

# Chesapeake Bay Program Update

2013-2014 Bay Barometer  
Principals' Staff Committee Meetings  
Accountability and Verification

***Nick DiPasquale, February 19, 2015***



**Chesapeake Bay Program**  
*Science. Restoration. Partnership.*

[www.Chesapeakebay.net](http://www.Chesapeakebay.net)

# Chesapeake Bay Barometer

## Challenges & Opportunities



# BAY BAROMETER

2013 - 2014

## Health and Restoration

in the Chesapeake Bay Watershed



Chesapeake Bay Program  
Science. Restoration. Partnership.

**How is the Bay  
doing?**

...the latest science  
from 2013 & 2014



# At a Glance...

## HEALTH AND RESTORATION AT A GLANCE

### HEALTH

#### Water Quality

29 percent of the clean water standards were met in the Bay's tidal waters. Three major rivers in the watershed showed long-term improvements in nutrient and sediment concentrations. In the short-term, concentrations remain relatively unchanged.



#### American Shad

Rise in spawning shad in some watershed rivers



#### Juvenile Striped Bass

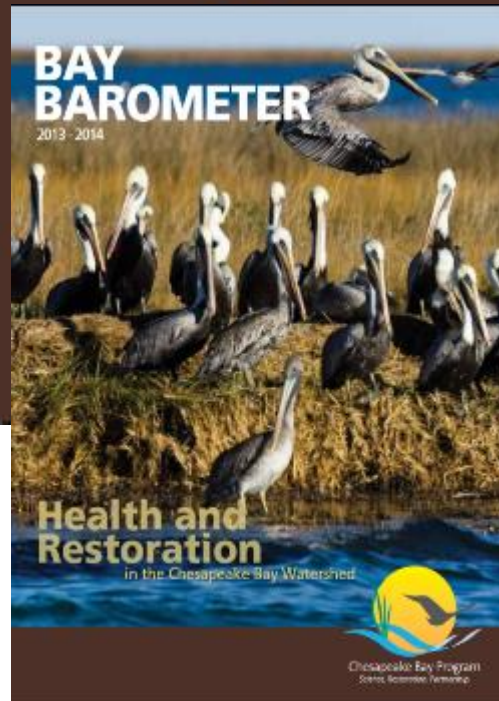
Rise in abundance of juvenile striped bass in the Bay in 2014

#### Underwater Grasses

59,927 acres of underwater grasses in the Bay in 2013; an increase from the previous year

#### Blue Crabs

68.5 million spawning-age female blue crabs in the Bay in 2014; a decrease from the previous year



### RESTORATION

#### Wetlands

6,098 acres of wetlands established, rehabilitated or reestablished on agricultural lands between 2010 and 2013



#### Forest Buffers

7,994 miles of streamside trees and shrubs planted since 1996



#### Fish Passage

2,576 miles of rivers and streams reopened to migratory fish since 1989



#### Protected Lands

572,000 acres of land permanently protected from development between 2010 and 2013



#### Public Access

36 new sites for the public to enjoy the Bay and its rivers were opened in 2013



#### Reducing Pollution to the Bay and its Tidal Rivers

Between 2009 and 2013, our partners reduced pollution by:

- o Nitrogen: 20.28 million pounds
- o Phosphorous: 2.04 million pounds
- o Sediment: 497 million pounds



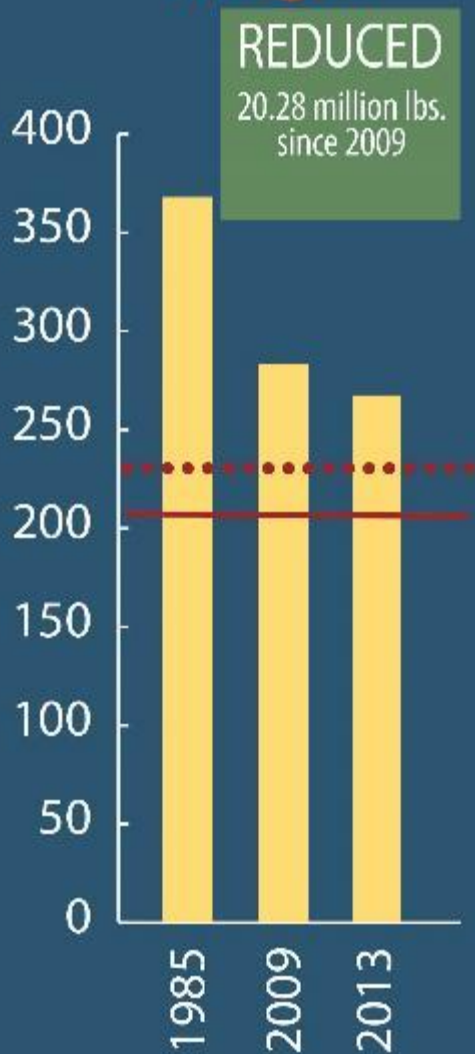
# Water quality, watershed-wide

## 3 aspects to consider:

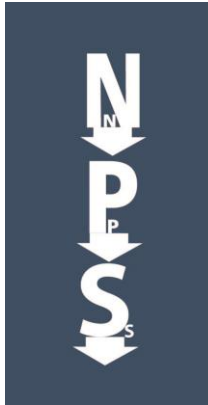
1. Results of CBP partners effort to improve water quality by reducing nitrogen, phosphorus, sediment (estimated data)
2. Rivers: Actual nitrogen, phosphorus, sediment in rivers (monitoring data)
3. Bay: Actual water quality in tidal Bay (monitoring data)



## Nitrogen



Decreased by  
20.28M lbs.  
to 262.4M lbs.



