MINNESOTA
COMMUNITY FORESTRY ACTION PLAN

1991-1995

Urban & Community Forestry Program

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In December 1990 the
Minnesota Shade Tree Advisory
Committee was designated by the
State Forester to assist in the
preparation of a plan of action
for Urban and Community
Forestry in Minnesota. The
result is this assessment of
Minnesota's community forestry
needs and opportunities, and
comprehensive five year
implementation plan for the
National Tree Planting Initia-
tive component of The America
the Beautiful Act of 1990.
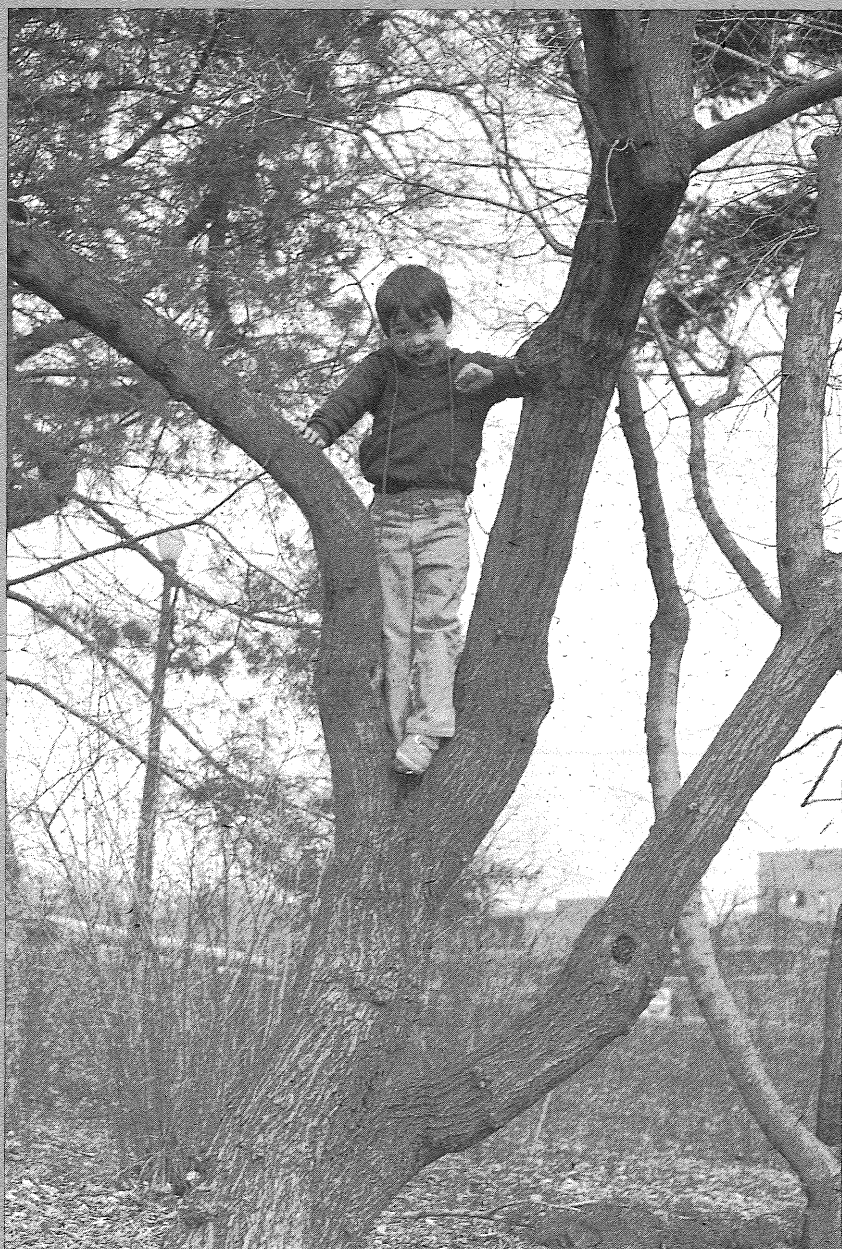
INTRODUCTION

Trees in Minnesota's cities and towns - our community forests - are valuable contributors to Minnesota's quality of life. Trees enhance recreation sites, build community pride, beautify urban settings and screen unsightly locations. They conserve energy and improve environmental quality. Trees are part of each community's public infrastructure and play an important role in community economic development.

As of April 1, 1990, Minnesota's population equaled 4,375,099 people, an increase of 7.3 percent since the 1980 census. More than 2 of every 3 Minnesotans now live within one of the state's five metropolitan areas. These metropolitan areas include the major cities of Duluth, Moorhead, Minneapolis-St. Paul, Rochester and St. Cloud together with adjacent communities. The non-metropolitan population has both urban and rural components. All Minnesota communities, from newly organized townships to the largest cities, face challenges of community forestry which include these population shifts and resulting changes in land use.

