

ECONOMIC BENEFITS OF NATURAL GREEN SPACE PROTECTION



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EXECUTIVE SUMMARY

With the demand for increased protection of parks and natural open space in urban areas, many have questioned the benefits and costs these areas bring to the community and local government. Some view natural open space as underutilized, while others value it as a component of the quality of life in a neighbourhood. More recently, natural open space benefits for stormwater management, habitat protection, recreation, groundwater capture, water and air quality improvements, and non-motorized transportation have been considered.

Ascertaining such costs and benefits of natural open space has been imprecise given the difficulty in quantification methodology. Researchers have attempted to place a private property value on natural open space by comparing housing prices in areas near and adjacent to parks, greenbelts, lakes and oceans with similar residences without an open space amenity. While this hedonic price study methodology has several shortcomings (for example, the inability to account for ecosystem and community benefits), it continues to be employed as a means to demonstrate the benefit of natural open space in urban and near-urban areas.

The purpose of this study is to review the literature documenting the effect of natural open space preservation on property values, and to briefly discuss the economic benefits such an approach has for land developers and municipalities.

Generally, research indicates that natural open space has a positive effect on real estate values. Quantified benefits to communities include higher residential property values in areas proximate to, and/or with views of, natural open space. Homebuyers are willing to pay a premium for properties near natural open space, and residents will pay to permanently protect a natural open space in their neighbourhood.

The presence of natural open space also has property tax implications for local governments and communities. Several studies have shown that agricultural and open space land pays significantly more in taxes than it requires in servicing from local governments. Likewise, the positive effect of natural open space on property values can result in higher assessments and thus property tax revenues for local governments.

Finally, many developers and municipalities are saving money and increasing the marketability of projects by integrating ecological considerations into the development.

1. INTRODUCTION¹

Urban and near-urban residents are increasingly concerned with the proximity of green space and the protection of natural areas. In North America, parks and open space are valued as an integral part of neighbourhoods. In two 1995 surveys by American LIVES, Inc and InterCommunications Inc, homebuyers indicated that natural open space and walking and biking paths were among the top four most important features in a residential neighbourhood (Warrick and Alexander, 1997). More than 50% of those surveyed also highly ranked gardens with native plants, walking paths, wilderness areas and interesting little parks.

In response, many local governments have initiated new environmental policies. A core strategy has been to acquire and/or set aside greenways and natural green space for a number of purposes which include stormwater management, habitat protection, recreation, aesthetics, groundwater capture, water and air quality improvements, non-motorized transportation, and enhancement of the surrounding residential neighbourhood.²

These new policies bring benefits and costs to the community and local government. These benefits and costs are difficult to assess given the fluid nature of the environment and the difficulty in placing monetary value on non-economic features such as aesthetics, environmental integrity and biological diversity. It is also difficult to place monetary values on environmental management functions that natural systems perform, including stormwater management and improvement of water quality. Benefits from natural green space also accrue to the community at large, and the common benefit of these spaces may exceed any price an individual landowner may be willing to pay for the benefit.

In addition, proximity to greenways, trails, and natural open spaces can also directly benefit the building industry and real estate market. Proximity may increase property values, increase the marketability of adjacent properties, and promote faster sales (U.S. National Park Service, 1995).

One method of assessing costs and benefits is through the impact of natural green space protection on the real estate value of adjacent and nearby properties. Using economic modeling, studies have attempted to evaluate the effect of parks, rivers and greenways on property values. While narrow in scope, they are an interesting indicator of the impact natural green space has on the urban neighbourhood. In addition, when natural green space can be assigned a value, market and regulatory mechanisms can be created to reward those who promote those values, such as through tax incentives to natural open space property owners for the benefit they provide to neighbourhood properties.

¹ Portions of this analysis are based on unpublished work done by the author in 2000 for a Canadian municipality – see Curran and Draeseke, 2000.

² For a more detailed discussion of the benefits of natural open spaces and greenways, see Garvin and Berens, 1997; Harnik, 2000; Sandborn 1996.

The purpose of this report is to summarize the economic literature of the past thirty years that documents the impact of the protection of natural green space on real estate values. The benefits of natural open space for the development industry and local governments are also briefly discussed. In general, proximity to natural parks and open areas increases real estate values and provides a number of benefits to communities. Developers and municipalities are taking note and increasingly integrating the protection of open space and ecological functioning into new projects.

