

## **Review of Wisconsin's Forestland Woody Biomass Harvesting Guidelines DRAFT Scoping Document**

### **Introduction**

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In December 2008, the Wisconsin Council on Forestry accepted Wisconsin's Forestland Woody Biomass Harvesting Guidelines. These guidelines were developed to address concerns about the sustainability and environmental impacts of increased removal of woody biomass from Wisconsin's forests. Understanding these impacts and assuring that the harvest of woody biomass is done within the framework of sustainable forest management is a priority of the Wisconsin Council on Forestry.

When accepting the guidelines, the Council on Forestry also made a commitment to review the guidelines in 2012, as the results for research projects became available and as implementation of the guidelines was tested. In September 2012, the Council sponsored an effort to review the guidelines for the harvest of woody biomass on Wisconsin's forestlands. The guideline review builds on the work done in the initial development of the guidelines. The review process includes expert review, stakeholder advisory committee input, and approval by the Council on Forestry. The review is expected to be completed by September 2013. If approved, these guidelines may become part of Wisconsin's Forest Management Guidelines.

The Council on Forestry is charged with advising the Governor, the Legislature, WDNR, and other state agencies on issues related to forestry, including the sustainable management of Wisconsin's forestland, forestry research, economic development and employment in the forestry industry, and the marketing and use of forest products. The WDNR Division of Forestry is responsible for developing, implementing, and administering current and long-term programs to protect and sustainably manage the state's forest resources. Shared forest management responsibilities provide the impetus for the cooperative development of guidelines to facilitate the sustainable management of forestland woody biomass.

### **Guideline Objectives**

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The guidelines focus on the sustainable harvest of woody biomass from forested areas within the context of generally accepted forestry practices, while protecting soil, water, and biodiversity that are characteristic of sustainable forest ecosystems. The review will be based on the best available information regarding biomass harvesting effects on forest ecosystems. Although it is always an option not to harvest biomass, these guidelines are intended for cases where biomass harvesting is being planned or considered.

The objective is to provide guidance to forest resource managers, loggers, equipment operators, contractors, and landowners in Wisconsin. The guidelines will facilitate operational analysis and informed decision-making regarding the harvest of woody biomass from forestland. The guidelines will provide a tool to enable sustainable forest management.

## **Guideline Review Process**

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The initial review will be conducted by a technical team comprised of WDNR staff using best available information, results of recent research projects, and experience in implementing the guidelines. The technical team will develop recommendations to maintain or modify the guidelines in light of information gathered in the review.

Once drafted, the recommendations will be submitted to a select panel of experts for technical review. Following revisions, the recommendations will be brought to a stakeholder advisory committee sponsored by the Council on Forestry. After review and approval by the Advisory Committee, the Committee may solicit public input prior to submitting the recommendations to the Council on Forestry. The recommendations will then be presented to the Wisconsin Council on Forestry.

## **Technical Team**

The review and recommendations will be drafted by a technical team comprised of WDNR staff. This team will gather relevant information, draft initial recommendations, take comments from expert reviewers and Advisory Committee members, and draft revisions based on those comments and discussions. Technical team members will work with the expert reviewers and Advisory Committee members to provide relevant background information, address concerns, and develop detailed recommendations for review and refinement.

## **Expert Review**

After development by the technical team, the draft recommendations will be sent out for review by experts in various fields. The expert review process will solicit comments on the technical and scientific aspects of the guidelines; experts are not intended to be representative of particular interest groups. Comments generated by expert reviewers will be provided to the technical team. The technical team is responsible for reviewing comments and making decisions regarding revisions to the draft recommendation.

Experts will be selected with input from the Advisory Committee. Experts will be solicited based on results of recent research projects and implementation experience. Expertise in the following fields may be requested:

- Wildlife Ecology and Management
- Endangered Resources (ETS)
- Silviculture
- Forest Management
- Forest Economics
- Harvest Systems
- Wood Utilization
- Forest Health
- Forest Hydrology
- Forest Soils
- Forest Vegetation Ecology
- Forest Microbiology

- Fire Management

### **Advisory Committee**

The Advisory Committee will be sponsored by the Council on Forestry and will be comprised of representatives from affected stakeholder groups, including industry, government, landowners, conservation organizations, and non-profit groups. After expert review and technical team revision, the Advisory Committee will review the draft recommendations. Advisory Committee comments will be used by the technical team for further refinement.

