

# Minnesota's Community and Urban Forests



## Minnesota Shade Tree Advisory Committee Report to the 1991 Legislature

The Minnesota Legislature directed the Minnesota Shade Tree Advisory Committee (MSTAC) to prepare a comprehensive analysis of community forestry issues. As a result, *Minnesota's Community and Urban Forests: Opportunities and Recommendations* was presented to the Legislature in January 1990. This report examined the role of the community forest as part of the public infrastructure and addressed the value of community forests for *energy conservation, quality of life, and community development*.

The 1990 Legislature responded by creating the Community and Urban Forestry Act (SF 2127). This Act directs state agencies to help communities locate an adequate and diverse supply of appropriate tree species. It also allows communities to enter into long-term contracts with nurseries to ensure the desired quality and quantity of trees. Furthermore, the Act encourages planting for energy conservation and calls for expanded Arbor Day programs, increased roadside planting and trees for new construction. This landmark legislation deserves implementation through funding and further legislation in 1991.

Minnesota's achievements in community forestry are a tribute to the leadership of the state legislature and demonstrate the value of united public and private effort. However, in tight economic times, investments which perpetuate existing resources are the most prudent. Erosion of current legislative support will weaken our trees and forests--living pillars of the state and community infrastructure. Our report focuses on the current issues facing Minnesota's community forests and the vital work of the various groups involved. It also presents MSTAC's recommendations for action by the 1991 Legislature.

## Threats to Community Forests

Trees in Minnesota towns and cities must endure the stresses of urbanization, aggravated by disease and insect problems as well as natural calamities. Listed below are the most significant challenges to urban and community forests in the 1990's, human initiatives used to meet the challenges, and issues that demand additional attention.

**Development in Woodlands.** Conversion of native forest land to residential and commercial use destroys trees in communities throughout Minnesota. Too often, rigid zoning and engineering standards result in excessive reshaping of the landscape. Careless construction activities around the remaining trees cause unnecessary loss of many more. Concern over vanishing woodlands led many communities to adopt tree preservation ordinances in 1990. *Losses may be reduced further by development of tree preservation guidelines at the state level.*

**Oak Wilt.** Oak wilt remains the most serious community forestry problem in Minnesota. Each year, tens of thousands of oaks die from oak wilt in more than thirty counties, particularly in developing areas around the Twin Cities metropolitan region. State agencies are expanding their control programs cooperatively with counties, communities, and the private sector. Anoka County is purchasing equipment to control oak wilt in communities and on public lands. Sherburne County Commissioners, working through a newly formed tree board, have allocated funds to begin county-wide control efforts. Communities are also responding with increased control programs. Despite this good start, *much more support is needed to preserve the oak resource and its benefits for our environment and economy.*

**Gypsy Moth.** Catches of gypsy moth increased dramatically in 1990. Through an effective survey program operated by the Minnesota Department of Agriculture (MDA), the Department of Natural Resources (DNR), and the U.S. Department of

Agriculture, 14 infestations have been detected early and eradicated since 1982. However, the pressure is increasing as gypsy moth populations expand in neighboring states. *The disastrous potential of gypsy moth has prompted the federal government to urge Minnesota to double existing survey efforts to hold the line on this pest.*

**Dutch Elm Disease.** The events of 1990 highlighted the value of Dutch elm disease control programs. While losses to Dutch elm disease remained high, populations of beetles that spread the fungus dropped in 1990. As a result, there should be fewer diseased trees in 1991, suggesting that investments in control programs are paying off. The value of large, mature elms to the community far outweighs the cost of a disease control program. However, *if control programs are cut, Dutch elm disease could cause major losses in the remaining, drought-weakened elm population.*

**The Drought.** Agricultural crop production may have recovered when rains returned, but the state's trees continue to suffer drought-related problems. The effects of three consecutive drought years was compounded when abnormally cold weather in 1989 froze the roots of weakened trees. Pine, oak and birch trees are dying in unprecedented numbers in western, central, and southern Minnesota. The worst mortality occurred in the sandy soils of the Mississippi corridor. In Stearns and Sherburne counties, oak mortality has been as high as 75%, and red pine as high as 85%. In urban areas, young trees with small root systems have suffered greatly; Minneapolis lost 3500 young trees on public property alone in 1990. *More young trees will be needed to cover community tree losses.*

