



USDA Forest Service

District of Columbia Tree Owners Forum
Donna Murphy, US Forest Service

RESOURCES



for people who care about trees

Currently:

- Many informational resources
- Developed by all kinds of people
- Many products are broadly applicable
- Distribution is becoming more accessible
- No one place stopping point
- Much duplication of efforts

What is needed?

- ❖ Technical Assistance
- ❖ Programmatic Tools
- ❖ Science
- ❖ Resources on critical topics
- ❖ Advocacy Materials
- ❖ Accessibility

Resources



How to Prune Trees



Planting



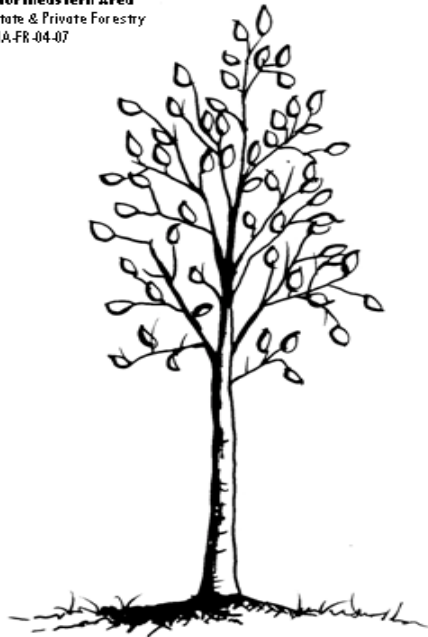
Planting Trees and Shrubs for Long-Term Health

Rebecca Hargrave • Gary Johnson • Michael Zins





United States
Department of Agriculture
Forest Service
Northeastern Area
State & Private Forestry
NA-FR-04-07



Tree Owner's Manual

www.treeownersmanual.info

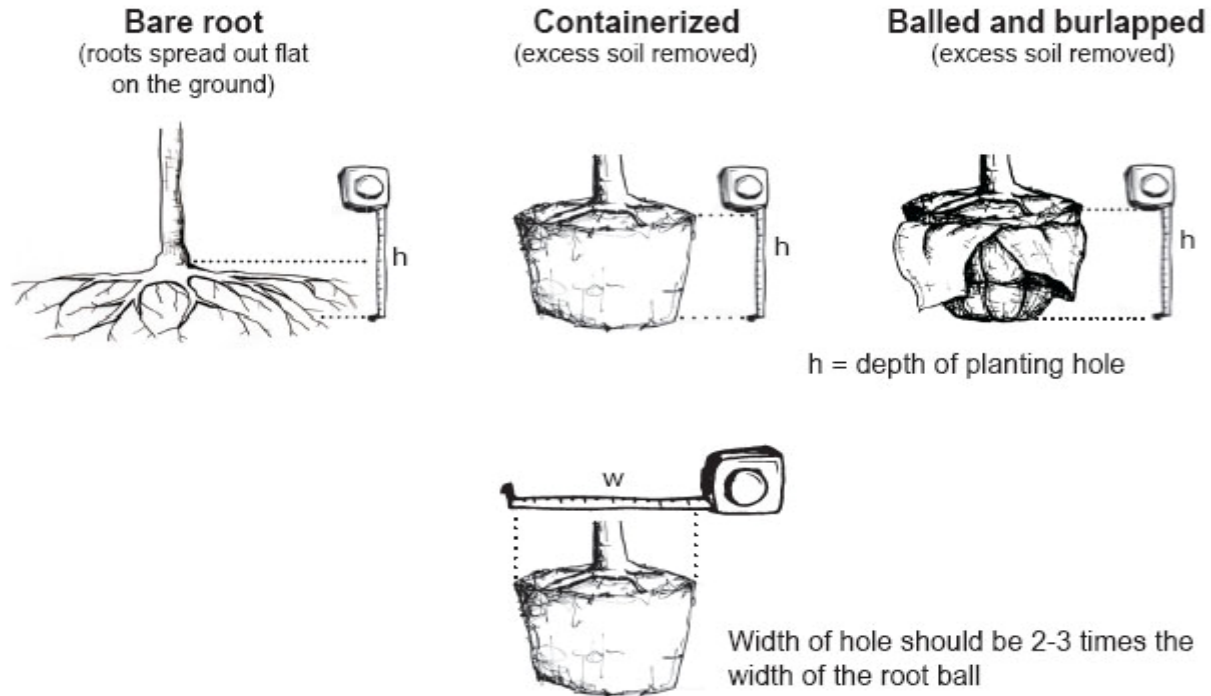
CAUTION

Read all precautions and instructions in
this manual before planting your tree.
Save this manual for future reference.

- Parts List
- Important Precautions
- Choosing Where to Plant
- Installation - How to Plant
- Maintenance
- Annual Requirements
- First 3 Years
- 4-10 years ++

Step 6. Determine how deep and wide to dig.

- A. Measure the height of the remaining root ball. This is exactly how deep you should dig the hole.
- B. Measure the approximate width of the root ball or root system. Multiply this by 2, or if your soil is hard (clay or compacted), by at least 3. This is how wide you should dig the hole.



Mulching

Maintain a ring of mulch around the tree (the wider the better). Organic materials like wood chips and leaves are best. Wood chips will take longer to break down and, therefore, will not require replacement as often.



TIP: Newspaper kills grass.

If there is grass in the area that needs to be mulched, put a 5-page layer of newspaper over the grass, and then add mulch on top (this will help keep the grass from growing up through the mulch).



Mulch becomes soil.

There should never be more than 4 inches of mulch over the roots. Too much mulch or soil can prevent oxygen from reaching the roots.

