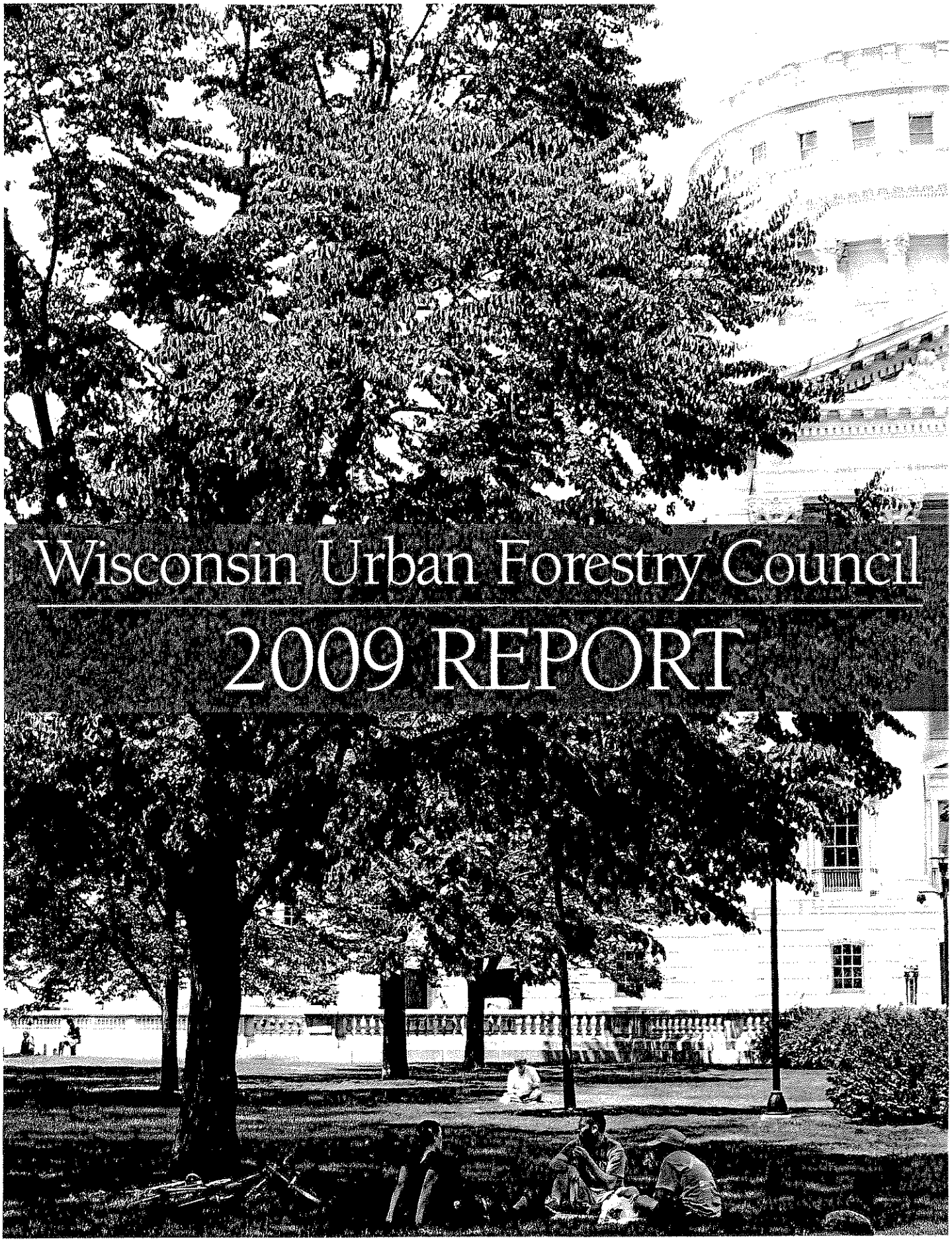

Wisconsin Urban Forestry Council

2009 REPORT

PRESENTED TO THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES

"Trees and greenspace are necessary components of a properly designed, maintained, and functioning community infrastructure."

"Trees are a necessity, not a nicety."

— Bob Skiera

City Forester, Milwaukee 1973–1990

Inducted into Wisconsin Forestry Hall of Fame – 2006

On behalf of the Wisconsin Urban Forestry Council, I proudly present the Urban Forestry Council's 2009 report to the Department of Natural Resources. This report describes progress made since our 2007 report, identifies issues that remain and new issues that have arisen, and provides recommendations to address the most critical issues. Adopting these recommendations will help to ensure sustainability of Wisconsin's urban forests and maintain and improve the services they provide to the citizens of the state.