2. THE EFFECT OF NATURAL GREEN SPACE PROTECTION ON PROPERTY VALUES

In this report, a number of terms are used to connote the publicly and privately owned natural areas (both land, ocean and freshwater bodies) that are not developed or built upon in urban, suburban and exurban³ areas. These terms include “natural green space,” “greenway,” “greenbelt,” “park,” “natural open space,” and “open space,” and are used in their widest context to be inclusive of the many different kinds of natural areas found in near urban areas. These areas generally contain a degree of ecological function, especially if a riparian area or providing habitat. The wide range of terminology has been retained to accurately report on the findings from each of the specific articles reviewed in this paper.

Greenbelt lands around urban areas, including agricultural and other private open spaces, are also included in this study, as city dwellers perceive agricultural land as an open space amenity. While natural green space does not include playing fields and other areas of grass or turf used for recreation, several studies addressing the effects of these types of open space are also included here.

2.1 Hedonic Price Study Methodology

The term "hedonic" in this paper refers to a model of statistical analysis in which goods are valued for individual characteristics, and a value is estimated for each characteristic. For example, the value of natural open space is estimated by looking at the separate characteristics of a residential property that in total make up the full value of the property. Through statistical analysis the implicit prices associated with each characteristic of a property (proximity to green space, number of bathrooms, age of house, etc.) are estimated.

Hamilton and Quayle (1999) describe such studies in the following manner:

One common way to estimate the impacts of proximity to greenways is to estimate the difference in the market value of properties which differ only in respect of their proximity to greenways. This involves holding the property characteristics constant. This is accomplished by...using statistical analyses such

³ Exurban land refers to very low density residential developments that are within commuting distance of employment but outside of urban and suburban areas. They are often hobby farms and acreages (Nelson 1988).

as multiple regression analysis [a technique used to determine the relationship between two or more variables]. Regression analysis consists of relating the sale prices of the property (the dependent variable) to the characteristics of the house and neighbourhood, including various measures of proximity to the greenway (the independent variable) using multiple regression...Such analysis would allow the researcher to compare how much more (or less) residents are willing to pay for increments to any of the independent variables such as living close to the greenway.

Valuation of the private property benefit of green space has been popular because using economic modeling allows researchers to isolate the portion of the value of the property attributable to its location adjacent to or near a greenway. The other component values of the property (such as value of the home, time of sale and location in region and country) are identified and accounted for, leaving the proximity to natural area as the isolated variable. Generally, as an indication of property value, sale prices of homes are compared. Some studies also address property owners' and residents' perceptions of the affect of natural open space on property values.

The accuracy of such studies, given the large number of variables affecting the selling price of a residential property, has been debated for the past thirty years. Researchers who focus primarily on the relationship between property value and the proximity of natural open space generally find a stronger positive correlation than do researchers who include these factors as part of a larger study (Schroeder, 1982). Sample size can vary significantly between studies. However, studies continue to be published in academic and peer-reviewed journals that show natural open space has a positive affect on property values (as discussed in below).

Finally, economic modeling addresses only the narrow question of increases in private property value that can be attributed to proximity to the open space. Many other values associated with open space remain largely unquantified. Few accounts exist of comprehensive valuations of natural open space and its benefits for stormwater management, habitat protection, recreation, aesthetics, groundwater capture, water and air quality improvements, non-motorized transportation, and enhancement of the surrounding residential neighbourhood. The cost or benefit to local governments of natural open space, through increased property tax revenue and lower servicing costs, also remain largely undocumented. Additional limitations of this type of study include a lack of differentiation between the quality of natural habitats studied and housing markets.

2.2 Proximity to Natural Open Spaces

Generally, properties with closer proximity to natural open space have a higher property value than similar properties located further away from natural open space. This generalization depends on the characteristics of the natural open space and the way in which the adjacent properties are linked to it (U.S. National Park Service 1995). High use areas or natural open

spaces that are perceived as unsafe can have a negative effect on adjacent property values. This is especially true for trails and high-use recreation spaces that experience peak weekend use and where parking can spillover onto nearby residential streets (PKF Consulting, 1994).

A study of riparian suburban greenways by Hamilton and Quayle (1999) at the University of British Columbia indicates that proximity to greenways has a positive property value effect of around 15%. The authors studied the sales of single detached dwellings in four different areas, three in the Lower Mainland and one on Southern Vancouver Island. The study site of each of the areas was divided into three zones: adjacent, near (within 150 feet) and control (150 to 450 feet), according to its distance from the greenway. The authors conducted surveys of the residents to determine their views of the effect of the greenway, and also used a multiple regression analysis on house sales.