Tree Maintenance Calendar

SEASONAL CARE FOR TREES & SHRUBS IN NORTHERN U.S. CLIMATES

SEASONAL CARE FOR TREES & SHRUBS IN NORTHERN U.S. CLIMATES

	SPRING	SUMMER	AUTUMN	WINTER	
	BUDS SWELL	LEAVES EMERGE	LEAVES FULL SIZE	LEAVES TURN & DROP	SOIL FROZEN
WATER		Water is essential in summer & drought.		Reduces winter damage.	
MULCH		Maintain a ring of mulch (2"-4" deep) around the tree but not against the trunk.			
PRUNE		For some plants, pruning or removal during this time requires special care to prevent disease transmission.			
FERTILIZE		Apply low rates of nitrogen if necessary.			
PROTECT TRUNK		Mulch or plastic guards may be used to prevent damage from mowers or other lawn equipment.		Apply if needed, use hardware cloth, 3" from the trunk.	
MONITOR HEALTH & SAFETY	Animal and snow/ice damage	Insect and disease problems		Animal and snow/ice damage	

■ PREFERRED
 ■ DEPENDS ON SITUATION
 ■ NOT ADVISED

Produced by: **UNIVERSITY OF MINNESOTA**

Funded in part by: **USDA FOREST SERVICE NORTHEASTERN AREA**

Designed by: **ANDREW ROSE** www.handeye.us

MONITOR HEALTH - Consult an ISA Certified Arborist for treatment*

SAFETY - Monitor year round, but especially after storms. Consult an ISA Certified Arborist for treatment*

■ PREFERRED
 ■ DEPENDS ON SITUATION
 ■ NOT ADVISED

Produced by: **REBECCA KOSTER, Research Assistant**
DAVE R. JOHNSON, Professor
DAVE HANSON, Research Specialist

Funded in part by the **USDA Forest Service - Northeastern Area**

Designed & Digitally Illustrated by **ANDREW ROSE, www.handeye.us**

THIS CHART HIGHLIGHTS THE MOST FAVORABLE TIMING FOR THE LISTED TREE CARE ACTIVITIES.

PLANTING, FERTILIZING AND PRUNING SHOULD BE AVOIDED DURING PERIODS OF WEATHER EXTREMES (E.G., DROUGHT OR HIGH WINDS).

FOR MORE INFORMATION INCLUDING A LIST OF ISA CERTIFIED ARBORISTS, VISIT WWW.TREESAREGOOD.COM.

CONTACT A SOIL TESTING LAB FOR A BASIC SOIL TEST. LOCAL LABS MAY BE FOUND ONLINE THROUGH A LOCAL HURBURY OR CONSULT A CERTIFIED ARBORIST.

University of Minnesota

Northern Trees / Southern Trees



Northern Trees

Tree Selector

Facts and Photos by Species

Northern Trees

Home

Tree Indexes

Scientific Names
Common Names

Tools for Novices

Tree Expert System
Tree Identification

Tools for Experts

Site Analysis
Tree Selector

References

Glossary of Terms
Hardiness Zone
State Trees

Related Sites

Urban Design
Nursery Growing



Trees by Common Name

Jump to: [A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

S

'Samuel Sommer' Southern Magnolia
'Schwedleri' Norway Maple
'Select III' Southern Magnolia
'Selkirk' Crabapple
'Seneca' Siebold Viburnum
'Sensation' Boxelder
'Sentinel' Crabapple
'Sentry' Possumhaw
'Shademaster' Thornless Honeylocust
'Shady Lady' Black Olive
'Silver Cloud' Eastern Redbud
'Silver Dust' Leyland Cypress
'Silver Moon' Crabapple
'Silver Queen' Silver Maple
'Silver Spire' Chastetree
'Sioux' Crapemyrtle
'Sister Agnes' Oleander
'Skinneri' Silver Maple
'Skyline' Thornless Honeylocust
'Skyrocket' Eastern Redcedar
'Slim Jim' American Holly
'Snow Fountain' Weeping Cherry
'Snowdrift' Crabapple
'Spatheii' Sycamore Maple
'Speciosa' Saucer Magnolia

- 1
- 2a
- 2b
- 3a
- 3b
- 4a
- 4b
- 5a
- 5b
- 6a
- 6b
- 7a
- 7b

Soil texture tolerance

- clay loam sand

Soil pH tolerance

- acidic
 slightly alkaline
 alkaline

Soil drainage tolerance

- well-drained
 occasionally wet
 extended flooding

Soil salt tolerance

- good
 moderate
 poor

Drought tolerance

- high
 moderate
 little

Recommended for dry climates

- yes
 no

Salt spray tolerance

- high low
 moderate none

Environment | General | Uses | Attributes | Size/Shape

Tree height (in feet)

over 75
50 - 75
25 - 50
15 - 25
10 - 15
6 - 10

Canopy texture

fine
 medium
 coarse

Canopy density

open
 medium
 dense

Canopy symmetry

irregular
 symmetrical

columnar oval pyramidal vase

spreading weeping round upright/erect

Tree spread (in feet)

6 - 10 | 10 - 15 | 15 - 25 | 25 - 35 | 35 - 50 | over 50

Submit | Reset | New search | Main menu
Clear this panel | Refine search

Landscape Tree Factsheets CD



(from Landscape Tree Factsheets, Including Evergreens for Screens)

- 210 tree species and cultivars
- 567 color photos
- Factsheets for each tree
- Technical info – procuring trees, utility compatible trees, analyzing sites
- Can be duplicated



POWER TREES[®]

A collaborative partnership for beautiful and healthy urban forests.