Increased interest in community trees is evident in the expansion of organized Arbor Day activities, achievement of Tree City USA, and the creation of local tree boards. In 1990, 67 Minnesota communities qualified for the Tree City USA award from the National Arbor Day Foundation. In that year alone, these towns and cities budgeted a total of $15,548,620 for community forestry programs.

Total Cities Receiving Award
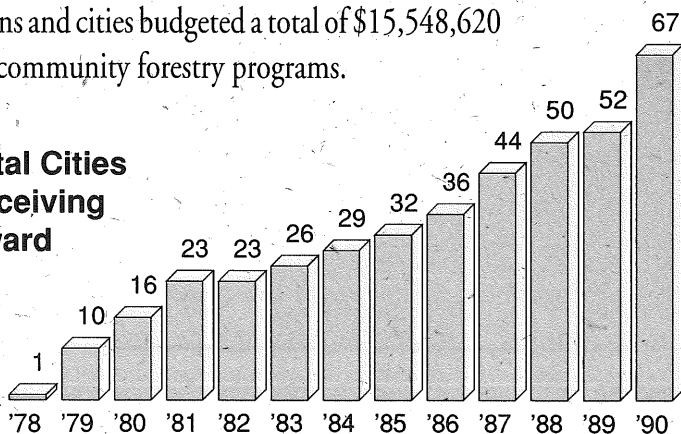
Year	Value
'78	1
'79	10
'80	16
'81	23
'82	23
'83	26
'84	29
'85	32
'86	36
'87	44
'88	50
'89	52
'90	67

Trees in Minnesota's cities and towns - our community forests - are valuable contributors to Minnesota's quality of life.
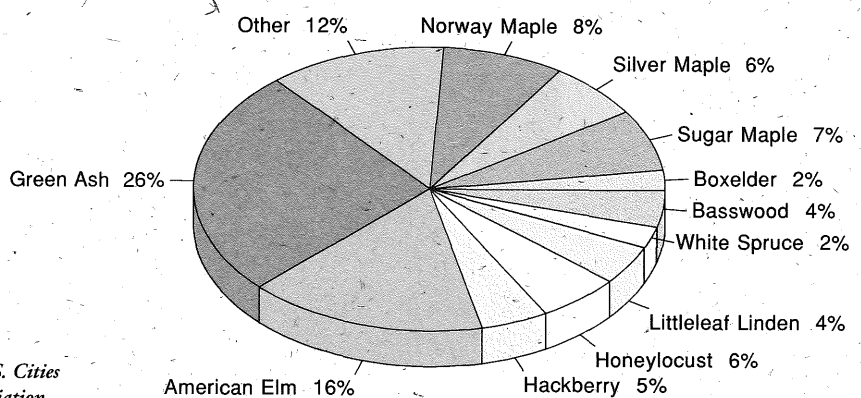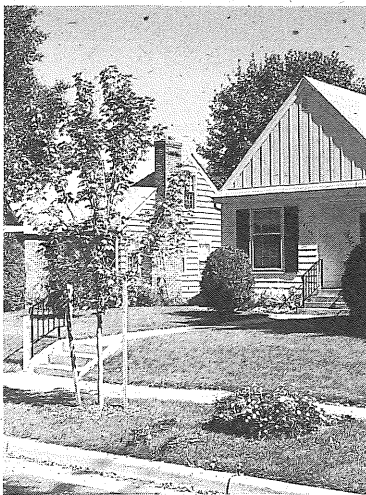
Minnesota Tree City USA Growth 1978-1990

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Community forestry in Minnesota encompasses both natural and planted environments. Boulevards, parks, school forests, municipal forests, greenbelts, residential dwellings, commercial and industrial sites, and undeveloped areas are places where trees and woodlands occur. Community forestry includes resource assessment, planning, planting, maintenance and citizen involvement.

Minnesota Street Tree Species

from: 1989 Street Tree Survey of U.S. Cities and Towns, American Forestry Association

Other 12%
Norway Maple 8%
Silver Maple 6%
Sugar Maple 7%
Boxelder 2%
Basswood 4%
White Spruce 2%
Green Ash 26%
Littleleaf Linden 4%
Honeylocust 6%
American Elm 16%
Hackberry 5%

In 1989, a survey of 20 Minnesota communities was conducted by the Department of Natural Resources in cooperation with the American Forestry Association to assess the condition of the State's community forests (specifically street trees). Sample plots were surveyed in communities as small as Kenyon and South International Falls and as large as St. Paul and Minneapolis. Results indicated that the majority of community street trees are in good to excellent condition, however most of these trees are small in diameter as a result of sudden catastrophic losses due to Dutch elm disease and a flurry of replanting aided by state cost share monies from 1976-82. Additionally, the survey found that in this rush to replace the elms, many communities so overplanted with green ash that they began to approach a shade tree monoculture similar to the elm monoculture that paved the way for the Dutch elm disease disaster.

The most significant finding was that 50 percent of the available spaces for street trees remain unplanted. There is room to plant approximately 360,000 trees along Minnesota community streets.