From the questionnaire, 75% of the respondents believed that the greenways had a positive affect on their property value. They estimated the overall average impact of the greenway on their property value to be 21%. Certain percentages of respondents also believed that the greenways contribute to walking (67%), nature viewing (66%), educational activities (55%), vandalism (16%), criminal activity (10%) and extra traffic in the area (28%).

The authors found that the greenway increased property values by, on average, 15% in three of the four study areas for those properties adjacent to the greenway. No price effect for properties in the category “near” to the greenways was detected.

A smaller study conducted for the District of Saanich near Victoria (Curran and Draeseke 2000) showed that properties near the Colquitz River and Rithets Bog have higher property values. While for both areas there is a negative effect on the value of properties that are directly adjacent to the natural open areas, there is a positive effect on the value of properties within 100 meters of green space but not directly adjacent. It is important to note that the negative affect was experienced for relatively few properties in the total sample size. Properties greater than 100 meters from the two areas studied showed no significant property value effects due to proximity to the natural open area.

Adjacent properties showed negative effects on property values of – 6.11% for Colquitz Creek and –7.19% for Rithets Bog. Properties within 100 meters of green space, but not adjacent, showed positive premiums of 5.7% and 10.5% for Colquitz Creek and Rithets Bog, respectively. In total, the Colquitz River study area netted an increase in value of \$2,777,600 and the Rithets Bog study area netted an increase in value of \$2,638,059. These figures represent only that portion of value these natural open areas provide in terms of their positive contribution to surrounding property values.

In Worcester, Massachusetts, More et al (1982) studied all houses sold within a 4000 foot radius of four parks, totaling 219 acres of open space, over a five year period. On average, a house located 20 feet from the park sold for \$2675 more than a similar house 2000 feet away.

This was not true for properties located next to active recreational facilities. Property value benefits declined with the increasing level of use of the park. The annual property value benefit produced by the four parks was \$349,195.

In an earlier study, Weicher and Zerbst compared residential properties near five parks in Columbus, Ohio (1973). The authors divided the properties adjacent to the natural open space into three categories: houses facing the park, those backing onto the park, and those facing an area of heavy recreational use or a park building. They found that increases in single family housing prices (7% to 23% of property values) were generated for properties that faced open space, but not for properties that overlooked active recreation areas such as playing fields. Houses facing the park sold for 23% more than properties located one block away, but houses in the other two categories sold for about the same as residences located one block away.

Hammer et al (1974) examined the property value effect of the 1294 acre Pennypack Park in Philadelphia and found a statistically significant rise in land value with closeness to the park. The study included similar properties close to the park and a control sample of properties not near natural open space, retail areas or highways. While property values of residences backing onto the park were negatively affected, proximity to the park accounted for 33% of land value at 40 feet from the park, 9% at 1000 feet, and 4.2% at 2500 feet. This equaled a land value premium of \$11,500 per acre 40 feet from the park to \$1000 at 2500 feet. Each acre of parkland could be said to generate a value of \$2600 in increased property value. The aggregate increase in land value attributable to the park was estimated at \$3,391,000. Proximity to the park was the only significant variable found in this regression analysis.

In Boulder, Colorado, residential property values were found to be 32% higher adjacent to a neighbourhood greenbelt than were properties 3200 feet away (Correll et al, 1978). The study involved 1,382 acres of greenbelt property purchased adjacent to residential developments. A \$4.20 decrease in the price of a residential property was experienced for every foot moved away from the greenbelt. The aggregate property value of the greenbelt for the neighbourhood was approximately \$5.4 million, which resulted in potentially \$500,000 to the neighbourhood property tax revenue. This increase in tax revenue could have paid for the initial purchase price of the greenbelt lands over a three year period.

Property value benefits have also been documented relating to shoreline parks in urban and suburban areas. Residential property values in neighbourhoods near three lakes in Seattle declined with distance from the shoreline (Brown and Pollakowski, 1977).

In addition to proximity to water, water quality has also been shown to affect property values (Kirshner and Moore, 1989). In comparing two similar residential areas adjacent to San Francisco Bay that differ in water quality, the researchers concluded that 20% of the value of the property (\$65,000) in the area of better water quality could be attributed to proximity to the Bay. In the area of poorer water quality, 9% of the value of the property, or \$24,000, could be attributed to proximity to the Bay.

