Chesapeake Bay Challenges and Solutions

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Watershed: 166,000 km$^2$
Ave Depth: 6 m
Max Depth: 50 m
Population: 16 million
The Chesapeake Bay is the Economic Engine of the Region

INVESTMENT: $1 of water and sewer infrastructure investment increases private output (Gross Domestic Product) in the long term by $6.35.

FISHERIES: Commercial seafood industry in Maryland and Virginia contributed $3.39 billion in sales, $890 million in income, and almost 34,000 jobs to the local economy. (2009 Fisheries Economics of the U.S. report)

PROPERTY VALUES: An EPA study indicated that clean water can increase the value of single family homes up to 4,000 feet from the shoreline by up to 25 percent.

Source: Chesapeake Bay Foundation, 2012 “The Economic Argument for Cleaning Up the Chesapeake Bay and its Rivers”
Chesapeake Bay Challenges

- water quality impaired by pollution
  - Extensive low to no summer dissolved oxygen conditions
- historic overfishing
- population growth
- poor land use management
- loss of habitat
- invasive species
- climate change and sea level rise
• Md, Pa, Va, DC, and USEPA
• Recognize degradation of Bay after Tropical Storm Agnes (1972)

Chesapeake 2000:
• 1987 nutrient goals remain unmet
• Begin Enforcement of TMDL in 2010
• Establish over 100 new goals – many unrelated to nutrients

Accountability Phase: 2003-2008
• Focus on monitoring and modeling
• Cost and nutrient reduction effectiveness assessments

Chesapeake Bay Agreement: 1987-2000
• Reduce nutrients by 40% from all controllable sources by 2000
• Focus on modeling and monitoring

Adaptive Management 2009 - Future
• 2 Year Goals to hold politicians accountable
• Enforce TMDL beginning in 2011
• Target problem areas & focus on Bay response
Applying Adaptive Management Principles
BayStat tracks health, pressures, and solutions
Solutions must also be diverse

- Phosphate Laundry Detergent Ban (1988) – reduced phosphorous loads
- Water Quality Improvement Act (1998) – nutrient management on farms
- Bay Restoration Fund (2005) – primarily for waste water treatment plant upgrades, also funds cover crops and septic upgrades
- Water Resources Element of Comprehensive Plans (2006) - ensure water and sewer capacity available for growth
- Chesapeake Bay 2010 Trust Fund (2008) – reduce non-point sources of pollution
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Websites for more info:
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