

Shade Tree Advocate

Speaking Out For *Community Forests*

Summer '98

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Storms Rage, and Trees Fall

Natural Disasters and the Community Forest was chosen as the theme for this Advocate issue last March. No one could have imagined how many Minnesota communities and their forests would be affected by wind storms in the time since then, and some potentially heavy storm months are still ahead of us. It will be months before final estimates of the number of Minnesota community trees damaged or destroyed will be known. Already tens of thousands have been counted. Some communities barely got cleaned up from one storm when they were hit by another. The effects of the losses of 1998 will be felt decades into the future.

Throughout the world, violent weather is a constant companion to the other disasters that affect our lives.

- Nearly 2,000 thunderstorms are in process at any given moment.
- Over 45,000 thunderstorms and related weather conditions occur daily, including many that damage trees.
- Lightning strikes the earth 100 times each second.
- There were at least 100,000 thunderstorms each year in the U.S. from 1959 to 1984.
- 100 people are killed and 250 severely injured by violent weather on an annual basis. Most of the human deaths and destruction of vegetation occurs in the eastern half of the country.

When a disaster such as a wind or ice storm strikes a community, the people and government officials take immediate actions to ensure



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survival and safety of citizens. Downed trees, power lines and wrecked property are major hindrances in getting help to injured people. The beautiful shade tree, now severely damaged, is a hazard that must be removed in a hurry to get emergency vehicles through the street.

Only after several days and weeks of cleanup does the full impact of the damage and loss of trees become reality. The community forest we all took for granted is mostly gone or severely damaged. A lot of time and money has been spent on cleaning up trees. Those that remain may be cut or topped so they look like telephone poles with stubs sticking out, and have little hope of recovery. This is when people start really looking at the loss of their community forest and all the benefits they enjoyed.

Sadly, in some communities, it is almost too late to help the situation. The cities that fare best are those that had an action plan to protect trees *before* the storm, and a plan for treating affected trees if a disaster strikes. With a good forestry program in place before the storm, there is less damage because trees are

Storms Rage continued on p. 12

The Minnesota Shade Tree Advisory Committee's mission is to advance Minnesota's commitment to the health, care and future of all community forests.

Storms Over St. Peter



PHOTOS COURTESY BRIAN HAGBERG

Although over 90% of St. Peter's trees were destroyed or damaged, the emergency response plans and ordinances greatly aided cleanup and lessened damage. Mankato's crews were among the many public and private sources giving assistance.

March 29, 1998 is etched forever in the memories of the citizens of St. Peter, Minnesota. In just a few short moments that day, their neat, picturesque southern Minnesota community of 10,000 was reduced to devastating ruin by violent tornadoes.

Few community forests ever experience destruction of the magnitude that struck St. Peter. Over 90% of the city trees were destroyed or damaged. A final tally is not available, but city forester Dan Knight knows over 5,550 trees had been removed by April 22. The cleanup work is still continuing from this storm, and there has been additional damage from a storm in July.

Although the damage was monumental, Knight says emergency response plans in place before the storm and support from many public and private

sources helped greatly with cleanup operations.

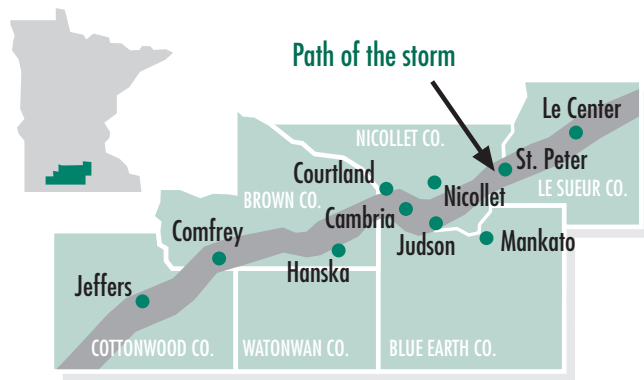
Communication links were good and allowed St. Peter Public Works headquarters to organize and direct cleanup efforts effectively. One critical key was having established relationships ahead of time with reputable tree service professionals. A single call to a trusted independent contractor brought 16 trained crews to town the first night to assist city public works people. They were soon joined by experienced utility tree handlers, other local contractors and arborists, county highway departments, city foresters and public works crews from surrounding communities. Many brought badly-needed loaders, lifts, trucks, clambers, saws, tub grinders and more. Some responded to computer calls for help. DNR came to assist due to the crisis situation and the community's need for technical expertise in hazard tree evaluation.

The first priority was, of course, citizen safety. City Street Foreman Greg Kozitza was designated to head cleanup efforts. The city was divided into zones, with work crews assigned to specific sections. Clearing the

streets, dealing with downed power lines and establishing a central drop off site for tree debris were among the immediate needs. An effort was made early on to sort and separate logs, branches and smaller debris to make as much use as possible of the available wood and to simplify disposal.