**Storm Damage.** Severe storms in summer 1990 caused significant damage to trees in many communities from Duluth to the Twin Cities. A single storm cost the city of Minneapolis \$1.3 million to dispose of debris from over 500 public and private trees. *The cost for such emergencies will place even more strain on tight local budgets.*



## Energy, Environment, and Solid Waste

**Energy Conservation and Global Warming.** In recognition of the value of tree planting for energy conservation, several cooperative ventures were initiated in 1990:

- \*The U.S. Forest Service and Northern States Power provided money to develop a pilot program for energy conservation demonstration plantings in Minnesota.
- \*Over 3000 copies of *Energy-Saving Landscaping*, a new booklet from the Minnesota Department of Public Service (DPS), have been distributed around the state.
- \*The Legislative Commission on Minnesota Resources has recommended funding for a project that includes research, public information, and cost-sharing for tree planting. The program is a cooperative effort between DNR, DPS and the University of Minnesota.
- \*The first Minnesota-based research to quantify benefits of trees for energy conservation and carbon dioxide reduction was completed with support from the Legislature, Northern States Power, and Minnesota Power and Light.

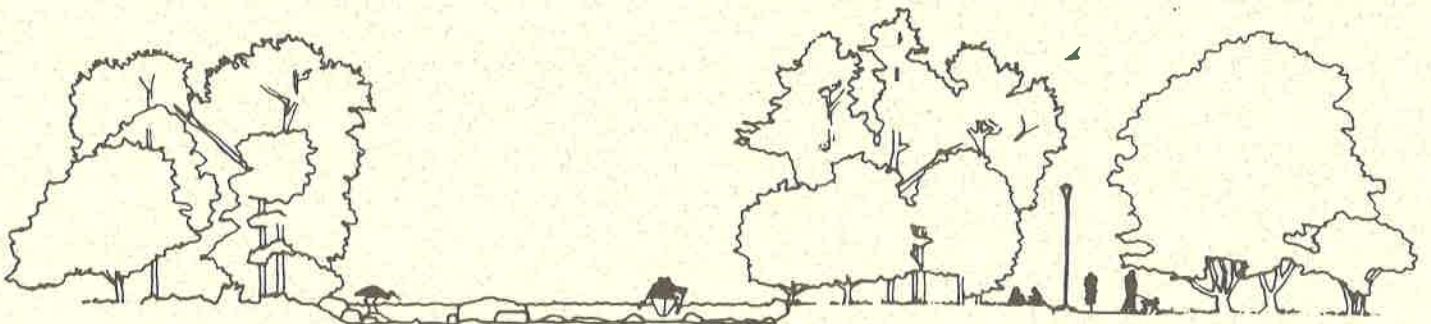
*More research is needed on the energy-saving role of trees in Minnesota communities.*

**Wood Waste Utilization.** Community forestry and landscape operations generate wood by-products in the form of logs, brush, and chips. A 1988 survey found that the annual total may be as high as 125,000 tons. Markets for recycling these materials are limited, so 87% is either burned or buried. Based on MSTAC recommendations, federal monies were awarded to DNR to work with the MSTAC Wood Utilization Task Force to investigate potential markets and uses for Minnesota wood waste, and to identify research and public information needs.

## Community Forestry Development

Comprehensive community forest management must include a community forest inventory, a management plan carried out under professional staff, and long-term public support and participation. Current issues related to management of community forests include: **Community Forest Management Programs.** A 1989 survey by the American Forestry Association found the condition and quantity of street trees in Minnesota to be better than the national average. Forty percent of the street trees evaluated in Minnesota cities were in excellent condition compared to the 32% national average. Only 16% were in poor or fair condition in Minnesota compared to 28% nationally. However, while the survey found 40 species along Minnesota streets, one quarter of the trees were green ash and nearly half were elm, maple, or linden. This lack of diversity is particularly alarming since the fatal disease ash yellows has been found in two locations in the state. Boulevard reforestation plans and strong management programs are essential to sustain a healthy and diverse community forest.

