

# Chesapeake Bay Agriculture101: Agriculture by the Numbers



Dana York, Green Earth Connection





“Farming looks mighty easy when your plow is a pencil, and you're a thousand miles from the corn field.”

Dwight D. Eisenhower



# Agriculture by the Numbers- Internationally

- **925 million:** People worldwide who are hungry and undernourished. 578 million of them live in Asia and the Pacific region, 239 million in sub-Saharan Africa. ([FAO](#))
- **100 percent:** Required food production increase to feed the Earth's anticipated 2050 population of 9 billion. ([FAO](#))
- **70 percent:** Of the global freshwater supply is used in agriculture. ([FAO](#))
- **40 percent:** Of the world's food is produced by irrigation on an estimated 20 percent of agricultural land worldwide. ([FAO](#))
- **11 percent:** Predicted increase in water used for irrigated agriculture to meet demand for food in 2050. ([FAO](#))
- **2,000-5,000:** Liters of water required to produce the food in average daily diet. ([U.N. – Water](#))
- **1 billion:** People benefited from the Green Revolution in terms of better access to food, increased earnings from agriculture, or both, between 1970 and 1990. Without the Green Revolution, a result of the work of Norman Borlaug, an estimated 30 million children would have died in the developing world between 1970 and 2000. ([IFPRI](#))

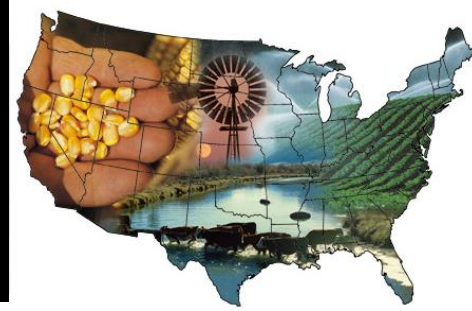
# Agriculture by the Numbers: From 2012 Ag Census



- **\$19.5 billion** was the total value spent on seeds by U.S. farmers in 2012, up 66% from 2007
- **95.5 million no-till** acres were reported by producers in the U.S. for 2012. That's more than the entire land area of Nebraska and Missouri combined
- **\$115,706** is the average value of all machinery and equipment on a U.S. farm in 2012, up 31% from 2007
- **1/3** of the value of agricultural sales in the U.S. was for grains and oilseeds
- **3.2 million** is the number of farm operators in the U.S. in 2012. That's more farmers than the entire population of Iowa.
- **40%** of all U.S. land is in farms, and farmland is most heavily concentrated in the middle of the U.S.



# Agriculture by the Numbers: Did you Know?



## How Many Gallons of Water is in a . . .

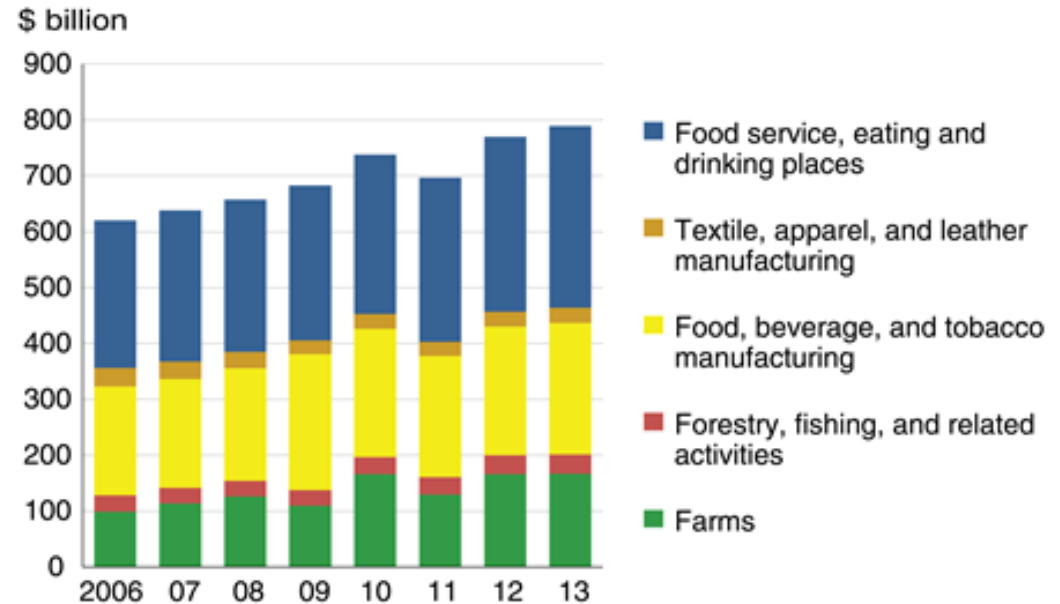
- **Car**-It takes an estimated 39,090 gallons of water to make a car. It's unclear if that includes the more 2,000 gallons used to make its tires--each tire takes 518 gallons to make.
- **Pair of Jeans**-It takes around 1,800 gallons of water to grow enough cotton to produce just one pair of regular ol' blue jeans.
- **Single Board of Lumber**-5.4 gallons of water are used to grow enough wood for one lumber board.
- **Barrel of Beer**-In order to process a single barrel of beer (32 gallons of booze), 1,500 gallons of water are sucked down.
- **To-Go Latte**-It takes 53 gallons to make every latte
- **Individual Bottled Water**-This irony shouldn't be lost on anyone: it takes 1.85 gallons of water to manufacture the plastic for the bottle in the average commercial bottle of water.

# Agriculture by the Numbers- US GDP



- Agriculture and agriculture-related industries contributed \$789 billion to the U.S. gross domestic product (GDP) in 2013, a 4.7-percent share.
- The output of America's farms contributed \$166.9 billion of this sum—about 1 percent of GDP.
- The overall contribution of the agriculture sector to GDP is larger than this because sectors related to agriculture rely on agricultural inputs in order to contribute added value to the economy.

Value added to GDP by agriculture and related industries, 2006-13



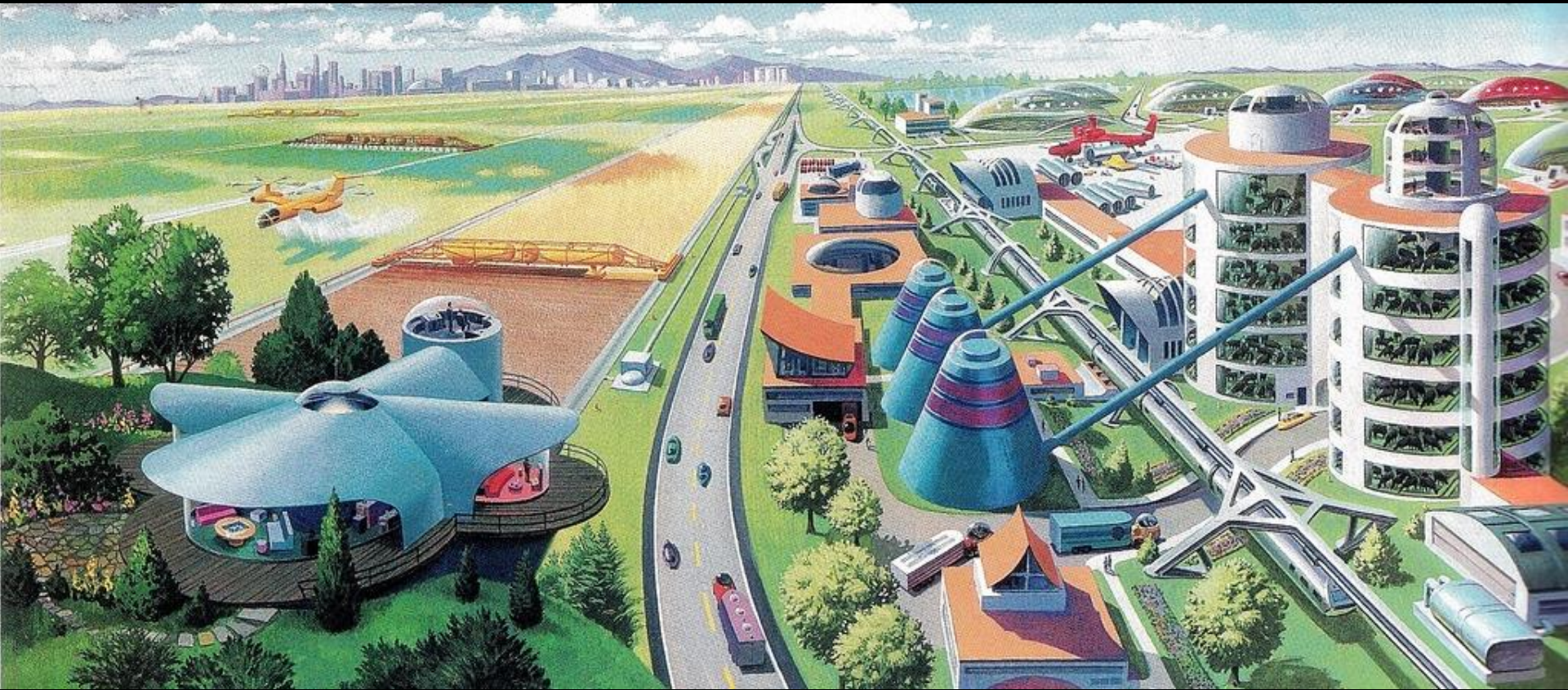
Note: GDP refers to gross domestic product.

Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of Economic Analysis, Value Added by Industry series.

“Farming is the only industry that buys retail and sells wholesale”



# Agriculture's Future as Predicted in 1950's:



# What would an Ideal Food System look like from a Consumer's Perspective?

One in which **food** is...

Healthy (Non-GMO- Organic?)

“Green”

Environmentally sustainable

Non-Polluting in Production

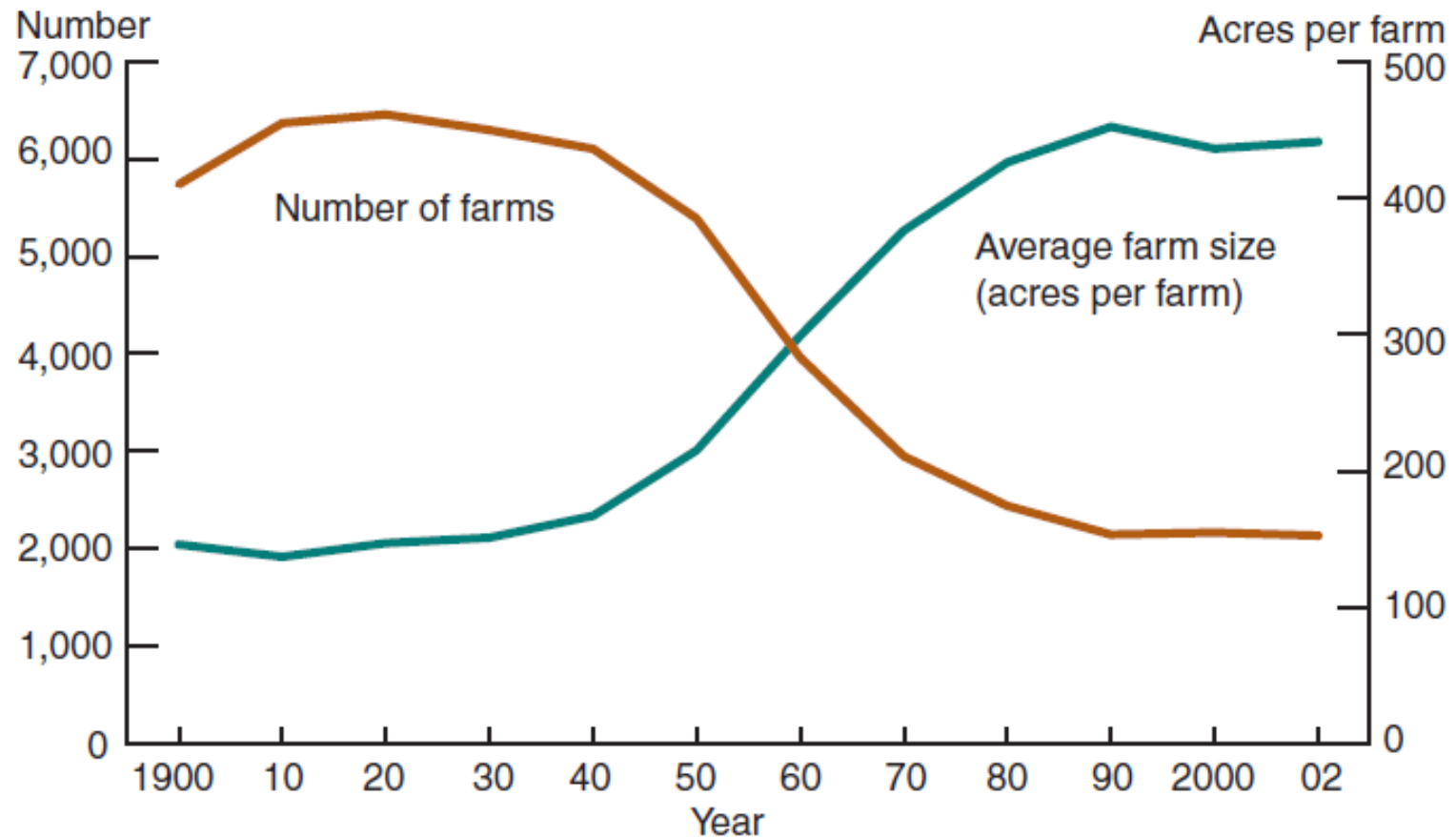
Fair to Farmer and Consumer

Affordable for Farmer and Consumer

*Source:* just about any website of a nonprofit organization concerned with the food system

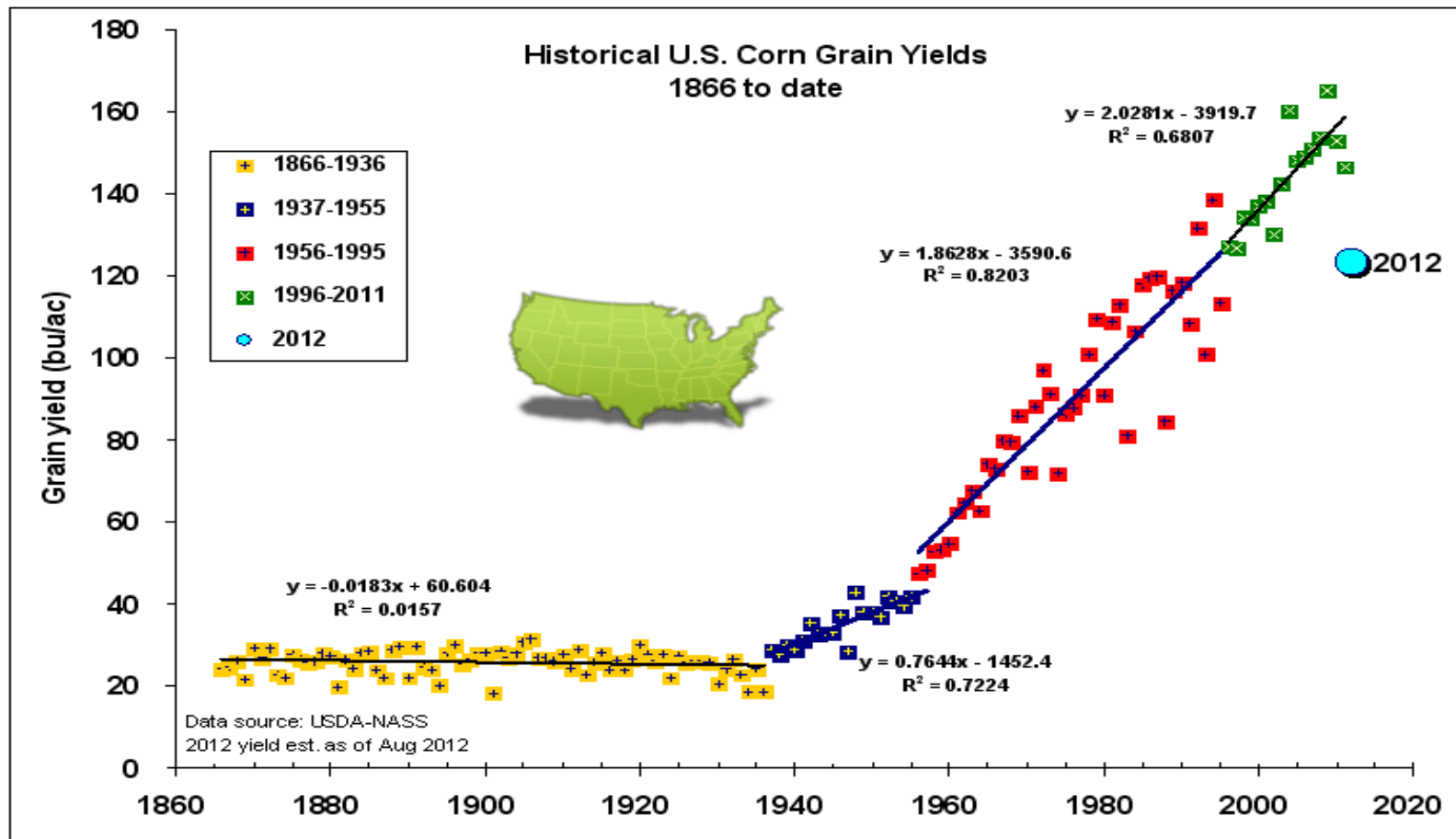


# Agriculture by the Numbers: Number of Farms vs. Size of Farms



Source: Compiled by Economic Research Service, USDA, using data from *Census of Agriculture*, *Census of Population*, and *Census of the United States*.