In a rural area in the United Kingdom around the Forest of Dean in Gloucestershire, Garrod and Willis (1992) examined the property value effect of different types of natural open space. The nearby presence of a canal increased the value of the average house by 4.9%, while the proximity of at least 20% woodland cover raised it by 7.1%. Open water did not have an observable effect, and the presence of marshland reduced housing prices.

In some regions, a significant source of green space results from the creation of an urban containment boundary (UCB). UCB's are lines drawn on municipal or land use planning maps that designate the urban (inside the line) and rural (outside the line) part of a municipality or regional district. In reality, these lines are often enforced through zoning standards, servicing limits, and regional planning agreements. The purpose is to concentrate growth within the UCB and to preserve the rural, agricultural and resource lands outside of that area. As UCB policies prevent development of rural land, the agricultural, forest, and natural land outside an UCB can be viewed as semi-permanently preserved as open space. However, because land outside an UCB is often privately owned, the property value benefit from the views and privacy provided by the rural greenbelt land to urban or exurban land accrues only to that land near or adjacent to it.

One study of the UCB in Salem, Oregon examined the amenity value added to urban residential land near the UCB boundary (Nelson, 1986). Urban land at the UCB boundary was found to be worth about \$1200 more per acre than urban land 1000 feet away from the boundary. In addition, the amenity value influence of greenbelt or rural land on urban land value extended 5000 feet inward from the UCB.

Likewise, Nelson also found that in Washington County, Oregon, the price of vacant parcels of land in exurban areas rose the closer they were to greenbelt land (1988). For each 1% change in the distance from greenbelt land, exurban land values fell by one-twentieth. Exurban land is generally larger tracts of land outside of an UCB.

To protect significant natural features, development potential has also been constrained along coastlines. The California Coastal Commission was established in 1972 to protect the California coast. Frech and Lafferty (1984) expected the Commission's work to raise the value of local housing in two ways: by preserving a positive externality (the coastline) that would otherwise be destroyed; and by reducing the amount of land available for housing. They found that in the zone closest to the coast, housing prices were 7.6% to 13.4% higher (\$2882 to \$5040) than comparable homes greater than 0.5 miles inland. Kniesel (1979) also found a 7% to 21% increase in housing prices for properties 4.5 miles from the coast to the shoreline.

Likewise, in Maryland the Critical Areas Commission limited residential development on land abutting the Chesapeake Bay in 1986. Housing prices in the critical area with water frontage increased by 46%-62% (Parsons, 1992). Housing prices in the critical area without water

frontage increased by 14%-27%. As far as 3 miles from the Critical Area, a 4%-11% price increase was observed.

While not “natural” open space, one study (Do and Grudnitski, 1995) demonstrated that single-family residential properties invited a 7.6% premium when they abut a suburban golf course.

The effects of proximity to natural open space differ with the type and use of the open space. Positive impacts on property values are generally the greatest when the natural open space has some recreational access, limited use, few or no developed facilities, limited vehicular access, and effective maintenance and security (U.S. National Park Service, 1995).

2.3 View of Natural Open Space

Many studies have shown that property buyers pay a premium for sites with a view (Do and Sirmans, 1994; Rodriquez and Sirmans, 1994; Cassal and Mendelsohn, 1985; Gillard, 1981; Plattner and Campbell, 1978; Darling, 1973).

A recent study of the effect of a view amenity (ocean, lake, mountain and lakefront) on single-family real estate markets focused on Bellingham, Washington (Benson et al, 1998). Overall, in 1993 homes with a view sold for 26% more than those with no view. In four different ocean view categories, homes with a view sold for 59%, 31%, 29% and 8% more, respectively, than homes in the neighbourhood without a view. Mountain view properties sold for 9% more, and lake view properties sold for 18% more. Lakefront properties sold for 127% more. For all the ocean view categories, the greater the distance from the water the less the view is worth.

In California, properties with a lake view had an increased value of over \$2000 (Darling, 1973).

