Executive Order 13058

Chesapeake Bay Protection and Restoration

Federal Register

Friday,
May 15, 2009

Part IV

The President

Executive Order 13508—Chesapeake Bay Protection and Restoration

USDA Briefing

November 10, 2009

Executive Order 13058

- **Establishes Federal Leadership Committee**

Chair

- **Requires 7 "section 202 reports"**
  - Drafts to FLC (and release publically) by 120 days (9/9)
  - Revised and published at 180 days (no later than 11/23)
- **Requires coordinated implementation strategy (section 203)**
  - Draft published at 180 days (11/9)
  - Final published at 365 days (5/12)
- **Requires consultation and coordination with state and local partners**

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- **Added Federal Leadership Committee Roles**

- Oversee development, coordination and implementation of new federal programs and activities for Chesapeake Bay restoration.
- Collaborate with state partners to create a new, coordinated strategy.
- Define environmental goals, indicators and milestones.
- Track and report restoration activities and spending.
- Publish Annual Action Plan describing how federal funding will be used.
- Publish an Annual Progress Report on environmental health and restoration efforts.
- Utilize independent evaluation to strengthen accountability.
- Establish a process for practicing adaptive management.

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202 Report Topics and Leads

Water Quality	Targeting Resources	Storm-water & Federal Facilities	Climate Change	Public Access & Conser-vation	Monitoring & Decision Support	Habitat & Research for Living Resources
Define the next generation of tools and actions to restore water quality... and describe the changes to be made to regulations, programs, and policies.	Target resources ... including resources under the Food Security Act of 1985 as amended, the Clean Water Act, and other laws.	Strengthen storm water management practices at Federal facilities and on Federal lands and develop storm water best practices guidance.	Assess the impacts of a changing climate ...and develop a strategy for adapting natural resource programs and public infrastructure.	Expand public access to waters and open spaces ... and conserve landscapes and ecosystems.	Strengthen scientific support for decision-making ... including expanded environmental research and monitoring and observing systems.	Develop focused and coordinated habitat and research activities that protect and restore living resources and water quality.
	USDA	+	+		+	+

Draft Coordinated Implementation Strategy

Focus of Strategy

Collectively, the federal initiatives support three actions:

- Restore clean water
- Conserve treasured places and restore habitats, fish and wildlife
- Adapt for climate change

To achieve these actions, there are three focus areas:

- Empower local efforts
- Decision-making through science
- New era of federal leadership

Draft Coordinated Implementation Strategy

Part 1 – Executive Summary

Part 2 – Health of the Chesapeake Bay and Watershed

Part 3 – Federal Initiatives

Part 4 – Developing a Coordinated Strategy

Federal Initiatives

Major Federal Initiatives

1. Reducing Pollution and Restoring Water Quality *(202a)*
2. Chesapeake Farms and Forests for the 21st Century *(202b)*
3. Chesapeake Treasured Landscape Initiative *(202e)*
4. Protect, Restore and Sustain Species and Habitats *(202g)*
5. Coordinate Tools and Services for Strategic Decision-making *(202f)*
6. A Strategy for Chesapeake Communities and Resources to Adapt to Climate Change *(202d)*
7. Federal Leadership by Example *(202c)*
8. Planning for Livable Communities *(new)*

Federal Initiatives

Chesapeake Farms and Forests for the 21st Century was developed from Recommendations in the USDA 202b Report.

- The 202b Report stated that USDA would lead an aggressive, voluntary, partnership conservation initiative to improve water quality while sustaining and enhancing the Chesapeake's farms and forests.

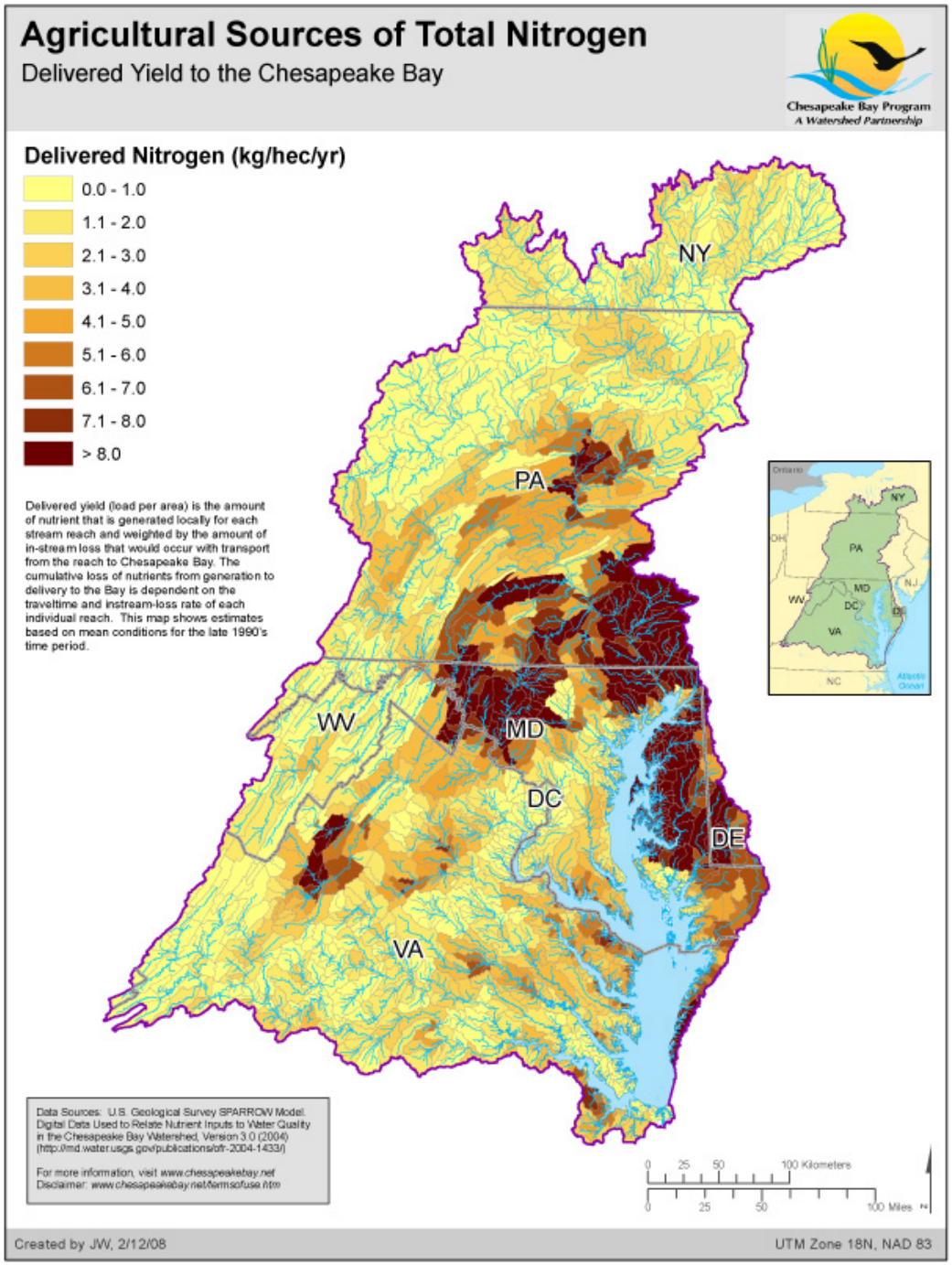
- There are 6 major Elements of this Initiative:
  A. Focus on the highest priority watersheds
  B. Focus and integrate Federal and State programs
  C. Accelerate conservation adoption
  D. Accelerate development of new conservation technologies
  E. Implement a sound accountability system
  F. Launch a "shared federal leadership" commitment to support Ecosystem Markets in the Chesapeake Bay.