# Agriculture by the Numbers: Corn yields since 1960

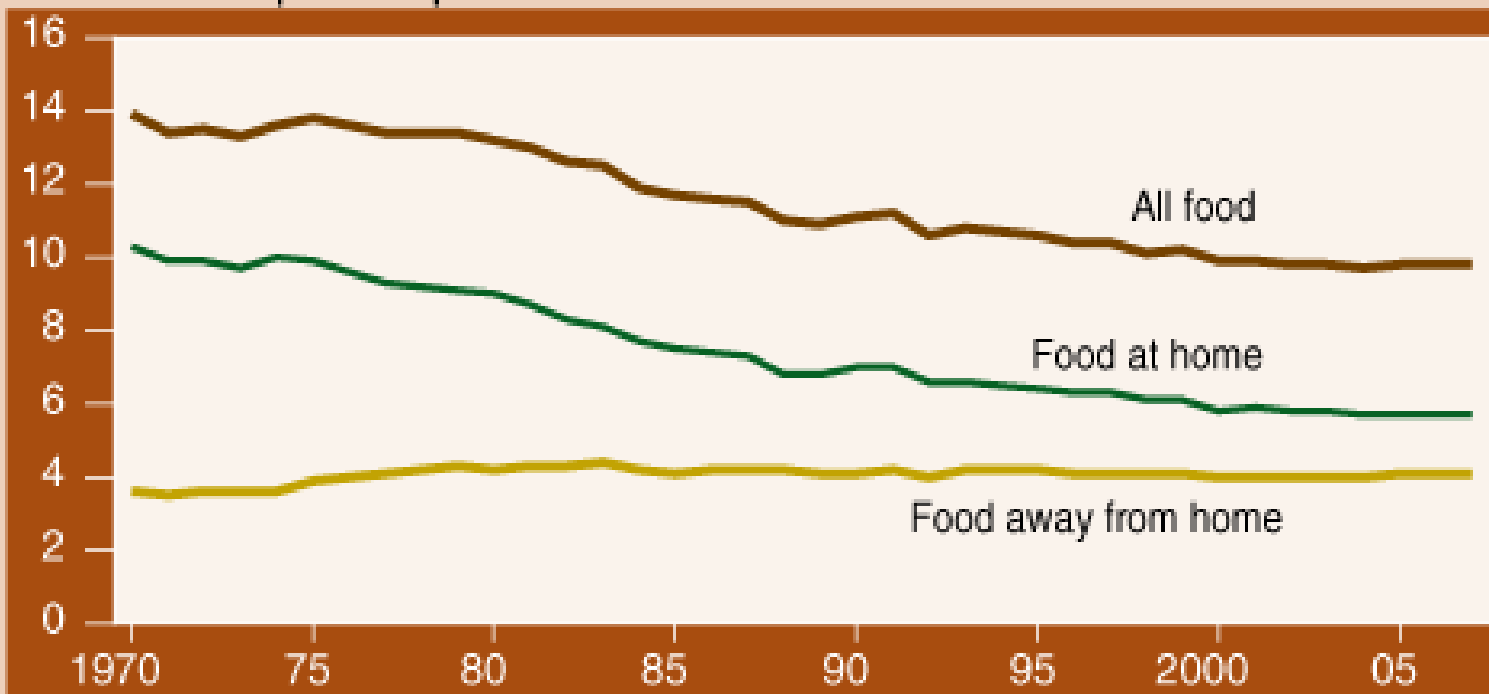


Source: Purdue University, <https://www.agry.purdue.edu/ext/corn/news/timeless/yieldtrends.html>

# Agriculture by the Numbers: Personal Income Spent on Food

Percent of income spent on food has been constant in recent years

Percent of disposable personal income



9.8% for  
average US  
consumer

Source: USDA, Economic Research Service analysis of U.S. Department of Commerce, Bureau of Economic Analysis data.



# Agriculture by the Numbers: Rising Obesity Rates:

America's Rising Obesity Rate

**15%**

**22%**

**31%**

**34%**



**1980**

**1990**

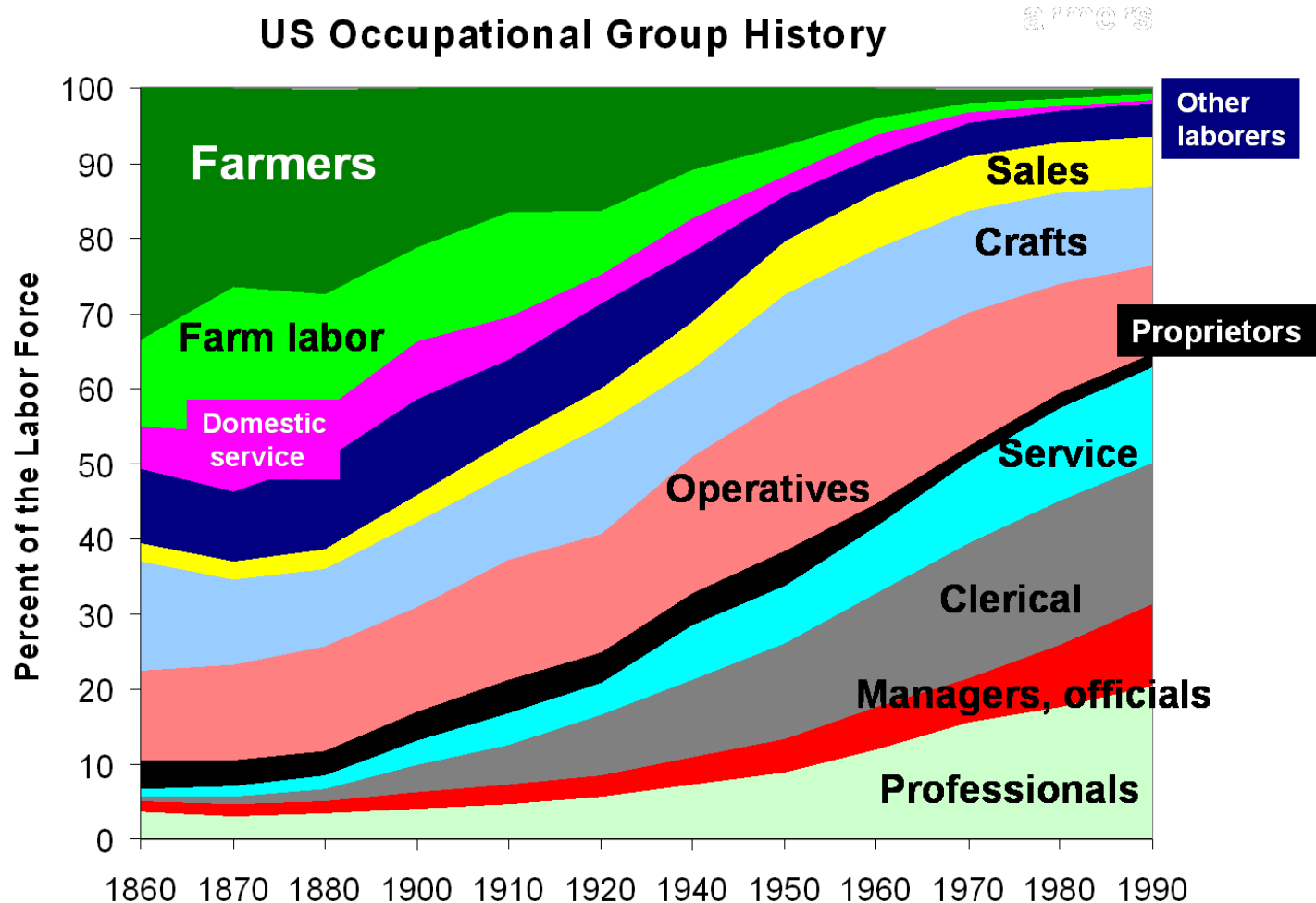
**2000**

**2008**

Percent of obese Americans

Data: CDC

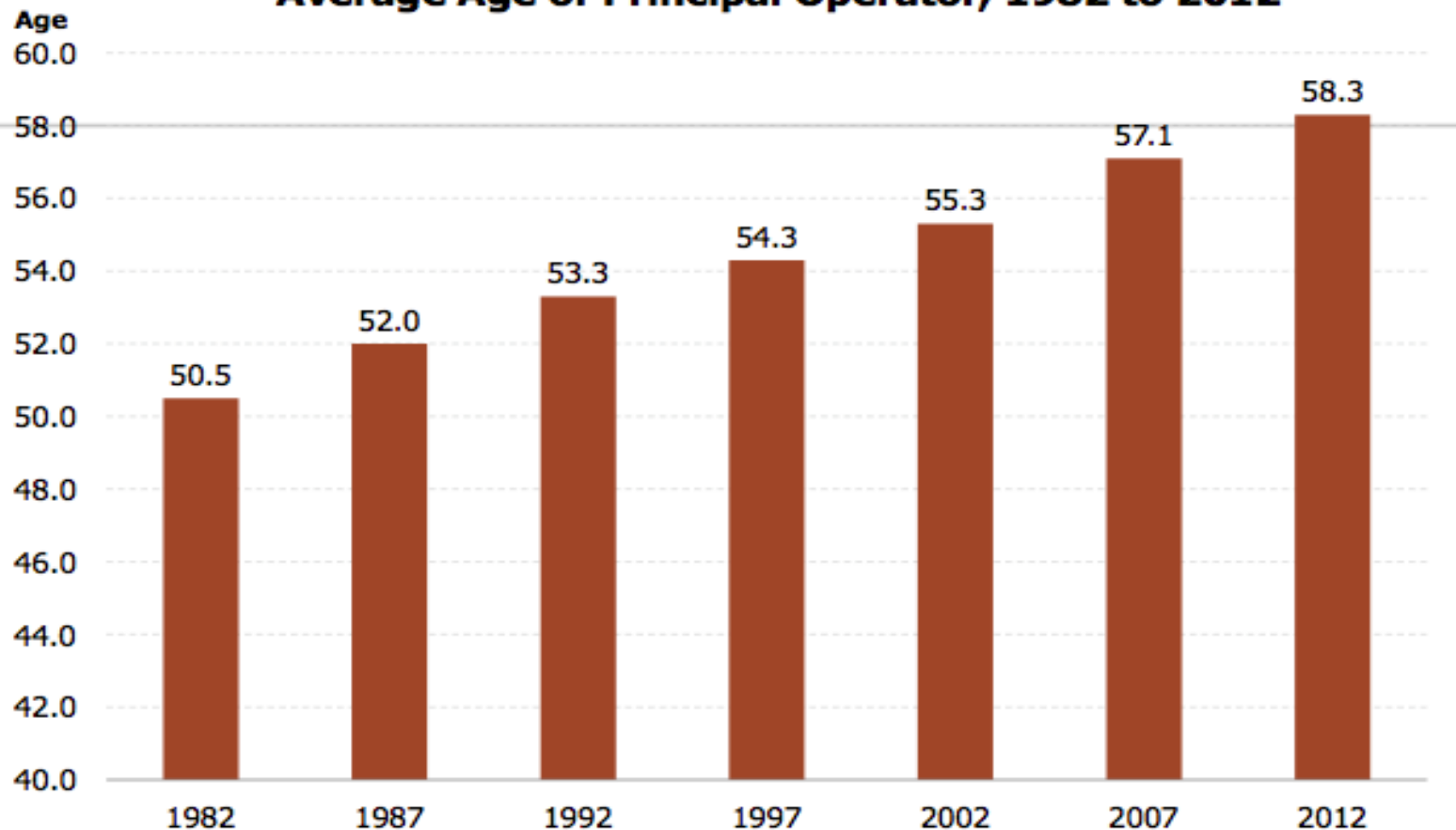
# Agriculture by the numbers: US Occupational changes since 1860



Data: US Bureau of Labor Statistics

# Agriculture by the Numbers: Average Age Of Farmers

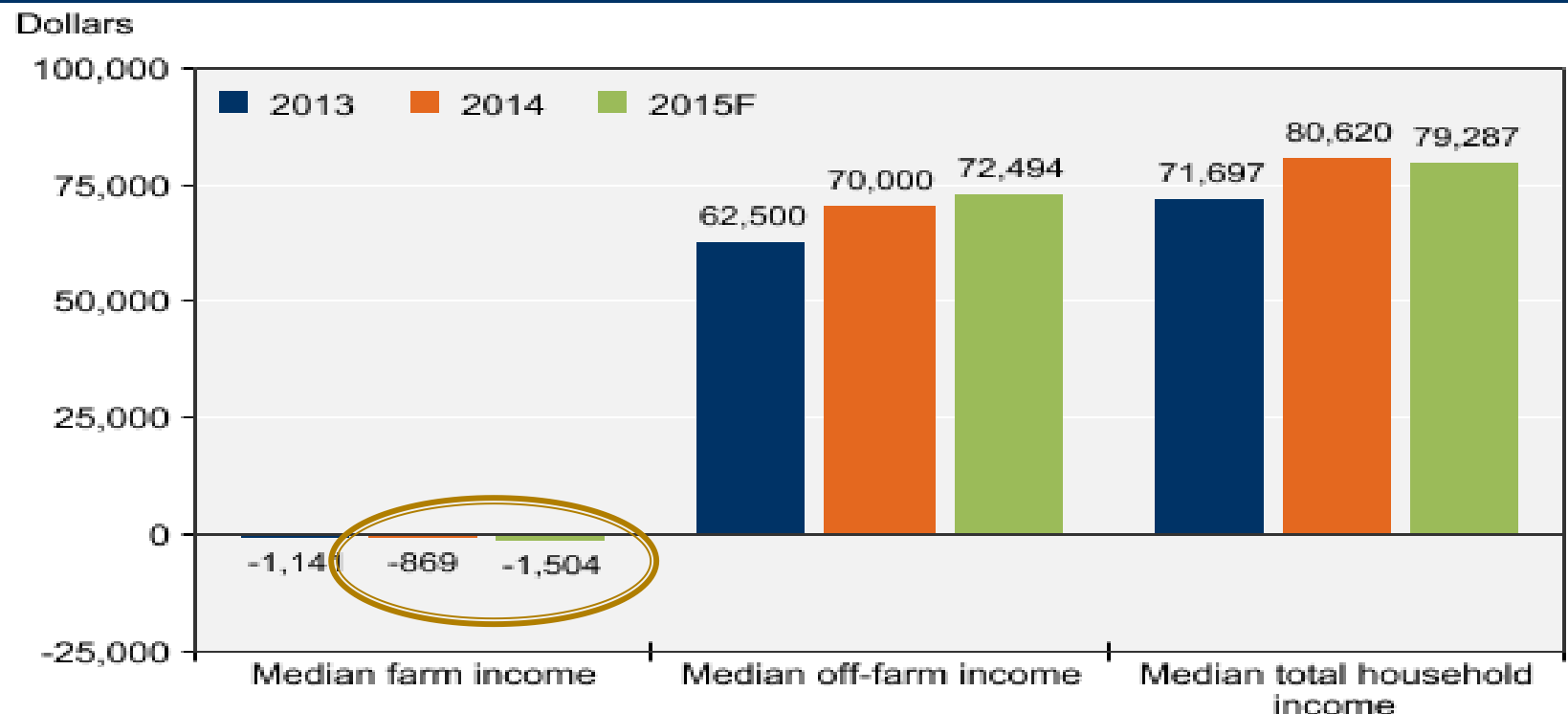
**Average Age of Principal Operator, 1982 to 2012**





# Agriculture by the Numbers: Median Farm On and Off Farm Income

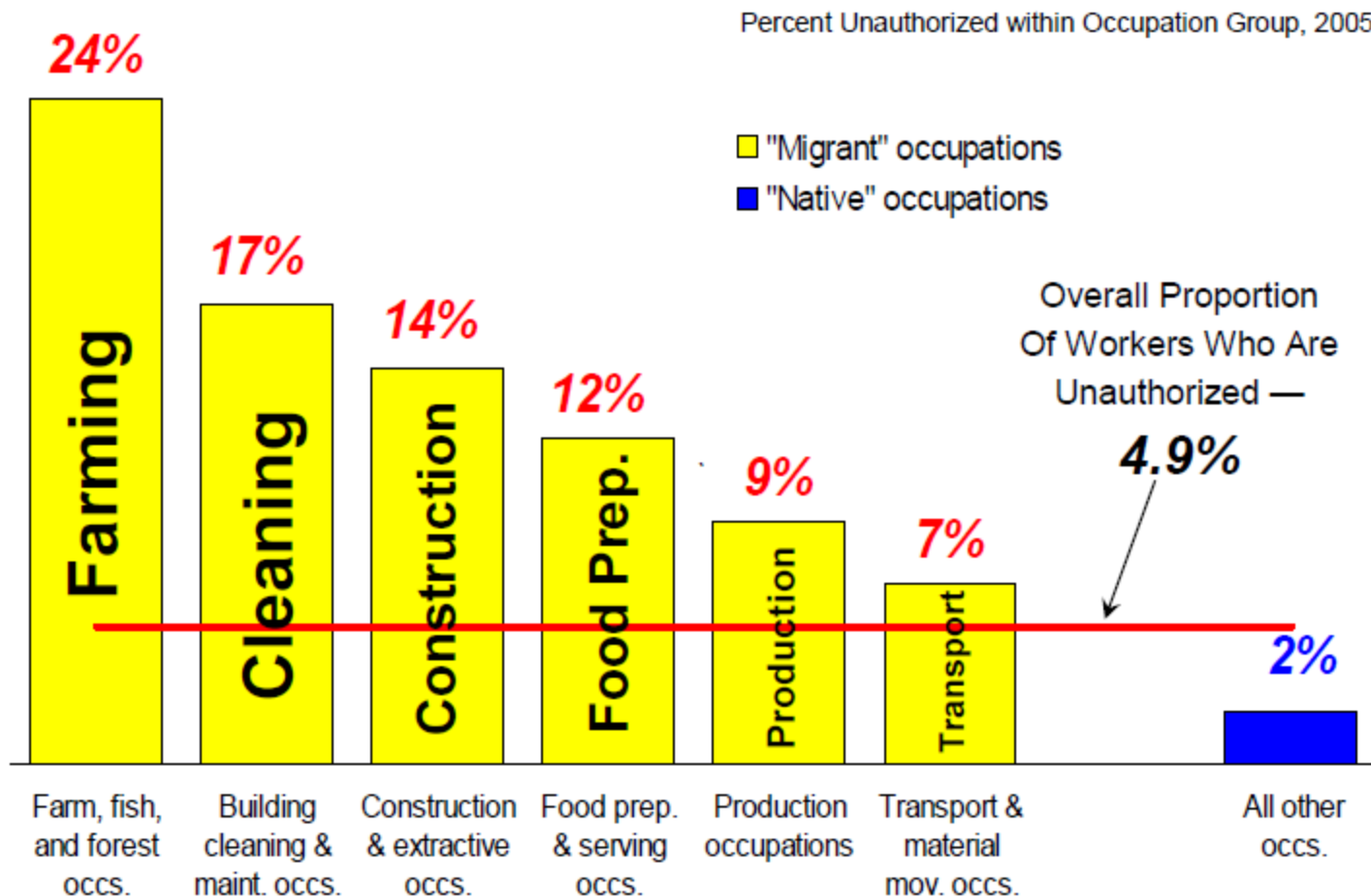
Median farm income, median off-farm income, and median total income of farm operator households, 2013-15F



Note: F = Forecast.

