

Maryland's TMDL Process and the Role for Agriculture WIP Phase II Summary



John Rhoderick
Program Manager
Resource Conservation Operations



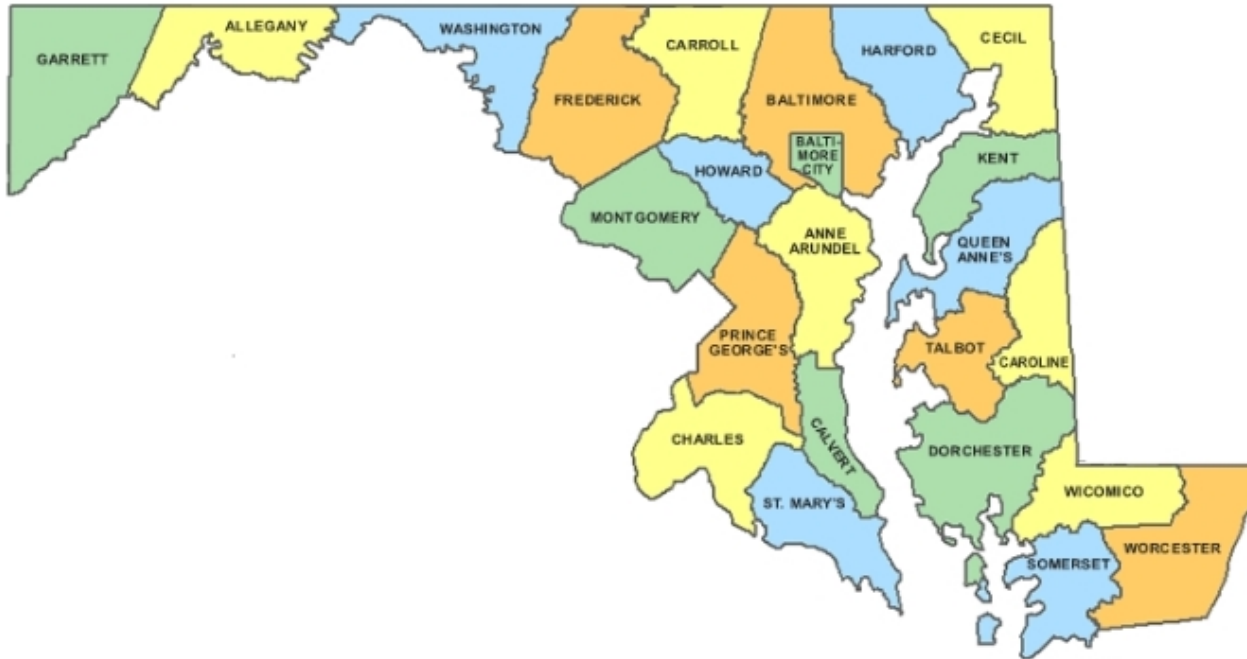
CONSERVATION

- Regulatory Information Center
- Nutrient Management
- Financial Assistance
- Technical Assistance
- TMDL/Watershed Implementation Plan
- WIP Strategies
- Public Drainage and Watershed Assoc.
- Special Projects
- Education and Homeowner Tips
- Committees
- Links

Chesapeake Bay TMDL- WIP Resource Map

Click on a county to view local implementation progress, strategies, and meeting information.

- View [Maryland Statewide Data](#)



WIP Coordinator

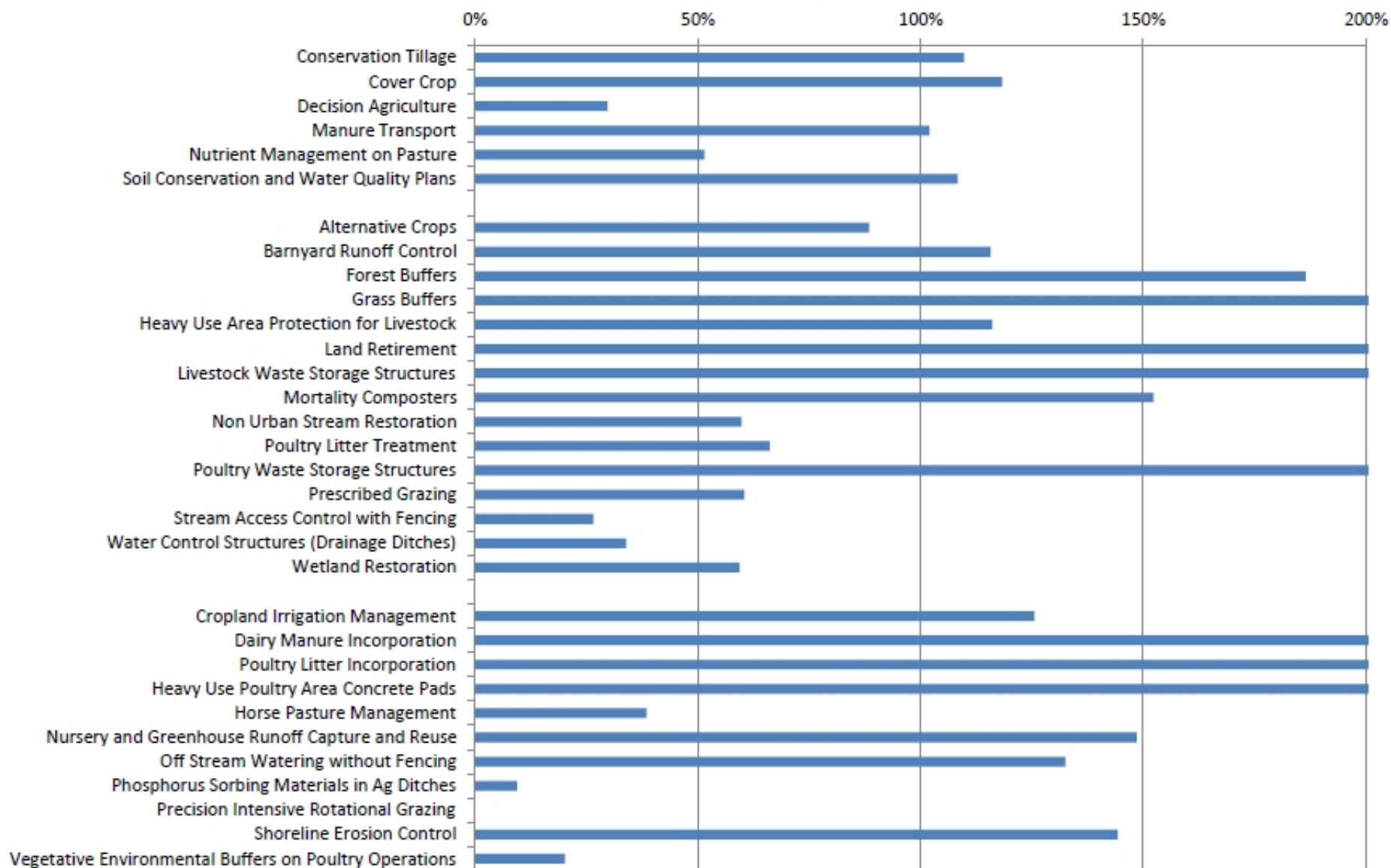
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Related Information

