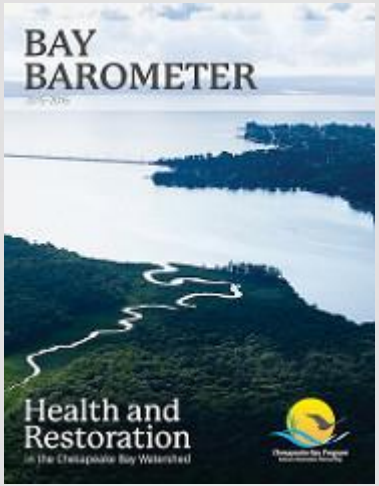
BAY BAROMETER: Health and Restoration in the Chesapeake Bay Watershed (2016 – 17)

Management Board
October 19, 2017

What is it?

What is it?

- Annual report on watershed health and restoration.
- Retrospective summary of previously published indicators.



Who is it for?

Who is it for?

- Chesapeake Bay Program partners
- The interested public (especially students and teachers)

What does it look like?

What does it look like?

- Clean design and simple structure

  Watershed Agreement themes: Abundant Life, Clean Water, Protected Lands, Engaged Communities and Climate Change

- Comprehensive coverage of Watershed Agreement outcomes

  20 are addressed with traditional indicators

  Where indicators are not available, or data has not been updated, outcomes are addressed with highlights from the year's news.

What's new in 2017?

What's new in 2017?

- Environmental Literacy & Planning
- Student MWEEs
- Citizen Stewardship

What does this year's Barometer say?

What does this year's Barometer say?

- Positive trends:
  - Blue crab abundance
  - Estimated Pollution Reduced
  - Fish Passage
  - Public Access
  - SAV
  - Water Quality Standards Achieved

What does this year's Barometer say?

News Stories:

Climate Resiliency
Local Leadership
Diversity
Environmental Literacy
Protect Lands
Land Use Options Evaluation
Land Use Metrics & Metrics Development
Healthy Watersheds
Toxic Contaminants Research

Wetlands
Tree Canopy
Stream Health
Forest Buffers
Brook Trout
Black Duck
Forage Fish
Fish Habitat
Blue Crab Management


Abundant Life: Vital Habitats

Abundant Life: Vital Habitats

Positive Trends

FISH PASSAGE

Progress to restore historical fish migration routes is measured against a 2011 baseline of 2,510 stream miles open to the migration of fish. **Between 2012 and 2016, 1,126 additional miles were opened** to fish passage, including 565 miles in Virginia, 538 miles in Pennsylvania and 22.6 miles in Maryland. This marks a **113 percent achievement** of the 1,000-mile goal.

Abundant Life: Vital Habitats

Positive Trends

UNDERWATER GRASSES

In 2016, an estimated 97,433 acres of underwater grasses were mapped in the Chesapeake Bay: **7,433 acres greater than the Chesapeake Bay Program's 2017 restoration target and 53 percent of the partnership's 185,000-acre goal**. Researchers, led by the Virginia Institute of marine Sciences, attribute the rise in underwater grasses to a strong increase in the tidal freshwater and moderately salty regions of the Bay. The iconic grass beds at the mouth of the Susquehanna River, for instance, continued their four-year recovery following damage from Hurricane Irene and Tropical Storm Lee. And at over 10,000 acres, the grasses that stretch from Smith Island to Tangier Island have become the biggest contiguous grass bed in the Bay. Researchers observed a drop in the eelgrass that grows in the very salty waters of the lower Bay, where beds had increased in recent years following losses that occurred during the hot summers of 2005 and 2010.

Abundant Life: Fish and Shellfish

Abundant Life: Fish and Shellfish

Positive Trends

OYSTERS

Each of the six tributaries that have been selected for oyster restoration is at a different level of progress in a process that involves developing a tributary restoration plan, constructing and seeding reefs, and monitoring and evaluating restored reefs. Monitoring and evaluation began in Harris Creek in 2015, where many of the reefs seeded in 2012 and 2013 are meeting the criteria for success in oyster weight and density and serving as home to oysters of different ages, which indicate a healthy oyster population. **In Maryland, 563.9 acres of oyster reefs are considered complete. In Virginia, 158 acres of oyster reefs are considered complete.** Some of these reefs have undergone restoration as part of our progress toward this outcome, while others have undergone previous restoration work or, due to naturally occurring reefs and oysters, already meet our restoration criteria.

Abundant Life: Fish and Shellfish

Positive Trends

BLUE CRAB ABUNDANCE

Between 2016 and 2017, the abundance of adult female blue crabs in the Chesapeake Bay **rose 31 percent from 194 million to 254 million**. This number is **above the 70 million threshold and the 215 million target**, and marks the **highest amount ever** recorded by the Bay-wide Blue Crab Winter Dredge Survey.