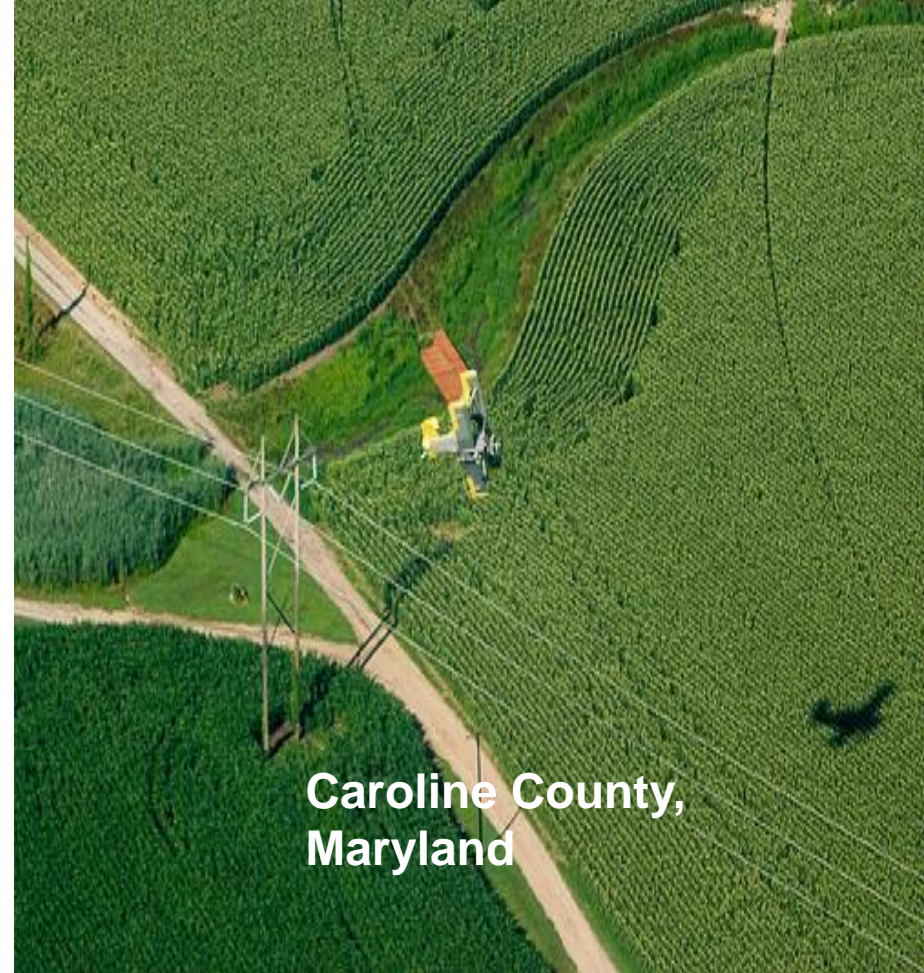
Source: USDA, Economic Research Service and National Agricultural Statistics Service, Agricultural Resource Management Survey. Data as of August 25, 2015.

# Agriculture by the numbers: Migrant Occupations



Source: Pew Hispanic Center, 2006

# So Let's Look How Agriculture Compares in the Chesapeake Bay.



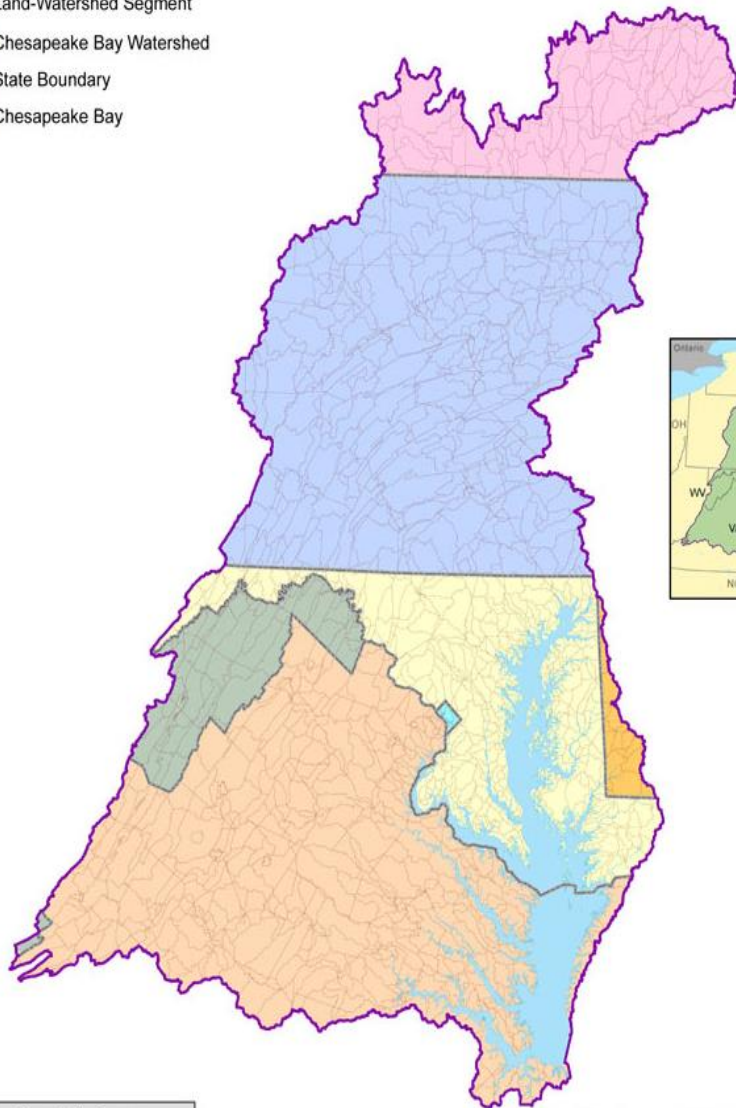


# Chesapeake Bay Watershed Model

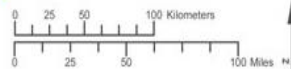
Phase 5 Modeling Segments



- Land-Watershed Segment
- Chesapeake Bay Watershed
- State Boundary
- Chesapeake Bay



Data Sources: Chesapeake Bay Program  
For more information, visit [www.chesapeakebay.net/terms/usage.htm](http://www.chesapeakebay.net/terms/usage.htm)  
Disclaimer: [www.chesapeakebay.net/terms/usage.htm](http://www.chesapeakebay.net/terms/usage.htm)



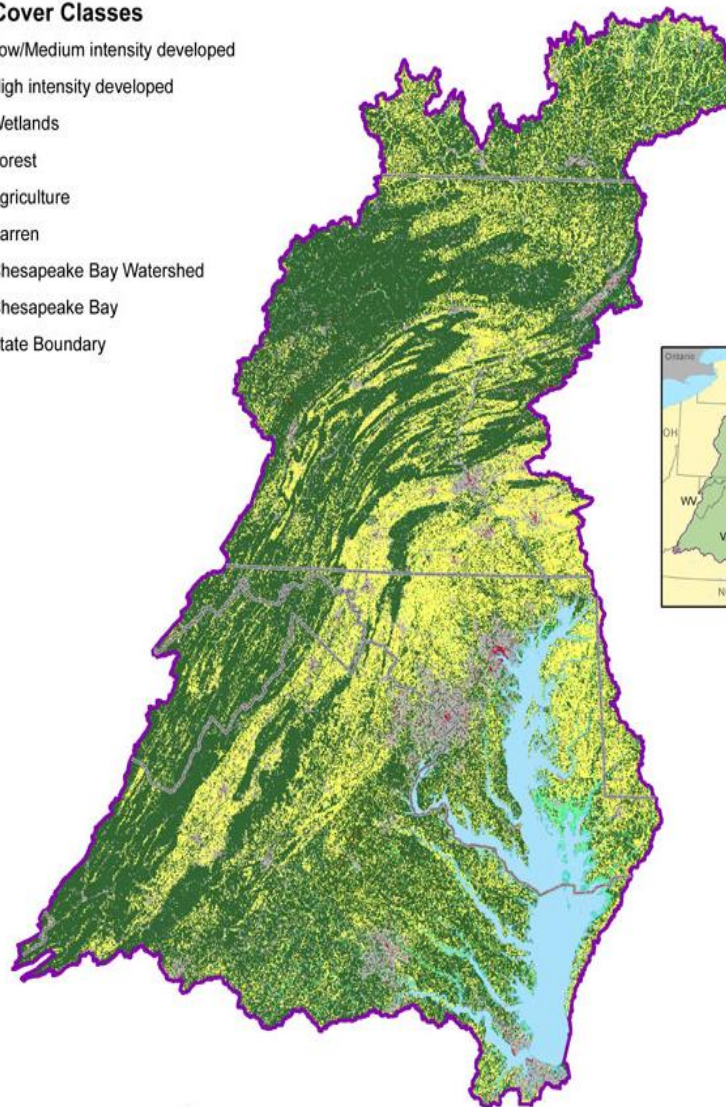
# Land Cover

Chesapeake Bay Watershed

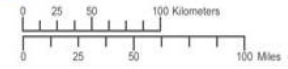


## Land Cover Classes

- Low/Medium intensity developed
- High intensity developed
- Wetlands
- Forest
- Agriculture
- Barren
- Chesapeake Bay Watershed
- Chesapeake Bay
- State Boundary

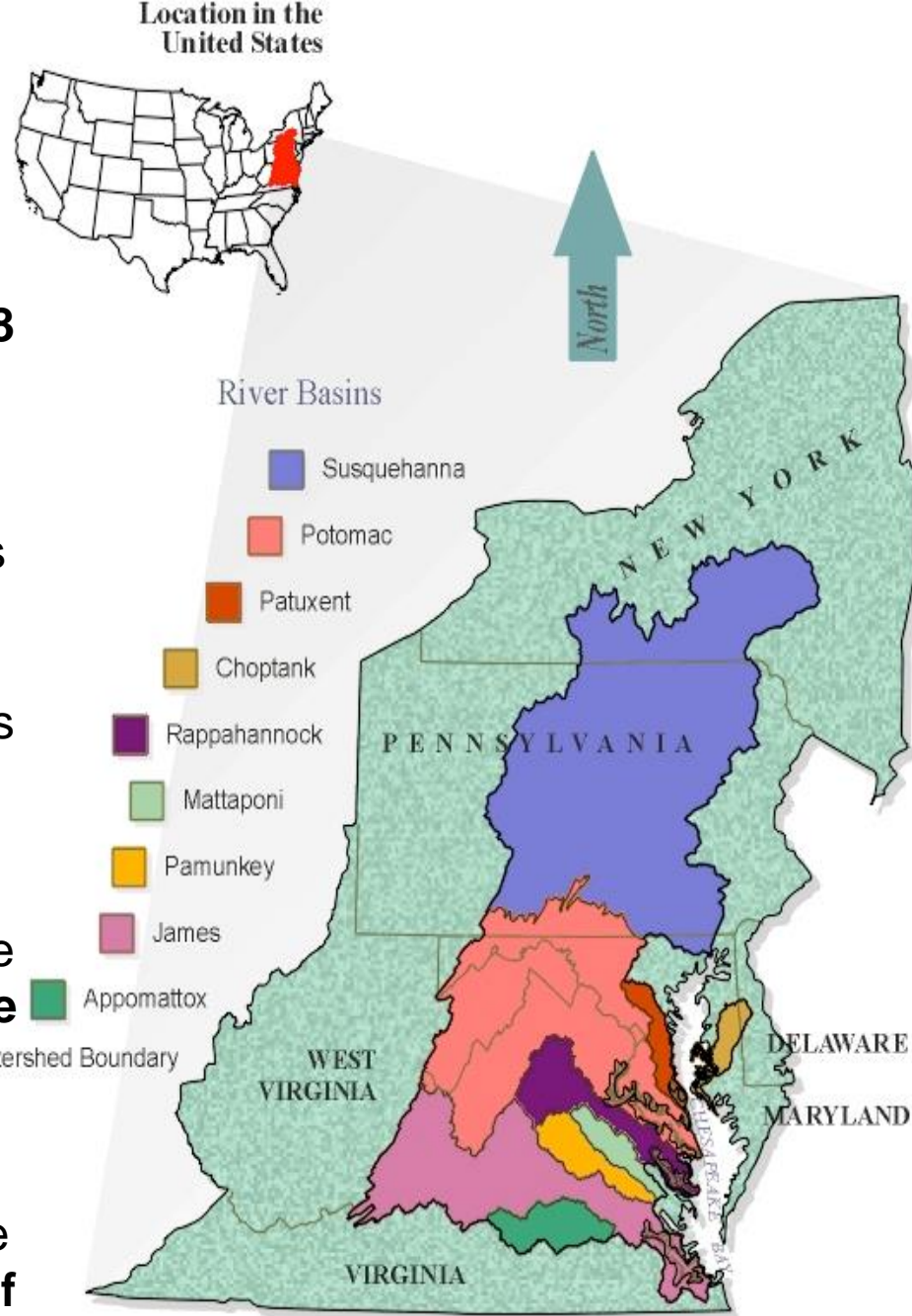


Data Sources: Chesapeake Bay Program, National Land Cover Data 2001  
For more information, visit [www.chesapeakebay.net](http://www.chesapeakebay.net)



# Chesapeake Bay Major River Systems/Facts

- The **Chesapeake Bay** holds more than **18 trillion gallons of water**.
- The Bay receives about **half its water volume from the Atlantic Ocean**. The rest drains into the Bay from an enormous **64,000-square-mile watershed**.
- **Approximately 51 billion gallons of water flow into the Bay** each day from its freshwater tributaries.
- Collectively, the **Chesapeake's three largest rivers** – the Susquehanna, Potomac and James rivers – provide more than **80 percent of the fresh water to the Bay**.
- The **Susquehanna River is the Bay's largest river**. It provides nearly **50 percent** of the fresh water coming into the Bay – an average of **19 million gallons of water per minute**. (CBP)





# Chesapeake Bay Population 2010

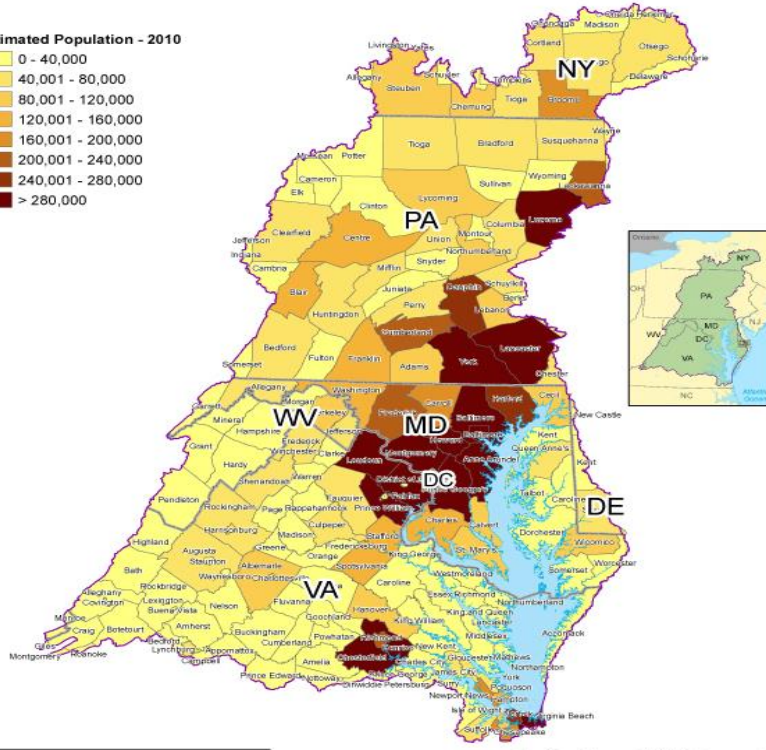
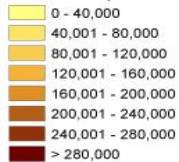
- The Chesapeake Bay watershed is home to more than 17 million people.
- About 150,000 new people move into the Bay watershed each year. (CBP)