Once immediate safety needs were met, DNR hazardous tree field evaluation people went through the city and identified trees that needed to be trimmed or removed. Trees to be removed were marked with a red dot; those to be trimmed got yellow dots. Survey teams went to every boulevard and house in town and identified the number of red dot trees and yellow dot trees. Tree work was initiated, stumps removed and stump holes filled. A concern for Dan Knight was that many people were paying private sources to do tree work, not being aware that FEMA was paying for everything the first few weeks.

Dealing with the mere volume of tree debris was staggering. After the first week, one tree company and logging firm was identified to take wood. At one point, 600,000 cubic yards of chips had been generated by tub



grinders. That's enough to cover two football fields ten feet deep.

The city is already looking ahead to re-planting. The consulting firm hired to identify available planting sites has specified 1704 spots on boulevards alone. A recommended tree list is being generated and plans are moving ahead to have young stock planted throughout the summer and fall. Homeowners and businesses are eager to replace their trees as well, and are looking to the city, DNR and other agencies for tips for successful re-planting. The fact that the city had a general emergency plan and has had a "no topping" ordinance for about 15 years has helped lessen the amount of damage wrought to the city's surviving trees.

Knight and Kozitza very much appreciate the tremendous outpouring of support and help that came from so many people, professionals and volunteers. Kozitza commented that it was gratifying to see the dedication and care demonstrated throughout the cleanup. It was apparent that people wanted to "clean up St. Peter like it was their own town."

St. Peter was only one of the communities struck by the March 29 tornadoes. The map below

shows several of the other areas affected by the same storm system. The slow process of rebuilding damaged community forests is taking place in all of them.

Taking Stock in Mankato

Mankato City Forester Brian Hagberg and his city's crews were among the many professionals who pitched in with labor and equipment to help St. Peter restore order after the March 29 tornadoes. Even though the destruction was immense, Hagberg was heartened by the tremendous outpouring of help for St. Peter and other stricken communities.

Although he knows nothing is a 100% guarantee that his own community will not suffer major damage in the future, Hagberg and Mankato city leaders are taking assertive, proactive steps to give Mankato a protective edge. In the ten years since coming to the city, Hagberg says support has always been strong for forest maintenance. The city has three full-time tree trimmers. A Treekeeper computer software program helps manage the urban forest.

Mankato knows a lot about its trees. A street tree inventory helps the city know what is in its urban forest and where it is located. There is a conscious effort to diversify species and to capitalize on the strengths of native species. Regular tree maintenance is in place, with the city divided into zones. Because healthy, well trimmed trees are more storm resistant, each zone receives concentrated routine care and pruning on a rotation schedule. An independent contractor handles much of this work, since the city staff is

responsible for a full load of other tasks.

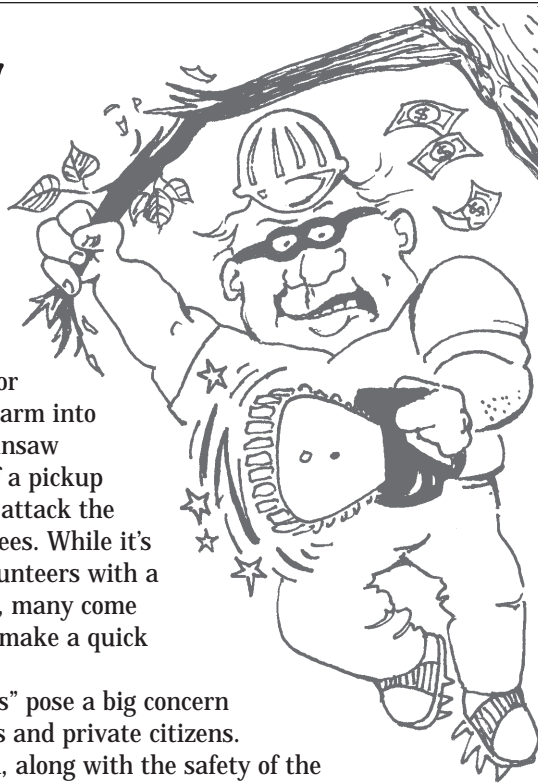
The city looks for opportunities to collaborate with tree resource agencies and grant sources to build a better future for its trees. For example, one project with Northern States Power and Tree Trust replaced trees under power lines with low-growing varieties, therefore lessening the chances of storm-toppled trees dragging down power lines. Mn ReLeaf grants and energy conservation initiatives also help fund special projects.

After working in St. Peter following the March 29 tornado, Hagberg is again reviewing and revising his own community's storm emergency response plan. Pre-storm protection, after-storm cleanup and regrouping for the future are all part of the plan Hagberg hopes he'll never have to fully apply. As many others have said, he stresses that it is essential to maintain a healthy forest in the first place, and then to have reputable contacts and contractors available in case of emergency. These relationships need to be developed long before a storm hits, both so you know immediately who to call and so you trust the quality and range of services others can provide. When Hagberg went to assist St. Peter's Dan Knight, he did not go as a stranger. The two had already established a relationship through their association in a group called "South of the River Tree People."