US National Arboretum

Anti-topping Campaign

- Posters
- PSA's
- Letters

**Think Of It As
A Really, Really
Bad Haircut...
Which Could
Kill You.**

It's called "tree topping" – the drastic removal of large limbs – and unfortunately, some people still believe it's a good thing. But what they don't know is that topping exposes the tree to disease and decay, leading to the tree's early death. It also permanently destroys the tree's natural shape and beauty, lowering property values. And if a topped tree manages to survive, the new branches that develop often are loosely attached and may become extremely hazardous, resulting in additional maintenance costs and property damage.

You can make sure you get a cut your trees can live with by hiring only professional arborists.

To find one near you, and for additional information, call your local forestry agency.

**EXPERTS AGREE
DON'T
TOP YOUR
TREE**



A program originally developed by The Missouri Community Forestry Council and Forest ReLeaf of Missouri through grants from the Missouri Department of Conservation and the USDA Forest Service.

Think Before You Top

Get the Facts

Anti Topping Campaign

Logo

Poster

Factsheets



5 REASONS TO STOP TOPPING TREES



What's wrong with topping?

Tree topping is the removal of large amounts of leaves and branches from a tree's crown. In some cases all of the leaves and branches are removed, leaving large stubs where branches were cut. Tree topping hurts trees, shortens their lives and creates dangerous trees that will drop branches in the future.

1. IT WON'T WORK

Many people top a tree to make it smaller. It doesn't work! After a tree is topped, it grows back rapidly in an attempt to replace its missing leaves. Leaves are needed to manufacture food for the tree. Without new leaves the tree will die.

The new branches that sprout up below the cuts will continue to grow quickly until they reach the same size it was before it was topped.

Sometimes topped trees will not grow back quickly; instead it will slowly die in the coming years.



Some types of trees grow tall and some stay smaller or shorter. If you don't want a tree to get too big, then it is best to plant a type of tree that doesn't grow too tall. You can't "stop" trees from growing tall by topping. If you do succeed, you have killed them.

2. IT STARVES A TREE

Simply, a tree's leaves manufacture its food (Photosynthesis). Repeated removal of a tree's food source literally starves the tree over time. When it is topped it must use stored (reserves) food to grow back new leaves and branches.



3. IT'S UGLY

Topped trees are ugly. They lose their natural, majestic look once they are topped. The new growth of thin upright branches looks like a broom to some. The natural form and appearance that took years for the tree to grow can be destroyed forever in a few hours by an un-informed tree pruner who tops.

Critical Topics



Before the Bug Comes to Town

Preparing for emerald ash borer

Emerald Ash Borer ID Card

www.emeraldashborer.info



EMERALD ASH BORER IDENTIFICATION GUIDE

UNUSUAL SPROUTS ON THE TRUNK (LOOK FOR YEAR-ROUND)

If you suspect Emerald Ash Borer, contact:
Your State Forester, State Department of Agriculture
or U.S. Department of Agriculture office in your state

For more information visit:
<http://www.emeraldashborer.info>

EAB ONLY ATTACKS ASH TREES

NA-IN-07-05

S-SHAPED GALLERIES (LOOK FOR UNDER BARK YEAR-ROUND)

ALL PHOTOS ARE ACTUAL SIZE

CLOCKWISE FROM TOP RIGHT

- EAB ADULT** (LOOK FOR JUNE AUGUST)
- EAB LARVA** (LOOK FOR YEAR-ROUND)
- EAB D-SHAPED EXIT HOLE** (LOOK FOR YEAR-ROUND)

EXIT HOLES OF NATIVE ASH BORERS ARE LARGER, ROUND OR OVAL

1/8" 3/16" 1/4"