- [Agricultural TMDL/WIP Summary](#)
- [MDE TMDL/WIP Website](#)
- [Maryland BayStat Website](#)

Agricultural Progress Towards
Meeting the TMDL
2012-2013

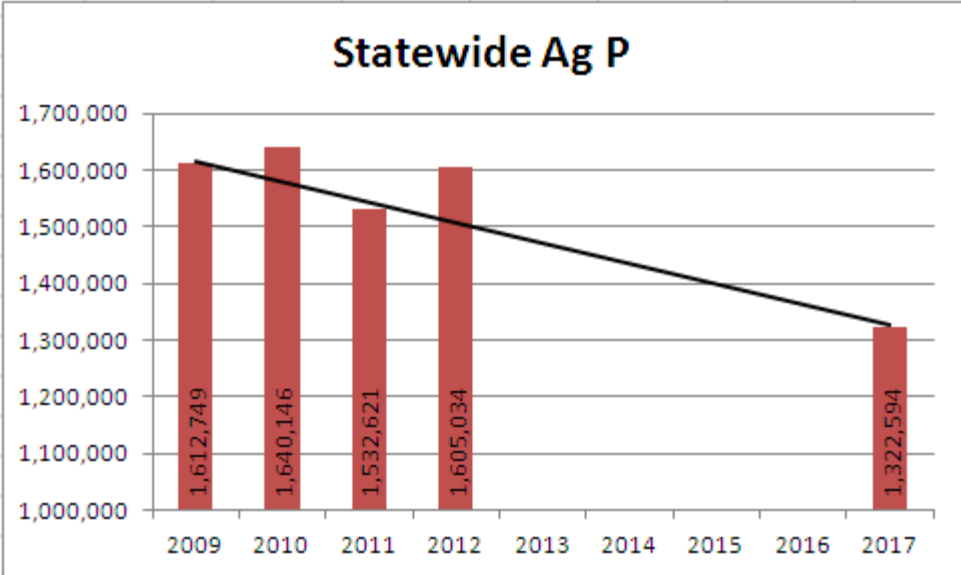
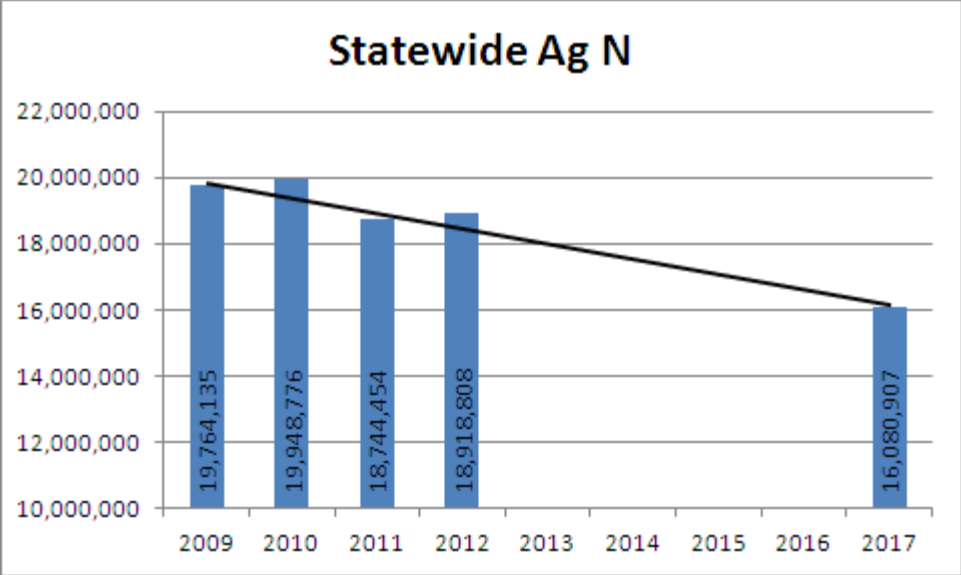
Maryland Statewide : Progress 7/1/11-12/31/12