Mankato's community forest has had some strong winds this year and some tree storm damage. Still, it withstands the onslaught of straight line winds quite well. The city trees are more prepared than most to meet storm conditions and Brian Hagberg's goal is to keep it that way. 🌿



Chainsaw Bandits



You'll find them after every major storm—people who swarm into the stricken area, chainsaw tossed into the back of a pickup truck or van, ready to attack the fallen and damaged trees. While it's true some come as volunteers with a genuine desire to help, many come for the opportunity to make a quick buck.

"Chainsaw bandits" pose a big concern for both public officials and private citizens. Public safety is at risk, along with the safety of the individuals involved. Property may be damaged. Community businesses and private citizens are vulnerable to being taken advantage of financially. There are many reports of people being charged high fees to have damaged trees cut, trimmed or taken away by door-to-door solicitors. Sometimes there would have been no charge at all if people had simply waited for the city public works department, the utility company or FEMA to act.

Amateur saw handlers also put the community forest itself at risk. Improper tree handling can mean death to trees that might otherwise be saved and do immense damage to others. Unacceptable practices such as topping trees, removing excessive amounts of live wood, using climbing spikes on trees that are not being removed and removing or disfiguring living trees without just cause are all avoided by good arborists.

Following a natural disaster, it is essential to have a system to prevent unapproved crews from entering the community and soliciting tree work. It is also important to make sure citizens are quickly informed about reputable and safe options available to help manage their tree dilemmas. Once again, having a good plan ahead of time helps prevent chaos. 🌿

Selecting a Tree Care Service

Tree care services are listed in the yellow pages. Ask plenty of questions and check out the company to make sure you are getting a reliable and reputable professional. Ask:

■ **Are you licensed? Do you have a permit to work in my city?** (Many cities require companies working in the city to be licensed so they are on record and are carrying proper liability and other insurances. Ask to see the city license or permit.)

■ **Are you a certified arborist?** (Arborists are certified through the International Society of Arboriculture. The program requires appropriate training, experience, knowledge and passing an exam. Ask to see a Certified Arborist membership card and check the expiration date.)

■ **What insurances do you carry?** (General liability, personal and property damage and worker's compensation should all be in place. The contractor should have an up-to-date insurance binder.)

■ **Who else have you recently done work for in my area that I can call as a reference?**

■ **How would you deal with my particular tree situation?** (Watch for good and respectful practices. Avoid people who want to remove living trees, use climbing spikes on living trees, top trees, excessively thin crowns, etc.)

■ **How much will you charge for your work?** (Get several estimates and make sure the company describes in writing specifically what it plans to do. Don't be rushed by a bargain, and never pay in advance.)

■ **When can you do my work?** (October through March is preferable for routine trimming of trees. Trees are dormant then. You may be able to save on trimming rates at this time of the year, but do so only if the work can be done at a dormant time for your trees.)

Good tree care companies are so busy they seldom have time to cold-call customers, and they are able to rely on referrals. If a tree care company seems questionable, check it out with the Better Business Bureau.

With good communication up front, competitive charges and recommendations from satisfied customers, you can feel confident with the tree care professional you hire.

For a list of ISA Certified Arborists in Minnesota and companies that employ Certified Arborists, contact Minnesota Society of Arboriculture, 115 Green Hall, 1530 Cleveland Ave N., St. Paul, MN 55108. A website is currently being developed that will have much of this information in the future.

The Minnesota Society of Arboriculture is the local chapter of International Society of Arboriculture. Both organizations are dedicated to professional and public education and to research regarding tree culture and care.



If you suspect an insect and/or disease problem with a damaged tree, you need someone proficient in diagnosing problems such as a certified arborist, pathologist or entomologist.

When Disasters Strike

Natural disasters that occur in Minnesota include floods, tornadoes, high velocity straight-line wind storms and ice storms. Most communities have some sort of plan for responding to emergencies, but many do not have a well thought-out plan that includes long-range forest issues. Preparing the community forest to withstand potential violent weather can seem a remote priority when ranked with a host of other current community needs. But after a disaster, priorities change instantly. Trees suddenly become the public enemy, blocking emergency routes, tangling with downed power lines and sprawling across rooftops. Getting rid of tree debris and restoring safety is certainly the top priority, but even then there are options that have long-range effects on the community forest. In the weeks and months following a storm, re-planting is critical.

Unless tree professionals and advocates “speak for the trees” before, during cleanup and for months after the disaster, the needs of the community forest are lost in the shuffle of other community priorities.

Damage is Preventable

Some storms are so strong they can wreak havoc with any community forest. Still, experts say as much as half the annual storm damage could be prevented with relatively simple steps. Three that go a long way are:



COURTESY GARY JOHNSON



Stem girdling roots, developing unnoticed due to deep planting, caused the tree failures shown at left. Planting problems—easily preventable—contributed to one-fourth of the tree failures in the storms of 1998.

Early corrective pruning can greatly reduce damage from failure of branches and codominant leaders.



COURTESY DANIELT. SCARBOROUGH/MINNESOTA DNR

■ Right trees in the right places

Species that are naturally suited to the site (tree structure, root system, climatic and soil compatibility, etc.) are best able to withstand storm stress.