**Professional Education.** Foresters from more than 350 towns and cities participated in seven Tree Inspector Workshops sponsored by MDA in 1990. The Shade Tree Short Course, sponsored by the Minnesota Extension Service, attracted more than 900 participants. Over 200 professionals attended the Minnesota Society of Arboriculture fall conference in Duluth. Undergraduate enrollment in urban forestry at the University of Minnesota has tripled in the last four years despite reallocations of staff and resources. **Community Tree Inventory.** The University, DNR, and U.S. Forest Service are finalizing a computerized tree inventory system. The inventory helps the community forester develop a management plan that will focus limited resources on priority items. A uniform inventory system will make it possible to complete statewide assessments of the value and condition of urban and community forests.



## Private Sector Activities

**The Nursery Industry.** Production and sales of nursery stock in Minnesota continues to increase. Unsuitable nursery stock coming from out of state causes serious concern among community foresters. Native trees from local seed sources are often the best shade trees, but they are typically the hardest to obtain.

**Urban Forestry Consultants.** Private sector foresters are indispensable to community forestry management and disease control programs. Urban forestry consultants serve numerous communities, businesses, and private homeowners, while adding to the state economy. MSTAC recognizes their important role in developing programs now being used by state agencies and communities. *Private sector growth should be stimulated by creating more opportunities for consultants to cooperate with state agencies that provide technical assistance.*

**Non-Profit Contributions.** The Twin Cities Tree Trust conducts public service programs that employ over 800 disadvantaged and/or handicapped youth and more than 900 adults. The programs teach basic job skills by doing quality forestry and landscape improvement projects for communities. More than seventy municipalities and government agencies were served by the program in 1990.

## Federal Initiatives

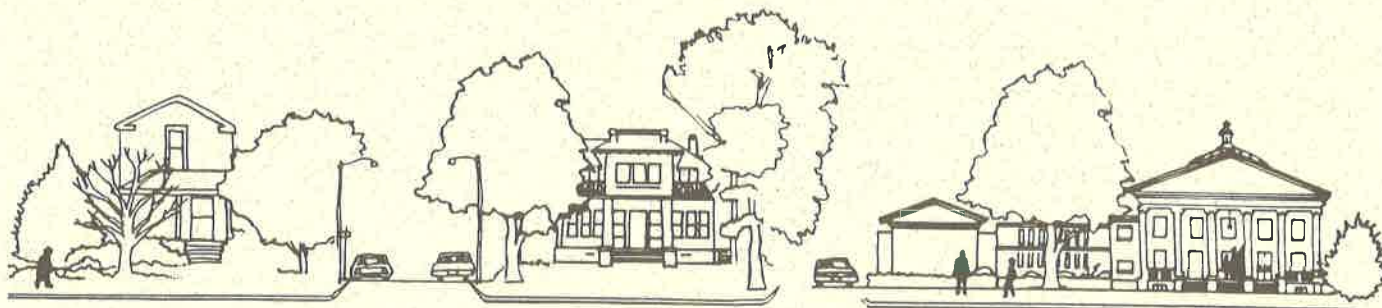
**America the Beautiful Program.** President Bush and Congress made a federal commitment to community forestry by passing the first Farm Bill Forestry Title. Minnesota's funding will include cost-share monies for community forestry planning and support of volunteer programs. To receive funding Minnesota must have: 1) a statewide urban/community forestry coordinator; 2) a means to promote and coordinate

volunteer community forestry efforts; 3) a state urban forest council; and 4) a comprehensive state plan for community forestry. Federal funding is intended only to complement, not supplant, state support. In fact, *strong state and local programs will put Minnesota in a better position to compete for the pool of federal funds.*

## Public Awareness

**Tree City USA.** More than fifty-two Minnesota cities have earned the designation of Tree City USA from the National Arbor Day Foundation. Tree City USA recognizes communities that have an organized forestry program and provides an opportunity for positive publicity. To qualify for recognition, a city must have a tree ordinance, a tree board, a comprehensive urban forestry program supported by a minimum of \$2 per capita, and an annual Arbor Day observance. *More communities could easily become Tree Cities, and expanded efforts in this area would pay long-term benefits in public support.*

**Arbor Day.** 1990 was a banner year for tree planting programs in Minnesota. Over ninety communities sponsored Arbor Day or Arbor Month tree planting programs. Arbor Month education packets were distributed to over 5000 educators throughout the state. Schools, communities, youth groups, and businesses planted "Jacob Trees" in honor of Jacob Wetterling to symbolize hope for children and the future. Minnesotans planted more than one million trees in observance of the 20th anniversary of Earth Day, for Arbor Month, and as part of Celebrate Minnesota 1990 projects.