Clean Water

Clean Water

Positive Trends

ESTIMATED POLLUTION REDUCED

Computer simulations show that pollution controls put in place in the Chesapeake Bay watershed between 2009 and 2016 **lowered nitrogen loads nine percent, phosphorus loads 20 percent and sediment loads nine percent**. Experts attribute the drop in estimated nitrogen loads to technological upgrades at wastewater treatment plants and agricultural best management practices (BMPs). Agricultural BMPs have also contributed to the drop in estimated phosphorus and sediment loads, but increased phosphorus and sediment pollution from urban development has offset or reduced the overall benefits these practices have engendered. Pollution-reducing practices are in place **to achieve 33 percent of the nitrogen reductions, 81 percent of the phosphorus reductions and 57 percent of the sediment reductions** necessary to attain applicable water quality standards as compared to 2009, the year before the U.S. Environmental Protection Agency established the Chesapeake Bay Total Maximum Daily Load (Bay TMDL).

Clean Water

Positive Trends

WATER QUALITY STANDARDS ACHIEVED

According to preliminary data, **almost 40 percent of the Chesapeake Bay and its tidal tributaries met water quality standards during the 2014 to 2016 assessment period**. This marks the **second highest** level of water quality standards attainment since 1985. In recent years, aquatic conditions have improved following the damaging 2011 impacts of Hurricane Irene and Tropical Storm Lee, and the long-term trend in estimated water quality standards attainment is positive. But water quality remains far below the 100 percent standards attainment needed for clean water and a stable aquatic habitat, and 60 percent of tidal waters are impaired for these standards.

Engaged Communities

Engaged Communities

Positive Trends

PUBLIC ACCESS

Between 2010 and 2016, **130 access sites were opened** to the public. This marks a **43 percent achievement** of the goal to add 300 new access sites to the watershed, and brings the total number of access sites in the region to 1,269. There are currently seven public access sites in Delaware, 23 in the District of Columbia, 36 in New York, 46 in West Virginia, 205 in Pennsylvania, 354 in Virginia and 598 in Maryland.

Public Release Plan

Public Release Plan

- Media advisory and release
  January 4, 2018

- Blog post and social media messages

- Printed copies mailed or otherwise distributed to:
  Management Board
  GIT and Advisory Committee Chairs, Coordinators and Staffers
  Communications Workgroup
  Education Workgroup
  Sustainable Schools

DATE	ACTIONS	DESCRIPTION	WHO RESPONSIBLE	NOTES
September 22 – October 4	Writing	Development of first draft text	Catherine/Joan/Caitlyn/Rachel	Catherine - Narrative for Indicators; Joan/Rachel/Caitlyn – news items Rachel – Director's message and quotes
September 28	DEADLINE	Presentation to STAR	Rachel	
October 5	DEADLINE	Review of first draft of text	Rachel	
October 6 - 13	Reviewing	CBP Leadership & SMEs	Nick, Jim, Carin, Rich, SMEs	Text & data only – no images or design
October 13 - 18	Compiling	Compiling edits from CBP Leadership/SMEs	Rachel	w/ Catherine, Joan, Caitlyn
October 18	DEADLINE	ALL FINAL INDICATOR DATA DUE	Rachel/Laura	All final data/A & M documents due for indicators included in BB
October 19	DEADLINE	MB Presentation/send to MB for review	Rachel	Text & Data only, no images
October 20	DEADLINE	Issue RFPs	Rachel	For printing
October 30 – November 13	Compiling	Image Selections	Will	w/ input from CBP Communications Team
November 1	DEADLINE	Comm Workgroup Presentation/send to Comm Workgroup for review/send to MB for review/send to final SMEs for review	Rachel	Text & data only, no images
November 13	Compiling	All edits due from MB/Comm Workgroup	Rachel	w/ input from Joan/Catherine/Caitlyn
November 17	DEADLINE	All text and images due to designer	Rachel	
Dec 1	DEADLINE	1st Draft design back	Dave	
Dec 4 - 8	Reviewing	Review of 1st draft design	Rachel/Laura/Catherine/Comm Team/CBP Leadership	4 – 5 days of review 1 week redesign
Dec 8	DEADLINE	2nd Draft design sent to designer	Rachel	Public Release strategy being planned concurrently
Dec 15	DEADLINE	2nd Draft design back	Dave	
Dec 18 - 21	Final Review	Finalize draft	Rachel/Laura/Catherine/Comm Team	
Dec 21	DEADLINE	Prep final design finals, send to printer F	Rachel, Dave	
Dec 26	Print Proof	Blueline for approval	Rachel, Dave	
Dec 27 – Jan 3	Printing		Printer	
Jan 2	Media	Media Advisory Sent	Rachel	
Jan 4		Public Release		

THANKS!

Any questions?

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