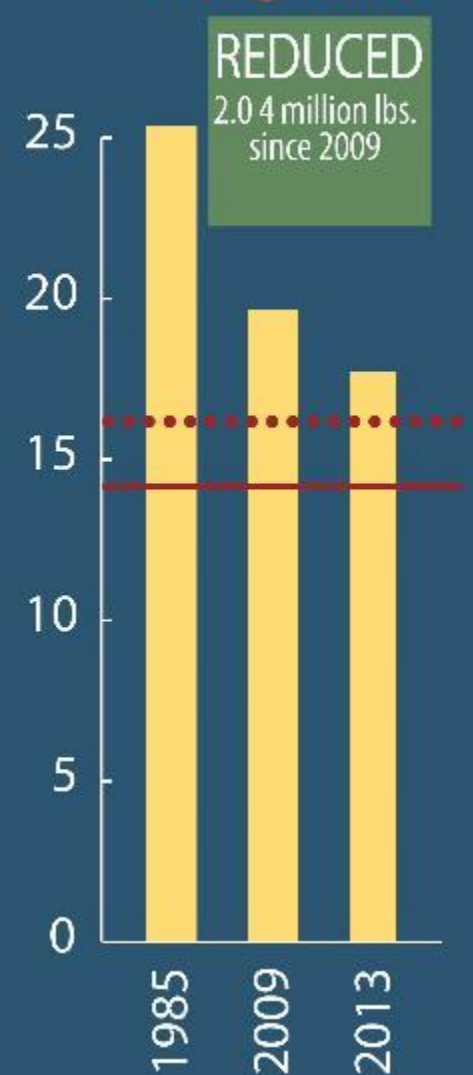
Restoration efforts:

Reducing  
**Nitrogen**  
&  
**Phosphorus**

2013 estimates of  
CBP partners'  
progress

(2014 data -spring 2015)

## Phosphorus



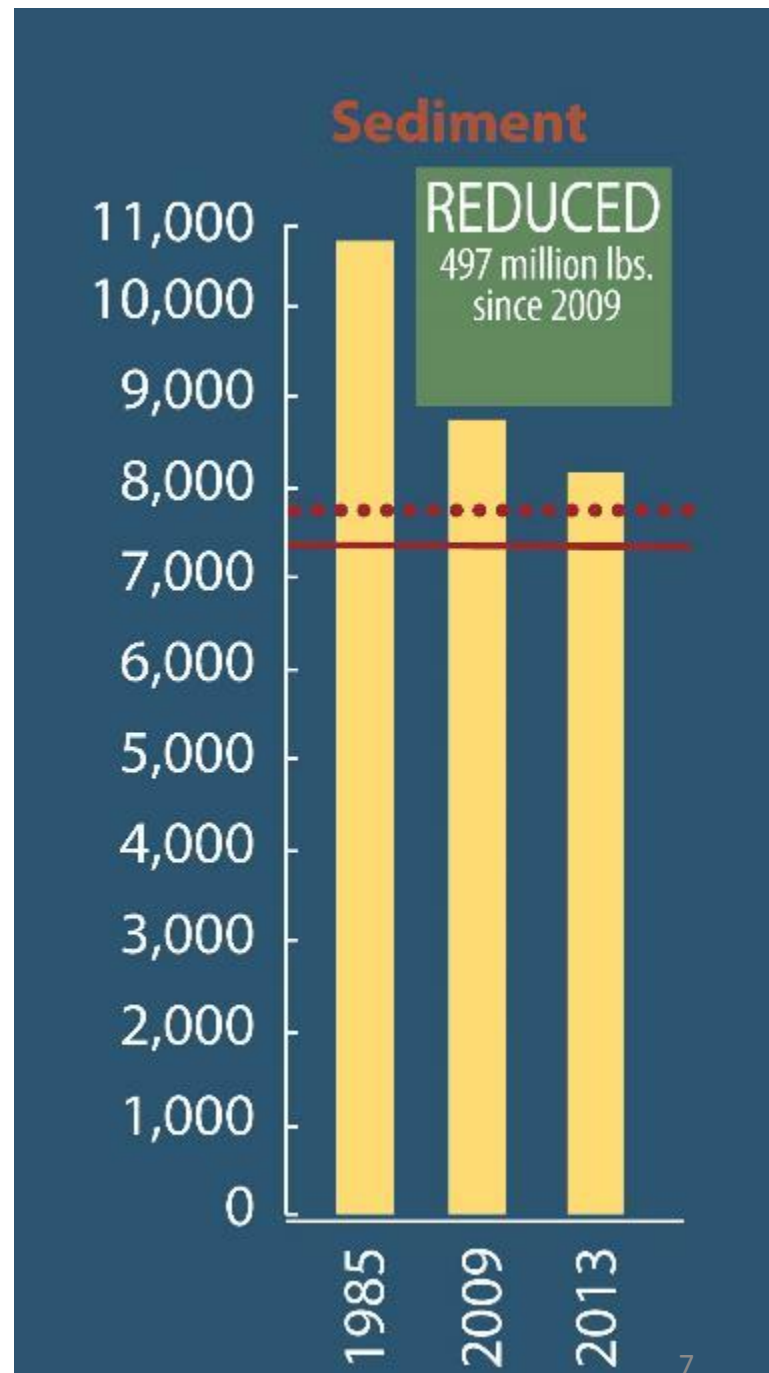
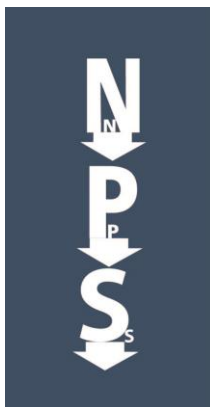
Decreased by  
2.04 M lbs.  
to 17.19 million<sup>6</sup>

Restoration efforts:  
**REDUCING SEDIMENT**

Decreased by  
497M lbs.  
to 8.1M lbs.