Element A. Focus on the highest priority watersheds

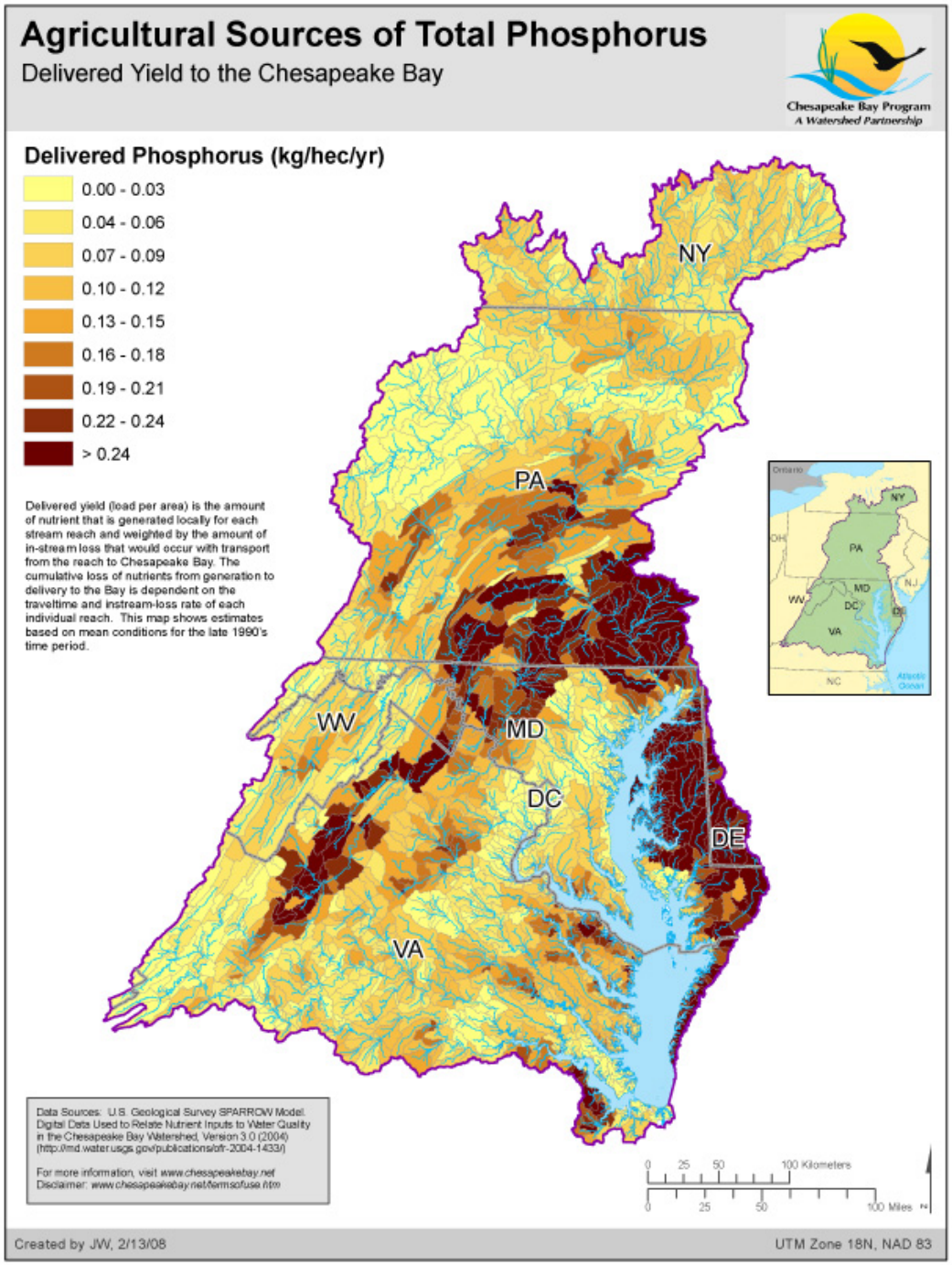
ACTIONS:

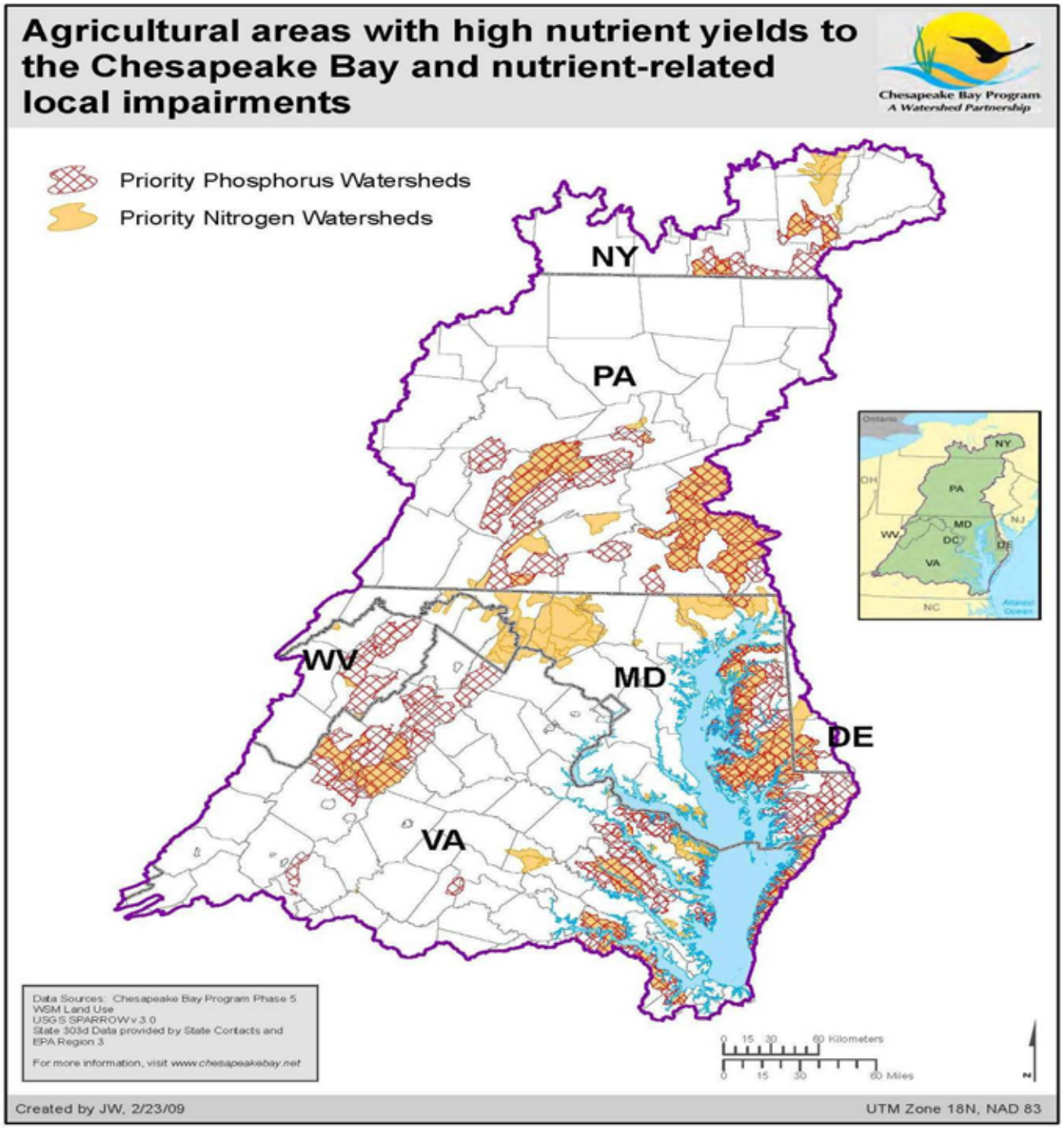
- Identify high priority watersheds for immediate conservation action
- Identify the critical acres