Shorter (< 30 ft.) boulevard trees survive windstorms better than the tall elms, ashes, oaks and maples that are damaged in many community boulevards.

■ Regular care and maintenance of trees, especially the young

In 1998 Minnesota storm damage surveys, two-thirds of damage in tree canopies was due to branches and/or codominant leaders that were allowed to develop with included bark and subsequent decay. Early corrective pruning could have significantly reduced this damage.

■ Correct planting

In 1998 storm damage surveys, one-fourth of total tree failures was related to deep planting problems and/or stem girdling roots that developed unnoticed due to deep planting.

Many are surprised to learn that storm damage from straight line winds under 60 miles an hour is mostly preventable. Strong,

Clip and Save



When Disasters Strike



healthy, site-suited trees that have been pruned against defects can successfully withstand winds that are much stronger.

Developing a Plan

Community foresters often hear and use the term *mitigation* activities. By definition, mitigation is “activities that eliminate or reduce the occurrence of future disasters.” In community forestry, mitigation involves efforts to prevent or minimize damage or loss of trees in areas affected by natural disasters.

Surveys of community foresters and tree professionals across the coun-

try indicate that the majority feel the emergency response plan for their community is not as strong as it needs to be. Developing a good emergency response plan always involves

- forming partnerships
- prioritizing needs
- assessing risks
- communicating with the community

Every county has an existing emergency response coordinator. Knowing who this is and being in contact with him or her is the place to start when developing emergency plans of any sort. The county sheriff or the civil defense coordinator might be the designated response coordinator, or they can tell you who is.

A good plan takes the cooperation of a wide range of people:

- municipal leaders
- community foresters
- state and local agencies
- utilities
- private arboricultural companies
- volunteers and
- independent forestry professionals

The guidelines that follow can be helpful in creating a plan.

Before, During and After the Disaster

An emergency action plan for a natural disaster includes three chronological phases:

Preparation, Response and Recovery.

For the community forest, these stages dovetail with the overall emergency plan for the community, but also include the following:

■ ■ ■ Preparation

(Months and Years Before the Disaster)

- Identify a core group to develop and maintain a tree-related plan for the community.
- Have someone on staff, develop a relationship with someone or have a contract with a forestry professional who:
 - meets regularly with city government and local and county emergency managers
 - knows the Incident Command System (ICS)
 - is trained to assess tree damage and identify hazard trees.
- Have a qualified professional perform a risk assessment of your community forest. Consider having one or more of your community employees attend a Minnesota DNR hazard tree assessment workshop.
- Make sure your community has:

- *A disaster response plan* that includes prioritizing needs (which streets and access areas must be cleared first, where wood waste will be stored, etc.), assessing tree damage, the process for clearing debris, surveying safety and fire hazards and eventually replanting trees. Plan for disaster response training, too. MnSTAC's Tree Emergency Response packet can help with your planning. Write to: MnSTAC c/o Glen Shirley, Maintenance Coordinator/Forester, City of Bloomington, 2215 West Old Shakopee Rd, Bloomington, MN 55431-3096.

- *A disaster response kit* that includes a current disaster response plan, listed priorities and who is in charge of what, maps of the city, tree ordinances, policies, specifications, public service announcements, names and phone numbers of key contacts including designated decision makers and state and local agencies that can offer assistance (FEMA, DNR, etc.), forms for surveying damage and collecting pertinent data.

- *Agreements with neighboring communities* to share workers and equipment in the event of a disaster.

- *An established relationship and agreement with one or more tree services* to clear debris after a storm. For the directory *Tree Care Companies Providing Storm Emergency Service in Minnesota*, write to the *Shade Tree Advocate*,



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Plan ahead for the Response phase, when large equipment such as the Ceres Company's tub grinder above, may be required during cleanup.

Windthrow damage to large trees is made worse by a weak or restricted root system.



COURTESY GARY JOHNSON

115 Green Hall, 1530 Cleveland Ave. North, St. Paul, 55108. (Postage/handling is \$3.00.)

➤ At least one *collection site* where huge amounts of tree debris can be collected, sorted and processed or dispersed to others. There are a number of alternatives for utilizing wood resources. It is a good idea to have a relationship with some forest products manufacturers or wood marketers who might purchase wood resources after a storm. MnSTAC's Wood Utilization Committee (see page 10) is a contact for more information.

➤ *An inventory of trees*, and photographs or videotapes of the most significant trees on public property. An inventory is a big help in estimating damage and needs when disaster strikes. For example, you'll be able to estimate the number of trees potentially damaged in a certain area of town. You'll have a better idea of how many arborists are needed and the amount of wood that could be generated.

To manage risk to the community forest:

■ Plant trees correctly and manage their early growth years. Planting depth problems and poor branch/leader attachments are common causes for tree failure. (For correct planting information, see *Advocate* Issue 2, Spring, 1998. For proper pruning techniques, see *Advocate* Issue 1, Winter 1998.)

