



Restoring the Chesapeake Bay

A 30-Year History of Effective Regional Collaboration

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Chesapeake Bay Commission

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What is the Chesapeake Bay ?

What makes it special?

"heaven and earth never agreed better to frame a place for man's habitation..." Captain John Smith, 1612

The Chesapeake Bay is the largest, most productive estuary on earth.





EXTRAORDINARILY DIVERSE!

The Chesapeake Bay supports more than 3,600 species of plants, fish and animals, including 348 kinds of finfish, 173 kinds of shellfish, and over 2,700 plants.

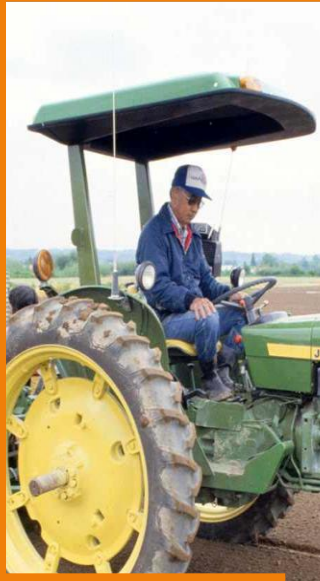
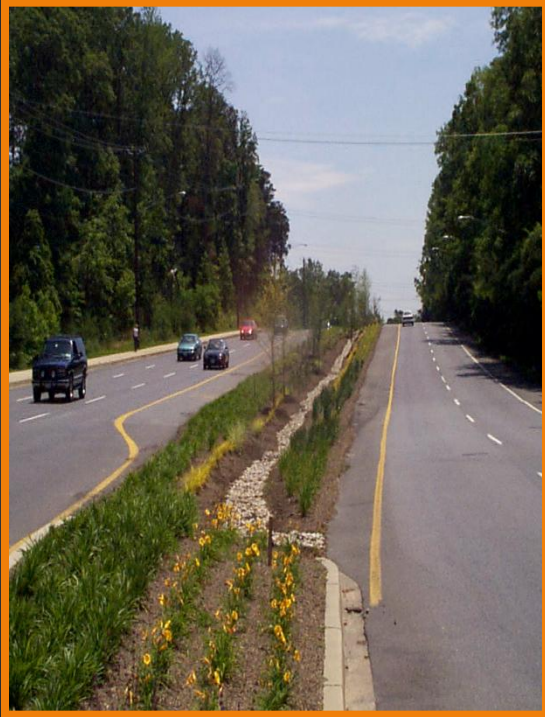


It's Amazingly Shallow!

Coastal Sea	Mean Depth m	Volume cu. km	Watershed Area sq. km
Sea of Japan	1,752	713,000	349,528
South China Sea	1,060	3,907,000	3,223,870
Gulf of Mexico	1,512	2,332,000	5,836,494
Mediterranean Sea	1,500	1,738,000	5,480,000
Red Sea	558	251,000	883,189
Black Sea	1,150	530,000	2,528,884
North Sea	91	155,000	885,306
Sea of Cortez	818	145,000	1,454,775
Great Lakes	35	22,809	510,160
Baltic Sea	558	21,721	1,721,233
Arabian (Persian) Gulf	40	10,000	1,248,506
Gulf of Finland	37	1,098	419,200
Chesapeake Bay	6	70	166,400