Dr. Les Werner, Chair
Wisconsin Urban Forestry Council

Wisconsin Urban Forestry Council

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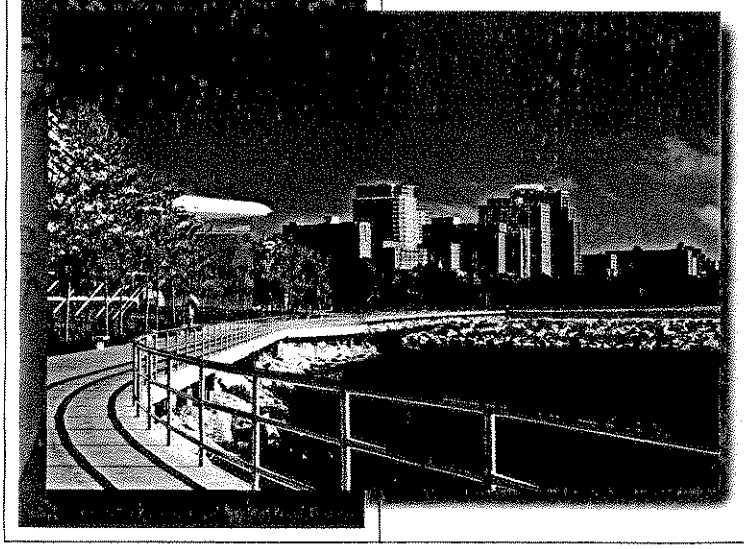
State Urban Forestry Coordinator, DNR

Mr. Jeffrey Roe
Urban Forestry Coordinator, DNR Southern Region

Ms. Laura Wyatt
Urban Forestry Council Liaison, DNR



The purpose of the council is to advise the Wisconsin State Forester and Wisconsin Department of Natural Resources on the best ways to preserve, protect, expand and improve Wisconsin's urban and community forest resources, as authorized by Wisconsin Statue 15.04 (1)(c).

Executive Summary

URBAN FORESTS ARE SIGNIFICANT CONTRIBUTORS TO THE QUALITY LIFE IN WISCONSIN AND IF MANAGED PROPERLY, A PARTIAL SOLUTION TO OUR STATE'S MOST PRESSING ENVIRONMENTAL ISSUES. THE BENEFITS DERIVED FROM THE MILLIONS OF URBAN TREES INCLUDE: REDUCTIONS IN ENERGY CONSUMPTION AND THE SEQUESTRATION OF ATMOSPHERIC CARBON, REDUCTIONS IN STORM WATER DISCHARGE INTO OUR LAKES AND RIVERS, AND REDUCED AIR POLLUTION. EVERY DOLLAR INVESTED IN MANAGING OUR URBAN FORESTS RETURNS THREE DOLLARS IN QUANTIFIABLE BENEFITS.[1]

Much has been accomplished since the presentation of our first 2007 advisory report:

- 99% of appropriation for urban forestry grants restored in the 2009-11 budget
- Development of Urban Forestry BMPs for Invasive Species
- Urban forestry policy included in **Global Warming Task Force** final report to the Governor.
- Expanded outreach to partners including the League of Wisconsin Municipalities

Unfortunately, Wisconsin's urban forests are under attack. The introduction and expansion of emerald ash borer (EAB) in Wisconsin, inadequate funding for urban/community forestry at all levels, lost benefits resulting from below average canopy coverage in most Wisconsin communities, reduced levels of on-the-ground management, and an urban forest comprised of relatively few tree species all pose significant individual threats. Collectively, these threats warrant immediate attention if we are to protect a resource that is currently valued at more that $10.9 billion.[2]

