
Agricultural Sector Briefing

Implementation Committee Meeting
April 19, 2007

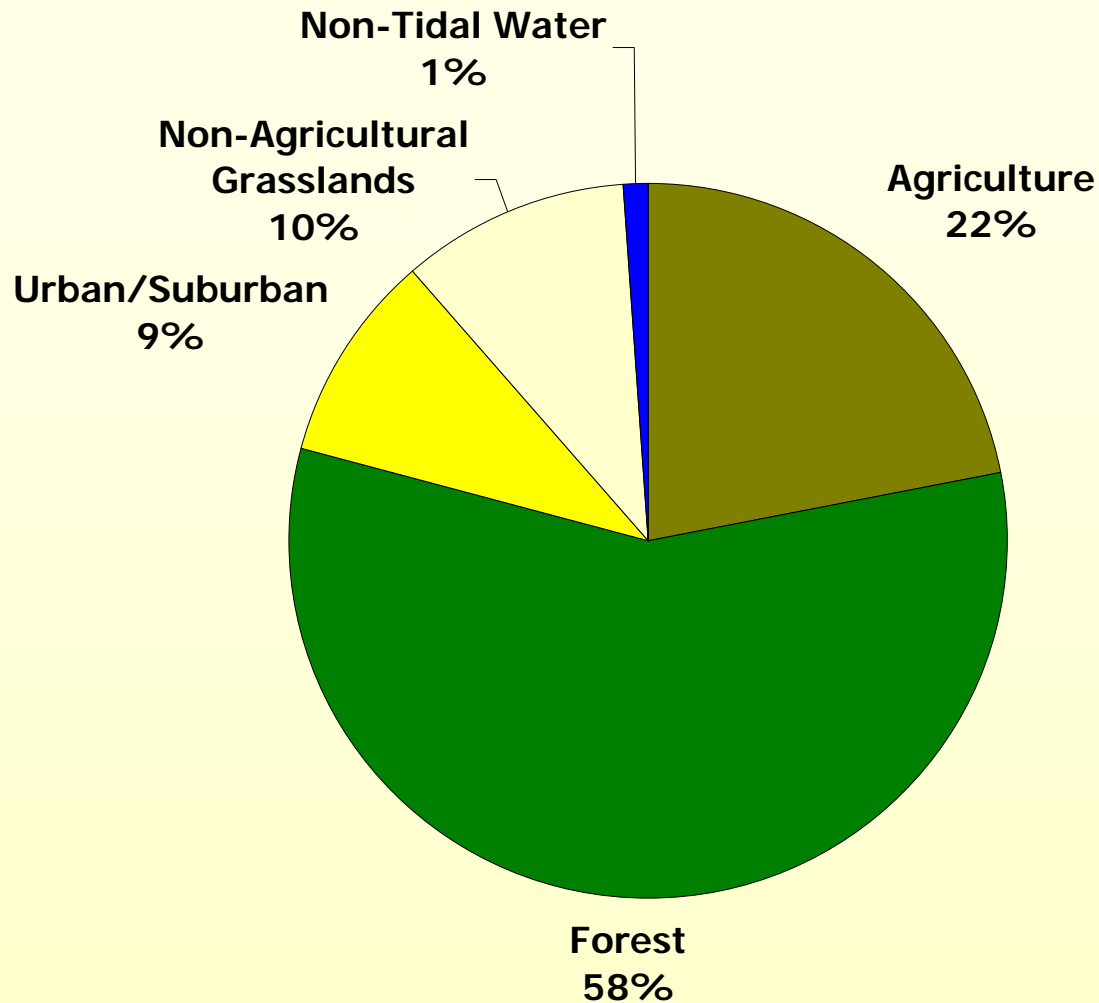


Overview of Agricultural Sector

Tom Simpson
Chair of Nutrient Subcommittee
UMD Mid-Atlantic Regional Water Program

Overview of Agricultural Sector

Agricultural Lands in the Watershed



Cropland in the Chesapeake Bay Watershed

- Over 87,000 farm operations
- 6.5 million acres of cropland
- Primary crops:
 - Pasture
 - Hay
 - Corn
 - Wheat
 - Soybeans
 - Vegetables
 - Fruits
- Eastern part of the region- rapidly expanding nursery and greenhouse industry



Overview of Agricultural Sector

Animal Operations in the Bay Watershed

- Livestock products -
60% of the annual farm
product sales.



- Six major types of animal operations
 - Dairy cows
 - Beef cattle
 - Pigs
 - Egg production
 - Broilers
 - Turkeys

Overview of Agricultural Sector

Animal Operations in the Bay Watershed

Chesapeake Bay Watershed

3 major animal production regions

- Lower Susquehanna River (PA)
- Shenandoah Valley (VA, WV)
- Delmarva Peninsula (DE, MD, VA)

185,000 million livestock animals in the watershed at any given time.



Agricultural Productivity in the Bay Watershed

- Bay States rank high nationally for poultry, dairy, and nursery products.
- In the top 20 poultry producing counties in the U.S.
 - Sussex County, DE
 - Lancaster County, PA
 - Wicomico County, MD.



Overview of Agricultural Sector

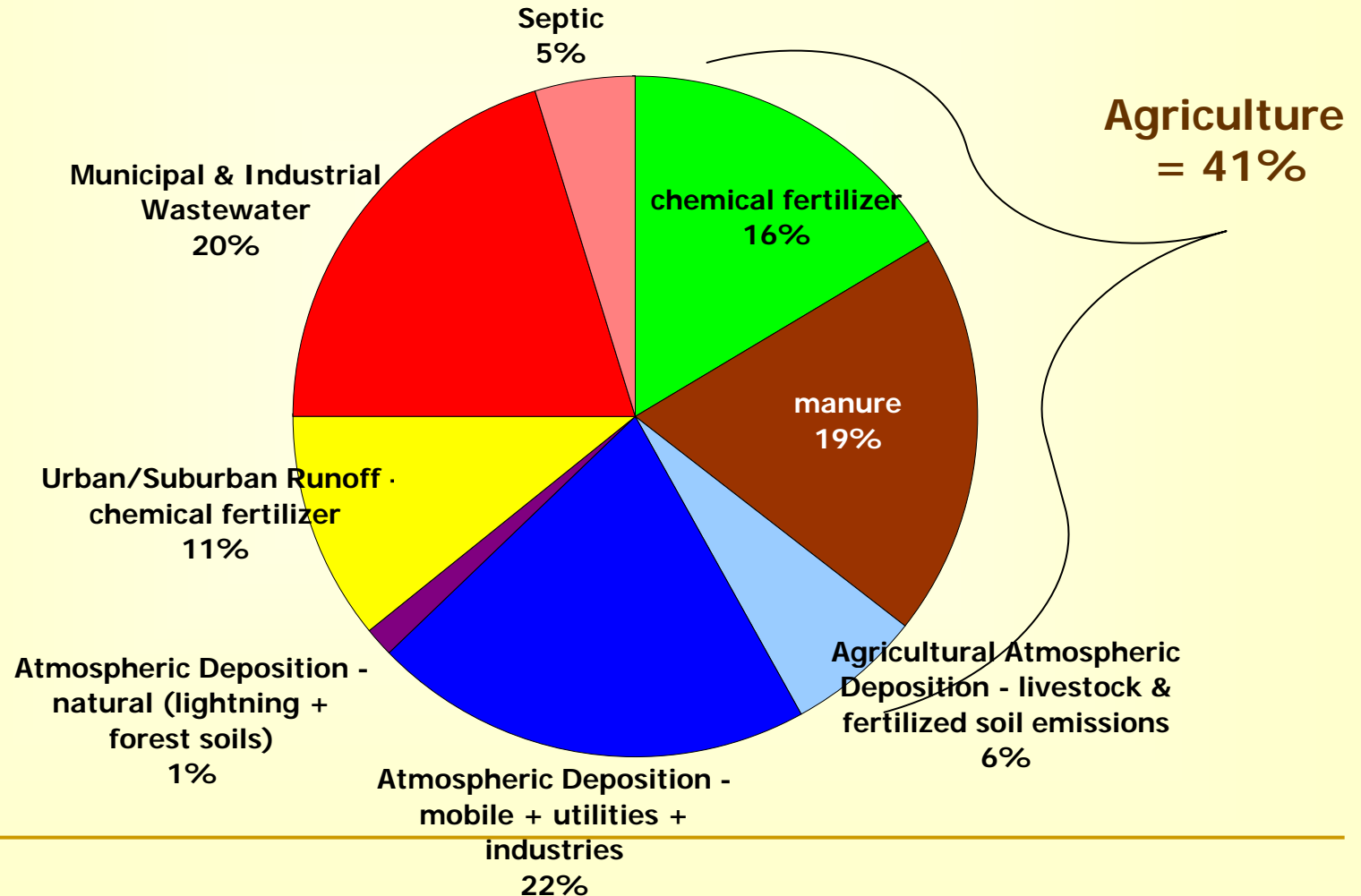
Agriculture's Contribution to the Economy

- \$8 billion of agricultural product sales in the Bay states in 2002.
- 13% of the region's Gross Domestic product is agriculture.
- Bay states account for 3.2% of all U.S. farm acreage and produce 5.7% of the U.S. farm cash receipts.
- Environmental and social value: open space, aesthetics, local products, etc.