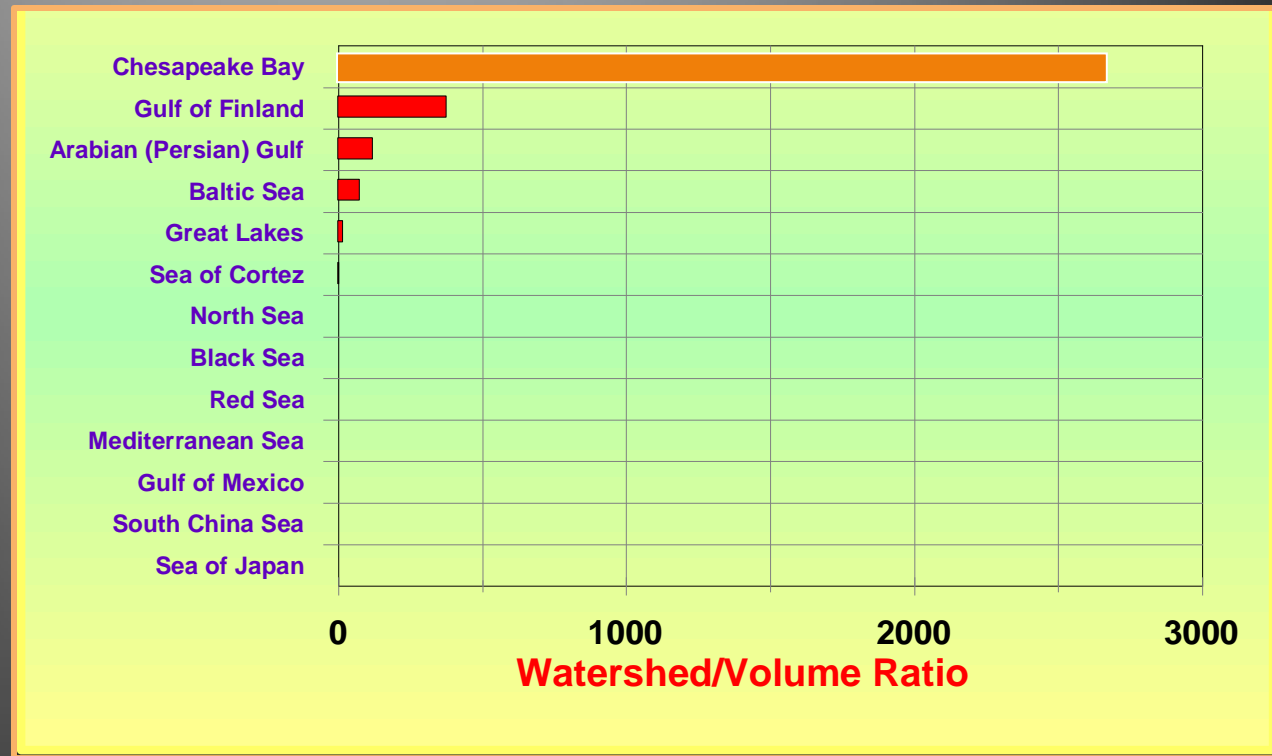
It's Big!