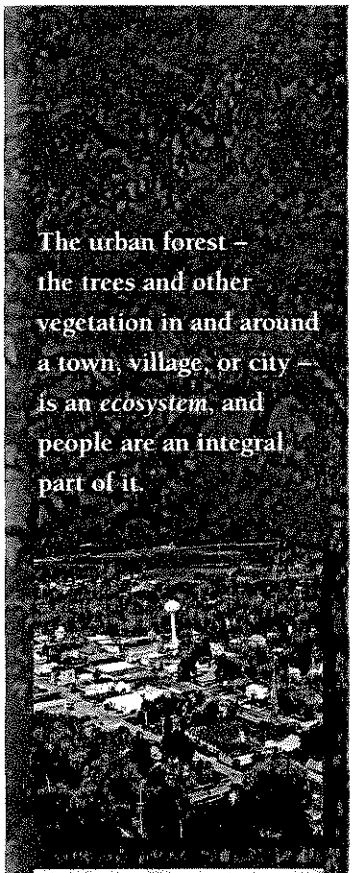
Immediate Needs

- The Urban Forestry Council recommends the implementation of a continuous statewide urban forestry inventory and canopy analysis to assist with resource allocation decisions and to provide technical assistance to developing programs.
- The Urban Forestry Council recommends a $1 million increase in the urban forestry grant appropriation to assist communities with developing urban forestry programs and to combat EAB.
- The Urban Forestry Council recommends hiring of a permanent full-time Partnership Coordinator using new funding or the reallocation of an existing vacant position. State and local agencies must explore inter-departmental collaborations to address common problems, such as EAB, and form new private-public partnerships to support urban forestry efforts and expand the urban forestry funding base.
- The Urban Forestry Council believes there needs to be a stronger commitment of DNR staff resources to assist with on-the-ground efforts to combat EAB and implement the newly developed BMP's for Invasive Species.
- The Urban Forestry Council recognizes the valuable role of tree planting and maintenance in reducing the State's carbon footprint. As such, we request the inclusion of urban forestry within the framework of new legislation to address climate change or energy conservation.
- The council recommends the DNR increase urban forestry program support by allocating an additional 2% from the Forestry mil tax.

Future Needs

The Urban Forestry Council's long term goals for urban forestry in Wisconsin are to maintain our current urban forests, plant more trees, and increase species diversity. Despite the continuing economic downturn, the Urban Forestry Council believes there are unique and historic opportunities to advance urban forestry efforts at the local level and to renew Wisconsin's reputation as a national leader in urban forestry:

- Stimulate and support economic development and the creation of new markets within and for the urban forestry industry.
- Enact innovative legislation that provides incentives to homeowners and landowners to reduce heating and cooling demands through tree planting and long-term maintenance.
- Explore opportunities within municipal accounting standards to accurately reflect the increasing value of trees over time.



The urban forest – the trees and other vegetation in and around a town, village, or city – is an *ecosystem*, and people are an integral part of it.

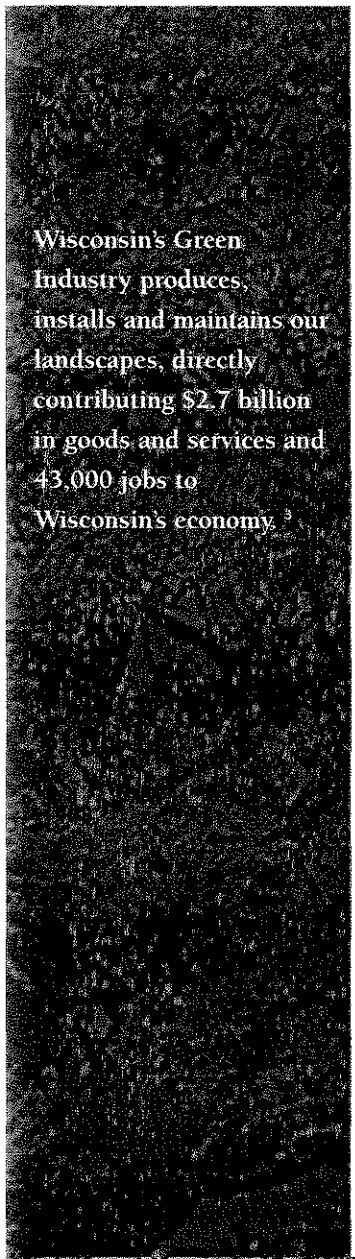
Economics of 100 large public trees over 40 years:

Benefits $379,000
- *Energy savings*
- *Air quality*
- *Water runoff management*
- *Real estate values*

Costs $148,000
- *Planting and pruning*
- *Removal and disposal*
- *Irrigation*
- *Sidewalk repair*
- *Litter*
- *Legal and administration*

Net Benefits....$231,000

Source: U.S. Forest Service, 2005



Wisconsin's Green Industry produces, installs and maintains our landscapes, directly contributing $2.7 billion in goods and services and 43,000 jobs to Wisconsin's economy.[3]

Challenges & Opportunities

COMMUNITIES THROUGHOUT WISCONSIN ARE FACING BOTH DIFFICULT CHALLENGES AND INCREDIBLE OPPORTUNITIES AS THEY STRUGGLE TO MANAGE THEIR URBAN FOREST RESOURCE. FIVE CRITICAL ISSUES IDENTIFIED IN THE 2007 COUNCIL'S ADVISORY REPORT CONTINUE TO CHALLENGE THE GROWTH AND SUSTAINABILITY OF WISCONSIN'S URBAN FORESTS AND THE BENEFITS AND SERVICES THEY PROVIDE TO THE ECONOMY, ENVIRONMENT AND PEOPLE OF THE STATE.