2009-13 estimates of  
CBP partners' progress

(2014 data expected spring  
2015)





# River data



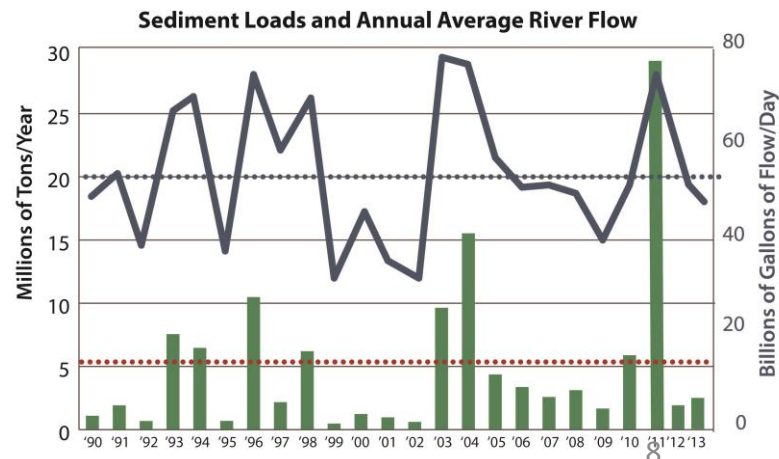
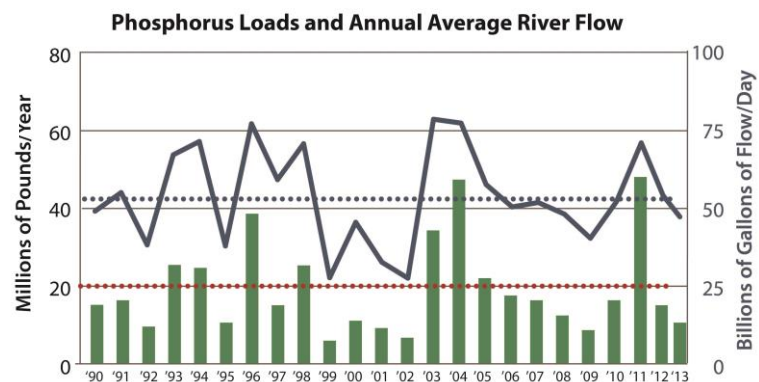
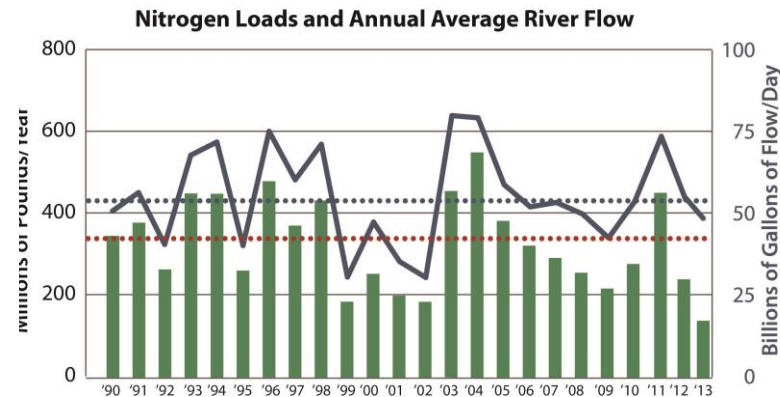
**N**  
**P S**

**Pollution Loads in Rivers Decreased**

Precipitation affects river flow (blue line) and the amounts of nutrients and sediments that wash downstream

2013, river flow was average

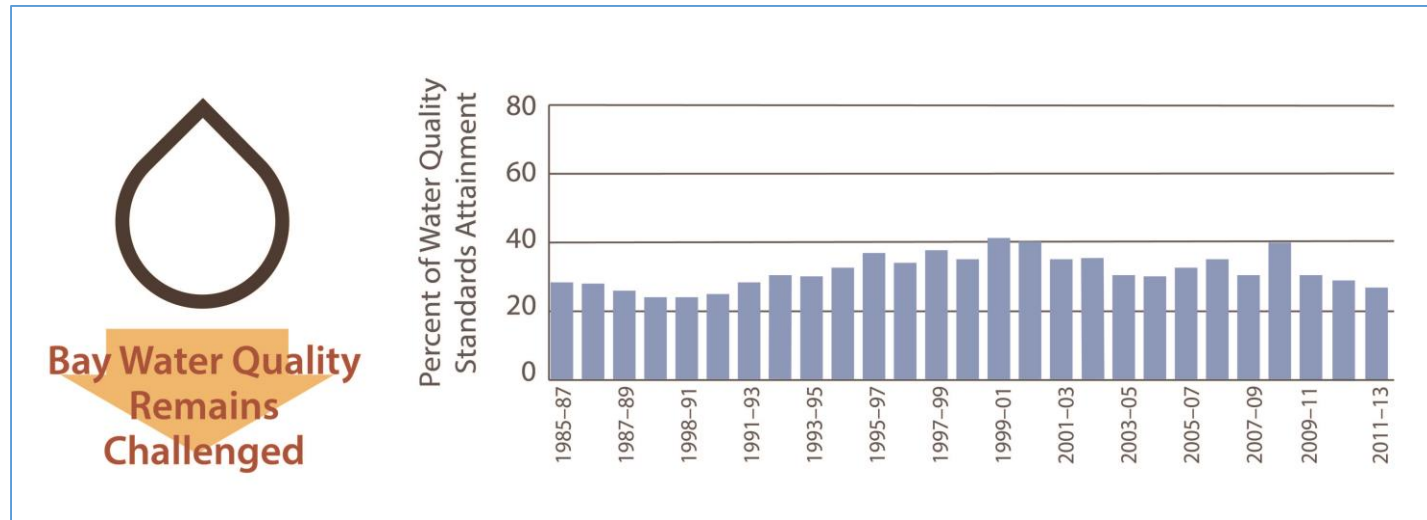
Average Load .....  
Average Flow .....  
River Flow —