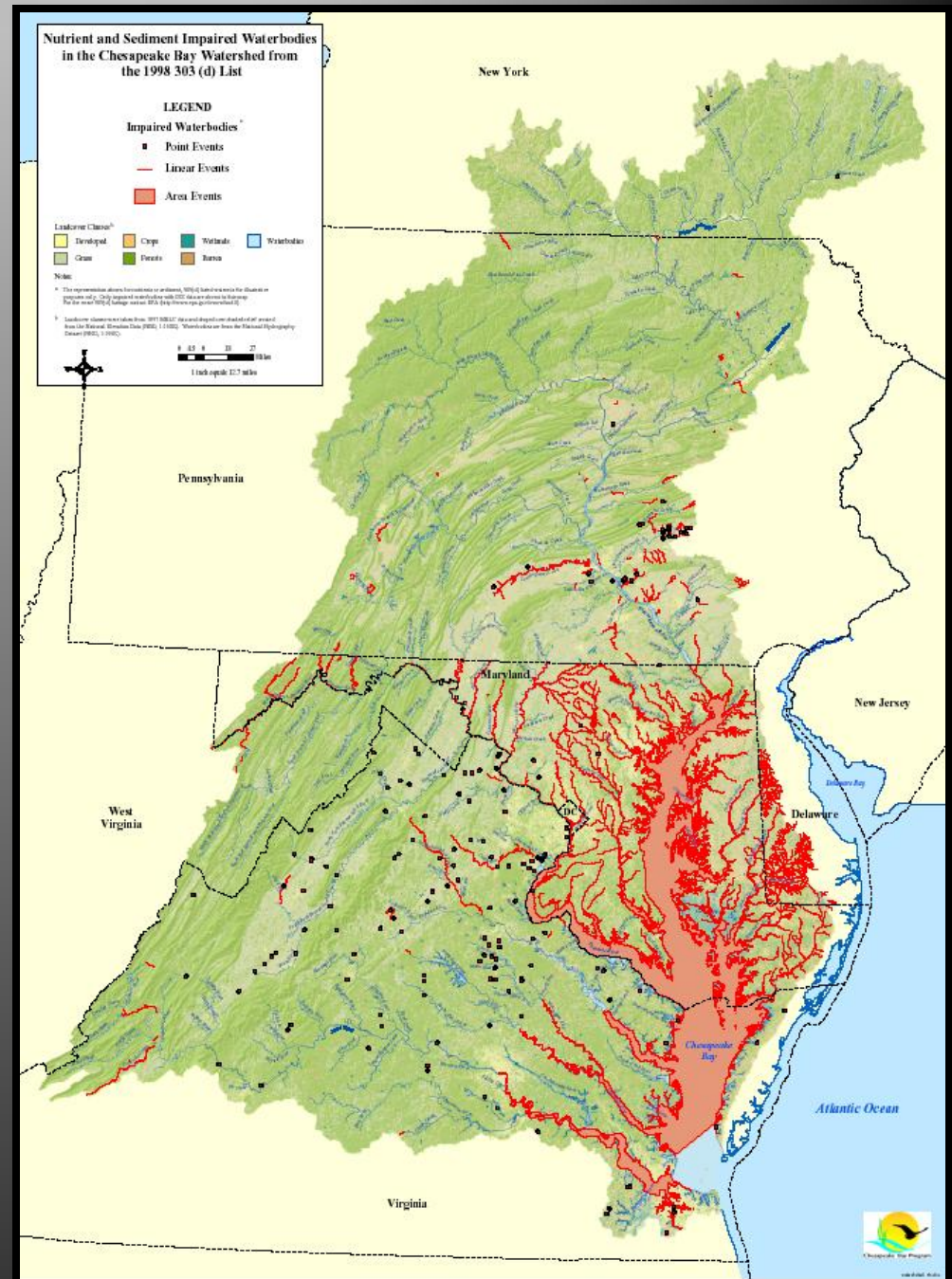


Land Use Matters

Chesapeake Bay has the largest land-to-water ratio of any of the large enclosed coastal seas.

