



THE VALUE OF TREES

Forests Boost Citizens' Physical and Mental Health

BY JESSICA AIELLO / PENNSYLVANIA PARKS AND FORESTS FOUNDATION

As just about any grade school-aged child can tell you, Pennsylvania means “Penn’s Woods.” Forests are figurately ingrained in the very name of our commonwealth, which today is nearly 60% covered by trees — that’s 274,291 acres.

Townships can play a significant role in ensuring that Pennsylvania remains wooded, and for good reason — trees and forests provide us with many benefits. From cleaning our waterways to lowering our stress levels, trees do so much and only require of us the availability of sunlight, rainwater, and appreciation.

How trees and forests protect our water

Ellen Shultzabarger, a state forester with the Department of Conservation and Natural Resources (DCNR), stresses the importance of Pennsylvania trees to the many waterways across the commonwealth.

She notes that trees absorb rainwater with their roots, slow runoff with their leaves (*up to a 60% reduction*), and transpire water, thus drying the soil more quickly and reducing downstream flooding. In fact, the U.S. Forest Service says that a healthy 100-foot-tall deciduous tree’s 200,000 leaves can take up 11,000 gallons of water from the soil and release it into the air as oxygen and water vapor in just one growing season.

Greg Czarnecki, director of Applied Climate Science for DCNR, says, “Trees are like big straws, sucking water up from the ground and adding it back into the atmosphere. They are great at reducing flood impacts, especially in cities with a lot of impervious surfaces.”

How trees and forests protect health and quality of life

A recent report from the state Department of Health shows that two out of every three Pennsylvania adults (*6.2 million people*) and one out of three children (*500,000 kids*) are overweight

or obese, which magnifies their risk of developing a chronic illness like diabetes, heart disease, or high blood pressure. One way to reduce that risk and help people get and stay healthy is by encouraging outdoor recreation.

“Being outside and using outdoor recreation as a form of physical activity can lead to a lot of great physical benefits,” Dr. Michael Suk, chief physician officer for Geisinger System Services, says. “It could help control your heart rate or decrease your blood pressure. It can help your respiratory system by enhancing your breathing. And overall, it can help you lose weight.”

In addition to the physical health improvements gained through time spent outdoors, mental and emotional health get a boost too. Physical activity done outside has been shown to improve self-esteem and reduce tension, anger, and depression. Stress hormones drop too, which is good for both mental and physical health.

“Our parks and forests really promote mental health in the way that

they allow the brain to relax,” Suk says. “Being in or near a park or forest can elevate your mood and elevate your outlook.”

When townships take steps to plant more trees and protect their forests, the benefits are apparent to everyone who fishes, canoes, hikes, and kayaks, says Stephen Letavic, manager of Londonderry Township in Dauphin County.

“Increased and enhanced outdoor recreational activities in our township mean that more people take part in tourism along the Susquehanna River, which creates economic growth, jobs, and tax revenues,” he says. “Improved water quality also provides the opportunity for species that are in decline to rebound as the environment heals.”

Marci Mowery, president of the Pennsylvania Parks and Forests Foundation (PPFF), agrees.

“If the pandemic taught us anything, it’s that we need access to a reliable and well-maintained park and forest system for the health of the environment, and our health as well,” she says. “Townships can be champions for human and environmental quality of life concerns by ensuring that future generations will have the same or better opportunities for healthy, outdoor recreation.”

PPFF provides the voice for Pennsylvania’s 121 state parks and 2.2 million acres of state forest land. Its work includes promoting outdoor recreation and protecting natural resources. For that very reason, PPFF created a series of videos on the health benefits of outdoor recreation, including one in Spanish, which can be viewed at <https://paparksandforests.org/our-work/education/the-outdoors-and-your-health>. They also developed an infographic on the overall “Value of Trees,” which can be downloaded at <https://paparksandforests.org/wpcontent/uploads/2020/04/Value-of-Trees-high-rez-infographic.pdf>.

How townships can be champions for trees

Londonderry Township provides another example of how a township uses trees to benefit multiple efforts, particularly stormwater management. Since 2005, the township has worked

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with Penn State Extension and the Conewago Creek Association to address water quality issues and flooding.

After Tropical Depression Ivan caused significant flood damage to properties along Swatara Creek, the township used grant funds to purchase those buildings and relocate residents out of the flood-prone areas. It then restored the floodplain and planted forested riparian buffers to reduce the frequency and severity of floods and improve water quality. The effort involved Penn State Extension, a local engineering firm, scout troops, a couple of nonprofits, and many volunteers to plant thousands of trees and shrubs where the homes once stood.

“The idea was to take what was once a horrific situation and make it something positive,” Letavic says. “This project was the springboard for the township’s municipal separate storm sewer system (MS4) program and environmental department. Since then, we have installed many best management

practices, including nearly a mile of stream restoration, habitat improvements, legacy sediment removal, and flood control on the Conewago Creek.”

Shultzabarger of DCNR encourages townships to apply for grants through the department’s Riparian Forest Buffer and TreeVitalize programs to plant street trees and riparian forest buffers, and convert mowed lawn areas to forest.

“Whether on a small or large scale, townships can make a huge impact on the quality and quantity of tree canopy, which leads to better water quality, reduced flooding, and healthier citizens,” Mowery says. “I encourage township staff to do all they can to focus more attention on trees to the betterment of all concerned.” ♦

About the author: Jessica Aiello is a freelance communications professional working on a contractual basis for the Pennsylvania Parks and Forests Foundation, along with other clients.



Trees can reduce runoff and flooding, improve mental and physical health, and economically benefit regions.