



Tampa Bay Watershed

FOREST WORKING GROUP

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The Tampa Bay Watershed – Forest Working Group (2006) is:

a collaboration of federal, state, and local government forestry professionals and researchers whose focus is on the development of information and technologies that promote forest sustainability in the Tampa Bay Watershed.



Mission: Create a scientific framework for the ecological assessment and sustainable management of the Tampa Bay watershed's trees and forested ecosystems along the urban – wildland continuum.



1. Understand the Tampa Bay watershed trees and forest as an ecological system;
2. Understand how the Tampa Bay watershed's trees and forest ecosystems change (short and long term changes);
3. Use the ecological knowledge created to help support educational and community-based activities; and
4. Contribute to and examine ecological management and decision-making practices range of geographic scales.



Avoiding the
Old Pitfalls
the Ecology
Behind
Conservation
of Urban and
Urbanizing
Forests



General lessons of ecology

Ecosystems:

1. Can be open
2. Can be externally regulated
3. Have probabilistic dynamics, with multiple trajectories
4. Have no, transient, or multiple equilibria
5. Subject natural disturbance
6. Incorporate humans and their effects

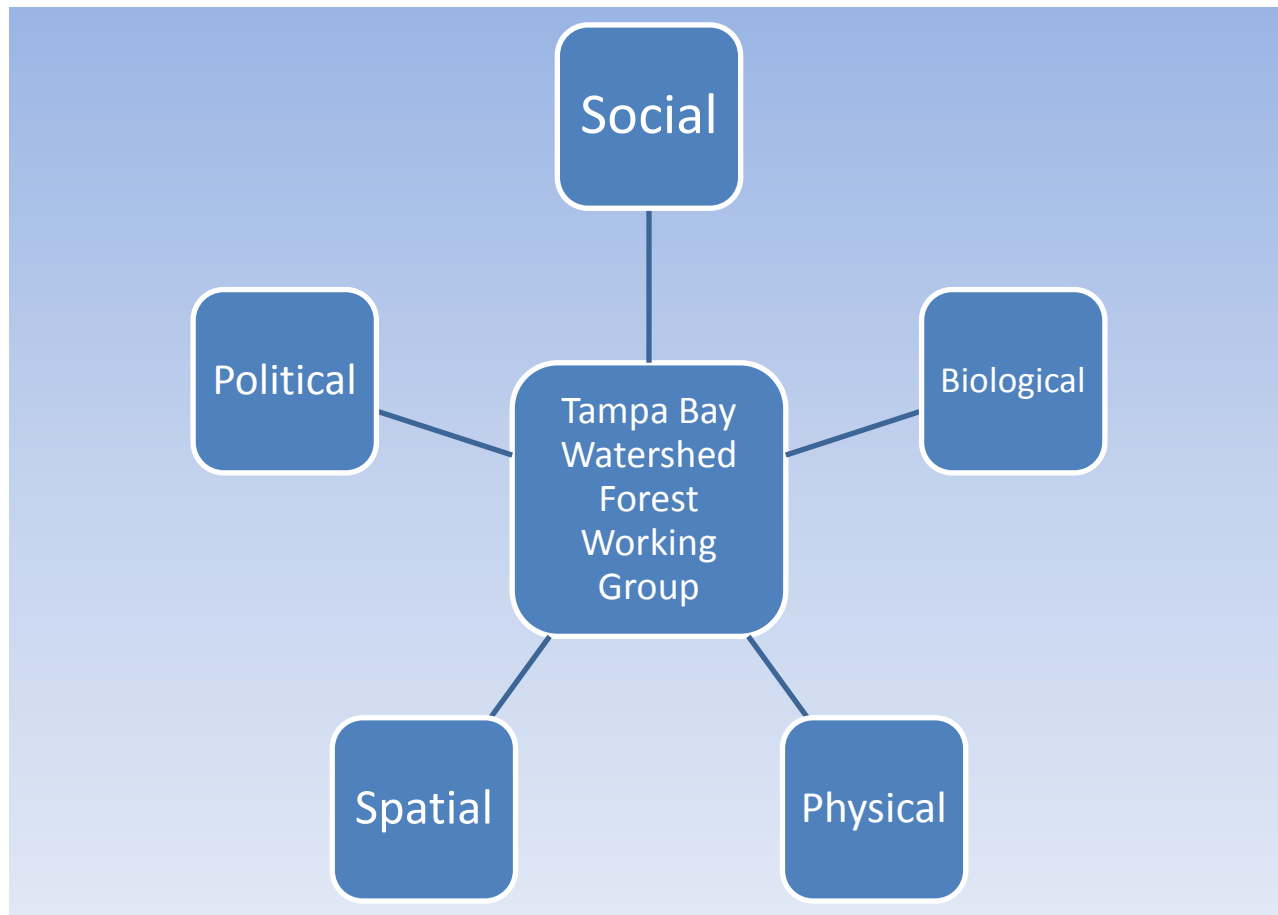


Kinds of information necessary to restore and manage ecological systems

Process – ex. nutrient cycling, hydrology, disturbance, dispersal, establishment, competition, growth, mortality and herbivory

Context – spatial connections and situation of the system are critical determinants of its dynamics



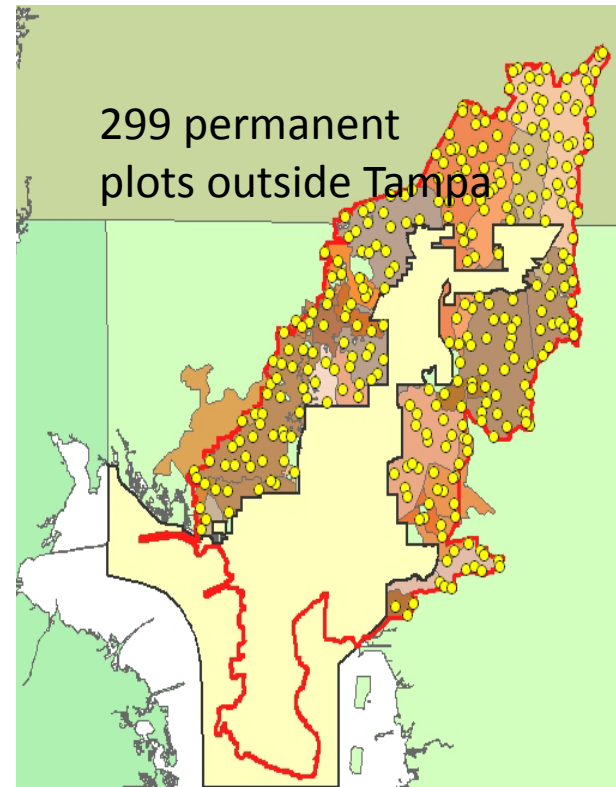
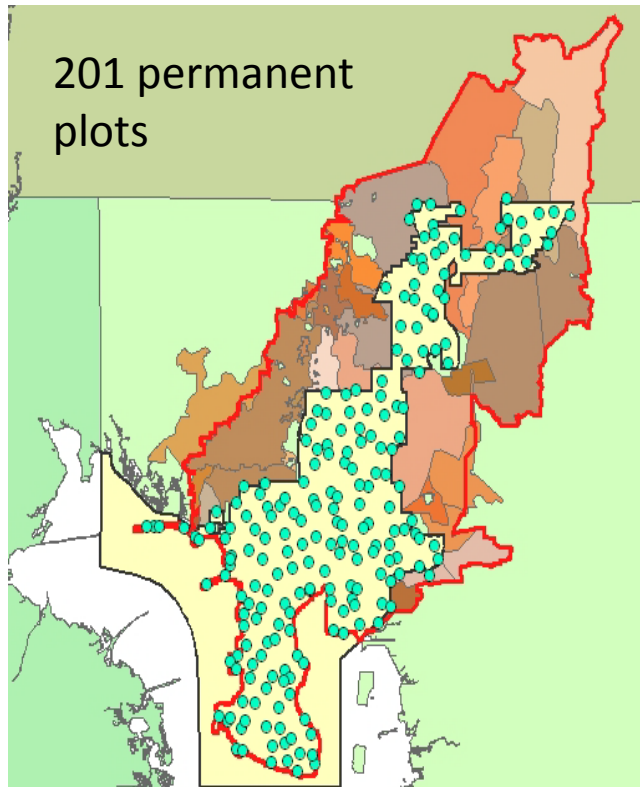


