



Community Greening Initiative

Trees as Indicators of a Community's Ecological Health

Community ecology is more complex than tree cover. Trees, which make up the majority of the green in a community's green infrastructure, are good indicators of the health of that community's ecosystem. When trees are large and healthy, the ecological systems that support them, including soils, air and water systems, are also healthy. In turn, healthy trees provide valuable environmental benefits.



CES & Chesapeake Bay Trust

The Center for Environment & Society (CES) at Washington College is working in partnership with the Chesapeake Bay Trust (CBT) on Community Greening Initiatives in four Kent County communities: starting in Chestertown (above, middle) in 2008, then continuing the program in Millington (right), Betterton (top) and Rock Hall (left) in 2009.

Community Involvement

CES worked with students from the Chestertown Middle School, as well as local residents, the Town Manager's staff, and students from Washington College in a tree-planting demonstration. Eighty-six trees were planted near the Middle School as well as in Rolling Road park on the north end of town.



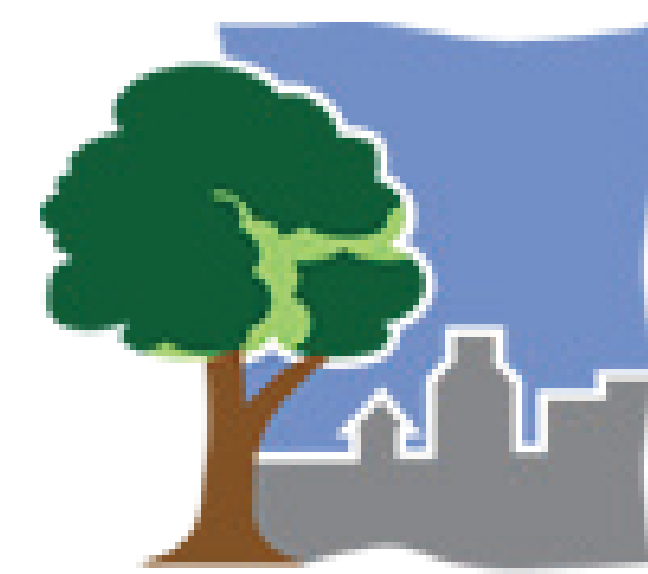
Satellite Imagery

CES acquired Quick-bird satellite images of each municipality which were run through the Center's Geographic Information Systems (GIS) laboratory. Students and staff working in the GIS lab were able to map the tree canopy of each town using ArcGIS software. Below is a section of the Chestertown satellite image after the tree canopy was identified and mapped. It was determined that Chestertown has a 24% tree canopy. The US Forest Service recommends a minimum 40% tree canopy for supporting environmentally healthy communities.



Surveying the Inventory

CES Research Associate, Dr. Carl Gallegos, who is also a forester, helped train volunteers from the four towns in methods for taking an inventory of each town's street trees. Above, residents of Chestertown use measuring tools to determine the height of some trees.



i-Tree



USDA Forest Service

CES acquired i-Tree software from the US Department of Agriculture's Forest Service. i-Tree is a state-of-the-art software suite that provides Town Managers with the tools to analyze community forests. For example, using this software CES determined that Chestertown's trees provide annual environmental benefits equal to \$75.63 per tree, and \$44.10 per resident.

"Marylanders Plant Trees" Program

When selecting a tree to plant, consider:

- Is there enough space for the tree to grow? How much space is available for the tree when it reaches its mature height, width and depth?
- Check nearby buildings, trees, plants, sidewalks and roads that may not allow the tree to grow tall and wide as it matures.
- Check for overhead and underground utilities.
- How much sunlight is available for the new tree? Is the tree shade tolerant or shade intolerant? A tree that is shade tolerant doesn't mind competition from other trees and buildings. A tree that is shade intolerant needs full sunlight to grow properly.
- Do you want a fast growing or slow growing tree?
- Is there enough water available at the site for the new tree?
- What is the purpose of the tree? Beauty, shade, wildlife habitat, increased property value, reducing erosion?
- If you plan to use a coupon, is your tree on the eligible list?
- Visit www.trees.maryland.gov to find out more information, and get a \$25 coupon toward the purchase of a new tree.