

Proposal for  
Development of  
Best Management Practices  
for  
Invasive Species in Wisconsin Forests

Wisconsin Council on Forestry -  
Forestry Invasives Leadership Team

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## Executive Summary

As a sub-committee of the Wisconsin Council on Forestry, the Forestry Invasives Leadership Team is charged with identifying and recommending policies and actions to protect Wisconsin's forests from invasive species. The Forestry Invasives Leadership Team is proposing a process for development of a comprehensive set of Best Management Practices for Invasive Species. We are proposing the Council on Forestry be the lead organization sponsoring this effort – with staff support provided by the Wisconsin Department of Natural Resources.

This process is envisioned as a suite of efforts that raise awareness and identify appropriate actions to address the threat of invasive species for all those who depend on healthy forests and healthy trees in Wisconsin.

Best Management Practices (BMP's) in forestry provide a framework for:

- ❖ Evaluating an environmental threat
- ❖ Identifying associated user groups whose behavior can help mitigate the threat
- ❖ Bringing the best available science and technological understanding to the issue
- ❖ Building a framework for appropriate actions that can be adopted by those users

Because Wisconsin's forest resource (including the urban forest) is extensive and variable in size, habitat, uses, and the demographics of ownership any comprehensive effort to address invasive species will require multiple strategies and will need to influence the behavior of a wide spectrum of professionals, user groups and citizens.

The Forest Invasives Leadership Team is proposing a process for addressing the threat of invasive species through development of FOUR parallel BMP processes (Tracks), each of which is focused on a segment of the forest resource and associated user groups.

The four BMP Tracks for addressing Invasive Species in Wisconsin Forests are:

- I - Forestry BMP's for Invasive Species
- II - Recreational Forest User BMP's for Invasive Species
- III - Urban Forestry BMP's for Invasive Species
- IV - Utility and Transportation Right-of-Way BMP's for Invasive Species

This proposal outlines the comprehensive approach we intend to take for each of the four tracks, and then specifically focuses on planning details for the track we feel is most mature and ready for development, Track I - Forestry BMP's for Invasive Species.

## Wisconsin Council on Forestry - Forest Invasive Leadership Team

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## **I. Best Management Practices for Invasive Species in Wisconsin Forests**

### **A. Problem Statement**

Invasive Species are a profound threat to Wisconsin's forests. They threaten the economic productivity of forests throughout the state and reduce the diversity of species in forest ecosystems. While the spectrum of invasive species that find habitat in forests could include a wide range of life forms, we choose to address in particular threats posed by destructive insects and diseases, and those posed by invasive, non-native plants.

Aggressive forest pests such as the Emerald Ash Borer or Asian Longhorn Beetle threaten to cause widespread mortality and wholesale loss of tree species in forests throughout the Northeastern US. Un-checked invasive plant species infestations can result in local collapse of forest ecosystems – as woodlots and entire forest stands convert from native forest species to non-native species of shrubs and plants.

The forestry profession has addressed on an issue-by-issue basis more traditionally understood invasive forest health threats such as Dutch Elm Disease or gypsy moth. Seasonal limitations on pruning or management of American elms in urban areas to limit spread of Dutch Elm Disease have been well-accepted for many years. Forest management strategies and quarantine programs to control gypsy moth are well-accepted aspects of professional forestry today. However beyond identification and some opportunistic control efforts, very little comparable work has been done to identify, manage and control invasive non-native plants that are now entering Wisconsin forests and urban areas at a rapid rate.

Seeds, eggs and spores of invasive species can and frequently are moved within and between forest sites on logging equipment, on mowers and road maintenance equipment, on construction equipment, and on recreational vehicles including ATV's, as well as horses, pets and people. Under the right conditions small infestations of invasive plants can be spread within and throughout sites and along roads by any of these types of activities. Spread of invasive species in this manner affects extensive northern forests as well as small woodlots and community parks in more densely populated areas. Other than the previously mentioned pest specific guidelines there are no generally recognized guidelines to minimize the spread of invasive species in Wisconsin's forests.

Although conclusive research on the effects and costs of invasive species is still lacking, there is consensus among the conservation community that the collective impacts of un-checked invasive species will be profound, and it threatens the practice of sustainable forestry and the quality of life for urban residents. While it will not be possible to eradicate many of the species already established here it is essential that the forestry community develop a comprehensive effort to address this threat. Best Management Practices for Invasive Species in Forestry will be a critical piece of an overall response to invasives that will reach across all agencies and stakeholder groups with an interest in healthy forests.