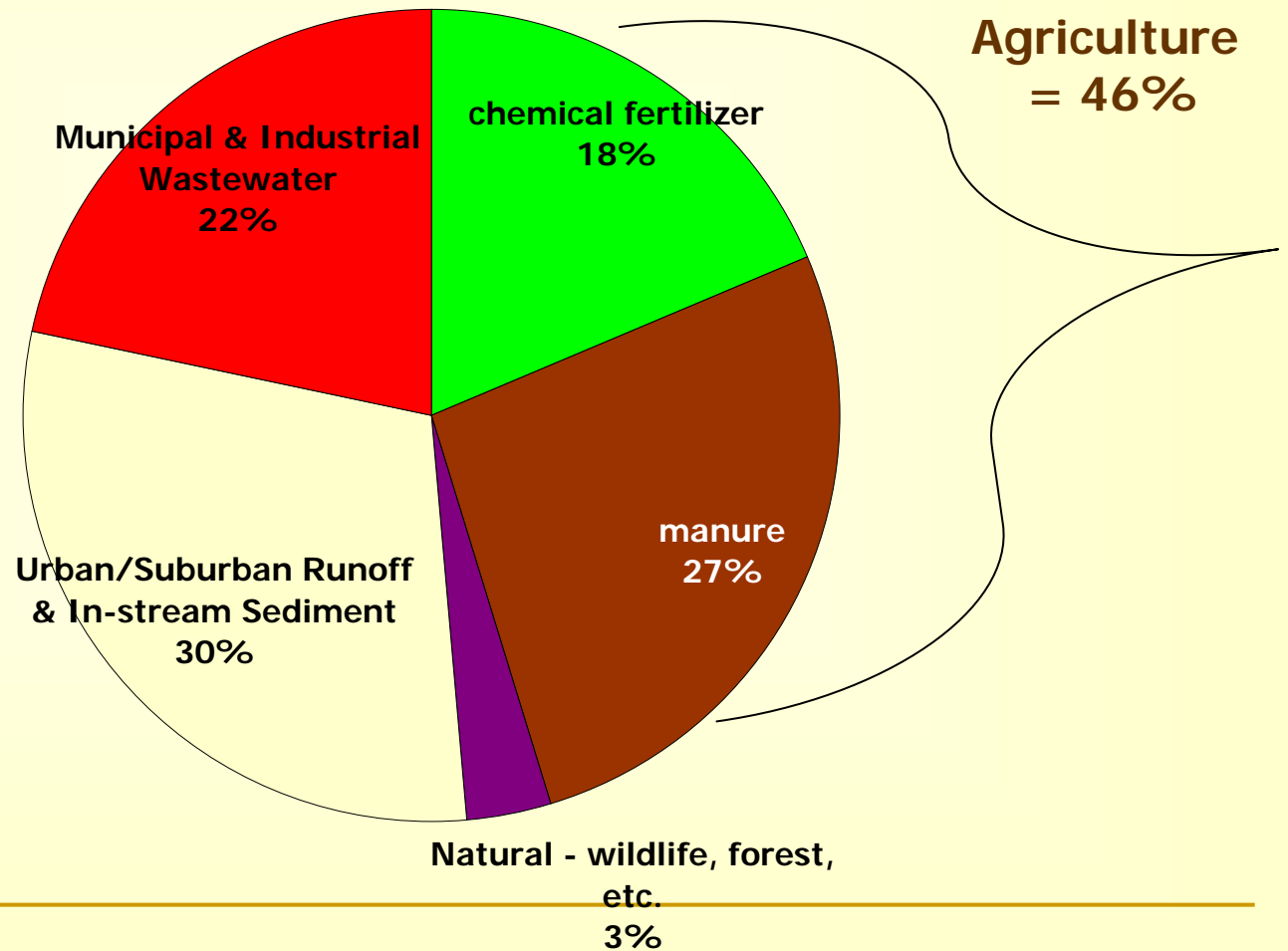
Overview of Agricultural Sector

Nitrogen Loads to the Chesapeake Bay



Overview of Agricultural Sector

Phosphorus Loads to the Chesapeake Bay

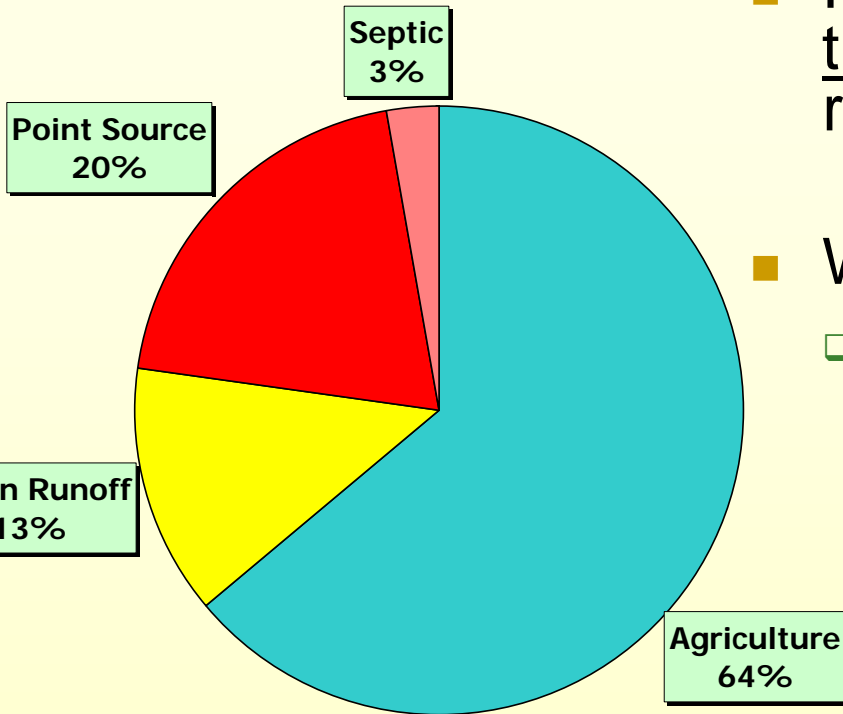


Agricultural Tributary Strategy Goals

Russ Perkinson
Virginia Department of Conservation and Recreation,
NSC AgNSRWG Member