The American Forestry Association has estimated from earlier nationwide surveys that for every boulevard tree in a community there are ten other trees in yards, commercial and industrial areas, and public parks and open space. In Minnesota communities, there is estimated growing space for planting an additional 3.6 million trees in these off-street locations. AFA also estimates that current average community tree cover is only 30 percent. For maximum environmental benefits, the AFA recommends average tree cover be doubled to 60 percent.

Minnesota community forestry goals are undertaken by various organizations. The Minnesota Department of Agriculture Plant Industry Division coordinates Minnesota's Arbor Month program, certifies local tree inspectors, inspects nurseries, and directs management of regulated pests. The University of Minnesota provides the lead for research and professional education through the Institute of Agriculture, Forestry and Home Economics. The University's Minnesota Extension Service furnishes publications, community-based educational programs and continuing education for professionals and field staff. The Minnesota Department of Natural Resources (DNR) administers Tree City USA and MN RELEAF programs, and provides technical assistance in community forest management. The USDA Forest Service and DNR provide

There is room to plant approximately 360,000 trees along Minnesota community streets.

financial assistance to communities through cost-share programs and competitive grants. The Minnesota Department of Transportation provides technical and financial assistance for plantings on trunk highways in and adjacent to communities through a partnership program and through state and federally funded landscape contracts. Private non-profit community corporations, youth organizations, and volunteer groups are working to plant, nurture and protect community forests in Minnesota.

Since 1974, the Minnesota Shade Tree Advisory Committee (MSTAC) has served as a forum where concerned people forge a collective vision for the future of Minnesota's community forests. MSTAC is recognized as a national leader for its work coordinating state agency and local programs and promoting the protection and expansion of Minnesota's community forests. Its diverse members represent nurseries, public utilities, community groups, non-profit organizations, academic institutions, Extension Service, and Federal, State, county and local government agencies. They include arborists, consulting foresters, landscape architects and private citizens. MSTAC has been designated as the State Council to guide implementation of the America the Beautiful Initiative in Minnesota.

In 1989 the Minnesota Legislature directed the MSTAC to prepare a comprehensive analysis of community forestry issues. The resulting report, **Minnesota's Community and Urban Forests - Opportunities and Recommendations**, identified major issues and opportunities, summarized relevant literature and developed policy recommendations. The 1990 Legislature responded by creating the Community and Urban Forestry Act. This Act encouraged the development of community reforestation policies, called for expanded Arbor Day programs and advocated greater diversity in species of trees planted.
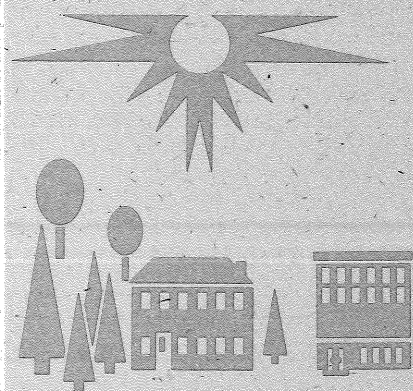
The beauty and value of healthy trees make a community a more pleasing place to live and work.

The 1990 Legislature also recognized the role of trees in balancing the earth's carbon cycle and passed legislation which required a study of carbon dioxide emissions and incentives to reduce emissions. **Carbon Dioxide Budgets in Minnesota and Recommendations on Reducing Net Emissions with Trees** was submitted to the Legislature in January 1991 through a cooperative effort of a number of agencies and organizations. Recommendations for legislative considerations included tree planting programs to reduce carbon directly through carbon storage and indirectly through reduction of energy demand. Support for the establishment of a MINNESOTA RELEAF program was included in these recommendations. MINNESOTA RELEAF has been developed, as part of the larger Global ReLeaf effort, to promote community and volunteer action (involving individuals and businesses) in tree planting and tree care programs.

Most recently, the Legislative Commission on Minnesota Resources (LCMR) approved a work plan "Tree and Shrub Planting for Energy in Minnesota Communities". An appropriation of $1,250,000 is available from July 1991 to July 1993 to accelerate appropriate planting of trees and shrubs for energy conservation in Minnesota communities. This aspect of MINNESOTA RELEAF has been established to encourage, promote, and fund the planting, maintenance, and improvement of trees to reduce atmospheric carbon and promote energy conservation. The Minnesota Pollution Control Agency is currently developing recommendations on carbon emissions fees. The University of Minnesota and the Department of Public Service are developing recommendations on planting for energy conservation. The DNR will prepare an implementation plan for MINNESOTA RELEAF and submit this plan and recommended legislation in early 1992. An advisory committee has been formed to help ensure the development of a comprehensive plan meeting legislative expectations.

PLAN COMPONENTS

The Minnesota Community Forestry Action Plan establishes a challenge for meeting community forestry needs in the state. It identifies goals and actions for managing community forests over the next five years and beyond.