## Population (2010)

Chesapeake Bay Watershed Counties



### Estimated Population - 2010



Data Sources: US Census.  
For more information, visit [www.chesapeakebay.net](http://www.chesapeakebay.net)  
Disclaimer: [www.chesapeakebay.net/terms-of-use.htm](http://www.chesapeakebay.net/terms-of-use.htm)

Created by HW, 08/05/11

UTM Zone 18N, NAD 83

## Forecasted Urban Growth in the Chesapeake Bay Watershed (2002 to 2030)



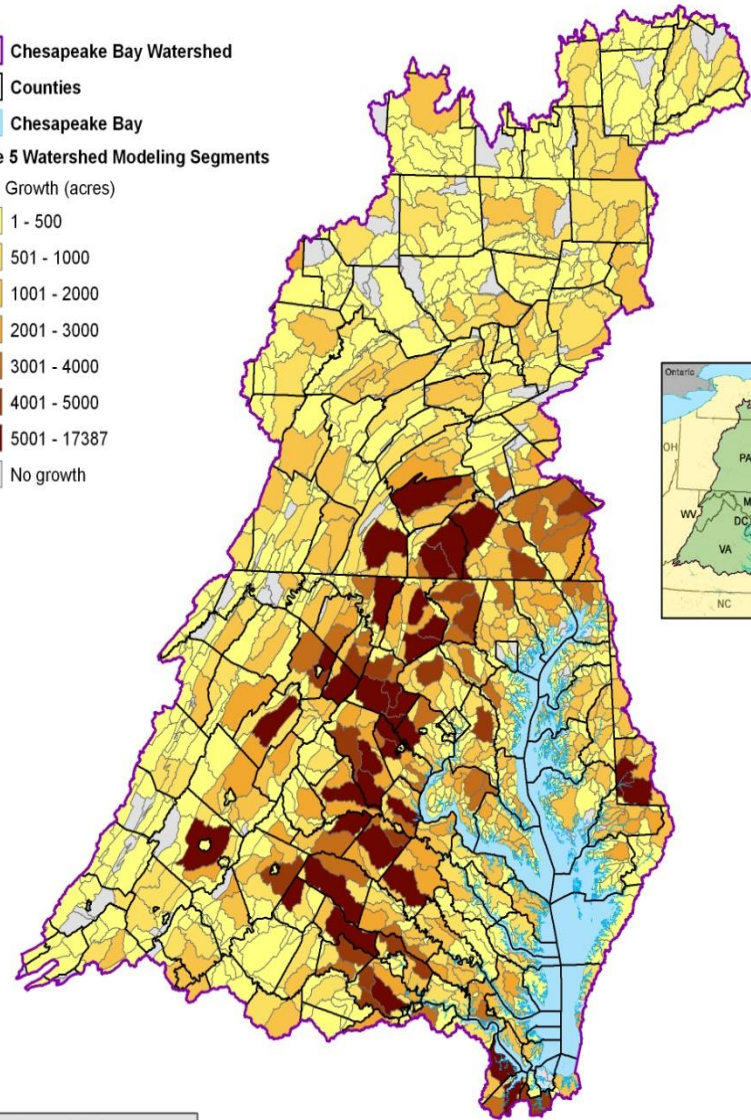
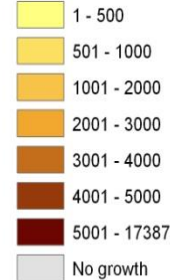
Chesapeake Bay Watershed

Counties

Chesapeake Bay

Phase 5 Watershed Modeling Segments

Urban Growth (acres)



Data Sources: Chesapeake Bay Program

For more information, visit [www.chesapeakebay.net](http://www.chesapeakebay.net)  
Disclaimer: [www.chesapeakebay.net/terms-of-use.htm](http://www.chesapeakebay.net/terms-of-use.htm)

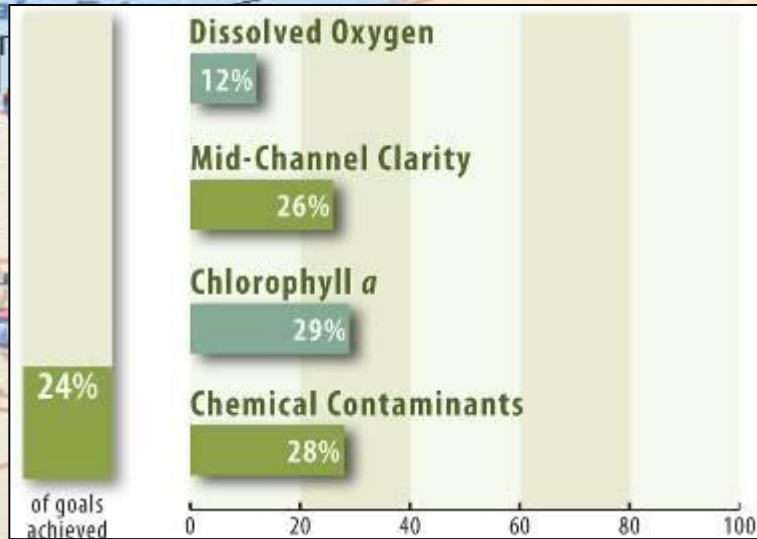
Created by PRC, 3/05/08

UTM Zone 18N, NAD 83

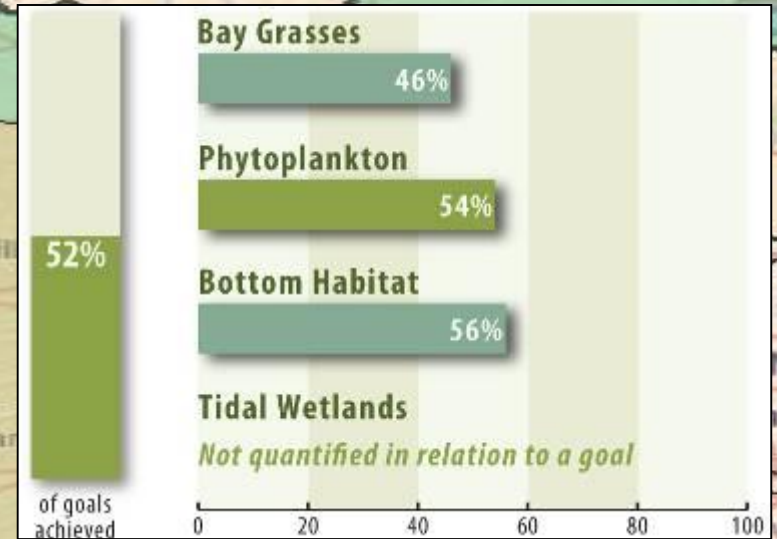


# Bay Measures- 2009

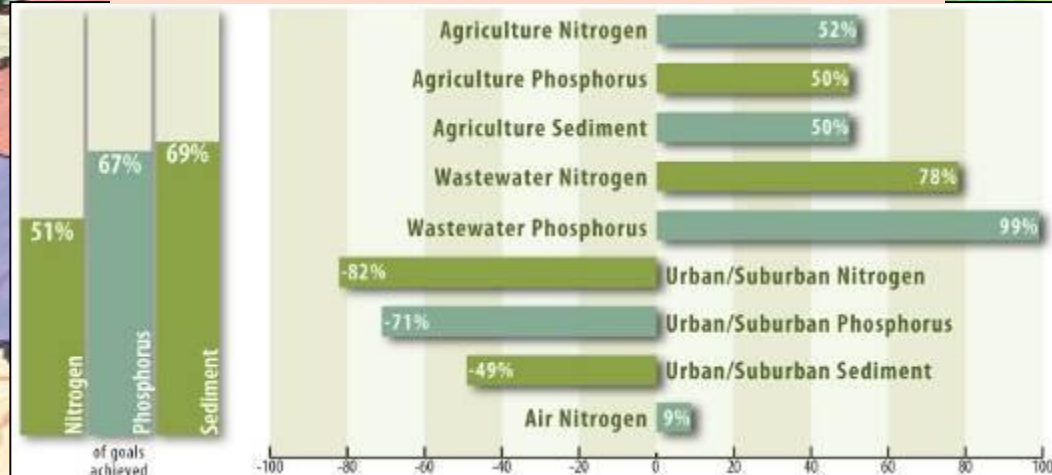
## Water Quality



## Habitats/Lower Food Web



## Reducing Pollution

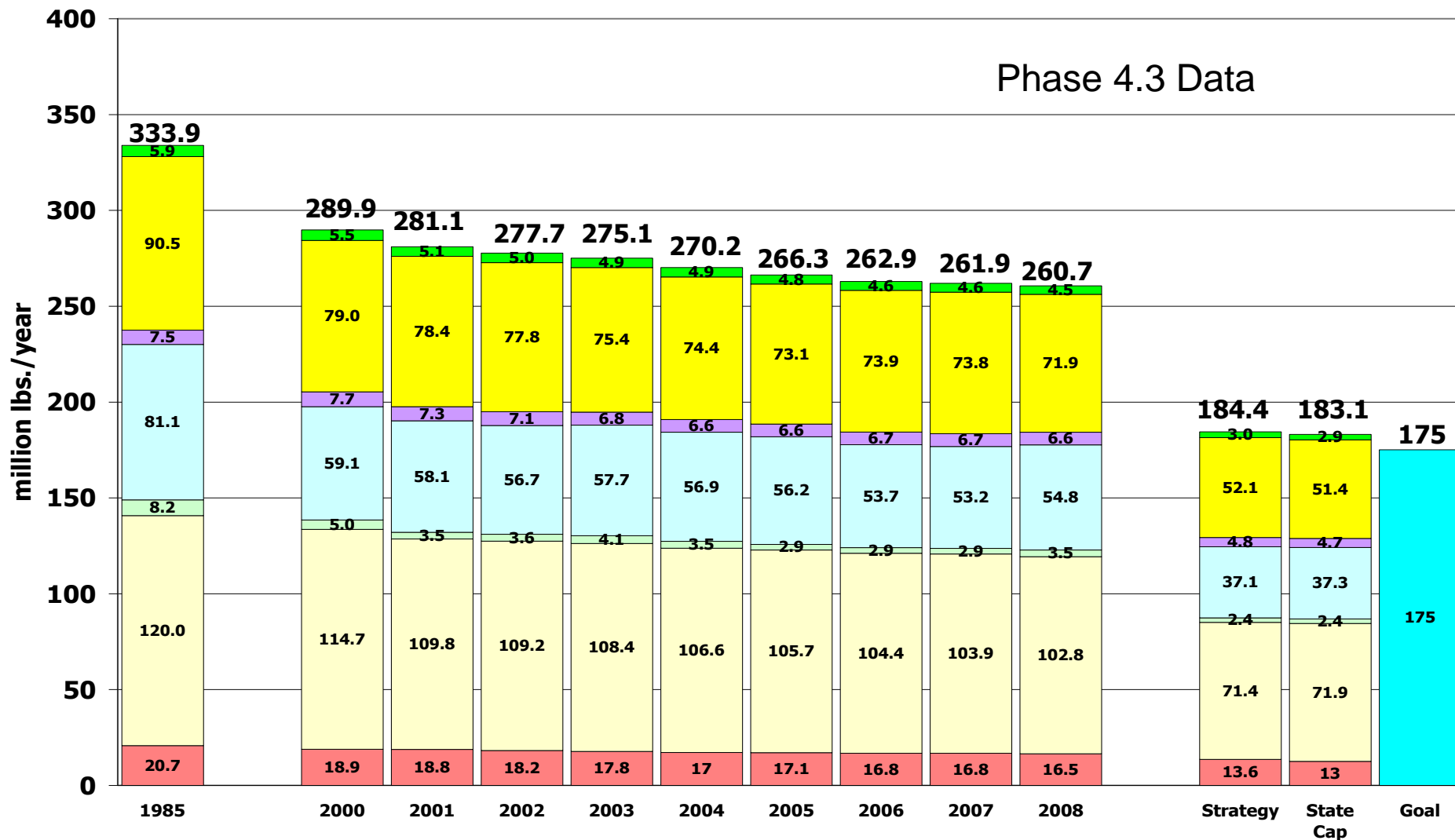




# Nitrogen Loads Delivered to the Chesapeake Bay By Jurisdiction

Point source loads reflect measured discharges while  
nonpoint source loads are based on an average-hydrology year

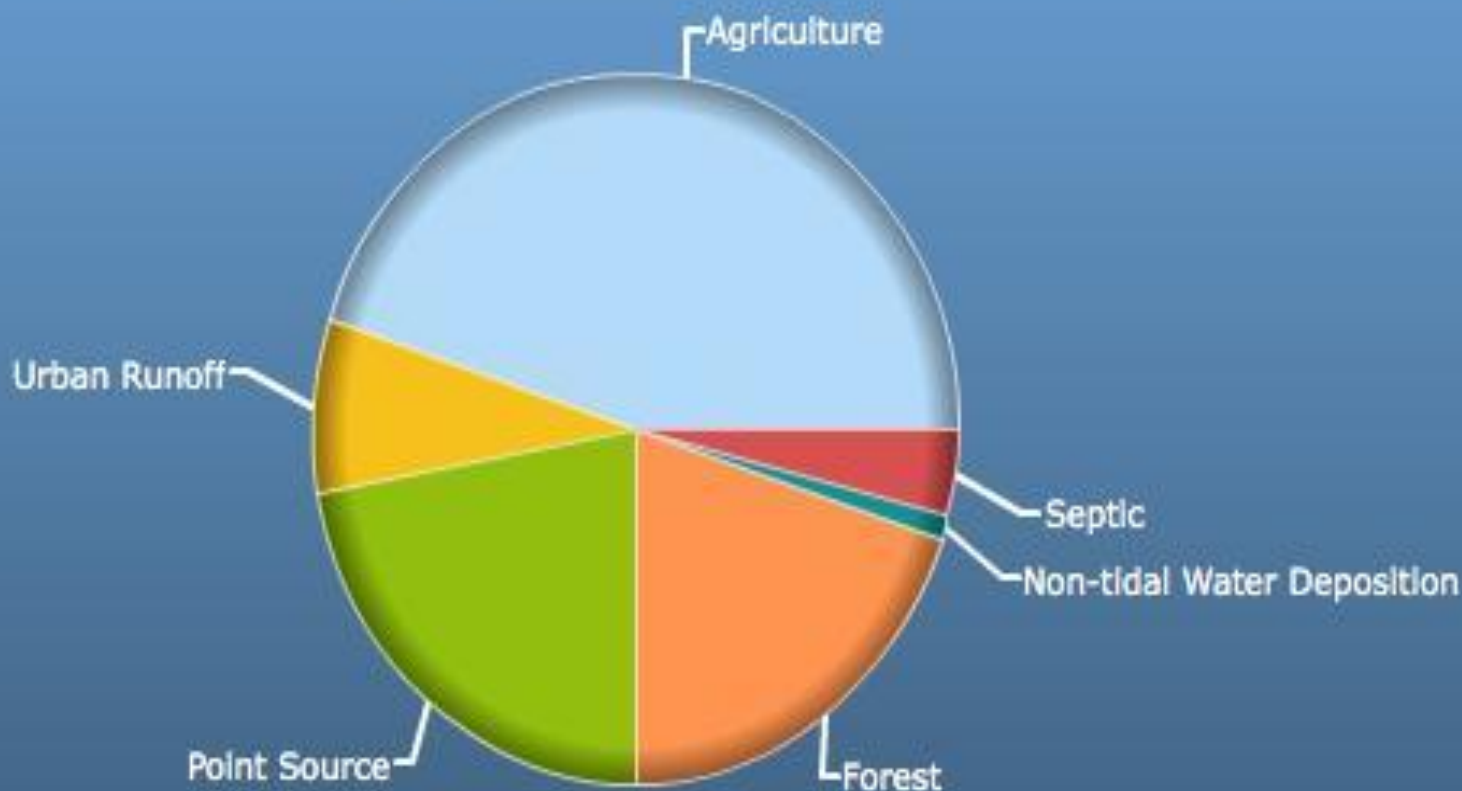
NY PA DC MD WV VA DE



# Nitrogen Delivery By Sector-2009

## 2009 Total Delivered Nitrogen by Sector

245.8 million lbs/year



# Regional Delivered Nitrogen

## SPARROW Total Delivered Yield of Nitrogen from Agricultural Sources

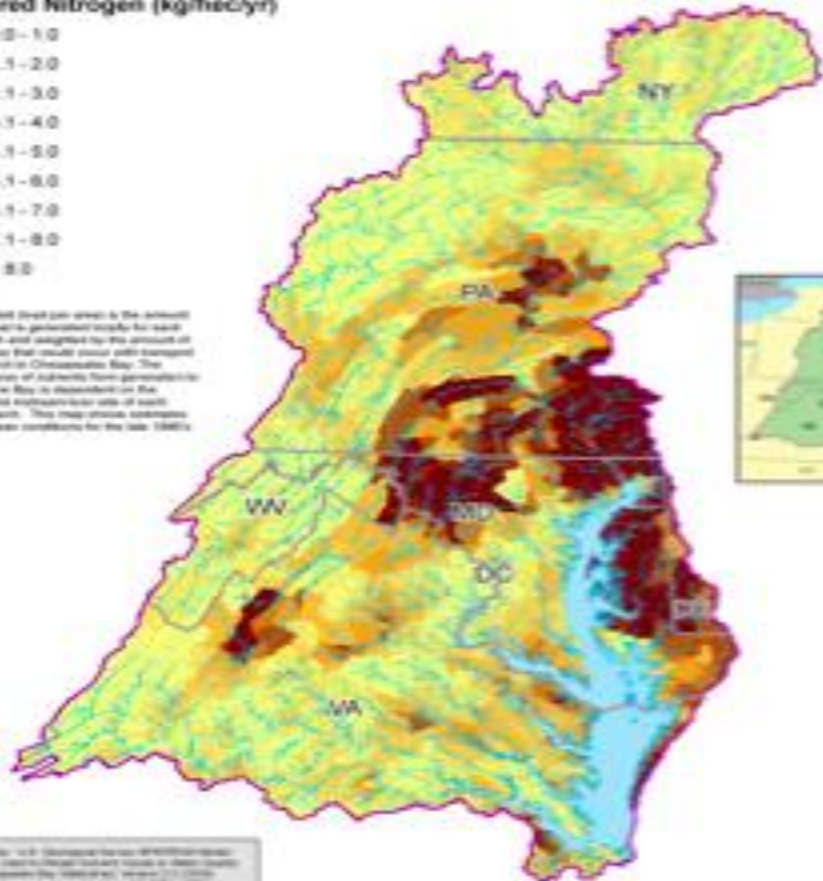
### Agricultural Sources of Total Nitrogen Delivered Yield to the Chesapeake Bay



#### Delivered Nitrogen (kg/ha/yr)



Delivered yield (kg/ha/yr) is the amount of nutrient that is generated locally for each stream reach and weighted by the amount of nitrogen that would enter and be transported from the reach to Chesapeake Bay. The relative loss of nutrients from generation to delivery to the Bay is dependent on the loading and nitrogen-to yield of each individual reach. This map shows estimates based on mean conditions for the late 1980's time period.