Agricultural Tributary Strategy Goals

Tributary Strategy Commitments

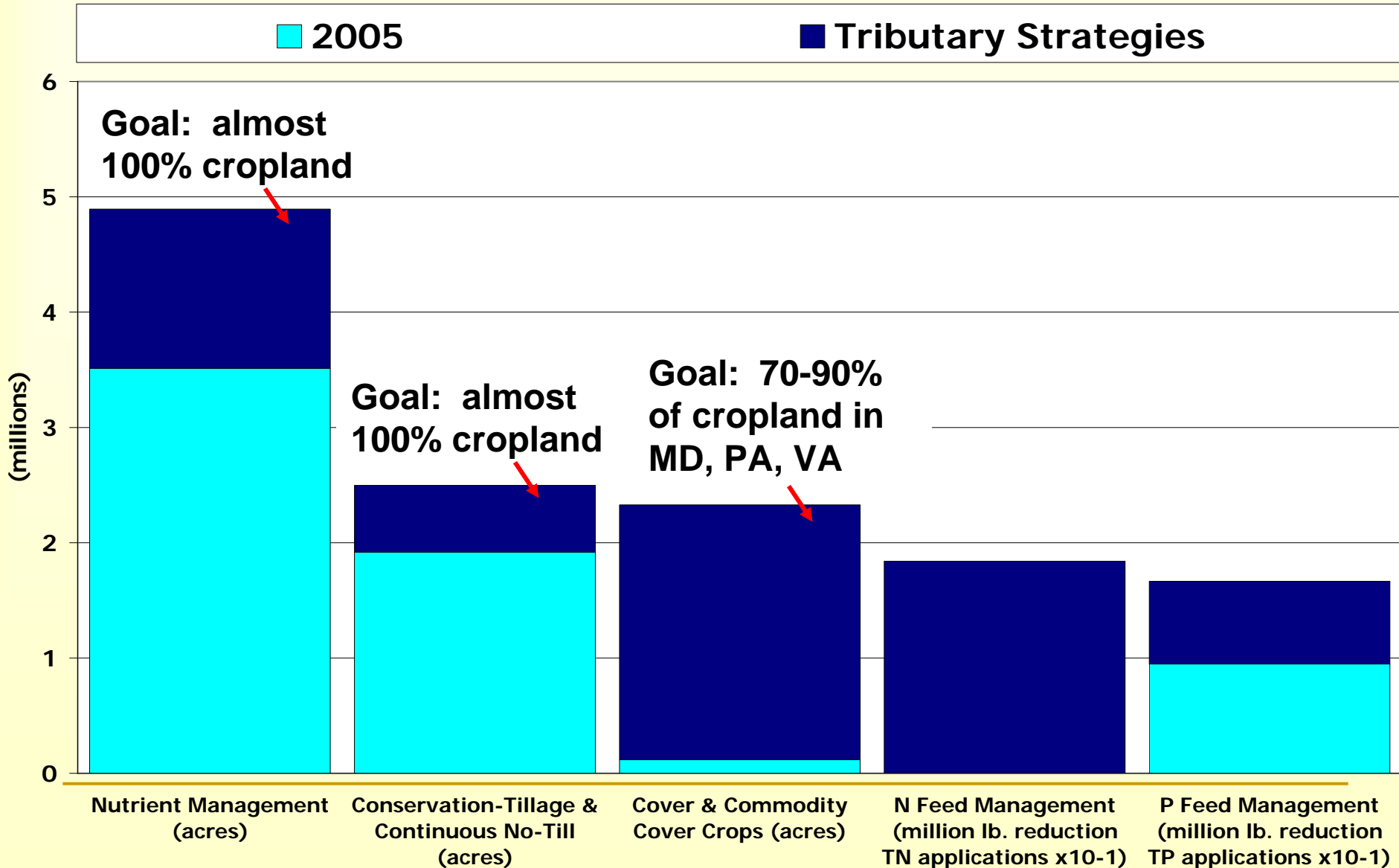


- Relying on Ag to achieve two-thirds of the needed nutrient reductions.
- Why?
 - 5 out of 6 smart investments for short term achievements in nutrient and sediment reductions for the Bay are agricultural practices

(CBC Report: Cost Effective Strategies for the Bay)