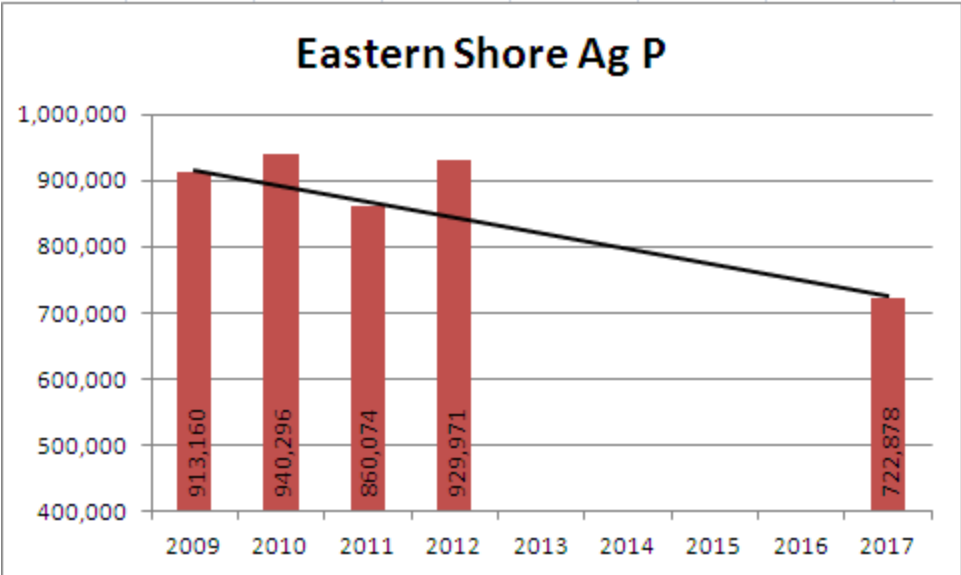
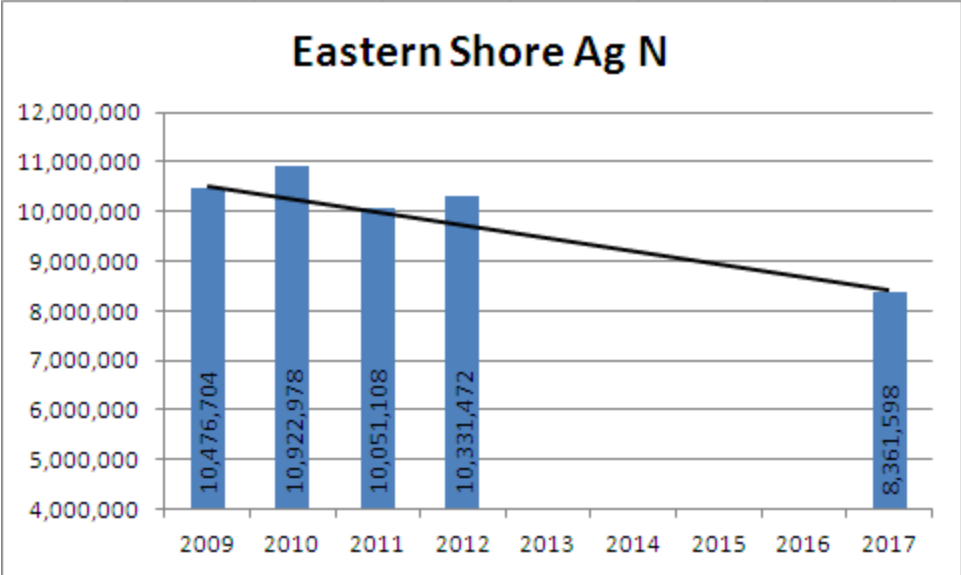


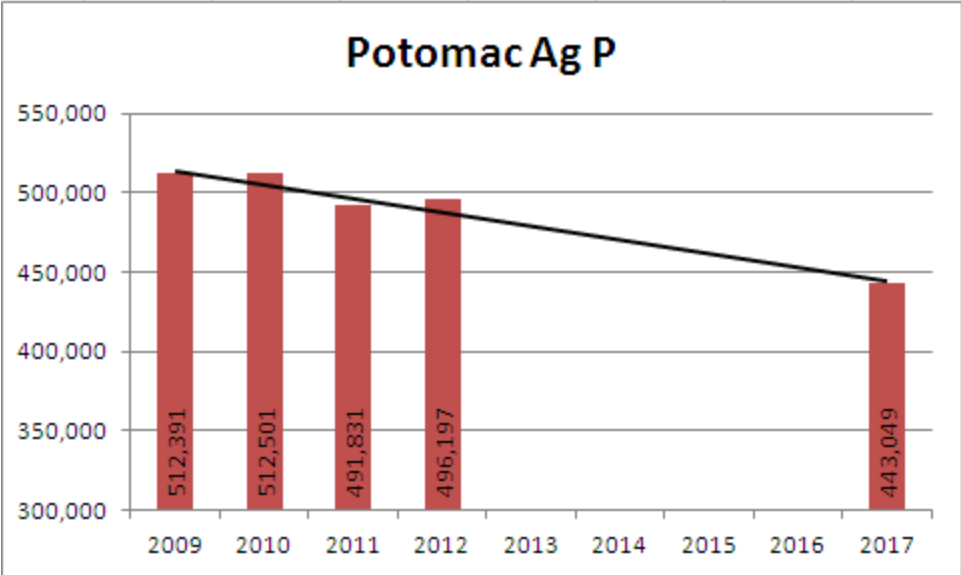
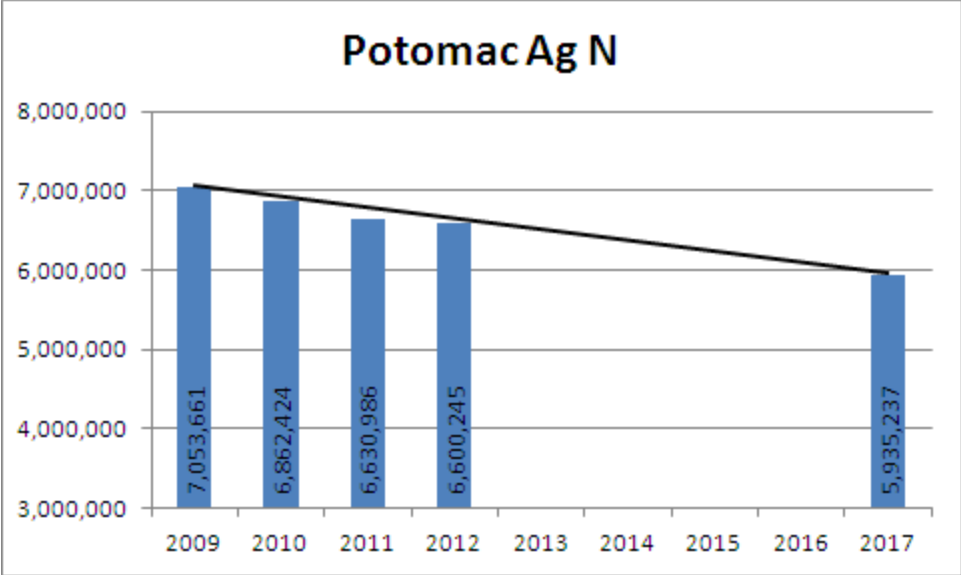
**Maryland Statewide
Agricultural Phase II Watershed Implementation Plan**

