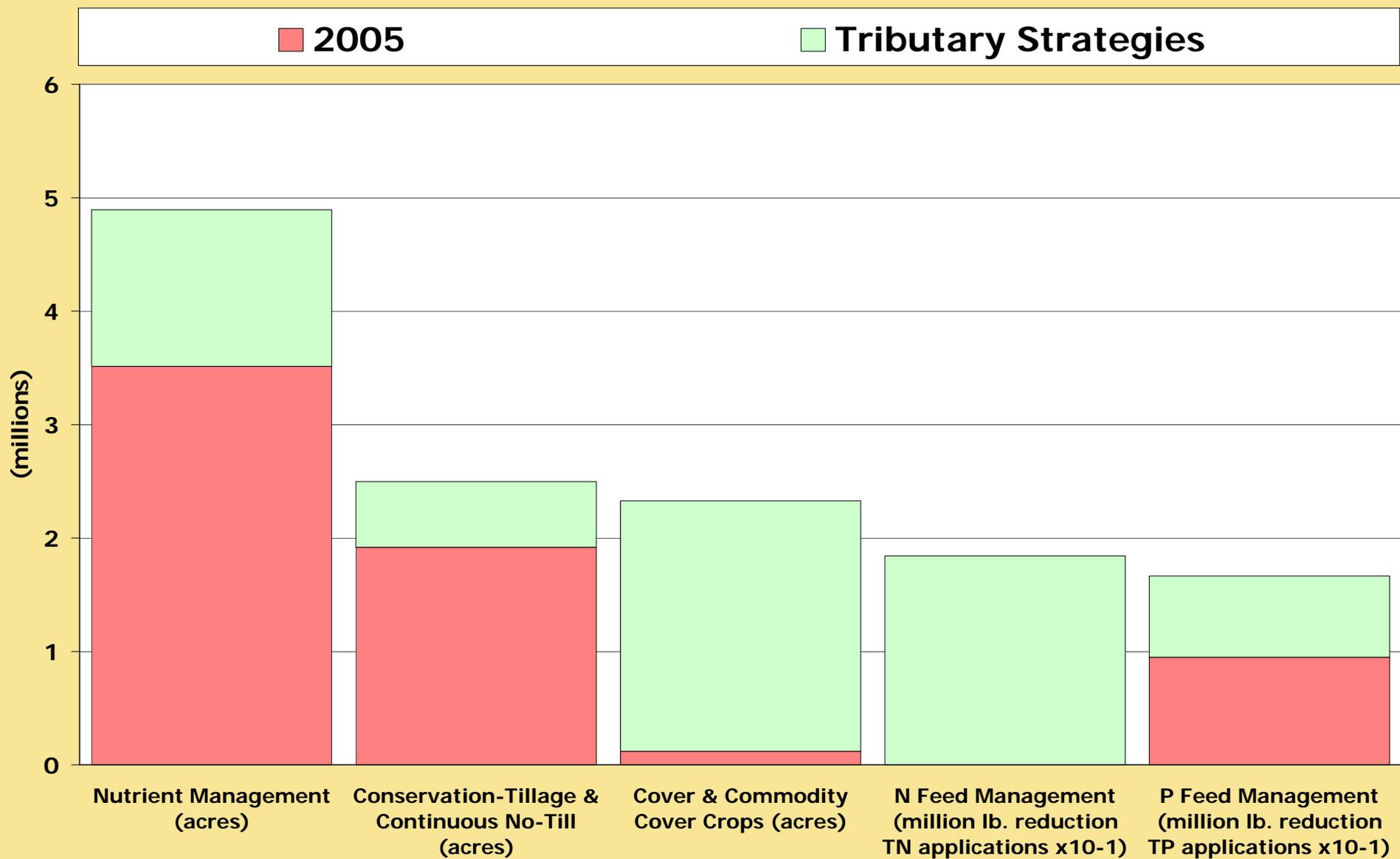
Sediment



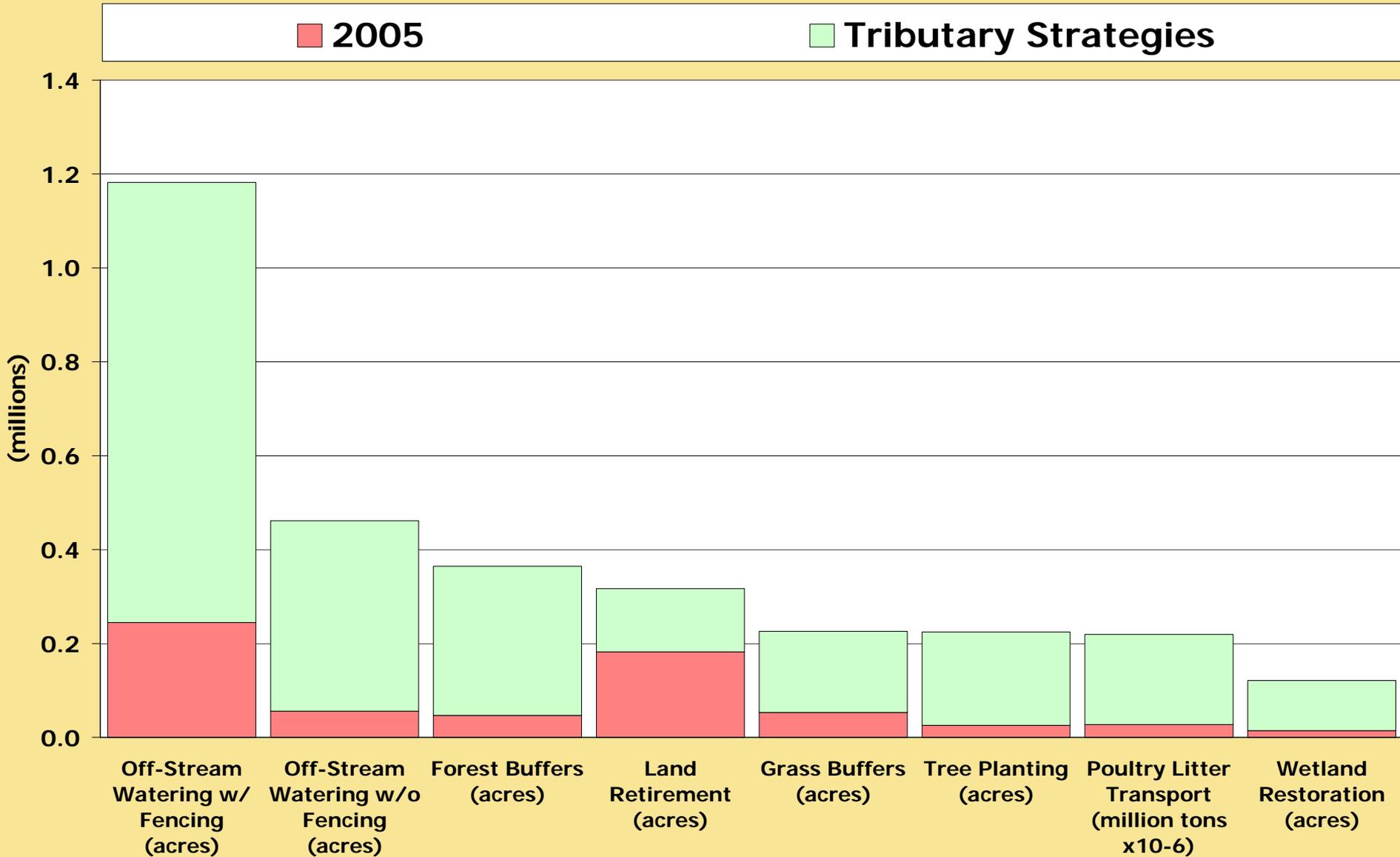


Agricultural Commitments

Cost-Effective BMPs



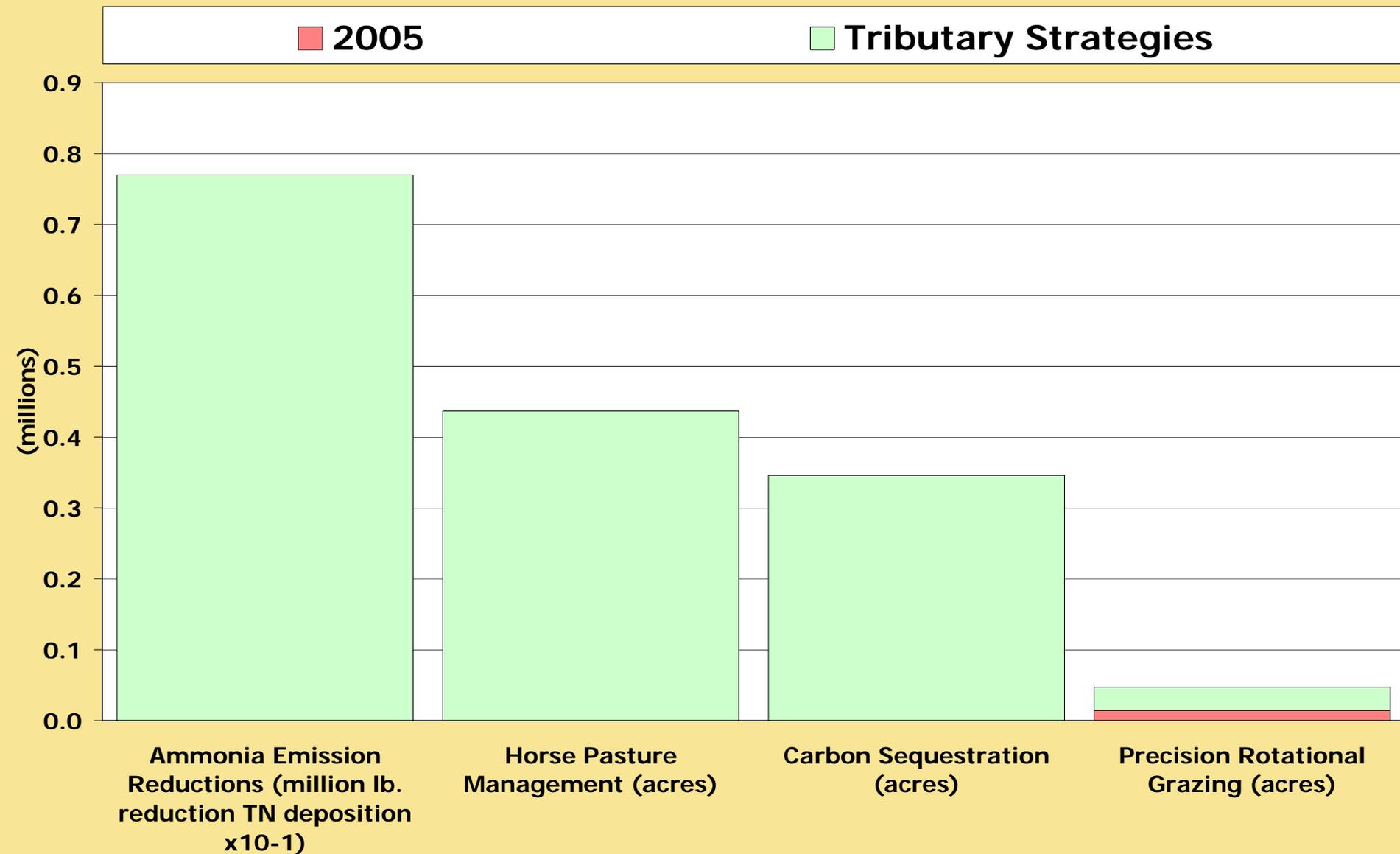
Agricultural Commitments





Agricultural Commitments

Innovative BMPs





Chesapeake Bay Program Language



- Best Management Practices (BMPs)
- Congregated Practice Components (Systems)
- ~ 30 Agricultural BMPs (Existing/New)

<http://www.chesapeakebay.net/pubs/waterqualitycriteria/BMPHandbook1-8f.pdf>

NRCS Language



- Conservation Practices (CPs)
- Components of Systems (160+)
- National Handbook of Conservation Practices (NHCP)
<http://www.nrcs.usda.gov/Technical/Standards/nhcp.html>

