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THE ECONOMIC BENEFITS OF IMPLEMENTING THE BLUEPRINT IN PENNSYLVANIA

Nature plays an important role by providing clean air and water, reducing flooding risks, and delivering food and recreational opportunities. These and other natural benefits can be quantified. The Chesapeake Bay Foundation's new report, *The Economic Benefits of Cleaning Up the Chesapeake*, for the first time assesses those benefits to determine what the current dollar value is, and how much it will increase with the implementation of the Chesapeake Clean Water Blueprint. The report also documents the loss of services if the Blueprint is not implemented.

Everyone will benefit from reducing pollution. The report estimates that in 2009 the value of nature's benefits in the region was \$107.2 billion and implementing the Blueprint will increase that value by \$22 billion. If we fail to continue to reduce pollution, the value of natural services would decline by \$5.6 billion annually.

Implementing the Blueprint will have a significant, positive benefit for Pennsylvania's economy. Once the Blueprint is fully implemented, and the benefits fully realized, the value of the natural services provided would increase by \$6.2 billion annually, from \$32.6 to \$38.8 billion. That increase is largely driven by the enhanced value of:

- Aesthetics, the role that healthy natural areas play in attracting people to live, work, and recreate in a region, showed an increase in value of \$2 billion annually; and
- Water supply, filtering, retention, storage, and delivery of fresh water—both quality and quantity—for drinking, irrigation, industrial processes, and other uses increased in value by \$1.3 billion annually.

Failure to implement the Blueprint would reduce natural benefits that Pennsylvania receives by \$1.8 billion annually.

Examples of how those benefits work in Pennsylvania include:

- The estimated value to Lancaster City, Pennsylvania, and its citizens of reduced air pollutant-related impacts is more than \$1 million dollars per year from implementing practices in their Green Infrastructure Plan (US EPA, 2014);
- Also, implementation of the City of Lancaster's Green Infrastructure Plan is estimated to have an annual benefit in reduced energy use of \$2.4 million dollars per year (US EPA, 2014). This figure represents the potential monetary savings for Lancaster and its residents in reduced heating and cooling needs.
- The City of Philadelphia estimates that installation of green stormwater infrastructure in the city will raise property values 2-5 percent, generating \$390 million over the next 40 years in increased values for homes near green spaces (Philadelphia Water Department, 2009).

More broadly across the region other benefits include:

- Approximately 75 percent of the people living in the Bay watershed rely on surface water supplies for their drinking water (Sprague, Burke, Clagett, & Todd, 2006). An EPA study of drinking water source protection efforts concluded that for every \$1 spent on source water protection, an average of \$27 is saved in water treatment costs (Groundwater Protection Council, 2007).
- Agricultural lands account for approximately 22 percent of the acres in the Chesapeake watershed (US EPA, 2010a) and the value of Chesapeake Bay region agricultural sales in 2007 was about \$9.5 billion—24 percent from crops and 76 percent from livestock (U.S. Department of Agriculture, 2007).

- Scientists estimate that the 1.2 million acres of urban forest in the Chesapeake region collectively remove approximately 42,700 metric tons of pollutants annually (Sprague et al., 2006).
- In 2009, tourists spent \$58 billion in Maryland, Pennsylvania, Virginia, and Washington, D.C., directly supporting approximately 600,000 jobs and contributing \$14.9 billion in labor income and \$9.4 billion in taxes. Tourists spent \$25.7 billion in the Chesapeake Bay Gateways Network region alone (Stynes, 2012).
- In 2001, more than 15 million people fished, hunted, or viewed wildlife in the Chesapeake region's forests alone and contributed approximately \$3 billion to the regional economy (Sprague et al., 2006).

CBF's study addressed only benefits, not costs. While there are no recent estimates of the total costs of implementation, a 2004 estimate put costs in the range of roughly \$6 billion per year.

Considering federal, state and local investments in clean water in the 10 years since that time, we estimate the current number is closer to \$5 billion annually. And once capital investments are made, the long-term annual operations and maintenance costs will be much lower.

The result--the Blueprint will return benefits to the region each year at a rate of more than four times the cost of the clean-up plan.



CHESAPEAKE BAY FOUNDATION
Saving a National Treasure

Founded in 1967, the Chesapeake Bay Foundation is a nonprofit 501(c)(3) conservation organization dedicated to saving a national treasure—the Chesapeake Bay and its rivers and streams. Its motto, Save the Bay, defines the organization's mission and commitment. With headquarters in Annapolis, MD, offices in Maryland, Virginia, Pennsylvania, and the District of Columbia, and 17 field centers, CBF works throughout the Chesapeake Bay's 64,000-square-mile watershed to build an informed citizenry, advocate pollution-reduction strategy, and enforce the law. CBF is supported by more than 200,000 active members and has a staff of 170 full-time employees. Approximately 80 percent of CBF's \$23.6 million annual budget is privately raised.