

Economic Benefits of the Chesapeake Clean Water Blueprint



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Saving a National Treasure

THE ECONOMIC BENEFITS OF CLEANING UP THE CHESAPEAKE

A VALUATION OF THE NATURAL BENEFITS GAINED BY
IMPLEMENTING THE CHESAPEAKE CLEAN WATER BLUEPRINT



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“The region’s environmental and economic health will improve when we fully implement the Blueprint. The cleanup plan was designed with the understanding that all people and communities in the watershed can contribute to making the Bay cleaner, and that everyone will benefit when pollution is reduced. Our analysis confirms this.”

Dr. Spencer Phillips, lead author

“This rigorously researched report by the Chesapeake Bay Foundation confirms what has long been known: that the Chesapeake Bay and its tributaries are indeed one of the most valuable, if not invaluable, estuary systems on Earth.”

Dr. Gerald J. Kauffman, report peer reviewer and Director,
University of Delaware Water Resources Agency



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Approach

Worked with CBP staff to acquire fine-scale land use information for entire watershed both pre-(2010) and post-Blueprint (2025).

Focused on 8 “ecosystem services” that are most likely to be improved by Blueprint implementation.

Land Cover

Chesapeake Bay Watershed

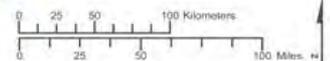


Land Cover Classes

- Low/Medium intensity developed
- High intensity developed
- Wetlands
- Forest
- Agriculture
- Barren
- Chesapeake Bay Watershed
- Chesapeake Bay
- State Boundary



Data Sources: Chesapeake Bay Program, National Land Cover Data 2001
For more information, visit www.chesapeakebay.net



Created by EA, 1/23/08

UTM Zone 18N, NAD 83



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How does the Blueprint lead to increase value?

Examples:

Waste Treatment	}	Reduced treatment facility costs, (less to filter)
Water Supply		
Water regulation		Reduced Flooding Damage
Recreation		Eco-tourism, fishing licenses
Food Production		Soil health (drought resistance), herd health, improved fisheries
Climate Stability		Moderate urban temperatures, reduced energy costs
Air Pollution		Reduction in Asthma cases, public health
Aesthetics		Increased property values, tourism



Measuring the Economic Benefits of America's Everglades Restoration

An Economic Evaluation of Ecosystem Services Affiliated with the World's Largest Ecosystem Restoration Project

Prepared for The Everglades Foundation

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"For every dollar spent on Everglades restoration, we are getting four dollars back in the form of higher home values, increased tourism and stronger fishing, boating and tourism industries," said Kirk Fordham, CEO, Everglades Foundation.

The collage features three overlapping news articles. The top article is from BusinessExcellence.com, dated October 24, 2010, with the headline "Economic Analysis Predicts Minimum 4-1 Return on Restoring the Everglades Ecosystem". The middle article is from a website with a "Sustainability: Comprehensive Everglades Restoration Plan" headline, dated November 9, 2010, and includes a photo of a bird. The bottom article is from a congressional website for Debbie Wasserman Schultz, dated July 13, 2012, with the headline "Everglades Restoration Report Shows Progress".



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A New View of the Puget Sound Economy

Earth Economics

The Economic Value of Nature's Services in the Puget Sound Basin

Initial estimates for the cleanup say the price tag could be as much as \$27 billion by 2020. **That's a lot less than the estimated long-term value of the ecosystems in and around the sound,** said study author David Batker, an economist...

Economists Measure Value of Puget Sound

Posted July 26, 2008 at 5:46 p.m.

Discuss

Print

A A A

f t S+ e

SEATTLE (AP) — Is it possible to put a price tag on the economic value of the Puget Sound, including the mountains, forests and wetlands surrounding it? A group of economists have come up with a range: at least \$7 billion to \$62 billion a year.

In a report issued this week by Earth Economics, a Seattle-based nonprofit, the authors used computerized maps to calculate how many acres of different kinds of land surround the sound, then used existing studies to put price tags on things such as the flood-controlling benefits of an acre of wetland.

The study puts an estimate on all the "natural capital" — both goods and services — of the region.