■ Plant a variety of tree species, including those that stand up to storms common in your area. Avoid planting very dense trees such as littleleaf lindens and Colorado spruce in storm-prone areas. In the storms the first seven months of 1998, Colorado spruce disproportionately dominated the windthrow category of tree damage, representing more than one-third of all surveyed windthrow-damaged trees. Most oaks, American elms and smaller trees were far less prone to windthrow damage.

■ Inspect public trees annually for hazards. Remove hazardous trees or sections of trees that are most likely to fail during a storm. Trees should be routinely inspected and pruned for the first 15 years of their lives. Prune every three to five years after that to maintain strong form.

■ If you must plant under power lines, plant only small maturing trees. A guide for planting near power lines is available from Minnesota Power Association. See page 12 for ordering information.

■ Educate the public about proper tree maintenance. Regular press releases in local newspapers are one way to do this. There are press releases available from MnSTAC, University of Minnesota Extension Service, MN DNR-Forestry and the Minnesota Department of Agriculture covering tree selection, planting, care, storm recovery and more.

■ ■ ■ Response

(Immediately Following the Disaster)

Follow the disaster response plan.

■ Communicate continually with those involved in cleanup as well as with the private citizens. Issue public service announcements as needed. Designate a qualified contact to answer tree-related questions from the public. Possibilities include a certified arborist, professional forestry consultant or employee with special knowledge in this type of emergency.

■ Stay flexible with tree salvage and utilization plans. A large volume of wood and tree debris may require new decisions, but the goal is to reuse as much as possible.

To manage risk to the community forest:

■ Remember: More damage is sometimes done to trees as a result of clean-up than is done directly by the disaster! Many trees CAN be saved even though damaged.

■ Make sure tree staff people or reputable consultants are involved in decisions affecting trees. In the absence of tree professionals, others less knowledgeable will decide!

■ Have a person trained in assessing tree damage mark hazardous trees for immediate removal and mark salvageable trees for appropriate care. A tree is a hazard when the failure of one or more of its parts could result in property damage or personal injury. Certified arborists and many other forestry professionals are trained in hazard tree identification. The DNR offers training on the subject, too.



COURTESY GARY JOHNSON

Don't Top Trees!

Tree topping is a senseless mutilation of trees. It's more than an assault on the beauty of a tree. It adds unnecessary stress and risk to tree health, increases the chances of rot and lowers the tree's resistance to insects and disease. The regrowth tends to be weakly attached as well, and the whole process can be expensive.

Have qualified people evaluate trees for possible corrective pruning and cabling. If the tree can't be saved without topping, have it removed.



- Once the immediate danger to people and property is past, insist that tree decisions are made with an eye to the future and according to the disaster response plan.

- Give immediate care to trees that have special significance for the community and champion or historic trees. Can they be saved?

- Allow only approved, insured crews to work in the community. Stop door-to-door vendors soliciting tree work and send them on their way.

- Use good tree management practices. Never top a tree, remove excessive live wood, remove or disfigure living trees without a just cause or use climbing spikes on living trees. Don't cut or sever roots.

■ ■ ■ Recovery (Weeks and Months After the Disaster)

Follow the disaster response plan.

To manage risk to the community forest:

- Administer care to salvageable trees as soon as possible.

- Prioritize the recoverable trees. The two most important goals should be safety and longevity. Make sure threats to public safety are taken care of immediately, then look at the needs of the community forest. For example, if you are in a community where oak wilt is a problem, tend to oak trees as soon as possible to avoid even more death to your community forest. Inspect all damaged trees for existing or potential decay. Care for problems before the next storm hits.

- Consider cabling or bracing weak forks or branches in older trees of high value. This is work for a professional arborist.

- If a tree inventory is not in place, conduct one now. Find out what remains of the community forest and the care needs of specific trees. Identify potential planting sites. DNR area foresters and private consultants can help.

- Maintain a system for educating the public about re-planting and for answering specific questions. Include regular local newspaper columns, public service announcements, workshops, phone numbers and addresses of helpful contacts; keep an inventory of informational handouts.

- Maintain access to public funds to support re-planting. Consider special fund drives for specific needs.

- Select proper and diverse species for planting based on site considerations. Choose species that are resistant to future natural disaster problems. The University of Minnesota Extension Service has a series of publications titled *Recommended Trees: An Ecosystem Approach* that suggest species specifically suited to each area of the state. Contact the University's Educational Distribution Service at 612/625-8173.

- Buy quality nursery stock and plant and maintain it correctly. Don't try to reforest all at once. Plant only what your community can afford to maintain. If you can't properly maintain your trees, you will only create an unsafe, problem-prone forest that will be damaged again in a couple of decades. Also, after major storms, many nurseries are sold out of good plant materials. Don't buy poor nursery stock just to reforest quickly. Take your time and wait until you can select quality trees. 🌿



COURTESY GORDON HERBST

Stem failures were common in the storms of 1998. Strong, healthy, site-suited trees can successfully withstand winds of more than 60mph.

Enormous amounts of wood debris were generated during storm cleanup, as shown below at Minneapolis' Bureau of Mines site. Storage and utilization of such wood debris should be thought out well in advance.