Data provided by the Chesapeake Bay Program, which is a partnership between the U.S. Environmental Protection Agency, the Maryland Department of the Environment, and the Virginia Department of Environmental Quality. The data was collected from 1988 to 1990.

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## Loads to Bay

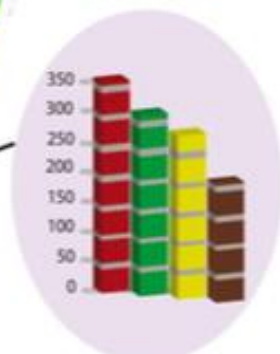
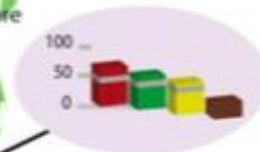
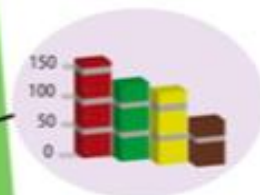
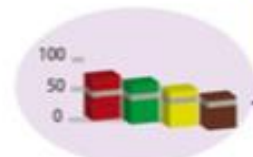
■ No-Practices

■ Baseline Conservation  
Condition 2003-06

■ Current Conservation  
Condition 2011

■ Background

One Block = 50 Million LBS.



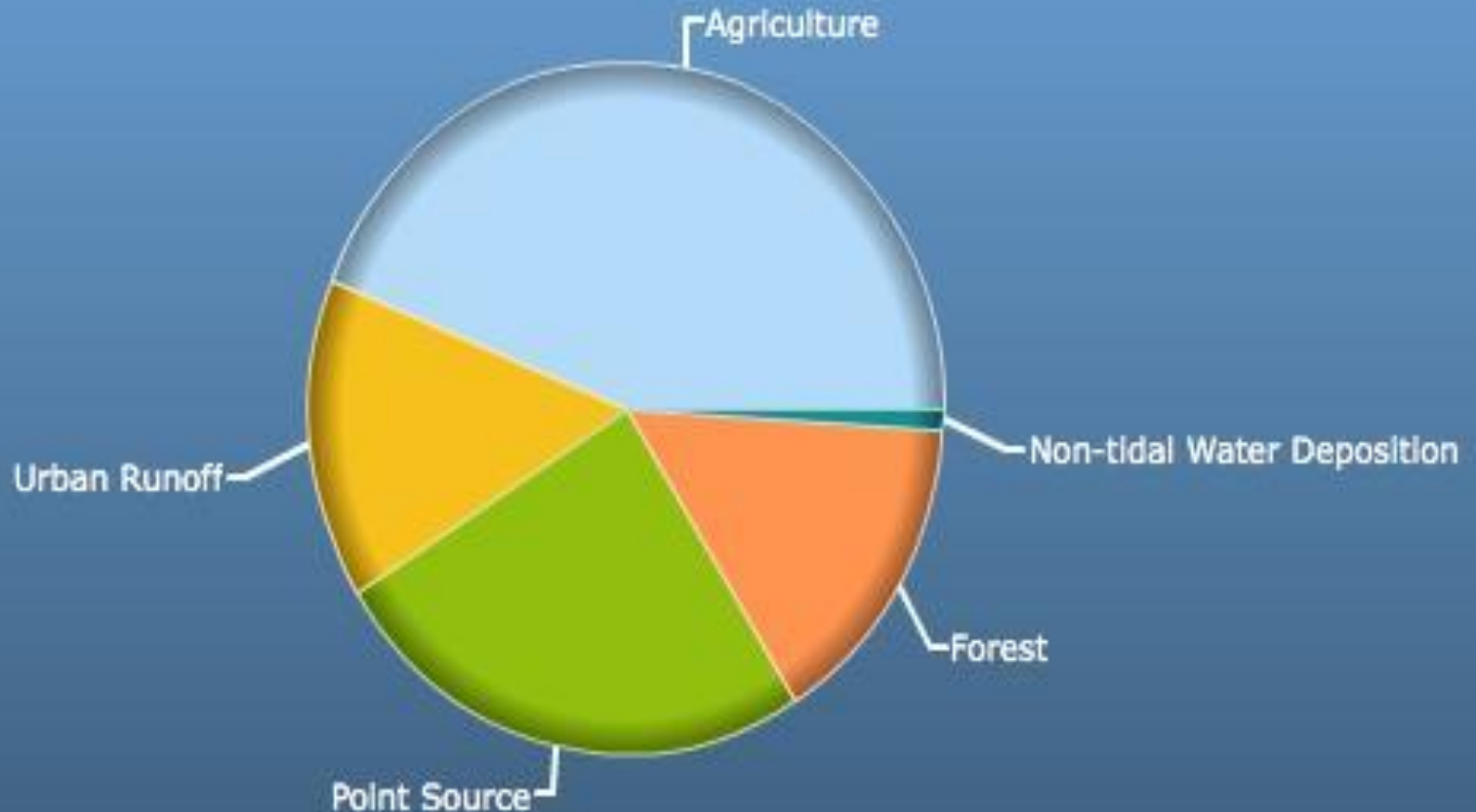
1 block = 50 Million Pounds

Nitrogen Load to Bay

# Phosphorous Delivery By Sector- 2009

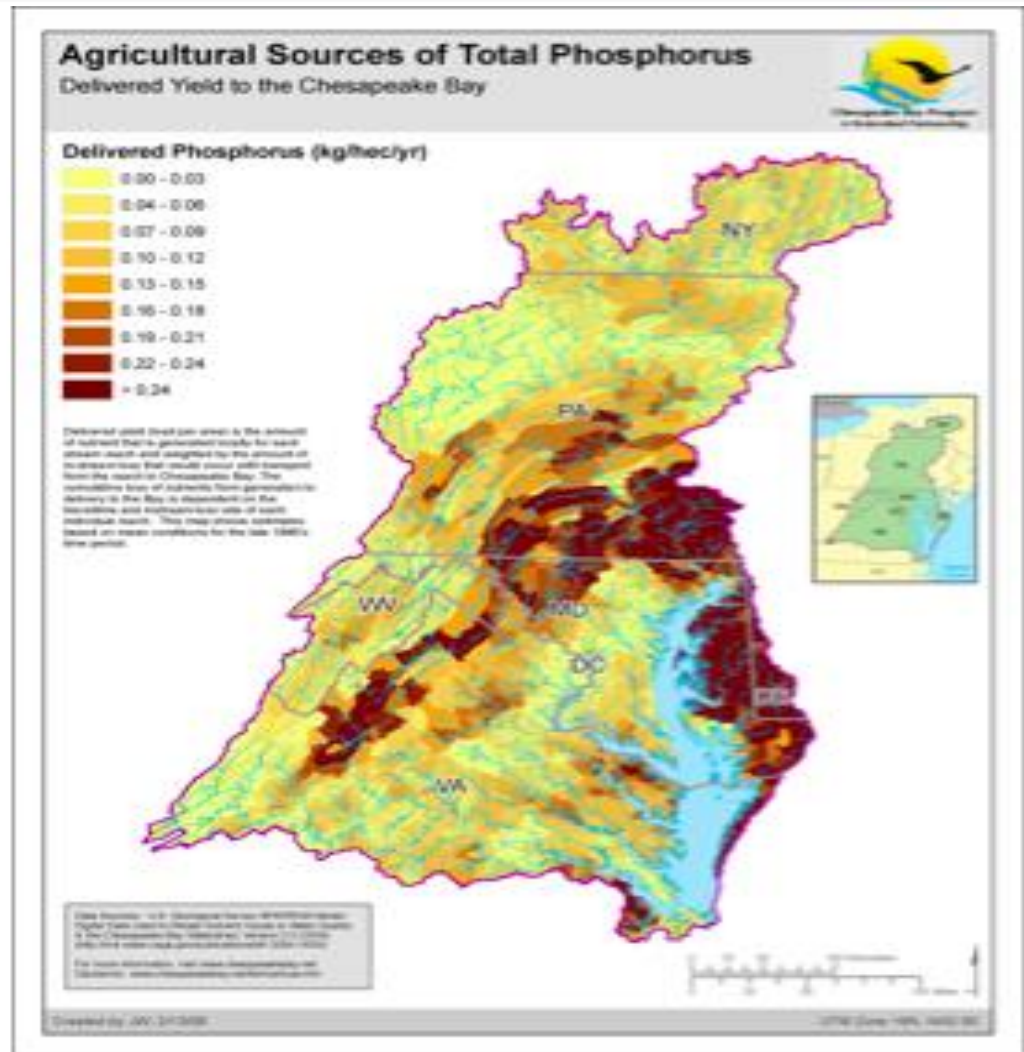
## 2009 Total Delivered Phosphorus by Sector

16.46 million lbs/year



# Regional Delivered Phosphorous

## SPARROW Total Delivered Yield of Phosphorous from Agricultural Sources



# NRCS- Conservation Effects Assessment Program

## PHOSPHORUS

### Loads to Bay

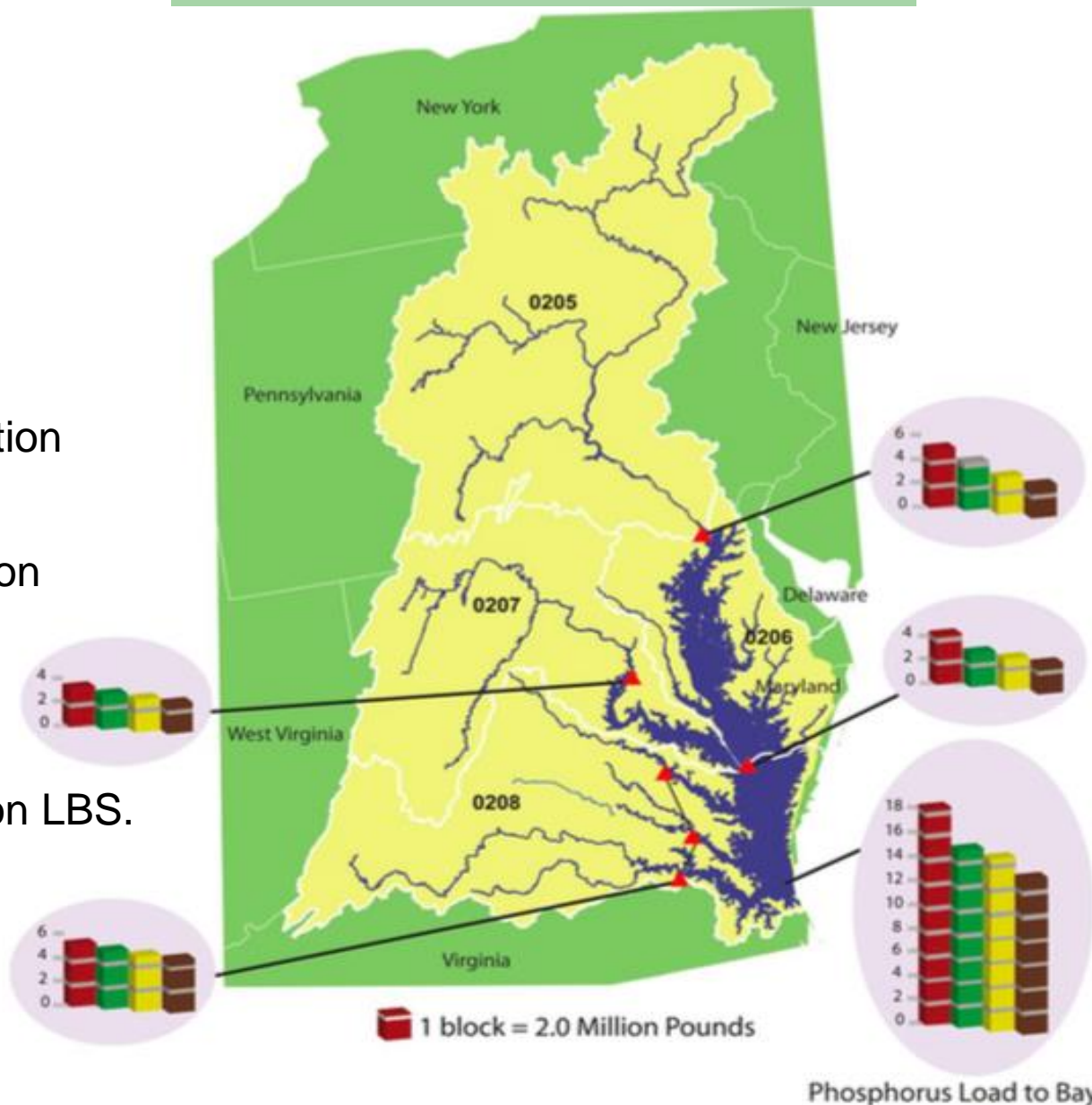
■ No-Practices

■ Baseline Conservation  
Condition 2003-06

■ Current Conservation  
Condition 2011

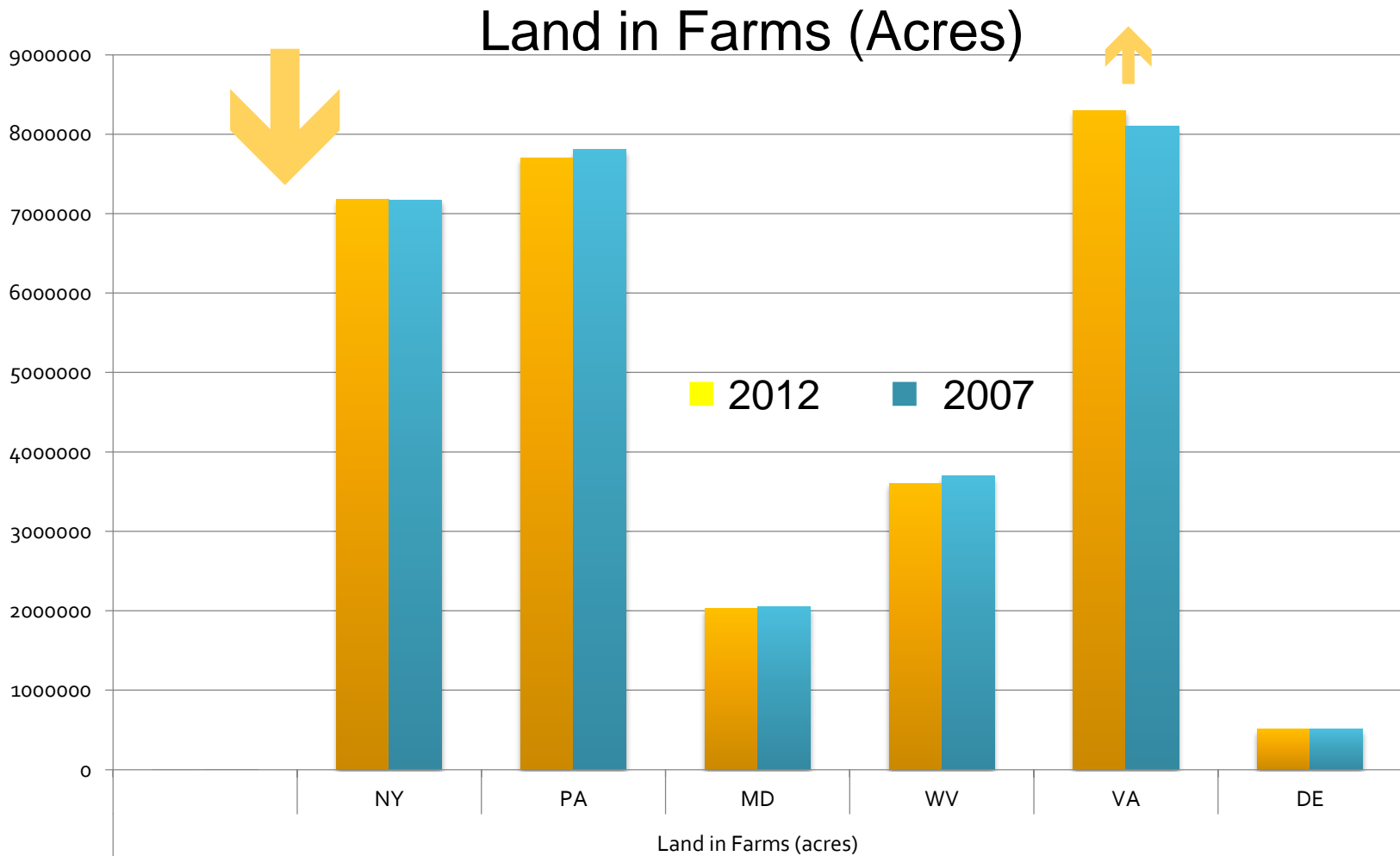
■ Background

One Block = 50 Million LBS.





