

Topic	Recommendation #	Recommendation	WFPS Link	Assigned Party	Assignment #	Assignment	Implementation Notes	Estimated Delivery Date	WFPS Advisory Team Priority
Northern Hardwood Mgmt.	1	The WNDR should transition from guidelines and policy based on the order of removal as established in the WDNR Silvicultural Handbook and establish guidance, as opposed to rules, for individual tree selection in northern hardwood stands. Guidance should be adaptable to landowner objectives, consider both biological and economic concerns, and foster development of crop trees while maintaining minimum basal area stocking levels consistent with current northern hardwood silvicultural science.	<a href="#">Steigerwaldt 2016, p. 51</a>	Wisconsin Silviculture Guidance Team (SGT)	1.1	The Wisconsin Silviculture Guidance Team (SGT) will examine whether the concept of order of removal should be retained and/or revised along with investigating other tree selection options. If retained, it will also explore how to add flexibility within the standard order of removal. SGT will expand current work revising and adding clarity to The WDNR Silviculture Handbook, Chapter 24: Tree Marking and Retention Guidelines and Chapter 21: Natural Regeneration - Single Tree Selection (STS). This work will include additional explanation on the proper application of marking processes within the context of landowner objectives and the resulting silvicultural prescription.	There is confusion among foresters (both public and private) on the intent and usage of the standard "order of removal" marking recommendation in relation to northern hardwood management. Specifically the standard order of removal is often confused or used interchangeably with the single-tree selection (STS) regeneration method. Already confused by many with intermediate thinning, the STS method has multiple prescription components that are not considered by the standard order of removal marking guide. To facilitate flexibility in marking assessment, SGT should also explore options for evaluating marking other than the Marked Assessment Tool. Example stand level metrics to replace the current tool based on OOR would be identified along with an appropriate methodology to determine if marking achieves goals.	December-2018	High
			<a href="#">Steigerwaldt 2016, p. 51</a>	Wisconsin Silviculture Guidance Team (SGT), Northern Hardwood Ad Hoc Team	1.2	The SGT Northern Hardwood Ad Hoc Team will revise the WDNR Silviculture Handbook, Chapter 40: Northern Hardwood Chapter to add clarity to the single tree selection section, marking guide examples, and explore additional options to the single tree selection method to provide additional flexibility in achieving landowner objectives.		December-2018	High
Northern Hardwood Mgmt.	2	The definition for the term "crop tree" should be revised and expanded to include various elements that incorporate landowner objectives whether they are economic, ecological, or social. A crop tree will have the potential to increase in value by a jump in grade or increase in ecological function; having not yet achieved its maximum economic, ecological, or social potential. The tree will exhibit quality with future potential. When the potential for increase in value growth peaks, it should no longer be considered a crop tree and should be eligible for harvest, subject to landowner objectives.		Wisconsin Silviculture Guidance Team (SGT)	2.1	The Wisconsin Silviculture Guidance Team will evaluate and review ongoing work to develop a crop tree definition and complementary Growing Stock Classification System (GSCS) to help foresters evaluate tree quality and potential.	Work on defining a growing stock classification should be explicit in discussing the difference between a tree classification and a marking prescription. Economic maturity and related decisions on when to harvest a tree is a management consideration reflected in a prescription, not determined by growing stock status.	December-2018	High
				Wisconsin Silviculture Guidance Team (SGT), Northern Hardwood Ad Hoc Team	2.2	The Wisconsin Silviculture Guidance Team will work to better define timber, aesthetic, and wildlife crop trees and provide tools for assessing crop trees within the WDNR Silviculture Handbook. In addition, The WDNR Northern Hardwood Ad Hoc Team will add a new economics section and revised stem quality section to the Northern Hardwood Chapter to expand on crop tree assessment.		December-2018	High
				Wisconsin Silviculture Guidance Team (SGT)	2.3	The Wisconsin Silviculture Guidance Team will expand discussion on crop tree selection in addition to the Growing Stock Classification System in Chapter 24: Marking Guidelines.	Risk and economic loss (ex. present value, rate of return) should be reviewed.	December-2018	High