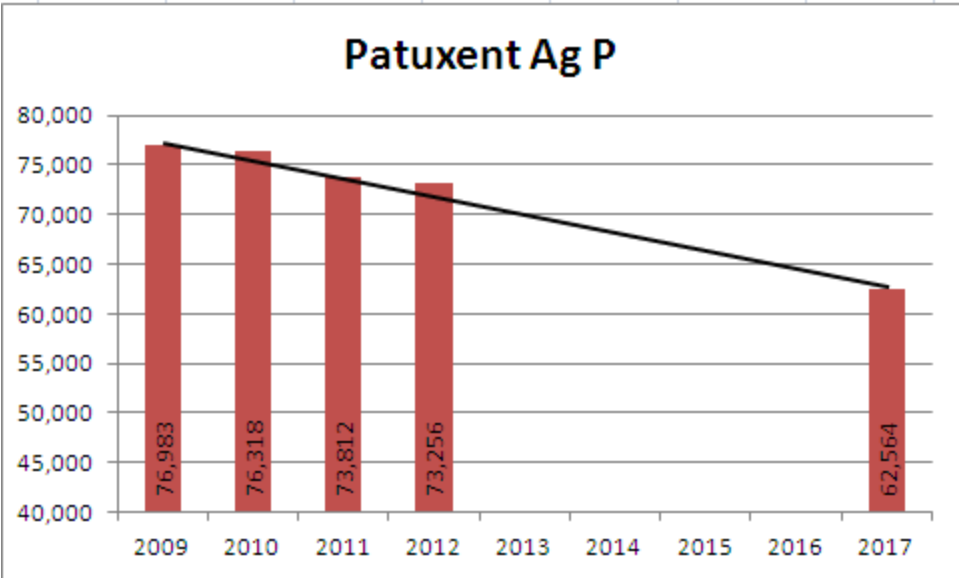
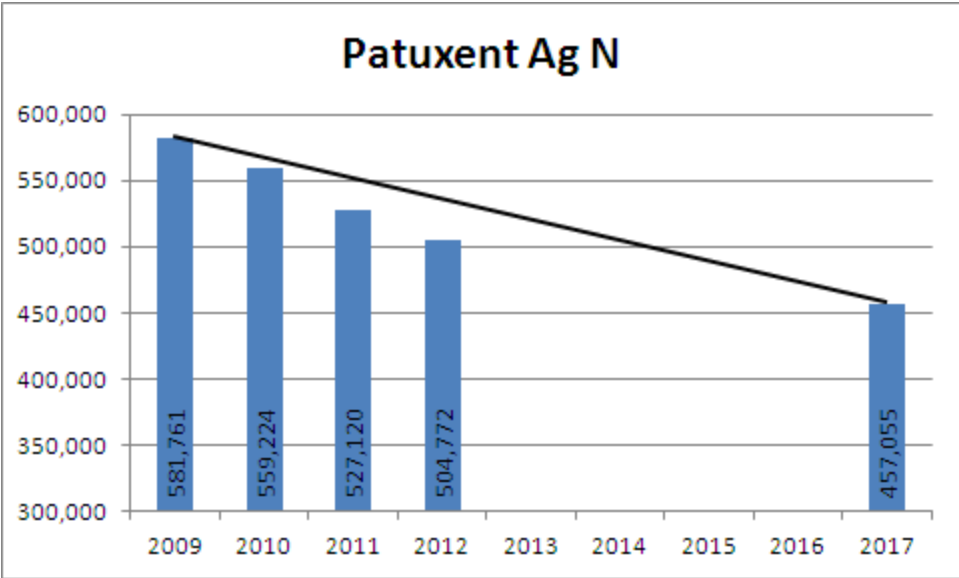
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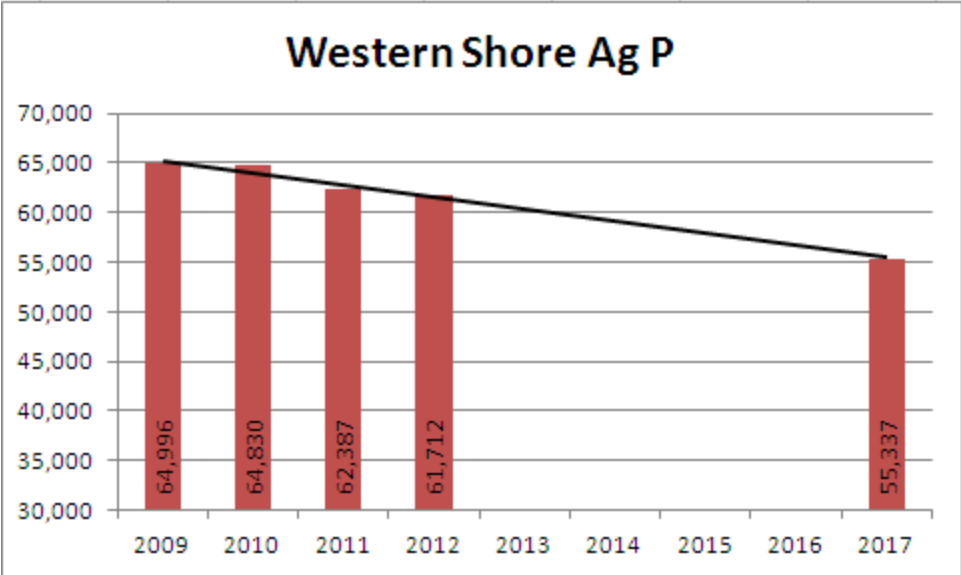
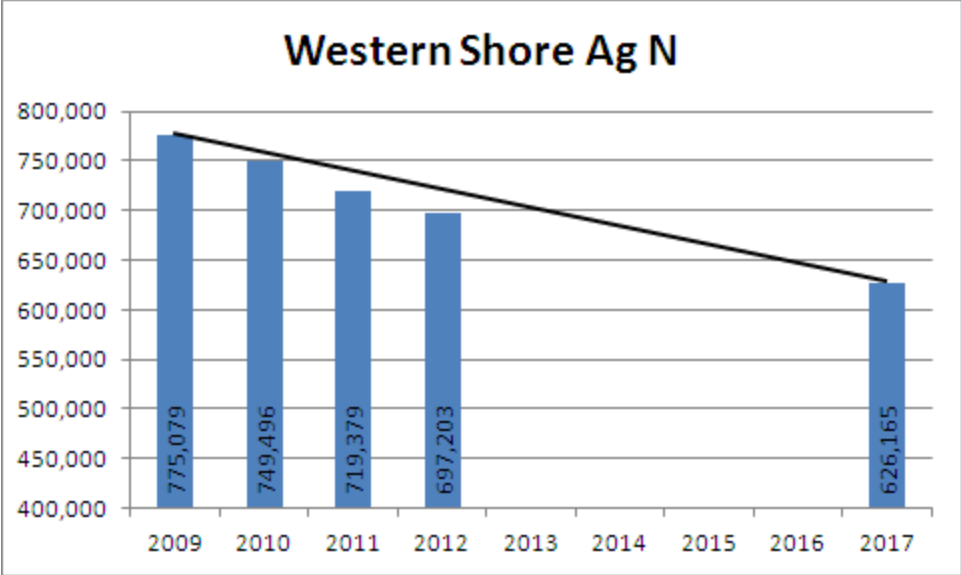
BMPs to be Implemented Annually	Unit	Progress	2013 Milestone	Percentage
Conservation Tillage	Acres/Year	839,281.0	764,629.6	110%
Cover Crop	Acres/Year	420,225.0	355,000.0	118%
Decision Agriculture	Acres/Year	111,224.0	373,367.1	30%
Enhanced Nutrient Management	Acres/Year	168,222.3	-	-
Manure Transport	Tons/Year	37,728.6	37,000.0	102%
Nutrient Management on Pasture	Acres/Year	88,669.4	172,018.6	52%
Soil Conservation and Water Quality Plans	Acres/Year	894,758.9	826,000.1	108%
Additional BMPs to be Implemented	Unit	Progress	2013 Milestone	Percentage
Alternative Crops	Acres	176.9	200.0	88%
Barnyard Runoff Control	Projects	177.0	153.0	116%
Forest Buffers	Acres	411.7	220.8	186%
Grass Buffers	Acres	2,019.7	541.2	373%
Heavy Use Area Protection for Livestock	Acres	40.0	34.4	116%
Land Retirement	Acres	1,807.7	608.0	297%
Livestock Waste Storage Structures	Projects	98.0	34.0	288%
Mortality Composters	Projects	32.0	21.0	152%
