Wisconsin DNR Owned Lands

Forest Land and Inventory Report

Forested Lands Excluded from Timber Harvest

Projection of forest heath and economic effects and public benefits

December 2025

The purpose of this report is to comply with Wis. Stats. 23.135, "Forest Land Inventory and Report." This report identifies where the DNR prohibits timber harvesting and the resulting long-term forest health effects, a projection of the economic effects, and a projection of the public benefits.

Background

Section 28.04(2) Wis. Stats. directs the Department of Natural Resources (DNR) to "practice sustainable forestry and use it to assure that state forests can provide a full range of benefits for present and future generations". Further, it requires that management is "consistent with the ecological capability of the state forest land and with the long-term maintenance of sustainable forest communities and ecosystems. These benefits include soil protection, public hunting, protection of water quality, production of recurring forest products, outdoor recreation, native biological diversity, aquatic and terrestrial wildlife, and aesthetics". In s. 28.04(2)(c) Wis. Stats. it also recognizes that "management may consist of both active and passive techniques".

Managing forest lands both actively and passively has ecological, social, and economic benefits that complement the entire management of forest lands and provide the long-term sustainability of our forest ecosystems required by law and policy. Decisions regarding whether certain forest lands are actively or passively managed typically come from either state statute, master planning documents and on the ground conditions, most of which are developed with public input and provide long-range objectives for DNR-owned properties.

Forest Inventory

DNR uses the Wisconsin Field Inventory and Reporting System (WisFIRS) as the primary stand-based forest inventory system. Data within WisFIRS was used to quantify how many acres of forested land are being excluded from timber harvest to meet the intent of this report.

Forest inventory data on DNR-owned properties is collected by DNR staff on a regular cycle or under circumstances that warrant updates, including storm or forest health events. A schedule of management practices, including timber harvests, is identified in WisFIRS based on that inventory data collection, and consistent with statutes, master plans and local property management and site conditions. Some stands do not include a harvest treatment, and for this report purpose, are considered excluded from the harvest schedule.

Forested Lands Excluded from Timber Harvest

DNR forest inventory includes 1,655,610 acres of DNR-owned lands of which 982,360 is forested (59%). Of the 982,360 forested acres, 299,215 acres (30%) are not scheduled for timber harvests. For comparison purposes, Wisconsin has approximately 17 million acres of forested land, with the DNR representing approximately 6% of that ownership. Acreage can be excluded from timber harvest scheduling due to property designations and management objectives and local site conditions.

Excluded from Timber Harvest (total acres)	**299,215**
Designated Wild Rivers Zone	3,901
Designated Wilderness Area	8,701
Property and Management Considerations	286,613

Forested stands receive a prefix code which indicates management objectives or other special features. Stands may also be assigned a designation indicating special management considerations which in some cases removes the stand from the harvest scheduling. Two statutory designations that remove acreage from harvest scheduling are designated Wild River Zone and Wilderness Classification. The table below summarizes excluded acres by DNR program.

DNR Program	Forested Acres Excluded from Harvest Schedule	Total Forested Acres	Total Program Acres	Percent of Forest Acres Excluded from Harvest	Percent of Total Program Acres Removed from Harvest	Percent of Total DNR Acres
Wildlife	76,492	244,769	612,135	31.3	12.5	37.0
Forestry	77,350	449,492	589,196	17.2	13.1	35.6
Water Resources	36,412	91,017	141,451	40.0	25.7	8.5
Fisheries	29,947	78,339	118,059	38.2	25.4	7.1
Parks	50,198	73,646	116,699	68.2	43.0	7.0
Natural Areas	27,745	43,351	74,653	64.0	37.2	4.5
Other*	1,071	1,746	3,417	61.3	31.3	0.2
Total	299,215	982,360	1,655,610	30.5	18.1	100.0

*Other program acreage includes headquarter properties, ranger stations, tower sites, etc. Southern State Forests are included in Forestry.