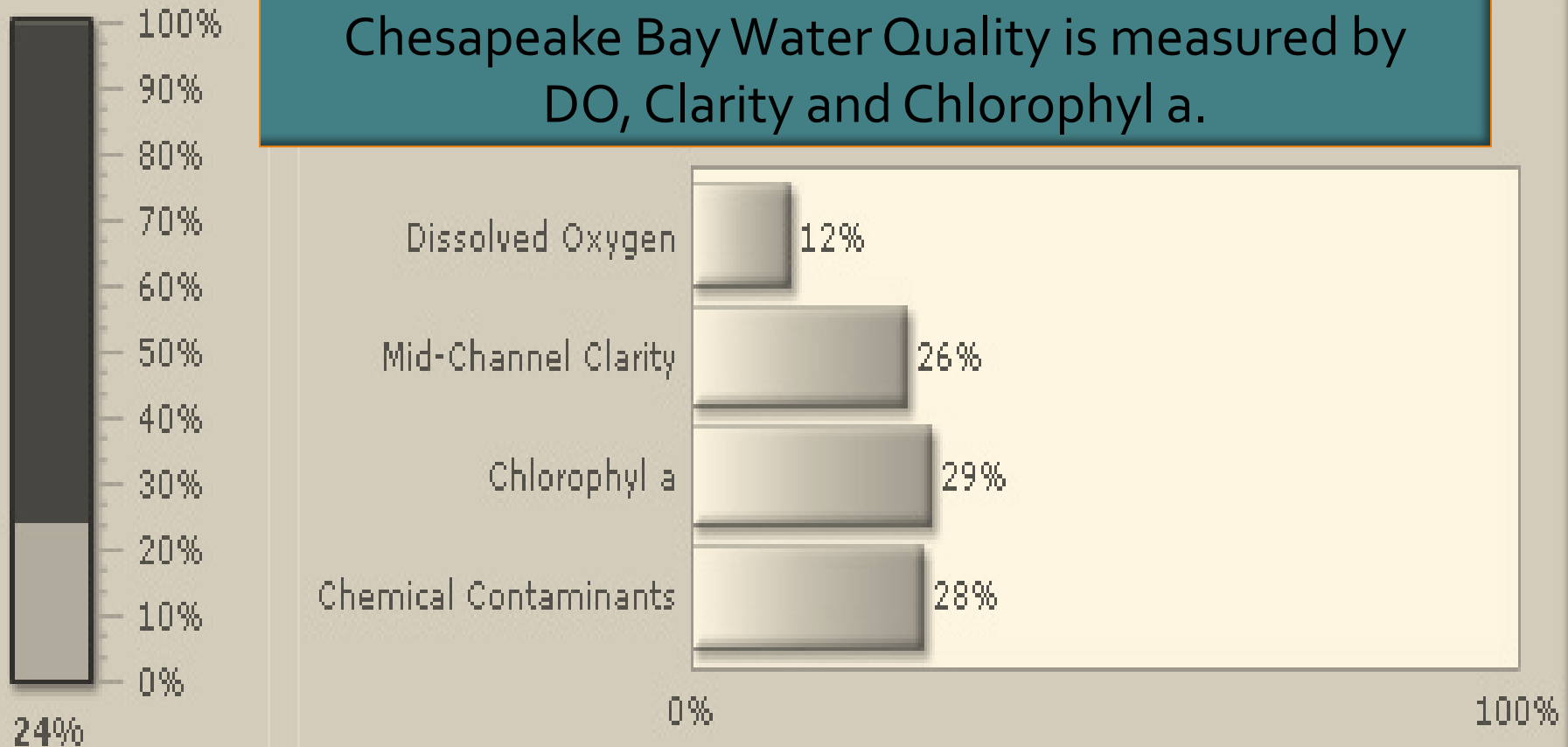


The Chesapeake Bay is IMPAIRED



Water Quality Standards Have Not Been Met

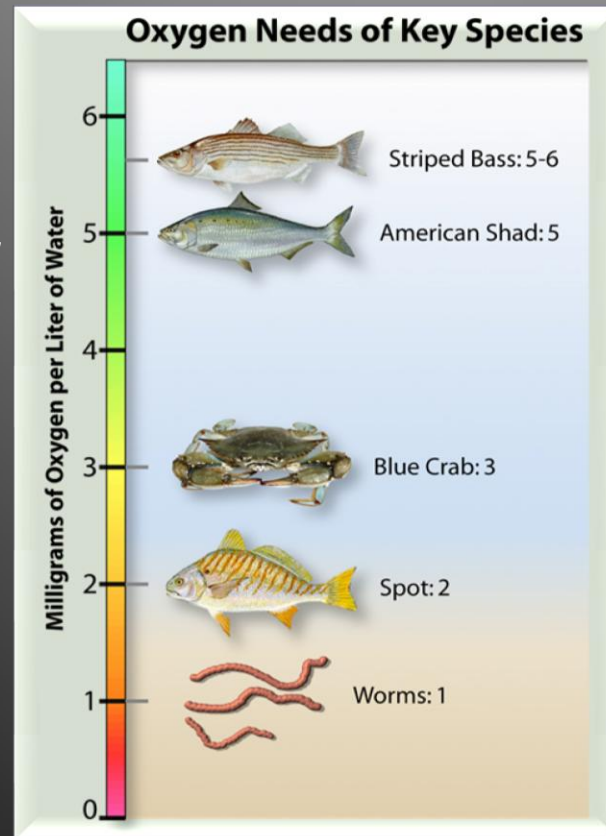
Chesapeake Bay Water Quality is measured by DO, Clarity and Chlorophyll a.



Impairment the Result of Pollution

WATER QUALITY STANDARDS

- Dissolved Oxygen
- Clarity
- Chlorophyll α



SOURCES OF IMPAIRMENT

- Nitrogen
- Phosphorus
- Sediment

Origins of the Bay Program

- 1960s
Noticeable decline
in Bay water quality
- 1967
Chesapeake Bay
Foundation
established
- 1976
EPA begins 5-year
Bay Study
- 1980
Chesapeake Bay
Commission
established

Chesapeake Bay Commission

- Tri-State Legislative Commission
 - PA, MD, VA
- Established by state law
- 7 Members Each (21 total)
 - 2 Senate
 - 3 House
 - 1 Cabinet-level
 - 1 Citizen at Large

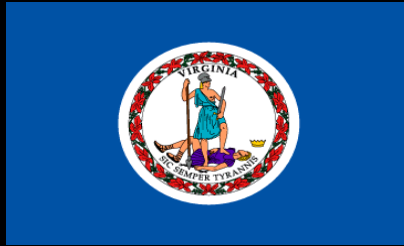


1983: Bay Program Created

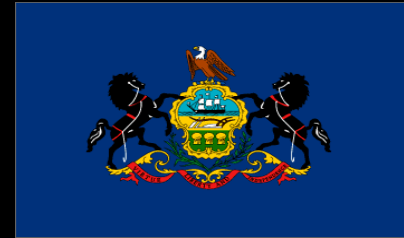
Governor of MD



Governor of VA



Governor of PA



Executive Council



Chesapeake Bay Program

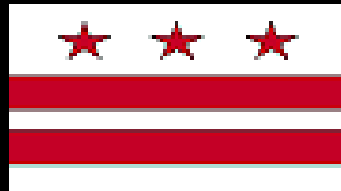
EPA Administrator



Chair of Chesapeake Bay Commission



Mayor of DC





The Chesapeake Bay Program

A Watershed PARTNERSHIP

Signatories

Chesapeake Bay Commission
Commonwealth of Pennsylvania
Commonwealth of Virginia
District of Columbia
State of Maryland
U.S. Environmental Protection Agency

Headwater State Partners

State of Delaware
State of New York
State of West Virginia

Federal Agency Partners

U.S. Department of Agriculture (USDA)
U.S. Department of Commerce
U.S. Department of Defense (DOD)
U.S. Department of Education
U.S. Department of the Interior
U.S. Department of Transportation
U.S. Postal Service (USPS)
U.S. General Services Administration (GSA)
National Aeronautics and Space Administration (NASA)
National Capital Planning Commission

