



Introduction

A number of economic benefits are available to property owners who apply the watershed approach to their landscapes. As Clements and St. Julianna (2013) explain in their publication *The Green Edge: How Commercial Property Investment in Green Infrastructure Creates Value*, the integration of Green Infrastructure (GI) can help property owners save on their utility bills while also reaping “higher rents and property values,” and “increased retail sales” among other environmental and social benefits. Primary research conducted by Laverne and Winson-Geideman (2003) found “landscaping with a good aesthetic value added approximately 7 percent to the average rental rate of a building” for 85 commercial office buildings in Cleveland, OH. Wolf (2003) analyzed 270 survey responses from city dwellers within revitalized business districts and found that the presence of trees within a commercial retail setting were associated with a willingness to travel more often, as well as farther and longer to patronize businesses. These same respondents were also willing to stay at the commercial space longer and pay more for parking. Finally, the same study reported a 12 percent increase in willingness to pay for goods when the retail space contained vegetated streetscapes. Kaplan (2007) analyzed nature preferences from 49 surveyed employees of 41 businesses along a main corridor in Ann Arbor, MI and found those who could readily look outdoors were the most satisfied. These same individuals, “appreciated that they could see birds and other animals, the general appearance of the area outside, as well as the number and size of trees.” Also, noteworthy was that manicured lawns at the place of employment “had no bearing on participants’ satisfaction with any aspect of the natural environment, or its general appearance.”

Data also suggests that residential property owners prefer smarter designed landscapes, as was observed more recently by the National Association of Home Builders. In their 2019 report *What Home Buyers Really Want*, the second ranked green preference by 4,000 recent home buyers or those looking to own a home within the near future, was “low-maintenance landscaping that grows in the local climate with minimal watering, weeding or

mowing.” Similarly, Ward et al. (2008) found that the installation of GI within select Seattle neighborhoods helped increase property values between 3.5 and 5 percent. Sustainable landscapes therefore can impact home sales, as was also documented by one Sacramento, CA news outlet. In 2014, CBS Sacramento reported that home prices were taking a hit because green lawns could not be sustained on drought watering restrictions, in one instance this accounted for a \$9,000 loss. Another buyer was reported to have backed out of a home purchase when the cost of maintaining the landscaped was

Trees



The presence of trees within urban landscapes can influence property value.

Laverne and Winson-Geideman (2003) found that commercial rental rates were positively impacted by approximately 7% for buildings with good shade. Donovan and Butry (2011) found that rental prices for a sample of 985 single family homes in Portland, Oregon increased by \$5.62 monthly from an additional tree on the lot, and similarly by \$21.00 for an additional street tree located in the public right of way. In 2010 the same researchers found that street trees in front of homes increased the sale by over \$7,000 and nearly \$13,000 for homes that were within 100 feet of the tree (Donovan and Butry 2010). Placement of trees were found to influence home sales, where Culp (2008) found that trees sited on three sides of a house reduced time on the market by half, while trees who’s branches overhung one side of a house reduced the sales price.

disclosed. This same buyer went on to seek out and purchase a property with drought-tolerant landscaping (CBS13 2014). Therefore, sustainable landscapes can help preserve or increase the market value of a property while also expanding the pool of interested buyers.

Methods

In its issue brief, the Natural Resources Defense Council (NRDC) estimated hypothetical monetary returns from GI investments for three typical commercial building types: a medium sized office building, mid-rise apartment building and a retail center (Clements and St. Juliana 2013). The results were reported in total present value over a 40-year analysis period and assumed a 6 percent discount rate. Results ranged from a net benefit of \$2 to \$24 million. Noteworthy is that property value was only assessed for the apartment building scenario and was attributed to a one-time sale. Additionally, each of the three analyses accounted for the installation of a green roof, which traditionally have not been eligible for water agency rebates, likely due to the high cost of design and installation. Nevertheless, the methodology used in the NRDC analysis could be utilized by water agencies to encourage CII property owners to invest in GI.

The Center for Neighborhood Technologies in partnership with American Rivers also laid out an approach for calculating “a variety of performance benefits gained by implementing GI strategies” on a parcel scale (CNT 2010). The approach utilized value estimates at the time of publication to assess the annual monetary benefits accrued from five GI practices, including: green roofs, tree planting, bioretention and infiltration, permeable pavement and water harvesting. Regarding property value, the study suggests a mean increase of 3.5 percent based on reported values from the literature.

Additional Considerations

As Clements and St. Juliana (2013) suggest, when it comes to making the business case for sustainable landscapes on commercial properties, it’s important to account for the potential benefits that accrue over the average lifetime of ownership. This helps to generate a more attractive return-on-investment that reflects the cumulative services provided by GI over a set period. However, as Cooley et al. (2019) note, these sorts of benefit analyses are less appealing to tenants of commercial properties as “investment in sustainable landscaping incurred by the tenant is a sunk cost if the business moves.”

While increased property values and rental rates can be attributed to the installation of GI or sustainable landscaping elements, studies have shown that the degree of increase is relative to the quality of the landscape. For instance, as early as 1994 Henry demonstrated that for a sample of 288 homes in Greenville, SC landscapes that were rated as “excellent” by landscape professionals accounted for a 4 to 5 percent increase in property value compared to landscapes that received a “good” rating. Similarly, in their study, Laverne and Winson-Geideman (2003) concluded, “It appears that landscaping does have a positive impact on rental rates, although quality is essential,” and cited findings from the 9th Edition of the *Guide for Plant Appraisal* that 20 percent of the value of an improved residential property can be attributed to a well-maintained landscape. Lastly, CNT (2011) cautions that property value is a dynamic measure that will fluctuate over time and is influenced by local variations and pricing uncertainties. Therefore, property value estimates should be calculated with the most up-to-date market figures to not over or under-project benefits generated by landscapes.

Primary Resources

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