### **Public Input**

After initial approval by the Advisory Committee, they may solicit public input on the recommendations before their final approval. Comments received from the public will be used by the technical team for further refinement. The recommendations will then be provided to the Advisory Committee and following final approval of the recommendations, the recommendations will be sent to the Council on Forestry.

### **Council on Forestry**

The final recommendations from the Advisory Committee will be forwarded to the Council on Forestry for their acceptance.

### **Guideline Review Description**

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The guideline review will be guided by the same principles used during the development of the guidelines in 2008. The review will be informed by new research findings and by experience gained during the implementation of the guidelines.

### **Context of Guideline Review**

During the review of the guidelines, any recommendations will be evaluated against its ability to support the sustainable harvest of woody biomass from Wisconsin's forestland within the context of generally accepted forest practices. The guidelines provide considerations and recommendations applicable to stand and site-level management. They facilitate operational analysis and informed decision-making regarding the harvest of woody biomass and potential impacts on other forest resources. In Appendix B is a detailed list of guideline considerations.

The guidelines will provide a tool to enable sustainable forest management. They are intended to be easy to understand and implement. The guidelines present practical and reliable recommendations. The guidelines are based on best available information, and are subject to periodic review and revision as better information becomes available.

### **Topics to be Addressed**

The guideline review will focus on two areas – recent research findings and experience gained in implementation of the guidelines.

The guideline review will be conducted in light of any applicable research findings that were not available or not considered in the development of the guidelines. This new information may support maintaining, modifying, or removing specific guidelines. The top research priorities identified in the development of the guidelines were the impacts of fine woody debris on ecosystem sustainability and the role of fine woody debris on dry nutrient-poor sandy soils.

The guideline review will be informed by experience gained while implementing the guidelines. Questions regarding the implementation of the guidelines will focus on the operability, practicality, and effectiveness.

### Topics Not to Be Addressed

The review **will not** address:

- Forest management practices that are not generally accepted or utilized in Wisconsin (e.g. fertilization)
- Short rotation intensive culture of trees for woody biomass (e.g. hybrid poplar plantations)
- Urban forests and trees
- Non-forest derived woody biomass (e.g. brushland, ROWs, shelterbelts, Christmas tree farms, orchards, agroforestry systems)
- Non-woody biomass
- Landscape level management issues
- Specific species or sites
- Education, training, or monitoring

## Appendix A – Advisory Committee Information

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### Specific responsibilities of Advisory Committee Members include:

- Support the charge of the Wisconsin Council on Forestry to review site-level guidelines for the harvest of woody biomass on Wisconsin's forestlands by September 2013.
- Recognize the responsibility of the WDNR Division of Forestry to develop and implement programs that protect and sustainably manage the state's forest resources.
- Recognize that scientific information about the effects of biomass harvesting on forest ecosystems is limited. Uncertainty, resulting from a lack of knowledge or scientifically supported theories, particularly concerning long-term ecosystem dynamics, may necessitate the application of precautionary principles and practices.
- Act as a liaison between the Advisory Committee and constituencies. Share new information developed at meetings with the constituencies and work to develop understanding with these groups.
- Be respectful of other Committee members' viewpoints.
- Work with the Technical Team to resolve concerns and develop guidelines in a timely manner.
- Attend and be an active participant in meetings. Be prepared for meetings by having read or reviewed necessary materials or drafts.

### Advisory Committee Meetings:

- Initial Meeting
  - Review background information and project scope
  - Agree to process for coordination and decision making
- Subsequent Meetings
  - Review draft guideline recommendations following expert review and subsequent revision
  - Work with Technical Team to resolve concerns and develop guideline recommendations
  - Reach key decisions through consensus
- Final Meeting
  - Review final document
  - Approve document to be sent to WI Council on Forestry

The WI Council on Forestry will have final approval of the guideline recommendations.