Academic Partners

Academy of Natural Sciences
Chesapeake Research Consortium (CRC)
College of William and Mary
Cornell Cooperative Extension (New York)
Old Dominion University (ODU)
Pennsylvania State University (Penn State)

Smithsonian Institution

University of Delaware Cooperative Extension
University of the District of Columbia (UDC)
University of Maryland
University of Pennsylvania
University of Virginia (UVa)
Virginia Polytechnic Institute and State University (Va Tech)
West Virginia University

Other Partners

Alliance for the Chesapeake Bay (ACB)
American Forests
Anacostia Watershed Society
Center for Chesapeake Communities (CCC)
Center for Watershed Protection (CWP)
Chesapeake Bay Foundation (CBF)
Chesapeake Bay Trust
Consortium for International Earth Science Information Network
Ducks Unlimited
Ecosystem Solutions
International City/County Management Association
Local Government Environmental Assistance Network (LGEAN)
Interstate Commission on the Potomac River Basin (ICPRB)
Low Impact Development Center
Metropolitan Washington Council of Government (MWCOG)
Montgomery County Environmental Protection
National Fish and Wildlife Foundation
Potomac Conservancy
Susquehanna River Basin Commission (SRBC)
Upper Susquehanna Coalition

1987: Second Bay Agreement

- 40% Reduction Goal for N and P by 2000
- Amended in 1992
 - Turned attention to the tributaries

Also in 1987, the Chesapeake Bay Program was officially authorized by the federal Clean Water Act, through adoption of Section 117.

Chesapeake 2000 Agreement (C2K)

- Over 100 Commitments
- 5 Overarching Goals
 - Water Quality
 - Habitat
 - Living Resources
 - Sound Land Use
 - Stewardship



C2K driven by TMDL Threat

- TMDL = Total Maximum Daily Load
- Required under Clean Water Act for all “impaired” waters
- 1999 Citizen’s Suit
 - Consent agreement created May 2011 deadline
- Partners established a 2010 deadline

The TMDL is Changing the Bay Program

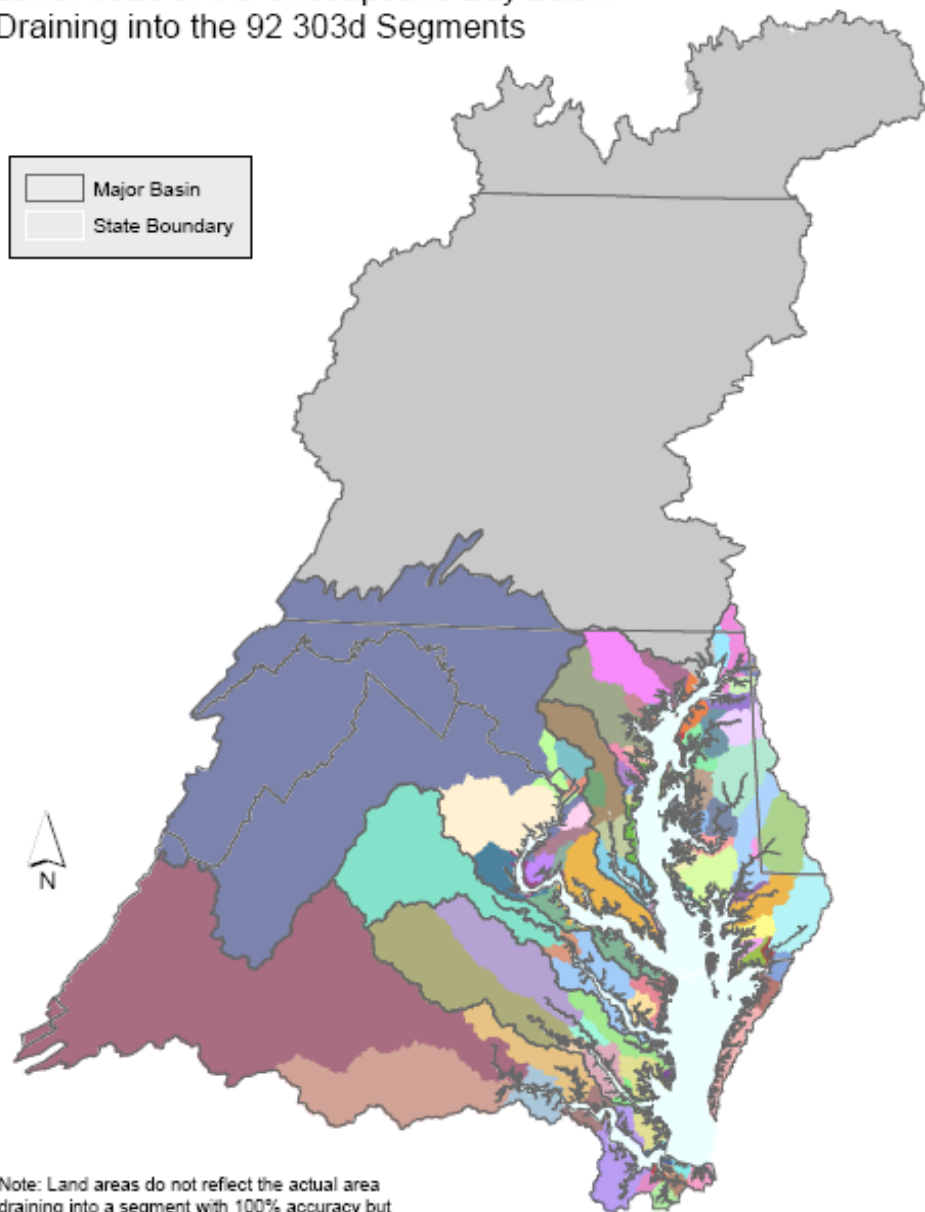
Moving into a New Regulatory Phase of Restoration