Challenges

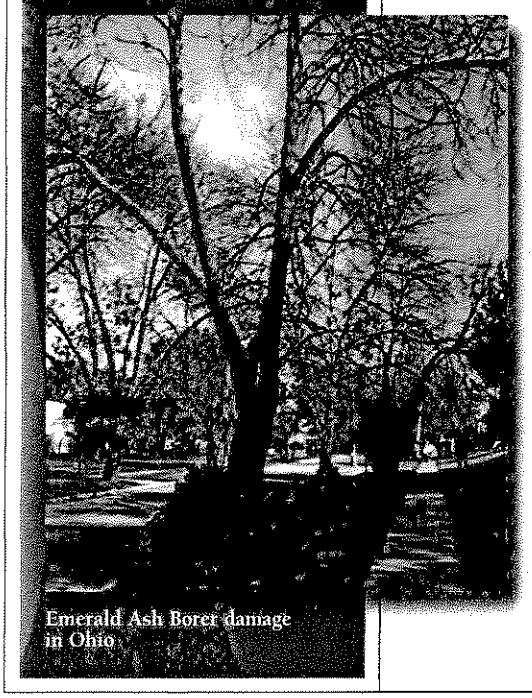
- **Emerald Ash Borer**
  EAB has been found in seven locations in the state. The number of infestations and geographic extent of this pest will continue to increase. Statewide, EAB threatens 5.2 million urban ash trees; 20% of the urban forest and as much as 50% of public trees in some communities. The cost of **removal and replacement will be more than $3 billion.**

- **Inadequate Funding**
  Despite a 3-to-1 economic return on investment, inadequate funding is one of the greatest threats to urban forestry programs in Wisconsin. Historically underfunded, community forestry programs now face unprecedented challenges resulting from escalating costs, reductions in shared revenue and associated penalties for increases in local levy assessments.

- **Insufficient Tree Cover**
  Average canopy cover in Wisconsin's communities is 14–20%, well below the 40% value suggested to maximize benefits. Currently, only 60% of public tree planting spaces are filled.

- **Lack of Management & Care**
  Maximum benefits from urban canopy coverage are fully realized when trees are properly managed. Proper management extends the tree's service life and reduces liability. Currently, only 7% of Wisconsin communities fully manage their urban forests (USDA Forest Service).

- **Species Diversity**
  Maple and ash trees comprise 43% of the trees in Wisconsin's communities. Reduced species diversity increases the potential for catastrophic losses from introduced pests and climate change.[2]



Emerald Ash Borer damage in Ohio

Opportunities

The Urban Forestry Council's long term goals for urban forestry in Wisconsin are to maintain our current urban forests, plant more trees, and increase species diversity. Despite the continuing economic downturn, the Urban Forestry Council believes there are unique and historic opportunities to advance urban forestry efforts at the local level and to renew Wisconsin's reputation as a national leader in urban forestry.

- **Economic development**
  A healthy urban forest requires management to avoid becoming an expensive liability and is the source of the original "green jobs." Increasing the urban canopy will increase the corresponding job market. Additional opportunities exist in the development of value added markets for urban wood residues, development of urban wood residue biofuel markets, revitalization of the landscape nursery industry to improve species diversity and replace trees lost to EAB.

- **Energy conservation**
  Trees that shade our houses and block winter winds save Wisconsin residents $13 million in heating costs and $11 million in cooling costs every year! This equates to 38,000 passenger cars worth of carbon from the power plants that would have produced the energy.[2]

- **Environmental services**
  Wisconsin's urban forests capture 119,000 tons of carbon annually, the equivalent of keeping 91,000 passenger cars off the road. And they store over 2 million tons of carbon, equivalent to the annual emissions of five and one-half 200 megawatt power plants! Wisconsin's community trees remove 6,400 tons of pollutants like ozone, particulates, nitrogen dioxide, sulfur dioxide and carbon monoxide every year, valued at $36 million. Community trees also reduce non-point source pollution by reducing storm water runoff and peak flow.[2]

- **Partnerships and collaborations**
  Interest in trees and green infrastructure has never been higher. Partnerships with businesses, nonprofits, service groups and professional associations can leverage public investment and revitalize community pride.