# Bay (tidal) Water Quality

**29% for  
2011-13  
period**  
(down slightly  
from 31% in  
2010-12)

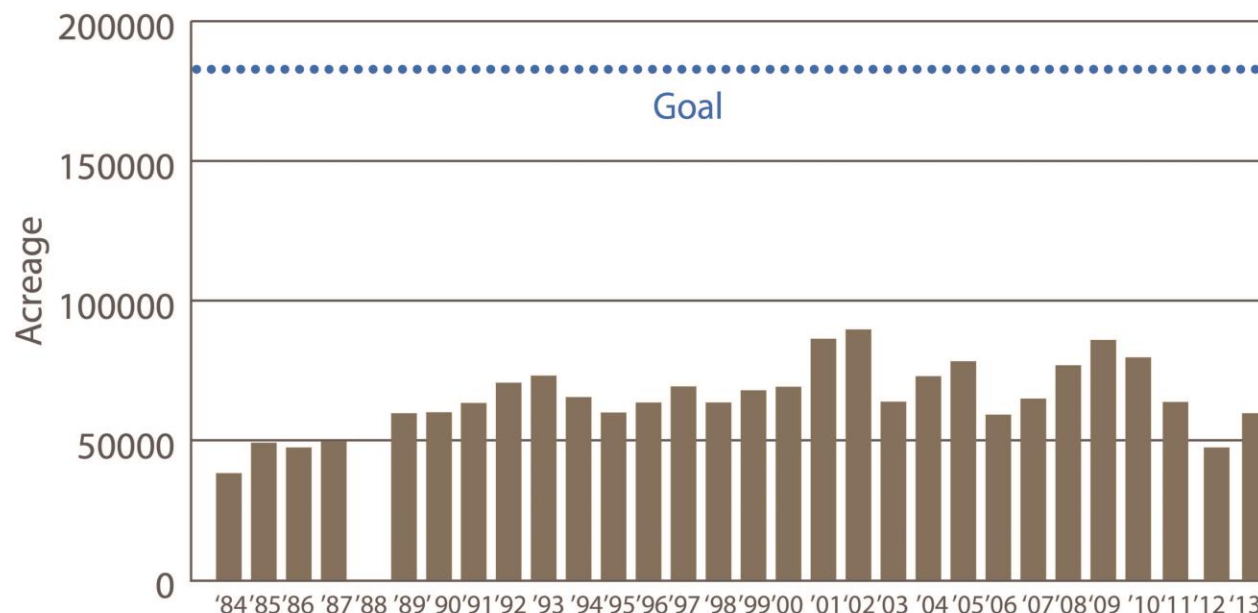


- 92 segments of tidal Bay evaluated using:
- 3 pieces of monitoring data for each:
  - Dissolved oxygen
  - Chlorophyll *a* (algae)\
  - Water clarity as measured by underwater grass abundance

# Underwater Grasses



**Underwater  
Grasses Show  
Modest Rise**



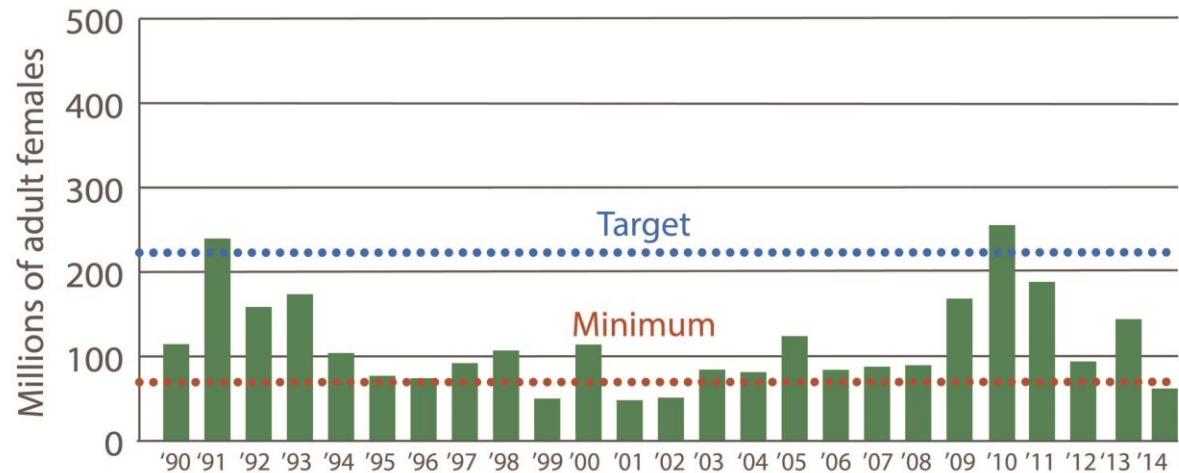
**2013 - 59,927 acres in the Bay**  
an increase of almost 12,000 acres since 2012

# Blue Crabs

(abundance of adult spawning age females)