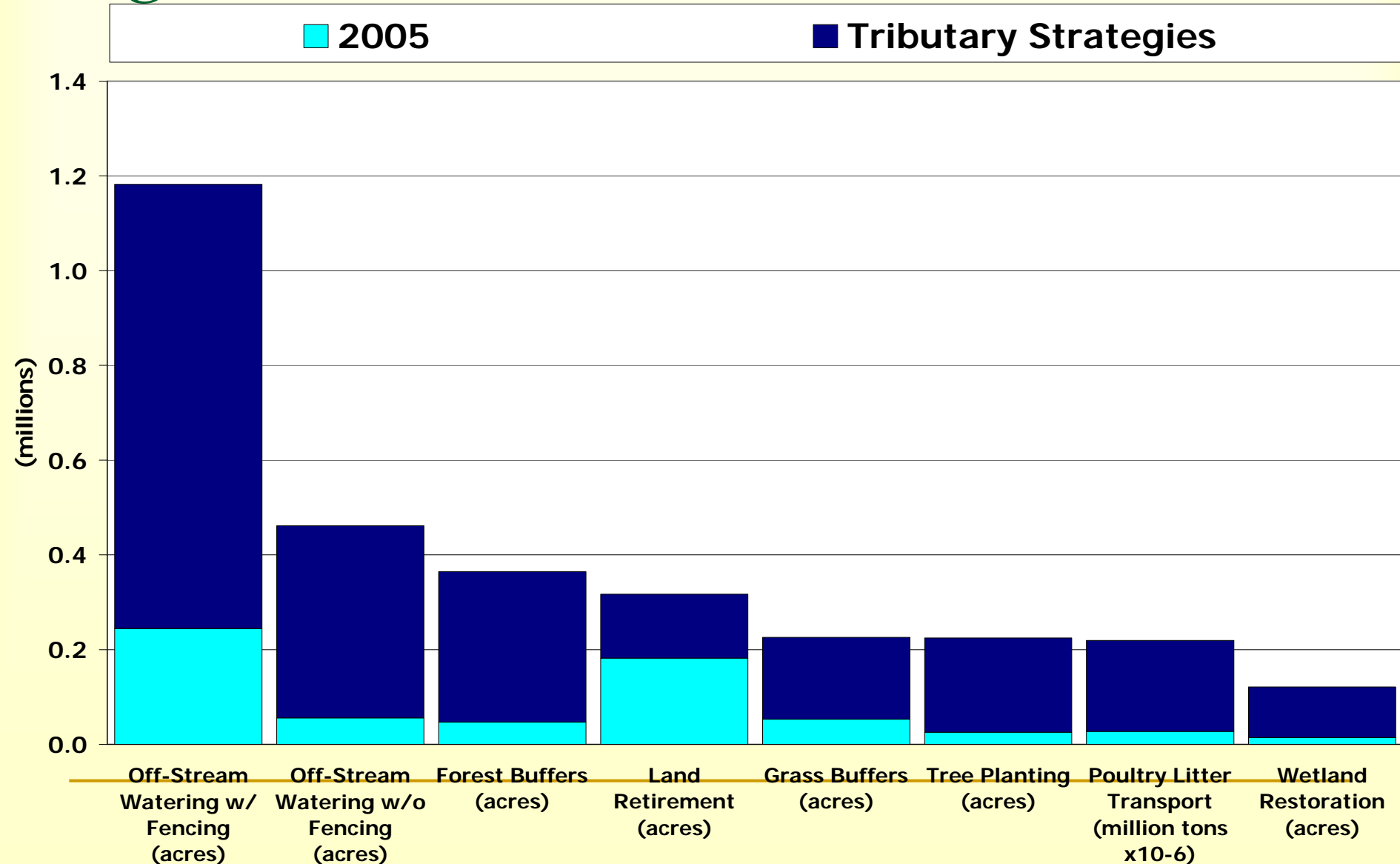
Agricultural Tributary Strategy Goals

Agricultural Commitments: Cost-Effective BMPs



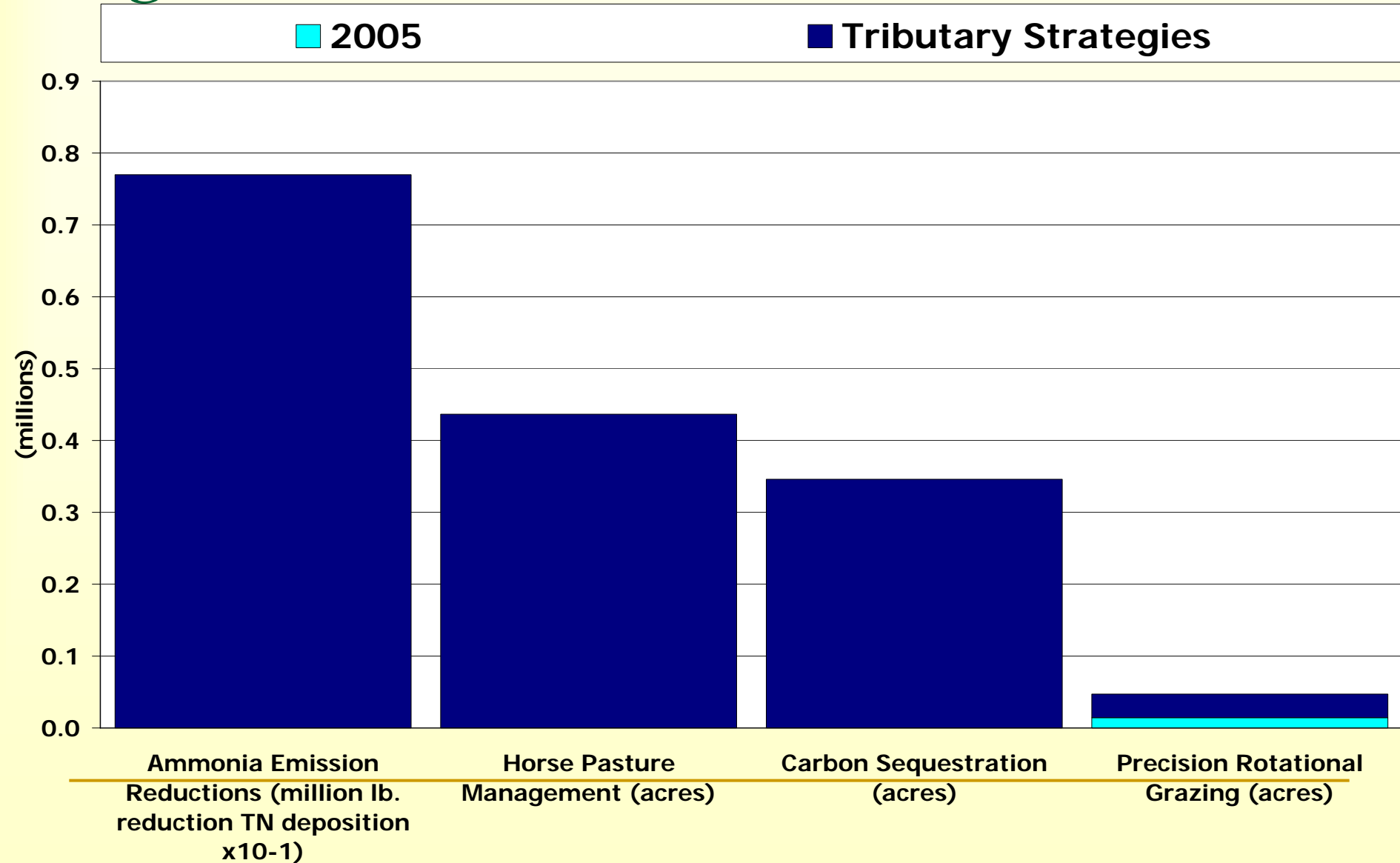
Agricultural Tributary Strategy Goals

Agricultural Commitments



Agricultural Tributary Strategy Goals

Agricultural Commitments: Innovative BMPs



Manure Strategy

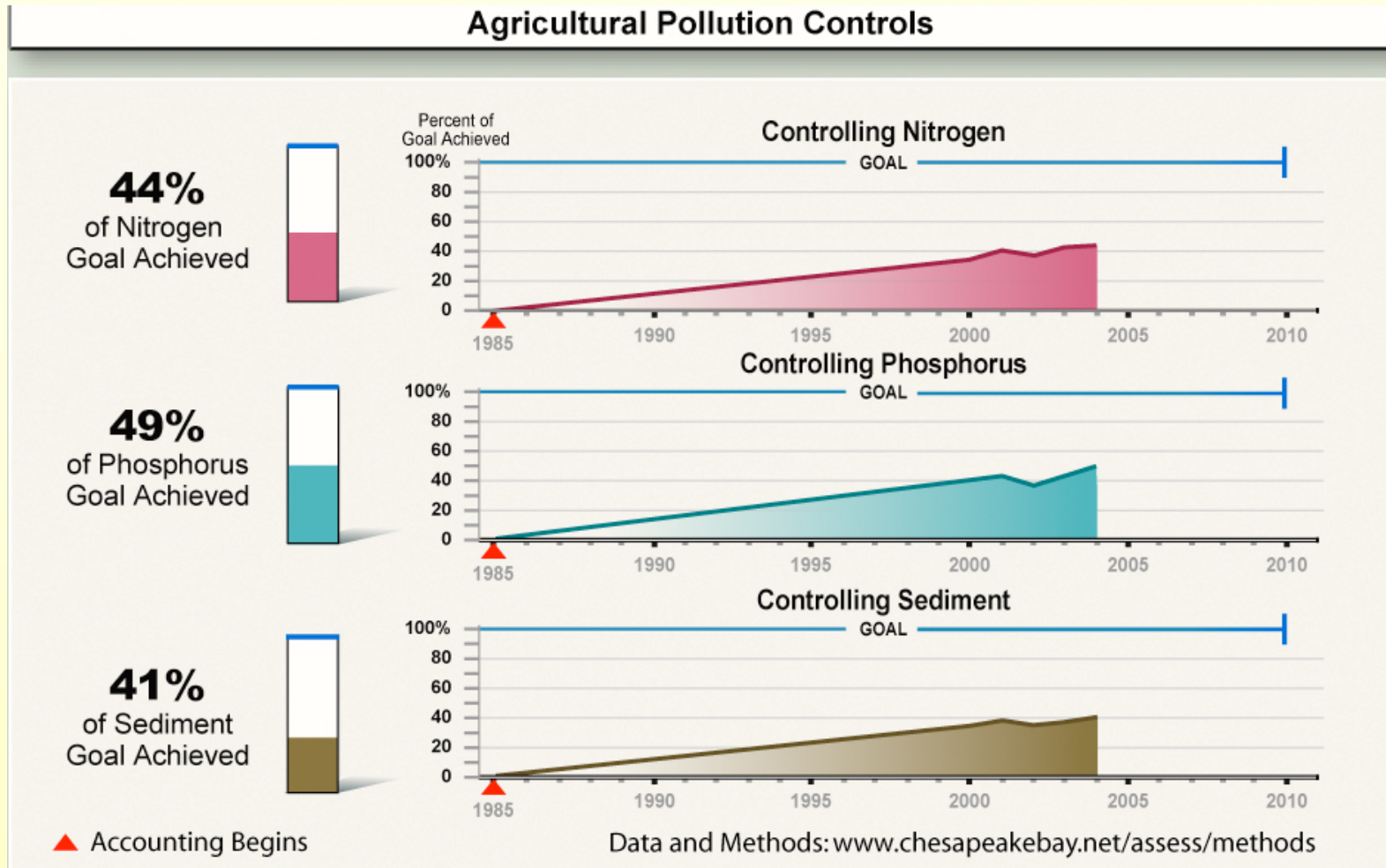


- Endorsed by the Chesapeake Executive Council, the headwater states, and the USDA in 2005

- Top three initiatives currently underway:
 - Dairy feed and forage management
 - Manure product procurement
 - Manure technology

Agricultural Tributary Strategy Goals

Agricultural Progress



Source: Chesapeake Bay 2005 Health and Restoration Assessment

Challenges

- Voluntary implementation of unprecedented levels of conservation practices.
- Farmer support in going beyond current conservation.
- Understanding of:
 - farmer values
 - property rights
 - Economics
- Sufficient education, outreach.
- Supplying sufficient technical assistance and incentives



Priorities for Agricultural Nutrient and Sediment Reductions

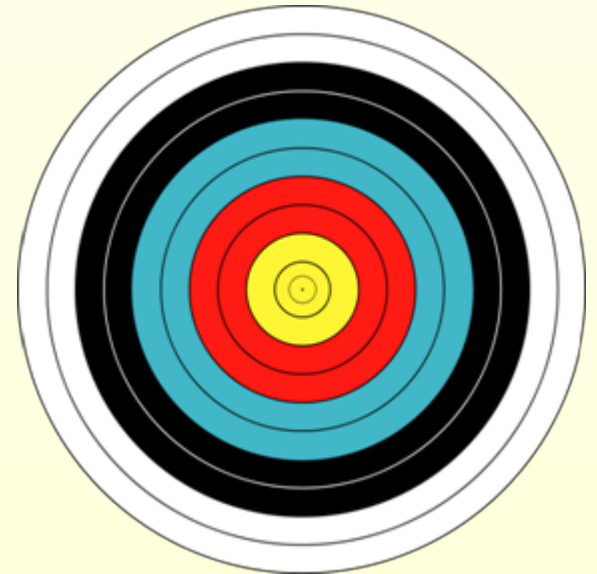
Kelly Shenk

**Nutrient Subcommittee Coordinator
EPA Chesapeake Bay Program Office**

Priorities for Agricultural Nutrient and Sediment Reductions

Strategic Implementation Plans

- Do we have a laser-like focus?
- Where will we get the greatest benefit and how?
- Some venues:
 - CBP Strategic Implementation Plan
 - Tributary Strategy Implementation Plans