2.4 Perception of Value of Natural Open Space to Residential Properties

Significant literature exists showing that residential property buyers are willing to pay more for land that is close to natural open space that is publicly owned. This includes shorelines, large urban parks, and greenbelts (Blomquist and Worley, 1981; Li and Brown, 1980; Diamond, 1980; Brookshire et al, 1980; Correll et al, 1978; Brown and Pollakowski, 1977; Coughlin and Kawashima, 1973; Weicher and Zerbst, 1973; Hammer et al, 1971). Buyers are also willing to pay a premium for land adjacent and near to private greenbelt land, such as agricultural and forested land (Nelson, 1986).

Generally, willingness to pay studies are conducted using questionnaires and surveys, and rely on the opinions of residents and property owners. When survey results are compared with actual land value increases or money donated to preserve a particular parcel of land, the actual value is smaller than the perceived value.

In Boulder, Colorado, households in one neighbourhood were willing to pay, on average, \$302 to preserve a 5.5 acre parcel of undeveloped land that provided views, open space and wildlife habitat (Breffle et al, 1998). The study was limited to a one mile radius around the Cunningham natural area in question. Not surprisingly, willingness to pay increased with income, and decreased with distance from the natural open space. Overall, the neighbourhood residents were willing to pay \$774,000, which was more than what the property would have cost to purchase from the developer.

The Seattle Office of Planning, Washington (1987) completed a study, based on surveys of homeowners and real estate agents, on the impact of the 12 mile Burke-Gilman trail. Real estate agents found that property near, but not adjacent to the trail, sold for an average of 6% more. Sixty percent of homeowners believed that being adjacent to the trail would either increase or have no effect on their property values.

A detailed study of the impacts of the Northern Central Rail Trail (NCRT) was completed for the Maryland Greenways Commission (PKF Consulting, 1994). Local property owners were surveyed, and real estate brokers, appraisers, developers and tax assessors were interviewed. Of the property owners, 63% of survey respondents believed that the NCRT adds an average of \$2459 to the value of their properties. Sixty eight percent believed that proximity to the trail would be a positive selling point for their home. This figure rises to over 90% for respondents living within one mile of the NCRT. Proximity to the trail would positively influence 62% of respondents in their decision to buy a house.

Those professionals interviewed reported that the NCRT increased the salability of the property. However, these perceptions were not empirically tested due to the limited amount of development and small number of sales in the area of NCRT to the date of the study.

Negative effects of the NCRT were also found. The NCRT appeared to have a negative property value effect on a number of properties adjacent to it, due to the trail's high weekend use and spillover of user parking onto residential streets.

Finally, Lindsey and Knaap (1999) studied the willingness of residential property owners to pay for a public greenway in Indianapolis, Indiana. The lands in question were largely privately owned. For residential property owners, 36% believed that public greenway designation would increase property values, 5% thought it would lower values, while 31% said that it would have no effect.

2.5 Property Tax Benefits of Natural Open Space

The higher property values of residences adjacent and near to natural open space also results in property tax benefits for local governments. Several studies have shown that agricultural and open space land pays significantly more in taxes than it requires in servicing from local governments (American Farmland Trust, 1997; Auger 1995).

Likewise, the positive effect of natural open space on property values can result in higher assessments and thus property tax revenues for local governments. In one Boulder, Colorado neighbourhood, the aggregate property value of the greenbelt was approximately \$5.4 million, which resulted in potentially \$500,000 annually to the neighbourhood property tax revenue (Correll et al, 1978).

Historically, however, tax assessors in some areas have failed to recognize the positive benefits of proximity to natural open spaces (Weicher and Zerbst, 1973).

3. PROPERTY DEVELOPMENT APPROACHES FOR PRIVATE AND MUNICIPAL PROJECTS

Increasingly, real estate developers and municipalities view protecting natural areas as a sound economic and marketing approach to land development. Even the National Association of Home Builders has endorsed the view that planting more trees can increase the marketability of new developments because of the environmental and public relations advantages greening creates (Petit, 1998). While it is outside the scope of this paper to present an exhaustive review of the economic benefits of protecting natural green space for land development, two case studies, one private and one undertaken by a local government, demonstrate the direct financial benefits of green development.

Village Homes in Davis, California is a 60 acre community based around a village green with adjacent commercial, community and recreational facilities. It houses 220 single family homes, 24 rental apartments and 22 businesses (Corbett and Corbett, 2000). The clusters of buildings are separated by greenbelts, and backyards open onto larger common areas leading to the village green. Forty percent of the site is dedicated to agriculture (community gardens, orchards, vineyards) and green space.