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For Specific Planning Help

Publications that are good guides to help communities develop emergency response plans include:

Burban, Lisa L. and John W. Andresen. *Storms Over the Urban Forest*. 1994.

Fazio, J. R. *When a Storm Strikes*. National Arbor Day Foundation, Tree City USA Bulletin No. 2.

Matheny, N.P. and J.R. Clark. *A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas*. 2nd edition. International Society of Arboriculture. 1991.

Replacing Storm-Damaged Trees: Plan Before You Plant

For the many Minnesotans with storm-damaged trees to replace, tree professionals are offering two words of advice:

Slow down!

“With a little luck and proper care, the tree you plant today can be around for decades to come,” says Ken Holman, community forestry coordinator for the Minnesota Department of Natural Resources. “Many trees can be planted throughout the growing season, so it pays to do some serious planning before you start the planting.”

The general public may need to be reminded about some of the following things that often seem elementary to more experienced tree planters.

Holman recommends that homeowners begin by making a rough sketch of their property that shows the location of buildings, power lines, underground utilities and existing plants. This makes it easier to determine the best locations for replacement trees.

Where a tree is placed is a major consideration in re-planting. The mature size and spread of a tree needs to be anticipated to prevent future conflicts between branches and overhead power lines or roots and underground utilities. For energy conserva-

tion benefits, deciduous trees are best planted to the east and west of a house, providing shade in the summer, but allowing sunlight during winter months. Evergreens planted to the north and west of a home can provide shelter from prevailing winds.

Proper tree selection, including species and high quality stock, is important to successful re-planting. It's not enough to just choose something you like. Many people may not know that species site-adapted to an area are more likely to thrive there than other types of trees. Soil characteristics, drainage and the amount of sunlight should be considered when choosing trees for a particular place. Healthy stock purchased from a reputable nursery may be a better investment than less expensive saplings bought from other sources.

How the tree is planted and subsequently cared for also makes a critical difference, Holman adds. Planting too deeply, for instance, is a common cause of tree decline and death. Adding woodchip mulch around the tree can conserve moisture, inhibit weeds and protect the trunk from lawn mowers and weed whips. Providing the equivalent of one inch of rainfall each week will help the tree thrive.

Holman summarizes, “Planting the tree is a little more complicated than picking up whatever's on sale at the local discount garden shop and plopping it into a hole. For the best results, planters should look over their sites, select good stock of the right kinds of trees and make sure they know the right way to plant them.”

Homeowners wanting more details on proper tree selection and planting techniques can contact their

Ice Storm Resistant Trees

Since ice accumulations can increase the branch weight of trees by 30 times or more, tree features influence ice storm resistance. The conical branching patterns, strong branch attachments and low surface area of lateral branches of many conifers are generally resistant to ice storms. Deciduous trees with coarse branching patterns (fewer, thicker branches) and lateral branches with reduced surface areas also have an advantage. Forest understory trees that mature at small heights are relatively resistant to ice storm damage. Species with deep root systems are less susceptible to tipping than shallow root species.

Species resistant to ice damage can be planted to reduce tree and property damage. Resistant species include

- arborvitae • black walnut
- blue beech • catalpa
- Eastern hemlock • ginkgo
- ironwood • Kentucky coffee tree
- little leaf linden • Norway maple
- white oak • bicolor oak

area DNR forester, county extension office or soil and water conservation district. A variety of free informational brochures and booklets are available. Contact the Minnesota Nursery and Landscape Association for a list of recommended nurseries (Toll free 1-888-886-6652). The May issue of the *Advocate* also included a Clip and Save guide to proper planting. 🌿

The trees in Minnesota that have survived our 1998 storms better than others, according to University of Minnesota Department of Forest Resources' survey date, are:

Bur oak, American elm, Japanese tree lilac, crabapple, honeylocust, black walnut, Kentucky coffeetree, most pines.

About MnSTAC

The Minnesota Shade Tree Advisory Committee (MnSTAC) was established in 1974 by a group of concerned citizens to address the health and well being of community forests. MnSTAC provides a forum where people forge a collective vision for the future of Minnesota's community forests and:

- advocates for public and private community forestry interests
- unites for the exchange and dissemination of ideas and information
- serves as the State Urban Forest Council to advise the State Forester on the implementation of state and federally-funded programs.

MnSTAC is recognized throughout Minnesota and the country for its expertise, advice, coordination and support for community trees. It is an organization of diverse individuals who represent a broad spectrum of tree-related interests. It fosters and supports local community tree programs across the state so healthy community forests are fully integrated into community development, infrastructure, education and management.

The MnSTAC resources listed here encourage your calls, questions and sharing of ideas.

