

GreenStep Cities Best Practice # 16 **- final draft for comment through May 2010 -**

❖ *UrbanForests*: Increase city tree and plant cover.

Required for Category B and C cities

Category: Environmental Management

Summary

Investments in a city's green infrastructure, which includes trees and other plant cover, deliver many financial, energy, quality of life and carbon sequestration benefits, just as do investments in a city's traditional grey infrastructure of roads and utilities (sewer, gas, electric and telecommunication lines).

Best Practice Actions

- Category C cities must implement this best practice by completing at least two Actions.
 - Category B cities must implement this best practice by completing at least one Action.
 - Category A cities, if they choose to implement this best practice, must complete at least one Action.
- (1) Qualify as a Tree City USA.
 - (2) Adopt as policy MN Tree Trusts' Best Practices and use the guidelines in at least one development project to achieve an excellent an exemplary rating.
 - (3) Budget tree installation and maintenance to, within 15 years, achieve the following tree canopy shading for streets, sidewalks and parking lots in the following zoning districts:
 - a. At least 25% for industrial and commercial zoning.
 - b. At least 75% for residential zoning.
 - (4) Maximize tree planting along your main downtown street.
 - (5) Adopt at least two of the following ordinances/policies:
 - a. Adopt a policy of no net loss of specified natural landscapes.
 - b. Adopt a policy relating to replacement of trees on public, or on public and private, property.
 - c. Adopt landscaping/nuisance ordinances that promote, rather than create barriers for, native vegetation.

See the related *Complete Green Streets* best practice for street tree standards, the *Stormwater Management* best practice for greening parking lots, and the *Conservation Design* best practice for addressing woodlands, native upland plant communities, wildlife, and steep slopes and bluffs.

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Implementation Resources

(tied to the relevant Action by number)

- (1) Tree City USA, a program of the national Arbor Day Foundation, requires a city to:
 - Establish a tree board or department.
 - Pass an ordinance on tree care.
 - Establish an annual tree budget of at least \$2 per resident.
 - Plan an annual Arbor Day celebration.140 cities in MN are certified as a Tree City: <http://www.arborday.org/programs/treeCityUSA/index.cfm>
- (2) *City Trees: Sustainability Guidelines & Best Practices* (MN Tree Trust, Bonestroo: 2007):
<http://www.bonestroo.com/More/?ID=3&v=t>

- (3) *Energy Conservation through Trees* (MN Dept. of Natural Resources):
<http://www.dnr.state.mn.us/treecare/energy/index.html>
- (4) Ideally, street tree planting is done as part of main street renovation that achieves cost efficiencies by including road and utility and business façade improvements.
- (5) MN Dept. of Natural Resources community forestry web pages:
<http://www.dnr.state.mn.us/forestry/urban/index.html>
- (5a and b) *Model Natural Resources Performance Standards* from the MN 2009 *Model Ordinances for Sustainable Development*): <http://www.crplanning.com/susdo.htm>
- (5b) Some cities set a replacement for cut/lost trees, such as 3:1, and specify tree caliper.
- (5c) *Landscaping and Maintenance of Vegetation* from the MN 2009 *Model Ordinances for Sustainable Development*: <http://www.crplanning.com/susdo.htm>

Benefits

- Tree benefits calculator of how much the trees in a residential yard are worth: <http://www.arboday.org>
- Software including CITYgreen (<http://www.americanforests.org/productsandpubs/citygreen/>), STRATUM (<http://www.itreetools.org>) and UFORE (<http://www.ufore.org>) help communities measure tree canopy cover and the value of community trees for energy savings, stormwater management, carbon sequestration, air pollution reductions, and property value enhancement.
- Among 2005 US Forest Service studies at <http://www.mntrees.org/payback.cfm> are data showing that single trees in southern or central Minnesota can generate a net benefit (total benefits minus initial and annual maintenance costs) of \$160 - \$3,040 during a 40-year period. The nearly 200,000 public trees in Minneapolis alone provide a total gross annual benefit of \$24.9 million. Benefits analyzed are:
 - *Energy savings and reduced CO2 emissions.* Shading/wind breaks reduce residential energy used in air conditioning and heating (25% in summer and 20% in winter).
 - *Increased property values and rents.* Humans are hard-wired to value the natural world and will pay 9% more for a house with a tree within 50 feet. Properly placed trees can increase property values from 7-21% and buildings in wooded areas rent more quickly and tenants stay longer.
 - *Beauty* and all the resulting intangible and financially significant personal/mental health and social benefits. (See especially <http://www.designforhealth.net/resources/mentalhealthissue.html>)
 - *Improved retail sales in tree-rich commercial districts.* People have been found to spend up to 12% more on products if they are shopping in a district with mature trees.
 - *Increased life of asphalt.* Shading reduces degradation of paved road surfaces.
 - *Reduced stormwater runoff and improved water quality.* Old growth trees can decrease runoff by 59%.
 - *Improved air quality.* Trees filter pollutants: 90 lbs. of CO₂, 3 lbs. of particulates and 4 lbs. of ozone per large tree per year.
 - *Improved wildlife habitat.* Trees provide nesting places and food for birds and other animals that make up a well-functioning ecosystem.
 - *Reduced crime.* One study demonstrated that apartment buildings with high levels of greenery had 52% fewer crimes than those without greenery.
 - *Noise reduction.* Trees absorb sound.

Connection to State Policy

- Use of trees is an optional measure in the Minnesota Green Communities criteria, used by the Minnesota Housing Finance Agency in awarding funding for building affordable green multi-family housing.