Priorities for Agricultural Nutrient and Sediment Reductions

Examples of State Priorities

Virginia

□ Incentive programs focus:

- Nutrient management plans
- Cover crops
- Conservation tillage
- Riparian buffers
- Livestock exclusion from streams



□ Regional Focus - Animal:

- Waste Solutions Forum in Shenandoah
- Improving poultry litter transport program

Priorities for Agricultural Nutrient and Sediment Reductions

State Approaches for Focusing Efforts

Delaware

- Focus primarily on 4 practices:
 - Phytase additives for poultry feed
 - Poultry litter transport
 - Developing alternative uses for manure
 - Nutrient management planning

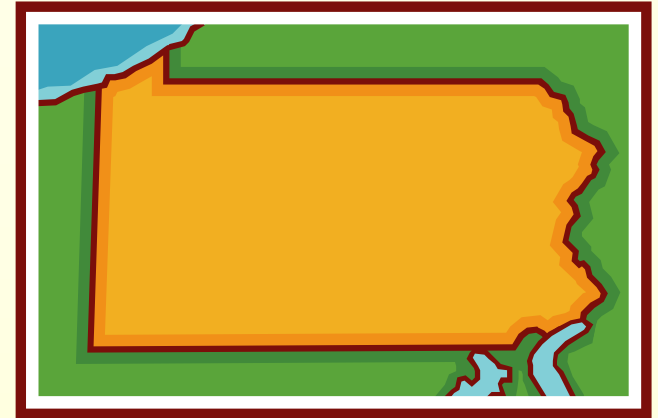


Priorities for Agricultural Nutrient and Sediment Reductions

State Approaches for Focusing Efforts

Pennsylvania

- Funding Focus:
 - Emphasis on developing standards for new practices identified in the state's Tributary Strategy



Maryland

- State has defined funding streams for:
 - Nutrient management planning
 - Manure transport
 - Cover crops



Priorities for Agricultural Nutrient and Sediment Reductions

Can we be more Focused?

- CBP effort to develop tool to identify priority watersheds and conservation practices.

- **Audiences:**
 - USDA
 - NRCS State Technical Committees
 - CBP Ag Workgroup
 - Funders
 - Many more!



Resources for Implementing Agricultural Conservation Practices

Kari Cohen

**Chesapeake Bay Watershed Specialist,
Natural Resources Conservation Service**

Resources for Implementing Agricultural Conservation Practices

Federal Funding Needs

- Cost of full implementation of agricultural practices in the Tributary Strategies= **\$700 million per year**
- Federal share needed is \$262M/yr
 - Assumes: 25% covered by farmer
 - Assumes: States and feds split remaining costs equally.
- Federal funding needed is 4 times FY04 federal funding level of \$66M.



Agricultural Tributary Strategy Goals

Programs that Support Ag Practices

Cost-Share & Stewardship

- Environmental Quality Incentives Program (EQIP)
- Conservation Security Program (CSP)
- Growing Greener (PA)
- Maryland Ag Cost Share (MACS)
- Ag BMP Cost-Share (VA)

Easement/Land Retirement

- Conservation Reserve Program (CRP & CREP)
- Farm and Ranch Lands Protection Program (FRPP)
- Wetlands Reserve Program (WRP)
- State & local easement programs

Technical Assistance

- Conservation Technical Assistance (CTA)
- Conservation Districts
- State, local, non-profit, for-profit funding sources



Resources for Implementing Agricultural Conservation Practices

Grant Programs

- Examples of Bay-specific grant programs:
 - NFWF Chesapeake Bay Small Watershed Grants Program
 - NFWF Chesapeake Bay Targeted Watersheds Grant Program
 - USDA-NRCS Conservation Innovation Grants Program (CIG)
 - US-EPA Chesapeake Bay Implementation Grant Program
 - Chesapeake Bay Trust Pioneer Grants
 - Bay Funders Network
 - NRCS and EPA are working to improve coordination of complementary grant programs
-

NRCS Role in CBP

- Conservation Technical Assistance Earmark - Status
 - Conservation Innovation Grants - Status
 - Funding trends
 - Work plan with EPA
-

USDA Farm Bill Proposals

- Consolidate and streamline conservation programs
 - Incorporate more market-based principles
 - Regional Water Enhancement Program
-

Innovative Funding Strategies

- “Flush” Tax (Maryland)
 - Green Fund (Maryland)
 - REAP (Pennsylvania)
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SEIZING THE OPPORTUNITY
The Federal Farm Bill: An Overview

Implementation Committee
Chesapeake Bay Program

April 19, 2007

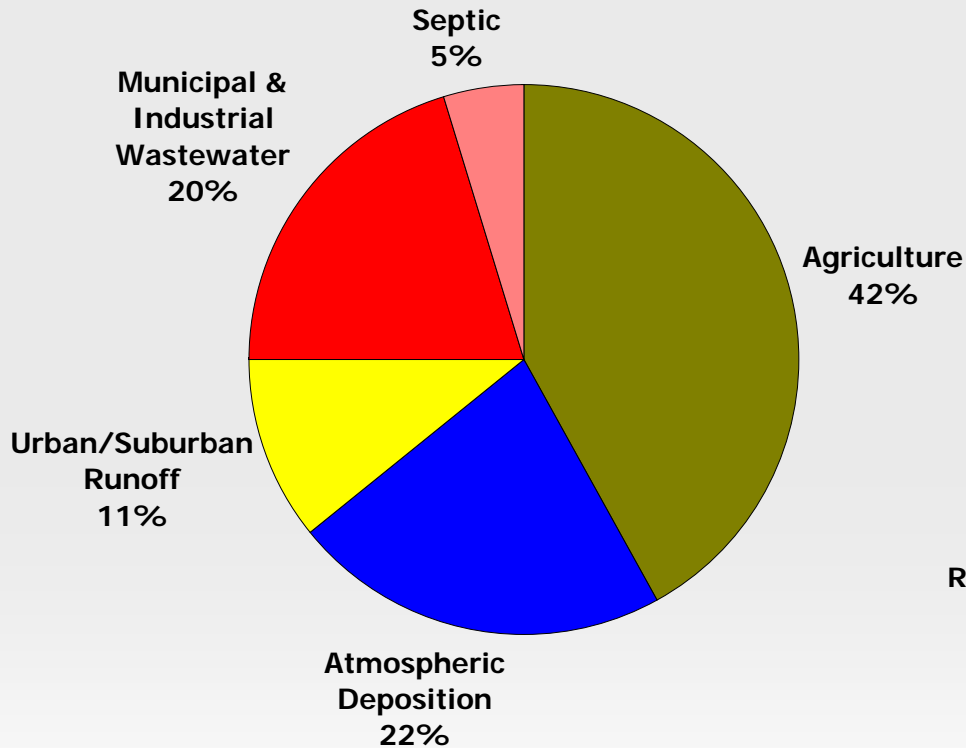
Marel Raub
Pennsylvania Director
Chesapeake Bay Commission

One quarter of our lands are agricultural...

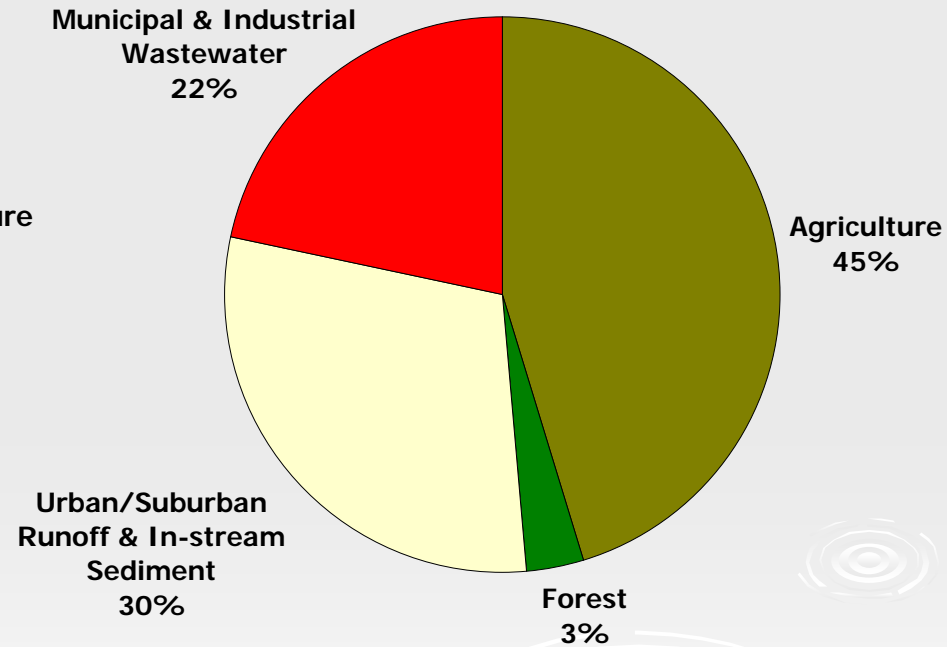


BASIC FACT: The Farm Bill offers the greatest opportunity to improve water quality in the Bay and its tributaries.