# Recommendations for Legislative Action in 1991

- Continue the funding critical to carry out state responsibilities in tree pest management, research, public and professional education, and technical assistance to communities. Support programs which emphasize public-private and interagency cooperation.
- Fund the research, education, and technical assistance programs necessary to implement the Urban and Community Forestry Act (SF 2127) adopted by the 1990 Minnesota Legislature. Specifically, fund:
  - research to develop a greater diversity and adequate supply of insect and disease-resistant tree varieties suited for use in Minnesota communities;
  - preparation of model guidelines specifying appropriate tree planting for subdivisions, new developments, and public lands to achieve energy conservation, wildlife habitat, erosion control, and other functions;
  - implementation of community forest inventories as management tools for local governments;
  - state Arbor Month activities to ensure adequate production and distribution of educational materials for schools and communities;
  - an urban forestry position at the university level to meet growing teaching, research, and extension needs.
- Fund expanded oak wilt control efforts including:
  - research, education, and technical assistance;
  - oak wilt suppression assistance to communities;
  - matches for federal funding for oak wilt control.
- Fund the LCMR-recommended proposal "Tree and Shrub Planting for Energy Conservation in Minnesota Communities."
- Encourage local units of government to include a community forestry management plan as part of any comprehensive community development plan.
- Authorize communities to levy funds, outside their current levy limits, to support community forestry management programs.
- Support the creation of state guidelines and incentives for communities to implement tree preservation ordinances which:
  - identify critical community forest lands and habitats, and
  - enact policies on protection and replacement of trees within their jurisdiction.

## MINNESOTA SHADE TREE ADVISORY COMMITTEE

The Minnesota Shade Tree Advisory Committee marked its 16th anniversary in 1990. The Committee is a national model due to its leadership and accomplishments in community and urban forestry management. MSTAC serves as a forum where concerned people forge a collective vision for the future of Minnesota's community forests. Each of the following individual members are valuable contributors to the Minnesota Shade Tree Advisory Committee.