Community forests are confronted with a variety of urban stresses, land use pressure, and inadequate funding. Commitments must be made by agencies, organizations, and communities themselves who are ultimately responsible for the well-being of their community forests. These efforts must be integrated to address issues and goals. Partnerships to work closely together will include government agencies, the academic community, the private sector and non-profit organizations.

MINNESOTA RELEAF has been developed to promote community and volunteer action in tree planting and tree care programs.

Inadequate aeration and moisture, severed roots and damaged trunks are problems which confront community trees.

PUBLIC AWARENESS AND EDUCATION

Heightened public awareness and active public participation are crucial factors in the success of community forestry programs. Better public understanding of the benefits of trees and related natural resources is needed to strengthen the use of community forest management to address environmental issues. Many types of educational opportunities are needed in forms that are easily understood and applied. Current environmental education programs reach many Minnesotans, but more people can be reached through expanded efforts.

Through outreach efforts of MINNESOTA RELEAF, Arbor Day and the Minnesota State Fair, displays and activities on community forestry have reached many Minnesotans. Project Learning Tree lessons, Arbor Month educational packets, Minnesota Landscape Arboretum resources, and Master Gardener and Woodland Advisor programs have statewide impact.

The Minnesota Forestry Fair is a biannual event cooperatively sponsored by the Department of Natural Resources, Minnesota Extension Services and the Minnesota Forestry Association. This environmental education effort offers lessons on planting, care, and wise use of trees to kindergarten through grade 12 students. The Forestry Fair allows people to learn about natural resources and the environment in an entertaining way and encourages resource agencies and organizations to work together.

Goal: Raise public awareness of the value of community forests and the importance of proper management.

Goal: Identify and address the educational needs of the general public, students and policy makers concerning community forests.

Community forestry activities introduce young volunteers to tree planting.

COMMUNITY PARTNERSHIP

The formation of citizen tree boards and the involvement of local community and neighborhood groups are critical to improvement of community forest management programs. State agencies will assist counties and communities in forming tree boards. Tree boards provide public input in setting long and short term goals, and help to assure ongoing local funding for community forestry programs. Strong volunteer networks will be supported by information, professional expertise and cost-sharing assistance. The involvement of culturally diverse groups will be encouraged and supported.

Professional arborists, urban foresters and landscape professionals provide expertise at the local level. This management by professionals will ensure proper selection, siting, and maintenance of new trees and protection of existing mature trees. Consequently community goals will be met at the least cost to taxpayers.

Goal: Promote and support sustainable grassroots action and community efforts toward education, planting and maintenance of community forests.

Goal: Increase citizen participation in tree planting, maintenance and pest control.

COMMUNITY FOREST MANAGEMENT

As one of Minnesota's abundant natural resources, community forests need professional management. They require wise planning, scheduled maintenance and replacement like the other components of a community's physical infrastructure - streets, utilities and public buildings. This management process involves:

- assessing the condition of the resource through periodic inventories,

- setting short and long term goals and drafting a comprehensive plan based on this assessment and the community's values and needs, and

- developing programs, ordinances and budgets set out in the plan to meet the goals.

Minnesota's communities are at various stages in the process of developing community forest management, depending primarily on community size, community tree health and the value they place on their tree resource. Those communities with established high quality management programs will be valuable resources for communities which are developing policies.

Goal: Develop an understanding of Minnesota community forest makeup, condition and maintenance needs.

Goal: Improve the quality of community forest management based on resource assessment.

Community forests need professional management including scheduled maintenance.

Proper pruning improves form and health of community trees.

RESEARCH AND TECHNOLOGY TRANSFER

Properly applied techniques and principles are crucial to quality care of community forests. Technical information must be effectively transferred, and easily understood and applied. Research, publications and information dissemination, education, and technical assistance are necessary for development of professional expertise.

Helping trees effectively reach their potential as community assets is limited by Minnesota's severe conditions. Features of community forestry and tree planting programs require analysis for adaptation to Minnesota's distinctive needs. Communication between researchers and practitioners should be strengthened.

As appropriate and available, existing publications and information will be used or adapted. New information and research findings will be incorporated to increase and improve program outcomes.

Educators, technical experts and users will collaborate to effectively transfer needed information. An annual short course and a statewide series of tree inspectors workshops are provided through joint sponsorship to update city foresters and certified tree inspectors with current technical information on shade trees. The Minnesota Society of Arboriculture sponsors an annual conference which fosters professional exchange of information on the science, technology, and practice of arboriculture and urban forestry. Undergraduate and graduate professional education programs are provided through the University of Minnesota.