The infrastructure and building design significantly reduced construction and maintenance costs. Narrow residential streets limited the land required for streets to just 20% of the site. Surface drainage handles stormwater through the use of swales that direct water over porous soils to irrigate agricultural areas. This design saved \$800 per lot when compared to conventional storm sewer construction (Rocky Mountain Institute, 1998). All of the homes are solar heated, and energy use is one third to one half that of other developments of comparable size.

Today, most units at Village Homes sell for \$11 per square foot more than homes of comparable size in surrounding areas. It is now recognized as Davis' most desirable neighbourhood by many in the real estate field (Rocky Mountain Institute, 1998). The relatively mature example of Village Homes, commenced in 1973, is now being replicated across Canada and the U.S. (see Rocky Mountain Institute, 1998).

Finally, many developers who take into account the protection of natural areas and use green products for their buildings spend very little on marketing because of the media interest the developments generate. Green developments often have a high rate of presold units, often around 75% as was the case with 2211 W.4th Avenue in Vancouver (Rocky Mountain Institute, 1998; Curran and Leung, 2000). The developers relied on on-site signage, word of mouth, and personalized marketing, saving an estimated \$650,000 in advertising and \$850,000 in real estate agents' leasing and sales fees.

The second case study is the award winning District of Matsqui's detention wetlands in Fishtrap Creek Nature Park, near Vancouver B.C. (Dayton and Knight, 1994; Hicks, Regts and Kelly, 1993). Frequent flooding problems forced the District to confront the increase in urban runoff from the rapidly urbanizing Abbotsford area. With the multiple goals of stormwater detention, habitat protection, recreation opportunities, groundwater capture, and improving water quality, all within the context of enhancing the surrounding residential neighbourhood, the District opted for the detention wetlands. Commenced in 1989, the project was designed to capture and attenuate water flows from a peak of 14.5 cubic meters per second to pre-development levels of 2.6 cubic meters per second in several detention basins.

The resulting 20 hectare park, complete with perimeter trails, is composed of native plant species used to re-create some riverbank vegetation and minimize maintenance requirements. Some areas of mature habitat and snags were retained, and a mixed vegetation regime established as wildlife habitat. Approximately 100,000 trees and shrubs, as well as ground cover and wetland plants were planted. Heavy construction was restricted before July to allow for nesting, and in-stream work was limited to mid-July to mid-September to allow for fish movement. Dual-purpose roads were used initially for construction and then were turned into treed islands or berms adjacent to the main creek channel that were planted to shade the creek to control the water temperature. The shape of the wetlands and channels was governed by fish habitat and protection requirements. Water flows are controlled by backing the flow upstream into the new wetlands from the confluence of the three tributaries in the system. Finally, the wetlands have improved water quality through biofiltration and sedimentation, and remove up to 60% of suspended solids.

Fishtrap creek drains 3047 hectares of urban uplands and agricultural lowlands, and at a cost of \$5 million for the detention wetlands project, has resulted in considerable savings for the District from what flood prevention and other strategies would have cost.

4. SUMMARY AND CONCLUSIONS

A review of the literature indicates that natural open space generally has a positive effect on real estate values. Quantified benefits to communities include higher residential property values in areas proximate to, and/or with views of, natural open space. Higher urban and exurban land prices are also experienced near the edge of urban containment boundaries and in ecologically sensitive areas, such as coastlines, where development has been limited and natural features preserved. Homebuyers are willing to pay a premium for properties near natural open space, and residents will pay to permanently protect a natural open space in their neighbourhood.

The presence of natural open space also has property tax implications for local governments and communities. Not only does agricultural and open space land pay significantly more in taxes than it requires in servicing from local governments, the positive effect of natural open space on property values can result in higher assessments and thus property tax revenues for local governments.

As a number of the studies found, this depends on the characteristics of the natural open space and the way in which the adjacent properties are linked to it, as properties adjacent to greenways can experience a negative premium. This is especially true if they are active recreation areas or if residents have concerns about safety.

The literature suggests that the overall net positive effect on property values of natural open space provides a significant benefit to property owners and potentially the local government through higher property tax assessments and increased quality of life in the community.

In addition, although unquantified, these natural open spaces have wider community benefits for stormwater management, habitat protection, recreation, aesthetics, groundwater capture, water and air quality improvements, and non-motorized transportation. The property value premium, if translated into higher tax assessments, also benefits the community as a whole.

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