**Female Blue  
Crabs Depleted**

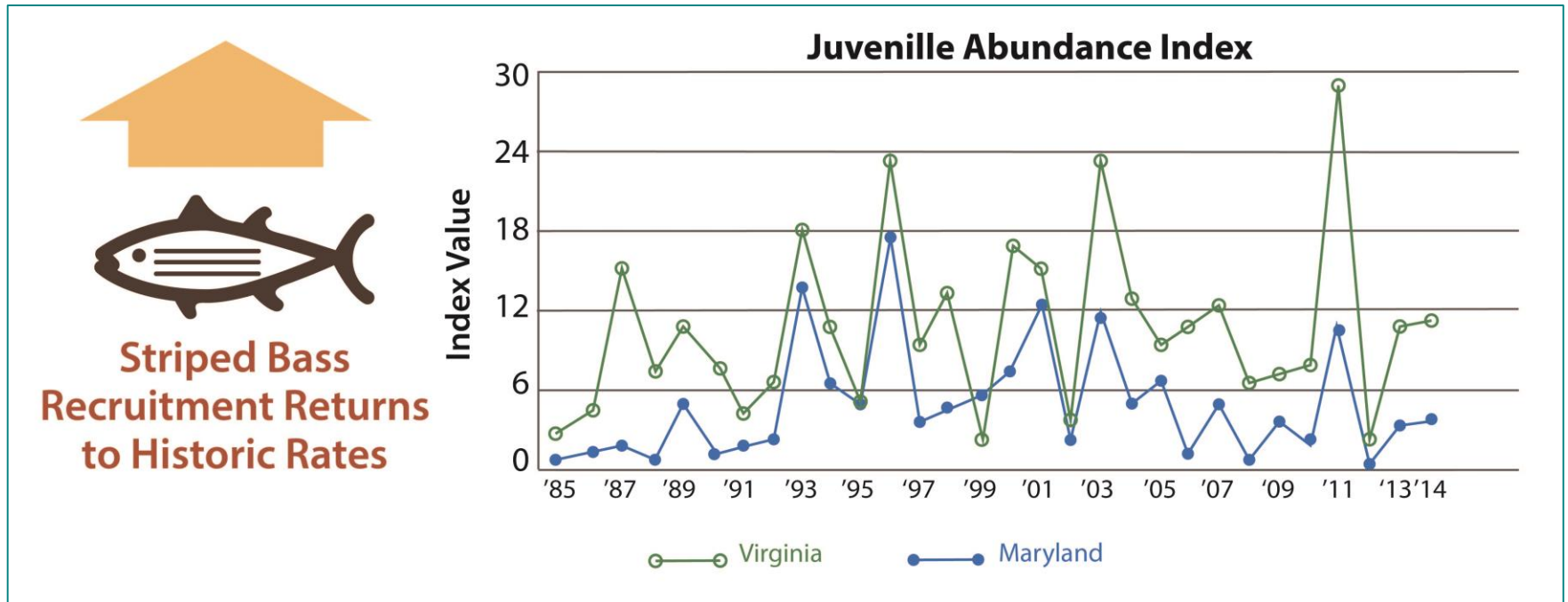


**2014 – 68.5 million**

2013 – 147 million

This number is below both the 215 million target abundance and the 70 million threshold, which means spawning-age female crabs are currently in a depleted state.

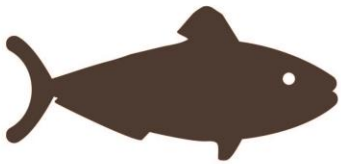
# Striped Bass (rockfish)



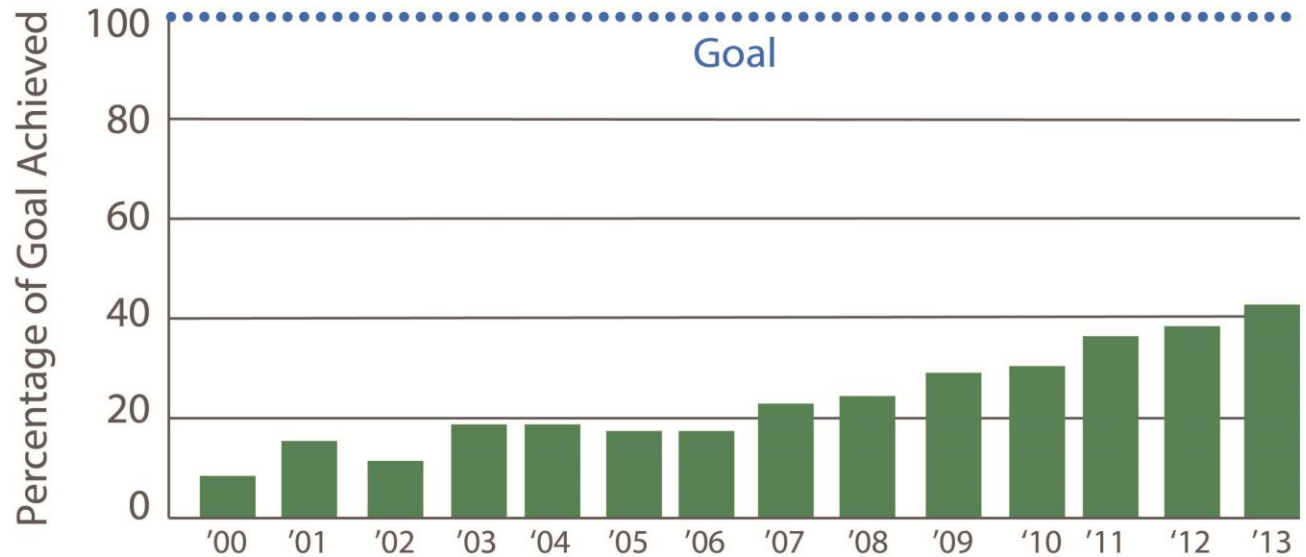
Juvenile index provides a good indication of what the adult abundance will be in coming years



