





Social Reasons for Urban Forestry

- Thoreau (1854) – insight with natural experiences and human well-being
- Olmsted (1865) – fatigued urban dwellers recover capacity to focus through nature experiences (also realized value of maintaining or linking natural areas) ... Parks and Trees are the Lungs of the City
- Ulrich (1984) – view through a window

Nature and Psychological Well-Being

What Benefits do Urban Trees Have?

- Shade
- Aesthetics
- Water Interception
- Energy Conservation
- Reduction in Violence
- Reduce Stress
- Retail Commerce
- Traditional Forest Products

Many Benefits

A Benefit – Cost Summary

Stevens Point UWSP Campus Urban Forest

Total Annual Benefits, Net Benefits, and Costs for Public Trees

11/13/2012

Benefit	Total (\$)	Standard Error	\$/tree	Standard Error	\$/capita	Standard Error
Energy	23,464 (N/A)		12.84 (N/A)		0.00 (N/A)	
CO2	3,979 (N/A)		2.01 (N/A)		0.00 (N/A)	
Air Quality	5,062 (N/A)		2.55 (N/A)		0.00 (N/A)	
Stormwater	35,736 (N/A)		18.02 (N/A)		0.00 (N/A)	
Aesthetics/Other	25,770 (N/A)		13.00 (N/A)		0.00 (N/A)	
Total Benefits	96,011 (N/A)		48.42 (N/A)		0.00 (N/A)	
Costs						
Planting	8,000		4.03		0.00	
Contract Pruning	2,000		1.01		0.00	
Pest Management	100		0.05		0.00	
Irrigation	3,000		1.51		0.00	
Removal	3,000		1.51		0.00	
Administration	10,000		5.04		0.00	
Inspection/Service	0		0.00		0.00	
Infrastructure Repairs	12,000		6.05		0.00	
Litter Clean-up	4,000		2.02		0.00	
Liability/Claims	0		0.00		0.00	
Other Costs	10,000		5.04		0.00	
Total Costs	52,100		26.27		0.00	
Net Benefits	43,911 (N/A)		22.14 (N/A)		0.00 (N/A)	
Benefit:cost ratio	1.84 (N/A)					

Annual B's & C's and B/C ... per capita and per tree

Benefits of Trees ... Benefit of Time

- How many years before benefits = costs of tree planting?
 - Public housing sites 9 years
 - Yard/street trees 13-14 years
 - Parks & highways 15 years
- All sites Chicago region (McPherson 1993, GTR NE-186)

Tree payback ... break even time in different locations

