

BAYFIELD COUNTY FOREST COMPREHENSIVE LAND USE PLAN

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2000 NEEDS OBJECTIVE AND FORMAT

Objectives: To provide guidelines which help to define the optimum level of actions and/or activities that should be undertaken to realize full potential benefits from the County Forest.

Format and Policy: Needs and/or goals for the County Forest shall be identified and listed without regard to budgetary constraints or other limitations. This list shall identify the forest potential in terms of public benefits, investments or opportunities, and financial returns. Silvicultural needs of the County Forest are identified throughout this Plan, as well as in the Workplan and Budget Narrative.

Copies of the Workplan and Budget Narrative can be found on the Department's website. Other needs shall be determined by the Committee and/or Administrator, with technical assistance, if necessary, from the DNR and other interested agencies and/or individuals qualified to provide such assistance.

2005 DETAILED ANNUAL NEEDS FOR FIFTEEN YEARS

Short and long term silvicultural needs are identified throughout this Plan, as well as in the Workplan and Budget Narrative. Various WisFIRS forest planning and scheduling reports will also be referenced to aid in the establishment of annual silvicultural needs. These reports, referenced throughout the Plan, will be available in the Administrator's office. WisFIRS reports can include, but are not limited to, timber harvest goals (both annual and long term), reforestation, and other prescribed silvicultural activities.

Other unanticipated needs will be addressed in accordance with procedures outlined in this Plan.

Unanticipated needs and/or goals will be addressed in the Workplan and/or Budget Narrative, as prepared by the Administrator and Committee. Annual Workplans are approved by the County Board and forwarded to the DNR as required by statute (s. 28.11(5)(b) and s.28.11(5m)(b), Wis. Stats.

2010 SUMMARY OF FIFTEEN-YEAR NEEDS

A summary of needs, both short and long term, are addressed throughout this Plan, as well as outlined in the Annual Workplan and Annual Budget. Forests are dynamic and managers must be adaptive to change and be prepared to address the unexpected. Funding, staffing shortfalls or other factors may also impact the ability of the Department to fulfill identified needs and/or goals. Refer to Chapter 100 and Section 2020 (below) for more information on the Annual Work Plan and Annual Budget. Also refer to the Department's website for current and previous versions of the Workplan and Budget. Each document will provide more detailed information regarding annual needs and/or goals, as well as budgetary expectations.

2015 WORKPLAN OBJECTIVE AND POLICY

Objective: To develop an annual Workplan and Budget that will satisfy the needs and/or goals specified throughout this Plan to the greatest extent practical and/or feasible, consistent with program priorities established in the Mission Statement, and elsewhere throughout this document.

Format and Policy: The Department will sustain a level of operation that addresses the needs of the County Forest, as well as the public, in accordance with the goals and objectives identified in Chapter 100.

2020 ANNUAL WORK PLAN AND BUDGET

Each year an Annual Workplan and Annual Budget shall be prepared by the Administrator with assistance from the Committee. Both documents shall, in part, address the annual needs and/or goals contained within this Plan, the management strategies (and costs) of known projects and obligations, unexpected issues and/or concerns that require attention, and other tasks necessary to effectively administer the County Forest program, as determined by the Administrator and/or Committee.

The Annual Workplan and Annual Budget are both approved by the Committee and County Board. The Workplan is forwarded to the DNR as required by Wisconsin statutes s. 28.11(5)(b) and s.28.11(5m)(b). Following County Board approval and upon request, a copy of the Workplan will be provided to official copy-holders of the Plan. A copy of the approved

Workplan and Budget will also be included as an amendment to this Plan. All official copies of the Workplan and Budget will be uploaded to and made available from the Department website.

Refer to Chapter 100 for more information regarding the Annual Workplan and Annual Budget.

Refer to the Department's website for current and previous versions of the Workplan and Budget documents.

2025 ACCOMPLISHMENT REPORTS OBJECTIVE AND POLICY

Objective: To provide a quantifiable means of presenting and evaluating achievements on both short and long term goals and objectives on the County Forest.