MnSTAC BOARD OF DIRECTORS

President: Glen Shirley, City of Bloomington
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Vice President: Dorothy Johnson
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Katie Himanga, Heartwood Forestry
Phone: 612/345-4976

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Mike Max, EnvironMentor Systems, Inc.
Phone: 612/753-5505

Gary Johnson, U of M Forest Resources
Phone: 612/625-3765

Dwight Robinson, MN Dept. of Agriculture
Phone: 612/296-8578

Ralph Sievert, Mpls. Parks and Rec. Board
Phone: 612/370-4900

MnSTAC COMMITTEES AND TASK FORCES

Arbor Month Partnership
Chair: Ken Holman, DNR Forestry
Phone: 612/772-7565

Constitution and Election Committee
Chair: Ken Simons, Ramsey County Parks
Phone: 612/748-2500

Education and Research Committee
Chair: Gary Johnson, U of M Forest Resources
Phone: 612/625-3765

Forest Health Committee
Chair: Steve Kunde, Kunde Company
Phone: 612/484-0114

Legislative Committee
Chair: Mark Schnobrich, City of Hutchinson
Phone: 320/234-4459

Outreach Committee
Co-Chairs:
Peter Bedker, Treescapes
Phone: 612/682-9562
Mike Max, EnvironMentor Systems, Inc.
Phone: 612/753-5505

Planning Committee
Chair: Janette Monear, Twin Cities Tree Trust
Phone: 612/920-9326

Publicity and Awards Committee
Chair: Terri Goodfellow-Heyer, MN State Horticultural Society
Phone: 612/643-3601

Scholarship Committee
Chair: Ralph Sievert, Mpls. Park and Rec. Board
Phone: 612/370-4900

Tree Emergency Response Committee
Chair: Katie Himanga, Heartwood Forestry
Phone: 612/345-4976

Tree Preservation Task Force
Chair: Paul Buck, City of Plymouth
Phone: 612/509-5944

Wood Utilization Task Force
Co-Chairs:
Mike Zins, U of M Arboretum
Phone: 612/443-2460 Ext. 247
Jim Hermann, Mpls. Park and Rec. Board
Phone: 612/370-4900

Regional Shade Tree Advisory Committees

To add more voices to the forum and encourage networking more easily at the local level, three regional MnSTAC units are in place.

Southeast STAC

Southeast STAC represents communities in the eleven counties that are part of the Hiawatha Valley Resource Conservation and Development Area.

For information about Southeast STAC, contact:
Chair: Henry Sorensen
Asst. Pub. Service Director, City of Red Wing 612/385-3674
Sec./Treas.: Katie Himanga
Heartwood Forestry, Lake City 612/345-4976

Headwaters-Agassiz STAC

HASTAC, the Headwaters-Agassiz Shade Tree Advisory Committee, was formed about a year ago as a regional branch of MnSTAC. The NW Regional Development Commission is the fiscal agent.

For information about HASTAC contact:
Chair: John Johnson
City Forester, City of Thief River Falls 218/681-1835
Sec./Treas.: Jeff Edmonds
DNR Forestry, Bemidji 218/755-2891

West Central STAC

West Central STAC started in 1997 to help communities in the northwest region share ideas, information and local success stories in managing community trees. The group has since met to discuss the committee's purpose and to promote it to communities.

For information about WESTAC, contact:
Chair: Bob Fogel
Director of Parks, City of Moorhead 218/299-5497
Sec./Treas.: Dave Johnson
DNR Forestry, Detroit Lakes 218/847-1596



Events and Conferences

Sept. 4-8—**North American Association for Environmental Education Conference**, Atlanta, GA. Contact NAAEE P.O. 400, Troy, OH 45373.

Sept. 14-17—**47th Annual North Central Forest Pest Workshop**, Dubuque, IA. <http://willow.ncfes.umn.edu/ncfpw98/ncfpw98.htm>

Sept. 17, 9:30-12:00 noon—**Special MnSTAC meeting: Focus on Storm Recovery**, Mn Dept. of Ag. Call 651-772-7925 for more information.

Sept. 17—**Trees and Utilities Regional Workshop**-Kansas City, Blue Springs, MO. Contact NADF 402/474-5655.

Sept. 18-20—**Hazard Trees and the Decay Process Workshop**, College of the Adirondacks, Paul Smiths, NY. Contact Barb S. 612/327-6236.

Sept. 27-30—**Society of Municipal Arborists 34th Annual Conference & Trade Show**, St. Louis, MO. Contact <http://www.urban-forestry.com/index.html>

Oct. 7-9—**Minnesota GIS/LIS 1998 Conference**, St. Cloud Civic Center, St. Cloud, MN. Contact Mgmt. Co. 612/226-5312.

Oct. 9-10—**Small Logging Equipment Field Demonstration**, Duxbury MN (near Sandstone). Contact Jean Mouelle 612/772-7567.

Oct. 22-24—**Midwest Environmental Education Conference**, Carbondale, IL. Contact Touch of Nature EC 618/453-1121.

May 1-5, '99—**4th International Symposium on Urban Wildlife**, Tucson, AZ. Contact Bill Shaw 520/621-7265.

MSA Certified Arborist Exams

Sept. 11—Anoka Co. Extension Office, Anoka MN.

Contact Gary Johnson 612/625-3765

Opportunities

Aug. 15—**Building with Trees Awards of Excellence** entry due. Contact NADF 402/474-5655.