SPARROW Total Delivered Yield of Nitrogen from Agricultural Sources

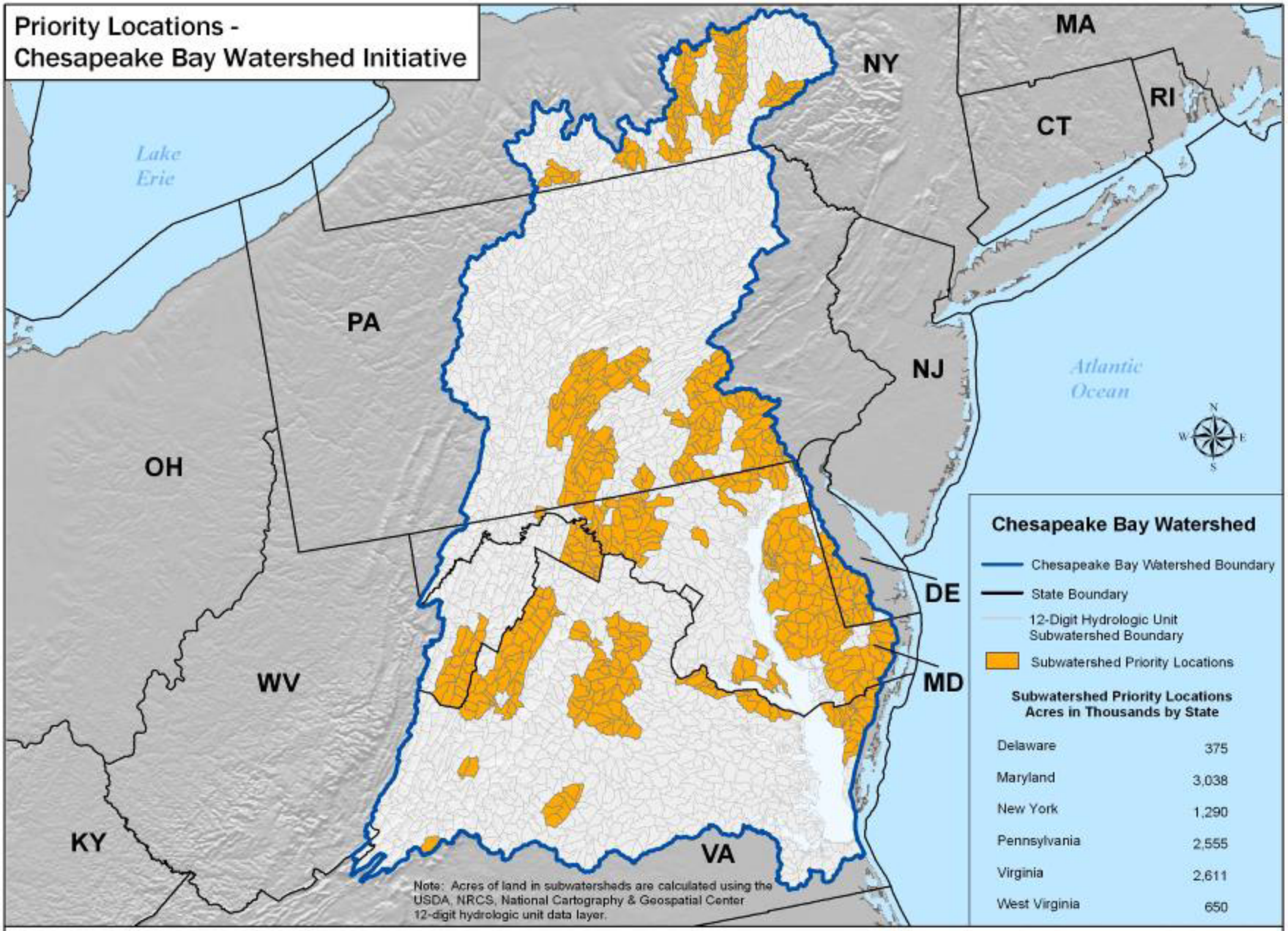


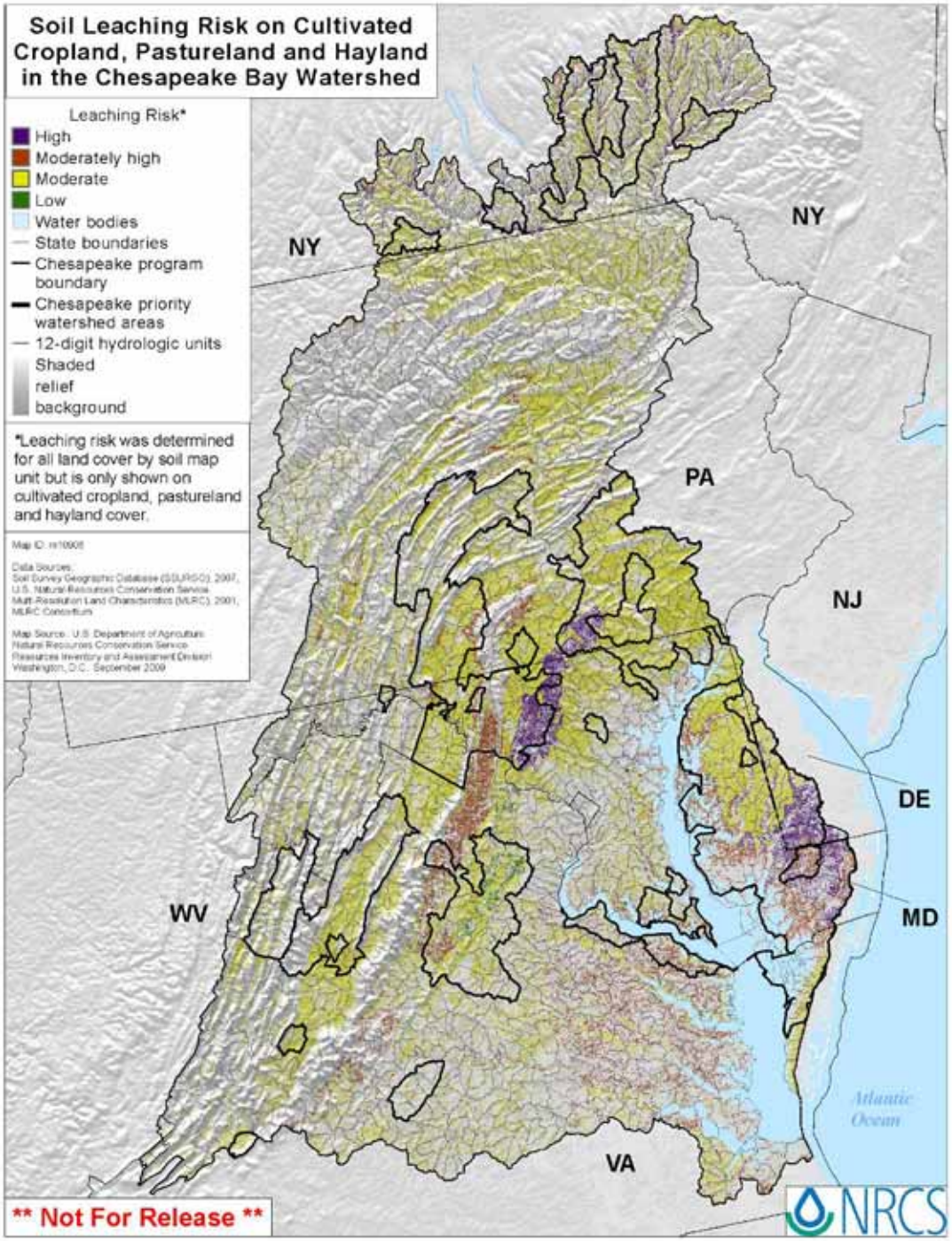
SPARROW Total Delivered Yield of Phosphorous from Agricultural Sources





Nutrient impairments are show for the 2009 Chesapeake Bay Watershed Initiative Priority Watersheds.