Northern Hardwood Mgmt.	3	Develop a marking guide that accounts for variable stand conditions, along with the current typical Wisconsin northern hardwood stand structure, and that includes considerations for the range of crop tree definitions and landowner objectives.		Wisconsin Silviculture Guidance Team (SGT)	3.1	The SGT will develop a tool to guide tree harvest and retention decisions made while marking timber. The tool will be adaptable to various stand level prescriptions and related landowner management objectives.	Better field marking guides are needed, not only for northern hardwoods but all cover types, to improve the implementation of silviculture prescriptions on the ground.	December-2018	
				Wisconsin Silviculture Guidance Team (SGT), Northern Hardwood Ad Hoc Team	3.2	The SGT Northern Hardwood Ad Hoc Team will add northern hardwood marking prescription examples for specific regeneration methods, stand conditions, and landowner objectives as an appendix to the revised Northern Hardwood Chapter.		December-2018	
Northern Hardwood Mgmt.	4	Provide training to foresters marking single tree selection harvests to increase knowledge on management designed to foster development of crop trees. Multi-stakeholder involvement with developing and providing the training in accepted methods to promote crop trees will be important to ensure a range of sustainable practices are considered.		WDNR Silviculture Program	4.1	The WDNR in cooperation with partners will develop an ad hoc team to provide training based on the Northern Hardwood Chapter revision. This training will include examples of northern hardwood single tree selection, crop tree considerations, and prescriptions based on assessing stand conditions and varying management / landowner objectives.	Additional training is needed for foresters on the implementation of single-tree selection in northern hardwoods. As Wisconsin northern hardwood stands transition from a typically even-aged structure to an uneven-aged structure after multiple stand entries, foresters have not always been clear on how to mark trees using the single-tree selection method. This confusion has led to misunderstandings about order of removal and when to harvest mature trees using this method.	March-2019	
				United States Forest Service, UWSP	4.2	The USFS, UWSP, WDNR, and stakeholders are currently working to develop a northern hardwood marteloscope (i.e. tree marking training site) at the USDA-FS Argonne Experimental Forest. This hands-on marking site will give public and private foresters experience implementing a variety of northern hardwood management prescriptions reflecting varying landowner management objectives.	Potential exists to expand marteloscopes to other parts of the State and explore the creation of a hardwood marker certification program based on marteloscope training.	March-2019	
				UW-Extension, WDNR	4.3	The WDNR SGT and UW-Extension in cooperation with partners will explore the creation of on-line training modules on basic northern hardwood silviculture. This training component could be coupled with the hands-on marteloscope for in-depth forester training.	Resources (staff and funding) and IT expertise would be needed to develop these training proposals.	June-2019	
Northern Hardwood Mgmt.	5	Provide training for foresters that write MFL plans and timber harvest prescriptions, and DNR foresters who may be required to inspect forest tax law harvests, so they understand crop tree definitions and revised marking guides. This would also include training on how to better communicate plans and prescriptions and how to correctly state the intended outcome of a specific harvest method.		WDNR Silviculture and Tax Law Programs	5.1	In coordination with Assignment 4.1, The WDNR Silviculture and Tax Law Programs will provide training for staff and partners based on prescription writing and WDNR Silviculture Handbook interpretation emphasizing the principles of sound forestry and flexibility within WDNR Silviculture Handbook guidance.	This type of training is currently provided to MFL CPW plan writers and new DNR foresters. In addition, a prescription writing exercise was recently reintroduced in Silviculture Orientation, a course taken by all new WDNR Foresters and Technicians.	March-2019	
Northern Hardwood Mgmt.	6	Move away from the heavy reliance on uniform basal area and basal area stocking as criteria for adherence to forest tax law plans or prescriptions. Rather, the focus should be on retention and increase of stem quality, along with considerations for landowner objectives, while maintaining minimum basal area stocking levels consistent with current northern hardwood silvicultural science including accounting for natural regeneration needs and residual stem quality factors.	<a href="#">Steigerwaldt 2016, p. 51</a>	Wisconsin Silviculture Guidance Team (SGT), Northern Hardwood Ad Hoc Team	6.1	The SGT Northern Hardwood Ad Hoc Team will review and consider revisions to the Northern Hardwood Chapter, single tree selection section based on best available science. While some USFS Dukes and Argonne Experimental Forest research specific to stand density management is already discussed in the chapter, there is the potential to expand this information. See Assignment 1.2	The focus of this recommendation deals primarily with the acceptable range of variation in basal area stocking for northern hardwood stands managed with single tree selection in order to allow for flexibility yet still maintain conditions for the development of quality stems. Implementation should seek to enhance flexibility and address basal area retention standards.	December-2018	High

