

# City of Tampa's Urban Forest *Compensatory Value*



## *Compensatory Value of Tampa's Urban Forest*

### **What does the "compensatory value" of the urban forest mean?**

The compensatory value of the urban forest of Tampa is an estimate of the amount of money it would cost to replace a tree with a similar species of the same size in a specific location. The compensatory value of the urban forest was calculated using guidelines from the Nowak et al. (2002) study on Brooklyn's Urban Forest. Values for trees were based on the compensatory value of trees as published by the Council of Tree and Landscape Appraisers (CTLA) (8<sup>th</sup> ed., 1992).

Compensatory value is based on four factors:

1. trunk area (cross sectional area at 4.5 ft in height)
2. tree species
3. tree condition (health)
4. tree location

### **How much is the compensatory value of Tampa's urban forest?**

The UFORE model calculated the compensatory value of Tampa's urban forest to be approximately \$1.47 billion. This estimate includes a compensatory value for all tree species that occurred in the 2007 inventory except for palms, due to design limitations of the model.

The estimated compensatory value, however, does not discriminate for non-native invasive species. Initially it seemed logical to remove non-native invasive trees (e.g. Brazilian pepper) from the appraised value since these are the kind of species generally targeted for removal, but because they *are* part of Tampa's urban forest, there will be a cost associated with not only removing them but also replacing them. Hence, all of the trees in Tampa's urban forest have value. Native, non-native, and invasive species in Tampa provide ecological services such as carbon sequestration and pollution removal. Therefore, if management actions choose to remove them, then consideration will need to be taken to replace them in order to compensate for the loss of services they provided.

The compensatory value does not include the value of the many other environmental services provided by trees to Tampa's urban forest, such as improving human health and economics (Coder 1996, Wolf 2003). The urban forest is an asset that is part of the city's infrastructure and is providing many services to the city at a relatively low investment and maintenance cost compared to engineered services such as water treatment systems or transportation networks.

## How can the compensatory value of the forest be used?

The compensatory value is regularly used to determine monetary settlement for damage or death of plants through litigation, insurance claims, loss of property value for income tax deductions, and real estate assessments. It is based, in part, on the replacement cost of a similar tree (size, health, location) of the same or similar species and is an estimate of the amount of money the tree owner should be compensated for tree loss. In the case of Tampa, the compensatory value is an important figure to estimate damage to the urban forest following large storm events such as a hurricane. Frequently the Federal and State government need quantitative estimates from city officials to justify sending emergency relief. This figure can be used as a basis for estimating the current value of the urban forest, should such an event occur.

The content of this fact sheet was derived from the "City of Tampa: Urban Ecological Analysis" and the full report can be viewed by visiting [http://www.sfrc.ufl.edu/urbanforestry/Files/TampaUEA2006-7\\_FinalReport.pdf](http://www.sfrc.ufl.edu/urbanforestry/Files/TampaUEA2006-7_FinalReport.pdf)

## *References*

Andreu, M. G., M. H. Friedman, S. M. Landry, and R. J. Northrop. 2008a. City of Tampa Urban Ecological Analysis 2006-2007. Final Report to the City of Tampa, April 24, 2008. City of Tampa, Florida.

Andreu, M. G., B. J. Tamang, M. H. Friedman, and D. Rockwood. 2008b. The Benefits of Windbreaks for Florida Growers. University of Florida Cooperative Extension Service – Document FOR192.

Council of Tree and Landscape Appraisers. 1992. Guide for Plant Appraisal. Savoy, Illinois, International Society of Arboriculture.

Coder, K. D. 1996. Identified Benefits of Community Trees and Forests. University of Georgia Cooperative Extension Service – Forest Resources Publication FOR96-39.

Escobedo, F. 2007. Urban Forests of Florida: Do They Reduce Air Pollution? University of Florida Cooperative Extension Service – Document FOR128.

Nowak, D. J., D. E. Crane, J. C. Stevens, and M. Ibarra. 2002. Brooklyn's Urban Forest, US Department of Agriculture, Forest Service, Northeastern Research Station. General Technical Report NE-290: 107.

Wolf, K. 2003. Public Response to the Urban Forest in Inner-City Business Districts. Journal of Arboriculture, 29(3): 117-26.