# Shad



**American Shad  
Recover in  
Potomac River**



**2013 – 41% of goal**

**Increase from 38% in 2012**

Data from the James, Potomac, Rappahannock, Susquehanna  
and York rivers

# 2013 & 2014

## CBP partner conservation & restoration watershed-wide



6,098  
acres



7,994  
miles



2,576  
miles

### Wetlands Restored

2013: **287 acres established, rehabilitated or reestablished** on agricultural lands

**Total since 2010: 6,098**

Wetlands trap pollution, slow erosion, protect properties from floods and provide critical habitat to wildlife. Land purchases and conservation easements continue to protect wetland habitat, while the removal of invasive species rehabilitates degraded wetlands.

### Forest Buffers Planted

2013: **229 miles planted**

**Total since 1996: 7,994 miles**

Streamside trees and shrubs, also known as riparian forest buffers, stabilize shorelines, remove pollutants from runoff and shade streams for brook trout and smaller creatures that thrive in cool temperatures and clean waters. Forest buffers are essential to healthy stream habitats.

### Fish Passage Reopened

2013: **33 miles restored**

**Total since 1989: 2,576 miles**

Installing fish ladders, lifts and other passageways or removing dams, culverts and other barriers allow migratory fish to reach their upstream spawning grounds.

# 2013 & 2014

## CBP partner conservation & restoration watershed-wide



8.4  
million  
acres



1,208  
sites



6  
rivers

### Lands Protected

2010-13: **572,000 acres**  
**Total: 8,371,682**

Conserved lands protect water quality, sustain fish and wildlife, maintain working farms and forests, preserve our history, and provide opportunities for outdoor recreation. Approximately 21 percent of the land (8,371,682 acres) in the Chesapeake Bay watershed has been permanently protected from development.

### Public Access Established

2013: **36 sites opened**  
**Total: 1,208 sites**

Increasing public access to open space and waterways strengthens the bond between people and place, boosting local economies and creating citizen stewards who are engaged in conservation work.

### Oyster Reefs Being Built

2014: **6 tributaries selected  
for restoration**

Oysters are filter-feeders that help clean the Bay's waters; the reefs that they form also create valuable habitat for many bottom-dwelling creatures. In 2010, our partners embarked on a tributary-based strategy to restore oyster reefs in Maryland and Virginia waterways. As of February 2014, six tributaries have been selected for restoration. Reefs have been built and seeded on almost 190 acres in Harris Creek, and restoration plans have been drafted for the Little Choptank and Tred Avon rivers.



# Principals' Staff Committee

February 18, 2015 Meeting  
Looking Ahead in 2015





# February 18 PSC Meeting (postponed)

## *Decisions Requested:*

### **Management Strategy Development**

- Input on the communications plan and timeline for the release of draft management strategies for public comment.
- Input and support for engaging new partner agencies, including federal, state and local departments of transportation and education.

### **Riparian Forest Buffer State Task Force**

- Awareness and involvement in high-level action to increase riparian forest buffers.

### **Chesapeake Bay Comprehensive Study**

- Jurisdiction commitment to working with NFWF as the non-federal sponsor, and identification of resources that can be applied to Management Strategy Biennial Workplans.

### **Watershed-wide Acquisition of High Resolution Land Cover Data**

- Agreement to proceed with acquisition of hi-res land cover data, and plans to fill in remaining gaps in high resolution elevation data.

### **2015 Executive Council Planning**

- Signatory appointments to the Executive Council Planning Team.

# *Choose Clean Water Coalition February 12 Letter to Secretary Ward*

*“ . . . respectfully request that **current drafts of the Management Strategies be made available immediately** on the Management Strategies Dashboard and that **the planned comment period be extended from 30 days to 60 days** to allow interested stakeholders a reasonable opportunity to comment on the 25 Management Strategies.”*

- 30 days is not enough time for full-time advocates, volunteers or other interested parties to review 25 strategies.
- Current draft strategies should be posted as they are developed to allow stakeholders to track progress when they cannot attend meetings.

# Principals' Staff Committee

## *Looking Ahead in 2015*

### **Short Term**

- Welcoming and orienting new administrations
- S. 1000 – The Chesapeake Bay Accountability and Recover Act of 2014
- CAC Letter Addressing Governance & supermajority voting.

### **Long Term**

- Management Strategy and Biennial Workplans
- ChesapeakeStat
- Federal Facility Targets
- State BMP Verification Program Reviews
- Mid-Point Assessment
- Citizen Monitoring Network

# Accountability & Verification

Independent Evaluation  
Nutrient Credit Trading  
Progress on Gaps in WIPs  
Management Strategy Assessment





# Independent Evaluation

*P.L. 113-273*

## *Chesapeake Bay Accountability & Recovery Act*

An Independent Evaluator for restoration activities in the Chesapeake Bay watershed shall be appointed to review and report on:

1. Restoration activities; and
2. Any related topics that are suggested by the Chesapeake Executive Council

# Independent Evaluation

## *Nominees and Appointment*

- Not later than 30 days after the date of submission of nominees by the Chesapeake Executive Council, the Independent Evaluator shall be appointed by the Administrator with the consultation of the scientific community.
- The EC may nominate for consideration a science based institution of higher education.
- Administrator shall only select a nominee that demonstrates excellence in marine science, policy evaluation, or other studies relating to complex environmental restoration activities.

# Independent Evaluation *Reports*

- Not later than 180 days after the date of appointment and once every 2 years thereafter, the Independent Evaluator shall submit to Congress a report describing the findings and recommendations of reviews
- No additional funds are authorized to be appropriated.