NRCS Language



- State Conservation Practice Standards (6 watershed states)
 - Standards Based on the NHCP
 - State by State Internal Development
- <http://www.nrcs.usda.gov/technical/efotg/>



Comparison of Agricultural Conservation Practices

CB Program Existing BMPs

Nutrient Management

Cover Crops (Early & Late)

Small Grain Enhancement (Early & Late)

Conservation Tillage

Continuous No-Till

Off-Stream Watering w/ and w/o Fencing

Rotational Grazing

Poultry and Swine Phytase

Poultry Litter Transport

Animal Waste Management

Mortality Composters

Barnyard Runoff Control

NRCS Practices

Nutrient Management (590)

Cover Crop (340)

N/A

Residue & Tillage Mgmt. (345,329,346)

Residue & Tillage Mgmt. (329)

Walkways (575) Fence (382) Crossing (580), Exclusion (472), Well (642) etc.

Feed Mgmt. (592)

Manure Transfer (634)

Waste Storage Structure (313) Lagoon (359)

Manure Transfer (634) etc.

Animal Mortality Facility (316)

Filter Strip (393) Heavy Use Area (561)

Roof Runoff Control (570) etc.



Comparison of Agricultural Conservation Practices

CB Program Existing BMPs

Conservation Plans

Land Retirement

Water Control Structures

Urban Stream Restoration

Riparian Forest Buffers

Riparian Grass Buffers

Wetland Restoration

Tree Planting

CB Program New BMPs

Precision Grazing

Ammonia Emission Controls

Dairy Precision Feeding

Carbon Sequestration/Alternative Crops

NRCS Practices

Grass Waterway (412) Terrace (600) etc.

Cons. Cover (327) Critical Area (342)

Structure for Water Control (587)

Stream Protect.(580) Habitat Improv. (395)

Tree Establish (612) Riparian Forest (391)

Cons. Cover (327) Riparian Cover (390)

Wetland Creation (658) Restoration (657)

Tree Establish (612) Tree Site Prep. (490)

Prescribed Grazing (528)

Atmospheric Resource Quality (370)

Feed Management (592)

Atmospheric Resource Quality (370)

Conservation Cover (327) Tree Planting (612) No-Till (329) etc..

NRCS Collaboration



- Chesapeake Bay NRCS/EPA Work Plan Signed (October 30, 2007)
 - Component of new USDA/EPA MOU
 - Two-Year Plan of Work
 - Specific Deliverables for Collaboration on Multiple Levels

NRCS Collaboration



- Chesapeake Bay NRCS Regional Technical Workgroups (6 states and East Region)
 - Agronomic Workgroup
 - Livestock Workgroup
 - Development of Regionally Consistent Practice Standards

NRCS Collaboration



- Development of an NPS Data Transfer System with State Program Partners for the Region
 - Component of new USDA/EPA Work Plan
 - Pilot Project in Pennsylvania
 - NPS Implementation Data Sharing Requires a Universal Language for Utility



Chesapeake Bay Program Adaptations



- Chesapeake Bay Phase 5 Watershed Model BMP Project
 - EPA-CBP contract to the UMD-MAWP
 - Two-Year Project
 - Scientific Evaluation of Existing BMPs and Development of Proposed New BMPs



Chesapeake Bay Program Adaptations



- UMD-MAWP Development of New/Revised BMP Terminology and Effectiveness Values
 - Integration of NRCS Conservation Practice Language
 - Cross-References to the NHCP and Conservation Practice Codes
 - Collaboration with NRCS Technical Staff and Research Specialists

Future Goals for a Universal Agricultural Conservation Language



- Complete the UMD-MAWP BMP Project to Integrate New Practice Terminology
- Implement New Practice and Reporting Standards
- Implement Regional NPS Exchanges with NRCS
- Continue to Increase Program Collaboration with NRCS
- Develop and Implement Regionally Consistent Standards
- Develop New CP Standards and Codes
- Implement Regional NPS Data Exchanges with States
- Continue to Increase Program Collaboration CBP Partners



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