Priority Locations -
Chesapeake Bay Watershed Initiative
Lake Erie
Atlantic Ocean
NY
MA
RI
CT
PA
NJ
OH
DE
MD
WV
KY
VA
Chesapeake Bay Watershed
Chesapeake Bay Watershed Boundary
State Boundary
12-Digit Hydrologic Unit Subwatershed Boundary
Subwatershed Priority Locations
Subwatershed Priority Locations
Acres in Thousands by State
Delaware 375
Maryland 3,038
New York 1,290
Pennsylvania 2,555
Virginia 2,611
West Virginia 650
Note: Acres of land in subwatersheds are calculated using the USDA, NRCS, National Cartography & Geospatial Center 12-digit hydrologic unit data layer.
NRCS
U.S. Department of Agriculture
Natural Resources Conservation Service
Resources Inventory and Assessment Division
Washington, D.C. February 2009
Map ID: 10434
Source: USDA, NRCS, Chesapeake Bay Program Data



Vulnerable Soils-Leaching Risk

Soil Vulnerability determined from soil properties such as:

- ✓Rate of water movement
- ✓Surface texture
- ✓Erodibility
- ✓Internal soil drainage
- ✓Infiltration
- ✓Slope

PURPLE- High risk on agricultural lands
RED- Moderately high risk
YELLOW- Moderate risk
GREEN- Low Risk

Chesapeake Bay TMDL Load Reductions to Meet CAP

(Graphic Not Currently Available for Public Distribution)

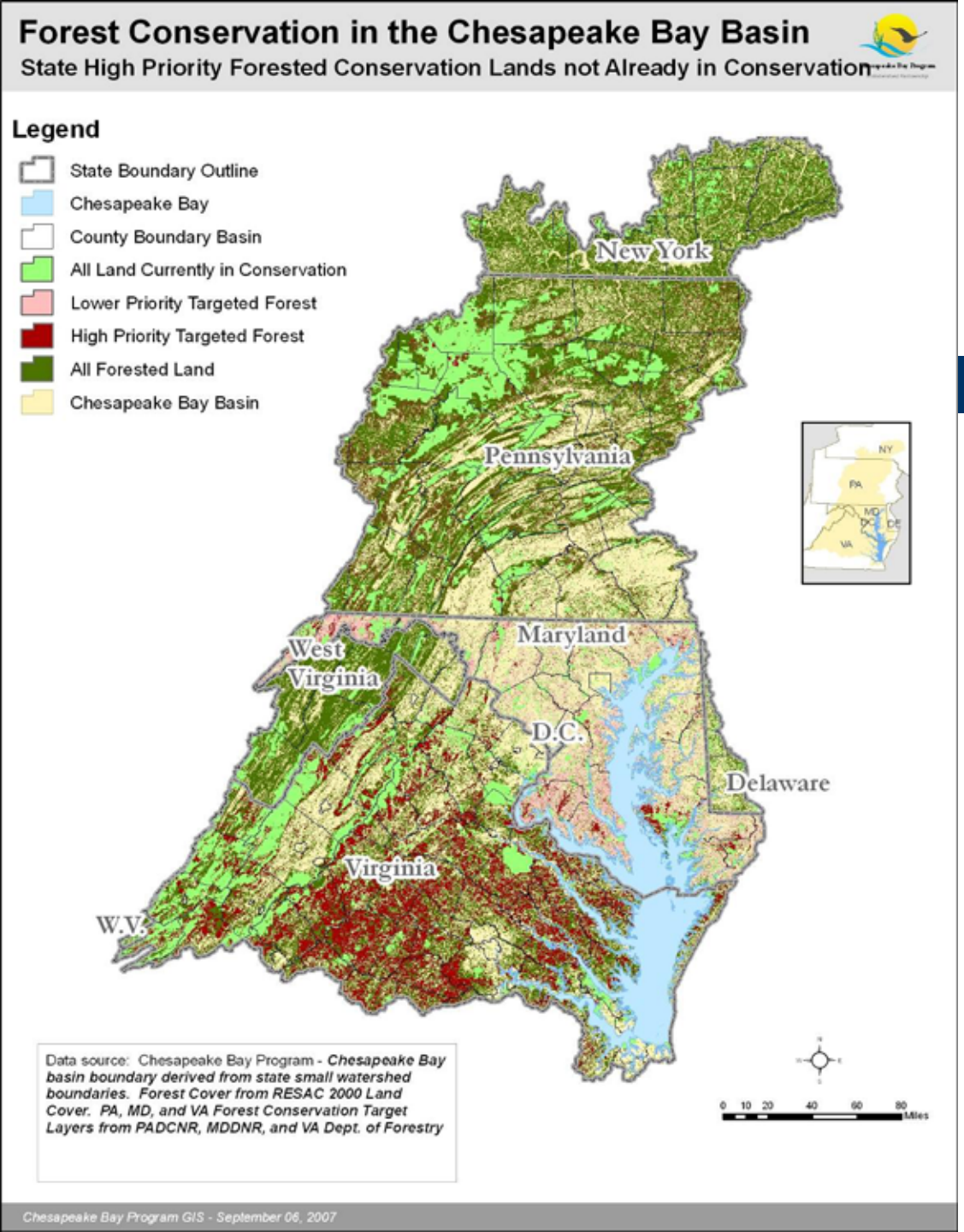
This slide shows the TMDL Load reductions to meet the Cap.

The 2009 Chesapeake Bay Watershed Initiative Priority Watersheds are in outlined in in black.

Element B. Focus and Integrate Federal and State programs

ACTIONS:

- Prioritize high impact practices
- Coordinate USDA – EPA voluntary programs and resources
- Deliver the programs more effectively



In 2007, the Chesapeake Bay Executive Council established the Forest Conservation Directive.

The Directive stated that the conservation of forests was critical to preventing millions of pounds of nutrients and sediment from reaching the Bay:

- Set a goal of protecting 695,000 acres of high value forest lands by 2020.
- High priority forest land is shown in red shading.
- Lower priority forestland is shown in pink.
- The lightest green shading reflects forestland currently in conserving uses.

