



Overview of the Economic Benefits of Conservation around Stringer's Ridge.

As a vantage point from which to view the entrance to the Tennessee River Gorge from one side and downtown Chattanooga from the other, Stringer's Ridge offers more than 90 acres of urban forest situated minutes from 50,000 people. It offers both historic contemplation and trails for mountain bikers and hikers. The slopes of this low ridge are covered by mature oak, hickory trees and a host of other native trees. A rich bird population fills the forest canopy and rounds out a rich treasure of plant and animal life. In addition, the ridge's trails provide a lasting community asset with both natural and economic benefits.

Recreational Use - Residents and visitors gain value by visiting the parks and trails and engaging in an activity (e.g., walking, picnicking, biking). Some economists examine the interest of the visitors to a park or public attraction in terms of their "willingness to pay". In very simple terms, based on calculations by U.S. Army Corps of Engineers, and covering very limited general recreation opportunities with low aesthetic values, there is a \$3.58 of unit day value for Recreation.¹ This gives a very rough idea of the amount of money residents or visitors potentially save by not having to pay market rates to indulge in park activities like trails for walking or biking.

Human Health - Strong evidence suggests that when people have access to parks and trails, they exercise more. Exercise reduces illness in people of all ages and fights depression, obesity and high blood pressure. The obesity rate in Tennessee is the third highest in the U.S. at 32 percent. The rate of inactivity for adults in the state ranks the highest in the U.S. In 2003, estimated adult obesity-related expenditures in Tennessee exceeded \$1.84 billion with \$433 million paid by Medicare and \$488 million paid by Medicaid.² The financial benefit of increasing exercise and recreation on public health is evident and is especially important for certain population groups.

Access to parks, trails, open space, and natural areas increases residents' levels of physical activity and generates medical cost savings for those who exercise in these important places.



Photo: Darcy Kiefel

TPL has found that an average of \$351 in medical costs is saved annually by those under 65 who exercise regularly.³ The importance of healthy and happy residents is not only a financial factor but can also be seen in the foundation for strong communities and social cohesion.

Tourism – Non-residents use parks and trails for special events, walking, biking, and other activities. They also spend money locally generating local income and jobs. Tourism in Chattanooga attracts 3 million visitors annually and accounts for \$690 million in the local economy. In 2010, tourist activity was also responsible for creating 8,200 jobs in Hamilton County, contributing \$46 million in state sales tax and \$18 million in local sales tax.⁴

Improved Air Quality - Park and trail vegetation, including trees and shrubs, has the ability to remove air pollutants. They play an important role in improving air quality, and reducing the costs associated with pollution. The intact tree

1 U.S. Army Corps of Engineers. Calculation of Unit Day Value for recreation 2011. <http://www.usace.army.mil/CECW/PlanningCOP/Documents/egms/egm11-03.pdf>

2 http://hit.state.tn.us/Reports/Final_Obesity_Report.pdf

3 Based on studies that have been carried out in seven states, we assigned a value of \$250 as the annual medical cost difference between those who exercise regularly and those who do not.

4 Tennessee Department of Tourist Development.



canopy on top of Stringer's Ridge naturally removes 8,000 pounds per year of particulate matter with a dollar value of nearly \$23,000 annually.⁵ The tree canopy also stores 3,600 tons of carbon dioxide and sequesters another 28 tons annually.

Job Creation - Park and trail construction creates local jobs. A 2011 report showed that, on average, 8.83 jobs were created in Lexington, AR. for every \$1 million dollars spent on trail design and construction. This figure accounts for both direct and indirect jobs, for trails and pedestrian and bicycle infrastructure, both on and off street. The national average from the same report was 8.96 jobs per \$1 million invested. The largest individual job creation component was bicycle infrastructure, which accounted for 11.4 jobs.⁶

Reduction in Stormwater Runoff - Parks and trails absorb rainfall and reduce the volume of stormwater runoff, decreasing local government's stormwater management costs. Analysis of costs associated with reduced runoff volume conducted by American Forests for Stringer's Ridge revealed annual government cost savings of more than \$141,000. This is calculated by examining tree canopy, annual rainfall, and construction costs related to containment.

The tree canopy over Stringer's Ridge also benefits water quality. Trees naturally filter surface water, maintain or improve water quality, and prevent concentrations of pollutants associated with impervious surfaces.⁷



Photo: David LaBelle

5 Analysis completed by American Forests using CITYgreen to estimate the annual air pollution removal rate on Stringer's Ridge property. Based on research completed by David Nowak, PhD. Of the U.S. Forest Service.

6 Pedestrian and Bicycle Infrastructure: A National Study of Employment Impacts. Political Economy Research Institute, Univ of Mass., Amherst. June 2011.

7 Analysis completed by American Forests for Stringer's Ridge using CITYgreen to calculate runoff volume and contaminant loading.

Reduced Cost of Community Services –

Development imposes costs on communities in the form of increased demand for schools, roads, water, sewer and other community services. Creating parks and protecting and natural areas lowers demand for these expensive public services. Cost of community services has been studied in 128 communities across the country. These studies have consistently demonstrated that parks, open space and working lands (e.g. farms and forestland) generate significantly more local tax revenue than they require in public services. On average, these studies found that parks, open space and working lands require \$0.35 in services for every \$1 paid in local taxes. By comparison, residential development typically fails to make up for local costs with property tax revenue. These studies have found that an average home in Tennessee requires \$1.14 in services for every \$1 paid in local taxes.⁸

Enhanced Property Values -The market values of residential properties located near parks and trails are typically higher than those of comparable properties more distant from parks and open space. Property owners benefit from higher property values and local governments benefit from an increased tax base. A National Association of Realtors survey found half of respondents would pay 10 percent more for a house located near a park or open space.⁹ Another recent report from the National Association of Realtors found the premium for homes near parks and open space can extend three blocks and start at 20 percent for those homes directly adjacent to the amenity.¹⁰

TPL has determined, based on over 30 studies, that excellent parks add approximately 15 percent to the value of a dwelling within 500 feet of parks. Therefore, we estimate the reservation or creation of additional open space will add more than \$21,000 to the market value of a typical nearby home (based on the median home value of \$142,500).¹¹

8 American Farmland Trust. 2010. Cost of Community Services Studies Fact Sheet.

9 According to a 2001 survey by the National Association of Realtors by Public Opinion Strategies, 50 percent of respondents said they would pay 10 percent more for a house located near a park or open space.

10 National Association of Realtors. On Common Ground. Winter 2009.

11 U.S. Census, Hamilton County, Tennessee Quick Facts.