Non Urban Stream Restoration	Linear Feet	4,139.2	6,919.3	60%
Poultry Litter Treatment	Operations	43.0	65.0	66%
Poultry Waste Storage Structures	Projects	22.0	7.0	314%
Prescribed Grazing	Acres	1,581.4	2,614.8	60%
Stream Access Control with Fencing	Acres	95.4	359.3	27%
Water Control Structures (Drainage Ditches)	Acres	832.0	2,453.3	34%
Wetland Restoration	Acres	383.2	645.2	59%
BMPs Pending Model Efficiency	Unit	Progress	2013 Milestone	Percentage
Cropland Irrigation Management	Acres/Year	115,528.5	92,000.0	126%
Dairy Manure Incorporation	Acres/Year	19,526.0	3,976.9	491%
Poultry Litter Incorporation	Acres/Year	85,363.7	23,876.8	358%
Heavy Use Poultry Area Concrete Pads	Acres	87.3	19.4	451%
Horse Pasture Management	Acres	274.7	712.8	39%
Nursery and Greenhouse Runoff Capture and Reuse	Acres	1,484.9	1,000.0	148%
Off Stream Watering without Fencing	Acres	1,518.0	1,145.0	133%
Phosphorus Sorbing Materials in Ag Ditches	Acres	36.4	386.4	9%
Precision Intensive Rotational Grazing	Acres	-	397.9	-
Shoreline Erosion Control	Linear Feet	5,266.0	3,648.9	144%
Vegetative Environmental Buffers on Poultry Operations	Acres	6.0	29.6	20%