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Aspen & Red Pine Rotation Ages	7	Establish guiding principles that allows flexibility in rotation ages depending on site potential. Guiding principles should recognize that the timing to rotate a particular stand can be influenced by unique stand conditions and other considerations such as land owner objectives, operability, markets, economics, social and ecological considerations.	<a href="#">Steigerwaldt 2016, p. 70</a>	Wisconsin Silviculture Guidance Team (SGT), Aspen and Red Pine Rotation Age Ad Hoc Team	7.1	The Wisconsin Silviculture Guidance Team Rotation Ad Hoc Team will continue work to define flexible rotation age guidance for aspen and red pine based an examination of current research, actual stand data, field experience, and WFPS study results.	Economic considerations would be one of the main things to address as this is the weakest part of the current discussion. SGT created an ad hoc team to develop an economics chapter for the handbook and the chapter was finalized in 2016. The economics chapter covers the costs and revenues needed to calculate an economic rotation and the factors that influence economic rotations. SGT formed the Rotation Ad Hoc Team in 2016 to examine Silviculture Handbook rotation ages for aspen, red pine and oak. The team was specifically asked to review suitable economic rotations for these cover types.	December-2018	High
Oak Wilt Restrictions	1	Request that the DNR provide training to all DNR foresters, by January 1, 2018, on the changes to the Oak Wilt restrictions and support their implementation . DNR also to make training available to Cooperating Foresters.	<a href="#">Demchik etal 2016, p. 45</a>	WDNR Forest Health Team, UW-Extension	8.1	The WDNR Forest Health Team in partnership with The UW-Extension will develop an oak wilt guidelines training program which reviews current guidelines and changes since the previous recommendations. This training should also aid conversations about risks associated with management. It will be open to WDNR Foresters (required), consulting & industrial foresters, and County forestry staff.	This is meant to address a goal of educating land managers on the cumulative effect of restrictions and barriers on forest management. Though not referenced here, follow up to gauge success will be needed. Note: this training could be delivered in MFL Recertification meetings, regional meetings, webinars, etc. Note: The Team working on this should review the Demchik etal WFPS report or have it presented to them by authors - for background and scale of seasonality topic.	December-2018	High
Oak Wilt Restrictions	2	Request that WCFA provide training to all County foresters, by January 1, 2018, on the changes to the Oak Wilt restrictions and support their implementation.	<a href="#">Demchik etal 2016, p. 45</a>						
Oak Wilt Restrictions	3	Request that FISTA and WOOA provide similar training for Loggers and Landowners.	<a href="#">Demchik etal 2016, p. 45</a>						
Rutting	4	Recommend that research is performed (by University or other) into the ecological effects of rutting and develop new guidelines and rutting definition based on the most recent science. (Perhaps based on soil types).	<a href="#">Demchik etal 2016, p. 44</a>	Wisconsin Council on Forestry	9.1	The Wisconsin Council on Forestry (COF) will ask The WDNR Division of Forestry to include rutting as a research priority. The COF will also commission a small panel to review current and past research on ecological effects of rutting and the WDNR definition of rutting (i.e. sensitive to the difference between soil disturbance and rutting).	This could also benefit from a check in with the WDNR BMP Advisory Committee.	December-2018	
Prescription Writing	5	Review (DNR ?) the resources that are most commonly used when writing timber harvest prescriptions and Revise them where appropriate to align with most current guidelines and science - AS WELL AS modify them to avoid being too specific. (i.e. - must make sure these documents do not dictate 'frozen' ground - when 'firm' or 'dry' would also be suitable). It is very important to modify these resources - otherwise - it will be very difficult to drive change.	<a href="#">Demchik etal 2016, p. 45</a>	WDNR Public Lands Specialist Team	10.1	The WDNR Public Lands Specialist Team will review what resources foresters use to determine seasonal restrictions (ex. frozen ground only). The Team will also review the concept of outcome based specifications in order to enhance harvesting flexibility while protecting site productivity.	Thaw WFPS Implementation Team discussed vetting any modifications through GLTPA and/or including timber producers in review efforts. It also discussed the concept of a contract scorecard based on restrictions to assess impacts of cumulative restrictions. This could be piloted on public or private land.	March-2018	High