### MSTAC Membership

**G. Rolf Svendsen, Chair; Dougherty, Dawkins, Strand, & Yost, Inc.**

Mike Albers; Minn. Dept. of Natural Resources  
Mark E. Ascerno; Dept. of Entomology, Univ. of Minn.  
Hon. Mark Andrew; Hennepin County  
Mark W. Andrews; Minn. Extension Service, Univ. of Minn.  
Marty Asleson; City of Lino Lakes  
Brian Asmus; Minnesota Power and Light  
Larry Bachman; Bachman's, Inc.  
Bruce Bacon; City of Ramsey  
Rick Bonlender; Minn. State Horticultural Society  
Ken Brackee; City of Apple Valley  
Michael Brandt; Hennepin County Dept. of Environment and Energy  
Kirk M. Brown; Twin Cities Tree Trust  
Lisa Burban; USDA Forest Service  
Lloyd Burkholder; City of St. Paul  
Robert Cupit; Minn. State Planning Agency  
Hon. Greg Dahl; Minn. State Senate  
John B. Daniels, Jr.; Bachman's, Inc.  
Hon. Andrew Dawkins; Minn. State House of Representatives  
Jackie Deneen; Minn. Pollution Control Agency  
David F. DeVoto; Mpls. Park and Recreation Board  
Tom Eiber; Minn. Dept. of Natural Resources  
Alan R. Ek; Dept. of Forest Resources, Univ. of Minn.  
Charles Evenson; Hennepin County Parks Dept.  
Daniel Fitzpatrick; Univ. of Minn.  
Kelly Fleissner; City of Duluth  
Stuart A. Fox; City of Eden Prairie  
David W. French; Dept. of Plant Pathology, Univ. of Minn.  
Greg Groenjes; Northern States Power Co.  
Brian Hagberg; City of Mankato  
Keith Hanson; Minn. Power and Light  
Maryanna Harstad; Minn. Dept. of Natural Resources  
Hon. Alice Hausman; Minn. State House of Representatives  
Edward Hayes; Minn. Dept. of Natural Resources  
James Hermann; Mpls. Park and Recreation Board  
Kenneth P. Holman; Minn. Dept. of Agriculture  
Tim Howard; City of Duluth  
Dorothy Johnson; Minn. State Horticultural Society  
Alan Jones; Minn. Dept. of Natural Resources  
Hon. Henry Kalis; Minn. State House of Representatives  
Tom Karl; City of St. Paul  
D. Perry Kidder; Private Citizen  
Don Kissinger; City of Plymouth  
Scott Kruse; Midwest Tree Technology  
Steven J. Kunde; Kunde Co. Forestry Consultants  
Janet Larsen; College of Natural Resources, Univ. of Minn.  
Hon. Harold Lasley; Minn. State House of Representatives  
Steven B. Laursen; Minn. Extension Service, Univ. of Minn.  
Chuck Lowery; Dakota County Parks  
Lowell Luebeck; City of Coon Rapids  
Eric Magee; Washington County Public Health Dept.  
Michael Marxen; US Fish and Wildlife Service  
Arthur Mason; Minn. Dept. of Agriculture  
John Miller; Minn. Dept. of Education  
Janette Monear; Anoka County Extension  
Susan Moore; Minn. Dept. of Public Safety  
Don Mueller; Minn. Dept. of Agriculture  
Olander Nelson; City of Brooklyn Center  
Steven F. Nelson; Source Technology Biologicals, Inc.  
Peter Olin; Minn. Landscape Arboretum  
Alan Olson; Rainbow Tree Co.  
Orlyn Olson; Iron Range Resources and Rehabilitation Board  
Frank V. Ongaro; Minn. Dept. of Trade and Economic Development  
William Pesek; City of St. Paul  
Harlan Peterson; Dept. of Forest Products, Univ. of Minn.  
Vern Peterson; Assn. of Metropolitan Municipalities  
Debra Pfaff; Staff, Minn. State Senate  
S. Olin Phillips; Minn. Dept. of Natural Resources  
Tom Polasik; Minn. Dept. of Natural Resources  
Tom Prosser; Rainbow Tree Care Co.  
Michael Prouty; USDA Forest Service  
JoAnn Ray; Minn. Dept. of Public Service  
Dean Rebuffoni; Mpls. Star Tribune  
Floyd Roberts; City of Mankato  
Dwight Robinson; Minn. Dept. of Agriculture  
Peter-Jon Rudquist; Minn. Dept. of Agriculture  
Peggy Sand; Dept. of Landscape Architecture, Univ. of Minn.  
Mike Scharrer; Minn. Dept. of Natural Resources  
Mark C. Schnobrich; City of Hutchinson  
Fr. Paul Schwietz; St. John's University  
Donald R. Selinger; Bailey Nurseries, Inc.  
Steven Shimek; Minn. Dept. of Agriculture  
Glen Shirley; City of Bloomington  
Ken Simons; Heritage Shade Tree Consultants  
Diane Spector; City of Brooklyn Center  
Joan Spence; Creative Environments  
Al Sproessig; Sherburne County Tree Board  
Mark Stennes; Stennes Shade Tree Inc.  
David J. Stephenson; Minn. Dept. of Agriculture  
Jonathan E. Stiegler; Minn. Dept. of Natural Resources  
Dennis Stotz; City of Rochester  
David Sundmark; City of St. Paul  
Bert Swanson; Dept. of Horticultural Science  
Robert Tomlinson; Minn. Dept. of Natural Resources  
Anita Twaroski; Minn. Dept. of Natural Resources  
Jim Vaughan; City of St. Louis Park  
T.K. Walling; City of St. Paul  
Paul G. A. Walvatne; Minn. Dept. of Transportation  
Art Widerstrom; Minn. Dept. of Natural Resources  
Katherine D. Widin; Plant Health Associates, Inc.  
Donald C. Willeke; National Urban Forest Council  
Richard Wiskey; Cities of New Brighton and Mounds View  
Richard Zink; Minn. Dept. of Agriculture  
Michael Zins; Minn. Landscape Arboretum  
Bruce Zumbahlen; Minn. Dept. of Natural Resources