CENTIMETERS PRODUCED BY COMMTECH, THE OHIO STATE UNIVERSITY

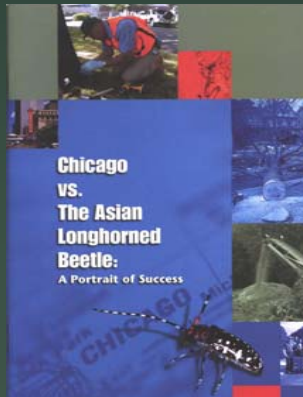
Critical Topics



Asian Longhorned Beetle website

US Forest Service Pest Factsheets

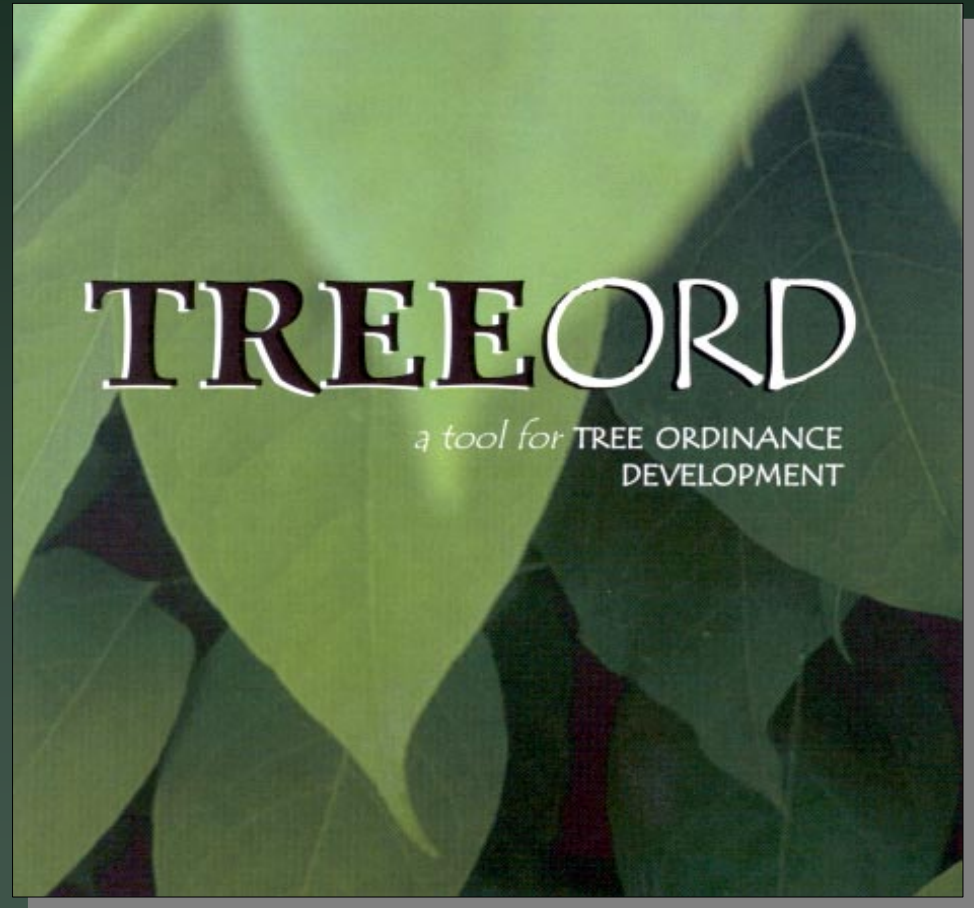
I-PED WIKI Site



Chicago vs. the Emerald Ash Borer

Writing Tree Ordinances

Software



How to Recognize Hazardous Defects in Trees

HOW to

Recognize Hazardous Defects in Trees



United States
Department of
Agriculture

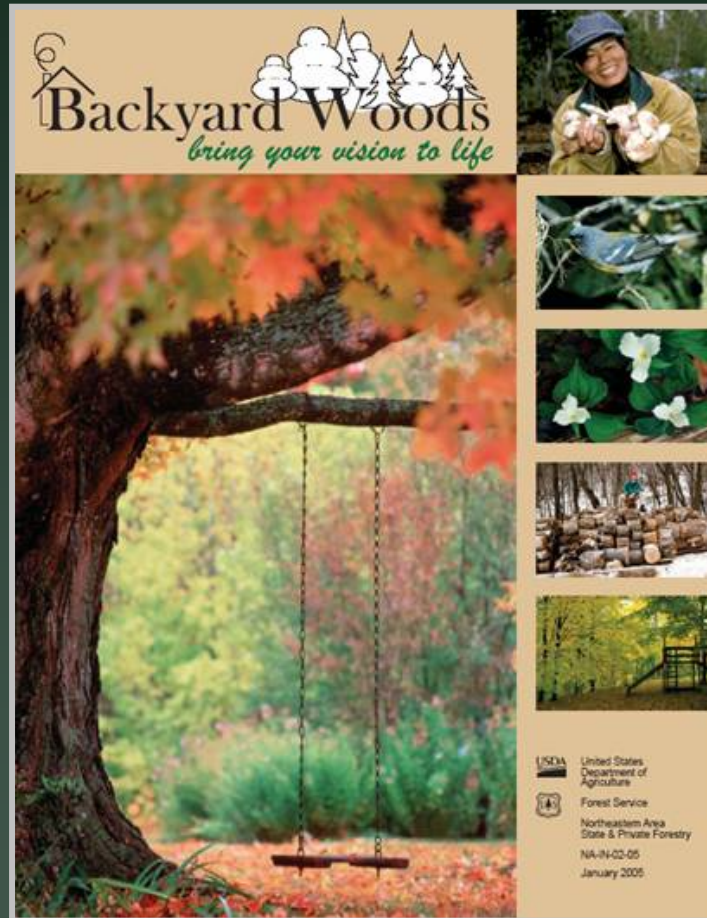
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Northeastern Area
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Forestry