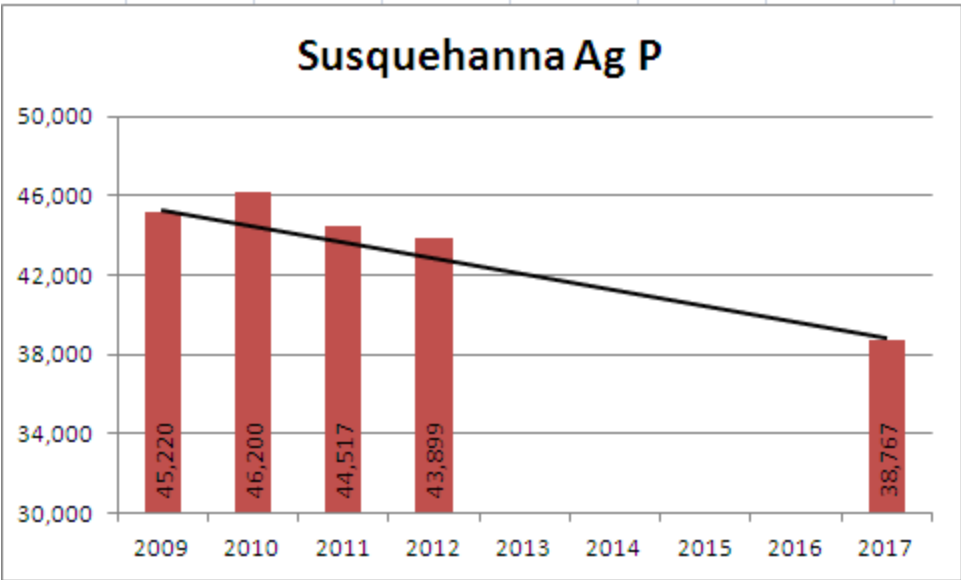
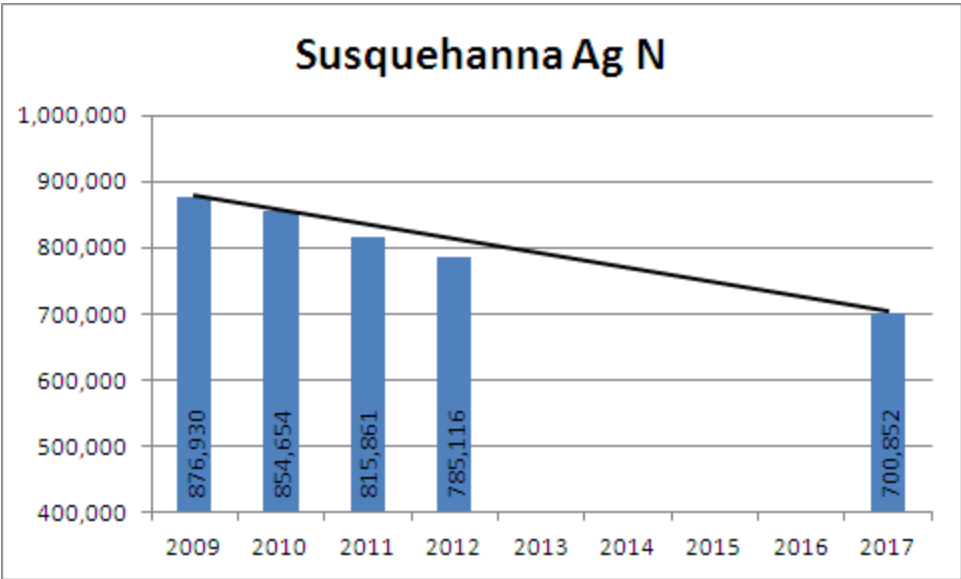