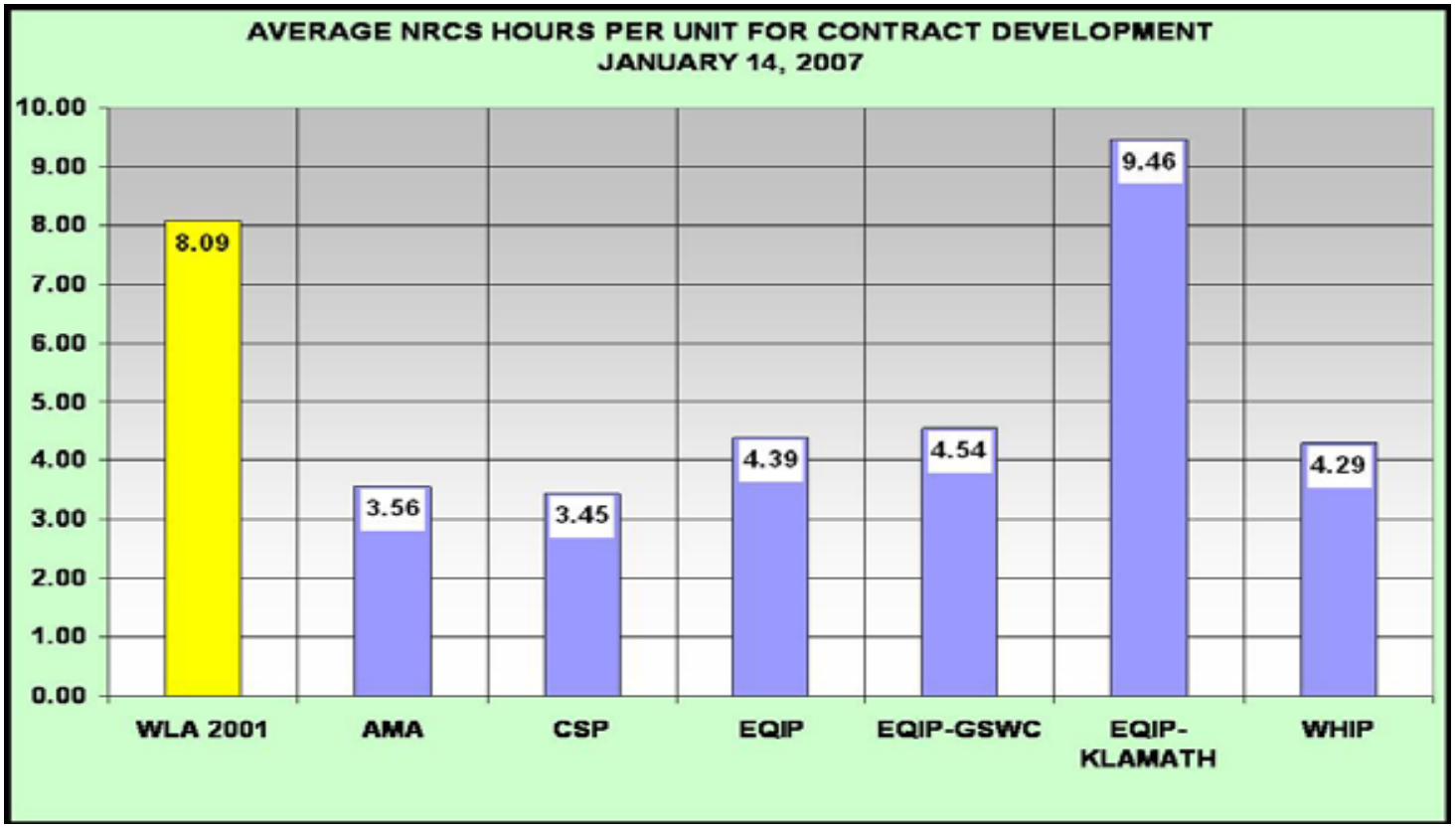
NRCS- CBWI-Priority conservation practices identified by Bay States (2009)

Pennsylvania	New York	Virginia
Residue Management Cover Crops Grassed Waterways Terraces Diversions Vegetative Cover Nutrient Management Precision Application Techniques Feed Management Stream Bank Fencing Riparian Buffers	Grassed Waterways Diversions Prescribed Grazing Pasture and Hayland Planting Nutrient Management Cover Crops Stream Bank Fencing Riparian Buffers	Conservation Crop Rotation Residue and Tillage Management Cover Crop Riparian Herbaceous Cover Riparian Forested Buffer Nutrient Management Pest Management Fence Conservation Cover Pasture and Hayland Planting Tree Planting
Maryland	**Delaware**	**West Virginia**
Residue Management Grassed Waterways Vegetative Covers – filter strips, field borders Nutrient Management Precision Application Techniques Waste Storage Facilities Structures for Water Control Stream Bank Fencing Riparian Buffers	Nutrient Management Cover Crops Irrigation Water Management Heavy Use Area Protection	Nutrient Management Pest Management Residue Management Cover Crop Shoreline Protection Fence Heavy Use Area Protection Waste Storage Facility

Coordinate USDA – EPA voluntary efforts in priority watersheds

- **EPA will work to align its resources with USDA to accelerate nutrient and sediment reductions :**
  - **Clean Water State Revolving Loan Fund-** look for ways to leverage resources with states.
  - **Nonpoint Source Management Programs Grants (319)-** target where Farm Bill may not address- i.e. technical assistance, farmer outreach, and monitoring.
  - **Clean Water Act 117-** grant preference given priority watersheds.
  - **STAR and State Innovation Grants** – align grant programs to address Bay goals.
  - **Coordinated Federal Grant Announcements –** consider coordinated grant announcement for federal agricultural grant programs.
  - **Geographic Targeting-** EPA will continue to work with Chesapeake Bay Partners to develop priority maps and practices and encourage targeting of funding.

Average Hours for Contract Development (2007)(ABC data)



State Partner Contributions to the Environmental Quality Improvement Program-2006 (ABC Data)

State	Percentage Partner Contribution to Total EQIP Program Hours
Maryland	40.9%
Delaware	31.0%
Virginia	22.9%
New York	17.1%
Pennsylvania	13.7%
West Virginia	0.5%

Element C. Increase conservation adoption

ACTIONS:

- Increase incentives through partnerships
- Simplify program participation

There are a many programs in the Bay- the 202b report list Agency contributions 2004-2008

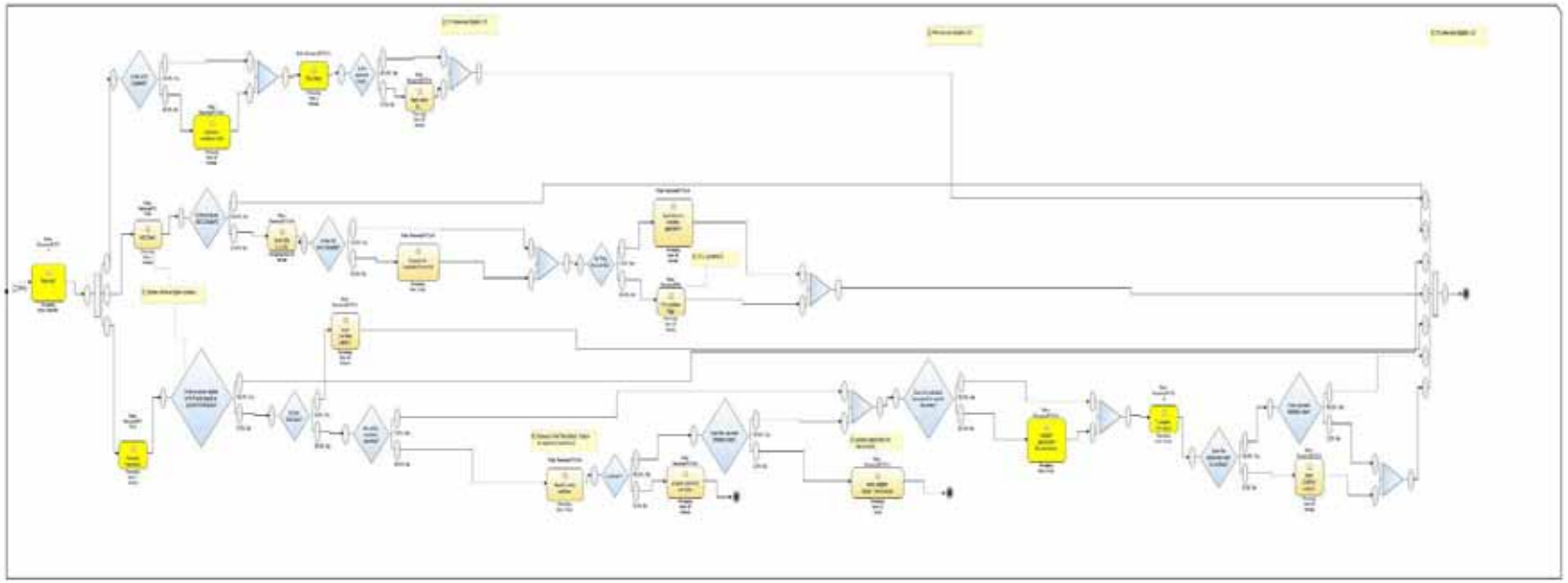
- NRCS Environmental Quality Incentives Program
- NRCS Farmland Protection Program
- NRCS Wetlands Reserve Program
- NRCS Wildlife Habitat Incentives Program
- NRCS Agricultural Management Assistance
- NRCS Conservation Security Program
- NRCS Conservation Innovation Grants
- CSREES National Integrated Water Quality Program Grants
- CSREES Water and Watershed Program Grants
- USFWS Partners for Wildlife
- USFWS Coastal Program
- FSA Conservation Reserve Program
- FSA Emergency Conservation Program
- FSA Grassland Reserve Program
- USFS Chesapeake Watershed Forestry
- RD FFB Guaranteed Loan Program (Electric Program)
- RD Water and Waste Disposal Loan and Grant Program
- EPA State Pollution Control Grants-Clean Water Act Section 106
- EPA Nonpoint Source Management Program Grants- Clean Water Act Section 319
- EPA Chesapeake Bay Program - Clean Water Act Section 117
- EPA Targeted Watershed Grants
- USACE Section 510 - Water Resources Development Act of 1996

Not the complete lists!