Raising Our Voices

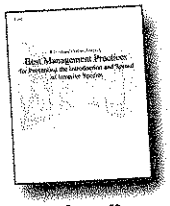
Advocating for Urban Forests — Progress Since 2007

RESPONDING TO A CHALLENGE BY STATE FORESTER PAUL DELONG, THE WISCONSIN URBAN FORESTRY COUNCIL HAS AMPLIFIED THE VOICE OF WISCONSIN URBAN FORESTRY BY STRENGTHENING STRATEGIC ALLIANCES AND ENGAGING STAKEHOLDERS AND LOCAL, STATE AND NATIONAL POLICY MAKERS IN CRITICAL CONVERSATIONS ADDRESSING ISSUES FACING WISCONSIN.

Grants

- As a result of the Council's proposed Wisconsin Tree Planting Initiative, 20 Million by 2020, **the Natural Resources Board amended the DNR's 2009–11 budget to add $1 million for urban tree planting.** Although the initiative was not included in the Governor's final budget the action by the Board was noteworthy.
- The Governor's budget eliminated the long-standing urban forestry grant program. Working with municipal stakeholders, nonprofit organizations and legislators, council members were **successful in having 99% of the appropriation restored by the legislature.** The program remains over-subscribed and under-funded.
- The first urban forestry grants, totaling $71,421, were awarded in response to **catastrophic storm damage** to the Kenosha County and the Town of Wheatland. Signed into law in 2007, the DNR is authorized to expedite urban forestry grants to communities following catastrophic storm damage in an urban area for which the governor has declared a state of emergency.

Invasives



- The Wisconsin Urban Forestry Council led the **development of Urban Forestry Best Management Practices for Invasive Species** with 21 representatives of the green industry and staffing from DNR Forestry. This is a national model for both the BMPs and the process for other states to develop their own.
- Emerald ash borer was finally found in Wisconsin in 2008. The council has been advocating for an aggressive response by both state and federal agencies. **The DNR successfully targeted its urban forestry grants resulting in 94% of the funds being used for EAB readiness and response.**

Quantifying the Urban Forest

- **Urban forestry grants funded 38 local inventory projects during '08 and '09** including a cutting-edge **hyper-spectral analysis** to identify ash in Milwaukee and Mequon. A statewide assessment is still necessary to set resource goals, identify new threats, measure progress and quantify benefits to the public

Benefits Beyond Beauty

- Council member **Ron Zillmer** (Wisconsin Rapids) served on the Forestry & Agriculture work group of the **Governor's Global Warming Task Force** and was successful in having an urban forestry policy included in the Task Force's final report.

Manage the Trees We Have

- In 2010, DNR Urban Forestry initiated the first **Wisconsin Community Tree Management Institute** (WCTMI). The 5-day program provided 30 communities with the technical and managerial skills to effectively manage their urban forests.

Facilitate Partnerships and Collaboration

- Council member **Mayor Dennis Kropp** (Menomonie) initiated a new partnership between urban forestry and the League of Wisconsin Municipalities to improve mayoral understanding of the threat of EAB.
- Council members **Dan Traas** (Appleton) and **Shirley Brabender Mattox** (Oshkosh) are working with the **Oshkosh Area Community Foundation's *Taking Root Fund*** to raise $500,000 in private funding for community tree planting.

Federal Budget Support

- Council members continue conversation with congressional representatives and staff regarding the importance USDA Forest Service support to state urban forestry programs. Congress **restored the last administration's proposed 82% cut** to the Forest Service's Urban & Community Forestry program in 2009 and the current administration kept the 2010 appropriation essentially flat.

Tree City USA

Wisconsin is home to 181 Tree City USAs making Wisconsin the third highest ranking state in the nation. To be recognized as a Tree City USA, a community must meet four requirements. It must have 1) a designated tree board or forestry department, 2) an annual forestry program expenditure of at least $2 per capita, 3) a tree ordinance, and 4) observe and proclaim Arbor Day.

COUNCIL TESTIMONY

"I have had the opportunity to work with over 100 Wisconsin communities and thousands of Wisconsin residents on UF projects supported by the DNR Urban Forestry grant program. This program allows the benefits of Wisconsin's urban forests the avenue to be delivered and enhanced to communities and residents throughout the state...I employ 17 people at Ranger Services Inc. and have had up to 12 of them working on different UF projects at one time."