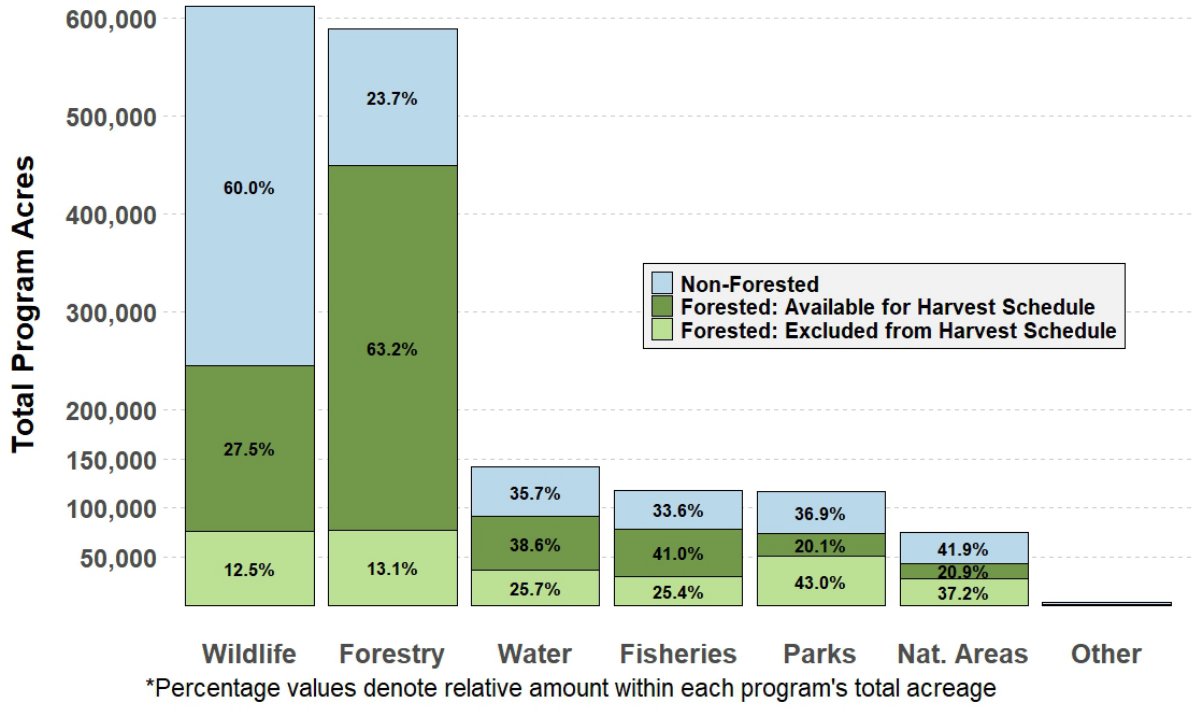

Figure 1: Total property type acreage distribution of non-forested acres, forested acres available for timber harvest scheduling and forested acres excluded from timber harvest.