Understanding the attitudes, perceptions and values of Florida's residents towards urban and urbanizing forests

1. Mail survey of community leaders from urban and suburban/rural areas (802 & 96)
2. Focus Groups
3. Community-based Social Marketing
(3 neighborhoods)

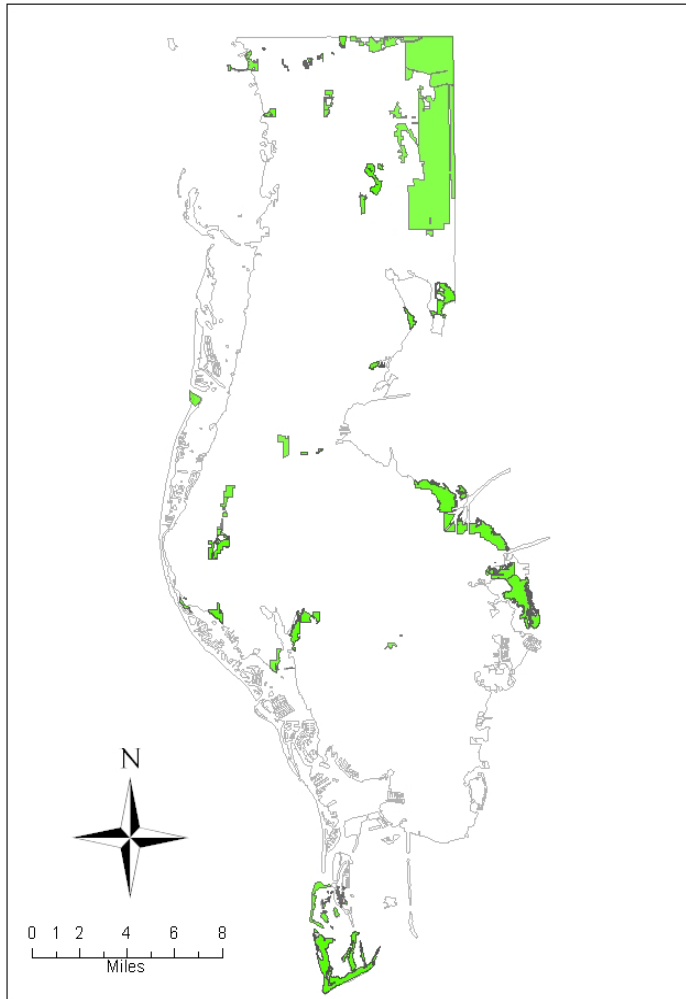


Tampa's Urban Forest/Regional Forest (subwatersheds) Structure, Composition and Ecological Function (2006-07)