## **B. Goals**

The overall goal of Best Management Practices for Invasive Species in Wisconsin Forests is a well-developed and broadly accepted set of conventions that guide the practice of forest and related professionals (including foresters, loggers, urban foresters and arborists, road and right-of-way managers), and that influence the behavior of forest users (including private forest landowners, sportsmen, recreationalists and urban homeowners). Thus BMP's for Invasive Species, when fully developed for all user groups, will become the on-the ground guidance for most site-level actions that address the invasive species problem. BMP's will be one important component of an overall response to invasive species, which must also include strategies based around policy and legislation, financial resources, clarifying the role of various agencies, research needs, regional assessment and co-ordination, early detection and response and a strong campaign of information and education.

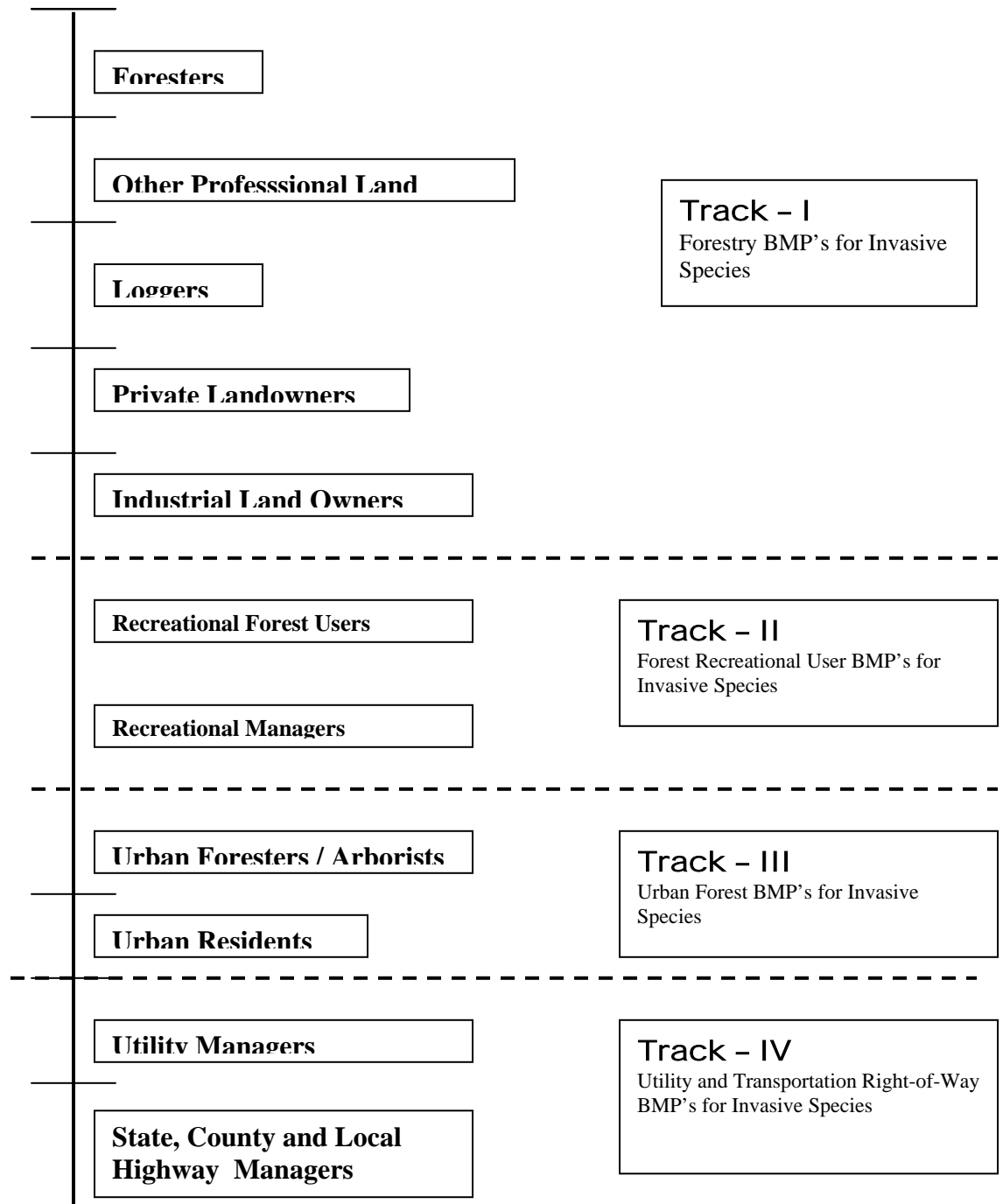
Successful adoption of effective and appropriate BMP's will have the following benefits:

- Slow the spread of rapidly advancing invasive species with destructive effects.
- Eliminate or minimize the spread of invasive species between sites by forest workers, forest users and their equipment.
- Eliminate or limit the spread of early-stage invasions within sites by forest users or logging equipment.
- Facilitate timely and cost-effective control efforts for the most threatening invasions and help ensure that limited resources are used on control efforts where the risk or feasibility of success is highest (e.g. source areas where propagules are likely to spread).
- Improve the level of co-operation between agencies and neighboring landowners.
- Incorporate invasive species considerations into the routine practice of foresters, loggers, park managers, right-of-way managers and other professionals whose work impacts forests throughout Wisconsin.
- Increase awareness by forest users of the threat posed by invasive species and appropriate actions to minimize that threat.
- Protect the health of forest ecosystems by limiting and managing the impacts of invasives.
- Conserve the productivity of working forests, and the resources and jobs they support.

## **C. Audiences and Stakeholders**

Effectively protecting forests and responding to the threats posed by invasive species in our forests, woodlots and urban forests will require influencing the behavior of many distinct professionals and user groups. The different "stakeholder groups" we see as most important to reach for addressing the threat of invasives are outlined in Figure 1. The behavior to be influenced, development process, approach, content and method of delivery for BMP's for each of these groups is different. Many of these groups do however share characteristics and relationships that can be leveraged for maximum effect. With those commonalities in mind we propose to group the BMP process into four separate tracks, each of which addresses one or more segments of the forest resource, targets one or more professional or stakeholder groups. Using similar processes each track will and develop and execute a strategy for establishing appropriate BMP guidelines and securing adoption of those guidelines by the appropriate user groups.

Fig. 1 : Best Management Practices for Invasive Species in  
Wisconsin Forests  
"User Groups and "Tracks"



## **D. Measures of Success**

The process of developing BMP's for Invasive Species in Wisconsin Forests, if successful will result in much more than a document. The development of voluntary Forestry BMP's for Water Quality in the 1990's is a model we hope to emulate. As a result of Forestry BMP's for Water Quality today we share a consensus on the need to protect the water resources from un-intended effects of forestry practices. In order to evaluate the success of Wisconsin's BMP Program in achieving the EPA's performance goals for water quality, randomly selected timber sales are surveyed by monitoring teams. The first cycle of BMP monitoring in 1995-1997 found that BMP's were correctly applied 86% of the time where needed. In the last round of monitoring, BMP's were correctly applied over 90% of the time. All of the major schemes that set performance standards for forest management in Wisconsin have adopted Wisconsin Forestry BMP's for Water Quality as part of their overall guidelines. Forestry BMP's for Water Quality in Wisconsin have been a success by all measures, largely due to the deliberate and inclusive process that was used in their development and implementation.

Likewise, a successful process for developing BMP's for Invasive Species in Wisconsin Forests will result in a similarly broad scope of adoption by forestry interests. Equally important, a successful process will result in raising the broader awareness of the threat posed by invasives to our forest resource among all our stakeholders. This awareness and acceptance of the need to take active responsibility to limit impacts will be the foundation on which larger commitments to action will be built. While we cannot eliminate most invasive species, we can help to limit their spread, control them locally where appropriate, and manage them effectively to protect the forest productivity on which we all rely.

## **II: TRACK I – Forestry BMP’s for Invasive Species**

The following section provides detail, including a process description, budget, stakeholder list and timetable for Track I – Forestry BMP’s for Invasive Species. The Forestry Invasives Leadership Team is requesting Forestry Council endorsement to begin action on this track as soon as resources become available.

We envision that the remaining three BMP tracks will follow a similar trajectory and process, but additional time may be needed to develop consensus and support for those efforts before launching.

### **A. Targeted Resource and Audience**

Forestry BMP’s for Invasive Species will address the practice of sustainable forestry and all its related activities. The activities and user groups targeted will be substantially the same as those covered by the existing Wisconsin Forestry BMP’s for Water Quality. Forest resources covered will include forestlands of all ownerships including federal, state, county, local, industrial and family forests. Activities addressed will include forest management planning, silviculture and forest cultural activities, production and harvest of timber, and non-timber management. Audiences addressed will include foresters, professional loggers, other professional land managers, and landowners managing forests of all sizes.