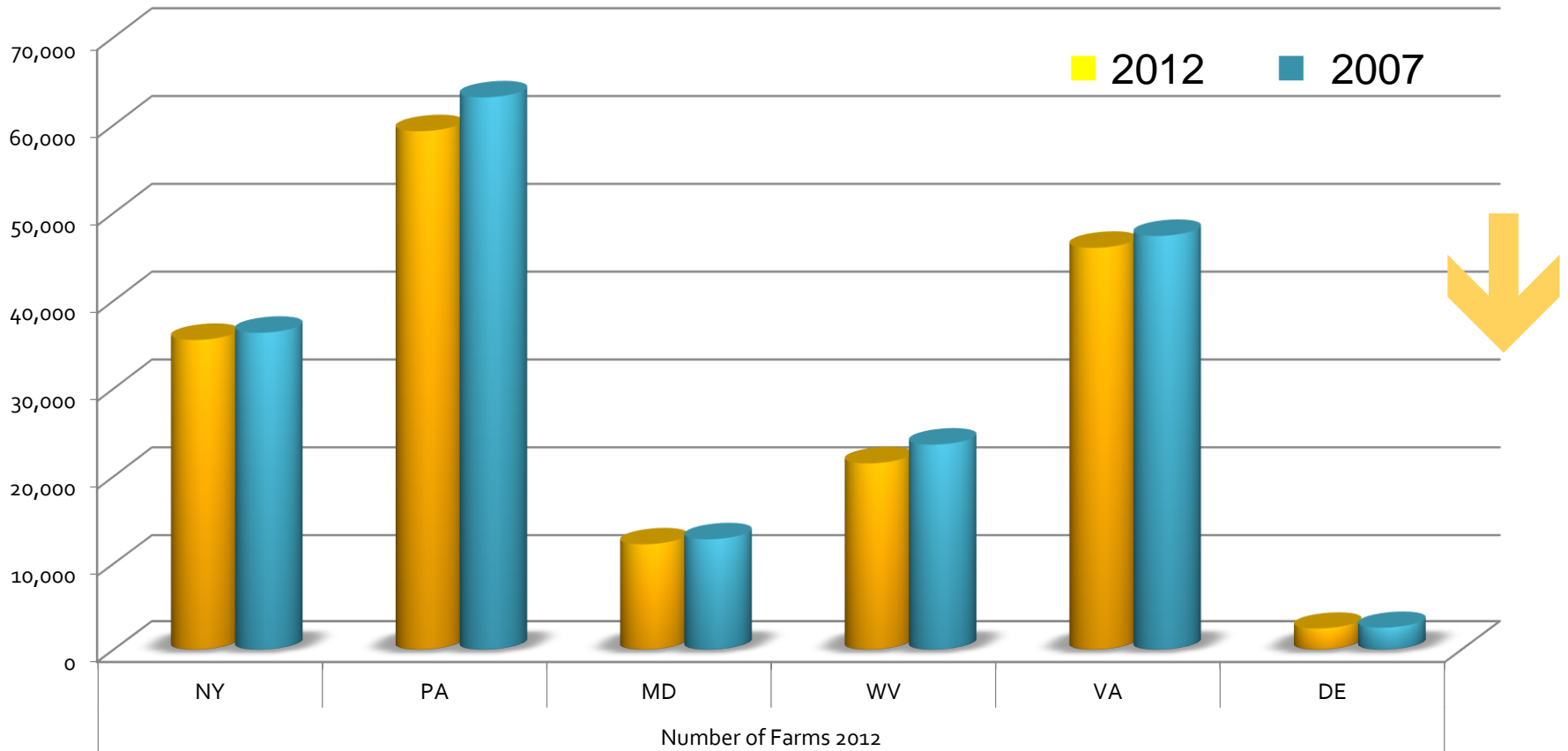
# Chesapeake Bay Region- State Ag Census Statistics



2012 Census of Ag

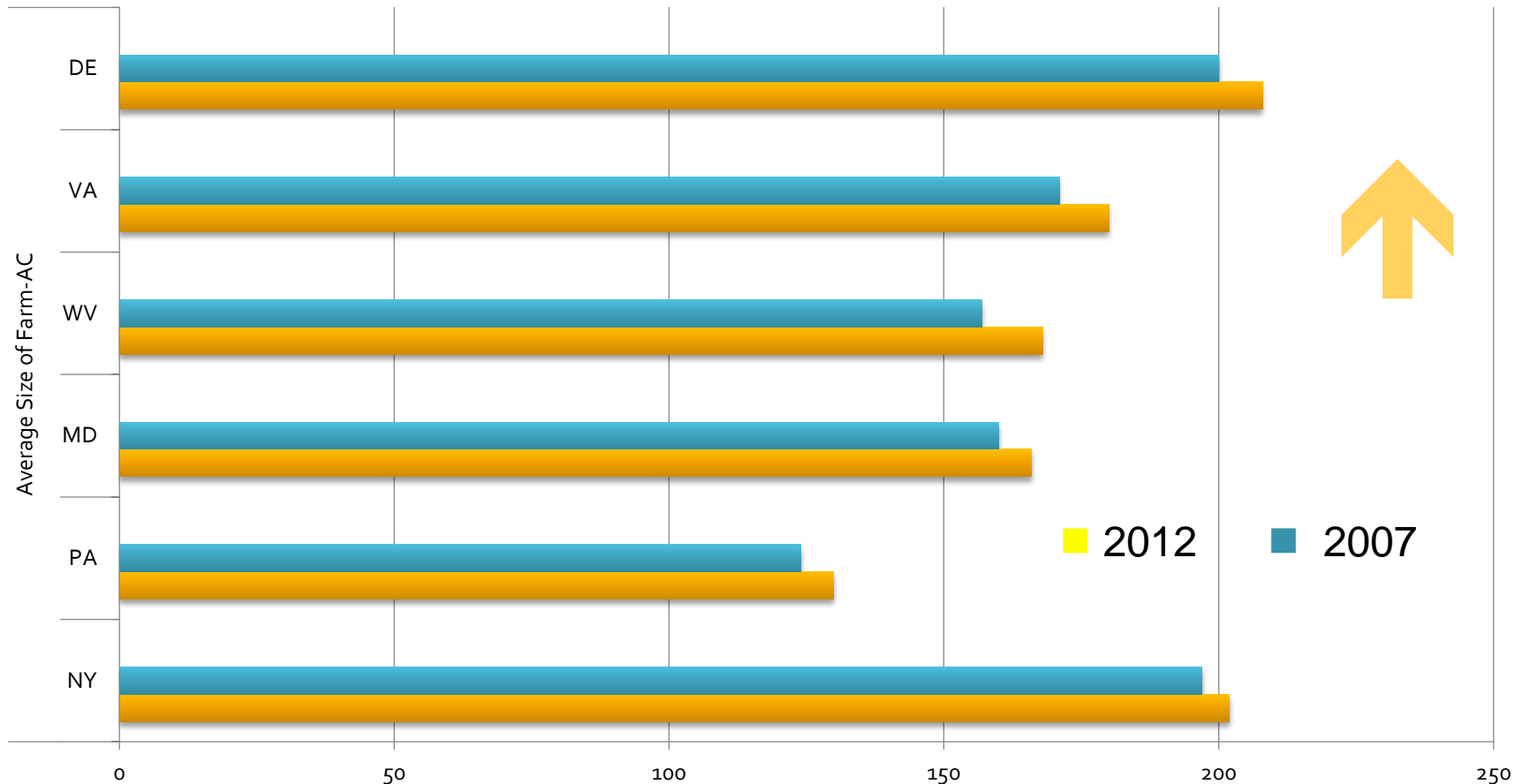
# Chesapeake Bay Region- State Ag Census Statistics

## Number of Farms



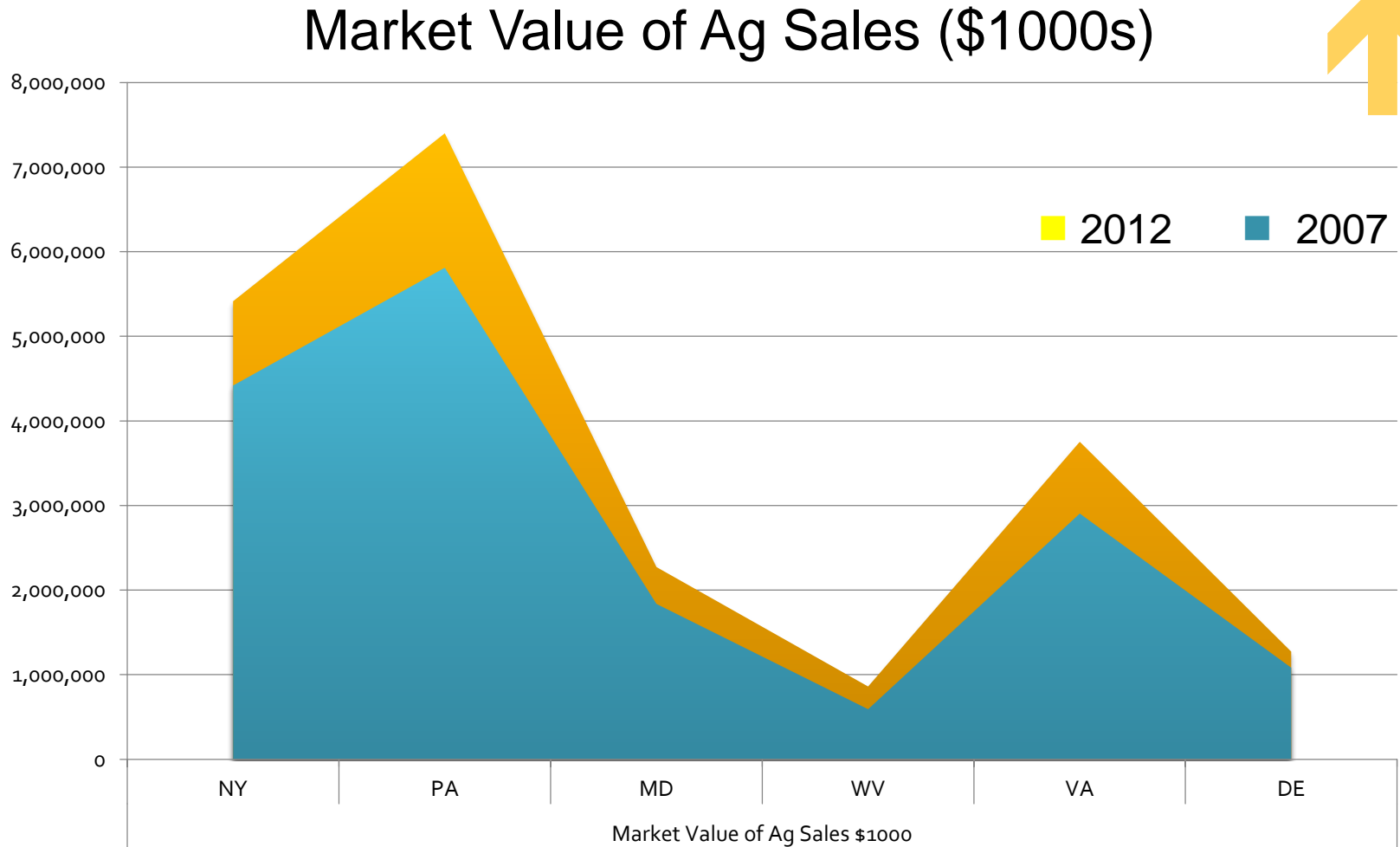
# Chesapeake Bay Region- State Ag Census Statistics

Average Size of Farms - Acres



2012 Census of Ag

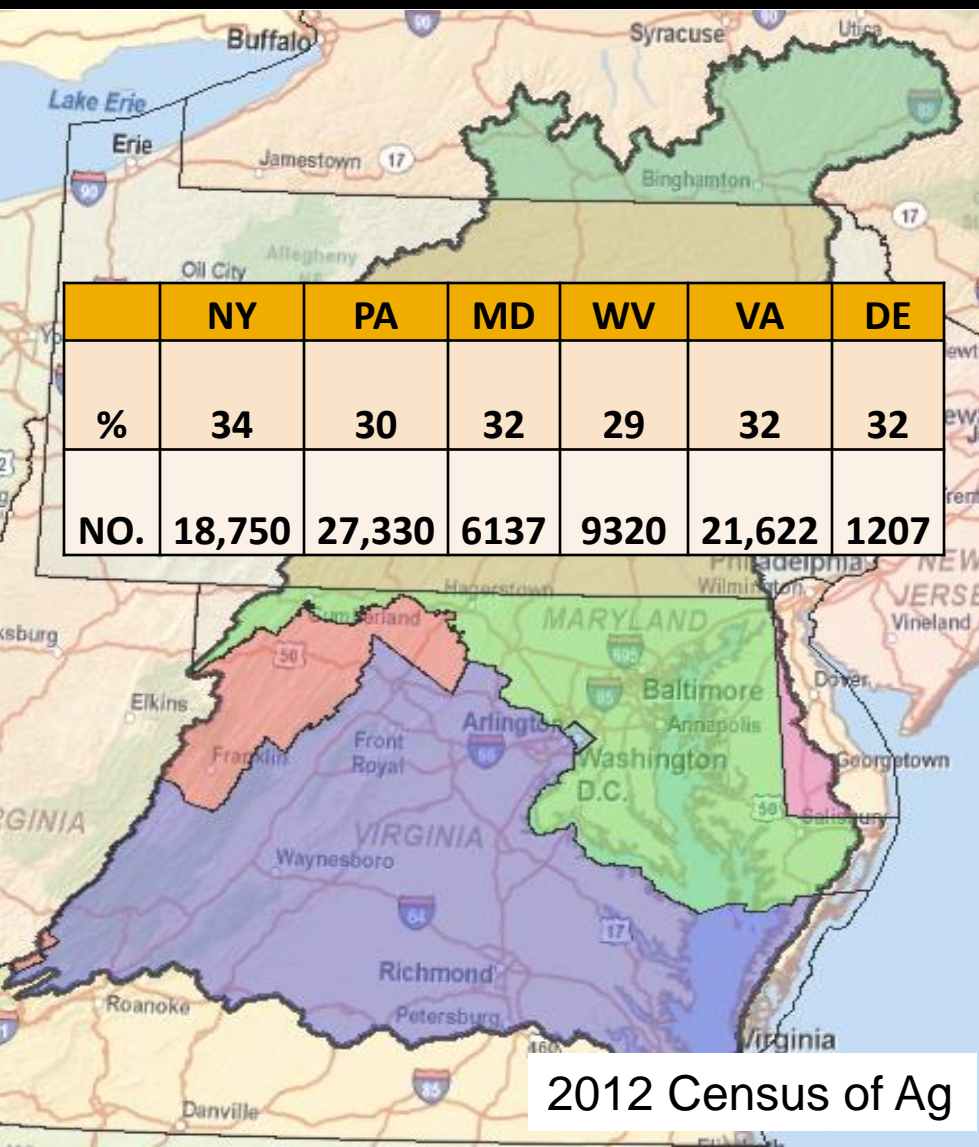
# Chesapeake Bay Region- State Farm Statistics



2012 Census of Ag

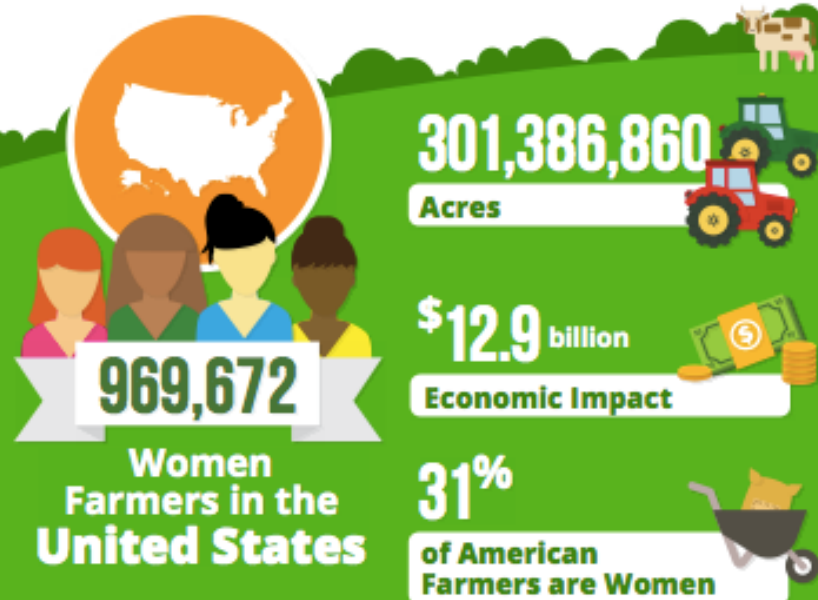


# WOMEN FARMERS IN CHESAPEAKE BAY



## #WomenInAg

From the classroom to the farm to the boardroom, women in agriculture are helping to pave the way for a better future. As leaders, it is our responsibility to make sure the next generation of women are educated, encouraged and empowered to take on the challenges of meeting the world's growing food, fuel and fiber needs. To help women in the United States connect with other women leaders in agriculture all across the country, the U.S. Department of Agriculture has established a women in ag mentoring network. Join the conversation by emailing [AgWomenLead@usda.gov](mailto:AgWomenLead@usda.gov) or check out [#womeninag](https://twitter.com/womeninag) on Twitter.