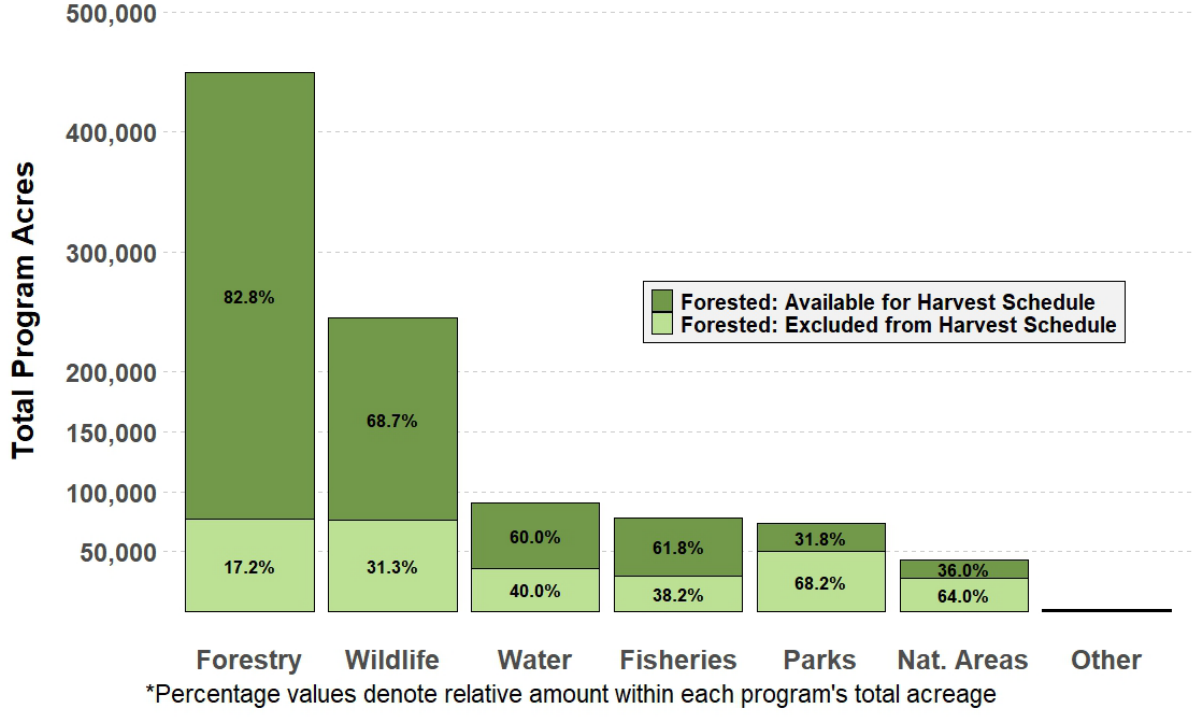

Figure 2: Forested acreage by program available or excluded from harvest scheduling.

Stands which are removed from the harvest schedule often include a stand prefix code which explains why the stand has been excluded from the timber harvest schedule. The table below summarizes the primary reasons or management consideration that acres were removed from the harvest schedule.

Management Designation/Consideration	Acres Excluded
Natural area	71,846
Lake or river zone	42,824
Deferral area	20,518
Non-productive	11,467
Old growth	10,432
Objective not determined	9,095
Aesthetic zone	8,347
Silviculture concerns	5,915
Species and communities of special concern	3,110
Extended rotation	1,622
Wild area	1,220
Plantation	884
Deer yard	712
Special oak concerns	469
Camping	21
Other reasons excluded (site conditions, access, markets)	98,131
Total	286,613

Forested stands are assigned a forest cover type based on the predominant tree species, or associations of tree species. Aspen is the forest type with the most acres across DNR owned lands, with over 250,000 acres. Approximately 40,000 acres or 15.5% of the aspen cover type is excluded from the timber harvest schedule. The aspen cover type makes up 13.3% of the total forested acres excluded from timber harvest. Often the wetland and bottomland forest cover types have greater amounts of relative acreage that is excluded from harvest scheduling. For example, over 67% of the bottomland hardwood cover type acreage is excluded from harvest, and over 50% of each swamp conifer, swamp hardwoods and tamarack forest cover type acreages are removed from harvest schedule. Upland cover types such as the pine forest types have considerably less relative acreage removed from harvest scheduling. The table below summarizes forest cover type acreage and the relative amount of each removed from harvest schedule.

Forest Type	Total Acres	Acres Excluded	Percent of Total Forest Acres Excluded	Percent of Forest Type Excluded
Aspen	257,442	39,851	13.3	15.5
Balsam Fir	4,651	2,652	0.9	57.0
Black Spruce	37,696	16,563	5.5	43.9
Bottomland Hardwoods	68,082	45,793	15.3	67.3
Central Hardwoods	25,175	7,873	2.6	31.3
Fir Spruce	685	608	0.2	88.8
Hemlock	11,743	8,893	3.0	75.7
Jack Pine	35,317	2,181	0.7	6.2
Misc. Coniferous	2,258	806	0.3	35.7
Misc. Deciduous	2,916	475	0.2	16.3
Northern Hardwoods	101,025	25,722	8.6	25.5
Oak	144,148	43,903	14.7	30.5
Red Maple	27,229	6,773	2.3	24.9
Red Pine	61,041	4,405	1.5	7.2
Scrub Oak	30,172	7,178	2.4	23.8
Swamp Conifer	570	390	0.1	68.4
Swamp Hardwoods	42,506	28,875	9.7	67.9
Tamarack	22,394	11,325	3.8	50.6
Walnut	1,388	441	0.1	31.8
White Birch	8,530	5,088	1.7	59.6
White Cedar	26,274	22,853	7.6	87.0
White Pine	67,321	15,967	5.3	23.7
White Spruce	3,797	600	0.2	15.8
Total	**982,360**	**299,215**	**100.0**	**30.5**