In FY 2009 NRCS and the Maryland Department of Agriculture coordinate between State and Federal Programs to increase overall Incentives to Farmers

Streamlining Application to Farm Bill Programs

Concerns over the administrative burden on applicants and field office technical staff for Farm Bill program application and contract development has shown the need to continue to streamline these processes.



Element D. Accelerate development of new conservation technologies

ACTIONS:

- Increase public-private research partnerships
- Focus federal funding to foster and promote innovation

Experimental Poultry Waste Injection Equipment

Water Control Structures

- Hold field drainage with flash-boards or risers
- Ditches become anoxic leading to denitrification
- Reduce nutrient loading
- Improve crop root development
- Reduce flashiness of flows to drainage systems
- Wildlife habitat for waterfowl

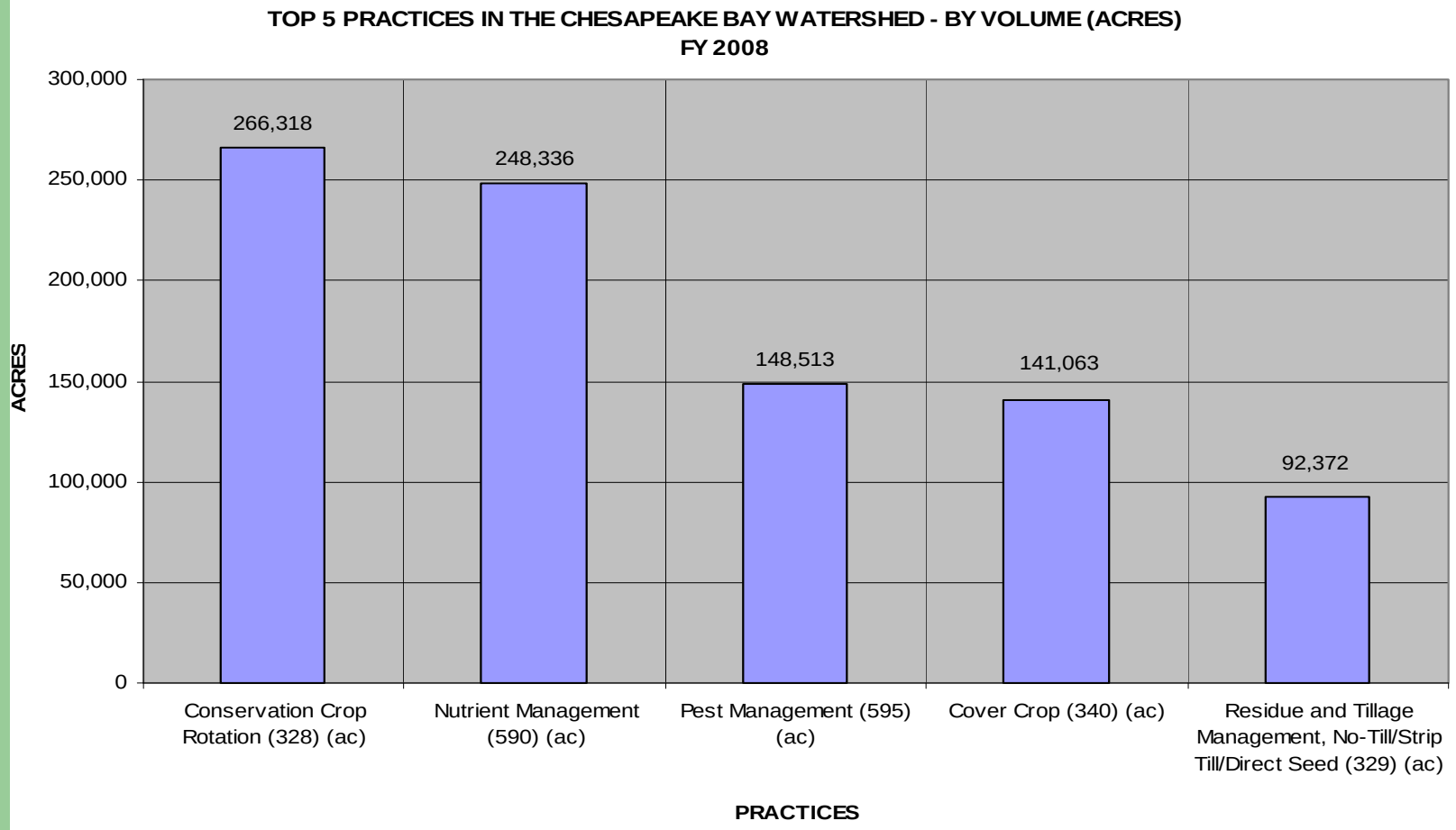
Algal Turf Scrubber being developed through a Conservation Innovation Grant.

E. Implement a sound accountability system

ACTIONS:

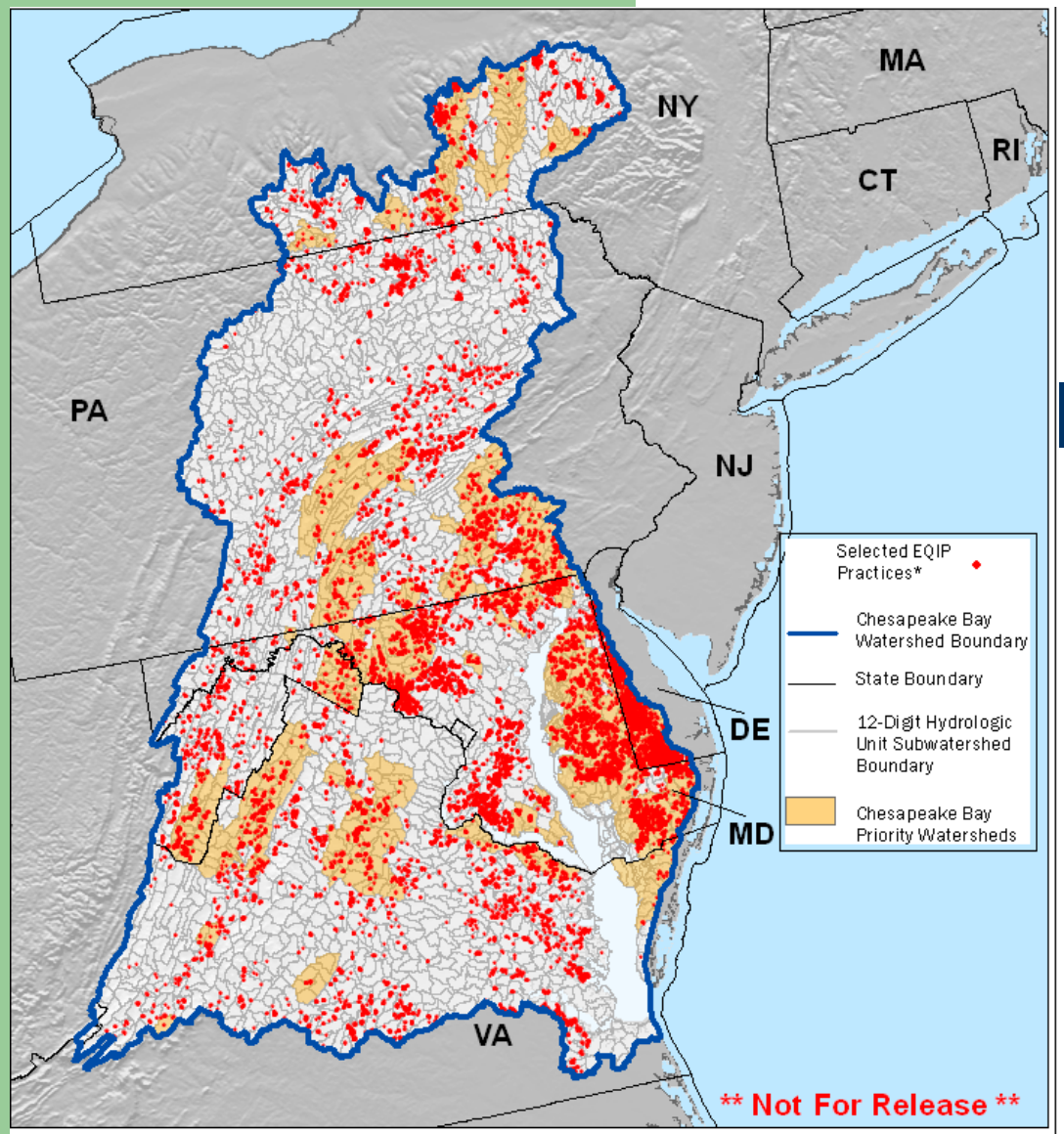
- Establish environmental outcome measures
- Create a conservation implementation database
- Monitor and assess progress in priority watersheds
- Use science to adapt the strategy

NRCS Top Practices in The Bay by Acres -2008



Baywide Two Year Milestones for Agriculture Practice Implementation- 2009-2011

- **Nutrient Management 1,082,251 acres**
- **Conservation Tillage 306,991 acres**
- **Cover Crops 652,152 acres/year**
- Pasture Grazing BMPs 168,800 acres
- Streamside Forest Buffers 39,110 acres
- Streamside Grass Buffers 14,910 acres
- Forest Harvesting Practices 125 acres
- Wetland Restoration 3,809 acres
- Land Retirement 81,676 acres
- Tree Planting 27,965 acres
- Carbon Sequestration/Alternative Crops 25,740 acres
- Conservation Plans/SCWQP 584,648 acres
- **Animal Waste Management Systems 1,016 systems**
- Mortality Composters 22 systems
- Water Control Structures 25,000 acres
- Horse Pasture Management 300 acres
- Non-Urban Stream Restoration 232,088 feet
- Poultry Phytase 19,626 fewer pounds phosphorus
- Manure Transport 131,503 net tons
- Dairy Precision Feeding and/or Forage Management 291,203 pounds N/51,264 pounds P
- Heavy Use Poultry Area Concrete Pads 400 farms
- **Livestock and Poultry Waste Structures 198 structures**
- Dairy and Poultry Manure Incorporation Technology 5,000 acres



There are a total of 45,602 practices represented in this map; 23,278 of these, or 51%, are in priority watersheds. The practices cover 651,164 acres -- 54% in priority areas; 4,409,461 feet -- 36% in priority areas; 799 facilities or structures – 53% in priority areas; and 302 animal units -- 99% in priority areas.

*This map includes the following practices: Conservation Cover, Conservation Crop Rotation, Cover Crop, Cover Crop Shoreline Protection, Diversions, Feed Mgmnt., Fencing, Filter Strips, Grassed Waterways, Heavy Use Area Protection, Irrigation Water Mgmnt., Lined Waterway or Outlet, Nutrient Mgmnt., Pasture and Hayland Planting, Pest Mgmnt., Prescribed Grazing, Residue & Tillage Mgmnt., Riparian Buffers, Riparian Herbaceous Cover, Structures for Water Control, Terraces, Tree Planting, and Waste Storage Facilities.

NRCS

U.S. Department of Agriculture
Natural Resources Conservation Service
Resources Inventory and Assessment Division
Washington, D.C. June 2009

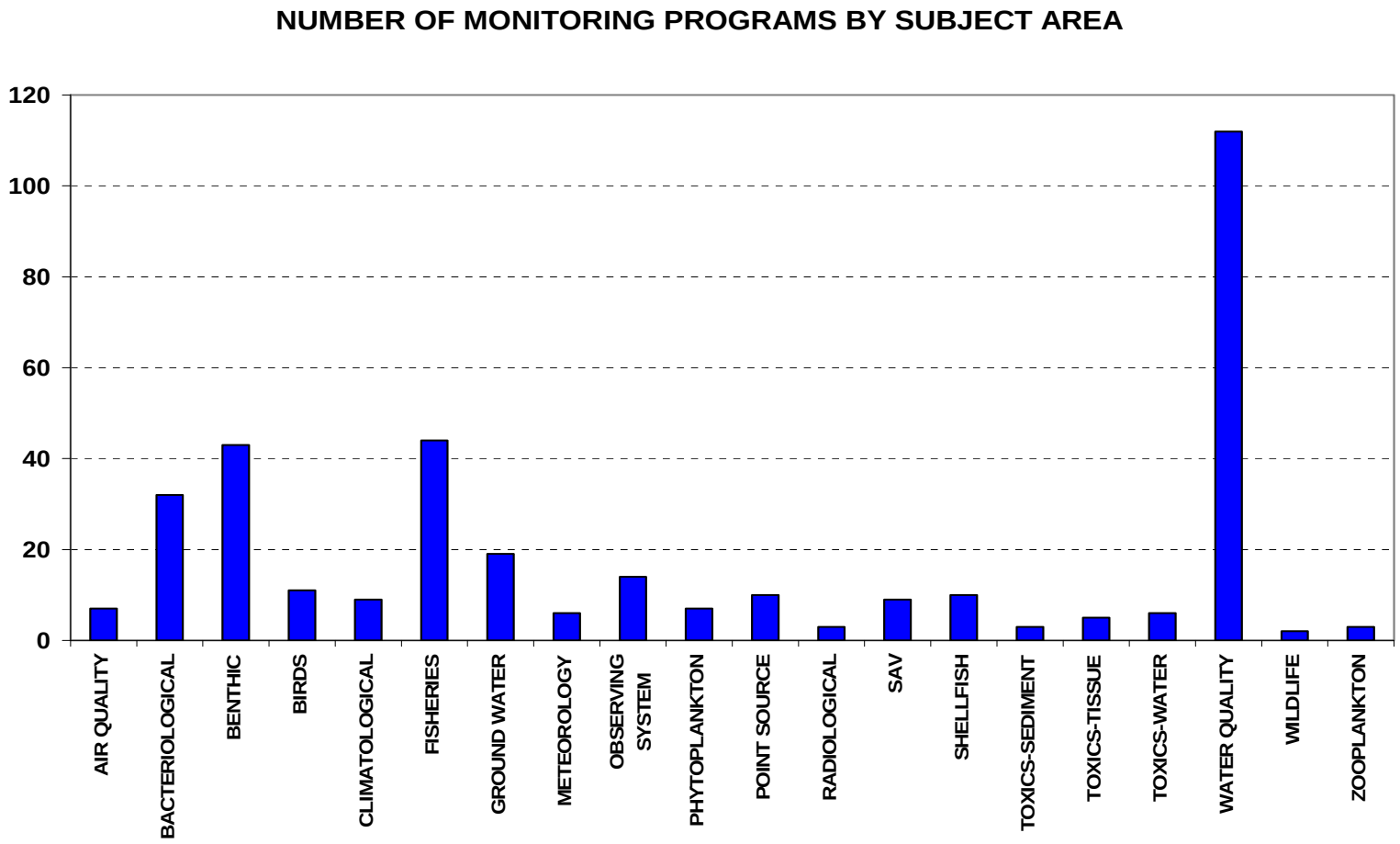
Map ID: 10677

Source: USDA, NRCS,
National Conservation Planning Database,
Applied and Reported Practices, June 2009