# Minority Farmers in the Bay-

## Largest Number in White Box

Minority Farmers	NY	PA	MD	WV	VA	DE
Hispanic Number	481	652	211	189	755	40
Hispanic Farms	425	550	207	179	686	36
Hispanic Acres	55,170	53,897	22,884	28,663	97,608	2,409
American Indian No.	279	311	111	150	442	0
American Indian farms	241	285	92	130	399	0
American Indian Acres	41,044	39,959	7,549	14,218	38,476	0
Asian Number	184	124	182	52	261	56
Asian farms	150	111	120	46	206	35
Asian Acres	12,427	6,927	4,807	5,937	13,702	763
Black Number	164	140	220	43	1916	0
Black Farms	136	122	180	41	1606	0
Black Acres	122,676	6,385	1,,8343	5,029	194,673	0

# Ranking Market Value of Products Sold- Top 5 by Percent of Market Value

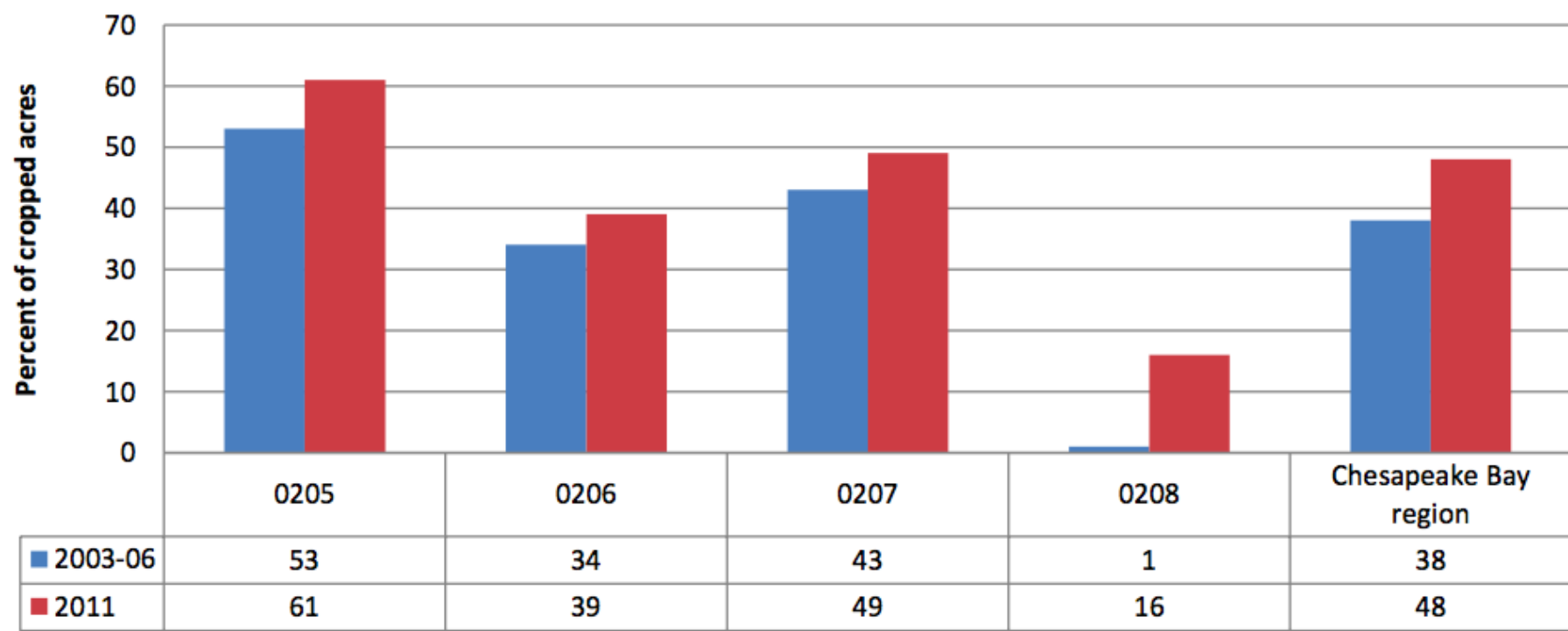
	NY	%	PA	%	MD	%	WV	5	VA	%	DE	%
1	Milk from Cows	44.6	Milk from Cows	26.6	Poultry and Eggs	40.6	Poultry and Eggs	49.8	Poultry and Eggs	30.9	Poultry and Eggs	63.7
2	Grains, Oilseeds, dry beans and dry peas	15.8	Poultry and Eggs	18.4	Grains, Oilseeds, dry beans and dry peas	31.5	Cattle and Calves	26.9	Cattle and Calves	18.9	Grains, Oilseeds, dry beans and dry peas	27.1
3	Cattle and Calves	8.3	Grains, Oilseeds, dry beans and dry peas	16.4	Nursery, Green House Floriculture and Sod	9	Grains, Oilseeds, dry beans and dry peas	4.6	Grains, Oilseeds, dry beans and dry peas	16.9	Vegetables Melons, potatoes and and sweet potatoes	4.8
4	Nursery,, Green House Floriculture and Sod	7.6	Nursery, Green House Floriculture and Sod	12.8	Milk from Cows	8.8	Other Crops and Hay	4.1	Milk from Cows	9.3	Milk from Cows	1.3
5	Vegetables Melons, potatoes and and sweet potatoes	6.7	Cattle and Calves	9.7	Vegetables Melons, potatoes and and sweet potatoes	3.1	Milk from Cows	4	Nursery, Green House Floriculture and Sod	6.7	Nursery, Green House Floriculture and Sod	1.3
	% Total of Sales	83		83.9		93		89.4		82.7		98.2

2012 Census of Ag



# River Basin Manure Application 2003-06 and 2011 (CEAP)

**Figure 2.3.** Average annual percent of cropped acres in each of the subareas receiving manure in the Chesapeake Bay region, 2003-06 and 2011.



\*0205=Susquehanna River Basin; 0206=Upper Chesapeake Bay; 0207=Potomac River Basin; 0208=Lower Chesapeake Bay.

# NRCS- Conservation Effects Assessment Program



## Conservation IN CHESAPEAKE BAY

Natural Resources Conservation Service

### WATERSHED STATES

Chesapeake Bay Watershed touches

**6 STATES,**



**83,800+**

farms & ranches,

and

**17 MILLION**



### EROSION CONTROL

Since 2006, average edge-of-field sediment losses decreased by

**15.1 MILLION** **TONS** *per year*

which is enough soil to fill

**150,000**



**TRAIN CARS**

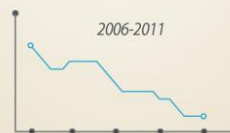
stretching **1,704 MILES,** further than from Washington, D.C. to Albuquerque, N.M. *per year.*



### CONSERVATION ON THE GROUND



Acres with some form of **erosion control** practice.



Loss of Nitrogen into nearby waterways reduced by **48.6 million** pounds/year



Loss of Phosphorus into nearby waterways reduced by **7.1 million** pounds

Sediment entering the bay was reduced by **8 percent.**

Nitrogen was reduced by **6 percent.**

Phosphorous was reduced by **5 percent.**



**CLEANER**

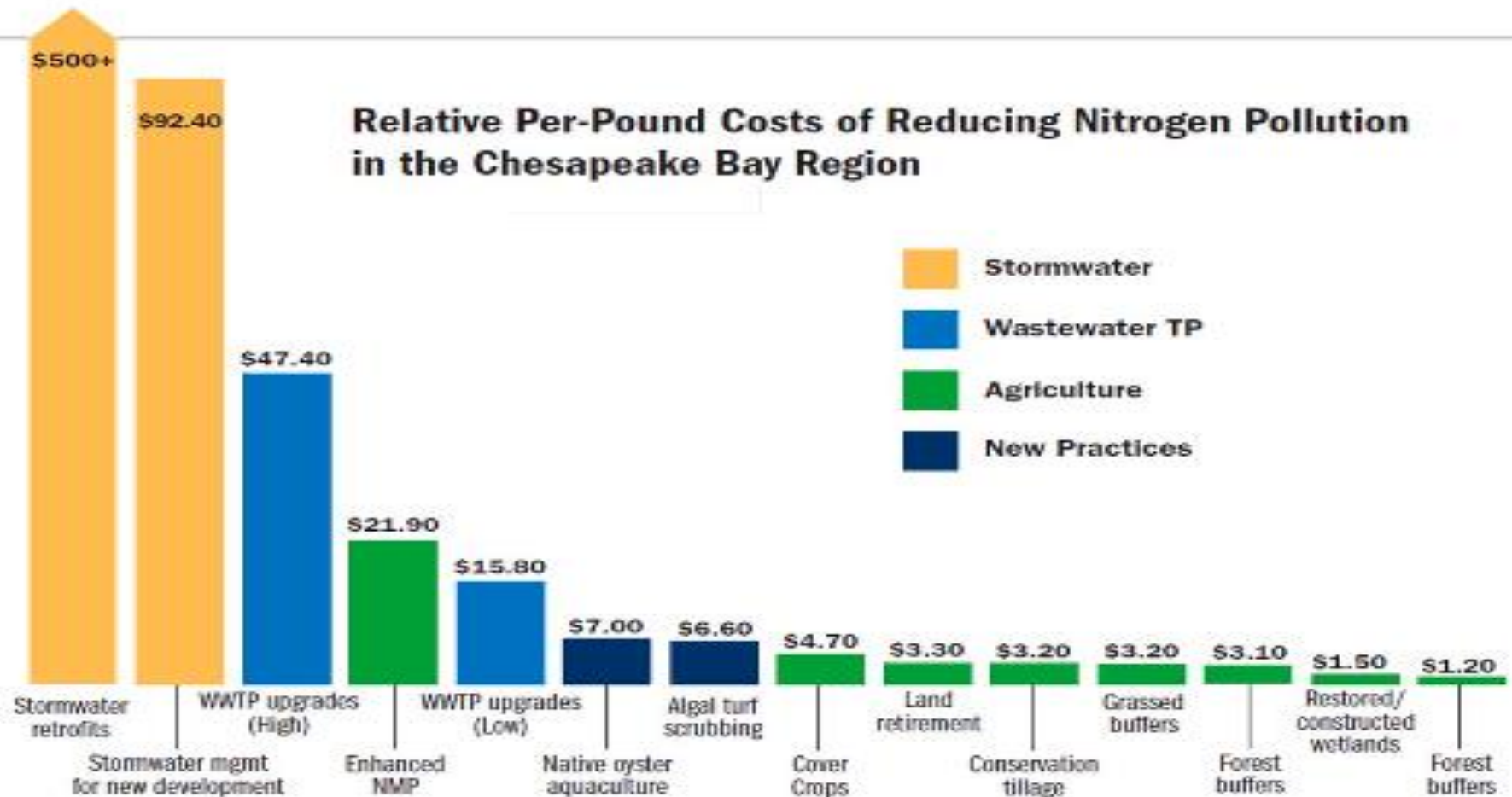


All estimates from the Conservation Effects Assessment Project, 2013

USDA is an equal opportunity provider and employer.

# Cost of Best Management Practices Per Pound of Reduced Nitrogen

**Relative Per-Pound Costs of Reducing Nitrogen Pollution in the Chesapeake Bay Region**



Source: World Resources Institute

January 2010

For more information on nutrient trading and an updated version of this cost-curve, please visit the World Resources Institute Website at: <http://www.wri.org/publication/how-nutrient-trading-could-help-restore-the-chesapeake-bay>

# Chesapeake Bay Watershed Initiative (CBWI)

## Total Obligations by FY (Thousands of Dollars)

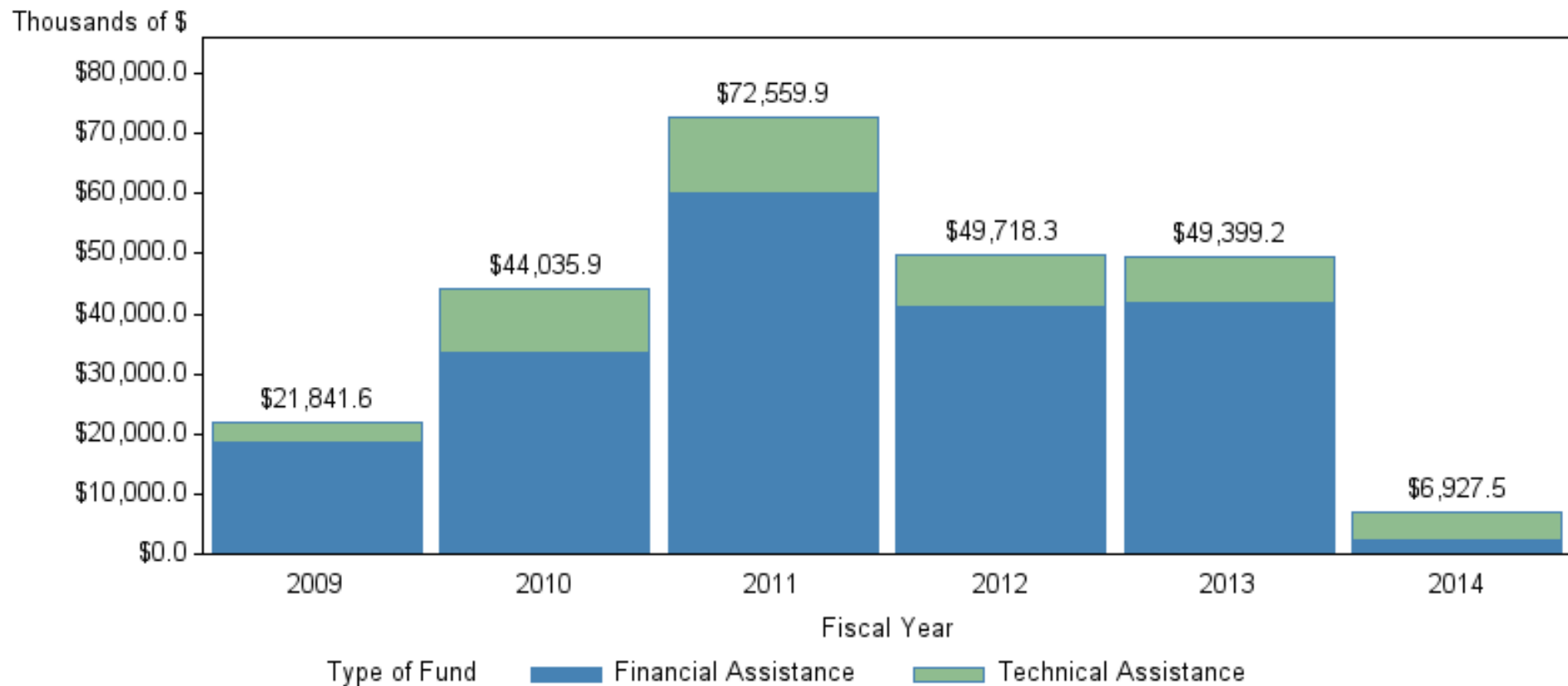
Division	2009	2010	2011	2012	2013	2014
Delaware	\$1,255.2	\$2,504.0	\$4,228.3	\$2,017.6	\$1,251.9	\$313.8
Maryland	\$4,960.9	\$9,493.3	\$14,546.5	\$8,165.4	\$12,191.0	\$1,736.8
New York	\$1,251.8	\$2,280.7	\$3,779.1	\$1,662.1	\$5,822.4	\$527.3
Pennsylvania	\$6,740.1	\$13,489.7	\$22,845.9	\$17,232.4	\$10,965.1	\$1,706.1
Virginia	\$6,214.5	\$12,813.5	\$19,246.2	\$13,631.0	\$10,776.2	\$1,629.9
West Virginia	\$1,419.0	\$2,557.5	\$5,899.2	\$3,721.5	\$8,454.0	\$1,036.7
Other		\$897.3	\$2,014.8	\$3,288.3	\$-61.4	\$-23.1
Total	\$21,841.6	\$44,035.9	\$72,559.9	\$49,718.3	\$49,399.2	\$6,927.5

(NRCS)



# CBWI Total Obligations 2009-2014

CBWI Total Obligations \$, by Fiscal Year  
and Type of Fund



# CBWI Practices

- Under CBWI, more than 37,000 conservation practices were installed on hundreds of thousands of acres in the watershed, including:
- Nearly 500,000 acres of nutrient management to improve the rate, timing and method of nutrient application;
- More than 228,000 acres of cover crops to absorb excessive nitrogen and phosphorous; and
- More than 1,000 buffers planted along stream banks that prevent sediment and pollutants from entering waterways.