SUBJECT: *Tree Planting*
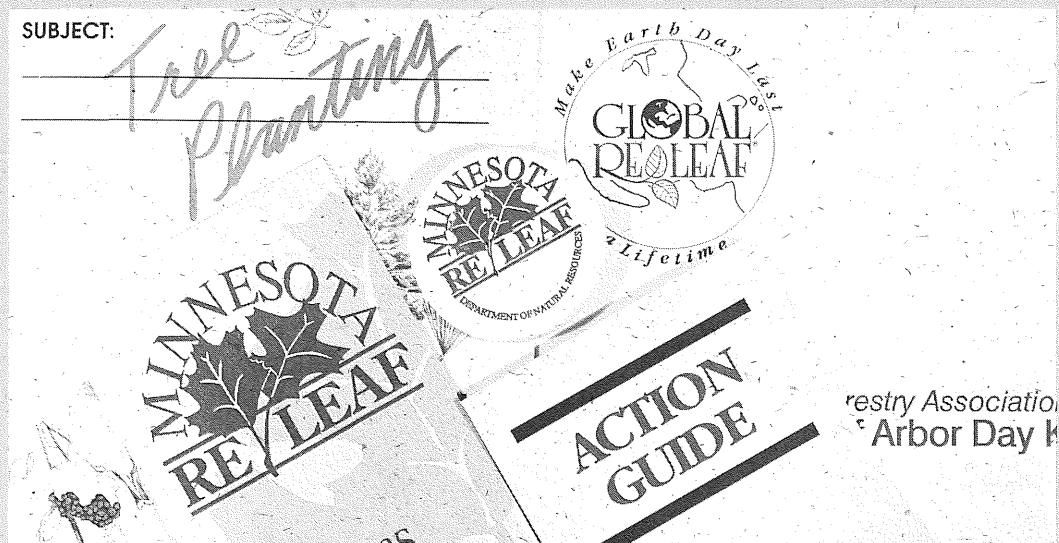
The quality and long-term success of community forestry and tree planting initiatives will depend on the application of proper techniques and principles for management and tree planting and care. Specialists from a wide range of disciplines including forestry, arboriculture, botany, ecology, landscape architecture, horticulture, plant pathology, entomology, outdoor recreation and wildlife biology provide this technical assistance. The challenge is to provide community leaders, volunteers, landowners and others with the expertise that is needed.

Goal: Strengthen research in community forestry.

Goal: Extend research results to field practitioners and the public.

Goal: Develop and provide materials for public information, training of professionals and technical assistance to communities.

Goal: Provide continuing education and training for community forestry professionals and para-professionals.

Goal: Assist communities, tree boards and civic action committees in obtaining professional technical assistance.

Goal: Optimize the effectiveness of professional technical assistance to communities, tree boards and action groups.

PROGRAM MANAGEMENT AND ADMINISTRATION

Numerous agencies and organizations have direct involvement in various aspects of community forestry programs and tree planting initiatives. Efforts underway to better define the roles and responsibilities of lead and support players will be extended. New initiatives will be linked to appropriate existing programs.

Goal: Maximize state-plan efficiency and effectiveness through inter-agency and inter-organizational cooperation and support.

Goal: Effectively administer funding opportunities available for community forestry.

PROGRAM EVALUATION

Ongoing monitoring and evaluation of community forestry programs are necessary to assess the effectiveness of community forestry policies. Successful techniques and recommended improvements provide direction for the development of better approaches for future programs.

Goal: Evaluate the achievement of state plan goals and actions.

Goal: Provide reliable information on the impacts of community forestry programs.

ESTIMATED BUDGET

The total cost for the 5-year urban and community forestry program is estimated to be $5.7242 million (includes federal funding and state/local match of federal dollars). The budget plan by objective by fiscal year is as follows:

OBJECTIVE	1991	1992	1993	1994	1995	TOTAL
Council Support	15,000	15,000	15,000	15,000	15,000	75,000
State Plan	15,000	2,500	2,500	2,500	2,500	25,000
Technical Assistance/ Program Coordination	239,000	445,200	500,000	500,000	500,000	2,184,200
University/Extension Support	40,000	50,000	50,000	50,000	50,000	240,000
Information and Education (Publications)	30,000	60,000	60,000	60,000	60,000	270,000
Cost-Share Projects	130,000	1,200,000	1,200,000	200,000	200,000	2,930,000
TOTAL	469,000	1,772,700	1,827,500	827,500	827,500	5,724,200

Young shade trees add value to any community setting

PROJECTED OUTPUTS

The urban and community forestry plan and program implementation will be monitored and evaluated annually. To ensure that the program goals will be met, the following accomplishments will be monitored. Targets for each of the next five fiscal years have been set based upon estimated program funding.

ACCOMPLISHMENT	1991	1992	1993	1994	1995
TREE CITY USAs	67	80	95	110	125
Communities Assisted	350	400	450	500	550
Local Action Groups	133	150	175	200	225
Community Trees (Planted/Maintained)	75,800	100,000	150,000	150,000	150,000

CONCLUSION

The Minnesota Community Forestry Action Plan sets a challenging agenda for meeting community forestry needs in the state. It identifies goals, actions and commitments to provide direction for community forest planning, planting, and care in the next five years and beyond. Opportunities described in the plan components will continue to expand, and Minnesota will continue to respond to evolving demands.