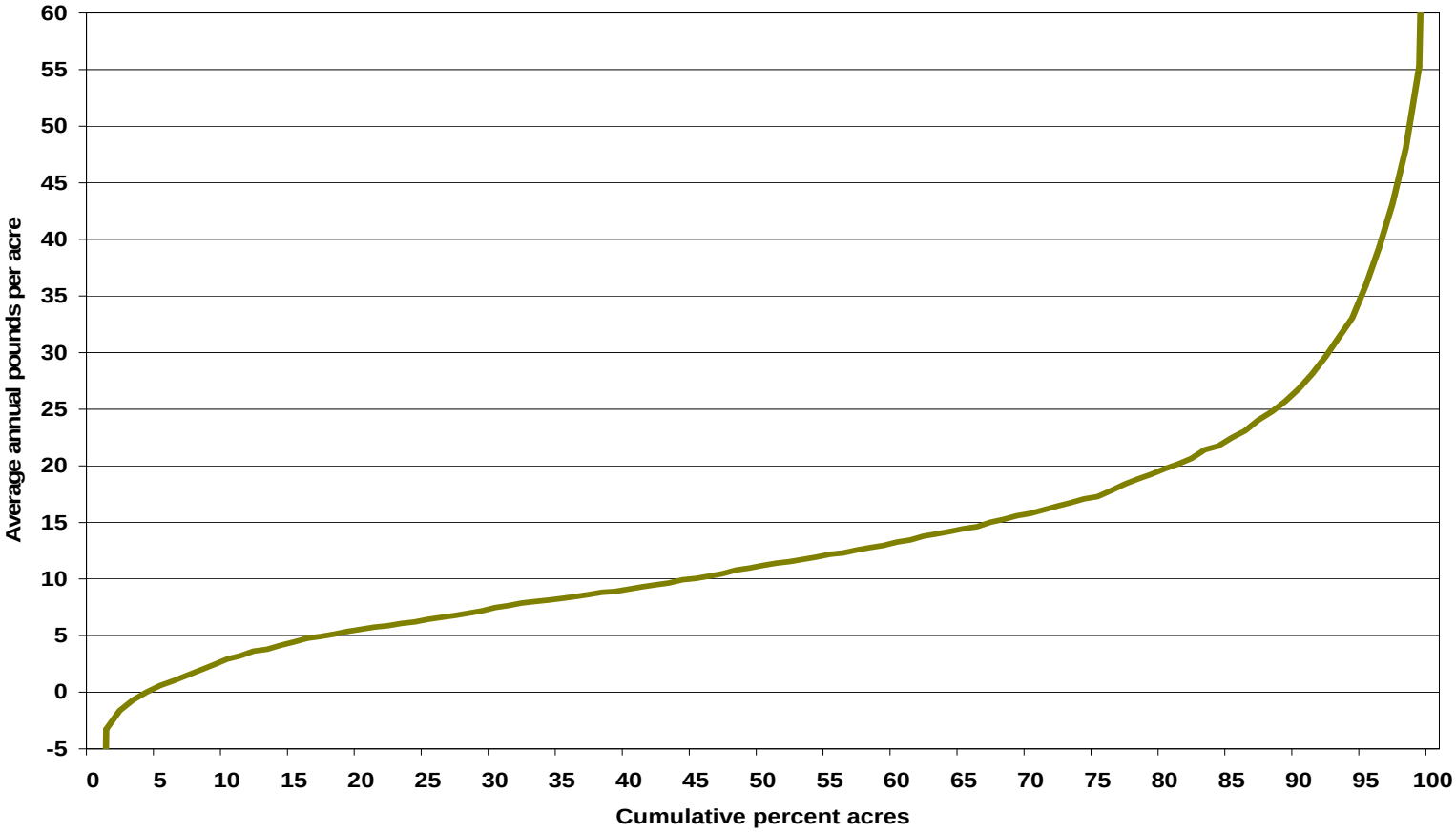
CHESAPEAKE BAY WATERSHED INITIATIVE

- EQIP practices applied and reported in the Chesapeake Bay Watershed FY2004 to May 2009.
- 24 priority practices as identified by each state for CBWI are represented.
- 45,602 Practices Installed. 40-51% are in the priority watersheds.

295 Monitoring Programs by subject areas in the Chesapeake Bay (June 2009)



Reductions in Total Nitrogen Loss- Upper Mississippi River Basin Conservation Effects Assessment Program Report-DRAFT



F. Launch a “shared federal leadership” commitment to support Ecosystem Markets in the Chesapeake Bay.

ACTIONS:

- Collaborate across federal agencies with Leadership from USDA Office of Ecosystem Services and Markets
- Development of market based tools and technologies
- Ensure markets are credible, accessible and accountable

New Markets for Agricultural Lands

With the emergence of markets for ecosystem services, landowners will find new income streams in the form of tradable credits for ecosystem services like water, carbon, and biodiversity, to augment revenues from traditional products like grain, livestock, and timber.

Water Quality Credits

Agricultural lands provide critical water filtering services that ensure the provision of quality water to downstream users. Nutrient management, wetland enhancement, and establishment of buffer strips are some of the practices that help reduce or eliminate nutrient and sediment runoff from these lands. Landowners who adopt these practices can generate water quality credits that can be sold to urban water utilities and industrial polluters that must comply with the Clean Water Act.

Carbon Offset Credits

Agricultural lands are a critical component of nature's storehouse of carbon dioxide taken from the atmosphere. Conservation tillage practices, perennial grass plantings, tree plantings, and reforestation and conservation of forested land are activities that can increase the amount of CO_2 farm lands sequester. Landowners who adopt these practices can generate offset credits that can be sold to industrial emitters of greenhouse gases in anticipation of future federal climate regulation.

Biodiversity Credits

Critical wildlife habitat and species protected under federal and state regulations are often found on or near agricultural lands. Landowners who set aside areas for wildlife habitat and species protection, through a conservation easement or other such contract, can create a "biodiversity bank." In exchange for permanently protecting the land for its natural resource values, the landowner can sell credits to land developers and other entities that must comply with the Endangered Species Act.

Commodity	Percentage of Farm Revenue	Buyer
Water Quality Credits	10%	Urban Consumers Industrial Emitters
Carbon Offset Credits	15%	Energy Industry Transportation
Biodiversity Credits	5%	Land Developers Conservation Org.
Renewable Energy	10%	Energy Market
Traditional Farm Income	60%	World Market
TOTAL	100%	

Adapted from Scientific American (2005) by the USDA Office of Ecosystem Services and Markets

There are 6 Elements in the Chesapeake Farms and Forests for the 21st Century Initiative:

A. **Focus on the highest priority watersheds.**
B. **Focus and integrate Federal and State programs.**
C. **Accelerate conservation adoption.**
D. **Accelerate development of new conservation technologies.**
E. **Implement a sound system of accountability.**
F. **Launch a "shared federal leadership" commitment to support Ecosystem Markets in the Chesapeake Bay.**

Questions

Draft Strategy:

http//executiveorder.chesapeakebay.net

Formally submit feedback:

www.regulations.gov