(NRCS)

# Delaware Manure Relocation-Partnerships in Funding

	State Funds	Federal Funds	Poultry Companies
2008	\$246,000	\$310,000	\$53,863
2009	\$246,000	\$310,000	\$125,499
2010	\$246,000	\$350,000	\$176,011
2011	\$246,000	\$350,000	\$164,000
2012	\$246,000	\$250,000	\$187,000
2013	\$246,000	\$249,000	\$212,500
2014	\$246,000	\$249,000	\$147,891
2015	\$246,000	\$254,272	\$147,89

(DDA)

# Delaware State Cost Share Funding

Fiscal Year	Funding
2006	\$3,205,000
2007	\$3,205,000
2008	\$3,205,000
2010	\$3,205,000
2011	\$1,500,000
2012	\$1,500,000
2013	\$1,500,000
2014	\$1,500,000
2015	\$1,500,000
2016	\$1,500,000

(DDA)



# Maryland Department of Agriculture- MACS program

- In 2014, MACS provided MD farmers with **\$27.3 million** in grants to install 2,374 conservation projects on their farms. These projects prevented an estimated 2.6 million pounds of nitrogen, 111,000 pounds of phosphorus, and 13,857 tons of soil from entering MD waterways.
- **Cover Crops:** During the 2013-2014, MACS provided farmers with **\$21.2 million** in grants to plant 423, 212 acres of cover crops statewide. This exceeds our milestone commitment and is the 5th straight year MD farmers have planted over **400,000 acres of cover crops**.
- **Manure Transport:** In FY 2014, MDA provided MD farmers with **\$608,259** in grants to transport 118,995 tons of manure to approved farms and businesses (more than double the amount of manure transported the previous year). **About 39% of this tonnage was shipped to alternative use** facilities and not land applied in the watershed.
- **Technical Assistance:** In FY 2014, **MDA funded 75 technical positions** in local soil conservation district (SCD) offices statewide. An **additional 45 technicians and conservation planners were hired** in 2013 with grant support from the **2010 Chesapeake Bay Trust Fund** raises the total amount of **field staff available to MD farmers to 120**. In FY 2014, a total of 933,965 acres of agricultural land in MD were managed under a current soil conservation and water quality plan (SCWQ), which also exceeds our milestone commitment.

# NY- Upper Susquehanna Coalition

USC Structure: The Upper Susquehanna Coalition (USC) consists of 19 Soil and Water Conservation Districts (16 in NY and 3 in PA) that cover 99% of the headwaters of the Susquehanna River upstream of Towanda, PA. USC Watershed Statistics are as follows:

- 7,500 square miles/13,000 miles of roads and 17,000 miles of stream
- 69% forest, 23% agriculture, 3% urban/suburban, 4% open water/wetlands
- NYS's portion of the Bay Watershed is estimated to contain approximately 247 animal operations, of which, 68 are SPDES-permitted CAFOs.
- The AEM-participating farms in the Bay Watershed include 2,285 unpermitted farms (both crop and livestock operations).



Before and after stream fencing, stream restoration, and pasture management project

## Delmarva Poultry Production and the Use of Delmarva Soybean and Corn (DPI )

	Millions of Meat Chickens Grown	Soybeans used for Meat Chickens*	Delmarva Soybeans Grown*	Corn Used for Meat Chickens	Delmarva Corn Grown
2000	599	28.4	28.2	69.7	67.6
2001	587	25.0	25.3	73.0	66.5
2002	585	25.2	13.2	72.5	35.5
2003	577	25.9	19.9	73.8	55.9
2004	561	27.8	26.1	74.8	69.2
2005	571	30.3	18.0	76.4	61.6
2006	568	28.4	18.7	77.9	67.8
2007	566.2	30.3	13.8	76.8	54.9
2008	571.2	26.7	16.8	79.9	54.1
2009	568.1	24.6	24.0	72.8	68.3
2010	559	26.9	18.5	71.2	52.4
2011	563	23.8	21.0	73.7	57.9
2012	558	24.8	24.5	79.0	59.0
2013	565	26.8	19.8	77.5	72.4
2014	569	29.3		81.2	
	Millions of Meat Chickens Grown	Soybeans used for Meat Chickens*	Delmarva Soybeans Grown*	Corn Used for Meat Chickens	Delmarva Corn Grown

\*numbers in millions of bushels

Meat Chickens Grown, Soybeans Used for Meat Chickens, and Corn Used for Meat Chickens provided by DPI.

Delmarva Soybeans Grown and Delmarva Corn Grown provided by USDA's National Agricultural Statistics Service.

# Economic Output of Poultry Industry

## **Chicken Industry Adds 21,000 New Direct Jobs; Total Economic Output Increases \$143 Billion over Last Two Years**

*Updated study quantifies the economic impact of the chicken industry in the United States*

The National Chicken Council (NCC) and the U.S. Poultry & Egg Association (USPOULTRY) today have made available an updated [economic impact study](#) that highlights the increased positive impact the chicken industry has on jobs, wages, and federal and state revenue in the United States.

A dynamic and integral part of the national economy, the chicken industry increased from 2012 to 2014 its number of direct jobs from 259,000 to 280,800. Taking into account direct, supplier and induced impact, the chicken industry generates 1,339,875 jobs nationwide, according to the study.

The industry also increased from 2012 to 2014 its total amount of wages from \$49.1 billion to \$74 billion, total economic activity from \$205.6 billion to \$348.8 billion, and government revenue from \$18 billion to \$24.4 billion.

The data is hosted on an interactive website – [www.chickenfeedsamerica.com](http://www.chickenfeedsamerica.com) – that can be sorted nationally, by state, congressional district, state house district or state senate district.



# Chesapeake Stat- Two Year Milestones

[TMDL Tracking](#)[BMP Review](#)[Two-Year Milestones](#)

## Milestone Commitments

### Watershed-Wide

EPA and jurisdictions are held accountable to the overall simulated load reductions and their two-year milestone commitments. The Bay jurisdictions' 2014-2015 milestones wastewater strategies and best management practice (BMP) commitments for other source sectors reduce phosphorus by nearly 2.4 million pounds and decrease sediment by more than 1.1 billion pounds by the end of 2015, compared to the 2009 baseline. Nitrogen is projected to be reduced by nearly 25 million pounds, but this reduction is nearly 6 million pounds less than is

☒ Nitrogen ☐ Phosphorus ☐ Sediment

State: Watershed-Wide

Year: 2015 Milestone

### Simulated Nitrogen Loads



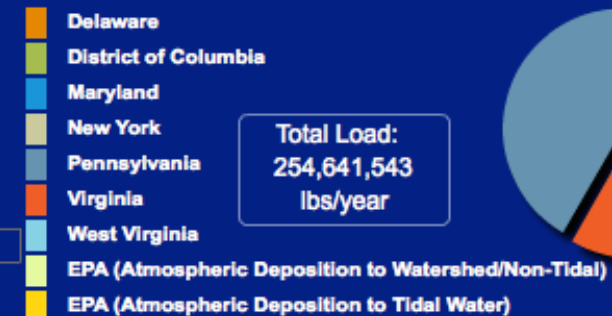
\* Primary scenario for assessing whether 2013 Milestone is met since it holds background conditions constant (e.g., land uses).

### How to use this Tool

Simulated pollutant loads are viewable by the entire Watershed or jurisdiction. Select by pollutant, year, or jurisdiction through the drop-down menus or by clicking on the bar or pie charts. Select a jurisdiction to view sector contributions to the load. The practices being implemented to achieve load reductions are listed by sector below.

[About the Data](#)

### 2015 Nitrogen Load Milestone by Jurisdiction

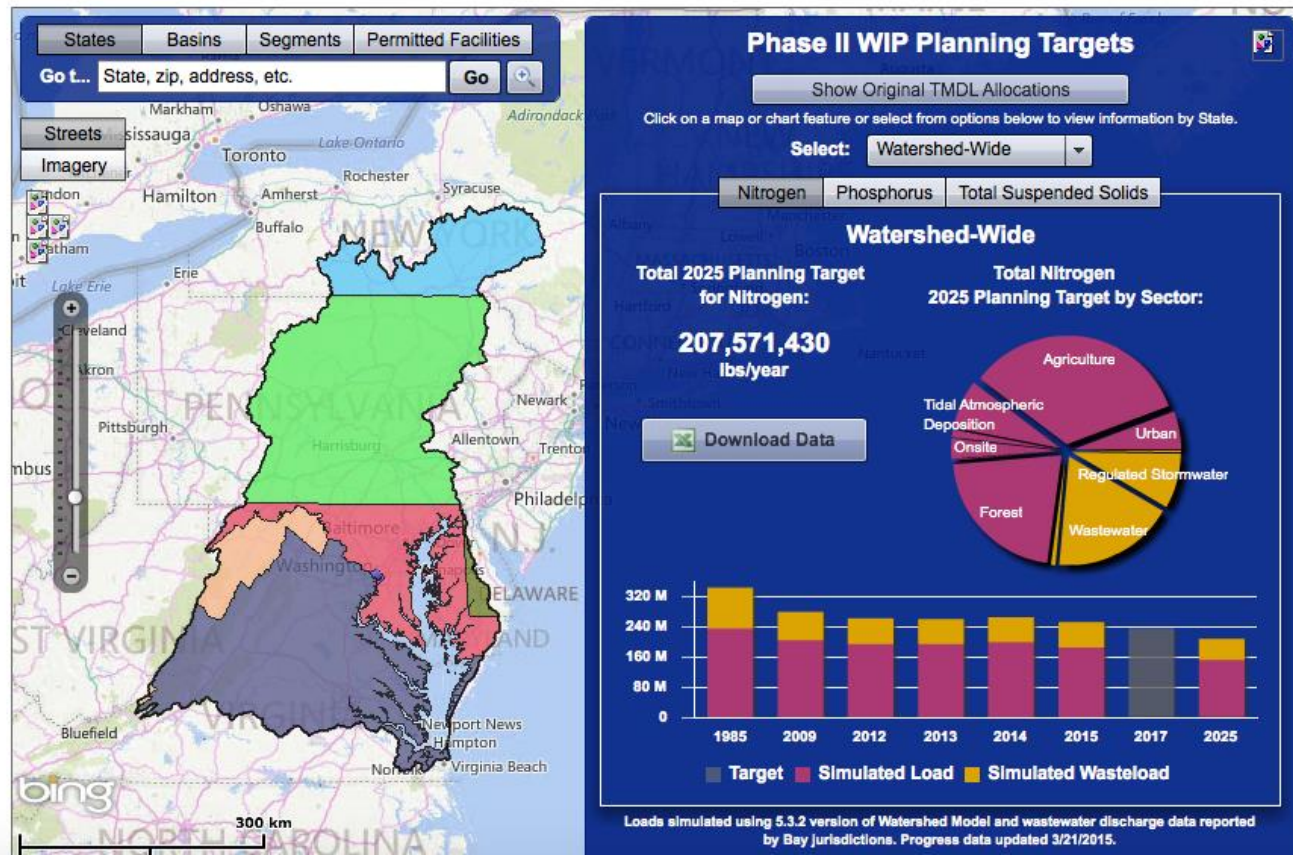


# Chesapeake Stat- TMDL Tracking

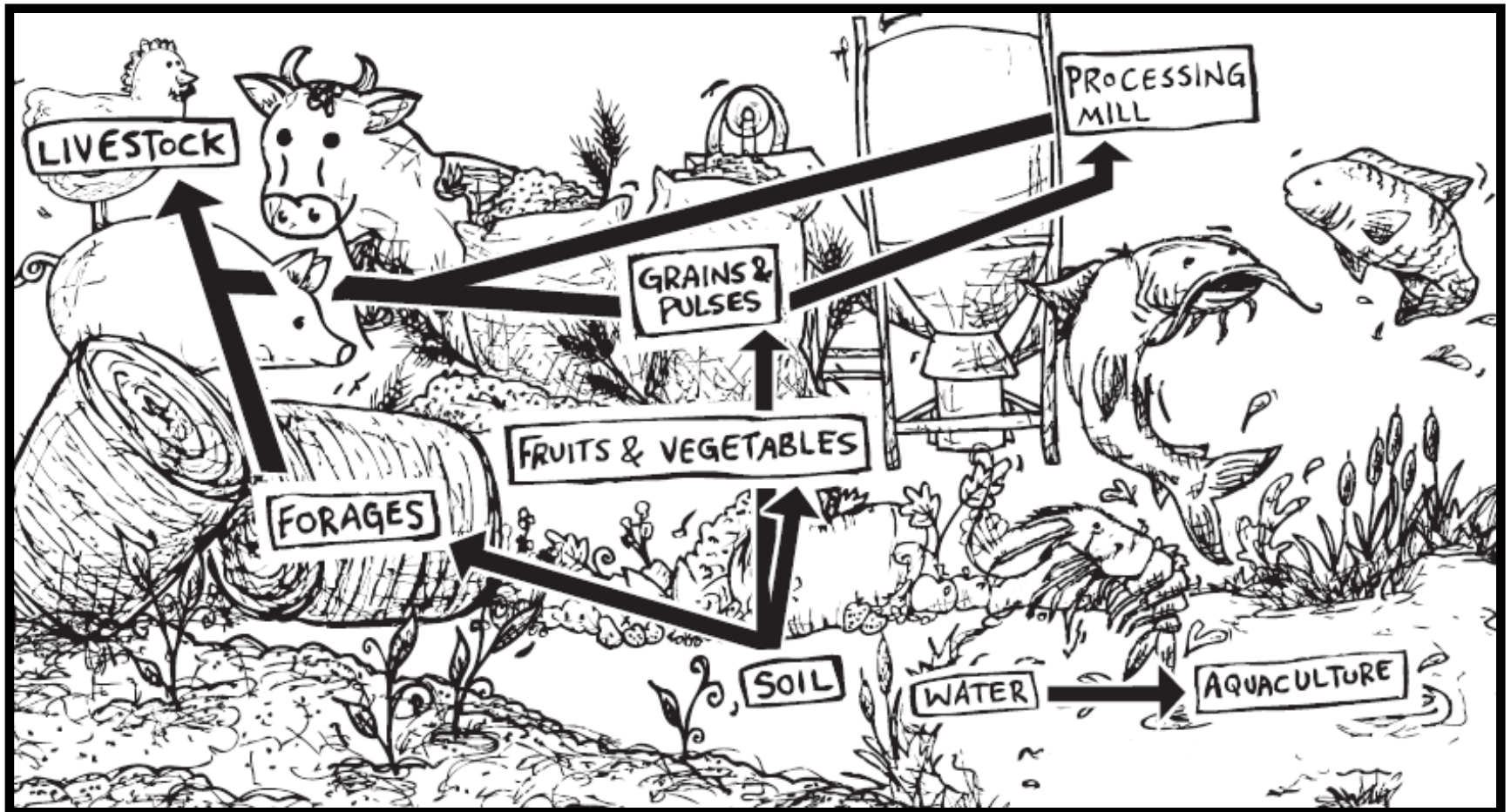
[TMDL Tracking](#)[BMP Review](#)[Two-Year Milestones](#)

## Chesapeake Bay TMDL Tracking and Accounting System

The Chesapeake Bay TMDL Tracking and Accounting System (BayTAS) was developed to inform EPA, the Bay Jurisdictions, and the public on progress in implementing the [Bay Total Maximum Daily Load \(Bay TMDL\)](#). BayTAS stores the TMDL allocations (based on the Watershed Model Phase 5.3.0 and tracks implementation progress (based on the Watershed Model Phase 5.3.2 and the jurisdictions' Phase II Watershed Implementation Plans (WIPs)). BayTAS data are displayed through the TMDL Tracker. [Learn more about BayTAS](#) and the [terminology of the TMDL](#) in the glossary found in Section 13 of the TMDL. Get answers to [frequently asked questions](#) about the Bay TMDL.



**Agriculture is a Complex system of inputs and outputs- And sometimes you make money!**





# Major Agricultural Issues in Bay Region

- Loss of Farmland/Urbanization
- Age of Farmers/Beginning Farmer Start-up Cost
- Low or Cyclic Farm Product Prices or Markets
- International Competition (Cheaper products entering market)
- Equipment/ Farmland Cost
- Need for Increased Diversification on Farms
- Economic vs. Environmental Farm Dynamic
- Interactions with Public: Agriculturally Uninformed Neighbors = Complaints of Odors/Noise/Traffic/Use of Farmland
- Agricultural Regulation Requirements- State and Federal
- Cost Share Funding Decreases- State and Federal
- Decreased Technical Assistance for Farmers
- Others?



# QUESTIONS ?

**Dana York-**  
**Green Earth Connection**  
[dyork818@yahoo.com](mailto:dyork818@yahoo.com)



Thanks to Contributors: Edwin Kee, Dr. Sean Clark, Berea College, Matt Monroe, Wendy Walsh; Rachel Rhodes, Bill Satterfield, Bill Angstadt, James Davis-Martin