The America the Beautiful National Tree Planting Initiative is integrated into Minnesota community forestry efforts. Partnerships will continue to form involving government agencies, the academic community, the private sector, nonprofit organizations, community groups and active volunteers.

More healthy trees in our cities and towns, more forest management assistance for communities, more Tree City USA award winners, more tree boards and involved local action groups, increased community pride, and improved understanding of the value and benefits of trees will show Minnesota's energy and resolve toward improving community forests.
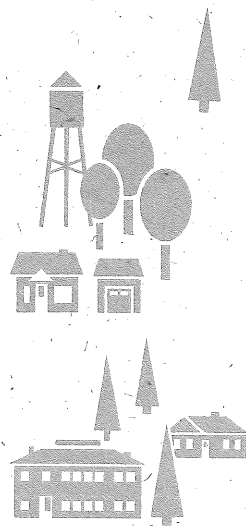
RECOMMENDED ACTIONS

The matrices on the following pages outline the actions recommended to achieve the goals of Minnesota's Community Forestry Plan. The status and priority of these actions will be updated on an annual basis. The opportunities and needs of community forestry in Minnesota are dynamic. New goals and actions will be created to address changing demands.

The following organizations shall be involved in implementing recommended actions:

Minnesota Department of Agriculture	MDA
Minnesota Department of Natural Resources	DNR
University of Minnesota	UofM
Minnesota Extension Service	MES
Minnesota Landscape Arboretum	ARB
United States Department of Agriculture Forest Service	USFS
Minnesota Department of Public Service	MDPS
Minnesota Department of Transportation	MnDOT
Minnesota Shade Tree Advisory Committee	MSTAC
Education Task Force	ED
Community Outreach Task Force	CO
Oak Wilt Task Force	OW
Arbor Month Partnership	AMP
Wood Waste Utilization Task Force	WWU
Legislative Task Force	LEG
America the Beautiful	ATB
Community Tree Preservation	CTP
Minnesota Nursery and Landscape Association	MNLA
Builders Association of Minnesota	BAM
Local tree boards	TB
Iron Range Resources and Rehabilitation Board	IRRRB
Minnesota Education Association	MEA
Lasting Woodlands	LW
Twin Cities Tree Trust	TCTT
Minnesota Horticultural Society	MHS
Private consultants	PC
Local action groups	ACT
Communities	COM
Minnesota Society of Arboriculture	MSA

Goal: Raise public awareness of the value of community forests and the importance of proper management.			
Recommended Actions	Priority	Performed by	Status / Completion Date
Define nature of outreach efforts.	High	MSTAC-CO	June 1,1992
Develop media campaigns and programs.	Medium	DNR, MSTAC-CO	MNRELEAF marketing effort, ongoing
Increase attention to community forestry concerns in local revitalization efforts through statewide environmental groups, and township, county and neighborhood groups.	High	DNR	Ongoing
Increase neighborhood community forestry action within communities and urban areas.	High	DNR,MSTAC	Ongoing
Solicit spokespersons to broaden appreciation of community forests and increase knowledge of forestry issues.	Medium-High	MSTAC	June 1, 1992
Identify key people, organizations, agencies and local groups active in community forestry and tree planting to increase efficiency of outreach efforts.	Medium-High	MSTAC,All	Ongoing
Provide regular updates of Minnesota Community Forestry Resource Directory.	Low	DNR	As needed
Increase regional participation in Arbor Month ceremonies.	High	MDA, MSTAC-AMP	Ongoing

Goal: Identify and address the educational needs of the general public, students and policy makers concerning community forests.			
Recommended Actions	Priority	Performed by	Status/Completion Date
Incorporate energy conservation planting concepts with elementary level educational material.	Medium	MDA,DNR	1992 Arbor Month packet
Expand statewide Arbor Month educational programs in schools and communities.	High	MDA,DNR	1992 Arbor Month
Develop and distribute guidelines for energy conservation plantings for the community environments and energy consumptive patterns in Minnesota.	High	MDPS	Target: July 1993
Develop and implement environmental education programs for youth and adults on the ecology, design, establishment and maintenance of community forest systems.	Medium	DNR,MDA, MEA,ARB	1992
Promote involvement in Master Gardener and Woodland Advisor programs.	Low	DNR,MES	1992

Goal: Promote and support sustainable grassroots action and community efforts toward education, planting and maintenance of community forests.			
Recommended Actions	Priority	Performed by	Status/Completion Date
Encourage establishment of local tree boards.	High	DNR	Ongoing
Encourage involvement of volunteer action groups.	High	DNR,MSTAC	
Encourage public service employment programs through Minnesota Jobs and Training to include community forestry activities in their missions.	Medium-High	MnDOT,TCTT, Counties	Ongoing
Coordinate cooperative public/private partnerships aimed at maximizing community forestry efforts.	Medium-High	DNR,MnDOT	Ongoing
Foster private support of community action projects.	Medium-High		

