

Green Neighborhood Case Study-Cheltenham Township

Custis Woods: A Green Neighborhood that provides a sense of place with significant natural and economic benefits

Unlike many developments that have lost the icons listed in their name like "The Oaks," Custis Woods is still a mix of mature native trees species that covered the Pennsylvania landscape for 10,000 years. Magnificent beech, maple, oak and hickory trees are rooted in our name. The trees are tall and mature with canopies that cover over 70 percent of the land. More than 75 percent of the canopy trees are native to the area. We also see tall Colorado blue spruce, fir, Norway maple and Japanese maple in the neighborhood but they are not native to Pennsylvania and do not provide important food for native wildlife.

According to Doug Tallamy in his book *Bringing Nature Home*, native plants have 29 times the biodiversity of non-native plants.¹ It is the biological diversity that drives natural system services such as carbon sequestration and air quality, water filtration, flood control, stormwater management, pollination and habitat,

During a morning walk, I counted over 20 species of native trees. The entire hill of this area was probably clear-cut back in the late 1700's and the rocky, slope has grown back to the original natural forest composition. The local story is that Custis Woods was part of Martha Custis Washington's dowry to George Washington. While I have never seen this documented, this is our story and we are sticking to it.

Custis Woods lies along a crystalline ridge of sandstone that is exposed in the local Glasgow rock and stone quarry on Limekiln Pike in Glenside Pennsylvania. Custis Woods is only a few miles from Chestnut Hill in Philadelphia where stone homes were built with the underlying Wissahickon schist demonstrating how geologically active the area was millions of years ago.

The first homes in Custis Woods were built in 1939. The homes are well- built but modest-sized by today's standards. The turnover rate in the neighborhood is very low. Most people leave because they are moving on to the next life stage. Most of us enjoy living in the neighborhood so much that we have made additions to our homes rather than move. People love to live here and inhabitants of Custis Woods often refer to it as "Camelot." The major attraction is the beauty and tranquility created by the trees, shrubs and flowers. As trees have been removed due to age and disease, the residents are keenly aware of the environmental impact on this area. The loss of each tree is a significant loss for residents here.

¹Tallamy, Douglas. *Bringing Nature Home: How Native Plants Sustain Wildlife in Our Gardens*. Timber Press Inc., 2007.

Morning, noon or night, you will see people walking up and down the streets, enjoying the beauty of their neighborhood. As a neighborhood, we gather for holiday celebrations, Derby Day parties and backyard picnics. We celebrate the beauty of our "woods" and are a close, interactive community. But we all see the signs of change. Thirty years ago many more trees towered over the homes than there are today. Not many canopy trees have been replanted to replace the forest canopy. We know that the loss of each mature tree has aesthetic and financial consequences.

While it costs money to keep the trees healthy and trimmed, Custis Woods provides many cost-free natural system services. Native insects, invertebrates, birds, plants and animals help, infiltrate rainwater into the ground reducing stormwater and flooding. The soils and underground biological systems filter and purify the water and allow the infiltrated rainwater to recharge local streams at the right temperatures to support aquatic life. Nutrients are absorbed and recycled. Native birds and beneficial insects control pests and naturally pollinate the trees and flowers. The trees and shrubs provide valuable food and shelter for a wide range of forest and grassland birds. Were it not for the woods, tax payers would have to replace many of these services with expensive, engineered solutions that would add to our cost of living.

On a regional scale, the place we call home provides stopper habitat for birds that migrate in the Atlantic Flyway as they travel north and south in the spring and fall. Over 40% of the birds in the Atlantic Flyway are in "conservation need" meaning they lack adequate habitat. Because the woods have been left in a relatively natural condition, Custis Woods contributes to the ecology of both North and South America in its own small way. Moreover, Custis Woods impacts our quality of life, health, and our economy. A recent research study by the Knight Foundation identified two of the top three reasons people are emotionally attached to their community: the social offerings, and aesthetics and greenery. Custis Woods has 110 households. The average lot size is one-third acre and the size of the home is about 2,000 square feet. Households in this area have about 2.5 people per household. The average home value is between \$350,000 and \$400,000 according to Zillow and the average energy bill for heating and air conditioning is \$400 per month.