— Dan Traas, President
Ranger Services Inc.
Appleton, WI

"First and foremost, Greening Milwaukee would not be in existence if it were not for the DNR Urban Forestry grant program. Thirteen years ago Greening Milwaukee was founded to re-build the urban forest canopy in Milwaukee following the devastation created by the Dutch Elm Disease. DNR was quick to recognize the role we would play in getting citizens engaged in planting and caring for trees. Since our efforts DNR support has been key to our creative, innovative and dynamic response to the needs of the greater Milwaukee urban forest."

— Joe Wilson
Executive Director
Greening Milwaukee

Recommendations

What is needed for Sustainability? In 2007, the council identified four strategic directions to focus on the most critical issues facing the urban forestry community. These continue to be our priority strategies for the future.

- **Manage the trees we have** – Maintaining the health and safety of existing trees will increase their benefits and services to communities. Building sustainable programs to manage forest health and longevity is critical to maximizing these benefits through time.
- **Plant more trees** – Wisconsin's urban tree canopy cover is only 14%. Wisconsin could triple the services provided by its urban trees if communities planted more trees and reached the 40% canopy goal.
- **Increase biodiversity** – Ash and maple trees make up over 43% of Wisconsin's urban forest. This has set communities up for catastrophic loss to exotic diseases and insects. Planting a diverse population is essential to a sustainable resource.
- **Facilitate partnerships and collaboration** – DNR Forestry is uniquely positioned to act as a convener and facilitator for urban forestry efforts at the state level. Investment in the DNR Urban Forestry program is necessary to create and support the collaboration of partnerships, networks and consortiums leading to increased leverage of public and private resources needed to support a sustainable urban forest for the benefits of all Wisconsin's residents.

What Needs To Be Done

Investing a little money now will save trees and leverage additional resources.

Wisconsin has a rich forestry tradition and is seen as a national leader. The Wisconsin forestry mil tax is a legendary resource providing support for Wisconsin's forests, including Wisconsin's urban & community forests. **Over 62% of the mil tax revenues that fund DNR Forestry comes from Wisconsin's cities and villages. However, only 2% of Forestry's expenditures are allocated to urban forestry.** While it is clear that all Wisconsin residents benefit from the primary and secondary products of traditional forests, it is equally clear that Wisconsin's 4+ million community residents benefit directly from our urban forests.

In Wisconsin's "forward" tradition, the DNR must provide the leadership and investment to leverage additional public and private collaborative efforts and resources to support a resilient urban forest for the benefit of all. The council recommends that the DNR increase urban forestry program support by allocating an additional 2% from the Forestry mil tax.

RECOMMENDATIONS: **The council understands the current economic situation makes it difficult to acquire new state spending authority. Given this environment, the council makes the following specific recommendations to the DNR to address the critical challenges and opportunities in Wisconsin urban forestry:**

- **Institute a continuous urban forest inventory and canopy analysis** to set resource goals, identify new threats, measure initiative results and quantify benefits to the public. The council believes that a continuous statewide urban forest inventory will provide state and local governments and their partners the tools and data to develop accurate plans for sustaining and enhancing their forest resource and assess management strategies.

- **Increase the urban forestry grant appropriation by $1 million.** The Wisconsin Urban Forestry Grant (50-50 match) program has been a successful stimulus to encourage and enable municipalities, nonprofits and tribes to address existing and emerging needs of urban forest management while also **leveraging the increased investment of local public and private funds.**

  Grant projects not only **directly support green jobs**, but the focus on sustainability – engaging new communities, establishing basic management standards, and enhancing existing management programs – helps communities recognize urban trees as a capital asset that provides direct ecological, social and economic services.

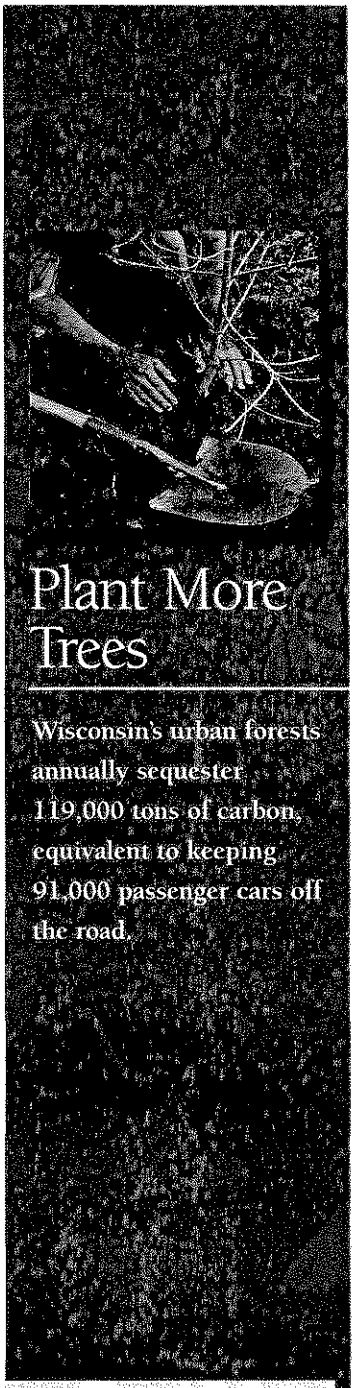
  Multiple demands are converging on the urban forestry grant funds. In 2009 there was a 35% unmet demand due to EAB, increases in the number of Emergency Storm Response Grant applicants, and a program revision targeting non-participating small communities and non-profits.