Goal: Increase citizen participation in tree planting, maintenance and pest control.			
Recommended Actions	Priority	Performed by	Status/Completion Date
Develop an award and recognition program for volunteer contributions to both public and private community forestry efforts.	Medium-High	MSTAC-CO	target: August 1991
Increase technical assistance to and organizational skills for corporations, small businesses, volunteer, and other local groups attempting program and project planning, tree planting and tree care.	Medium-High	Volunteer Coordinator	Ongoing
Assist State agencies in the attainment of their respective goals oriented toward promoting the establishment of local and community forest councils and initiation of tree action projects.	Medium	MSTAC-CO	Ongoing
Develop a comprehensive menu of community tree action projects.	Medium	MSTAC-CO	target: August 1991
Prepare a design and cost estimate for a traveling display to promote community tree action programs and formation of local tree boards.	Medium	MSTAC-CO	target: October 1991
Prepare a "gift catalog" of annual tree action projects suitable for funding by private donors.	Medium	MSTAC-CO	target: 1992
Organize and sponsor an annual conference to attract existing and potential group volunteers and tree board members.	High	MSTAC-CO	target: Winter 1992
Encourage public service employment programs to include community forestry programs in their mission.	Medium	DNR,MSTAC	for: 1992 Legislative Session
Encourage school community service programs to include community forestry programs in their mission.	Low	MDA, MSTAC-AMP	
Form a system of volunteer coordination	High	Volunteer Coordinator	June 1, 1992

Goal : Develop an understanding of community forest makeup,condition and maintenance needs.			
Recommended Actions	Priority	Performed by	Status/Completion date
Refine inventory and assessment process to include cost benefit analysis of community trees.	Medium	USFS,DNR	December 1992
Complete development of the standardized statewide urban tree inventory system. Conduct a statewide community street tree inventory to determine the extent of Minnesota's community forest resource and identify critical community forestry needs. Repeat such inventories as appropriate.	Medium	DNR,UofM	
Promote the use of the standardized tree inventory system in comprehensive community forest management plan development throughout the state.	Medium-High	DNR	Ongoing
Design sample management programs for professionals and community leaders.	Medium-High	DNR	Target: 1992

Goal: Improve the quality of community forest management based on resource assessment.			
Recommended Actions	Priority	Performed by	Status/Completion Date
Encourage local units of government to include a community forestry management plan as part of any comprehensive community development plan.	High	DNR	
Increase tree canopy cover in urban setting to 50 percent.		DNR	2000
Expand oak wilt and gypsy moth detection and control efforts through increased inspection, community cost share assistance, technical assistance, and conditional development requirements.	High	DNR,UofM, BAM	
Revise oak wilt rules and regulations (Chapter 1505) to provide more control guidelines in the law (such as is the case with Dutch Elm Disease).	High	MSTAC-LEG	1992
Develop policies and establish incentives for community energy-conservation plantings.	High	DNR	
Support and promote Minnesota ReLeaf tree planting and maintenance programs for energy conservation and carbon dioxide reduction.		DNR	Ongoing
Promote the production of plant species and varieties best suited for Minnesota through increased cooperation between the local nursery industry, the University and the State.	High	DNR,MDA MNLA	
Create state guidelines and provide 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.	Medium	DNR,BAM	
Support authorization for communities to levy funds, outside current levy limits, to support community forestry management programs.	Medium	MSTAC	
Consider the role of community trees in Environmental Impact Statements and environmental review,	Medium	All	

Goal: Strengthen research in community forestry.			
Recommended Actions	**Priority**	**Performed by**	**Status/Completion Date**
Identify community forestry and tree planting research needs, and set priorities.	High	MSTAC	Annually
Provide, solicit and support funding for research and teaching needs.	High	UofM,DNR, MDA,Industry	
Conduct Ash Yellows studies to determine the extent of the disease and develop a control strategy.	Medium-High	UofM	December 31, 1992
Expand Oak Wilt control research.			
Foster community demonstration and pilot programs.	Medium-High	DNR	Spring-Summer, 1992
Develop planning tools and site-specific guidelines to achieve energy conservation through tree planting. Explore the appropriateness of various energy-conserving site design techniques for Minnesota.	Medium-High	U of M	In progress. Target: July 1992
Develop prototype planting designs for various community environments in Minnesota and test these using simulations and scale models. Establish demonstrations to field test prototype plantings.	Medium -	UofM	June 1, 1992
Identify plant varieties adapted to the climate and growing conditions in Minnesota and resistant to prevalent pest problems. Develop new varieties meeting these criteria. Develop biological diversity and native species use guidelines for community tree planting and management programs.	Medium-High	UofM	December 31, 1992

