

Comparison of Community Leader Perceptions on Urban Forests in Florida¹

Francisco Escobedo, Robert Northrop, Michael Orfanedes, and Anna Iaconna²

Urban Forests in Florida: Comparing Community Leader Perceptions of Benefits, Costs, and Hurricanes

An urban forest is composed of all the trees and associated understory plants growing in urban areas, including streets, yards, parking lot islands, parks, rights-of-way, and other natural areas within the urban environment. Research has shown that urban forests provide many benefits, or ecosystem services, to city dwellers including temperature and energy use reduction, improvement of air and water quality, reduced crime and improved aesthetics, all of which can increase property values (Escobedo and others 2011). However, the preservation and maintenance of urban forests cost money, and the costs must be planned and budgeted for (Escobedo and Seitz 2019). These costs are often referred to as ecosystem disservices. To create, maintain, and preserve urban forests, it is important that urban foresters, arborists, planners, and land managers who deal with trees understand what residents, community leaders, and decision makers think about trees, including how much they value them (Wyman et.al. 2012). This fact sheet will summarize and discuss the results from a study conducted in Broward and Hillsborough Counties in Florida,

of community leaders' perceptions and attitudes regarding urban forests and hurricanes in Florida and beyond.

The study for the two counties was conducted using mail surveys that asked Homeowner Association (HOA) Leaders a series of questions concerning perceptions and attitudes about the benefits and costs of establishing and maintaining urban forests. The survey used a 5-point scale to assess the level of importance for specific urban forest benefits and costs. Two nominal groups of HOA leaders from suburban and urban Hillsborough County were used to develop the survey (Northrop and others 2008). Six hundred and forty one surveys were mailed in Hillsborough County in 2007 and 578 in Broward County in 2008. Mailing lists were provided by the local county Extension offices and municipalities. Twenty-two and 27 percent of all mailed surveys were returned in Hillsborough County and Broward County, respectively. Specific questions asked and methods are provided in the Wyman et al., (2012) publication.

Table 1 summarizes the top five most frequent responses (in numerical order) received from both Florida counties. The table shows that, in general, Broward County HOA leaders, who were directly affected by the 2004 and 2005 hurricane seasons, perceive the same benefits from the urban forest as HOA leaders in Hillsborough County who were not directly affected by hurricane force winds during

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2. Francisco Escobedo, Research Social Scientist Los Angeles Center for Urban Natural Resources Sustainability; Robert Northrop, Extension agent, UF/IFAS Extension Hillsborough County; Michael Orfanedes, Extension agent, UF/IFAS Extension Broward County; and Anna Iaconna, research technician, School of Forest, Fisheries, and Geomatics Sciences; UF/IFAS Extension Gainesville, FL 32611.

the same period. With the exception of shade, the benefits perceived by HOA leaders of both Florida counties were different from results from a national survey on people's perceptions of trees (Lohr and others 2004). These differences are shown in Table 1. When asked about the concerns of the urban forest, results differed slightly between Florida counties and national results. Broward County respondents indicated that three of their four greatest cost concerns were hurricane-related. In Hillsborough County, only two of the top four cost concerns were associated with hurricanes. Although the national study is different from this survey, it might indicate how Florida's unique geography and climate make people perceive urban forests differently from people elsewhere in the United States.

When asked about the costs associated with urban forest, results differed slightly between Florida counties and national results. Broward County respondents were concerned with the threat of branches and trees falling on property and cars, while in Hillsborough County the concern was trees blocking signs. Comparison of the national survey to the Broward and Hillsborough results reveals that Broward and Hillsborough County respondents recognize hurricanes as a major cost associated with urban forests. By contrast, respondents in the national survey listed storm damage to power lines as their only concern related to storms. Clearly, there is a perception among HOA leaders that the cost of maintaining trees is related to storm damages in Hillsborough and Broward County. This is not surprising given the greater frequency of hurricanes in Florida, and south Florida (Broward County) in particular.

It is interesting to note that none of the top benefits of trees mentioned by Florida HOA leaders included environmental benefits, or ecosystem services provided by trees, such as noise and dust mitigation, which were two of the top four benefits cited in the national study. This might be explained by the lack of knowledge on these benefits by HOA leaders or the relative absence of high-polluting heavy industry in most of Florida, unlike urban centers in California, the Northeast and the midwestern United States (Escobedo et al., 2011).

The Broward County and Hillsborough County HOA leaders were also asked to rate factors that might influence their support for increased tree planting and maintenance programs in their communities (Table 2). In Broward, younger, more highly educated HOA leaders were more likely to support increases in urban forests, while in Hillsborough it was older HOA leaders. Overall, respondents in both counties agree that hurricane damage, root damage to infrastructure, and the cost of maintaining trees would

be very important considerations when thinking about creating or expanding urban tree planting and/or tree protection programs. Homeownership, gender, and the amount of urban tree canopy were not however, related to HOA leaders supporting increases in urban forests in either county (Wyman et al., 2012).