Prescription Writing	6	Similar to 'Oak Wilt' recommendation - after the Review/Revise from step 1 is complete - then re-train DNR, County and Cooperating Foresters on the changes and the need for flexibility in prescription writing.	<a href="#">Demchik etal 2016, p. 45</a>	WDNR Silviculture Program	10.2	The WDNR Silviculture Program will review and revise prescription writing as a part of silvicultural training classes. As necessary, WDNR staff will amend training to review the impact of cumulative restrictions on forest management. If possible, it should be offered as a stand alone class or open to WDNR Foresters, consulting & industrial foresters, and County forestry staff .	See 5.1 for additional considerations in prescription writing training. Training can vary in duration and complexity depending upon context and audience.	June-2018	High
NHI Restrictions	7	Again - an education (training/communication) is needed on the procedures for compliance in regard to NHI (i.e.. If hit exists - still have option to determine if 'hit' exists and then have additional option to determine if harvest will impact 'hit'). We did not specifically ID who provides this training but most likely similar to 'Oak Wilt' where it is combination of State, County and FISTA.		WDNR Natural Heritage Conservation Forestry Liaison	11.1	The WDNR Natural Heritage Conservation Program will review NHI Assessment as a part of WDNR forestry classes. These classes will also be provided to County forestry staff and consulting foresters. As necessary, WDNR staff will alter training to review how to assess hits using the public portal as well as strategies to mitigate hits, in addition to recognizing the impact of cumulative restrictions on forest management.	Foresters in general need a better handle on how we handle NHI / archeological hits and understanding both how to assess hits using the public portal as well as strategies to mitigate hits.	March-2018	High
NHI Restrictions	8	Request new legislation that mandates a review and update of the NHI & Archeological database. (purpose here was to remove outdated items. Example at the meeting was the 'glass lizard' that was seen almost 100 years ago - therefore NHI hit still exists - is that really warranted?)		Wisconsin Council on Forestry, WDNR Natural Heritage Conservation Forestry Liaison, WDNR Tax Law NHI Subcommittee	11.2	The WDNR Tax Law NHI Subcommittee will assess options for improving access to The NHI database, what reviews of NHI data have occurred or are occurring, and what role the WI Forestry Community has and should play in this. The review will identify components of the current NHI review process that impact the ability to update and maintain the database and limit user access. If necessary, The WI Council on Forestry, with this review in hand, can assess advocating legislation to address desired efficiencies.		June-2018	High
NHI Restrictions	9	Request new legislation that would allow access to the NHI and Archaeological / Historical databases by Cooperating Foresters.							
NHI Restrictions	10	Request that a DNR Forester or other forestry professional be assigned as part of the 'team' that develops guidelines for NHI hits.							
Weight Restrictions	11	Develop science based guidelines & share/communicate to townships and counties to provide more consistent practice (or more practical implementation based on current year weather condition) for posting or removing postings for roads.		Wisconsin Council on Forestry	12.1	Develop science based guidelines & share/communicate to townships and counties to provide more consistent practice (or more practical implementation based on current year weather condition) for posting or removing postings for roads.		December-2019	
EAB Restrictions	12	Request that DATCP implement EAB Quarantine to Waupaca, Waushara and Green Lake counties.		Wisconsin Council on Forestry	13.1	None (already quarantined)			
EAB Restrictions	13	Request that EAB transport restrictions are reviewed and modified so that Ash/HW can be hauled from a Quarantined county to a Quarantined County AND pass through non-Quarantined counties with allowance for emergency or refueling stops only in the non-quarantined county.		Wisconsin Council on Forestry	13.2	Request that EAB transport restrictions are reviewed and modified so that Ash/HW can be hauled from a Quarantined county to a Quarantined County AND pass through non-Quarantined counties with allowance for emergency or refueling stops only in the non-quarantined county.		June-2018	
EAB Restrictions	14	Request that a Cost/Benefit study is performed that evaluates the benefit of not-Quarantining the entire state at this time - vs the potential costs. (i.e. a case study could be done to ID the costs associated with the current county by county approach where EAB is found on opposite ends of major transport corridors - with a non-quarantined county in the middle of that corridor (i.e. Hwy 13, I-29, etc.)		Wisconsin Council on Forestry	13.3	COF will approach WDNR and UW-Madison to determine if a cost/benefit study is feasible and/or should be performed to evaluate the benefit of not-quarantining the entire state at this time.		February-2018	