# Nutrient Credit Trading

## *Technical Memoranda Development Schedule*

Technical Memoranda Development Schedule							
#	Technical Memorandum	Lead Office	Next Step	Draft to HQ and USDA	Draft to Bay Jurisdictions	Draft to TOWG & Stakeholders	Target Finalized Date
1	Sector Load Growth Demonstration	WPD		Yes	Yes	Yes	Yes 2/5/13
2	Accounting for Uncertainty	CBPO		Yes	Yes Apr 2013	Yes Jun 2013	Yes 2/26/14
5	Local Water Quality	WPD		Yes	Yes Jul 2013	Yes Nov 2013	Yes 3/21/14
3	Representative Sampling	WPD		Yes	Yes Jun 2013	Yes Feb 2014	Yes 4/17/14
4	Components of Credit Calculation	CBPO		Yes	Yes Jun 2013	Yes Oct 2013	Yes 5/14/14
8	Credit Permanence	WPD		Yes 10/21/13	Yes 3/21/14	Yes 5/14/14	Yes 8/27/14
7	Verification/Certification Measures	CBPO	Staff still working, back to states next	Yes 12/23/13	Yes 8/6/14	Yes 10/6/14	No 4Q CY14
6	Baseline Demonstration	WPD	Jurisdiction meeting held 2/6	Yes 12/09/14	Yes 1/13/15	No 3Q CY14	No 4Q CY14
10	Net Improvement Offset	WPD/CBPO	Will send to HQQ for review	No 3Q CY14	No 3Q CY14	No 3Q CY14	No 4Q CY14
12	Compendium	CBPO	Drafted - needs more discussion	No 4Q CY14	No 4Q CY14	No 4Q CY14	No 4Q CY14
9	MS4 and Construction Mitigation	WPD	Rough draft exists, but not ready to share internally				
11	Interstate Trading	CBPO	Now active, see 1/28 management meeting agenda				
Updated 2/11/15							
* Left column denotes the original priority, thus is not necessarily sequential							



# Nutrient Credit Trading *Update*

## **Schedule for issuance of Trading Technical Memoranda (TMs)**

- 6 TMs issued to date
- 3 more to be issued in 2015
  - Baselines
  - Verification & Certification
  - Net Improvement Offset
- Possible Interstate Trading TM in 2016
- Compendium summarizing all TMs scheduled for late 2015

## **Interstate Trading Programs**

- Study being conducted in 2015 in the U.S.

# Nutrient Credit Trading *Update*

## **Second Assessment of Jurisdictions' Trading Programs**

- Being conducted by EPA in 2015 (first one conducted in 2012)
- Assessments will:
  - Examine how jurisdictions current trading programs meet the expectations set forth in the TMs.
  - Help determine readiness for interstate trading among jurisdictions.

## **Working with WRI to Improve Calibration Between the:**

Nutrient Trading Tool (NTT)

Chesapeake Bay Program Watershed Model

Scenario Builder

CAST family of decision-support tools

# Progress on Gaps in Watershed Implementation Plans

## *2014 EPA WIP Oversight Status*

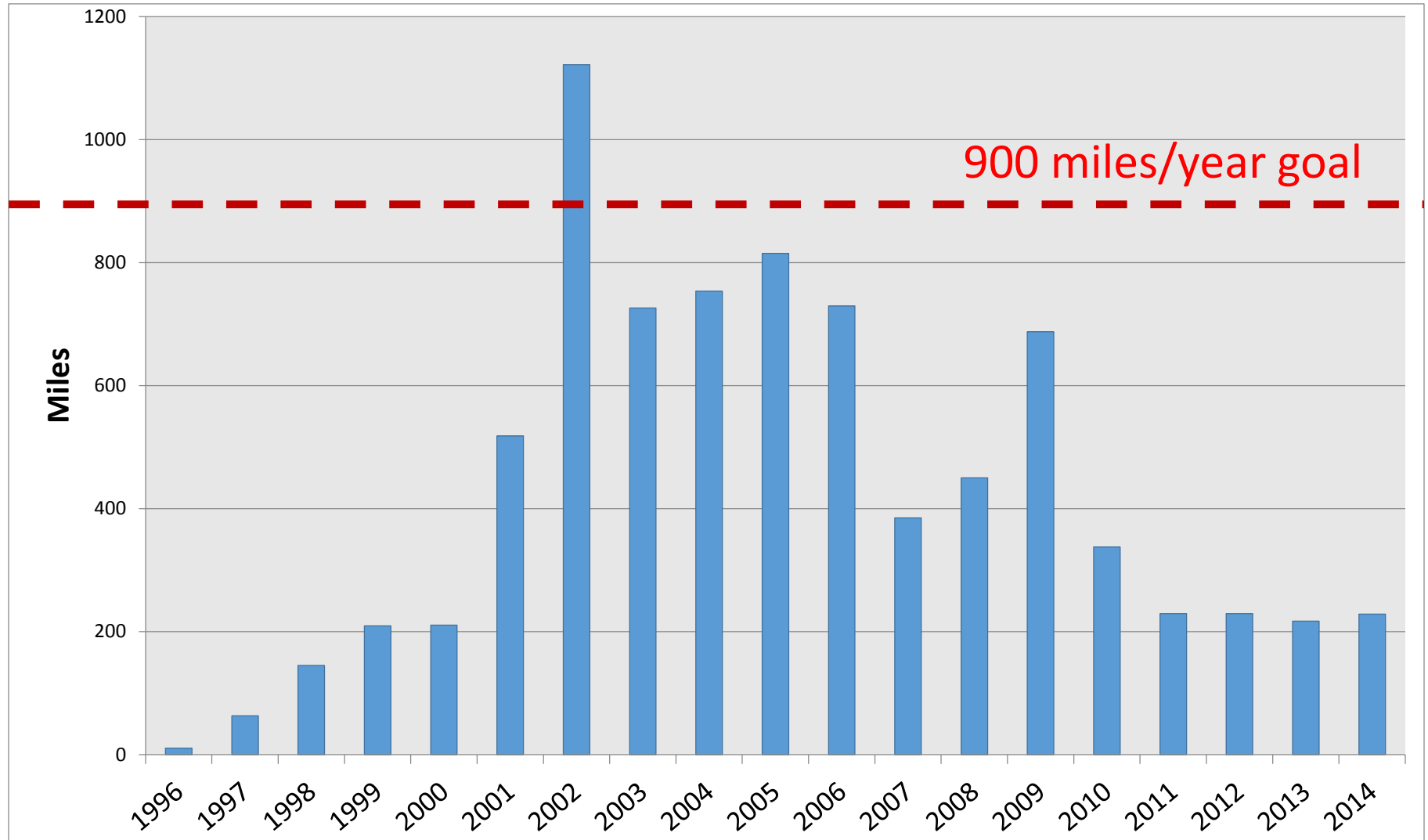
	Agriculture:	Urban/Suburban:	Wastewater:	Trading/Offsets:
DE	Ongoing Oversight	Ongoing Oversight	Ongoing Oversight	Ongoing Oversight
DC	Not Applicable	Ongoing Oversight	Ongoing Oversight	Ongoing Oversight
MD	Ongoing Oversight	Ongoing Oversight	Ongoing Oversight	Ongoing Oversight
NY	Ongoing Oversight	Ongoing Oversight	Enhanced Oversight	Ongoing Oversight
PA	Backstop Actions Level	Backstop Actions Level	Ongoing Oversight	Enhanced Oversight
VA	Ongoing Oversight	Enhanced Oversight	Ongoing Oversight	Ongoing Oversight
WV	Enhanced Oversight	Ongoing Oversight	Ongoing Oversight	Ongoing Oversight