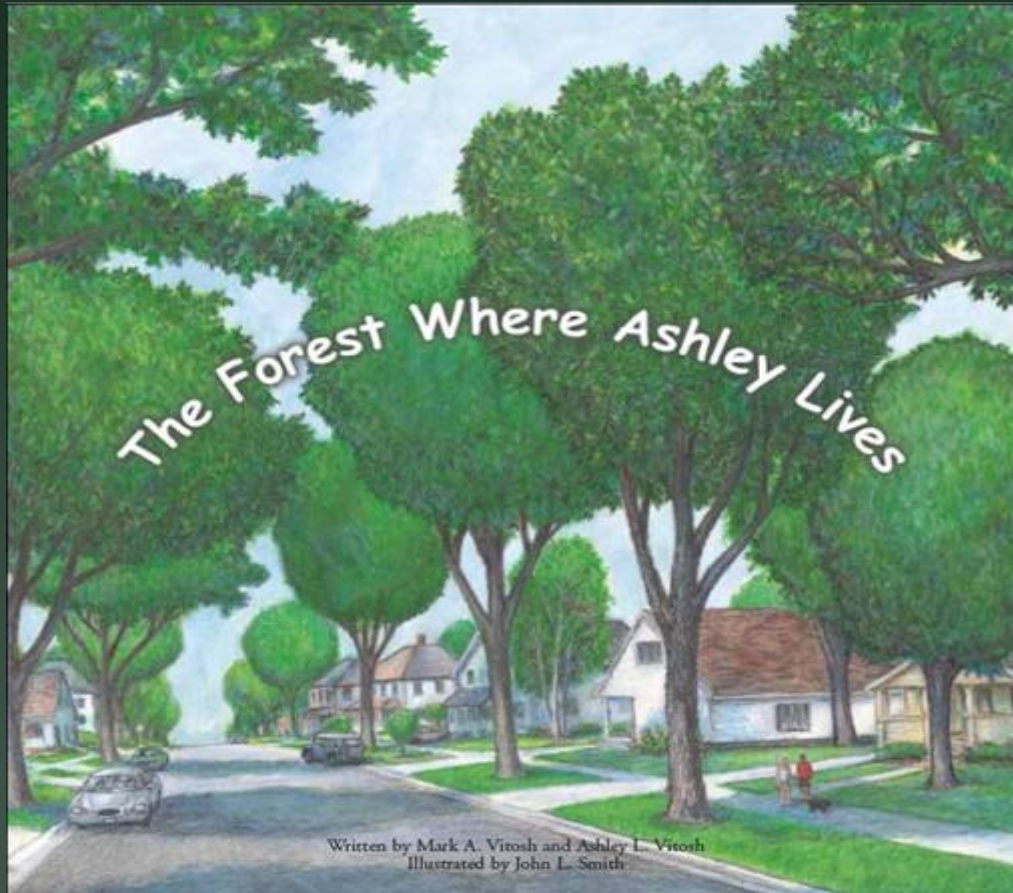
NA-FR-01-95



Backyard Woods



The Forest Where Ashley Lives



Urban Watershed Forestry Manuals

This cover features a photograph of a row of young trees planted in a grassy area. A technical diagram shows a cross-section of a tree pit with a 'Continuous soil trench connects pits under sidewalk' and notes that 'Plowers in tree pit allow water also and air circulation'. The text 'Center for Watershed Protection' is in the top right. The title 'URBAN WATERSHED FORESTRY MANUAL Part 3: Urban Tree Planting Guide' is in a green banner. The bottom left shows a man in a white shirt and cap kneeling to plant a tree. Logos for 'CENTER FOR WATERSHED PROTECTION', 'UAS', and 'NA' are on the right, with the date 'March 2006' at the bottom.

This cover features a photograph of a residential street lined with mature trees. The text 'Center for Watershed Protection' is in the top right. The title 'URBAN WATERSHED FORESTRY MANUAL Part 2: Conserving and Planting Trees at Development Sites' is in a green banner. The bottom right shows logos for 'CENTER FOR WATERSHED PROTECTION', 'UAS', 'NA', and 'Cooperative Tree Program', with the date 'June 2005' below them.

This cover features a photograph of a house with a tree in the foreground. The title 'Watershed Manual Methods for a Watershed' is in a white banner. The bottom right shows logos for 'UAS' and 'NA', and the text 'United States Department of Agriculture Forest Service Northeastern Area State and Private Forestry NA-TP-04-05 July 2005'.



Promoting the Benefits of Trees

- Presentations
- Webcasts - ACT
- Campaigns
- Factsheets
- Research Findings
- Videos/animated presentations/

Marketing the Urban Forest

PLANTING THE SEEDS OF SUCCESS.



Trees in Our City

Trees. Worth Our Time.
Worth Our Resources.

- Part of Community Infrastructure
- Vital to Community Health
- Community Legacy
- Positive Impact on Business and Tax Base
- Wise Investment of Community dollars



Trees Pay us Back Campaign

Healthy trees mean ...

... healthy people.¹

One hundred trees remove

- 53 tons of carbon dioxide per year.
- 430 pounds of other air pollutants per year.

... healthy communities.²

Tree-filled neighborhoods

- lower levels of domestic violence.
- are safer and more sociable.

... healthy environment.¹

One hundred mature trees catch about 139,000 gallons of rainwater per year.

... homeowner savings.¹

- Strategically placed trees save up to 56% on annual air-conditioning costs.
- Evergreens that block winter winds can save 3% on heating.

... better business.³

In tree-lined commercial districts, shoppers report

- more frequent shopping.
- longer shopping trips.
- willingness to pay more for parking.
- willingness to spend 12% more for goods.

... higher property values.⁴

- Each large front yard tree adds 1% to the house sales price.
- Large specimen trees can add 10% to property value.

¹ McPherson, H.G.; Simpson, J.R.; Papp, P.J.; Miao, S.E.; Gardner, S.L.; Condit, S.K.; Xiao, Q. 2005. Midwest community tree guide: benefits, costs, and strategic planting. NA-TP-05-06. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northeastern Area State and Private Forestry. (See the last page of this brochure for more information.)

² Sullivan, W.C.; Kuo, F.E. 1996. Do trees strengthen urban communities, reduce domestic violence? *Arborist News* 5: 33-34.

³ Wolf, K.L. 1999. Nature and commerce: human ecology in business districts. In Kollin, C., ed. *Building Cities of Green: Proceedings of the 1999 National Urban Forest Conference*. Washington, DC: American Forests: 56-59.

⁴ Anderson, L.M.; Cordell, H.K. 1988. Residential property values improve by landscaping with trees. *Southern Journal of Applied Forestry* 9: 162-166.

Notly, D., ed. 1988. *Valuations of landscape trees, shrubs, and other plants*. 7th ed. Urbana, IL: International Society of Arboriculture.

It pays to care for trees.



Landscape trees provide benefits that far exceed the costs of planting and care over their lifetime.

Environmental and esthetic benefits, such as energy savings, storm-water runoff reduction, cleaner air, and higher property values, are an average of three times greater than tree care costs.¹

The greatest benefits are energy savings and higher property values.

One healthy public tree in its 20th year after planting:¹

Benefits	\$96
Costs	\$36
Annual net benefit	\$60



One hundred healthy trees over 40 years¹:

	Yard trees	Public trees
Benefits	\$364,000	\$380,000
Costs	\$92,000	\$148,000
40-year net benefit	\$272,000	\$232,000



Trees Pay Us Back - Volume 2

Tools for Communicating the Benefits of Trees



Urban and Community Forestry Appreciation Tool Kit

Urban and Community Forestry Appreciation Toolkit

USDA Forest Service
Northeastern Area

This kit contains factsheets, a sample letter to the editor, sample press release, and public service announcements, making it easy to educate about how community trees contribute to quality your town's social, economic and environmental well-being.