- **Hire a permanent full time Partnership Coordinator.** The Wisconsin Urban Forestry Council fully supports State Forester Paul DeLong's statement in the *2008 DNR Division of Forestry Annual Report*, "we (DNR) realize more than ever that we can best meet our mission by working with others who are equally committed to our common goals." With only 15% of the urban forest on public property, sustainable management of the urban forest requires collaboration and participation amongst numerous public and private agencies.

- **Increase commitment of DNR staff resources to assist with on-the-ground efforts to combat EAB and implement the newly developed BMP's for Invasive Species.** The DNR is perhaps the sole state agency in the position to assist with the creation, implementation, and enforcement of consistent statewide management standards to combat the spread and economic damage resulting from exotic pests.

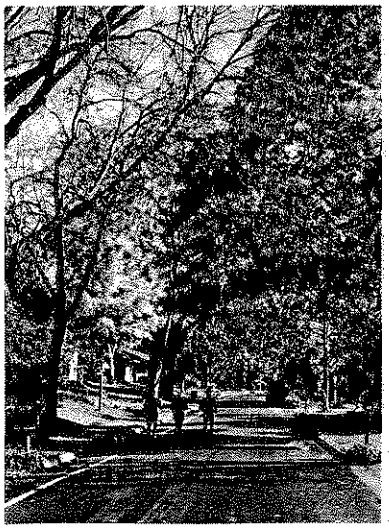
- **Compete for federal and private funding beyond the Forest Service** to expand urban forestry's funding base. The federal urban forestry base grant to Wisconsin is being reduced as part of the State & Private Forestry Redesign. Additional staff resources will be needed to locate and secure outside funding opportunities and assist with the development of competitive proposals to support the development of sustainable urban forestry strategies.

- **Include urban forestry in all state climate change and energy conservation legislation.** The economic and environmental benefits derived from urban forests are well established. The technology to effectively and efficiently implement urban forestry strategies that could reduce our carbon footprint and demand for energy is currently in place. What's missing is legislative authority that provides an incentive to make these urban forestry outcomes a reality.

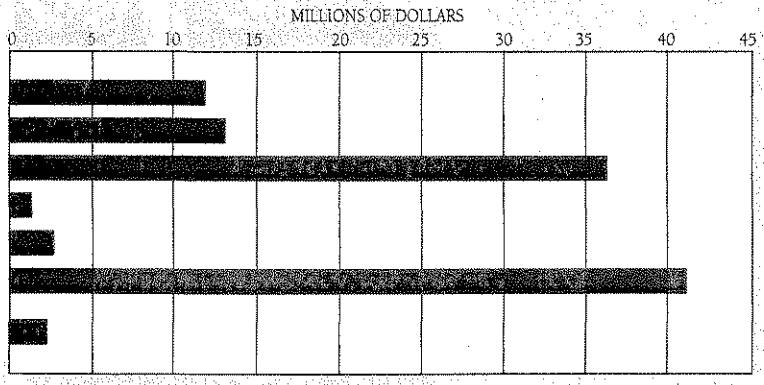


Plant More Trees

Wisconsin's urban forests annually sequester 119,000 tons of carbon, equivalent to keeping 91,000 passenger cars off the road.