It quantifies the air filtering impact of urban forests, the value of fresh water from wetlands and snowmelt, and both wild and cultivated food from fish to berries. It also considers the more obvious economic effect of Puget Sound, including the money tourists spend in the region and the sale of food from local farms and fisheries.

The economists emphasize the numbers are just a "rough cut, first step" at putting a value on nature. The broad range comes from the variety of existing studies they used when calculating prices. The aim of the report is to raise awareness and contribute to the community discussion.

[Senate Hearing 112-16]
[From the U.S. Government Printing Office]

DROUGHT AND CLIMATE CHANGE
ON WATER RESOURCES

S. Hrg. 112-16

HEARING

before the

COMMITTEE ON
ENVIRONMENT AND NATURAL RESOURCES
UNITED STATES SENATE

ONE HUNDRED TWELFTH CONGRESS

FIRST SESSION

TO

REPORT ON THE
ECONOMIC IMPACTS OF
CLIMATE CHANGE ON WATER
RESOURCES IN
CERTAIN RIVER BASINS

July 27, 2011

Use of the
Committee on Environment and Natural Resources

David Batker
Paula Swedeen
Robert Costanza
Isabel de la Torre
Roelof Boumans
Kenneth Bagstad



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Water Supply



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Ecosystem Service



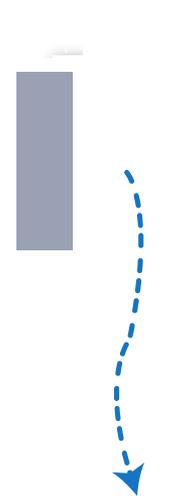
Water Regulation



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Ecosystem Service

Waste Treatment



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Ecosystem Service

Food Production



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Ecosystem Service



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Aesthetics

Recreation



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Ecosystem Service

BENEFITS

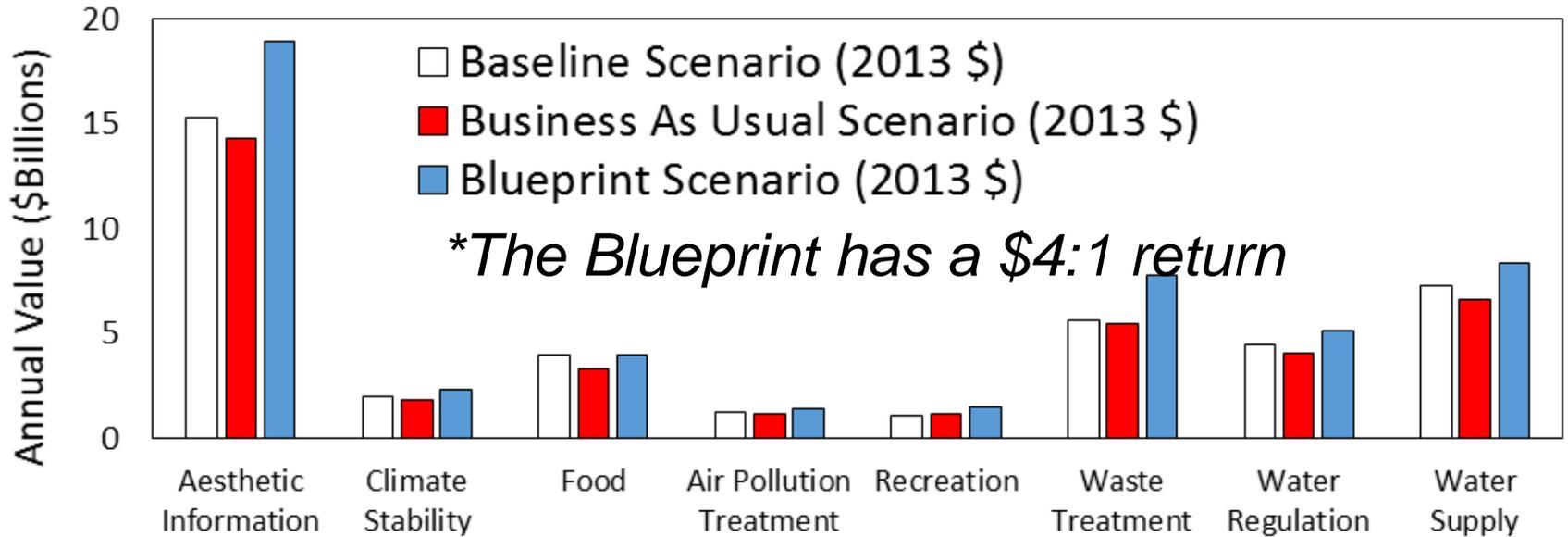
costs



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Results

Good News: The Blueprint's Economic benefits



Scenario:

Value:

Current:

\$108 Billion

Post-Blueprint:

\$130 Billion

Business as usual:

\$102 Billion

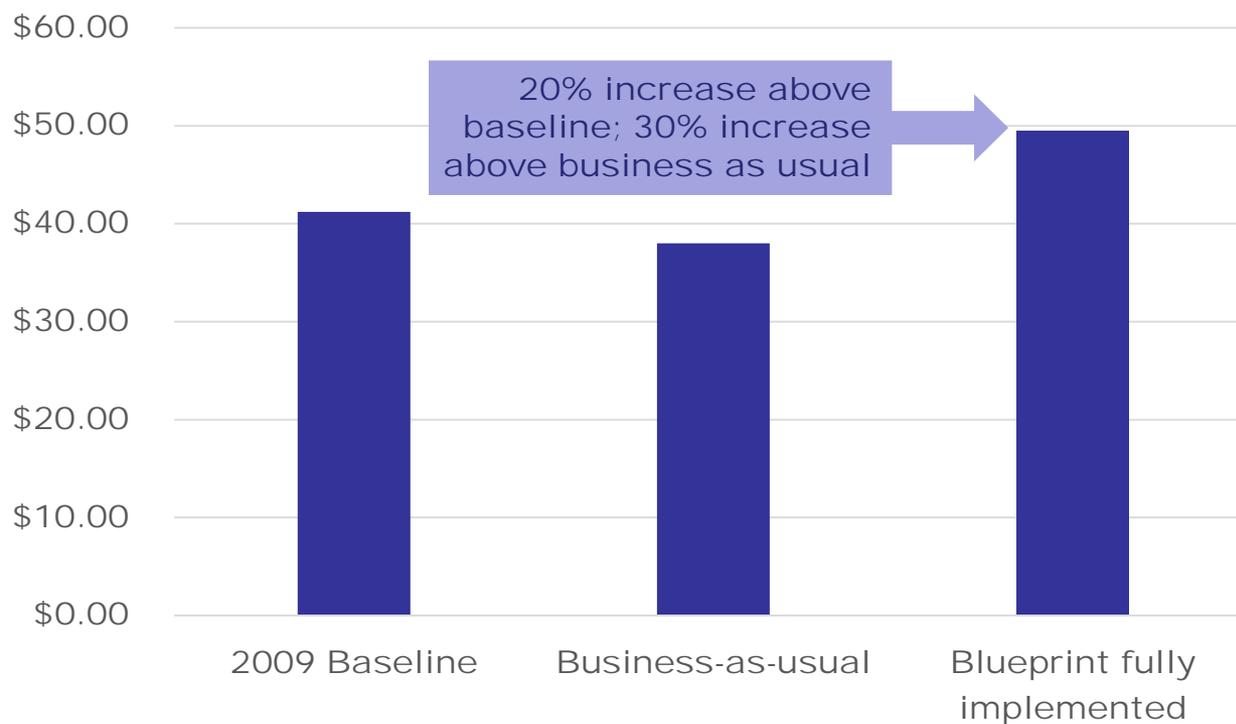


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The Economic Report

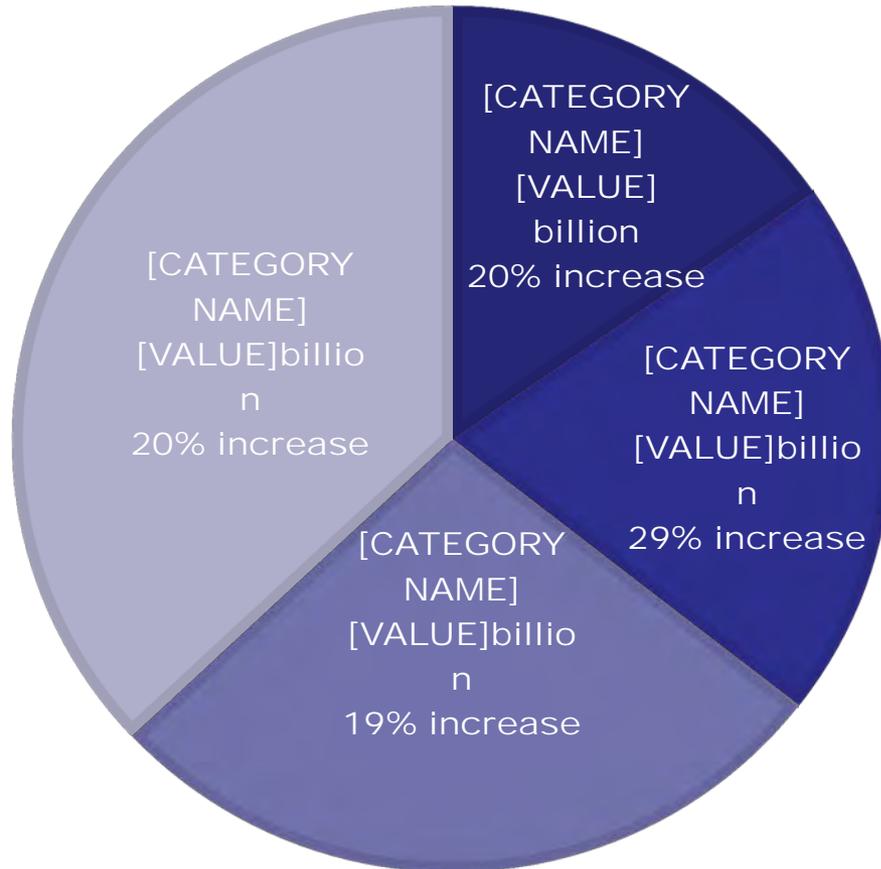
Benefits to Virginia

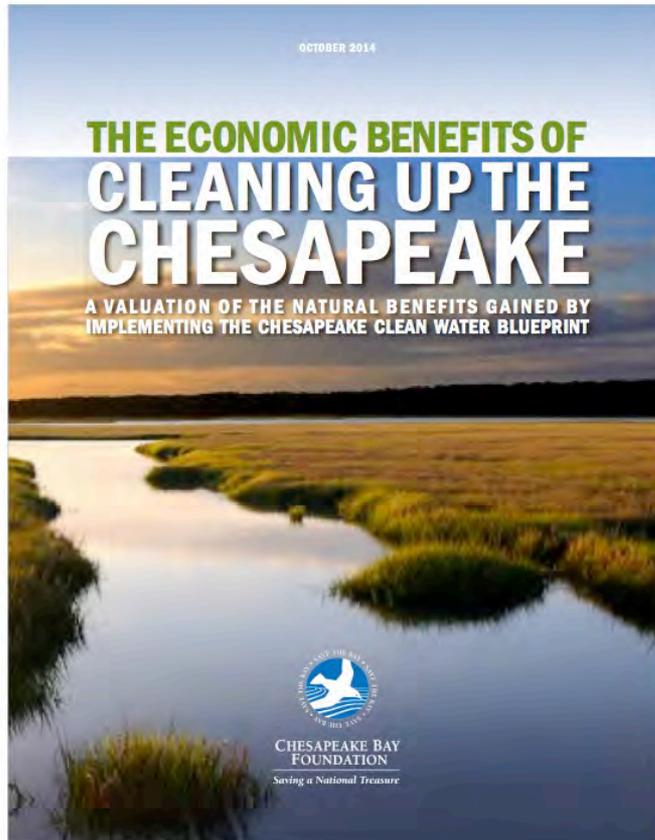
(In billions, annually)



Annual increase in benefits

(In billions, above 2009 baseline value)





Cleaning up the Chesapeake Bay and its rivers and streams makes environmental and economic sense. Economists say a saved Bay is worth nearly **\$130 billion**—an increase of \$22 billion per year.

The value of these same benefits will increase by \$22.5 billion annually to \$129.7 billion if the Blueprint is fully implemented. Once realized, those benefits would be enjoyed year after year.

cbf.org/economicbenefits



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