# Progress on Gaps in Watershed Implementation Plans

## *Top Priority WIP Implementation Challenges*

- **Pennsylvania Agriculture**
  - Lacks programmatic infrastructure, funding needed to achieve WIP commitments
- **Pennsylvania Stormwater**
  - Current WIP commitments are not achievable, needs to be re-allocated
- **Virginia Agriculture**
  - Lack of sufficient state cost share funds to achieve implementation levels within their WIP
- **Delaware Agriculture**
  - Lack of CAFO permits, need for updating P-index with latest science
- **Federal Facilities**
  - Adoption of facility specific targets w/regulatory or enforceable mechanisms

# *Jurisdictions Falling Well Below Desired Riparian Forest Buffer Installation Rate*





# Large Gaps Between Current Annual Progress and States' WIP Targets for Riparian Forest Buffers

	Total <u>New Acres</u> Needed 2012-2025	New acres/year needed	2014 new acres
Delaware	4,790	<b>399</b>	0
Maryland	1,560	<b>130</b>	144
New York	5,920	<b>493</b>	18
Pennsylvania	103,970	<b>8,664</b>	193
Virginia	79,730	<b>6,644</b>	123
West Virginia	2,910	<b>243</b>	43
<b>TOTAL</b>	198,880	<b>16,573</b>	<b>521</b>

16,573 acres/year = 1,367 miles/year of 100 ft wide buffers

# Management Strategy Tracking, Assessment & Verification

- The tracking, assessing, and verification of the management strategies is a Partnership effort.
- STAR and STAC are leading the assessment of new & outdated metrics and indicators.
- ChesapeakeStat will be a host site for the Progress, Decisions, and Data tools for management strategies



[About](#) [Chesapeake Bay Program](#) [Watershed Agreement](#) [Contact Us](#)

## Managing Watershed Restoration

ChesapeakeStat improves information-sharing and decision-making at the Chesapeake Bay Program. As we work toward the goals of the Chesapeake Bay Watershed Agreement, we invite you to access reliable, results-oriented data and information about our progress and hold us accountable for our work.



### CHESAPEAKE PROGRESS

Our progress is measured by accurate, up-to-date and accessible information on environmental health, habitat restoration and funding.



### CHESAPEAKE DECISIONS

Our work is guided by a decision-making framework that supports adaptive management: learning while doing and adjusting our efforts as needed.



### CHESAPEAKE DATA

Our decisions are influenced by a range of environmental data, which reach beyond those stories that are told by our indicators of environmental health and restoration success.



Access our TMDL [tracker](#), Two-Year Milestone [progress tool](#), Best Management Practice [review table](#), or Tracking Healthy Watersheds [tool](#).

[Learn more about the Watershed Agreement](#)



# EPA Chesapeake Bay Program Office Funding

FY 2015 / 2016





# FY 2015 President's Budget

## EPA Chesapeake Bay Program Office Funding

- **FY 2014** Enacted Budget - \$ 70 million
- **FY2015** Enacted Budget - \$ 73 million
  - Highlights:
    - Over \$29 million in state implementation and accountability grants, including \$5 million “set-aside” for local governments
    - Over \$4.8 million in water quality monitoring grants
    - \$ 6 million in Small Watershed Grants
    - \$ 6 million in Innovative Nutrient and Sediment Reduction Grants
    - Includes new funding for Citizen Monitoring Program, Climate Change Coordinator position, Land Cover Tool and development and implementation funds for Agreement Management Strategies
- **FY 2016** President's Budget - \$70 million