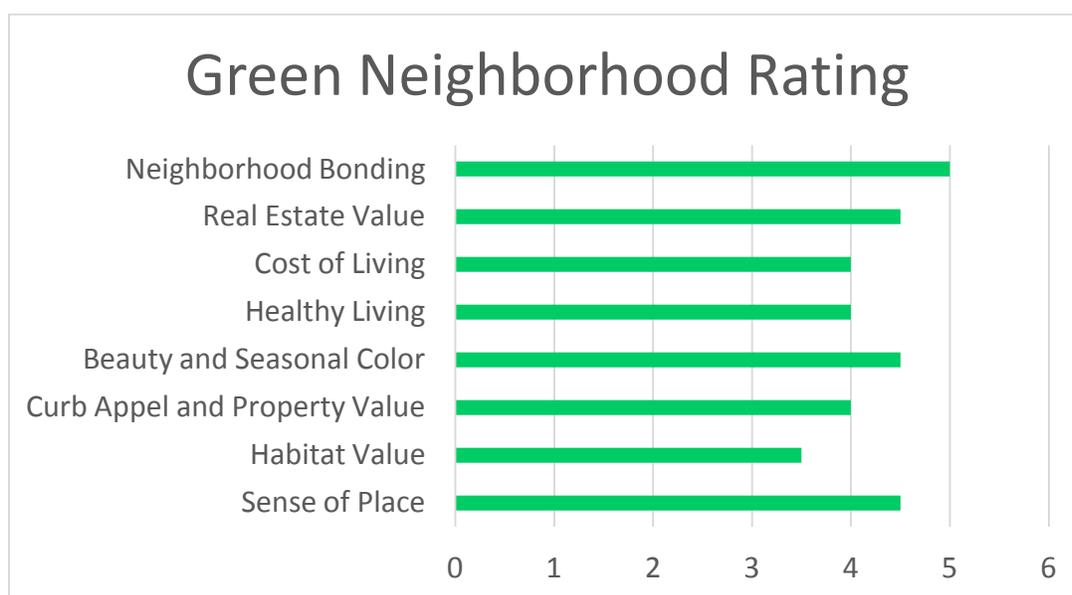
Added Benefits That Nature Provides in Custis Woods

Per household average	Custis Woods Neighborhood	Measure
2.5 people	275 people	<i>People who experience the inspiration and healing powers of nature</i>
\$5,896	\$60,000/year	<i>Potential medical cost savings by being close to nature</i>
\$ 85 /month	\$118,000/ year	<i>Energy cost savings</i>
\$75/ year	\$5,495/year	<i>Township stormwater management expenses savings</i>
\$50,000	\$5.5 million	<i>Increased home value due to wooded landscape</i>
7 out of 10		<i>Habitat value of the neighborhood</i>
		<i>Carbon dioxide offset from carbon sequestration and storage by trees</i>
40 0,000 gallons/ year	440 million gallons/ year	<i>Amount of water infiltrated into the ground by trees</i>
4	44	<i>Potential number of households supplied by infiltrated water</i>

Without the canopy cover, shrubs, gardens and native plants, these numbers would be **significantly reduced**. Also, if every neighborhood were like Custis woods, habitat needs of birds would be significantly improved.

In twenty years, the character of the area will undergo a dramatic change if residents don't become better stewards of the woods.

Custis Woods Green Neighborhood Scores



Green Neighborhood Rating System

Helping Custis Woods go from good to great.

1. Replace all canopy level tree species when older trees are removed. Plant Scarlet oak, White oak, Blackgum, Sugar maple, Red maple, White pine, River birch,
2. Grow more shade-tolerant native, flowering understory trees and shrubs with awesome blossoms like Downey Serviceberry, Fringe tree, Blackhawk viburnum, Maple-leaf viburnum, Virginia sweet spire, Ninebark, Sweet pepperbush and Winterberry
3. Keep lawns as small as possible by planting wider border gardens and island gardens in the front yard. In sunny areas, plant pollinator species of native plants
4. Remove invasives and replace them with native plants.
5. Use less chemicals when feeding and weeding lawns.
6. Continue walking and meeting neighbors.

For more information see DWTN.net