Planting the Seeds of Success: Marketing the Urban Forest

USDA Forest Service
Center for Urban Forest Research

This handbook outlines how to develop a strategy to gain support for urban forestry.



Conveying the Power of Trees

University of Illinois—Urbana-Champaign, Human-Environment Research Lab

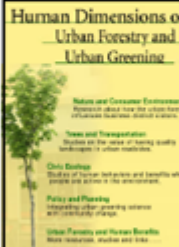
This collection of factsheets, scientific articles, and presentations shows how urban greenspace can reduce ADHD symptoms, aggression, and violence, help fight crime and poverty, increase self-discipline, and build stronger neighborhoods.



Trees in Our City Presentation

USDA Forest Service
Center for Urban Forest Research

This Power Point presentation communicates the benefits of trees to community leaders, using national research as well as i-Tree/STRATUM results specific to the Midwest.



Human Dimensions of Urban Forestry and Urban Greening

Nature and Consumer Economics
Recreation and the Value of Urban Forests
Urban Forestry and Human Benefits

Human Dimensions of Urban Greening

University of Washington
Center for Urban Horticulture

This website provides factsheets, presentations, and articles related to the benefits of trees in business districts.



Trees Pay Us Back

USDA Forest Service
Northeastern Area

This brochure summarizes the value of trees, using national research as well as i-Tree/STRATUM results specific to the Midwest.



Midwest Center for Urban & Community Forestry
USDA Forest Service - Northeastern Area
nrs.fs.fed.us/urban

Trees Pay Us Back - Volumes 1 and 2
Online at: nrs.fs.fed.us/urban/treespayusback

Urban and Community Forestry Appreciation Toolkit

Top 10 reasons for trees
(mini flier)

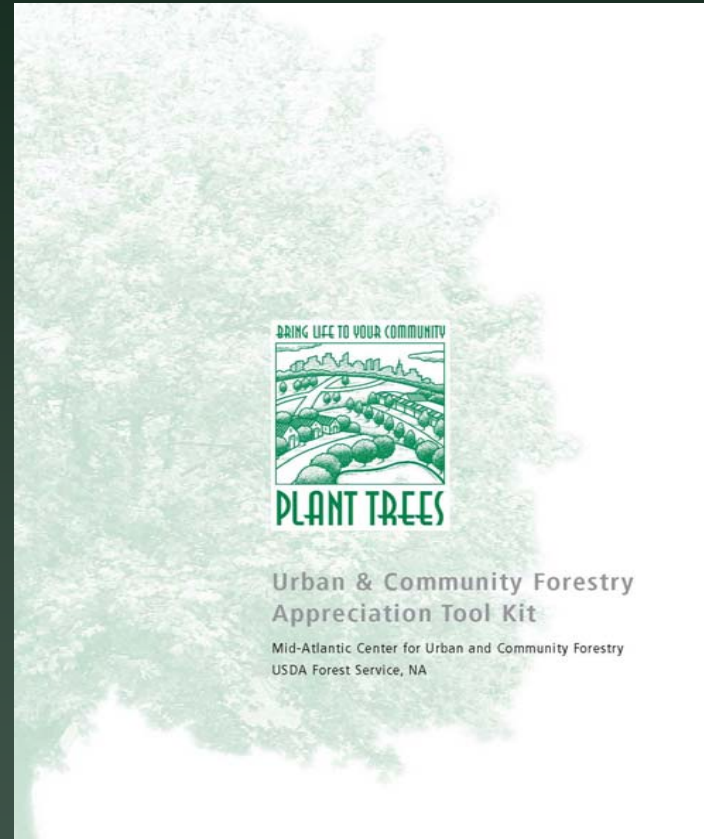
Letter to Editor

Action Alert

Factsheet

Stat Sheet

Six Articles





Community Trees
A Living Investment

Three videos with specific audiences in mind.



Citizens
Community Leaders
Decisionmakers

Speaks for the trees!

Personal testimony

Science

What you can do!

Make the contacts

Share easily!



Citizens

Benefits increase with time

Girls concentrate better

ADHD reduced in children

Build community pride

Tree commissions

How trees clean air

Heat island effect

Even an acoustic guitar tune!

The 20 minute video



Community Leaders

Benefits increase over time!

Benefits can be measured

Emphasizes economics!

Increase in community revenues

Business districts spending

Heating and cooling costs

Property value

Slows traffic

Actions to address planning

Trees need care case!

The Six Minute Video





David J. Nowak

Project Leader

USDA Forest Service, Northern Research Station

Urban Forestry Images



forestryimages.org

pests, tree species, invasives, people
and places

51,000 images

Web Resources



E-learning Web-casts

UNRI scientists provide online educational presentations on timely topics and current research and development initiatives.

- i-Tree
- Urban-Wildland Interface
- Air Quality
- Living Memorials
- Storm Assessment Tools

Northeastern Area



(enter query)

Search

- ▶ Northeastern Area Home
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- ▶ Forest Legacy
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- ▼ **Urban and Community Forestry**
 - Information Resources**
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- ▶ Watershed Programs
- ▶ Wood Education & Resource Center

Urban & Community Forestry

"Planting and Caring for the Trees and Forests Where People Live, Work, and Play"



The steady expansion of urban areas and associated decline of inner-city environments is a national problem that continues to impact basic ecological

functions essential to a healthy and productive society. Healthy trees and forests in urban areas contribute to improved air and water quality, watershed function, energy conservation and social well-being.

The Urban and Community Forestry Program provides technical, financial, educational, and research services to states, cities, and nonprofit groups so they can plant, protect, maintain, and utilize wood from community trees and forests to maximize environmental, social and economic benefits.