The Bay Program under a TMDL

- Enforces Numeric goals for N, P and Sediment
- Establishes State-specific Watershed Management Plans
- Necessitates Improved Engagement with Local Partners

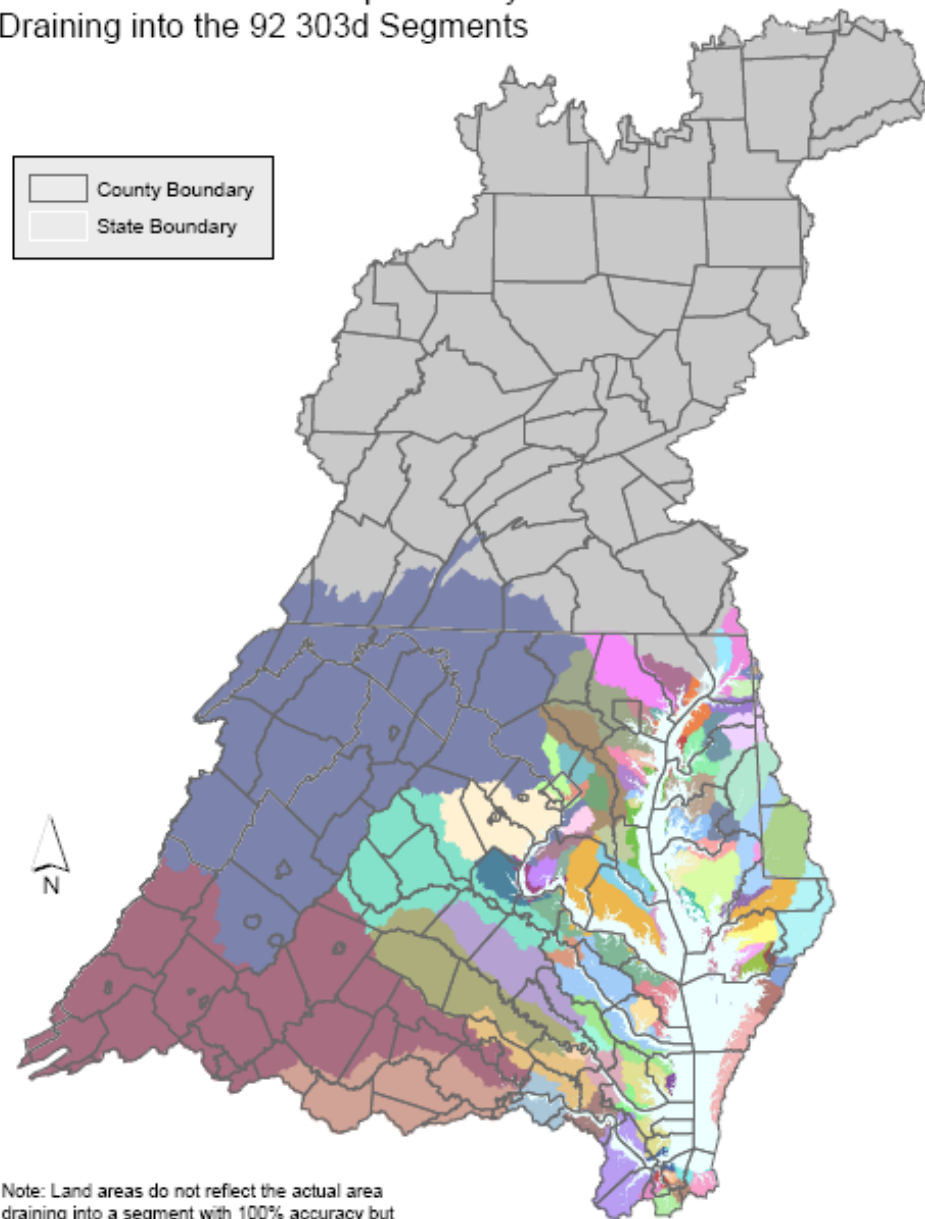
Phase I WIP

Land Areas of the Chesapeake Bay Basin
Draining into the 92 303d Segments



Phase II WIP

Land Areas of the Chesapeake Bay Basin
Draining into the 92 303d Segments



Note: Land areas do not reflect the actual area draining into a segment with 100% accuracy but are basically correct at the map scale.

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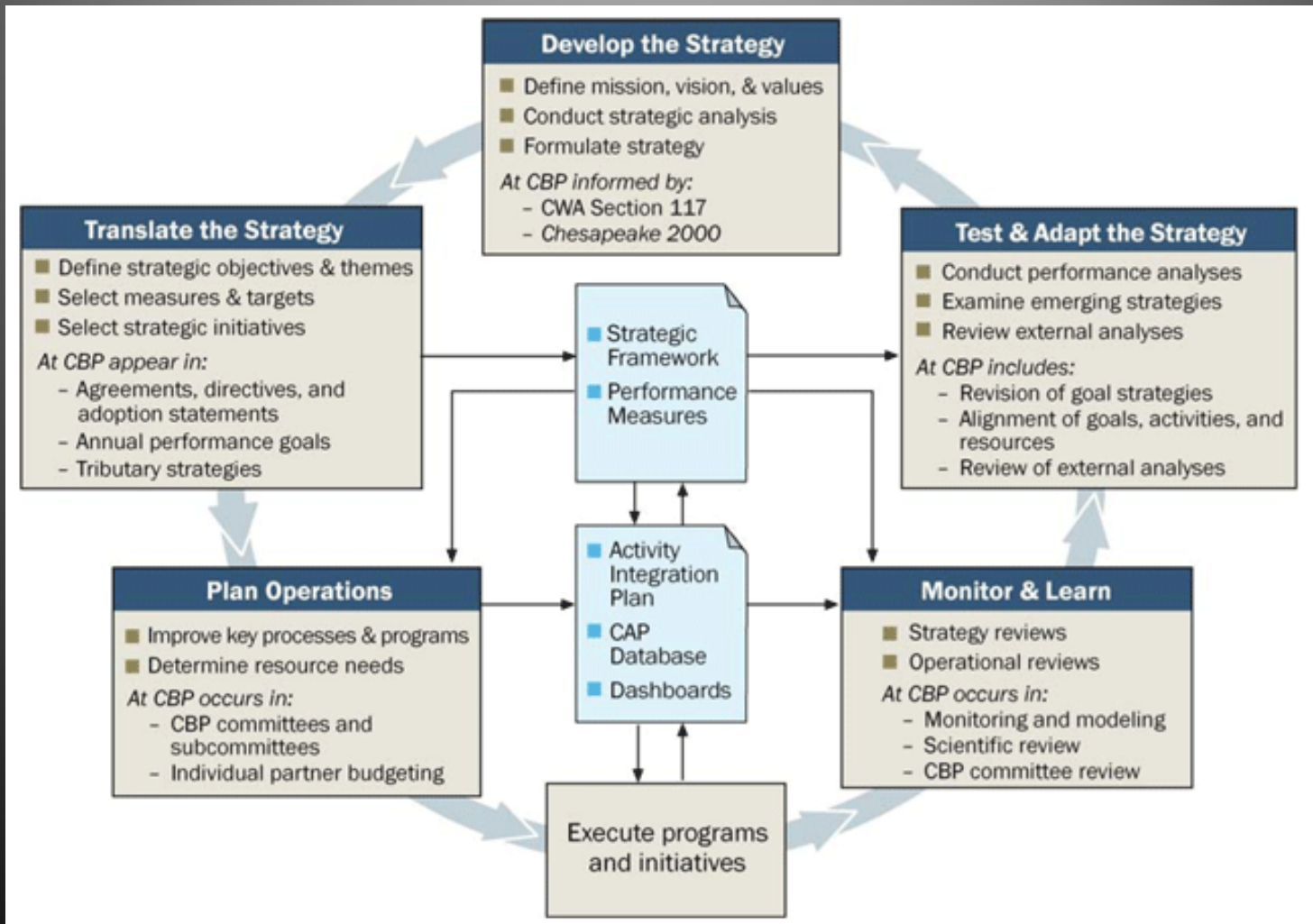
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The Bay Program under a TMDL