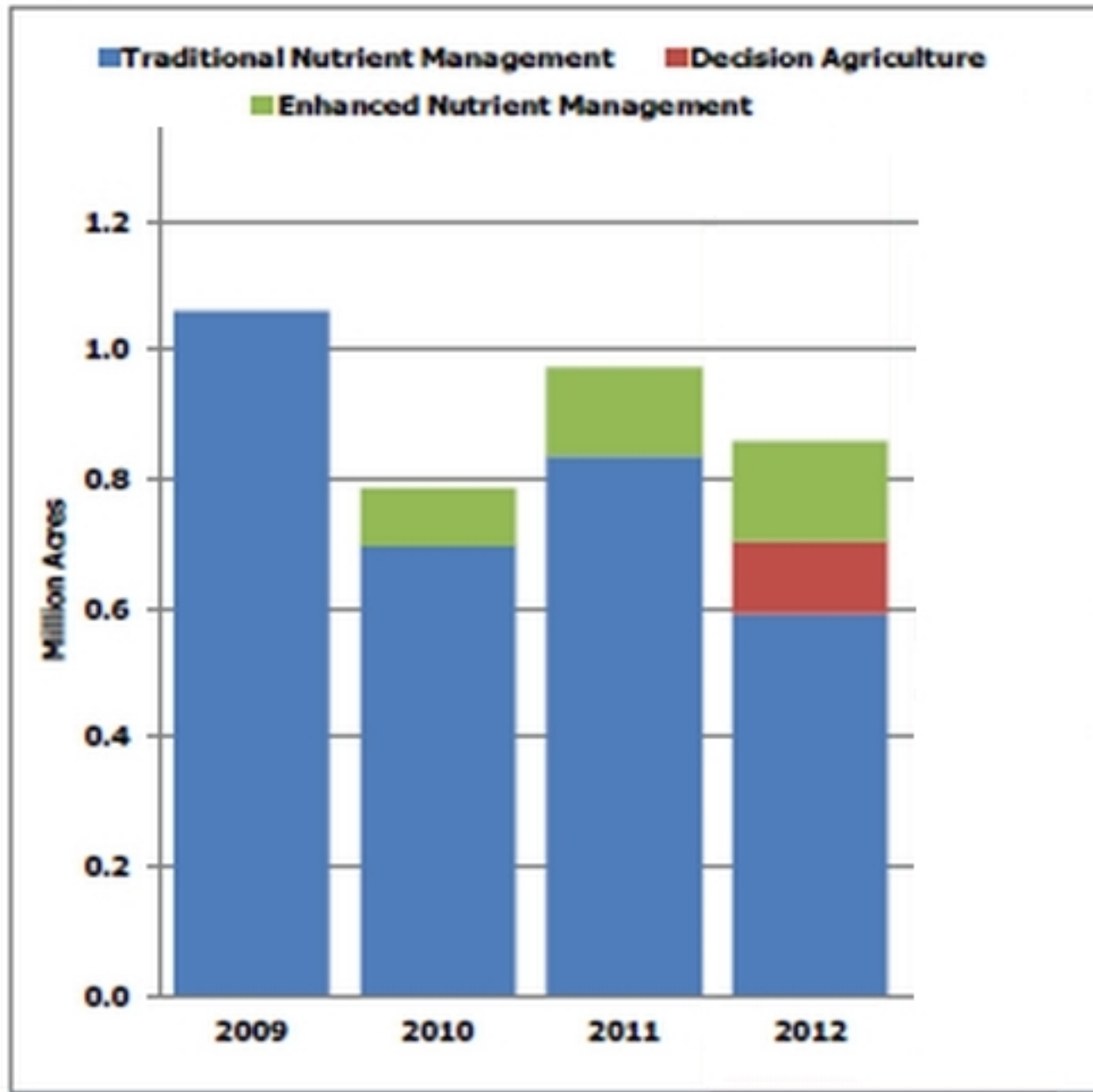




Why Did The Loads Increase In 2012?

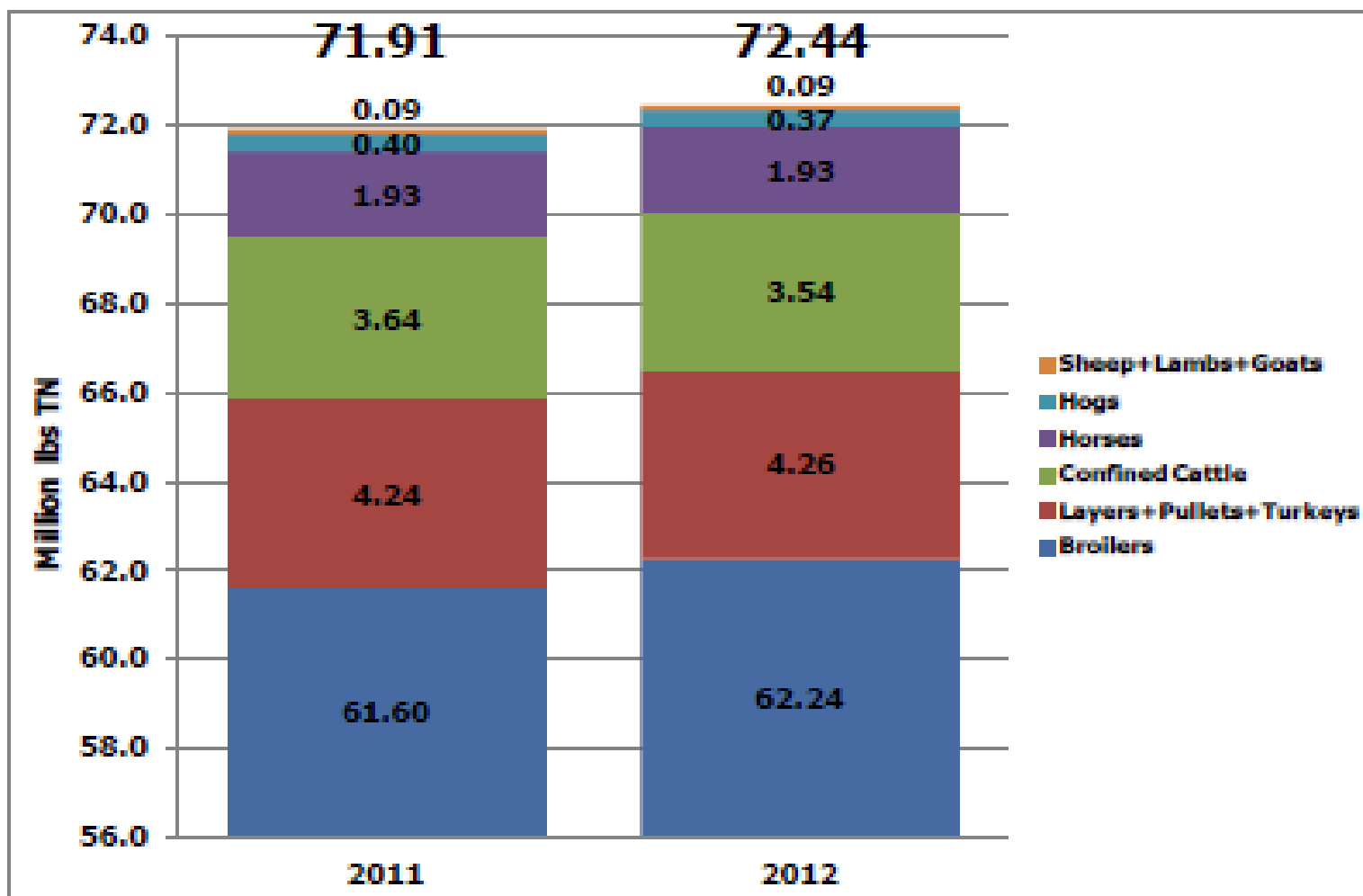
- Animal population projections increasing
- Compliance rates for Nutrient Management dropped to 70% versus 80%
- New BMPs that work against us in the model
 - Litter Treatment
 - Biofilters/Lagoon Covers
 - Manure Incorporation

