Our Neighbors Downstream

Goals and Progress within the
Chesapeake Bay Watershed
Fast Facts

• The nation’s largest estuary
• Supports more than 3,600 species of plants, fish and animals
• Bay area = 7,000 square miles, and includes parts of six states
• Average depth = 21ft
• Watershed area = 64,000sq. Miles
• More than 15 million people live in its basin
• More than 100,000 streams and rivers drain into the Bay
The C2K Agreement

“The Renewed Bay Agreement”

- Political agreement between Maryland, PA, Virginia, DC, the EPA and the Chesapeake Bay Commission.
- Most holistic approach to cleaning up the bay in history
- Political entities agreed to 100 specific actions under 5 major categories.
- Efforts were science based
C2K Categories

- Living Resource Protection and Restoration
- Vital Habitat Protection and Restoration
- Water Quality Protection and Restoration
- Sound Land Use
- Stewardship and Community Engagement
Cost of a Clean Bay

Bay-wide Cost of A Clean Bay

Total Projected Cost $18.7 billion
Total Projected Income $ 5.9 billion
Unfunded Gap $12.8 billion
Progress

• CBF independently scored the health of the Bay.
• Looked at similar interest areas covered in the C2K.
• CBF found the Bay’s health did not improve in 2005.
State of the Bay in 2005

Pollution

- F/D (N score: 13, P score: 20) → F
- Score: 14

Habitat

- B+ (Score: 55) ↔ D-
- Score: 20

Fisheries

- A+ (Score: 71) → F
- Score: 5

- C (Score: 35) ↔ F
- Score: 12
Dissolved Oxygen Levels

2005 resulted in some of the lowest dissolved oxygen levels ever recorded.
Effects of Nutrient Pollution in the Bay

Healthy Levels of Nutrients
- Algae growth is limited
- Sunlight penetrates clear water
- Underwater grasses use sunlight to make food
  - Healthy grasses provide habitat for crabs and fish
  - Grasses produce oxygen
  - Healthy aquatic community

Nutrient pollution
- Algae use nutrients to grow and reproduce rapidly
  - Algae cloud water and block sunlight
  - Underwater grasses die
  - Loss of grass habitat
  - Dissolved oxygen levels are decreased

Algae use up nutrients and die
- Algae use up nutrients and die

Bacteria feed on dead algae

Bay animals are stressed and/or die

CHESAPEAKE BAY FOUNDATION
Save the Bay
Where do the nutrients come from?

[Diagram showing the sources of nitrogen pollution in the Chesapeake Bay.]

- Agriculture: 33%
- Point Sources: 20%
- Urban & Septic: 14%
- Forest: 14%
- Atmospheric to Water: 8%
- Mixed Open: 6%

Chesapeake Bay Foundation
Land Use

- Developed = 9.03%
- Ag = 64.95%
- Forest = 21.15%

Overall
Imperviousness = 5.76%

- Pollutant Loading
  - TN = 1,020,234 lbs/yr
  - TP = 366,341 lbs/yr
  - Sed = 624,619,300 lbs/yr

Source: PSU SHRP Model
Development Pressure

Resource Lands Assessment
Chesapeake Bay Watershed

Vulnerability

Legend
Development Pressure
High
Moderate
Low
None

July 14, 2006
Reasons For Hope

• Despite the doubling of the human population within the Bay’s watershed in the past 40 the health of the bay has remained steady.

• Improvements are being made on many farms in this county and within the Chesapeake Bay watershed
  – CREP
  – Conservation Plans
  – Education