Hot Topics

- [i-Tree](#)
- [Benefits of Trees](#)
- [Trees & Ice Storms](#) (4.6MB pdf)
- [Urban Watershed Forestry Manual](#)
- [Tree Care Calendar](#)
- National FHM Program Maryland and Massachusetts Street Tree Monitoring Pilot Projects ([low resolution](#)) ([high resolution](#))
- [Northern Tree Selection On-line](#)
- [Living Memorials Project](#)

Web Resources - Online TT Library

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Welcome to the Urban Forestry Index (UFind). This is a searchable index of urban forestry and arboriculture publications and other media (like videos, websites, and posters). [More information...](#)

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Date Range: from to (4 digit year)

Type: Popular Materials
 Scientific Research Documents

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[Benefit](#)

[Benefits of Trees](#)

[Inventories and Management Plans](#)

[Ordinances](#)

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[Tree Biology](#)

[Tree Care and Maintenance](#)

[Tree Health](#)

[Tree Identification](#)

[Tree Planting](#)

[Tree Preservation and Protection](#)

[Tree Species Selection](#)

[Working with Volunteers](#)



We are in the process of inputting a lot of data. Check back often to find new resources!

Tree ID on the Go

Key to Wisconsin Woody
Plants for the i-Pod

What Tree is That? for
Mobile Phones



Tools for City Foresters – Municipal Arborists

UFORE

MCTI

ETRAC +

STRATUM

Storm Assessment

Protocol

I-PED

Professional Associations -

Nonprofits -



Applied Research - Assessing Urban Ecosystems



i-Tree - Help users, regardless of community size or technical capacity, to identify, understand, and manage urban trees

UFORE

Urban Forests Effects Model

STRATUM

Street Tree Management Tool

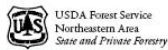
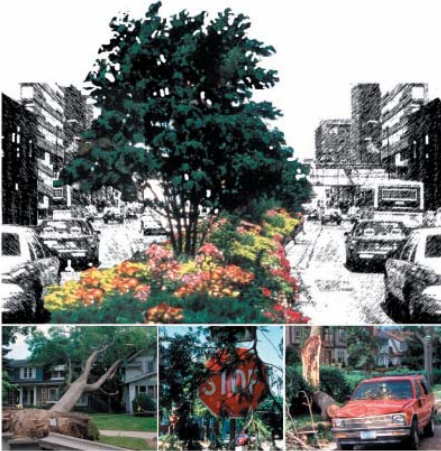
MCTI

Mobile Community Tree Inventory

SDAP

Storm Assessment Detection Protocol

Urban Tree Risk Management: A Community Guide to Program Design and Implementation



USDA Forest Service
Northeastern Area
State and Private Forestry

1992 Folwell Ave.
St. Paul, MN 55108

NA-TP-03-03

* Defects

* Prevention

Assessment

Correction

Community Risk Management

- Community Risk Zones
- Tree Risk Ratings

Fire

Fire in the Wildland-Urban Interface

- Preparing a Firewise Plant List
- Selecting and Maintaining Firewise Plants for Landscaping
- Firewise Landscaping Minimizing the Loss of Structures in the Home Landscape

* National study on the Flammability of Mulch – National Institute of Standards and University of Florida



Utilizing Municipal Trees

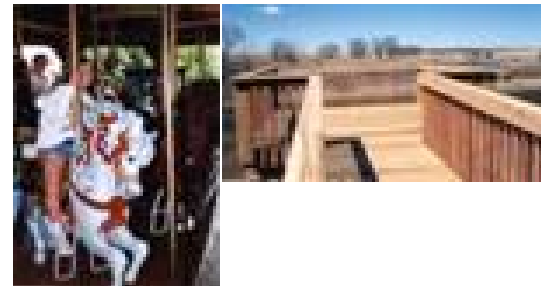
Planning Guide for
Small and Medium
Size Wood Products
Companies

