

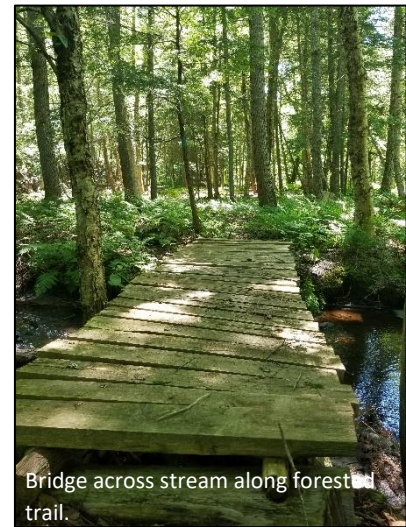
## Could Money Actually Grow on Trees?

By Amelia Harris

As a child, you probably had a parent tell you more than once that money doesn't grow on trees. What if I told you they were wrong?! Well, sort of wrong. Money may not actually grow on trees, but studies are showing that trees certainly contribute to economic prosperity, especially at the community level.

Trees were once valued as a resource that made our lives better. Humans used wood from trees to build everything from houses and ships to tools and weapons. Fruits, nuts, and leaves were harvested for people and livestock to eat. Bark, roots, and leaves were used as medicine. In many ancient cultures, trees were revered as a source of wisdom and even enlightenment.

However, as society shifts into an age dominated by metal, concrete, and plastics, trees have lost a bit of their status. They are often viewed as an impediment to building a new subdivision or shopping mall. It's easier to cut a tree down and dispose of it than it is to incorporate it into a new landscape. This mindset is creating an alarming reduction in forests across urban, suburban, and rural areas.



Bridge across stream along forest trail.

For so many of us, the intrinsic value of trees and being surrounded by trees is obvious. The feeling is innate, but how do we really know how trees are benefiting us? How do we identify and measure that good feeling we get from being around trees? Over the past few decades, scientists have stepped up to this challenge and there now is a significant body of research that quantifies just how much trees benefit individuals, businesses, and communities. Some of these benefits include, but are not limited to:

### **Increased property values**

Trees can increase property values and rental values by an average of 7% (Wolf, 2007).

### **Lowered heating and cooling costs for homes and businesses**

Homes shaded by trees can save homeowners up to 58% on daytime cooling costs, or 2-10% annually. Mobile homes owners can save up to 65% on daytime cooling costs (Smith, 1999).

### **Reduced flooding and stormwater maintenance costs**

An urban forest can reduce annual stormwater runoff by an estimated 5-7%. One mature deciduous tree can absorb to 500 gallons of rainwater a year, and that's just during the growing season. Evergreen trees that hold on to their leaves all year can absorb up to 4,000 gallons per year (Seitz, 2008). The roots of trees planted along stream banks help to stabilize soil and prevent erosion. Communities spend a lot of money managing stormwater and the funding typically comes from local property taxes.

## Reduced air particulates and pollution

Trees can remove up to 60% (or up to 80 pounds per forested acre annually) of street-level air pollution including, ozone, nitrogen dioxide, sulfuric dioxide, and particulate matter such as dust, ash, dirt, pollen, and smoke (Coder, 1996). Less air pollution decreases cases of respiratory and lung diseases and other human illnesses. Trees capture carbon dioxide, a major greenhouse gas, and release oxygen through the process of photosynthesis.

## Reduced heat island effect

Cities are getting hotter due to factors including climate change, decreased greenspace, and an increase in paved areas. Homes and business in these cities cost more to cool down and heat stress can be a significant factor in public health issues. Urban trees are one of the most effective ways to reduce the effects of urban heat islands and can lower ambient temperatures by 20–45°F (US EPA, 2015).

## More successful business districts

Tree-covered commercial shopping districts are more successful than those without canopy. Consumers are willing to pay 11% more for goods and shop for longer periods of time in shaded and landscaped business districts (Wolf 1998, 1999, and 2003).

## Improved mental and physical health

Trees create calming, less stressful environments for people. Those with views or access to greenspace tend to be healthier both mentally and physically. Employees experience 23% less sick time and greater job satisfaction, and surgery patients recover faster with fewer drugs (Ulrich 1984).

Trees seem to have a hand (or a leaf) in just about everything we do. Fortunately, prioritizing trees and urban forests isn't a question of economy versus environment. It's clear that trees provide valuable services for us in ways we can measure. You can even use the National Tree Benefit Calculator located at <http://www.treebenefits.com/calculator/> to see how the trees on your property benefit you.

Individuals can do a lot to improve and preserve the forest around them, but the big impact will be made at the community level. Cities and municipalities are realizing the economic benefits that a well-maintained urban forest brings to their communities. Some communities have enacted successful Urban Forest Master Plans and many more are in the process of developing plans that are tailored to their community's needs. Check out your city's website to see if your area has an urban forest plan and for ways that you can contribute. If your community doesn't have a plan, there is no time like the present to get the conversation started.



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