### **B. Deliverables**

The end product of Forestry BMP’s for Invasive Species will be a set of site-specific recommendations that will provide guidance on incorporating invasive species considerations into routine forestry activities such as management planning, harvest set-up and planning, harvest operations, forest cultural practices, and provide basic invasive species control recommendations. The BMP’s will include background information, decision support tools, and to the extent feasible, active site and species-specific recommendations. One unique challenge of addressing invasive species collectively is the large and growing number of species that threaten Wisconsin forests. Effective guidelines will need to address many different threats, an even wider range of appropriate responses, and must be easily expanded to take into account newly emerging threats. The guidelines will include text, images and graphics and will be formatted comparably to the existing Wisconsin Forest Management Guidelines (PUB-FR-226-2003).

### **C. Process**

In order to ensure development of effective and well-accepted Forestry BMP’s for Invasive Species, the development process will, to the extent feasible, need to meet the following criteria:

- Be inclusive of ALL forestry interests in Wisconsin, including Federal, State, County, Local, Tribal, Industrial and Private Lands owners and NGO’s with interests in forestry.
- Be developed through a transparent process that allows participation by all parties in developing guidelines and other elements of consensus.
- Reflect the best available science on the ecology and management of invasive species in temperate forests.
- Share responsibility for action and obligations equitably among the range of players in the forest management arena.

## **D. Preliminary Timeline**

The overall process for BMP development and implementation can be planned in three phases. A more detailed timeline for action steps and milestones is provided at the end of this section. A similar process will be used for the other three Tracks for BMP's identified in this proposal with the addition of any process refinements that arise from moving through this initial effort.

### **Phase I – Planning, Stakeholder Engagement and Secure Funding**

During this time we'll continue to finalize the process outline that this document begins with input from a broader set of stakeholders. The process outline will be reviewed and approved by the Forestry Invasives Leadership Team of the Wisconsin Council on Forestry. Members of the Forestry Invasives Leadership Team, together with other representatives of key stakeholder groups will form a Steering Committee to guide the Forestry BMP process through its full development.

Concurrently another small team comprised of Leadership Team members will be working to develop a budget and secure funding to support BMP development and implementation. Phase I will end with a kick-off meeting wherein stakeholders and interested persons will be asked to join a working session to review and finalize details of the development process. Working committees including Technical Standards, Information and Education, and an Implementation committee will be created and charged at the kick-off event.

### **Phase II – Guidelines Development and Implementation Planning**

The development process will primarily involve parallel efforts of three Working Committees. The Steering Committee will be responsible for providing guidance to the Working Committees and will in turn report to the Leadership Team. Staff support will be provided by the Wisconsin DNR and other partners or contractors. Steering Committee members will be expected to participate in at least one working committee. Working committees may also include members not part of the Steering Committee.

The Technical Standards Committee will meet regularly, possibly monthly, for at least 18 months. The charge to this group will be development of the BMP's themselves, consistent with the scope and level of detail necessary, as directed by the Steering Committee. This group will access professional experts in a variety of fields to help understand and frame appropriate guidelines based on the best available science. This group will also need significant staff support.

After absorbing information and gathering facts the committee will begin work to outline standards and then direct staff to further develop detailed guidelines and documents for review and refinement. The committee will agree on a process for making decisions and may have a facilitator whose role is to guide the process, co-ordinate the work of the committee, staff and outside experts and who will help mediate any disagreements and attempt to reach key decisions. Drafts will also be made available at key points in the process for public input.

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The Implementation and Monitoring Committee will plan for moving forward with the guidelines and help manage their adoption and encourage their usage by practitioners. This group will be in contact with stakeholders and the organizations that represent them to identify opportunities to incorporate the BMP's into existing professional codes of practice. Examples of such opportunities include the Sustainable Forestry Initiative standards, the Forest Stewardship Council standards, the Forest Industry Safety Training Alliance programs, the Wisconsin Master Logger Program, the WDNR Co-operating Consultant Forester program, the Wisconsin DNR Forest Management Guidelines, and the University of Wisconsin-Extension Master Woodland Steward program. The committee, whose members will hopefully represent many of these groups, will work to secure their formal commitment to adopting the new BMP standards.