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Landowner Outreach	1	Outreach is a challenge to fund. The elimination of WEEB grants and increasing budget constraints with public entities (e.g., WDNR, UWEX) have and will continue to limit landowner outreach capacity and programming innovation. What constitutes adequate funding is beyond the team's scope, but new resources will be needed to ensure impact, as will funding cycles that permit experimentation and risk-taking (i.e., > 1 year). Expanded partnerships with programs such as the SFI SI Committee's grant program, which includes a public outreach section, has potential.		Wisconsin Council on Forestry	14.1	Following the completion of the legislative fiscal audit on the Forestry Account, The Wisconsin Council on Forestry will consider priority funding for public and landowner outreach needs.		December-2018	
Landowner Outreach	2	Coordination has long been sought, but never achieved because it is no one's job. Shared information might yield insights into geographic coverage, timing, and intended audiences toward gaps in program offerings, creation of a speakers' bureau, etc. Council should work to identify an entity or entities to investigate the feasibility of greater coordination.		WDNR Division of Forestry, UW-Extension	15.1	The WDNR Division of Forestry and UW-Extension will create a Team to review current outreach efforts in WI and how / if coordination might enhance outreach effectiveness. This Team would also analyze the priority of outreach needs.	WDNR Private Forestry Outreach Specialist will lead WDNR Forestry efforts on this assignment. Wisconsin Private Forestry Advisory Council could have involvement as well.	June-2018	
Landowner Outreach	3	New funding should include expectations for program evaluation and current efforts should be encouraged to do this as well. Evaluation will allow us to identify what is working and how program offerings might be improved. For example, if program evaluation was coordinated across a large numbers of program sponsors, we could construct a robust understanding of the collective benefit of outreach programs and their interconnectedness.		WDNR Division of Admin. Bureau of Environmental Analysis and Sustainability and UW-Extension	16.1	Develop a standardized system for monitoring and evaluating WDNR training and outreach efforts	WDNR Point of Contact for this is Carmen Hardin (Bureau of Applied Forestry) and Mike Warnke (Deputy Division Admin)	June-2018	
Forester Economic Training	4			WDNR Forest Products Marketing and Utilization	17.1	Continue and build upon recent forest industry training efforts to develop additional multi-stakeholder field training sessions on economics and operations. These trainings will review current economics software/tools (economic outcome/analysis). See 20.1	SGT may want to consider maintaining a standing Ad Hoc Team to address ongoing edits to the Economics Chapter as well assist the WDNR Forest Economist to advise and address economics related forest management efforts as requested by SGT or others.	March-2019	High
Forester Economic Training	5	In planning future events, engage WFPS investigators to ensure training content includes their findings, thus maximizing the translation of research into practice. It would be particularly useful to have investigators participate in trainings when possible.		Wisconsin Council on Forestry	18.1	The Wisconsin Council on Forestry will create a summarized report of main contact leads for WFPS authors.		March-2018	High
Forester Northern Hardwood Training	6	Develop research-based tools and curriculum to give foresters (public and private) confidence to implement northern hardwood prescriptions across a full range of options targeted toward meeting landowner objectives. This would include fostering a nuanced understanding of the market and product implications of different sized and aged trees. Real and/or virtual demonstrations of varied management techniques that were within the silvicultural guidelines by timber type would be highly desirable in such trainings.		WI Marteloscope Collaboration Partners	19.1	"WI Marteloscope Collaboration Partners" will investigate the possibilities for a National or Lake States Northern Hardwood management symposium. See Assignment 4.2	This could also include a wider range of partners (UW institutions, UWEX, COF, SFI, ACF, WCF, etc.)	June-2019	
Forester Northern Hardwood Training	7	Implement trainings that foster dialogue across forester "types" to include field- and mill-based components that move guidelines into practical demonstrations. The WDNR's Forest Products Team could be a strong partner along with expertise within UWEX. However, the team felt that DNR staff may not be the best facilitators given their oversight role.		WDNR Forest Products Marketing and Utilization, UW-Extension	20.1	See Assignment 17.1		March-2019	