

WHAT'S NATURE WORTH?

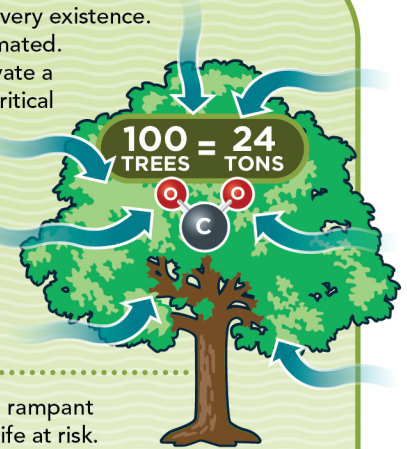


Earth's environmental assets underpin our economy, our society, indeed our very existence. Yet the full value of the natural world is often misrepresented and underestimated. To halt the unsustainable consumption of the environment, we must cultivate a greater awareness and understanding of these ecosystem services and the critical service they provide to all life on Earth.

Environmental Benefits from Nature

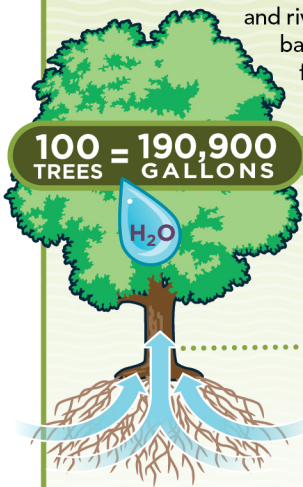
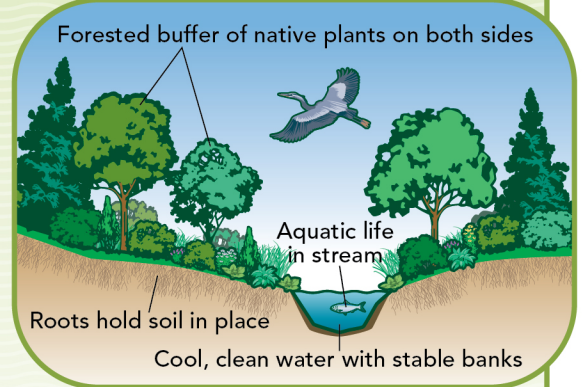
CARBON SEQUESTRATION

- Trees, like all plants, convert carbon dioxide from the air into energy, which sustains the tree's growth and survival. Forests then, which are lush with trees, have a generous capacity for removing carbon dioxide from the atmosphere and repurposing it.
- 100 large, mature trees can remove 24 tons of carbon dioxide each year.¹
- By capturing and sequestering carbon, forests help the planet mitigate the impact of humans' rampant carbon dioxide emissions, which are rapidly altering the planet's climate putting people and wildlife at risk.



WATER QUALITY IMPROVEMENTS

- Streamside forests are essential for protecting the health of freshwater creeks and rivers. When trees grow alongside rivers, they create a protective barrier which buffers the waterway from stormwater runoff and filters out pollutants, shade the water keeping it cool for wildlife, and stabilize the stream banks with their root systems.



FLOOD MITIGATION

- Wetlands can temporarily store flood waters when rivers overflow their banks. As the flood waters recede, wetlands release this captured water back into stream channels which reduces the severity of downstream flooding and erosion.
- 100 mature street trees can collect 190,900 gallons of rainwater each year!¹
- The flood mitigation performed by wetlands and other natural, green infrastructure minimizes property damage and clean-up costs from flood damage and storm surges.

Economic Benefits from Nature

CARBON SEQUESTRATION

- In Berks County, forests and their lush canopies store and sequester \$1.84 billion worth of carbon.²

WATER QUALITY IMPROVEMENTS

\$0.47 Healthy Watershed **VS** Wastewater Treatment Plant **\$3.24** PER 1000 GALLONS