Nitrogen



Phosphorus



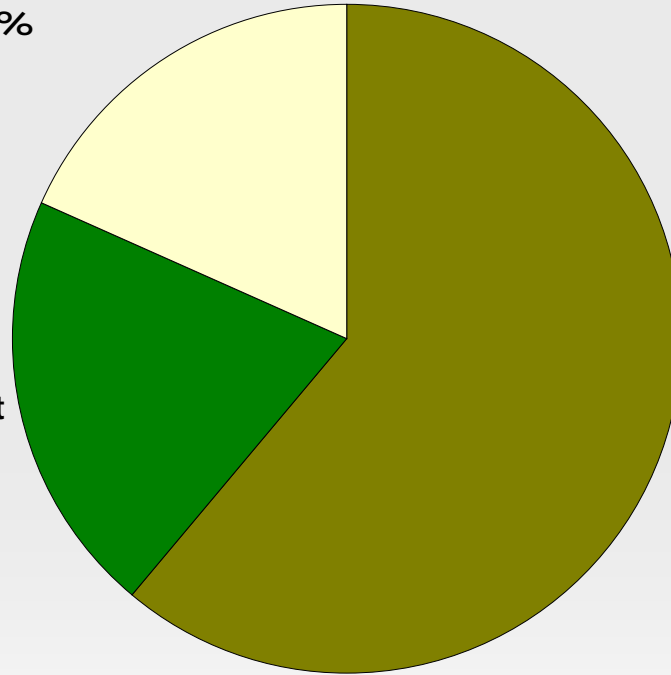
2005 Loads to the Tidal Chesapeake Bay by Source

Sources of Sediment Loads to the Bay 2005

Urban/Suburban
Runoff & In-stream
Sediment
18%

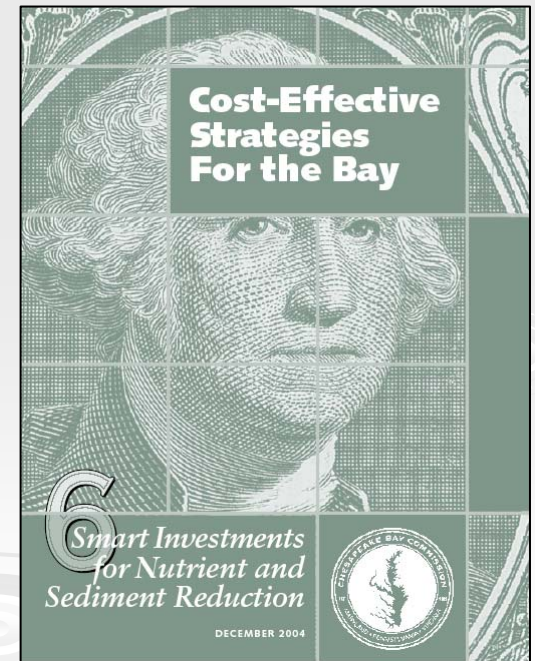
Forest
20%

Agriculture
62%

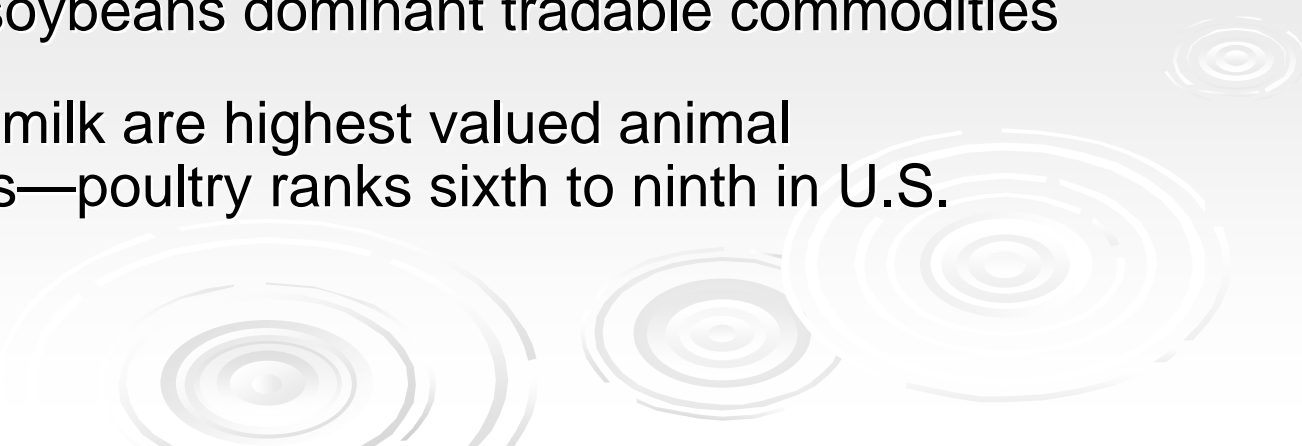


Agricultural practices are some of the most cost-effective to reduce nutrient and sediment pollution

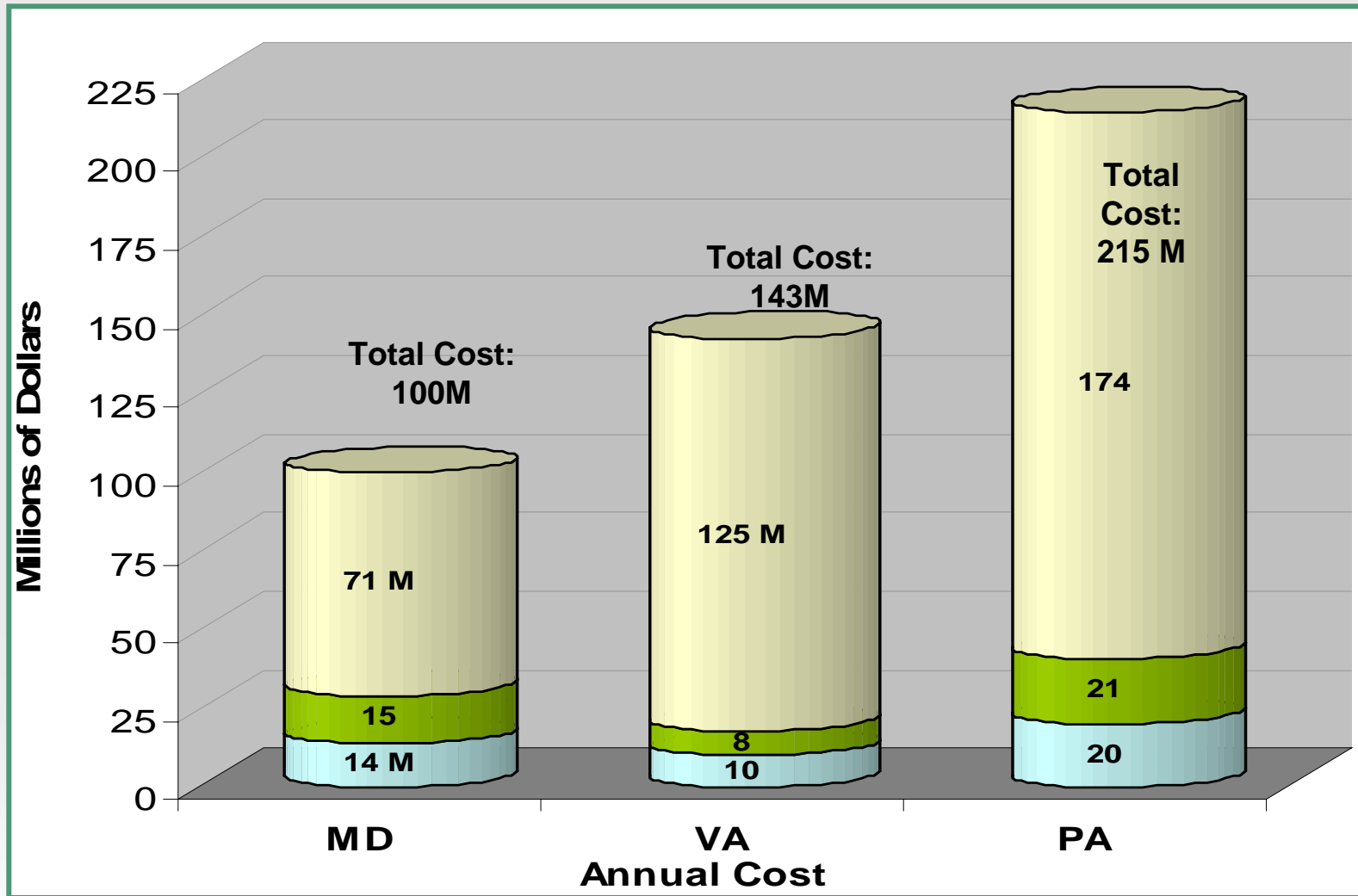
- **Wastewater treatment plant upgrades**
- **Animal diet and feed adjustments**
- **Nutrient management**
- **Enhanced nutrient management**
- **Conservation tillage**
- **Cover crops**