Through June, 1999—**MnReleaf Forest Health grants** available; Contact DNR Region Office or 612/772-7925.

Internet

—*Homepages etc.*

- **International Society of Arboriculture** <http://www.ag.uiuc.edu/-isa>
- **Minnesota Department of Natural Resources** <http://www.dnr.state.mn.us>
- **MnSTAC Homepage** <http://willow.ncfes.umn.edu/mnstac/mnstac.htm>
- **National Arbor Day Foundation** <http://www.arborday.org>
- **QuantiTree 2.0** computer software information <http://www.quantitree.com>
- **U of MN Environmental Events Calendar** <http://www.umn.edu/cura/env496.htm>
- **Urban Forestry: A Bibliography**, 1996 version <http://minerva.forestry.umn.edu/urb/>

New Publications

Connecting Forestry To People in 1999: The State and Private Forestry Programs. 1998. USFS, Northwestern Area State and Private Forestry. Contact Barb S. 612/327-6236.

MnSTAC's Report to the 1998 Legislature: Planting and Caring for Trees: A Minnesota Community Tradition. 1998. MnSTAC. Contact MN DNR 612/772-7564.

Landscape Design and Selected Species for Residential Sites (5 brochures). 1998.

- Evergreen Shaded Garden Landscape Design
 - Native Shade Garden Landscape Design
 - Prairie Garden Landscape Design
 - Suburban Garden Landscape Design
 - Wet Meadow Garden Landscape Design
- Contact MN DNR Forestry 612/772-7925.

National Tree Trust 1997 Annual Report. 1998. Contact National Tree Trust 202/628-8733.

Things to Consider to Repair or Replace Storm-Damaged Yard Trees. 1998. MN Recovery Forestry Task Force. Contact MN DNR 772/7925.



Dear Tree Advocate,

We want to hear from you! What are your thoughts about the new *Advocate* newsletter?

What would you like to see articles on?

Please check if appropriate:

- I want more information about joining the Minnesota Shade Tree Advisory Committee (MnSTAC).
- I do not wish to receive the *Minnesota Shade Tree Advocate*. Please remove me from your mailing list.

Mail to: Jan Hoppe
Minnesota Shade Tree Advocate
115 Green Hall, 1530 Cleveland Ave. N.
St. Paul, MN 55108

Name/Organization

Address

Phone Number

Minnesota Shade Tree Advocate

A quarterly newsletter published by the Minnesota Shade Tree Advisory Committee.

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Editor-in-Chief: Jan Hoppe

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Address inquiries to:

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Special Notes

Planting the Right Tree in the Right Place

From Minnesota Power, this 12-page booklet provides growth information on 64 different types of trees or shrubs. The brochure identifies tree and shrub selections that are compatible for planting near overhead powerlines. Call Minnesota Power toll free 1-800-228-4966 for a copy. An expanded color version of the brochure is available at www.mpelectric.com/treebook

Keeping Nature in Your Community: Using Ecosystem Approaches in Community Projects

This two-day workshop is for local officials, planners, natural resource managers, technical advisers and interested citizens who are working together on a community-based project such as:

- a comprehensive natural resources or open-space plan;
- a watershed management initiative;
- a riparian protection/restoration project;
- A sustainable communities initiative.

Registration is \$130. Scholarships are available. Contact Mark Wever, Tree Trust, 612-920-9326, for more information.

Sept. 22-23—Elk River

Sept. 25-26—St. Paul

Nov. 17-18—Red River Valley area

Nov. 20-21—Brainerd

March 5-6—Twin Cities area

March 9-10—Rochester

Storms Rage, from p. 1

healthier and stronger. Fewer mistakes occur in storm damage cleanup, in caring for damaged trees and in re-planting.

Some storms, especially tornadoes and ice storms, can be so severe they devastate in spite of the best of plans. But still, when a community does not have a forester, arborist, tree board or park department to direct the management of its trees, problems escalate following a storm. Other people such as law officers, utility crews, government officials or street maintenance workers without much knowledge of trees may make major decisions that can affect the quality of the community forest far into the future.

State and federal emergency management agencies stand ready to help, but they are not prepared to direct proper tree care. Each community needs to take this responsibility for itself.

This issue's Clip and Save section is a handy guide to preparing your community to respond to tree disasters. If you don't have a good tree management and emergency response plan, develop one now. Your community forest benefits immediately from the better care, even if you never have a disaster. Still, with the many moods of Minnesota weather, it is more realistic to plan for *when* your community gets hit than *if* it does.

A good plan takes everyone working together—community leaders and local government, tree professionals and urban forest advocates, state agencies, park and street maintenance personnel, private citizens. The benefits of being prepared are well worth the effort. 🌿

Some of the text for this article is reproduced from a foreword by Gerald Jensen in the book *Storms Over the Urban Forest* by Lisa L. Burbank and John W. Andresen. Thanks to Katie Himanga, Peggy Sand, Brian Hagerty, Dan Knight, Greg Kozitza and Barb Spears for the background information for this *Advocate*.

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