Pinellas County - Parks and Conservation Resources

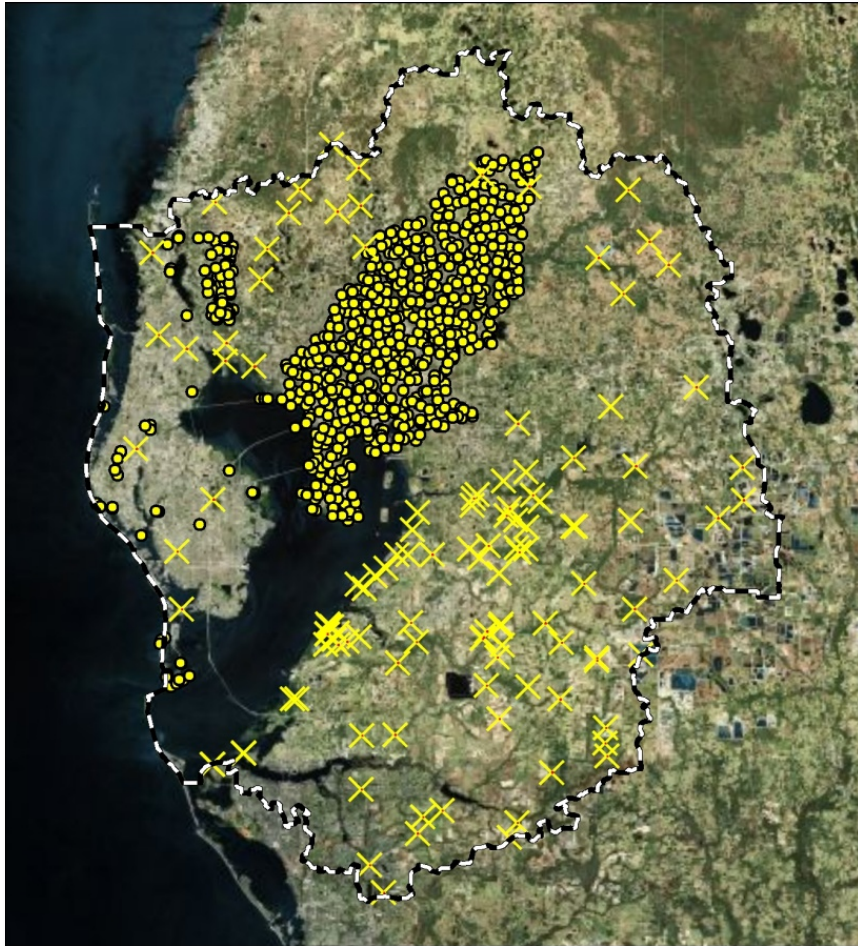
Carbon Sequestration and Storage Analysis



- 100 permanent plots
- 13 land use categories
- Location
- Composition
- Structure
- Health
- Analysis
 - Carbon sequestration rate
 - Carbon storage
 - Pollutant removal rates



Cooperative Agreement: EPA's Ecosystem Services Research Program



Cooperative Agreement: U.S. Forest Service, Integrating Human and Natural Systems in Urban and Urbanizing Environments



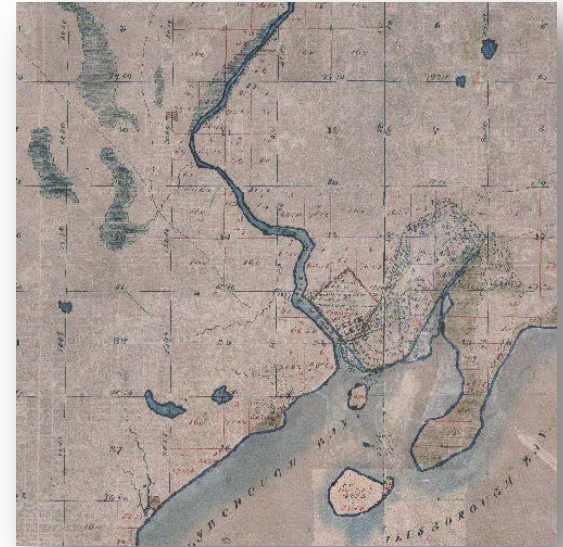
Long-term goal : to understand the fate and transport of N in urbanized watersheds within a (Florida) coastal plain and the role of vegetation plays in improving water quality in urban areas.

Short-term research objective : determine the denitrification and N-mineralization potential of riparian habitats in Florida's coastal-urban landscape



Future Efforts

- City of Tampa Urban Ecological Analysis and Management Plan 2010-2014
 - Detailed information on structural, functional and spatial change
 - Modeling efforts that benefit from newer satellite imagery and field sampling
 - Mapping tree species distributions
- Patterns and processes of long-term urban forest change





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