Projection of the public benefits, economic effects and long-term forest health effects

The DNR manages its forest lands for multiple uses and multiple purposes, recognizing that public forests must provide ecological, economic, and social benefits both today and for future generations. Active forest management allows DNR to maintain a diverse range of forest tree species, age classes, and size structure, conditions essential for long-term forest health, wildlife habitat, water resource protection, recreational opportunities, and sustainable forest products. By guiding regeneration, improving stand vigor, and reducing vulnerability to insects, disease, and disturbance, forest management helps ensure resilient and productive forests that meet the varied expectations of the public. At the same time, the department recognizes that in some places harvesting is not practical and the absence of harvesting can provide distinct ecological and social benefits, such as maintaining reference conditions, enhancing scenic or recreational values, or protecting sensitive resources. Both active and passive approaches play a role in balancing the diverse public demands and resource objectives across DNR managed lands.

DNR properties are acquired and managed with specific purposes designated by State Statute, including State Parks, State Forests, Wildlife areas, Fisheries areas, and Natural areas which all provide a wide range of public opportunities and benefits. Excluding forest management in the form of timber harvesting in certain areas is often viewed favorably by users who place high value on scenic quality and the absence of land management activities. Silent sport advocates are among the most vocal supporters of minimizing harvest activity. At the same time, hunters and trappers may experience diminished opportunities as passively managed forests convert away from early successional habitats such as aspen, paper birch, and jack pine. Early succession tree species often have shorter life spans and can experience forest health issues at later stages or convert to longer lived species that may not be desirable. These forest types provide the cover and forage essential for species like ruffed grouse, woodcock and other popular game species. Over the long term, declines in these habitats can reduce hunting satisfaction, affect cultural traditions tied to hunting, and lessen the tourism revenue associated with game species. Lack of young early succession forests can also decrease rare species, such as golden winged warbler, unique to Wisconsin and the Great Lake States which also attract bird enthusiasts and researchers.

Recreation values are also shaped by broader vegetation patterns, forest health, and water resources. Wisconsin citizens hold strong connections to lakes and rivers, which are among the most important social and recreational assets in the state. Passive management near riparian corridors can preserve scenic shorelines. However, lack of management may also contribute to excessive standing dead trees, smaller trees, less desirable tree species that diminish access or reduce the quality of experiences.

The exclusion of harvesting can lead to increases in mature and old-growth trees, enhancing aesthetic appeal valued by many visitors. Areas of harvest exclusion also provide important ecological reference areas, serving as scientific baselines that support public education and foster cultural connections to natural heritage. At the same time, forest management may sometimes be a tool to deliberately guide a stand toward a more desirable condition of large, late-successional trees that many find more visibly appealing. Achieving that outcome often requires selective thinning, regeneration treatments, or other treatments that temporarily create visual disturbance.

Conversely, in some landscapes, increased tree mortality, insect outbreaks, or woody debris buildup under passive management regimes may elevate the risk of wildland fire or forest health risks. Public safety concerns are particularly acute in the Wildland Urban Interface, where more homes and businesses border forest edges, as well as recreation facilities including trails and campgrounds. While fire suppression and educational programs mitigate some risks, public perception of safety can still be negatively affected when forests appear unhealthy or hazardous.

The 299,215 acres removed from the harvest schedule has a stumpage value of approximately 3.5 million dollars. The potential economic impacts of including all of the acres removed from harvest would be misleading, as it would assume that all of the acreage is accessible and the management objective requires active management, which we know to be unlikely. This includes acres that are not accessible, have no markets, or have ecological objectives not requiring disturbance. It can be assumed that if more acres were available for harvest on state forested land there would be changes in timber related revenues, employment, and economic output across key

sectors such as forestry, logging, and other forest products manufacturing sectors. However, the impact on the greater Wisconsin forest economy would likely be minimal as these acres make up such a small portion of the larger wood basket.