Agriculture is a Vital Component of the Bay's Economy, Landscape and Culture

- Nearly one-quarter of the land use in the watershed is agricultural
 - 13% of the region's gross domestic product
 - 5.7% of the nation's agricultural cash receipts
 - Crops make up two-thirds of ag production: corn, wheat and soybeans dominant tradable commodities
 - Poultry and milk are highest valued animal commodities—poultry ranks sixth to ninth in U.S. production
- 

Ag Sector Conservation Costs and Income Annual by State (2005-2010)



- Projected Funding Gap
- Projected State Funds
- Projected Federal Funds

BASIC FACT: Every state is relying *heavily* on agriculture to achieve their Nutrient and Sediment reductions

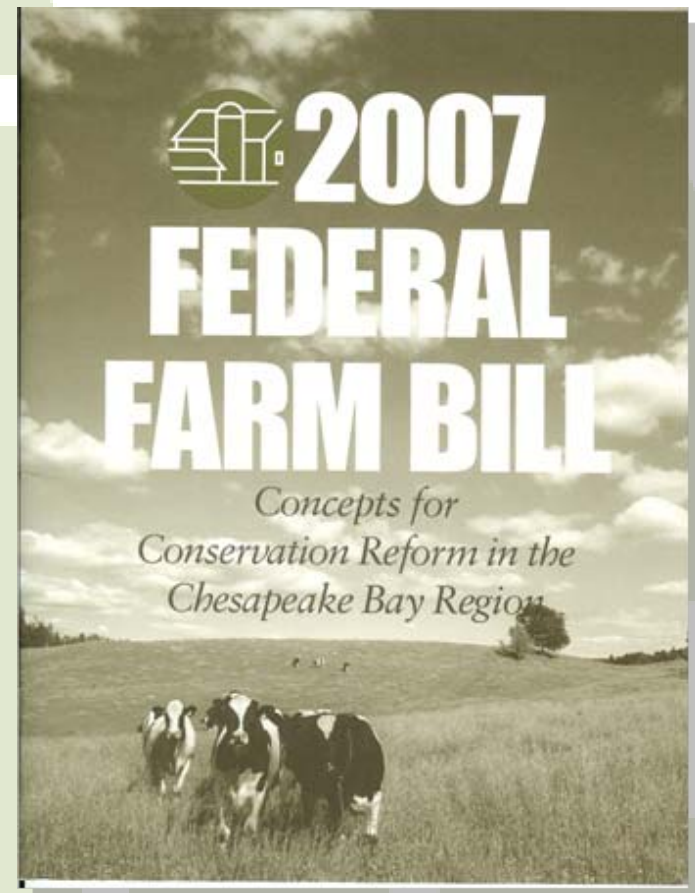
(2003-2010 Tributary Strategy delivered load reduction)

State	Nitrogen (%)	Phosphorus (%)	Sediment (%)
Delaware	89	98	100
Maryland	54	63	83
New York	71	49	91
Pennsylvania	70	72	92
Virginia	50	48	83
West Virginia	75	55	90

2007 FARM BILL REFORM RECOMMENDATIONS

**Report Breaks Down
into 3 Categories:**

- 1. Funding Needs**
- 2. Overarching Themes**
- 3. Specific Program Reforms**



Several “marker bills” address agriculture conservation

➤ *Healthy Farm, Foods & Fuels*

- HR 1551 (Kind, D-WI)

➤ *EAT Healthy America*

- HR 1600 (Cardozo, D-CA)





CHESSEA:

- *A Bay-specific Farm Bill “Marker” Bill*
- *HR 1766 (VanHollen, D-MD)*

A Bay-friendly Farm Bill

The short list

- **Double EQIP**
 - 10% to those states that “do it best.”
 - 5X increase in CIG; maintain 25% preference to Bay
 - EQIP for silviculture on non-industrial lands
- **Conservation Security Program**
- **Enhanced Technical Assistance**
- **More CRP to CREP, targeted to buffers and wetlands**
- **Regional Water Quality Enhancement Program**
- **Biofuels for Energy & Energy Systems**