Goal: Extend research results to field practitioners and the public.			
Recommended Actions	**Priority**	**Performed by**	**Status/Completion Date**
Determine the characteristics of urban and community forest environments needed to support viable wildlife management guidelines to promote desirable wildlife habitats.	Low	UofM	2000
Develop models for the most cost effective means of using trees and community forests to reduce erosion as well as air and noise pollution.	Low-Medium	MnDOT,UofM	1994
Develop guidelines for identifying critical forest habitats subject to urbanization and develop site analysis standards that communities can require before land development.	High	DNR,UofM	1992
Provide for research and post-secondary education staffing to implement integration of research and educational programs.	High	UofM	1992
Determine wood waste utilization amounts and types currently generated in Minnesota; develop strategies and options for optimum wood waste utilization.	High	MDA,DNR	1992
Determine cost-effective methods to control overland and underground spread of oak wilt in Minnesota.	Medium-High	UofM,DNR	1995
Determine the effects of various construction practices on the health of Minnesota trees.	High	UofM,DNR,Mn DOT,BAM	1995

Goal: Develop and provide materials for public information, training of professionals and technical assistance to communities.			
Recommended Actions	Priority	Performed by	Status/Completion Date
Set priorities for publications needed.	High	MSTAC-ED	Completed Fall 1991
Develop and distribute fact sheets and technical bulletins.	High	DNR,MES	Ongoing
Develop and provide information on professional technical assistance and cost share programs available to communities.	High	DNR,MES	June 1, 1992 To be ready for next sign-up period
Develop and distribute materials on methods for promoting proper community forestry management which encompass: (1) tree inventory; (2) development of comprehensive community forestry management plan; (3) use of proper tree to site selection techniques, planting and maintenance; and (4) organization of public involvement and support.	High	DNR,MES	In time for Community Forestry Conference in February 1992.

Goal: Provide continuing education and training for community forestry professionals and paraprofessionals.			
Recommended Actions	Priority	Performed by	Status/Completion Date
Direct instructional materials toward people in fields of planning, forestry, landscape architecture and engineering. Materials also need to reach municipal parks personnel, utility operators and property owners.	Medium	DNR,MDA, MES	
Expand comprehensive research based public education program to contain the spread of forest pests and diseases in Minnesota.	Medium-High	UofM	
Expand continuing education programs to improve the abilities of persons working with trees and their sensitivity to ecological issues. Develop expertise and ongoing skills of field specialists through training and use of existing material.	Medium-High	MES,UofM	

Goal: Assist communities, tree boards and civic action committees in obtaining professional technical assistance.			
Recommended Actions	Priority	Performed by	Status/Completion Date
Develop community forestry service policy and goals.	High	DNR	February 1992
Expand regional efforts in community forestry (including additional positions)	High	DNR	Dependent on funding
Develop workshops and training programs for communities and property owners.	Medium	DNR	February 1992

Goal: Optimize the effectiveness of professional technical assistance to communities, tree boards and action groups.			
Recommended Actions	Priority	Performed by	Status/Completion Date
Provide community leaders with education and technical assistance related to optimum wood waste utilization strategies.	Medium-High	DNR	1992
Expand capability for diagnosis of disease through development of a state diagnostic laboratory.			
Develop educational and technical assistance programs for architects, community planners, engineers, contractors and developers that show proper ways to protect trees during construction.	Medium-High	UofM,DNR	1992

Goal: Maximize state-plan efficiency and effectiveness through inter-agency and inter-organizational cooperation and support.			
Recommended Actions	Priority	Agency	Status/Completion Date
Establish state-wide goals and recommended actions and set priorities.	High	MSTAC-ATB	Completed fall 1991
Support Minnesota Shade Tree Advisory Committee recommendations to the Legislature.	High	All	Ongoing
Identify the agencies or organizations best able to accomplish each state plan action.	High	MSTAC-ATB	Completed fall 1991;annual updates
Develop memoranda of understanding to diminish duplication in responsibilities and relationship of existing organizations.	High	Various	
Develop enhanced communication network.	Medium-High	MSA,MNLA	

Goal: Effectively administer funding opportunities available for community forestry.			
Recommended Actions	Priority	Performed by	Status/Completion Date
Promote funding opportunities.	High	MSTAC-CO, DNR	
Develop criteria and procedures for reviewing project proposals and awarding grants.			
Develop expanded budget to delineate clear avenues for project support.	High	MSTAC,DNR	Annually
Provide cost sharing programs promoting proper community forestry management. Include workshops, seminars, and continuing education for community forest managers. Encourage sharing of resources (equipment, materials, professional expertise, etc.) between neighboring communities.	High	DNR	

Goal:	Evaluate the achievement of state plan goals and actions.			
Recommended Actions		Priority	Performed by	Status/Completion Date
Generate measures for tree planting, tree maintenance and community assistance which reflect desired benefits of the America the Beautiful initiative.				Annually
Review and report state plan action priority and completion status.			MSTAC-ATB	Annually

Goal:	Provide reliable information on the impacts of community forestry programs.			
Recommended Actions		Priority	Performed by	Status/Completion date
Develop reporting system and maintain data base of accomplishments and community assists.		Medium		
Document effects on environment of special projects.		Medium		

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