The table below provides an overview of timber harvest activity on DNR managed land over the past 15 years. On average, more than 15,000 acres were harvested annually, generating approximately $11 million in revenue.

Year	Acres Harvested (1,000)	Volume Harvested (cord equivalent in 1,000)	Stumpage Revenue (Million $)
2010	16.71	306.11	10.80
2011	15.50	276.26	10.28
2012	13.98	235.11	8.72
2013	16.72	289.30	10.64
2014	15.93	287.32	11.08
2015	16.83	288.33	11.61
2016	14.73	253.13	11.04
2017	15.41	285.35	12.26
2018	15.75	250.53	10.95
2019	18.39	322.32	12.88
2020	14.08	243.49	9.18
2021	15.10	279.01	11.60
2022	14.03	253.82	10.34
2023	15.41	282.89	11.21
2024	18.16	304.05	12.43
Average	**15.78**	**277.13**	**11.00**

Since 2010, Wisconsin's forest products industry employment has experienced notable shift. Employment has declined by more than 10 percent, with pulp, paper and paperboard manufacturing sector seeing a steep drop of 37.4 percent. The number of forest-related business establishments fell by over 17 percent during the same time period. Despite these changes, the industry continues to evolve, with emerging markets like bioenergy, biomaterial such as biochar production and engineered wood innovation like mass timber manufacturing, offering promising avenues for growth.

The stumpage value of acres removed from the sale of timber may be offset, at least partially, by increased recreational use and associated spending on some sites. In 2023, Wisconsin's outdoor recreation industry contributed $11.2 billion to the states GDP. Additionally, excluding timber harvests can yield carbon benefits by allowing more biomass to accumulate and sequester carbon over time, contributing to climate mitigation goals. However, assessing the full economic picture is complex. The indirect impacts of timber harvesting such as supply chain effects or long-term forest management costs are difficult to quantify. Even more challenging is measuring how changes in forest use affect recreational users, whose experiences and spending patterns vary widely across sites and seasons.

Importantly, the amount of land excluded from timber sales is minimal and does not pose a significant barrier to the industry's operations or its ability to pursue new market opportunities.

Wisconsin's Forest Management Guidelines define forest health as "The perceived condition of a forest derived from concerns about such factors as its age, structure, composition, function, vigor, presence of unusual levels of insects or disease, and resilience to disturbance." Healthy forests are sustainable and able to provide ecological, economic and social functions while maintaining biodiversity. Healthy forests are also better able to adapt to change and recover from disturbance.

Timber harvests often are designed to improve the growth and vigor of forested stands. However, lands excluded from timber harvest may be better able to produce and enhance certain ecological, social and cultural values and benefits. Depending on Master Plan goals, even passively managed stands may permit management activities which control invasive species, treat insect and disease infestations, or perform other practices aligned with the property objectives.

Although preserving some passively managed lands is desirable, timber harvesting and other forestry work remains a critical tool for maintaining healthy, sustainable forests. Increasing impacts of non-native insects and diseases and extreme abiotic events have elevated the need for pre-salvage and salvage harvests and stand maintenance. However, management of some forest types such as wet forests (e.g., bottomland and swamp hardwoods or conifers) is becoming increasingly difficult with fewer frozen ground days to access these sites. This greatly increases the difficulty of managing stands impacted by such invasive pests as the emerald ash borer. Difficult access with appropriate equipment to wet sites may result in more stands being managed passively if loggers do not bid on these timber sales. This may result in forest stands converting to non-forest cover types or less desirable timber species. Flexibility and ensuring multiple management tools are available so stands can be managed and adapted as evolving opportunities arise.

Wisconsin's forests are also aging, which can contribute to further insect and disease issues. Forest management may be increasingly needed to meet stand objectives, maintain the desired forest type (e.g., early successional species such as aspen), and maintain healthy, vigorously growing trees that are less susceptible to insects and diseases.

Passively managed forests will remain a component of DNRs overall forest strategy to maintain healthy, sustainable forests that provide multiple benefits. Monitoring the health of passively managed stands will remain key to ensuring stand objectives are being achieved given the increasing threat from non-native insects, diseases, invasive plants and abiotic pressures facing Wisconsin's forests.