### Decision-making Process:

The Advisory Committee will reach decisions via a system of team consensus, during which every member has the opportunity to express their views, divergent views are fully addressed, and, ideally, a satisfactory level of general agreement emerges.

- Advisory Committee consensus is an agreement, but not necessarily complete agreement. It is an outcome which is "close enough" to be acceptable. All or most team members can support it, and few or no members totally oppose it. Often, when a team achieves general agreement, no one is completely satisfied, but everyone accepts or "lives with" the group's prevailing view.
- Consensus is not a unanimous decision. Unanimity essentially gives each team member veto power.

It is the Advisory Committee's charge to reach consensus on the review of the guideline and recommendations for woody biomass harvest on Wisconsin forestland. However, in the event that the committee is unable to reach consensus on some issues, those issues will be brought to the Council on Forestry for a decision.

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## **Appendix B – Considerations Addressed by the Guidelines**

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Specific consideration regarding woody biomass harvests on forestland and related strategies and practices are listed below. This list of considerations guided the development of the guidelines in 2008. This list should not be considered exhaustive as additional topics may arise, and topics may be deleted or modified based on discussions during the guideline review process.

### 1) Biodiversity

The guideline address the potential impacts of woody biomass harvesting on the sustainability of game and non-game wildlife, plants, endangered resources, and sensitive and exceptional sites. Specific topics include:

- Slash (logging residues and salvage)
- Reserve trees and patches
- Coarse woody debris
- Fine woody debris
- Vertical structure and brush
- Mast producing trees and shrubs
- Cavity trees and snags
- Landings and access roads
- NHI and endangered, threatened, and special concern species
- Sensitive and exceptional sites
- Wildlife Habitat
- Endangered Resources

### 2) Soil Productivity

The guidelines address the protection of long-term soil productivity, and changes in chemical, physical, and biological characteristics resulting from biomass harvesting, including:

#### Site Variation:

- Productivity
- Limitations (exclusion of sites, e.g. organic, shallow)

#### Chemical:

- Nutrient budget
- Nutrient availability
- Nutrient removal
- Growth limiting nutrients

#### Physical:

- Compaction
- Rutting
- Erosion/sedimentation
- Infrastructure
- Hydrology
- Stockpiling
- Harvest methods and equipment
- Landings and access roads

- Multiple stand entries
- Biological:
- Role of vegetation
  - Role of microorganisms
  - Nitrogen mineralization
  - Nutrient uptake (fine roots, mycorrhizae)
  - Decomposition and nutrient cycling
  - Carbon sequestration and storage

### 3) Wetland and Water Quality Management

While recognizing Wisconsin's Forestry BMPs for Water Quality, the guidelines also address water quality considerations as they relate to the harvest of biomass from forests. Additional considerations are due to the increased level of traffic on stands, the potential for increased runoff, and the possibility of swamping of stands. Topics include:

- Increased traffic
- Forested wetlands
- Hydrologic alterations

### 4) Silviculture

The guidelines address vegetation management considerations, silvicultural adaptations, and generally accepted practices as they relate to the harvest of biomass from forest stands. Topics include:

- Sustainable forestry goals and generally accepted silvicultural practices
- Property goals and stand management objectives
- Silvicultural systems and methods
  - o Even-aged management systems
  - o Uneven-aged management systems
  - o Rotation lengths
  - o Regeneration
    - Natural
    - Artificial
    - Swamping
  - o Thinning and release
  - o Pruning
  - o Sanitation
  - o Salvage
  - o Season of harvest

### 5) Other Forest Management Objectives

- Aesthetics and recreation
- Fuel reduction
- Forest tree health
- Forest economics
- Social Issues

### 6) Exceptions

During the course of guideline review, situations may or may not be identified which will require specific discussion under within the guidelines.

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