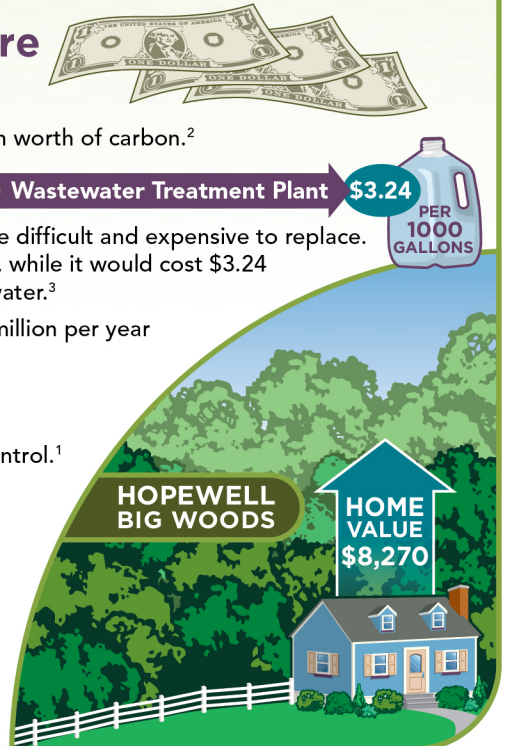
- The stormwater and pollution management provided by forested watersheds are difficult and expensive to replace. A healthy, functional watershed can treat 1000 gallons of water for just 47 cents, while it would cost \$3.24 for a conventional wastewater treatment plant to process the same amount of water.³
- In Berks County, forests prevent 257 million gallons of runoff, which saves \$2.3 million per year in associated stormwater management costs.²

FLOOD MITIGATION

- Streamside forests and plantings in Berks County provide \$77 million in flood control.¹

PROPERTY VALUE

- People prefer to live near clean water and natural landscapes, a preference reflected in property values across the country. For five counties in southeastern PA, open space is attributed to adding \$16.3 billion to the regional housing value.⁴
- In southern Berks County, homes located within one-quarter mile of Hopewell Big Woods enjoyed an \$8,270 increase in home value thanks to their proximity to this contiguous swath of forestland.⁵



Recreation Opportunities in Natural Spaces

With 54,294 acres of public park and recreation facilities and an additional 17,037 acres of private recreation facilities, there are an abundance of opportunities to explore the outdoors in Berks County. Which is fortunate, as 82% of the County's population participate in some form of outdoor activity!

Local outdoor recreation contributes to local economies. In Berks County...

- Walking and hiking contribute \$93 million to the economy annually. Trails were ranked by Berks County residents as the top priority for meeting the County's recreational needs.¹
- Biking contributes \$63 million to the economy annually. The greater Reading region has gained recognition as a Bronze Level International Mountain Biking Destination through the International Mountain Biking Association.¹
- Kayaking contributes \$31 million to the economy annually.¹
- Camping contributes \$47 million to the economy annually.¹
- Fishing provides \$43 million to the economy annually. Nationally, according to the American Sportfishing Association, over 30 million anglers generate over one million jobs and over \$45 billion in retail sales annually.¹
- Wildlife watching contributes \$84 million to the economy annually.¹



Health Benefits from Time Spent in Nature

Protecting the environment also increases opportunities for people to recreate outside, which is proven to have physical, mental, and social benefits on human health. People who live within half a mile of green space have lower incidences of 15 diseases including depression, heart disease, diabetes, asthma, and migraines.⁶

- Forest cover in Berks County helps contribute nearly \$7 million in public health cost savings per year and helps residents avoid 900 health incidents per year.²
- Learning in nature can support improved relationship skills while also minimizing stress, anger, and aggression. In children, the free and unstructured play associated with outdoor activity is essential for achieving important social, emotional, and cognitive developmental milestones.
- Time in nature improves mental health by reducing stress, depression, and anxiety while increasing resilience, engagement with learning, self-esteem, and capacity for socializing.
 - Scenes of nature encourage our brains to "rest and digest" and inspires awe, which improves mood.
 - Time spent in the woods decreases stress hormones while also stimulating healthy immune system functionality.
 - Hearing nature sounds can even help the human body recover from stressful situations.

Did You Know?

The National Park and Recreation Association recommends that municipalities provide at least 6.25 to 10.5 acres of community open space per 1,000 people.



Citations: ¹ Berks Nature (2012) "The Business of Nature", ² i-Tree Canopy (<https://canopy.itreetools.org/>), ³ EPA (April 2012) "The Economic Benefits of Protecting Healthy Watersheds", ⁴ Delaware Valley Planning Commission (November 2010) "Return on Environment", ⁵ Berks County Planning Commission (2019) "Berks County Greenway, Park and Recreation Plan", ⁶ EMGO Institute for Health and Care (2009) "Morbidity is related to a green living environment".