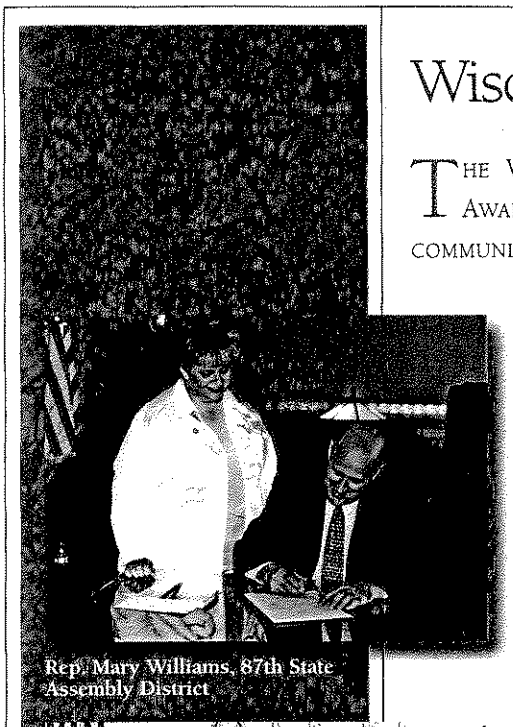


Value of Annual Services Provided by Wisconsin's Urban Forests vs. State & Federal Program Investment



Wisconsin Urban Forestry Council Awards

THE WISCONSIN URBAN FORESTRY COUNCIL ANNUALLY PRESENTS THE URBAN FORESTRY AWARDS IN RECOGNITION OF OUTSTANDING EFFORTS OF INDIVIDUALS, ORGANIZATIONS AND COMMUNITIES THAT FURTHER URBAN FORESTRY IN WISCONSIN.



Rep. Mary Williams, 87th State Assembly District

Village of Clinton Volunteer Foresters

Cliff Englert

Urban Brownfield Phytoremediation

2008 Winners

Distinguished Service – Harley McMillen
In recognition of leadership exhibited through the organization of Trees for Viola tree planting project and a community forestry program in response to devastating tornados of 2005.

Elected Official Distinguished Service – Representative Mary Williams, 87th State Assembly District
In recognition of leadership in the passage of 2007 Wisconsin Act 13 that allows the DNR to expedite urban forestry grants following catastrophic storm damage in urban areas for which the governor has declared a state of emergency.

Project Partnership – Town of Greenville and We Energies
Recognizes how one community merged the efforts of municipal volunteers and power company officials to landscape a power substation at the intersection of two busy highways. The tangible benefits include the conversion of a necessary eyesore into an environmental and aesthetic showcase.

Innovations in Urban Forestry – Village of Clinton Volunteer Foresters
Recognizes and celebrates the ingenuity and spirit of the Village of Clinton volunteer foresters in establishing and managing a community forestry program that preserves and advances forestry throughout the community with the active participation of residents of all ages.

2009 Winners

Lifetime Achievement – Cliff Englert
In recognition of career achievements that "planted the seed" for a Janesville urban forestry legacy through the creation, development and nurturing of the Janesville Shade Tree Advisory Committee which will continue to guide and sustain Janesville's community forestry program.

Distinguished Service – LaVerne Peterson
In recognition of sustained leadership in working with members of the Village of Amherst community to establish and maintain a community forestry program that preserves and advances forestry throughout the community.

Project Partnership – Short Elliott Hendrickson, Inc & City of Superior – Superior Tree Board
Recognizes the merged efforts of a municipality, community volunteers and a private contractor to increase tree canopy while redesigning and reconstructing a major transportation corridor.

Innovations in Urban Forestry – Urban Brownfield Phytoremediation – City of Menasha, Winnebago County, OMNNI Associates, Environmental Forestry Consultants, LLC
Recognizes the innovated use of trees to assist in the cleanup of contaminated soil and groundwater at a contaminated brownfield property in the City of Menasha.

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1. McPherson, E.G., J.R. Simpson, P.J. Peper, S.E. Maco, S.L. Gardner, S.K. Cozad and Q. Xiao. 2006. *Midwest Community Tree Guide: Benefits, Costs, and Strategic Planting.* United States Department of Agriculture Forest Service. Gen. Tech. Rep. PSW-GTR-199.
2. Cumming, A.B., D.J. Nowak, D.B. Twardus, R. Hoehn, M. Mielke, R. Rideout. 2007. *Urban Forests of Wisconsin: Pilot Monitoring Project 2002.* NA–FR–05–07. Newton Square, PA: U.S. Department of Agriculture, Forest Service, Northeastern Area State and Private Forestry.
3. Battaglia, R.J. and L.G. Jull. 2004. *Economic Impact of Wisconsin's Green Industry.* wa-0151.qxd 04/04. Wisconsin Agricultural Statistics Service.
4. R. Rideout. 2009. *Impact of the Wisconsin DNR Urban Forestry Grant Program.* A Report Request by the Wisconsin Urban Forestry Council.

References which are available electronically will be posted on the Wisconsin Urban Forestry Council Web page at http://dnr.wi.gov/forestry/UF/council/ .

WISCONSIN URBAN FORESTRY COUNCIL