Once BMP's are finalized and adopted the Implementation and Monitoring Committee will be charged with monitoring the use of BMP's by practitioners aligned with the adopting organizations (e.g. a logger working under the WPLA Master Logger Standards).

The Information and Education committee will plan for the dissemination of the guidelines to the general public and a broader set of audiences. This will include overseeing the development of brochures and other promotional materials that help interpret the guidelines for more casual audiences and the general public. The Information and Education committee will also assist in coordination of the BMP process with other agencies, NGO's and related initiatives in and around Wisconsin. One such example is the current effort to draft comprehensive invasive species administrative rules to implement the invasive species legislation in Wisconsin. If this rule is adopted it will create a regulatory framework for invasive species that the BMP process will need to address.

**D. Preliminary Timeline (Continued)**

**Forestry BMP's for Invasive Species – Process Timeline and Milestones\***

<b>What</b>	<b>Who</b>	<b>When</b>
Formal Approval of BMP Initiative	Council on Forestry	6/21/05
Continue planning and funding proposals	F.I.L.T., Office of Forest Sciences	7/1-9/1 2005
Outreach to stakeholders and recruit Steering Committee	F.I.L.T.	7/1/05- 9/1/05
Secure technical support, gather and prepare research findings and technical information	F.I.L.T., Office of Forest Sciences	7/1/05- 10/1/05
Steering Committee meets	Steering Committee	9/1/05; 10/15/05
Kick-off Workshop	F.I.L.T., Steering Committee	1/15/06
Steering Committee re-convenes	Steering Committee	2/15/06
Working Committees begin developing strategies and action plans.	Working Committees	3/15/06 – 3/15/07
Draft Standards Out for Public Comment	Technical Standards Committee, Steering Committee	5/15/07
Adoption Plan developed and partner commitment secured.	Implementation and Monitoring Committee	5/15/07 - Ongoing
Standards Finalized	Technical Standards Committee, Steering Committee	9/15/07
Public awareness and outreach campaign initiated	Information and Education Committee	9/15/07 – Ongoing
Training Workshops Statewide (3)	Information and Education, Technical Standards Committee	10/1/07 – 11/15/07

\* The timeline is preliminary and may need to be adjusted depending on availability of funding and staff.

## E. Prospective Participants and Stakeholders

The following organizations and interest groups will be asked to participate in the Forestry BMP for Invasive Species development process. Representatives of these groups or interests will be invited to serve on the Steering Committee or on a Working Committee. A broader list of stakeholders, including but not limited to all those directly involved, will be provided opportunity for review and comment on the BMP standards and implementation strategies.

<b>Organizations</b>	<b>Interest Groups</b>
American Forest and Paper Association (?)	Concerned Citizens
The Forest Guild	Consulting Foresters
Forest Industry Safety Training Alliance	County Foresters
Forest Stewardship Council	Ecologists
Great Lakes Indian Fish and Wildlife Commission	Environmental Groups
Invasive Plants Association of Wisconsin	Forest Products Industry
The Nature Conservancy	Industrial / Procurement Foresters
Society of American Foresters	Land Trusts
Sustainable Forestry Initiative – Wisconsin (?)	Private Landowners
Timber Producers Association	Professional Loggers
University of Wisconsin –Madison	Public Foresters
University of Wisconsin – Stevens Point	Restoration Contractors
University of Wisconsin – Cooperative Extension Service	Tribal Foresters
USDA Forest Service – National Forest System	Wildlife and Natural Area Managers
USDA Forest Service – State and Private Forestry	
USDA Forest Service – North Central Research Experiment Station	
USDA – Natural Resource Conservation Service	
USDI – Bureau of Indian Affairs	
Wisconsin Consulting Foresters Association	
Wisconsin County Forest Association	
Wisconsin Council on Invasives	
W.D.N.R. – Forestry Division	
W.D.N.R. – Lands Division	
W.D.N.R. Water Division	
Wisconsin Family Forests	
Wisconsin Paper Council	
Wisconsin Professional Loggers Association	
Wisconsin Woodland Owners Association	

## **F. Budget**

The total estimated cost for Track I Forestry BMP for Invasive Species development is **\$124,540**. See the attached budget worksheet for details.

The estimate includes the costs of supporting the development process through production of a final BMP standard, production and dissemination of handbooks and materials, three initial training sessions, and an outreach and promotional effort.

The cost estimate does not include the significant cost of organization or agency staff time and expenses contributed toward the development process, or any costs of adoption and implementation by partners.