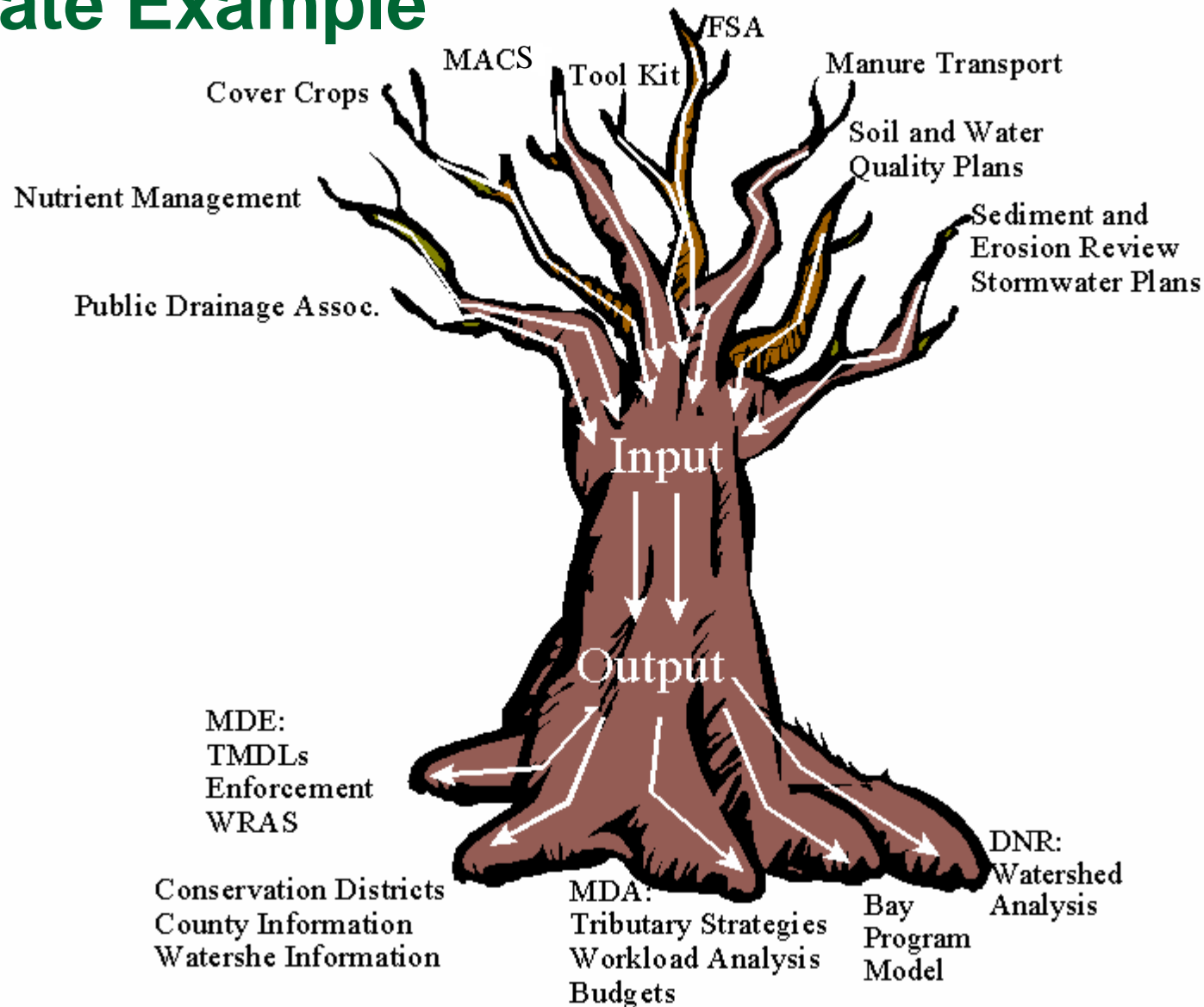


Accurate Accounting of Agricultural Conservation in the Watershed

Beth Horsey
Maryland Department of Agriculture,
NSC AgNSRWG Member

Accurate Accounting of Agricultural Conservation

State Example



Accurate Accounting of Agricultural Conservation

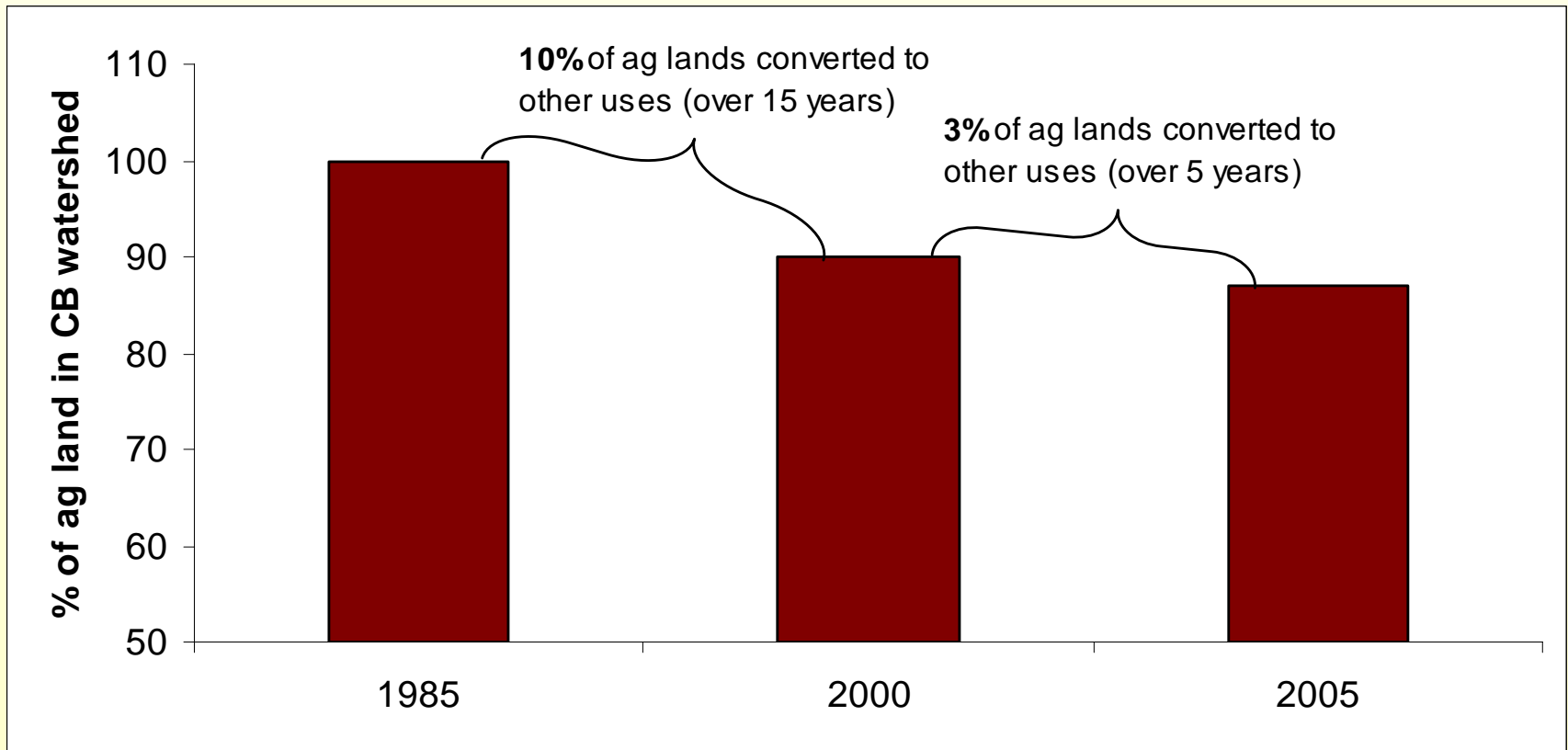
- **What data may not be fully accounted for?**
 - NRCS Data (state issues with double counting and data confidentiality).
 - Voluntary Practices that aren't cost-shared.
 - Verified implementation levels.

 - **Solution?**
 - NEIEN Project
 - Automated nonpoint source data submission process
 - Requires that NRCS offices coordinate data submission with states.
 - Efforts in PA to access NRCS data
-

Future of Agriculture in the Chesapeake Bay Watershed

Mark Dubin
Agricultural Technical Coordinator,
UMD Mid-Atlantic Regional Water Program

Reduction of Agricultural Lands in the Chesapeake Bay Watershed



Water Quality Implications of Increased Ethanol Production

- Additional acreage converted to corn
 - Corn fields lose more N&P than other commodity crops
 - Threat to conservation tillage
 - Increased soil erosion losses
 - Reduced soil organic matter and soil quality
 - Potential long term yield impacts
 - Results in soil carbon release, not sequestration
- Increased use of dried distillers grains as feed for livestock
 - DDGs high in P compared to other feeds
- Increased nitrogen application rates on corn crops



Future of Agriculture

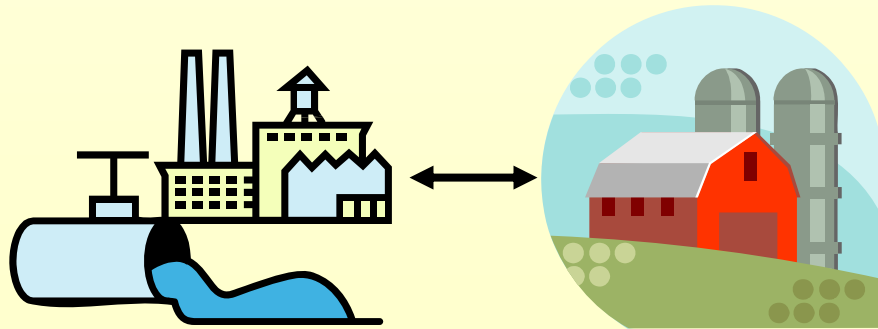
Corporate Responsibility



Resources for Implementing Agricultural Conservation Practices

Point to Non-Point Nutrient Trading

- Currently implemented in PA and VA; Proposed in DE, MD, and WV
- Significant reductions may be required of non-point sources in order for them to qualify for trading
- Credits generated are considered offsets
 - Will this make it more difficult for the agricultural sector to meet its goals?



Forecasting – Protecting Investments

- Farm land conversion.
- Aging of farm population.
- Rising land prices.
- Absentee land owners.
- Market influences.
- Expanding corn ethanol production.
- Trading programs, etc.



Opportunities

- Markets for environmentally focused products.
 - Alternative energy and consumer products.
 - Market-based economics vs. incentive programs.
 - Agri-business and technical assistance.
 - Agricultural economic stability.
-

Discussion

Tom Simpson

Chair of Nutrient Subcommittee

UMD Mid-Atlantic Regional Water Program

Discussion Questions

Forecast Report

- Should the CBP develop a report that forecasts the state of agriculture and how it may affect our management approach?
 - How do we protect our investment in agriculture in the face of future changes in the sector?
 - Implications of trading, market forces, land conversions on our management approach.
-

Discussion Questions

Stronger Focus

- Should the CBP take a more focused approach for addressing agriculture?
 - Geographic location
 - Practice (costs effectiveness)
 - Type of agriculture (types of crop, animal)
-

Discussion Questions

Partnerships

- What partnerships do we need to build to meet our agricultural goals for the Bay?
 - What is CBP role in corporate partnerships?



Discussion Questions

Practice Implementation

- How can we better document the level of conservation practice implementation on the ground?
-