Maryland Nutrient Management Application



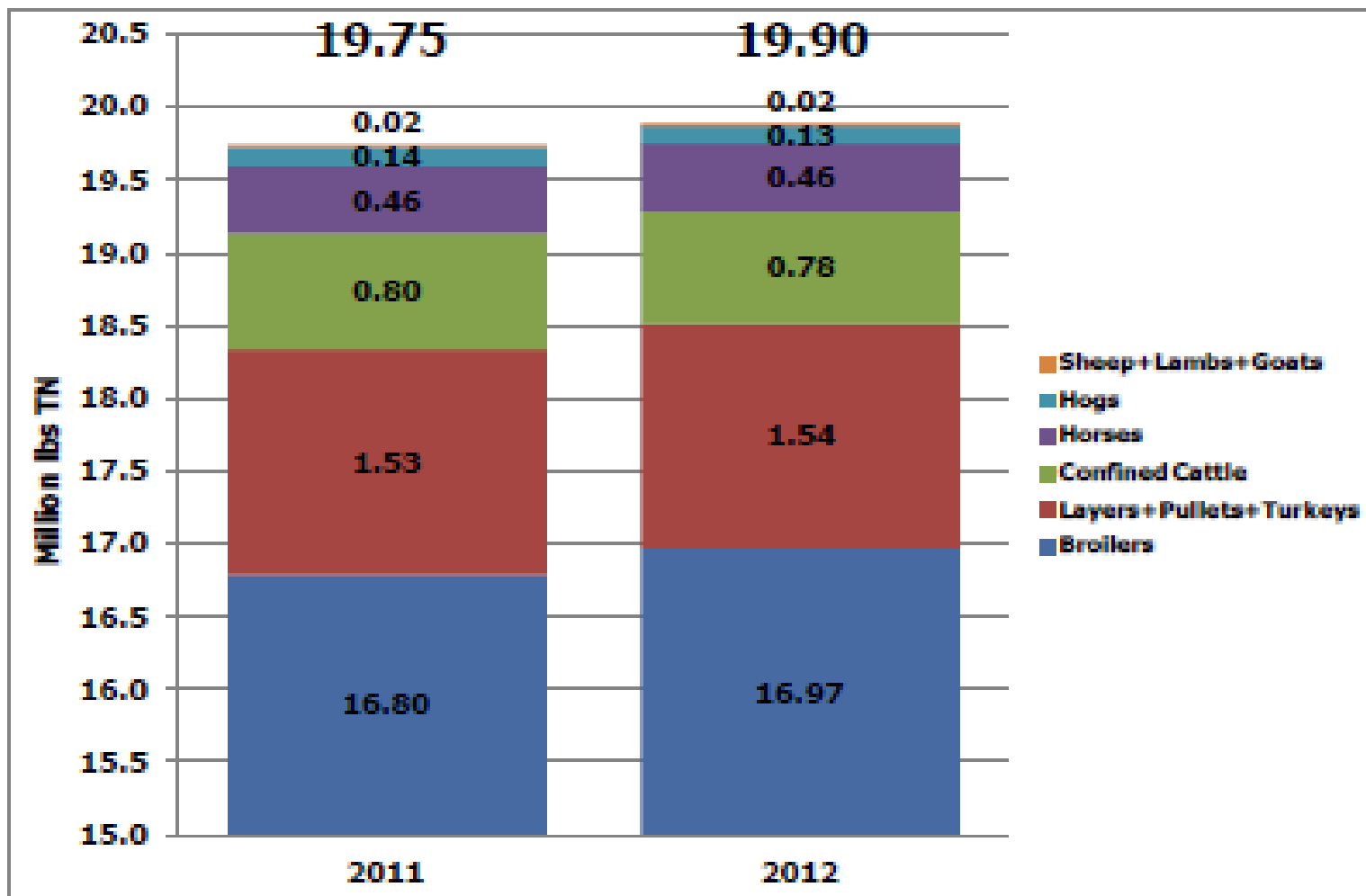


MD Confined Animal TN Generation 2011 → 2012





MD Confined Animal TP Generation 2011 → 2012



Net Effect

- Load Increases 2012 vs. 2011:
654,176 lbs N poultry
43,000 lbs N litter treatment
+ 697,176 lbs N
- Load Decreases 2012 vs. 2011:
- 512,000 lbs N new BMPs and new cover crop acres
- Change:
+ 185,176 lbs N

WIP BMPs Pending Model Efficiency

BMP	Acres/Feet	Proposed Reduction	
Cropland Irrigation Management	115,528	50,832	lbs N
Heavy Use Area Poultry Pads	87	90,906	lbs N
Horse Pasture Management	275	153	lbs N
Nursery & Greenhouse Capture	1,485	157,410	lbs N
Shoreline Erosion Control	5,266	52	lbs N
Off Stream Watering w/o Fencing	1,518	587	lbs N

Agriculture Going Forward

- Accounting and Tracking Farmer Installed BMPs
- New Nutrient Management Regulations
- Agricultural Certainty