USDA FS 2005



UTILIZING MUNICIPAL TREES:
IDEAS FROM ACROSS THE COUNTRY

STEPHEN M. BRATKOVICH



Recycling Municipal Trees Utilizing Municipal Trees



UTILIZING MUNICIPAL TREES: IDEAS FROM ACROSS THE COUNTRY

STEPHEN M. BRATKOVICH

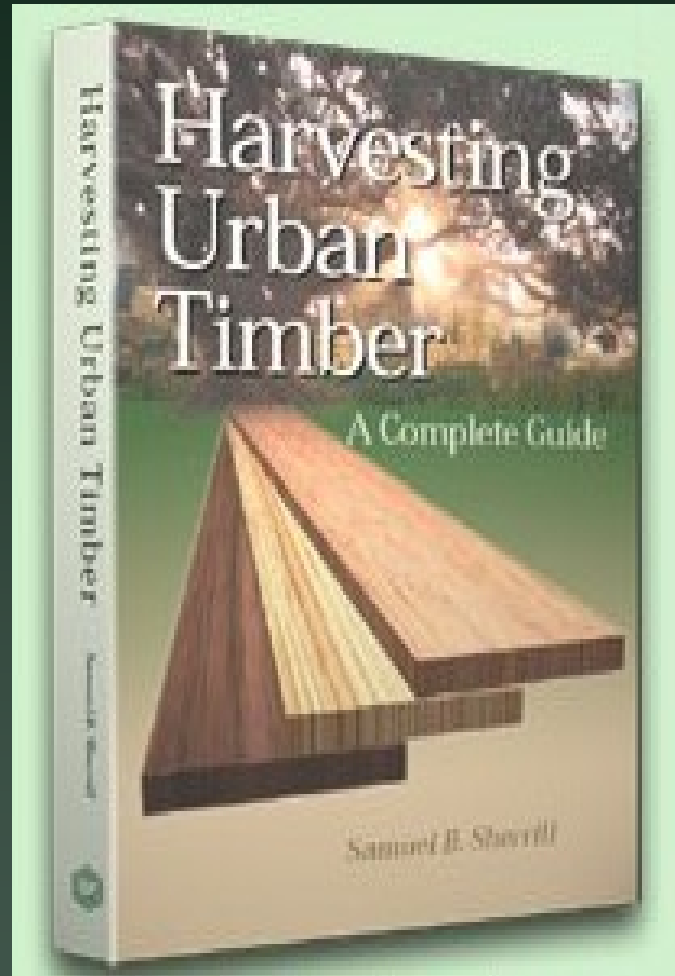
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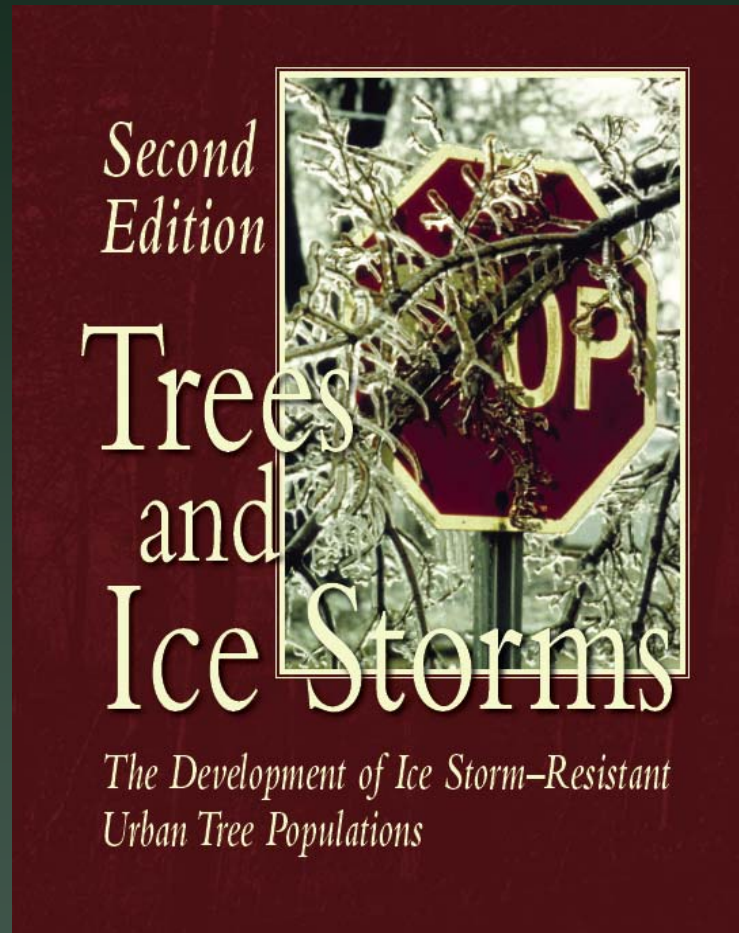
October 2001



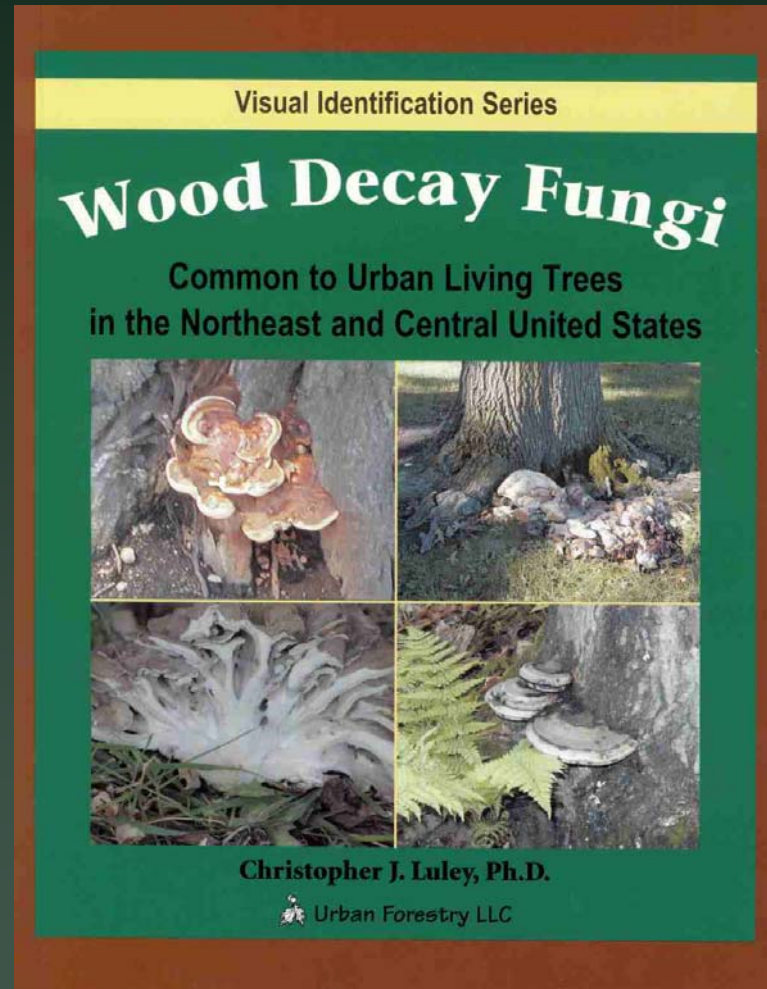
Harvesting Urban Timber



Trees and Ice Storms



Wood Decay Fungi



Thank You!

QUESTIONS