When asked if they would like more trees planted in their communities, responses between counties differed (Figure 1). Respondents in Broward County showed a greater interest in tree planting than did Hillsborough respondents. This might be due to a greater appreciation for trees due to Broward County's lower tree canopy and associated tree losses from the recent hurricanes (Wyman et al., 2012). More Hillsborough HOA leaders needed additional information to decide about whether to plant trees than did respondents in Broward County.

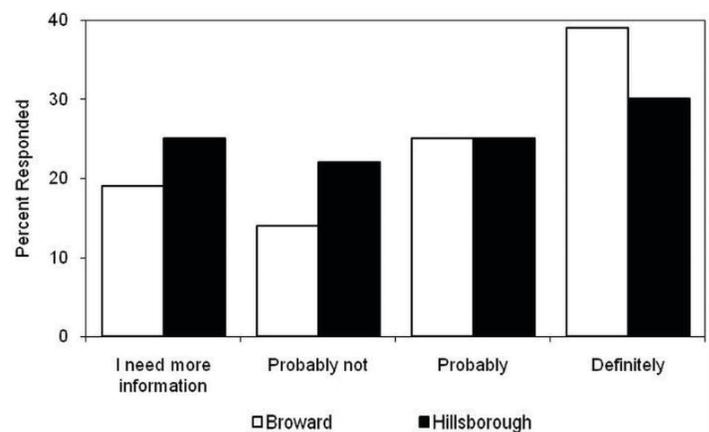


Figure 1. Comparison of Homeowner Association Leaders' Desire to Increase Tree Cover in Their Communities in Broward and Hillsborough Counties, Florida.

Survey results suggest that for the most part, Broward County HOA leaders perceive the same benefits from trees in their communities as do HOA leaders in Hillsborough County. Conversely, in the national survey, environmental benefits such as noise and air pollution reduction as well as the costs due to tree allergies were more important than in the two Florida counties. Hurricane damage was the biggest concern for both groups of Florida HOA leaders. The Wyman et al. (2012) study provides other detailed results.

The results from this survey suggest that people's perceptions of the benefits and cost (i.e., ecosystem services and disservices) of managing urban forests are affected by diverse factors and can include climate, city characteristics, a person's cultural and socioeconomic background, as well as the type, amount, and condition of the vegetation in their community. In addition, these perceptions can vary within the same state according to location or demographics. But understanding community leader's perceptions and attitudes towards trees can provide valuable insights

regarding that community's beliefs, educational needs and attitudes for funding urban forest. Knowing what people want and don't want from urban forests can help determine what kind of urban forest and how much of it people want in their communities, as well as where in the community would be best to plant new trees or preserve existing ones. Information such as this can then be used to develop management goals and design educational campaigns to promote greater awareness of the benefit of trees and show how to minimize associated costs. Understanding key stakeholders' perceptions of trees could also lead to promoting greater perceived value on the part of voters and decision-makers. Their additional support could pave the way for greater resources to promote and advocate urban forest programs in Florida.

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Table 1. Comparison of the Benefits and Costs of the Urban Forest to Homeowner Association Leaders from Broward and Hillsborough Counties from Wyman et al (2012) and Urban Residents in a National Study (Lohr et al. 2004) Ranked in Order of Importance.

Broward County	Hillsborough County	National Survey¹
Benefits of Urban Trees		
1. Shade	1. Shade	1. Provide shading and cooling of buildings
2. Aesthetics/beauty	2. Aesthetics/beauty	2. People feel calmer
3. Increased property values	3. Increased property values	3. Reduce smog and dust
4. Create a unique community character	4. Create a unique community character	4. Reduce noise
Costs of Urban Trees		
1. Hurricane damage from trees	1. Hurricane damage from trees	1. Allergies
2. Tree damage to sidewalks, roads, driveways, and foundations	2. Falling branches and trees on power lines	2. Block signage
3. Falling branches and trees on power lines	3. Tree damage to sidewalks, roads, driveways, and foundations	3. Cause cracks in the sidewalk
4. Falling branches and trees on property and cars	4. Block signage	4. Damage to power lines
From: ¹ Lohr, V.I., C.H. Pearson-Mims, J. Tarnal, and D.A. Dillman (2004)		

Table 2. Ranking of the Top 5 Statistically Significant Factors that Affect Support for Creation, Implementation, or Expansion of Tree Planting Programs by Homeowner Association Leaders in Broward and Hillsborough Counties.

Broward County	Hillsborough County
1. Hurricane damage	1. Hurricane damage
2. Root damage to infrastructure	2. Root damage to infrastructure
3. Falling branches/trees on property/cars	3. Falling branches/trees on property/cars
4. Monetary cost of maintaining trees	4. Monetary cost of maintaining trees
5. Tree sap and pollen on cars	5. Raking and disposal of leaves