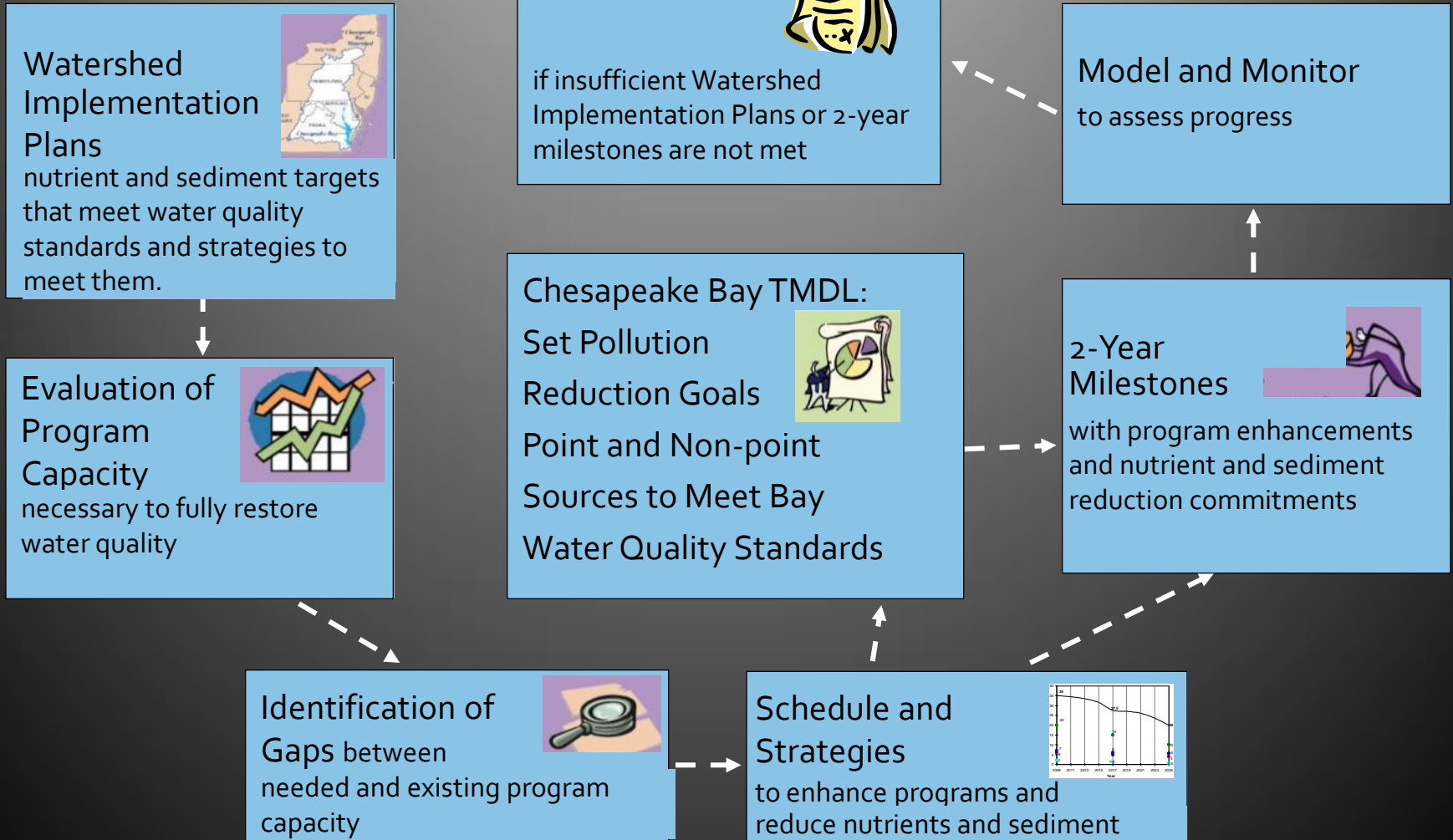
- 2-Year Incremental Milestones
 - With contingencies, and CONSEQUENCES
 - 60% implementation by 2017
 - 100% implementation by 2025
- Adaptive Management

Adaptive Management

(based on Kaplan and Norton's (2008) Five-stage Model of Adaptive Management ("Mastering the Management System," Harvard Business Review, January 2008, pp. 63-77))



Overview of Accountability Process



Challenges & Opportunities

CHALLENGES

- Need to improve tracking and reporting
- 1800 local governments
- Water quality is primary focus
- Continual change in the watershed
- Funding

OPPORTUNITIES

- Momentum
- Local focus = local benefits
- Market-based strategies
- Ag Certainty

Thank you!

Any questions?

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Chesapeake Bay Commission
Policy for the Bay