Format and Policy: In part, annual accomplishments will be recorded as a historical record, to assist in future planning, and to provide documentation for both the County, and the County Forest system. This information is invaluable in addressing public, County Board, and other legislative inquiries regarding the management of the Forest, as well as assessing and evaluating progress on goals.

2030 ANNUAL ACCOMPLISHMENT REPORTS

An annual Accomplishment Report will be prepared by the Administrator and presented to the Committee. A copy of the Accomplishment Report will also be included as an amendment to this Plan. Upon request, a copy of the Accomplishment Report will be provided to official copy-holders of the Plan. An official copy of the Accomplishment Report will also be uploaded to and made available from the Department website.

An annual Accomplishment Report shall include, at a minimum, the following:

- 1) Forest/Timber Management: a summary of all forest management activities, including, but not limited to:
 - a) Net stumpage receipts.
 - b) Sustainable harvest goals (acres) per primary timber type and associated accomplishments.
 - c) Harvested volumes per species and products.

- d) Total number of sales sold, unsold, active and closed out, including acres.
 - e) Total value of all sales sold.
- 2) Reforestation: a summary of all reforestation activities, including, but not limited to:
- a) Planting.
 - b) Seeding.
 - c) Site preparation and release.
 - d) Artificial seedling counts.
 - e) Natural regeneration monitoring (FRM).
 - f) Seedling protection.
 - g) Timber stand improvements (TSI).
- 3) Reconnaissance: a summary of all forest reconnaissance activities, including, but not limited to:
- a) Compartment updates.
 - b) Stand level updates.
 - c) Continuous Forest Inventory (CFI).
- 4) Recreation: a summary of all recreational development projects and/or major maintenance accomplishments, including related revenue and expense, if and where applicable:
- a) Trails, including both motorized and non-motorized.
 - b) Yurts.
 - c) Camping.
 - d) Day-Use Parks.
 - e) Events.
- 5) Permits: a summary of other approved/authorized activities on the County Forest, including, but not limited to:
- a) Access permits.
 - b) Disabled hunting.
 - c) Firewood.
 - d) Non-timber forest products.
 - e) Special use.
 - f) Recreational use.

- g) Other authorizations.
- 6) Wildlife: a summary of major project and/or management level accomplishments that emphasize wildlife habitat maintenance and/or development, including any applicable revenue and expense.
- 7) Fisheries: a summary of major project and/or management level accomplishments that emphasize fisheries habitat maintenance and/or development, including any applicable revenue and expense.
- 8) Other accomplishments identified as needs and/or goals in this Plan and/or Workplan or as otherwise deemed important as determined by the Administrator and/or Committee.

2035 PAST ACCOMPLISHMENTS

Historical accomplishments will be addressed in the Annual Accomplishment Report. All current and previous Accomplishment Reports will be available on the Department website.

2040 MONITORING

The Workplan establishes short and long term goals and objectives for the County Forest and effectively outlines an annual workload for each calendar year. The effectiveness of each Workplan is summarized in an annual Accomplishment Report. All goals and objectives, as established throughout this Plan, the Workplan, or as otherwise directed by the Committee, are monitored closely, by the Administrator, throughout each calendar year.

The Accomplishment Report is a document that effectively summarizes those annual monitoring efforts. This report details the accomplishments of each calendar year and compares those achievements to the listed goals and objectives for each activity. Annual accomplishments are also compared to previous goals to analyze progress, improvements, inconsistencies and/or trends over time.

The results of these monitoring efforts/accomplishments are used to assist in the development of future management strategies, as well as to help determine the effectiveness of previous treatments.

Please refer to the Workplan for more detailed information regarding annual management goals and objectives and to the Accomplishment Report for more information on annual, as well as long term achievements.

2040.1 COVER TYPES

Tables 2000.1 and 2000.2 (below) summarize the past, present and future (estimated/proposed) acreage of County Forest land per primary cover type (both forested and non-forested).

Table 2000.1: Summary of Past, Present, and Future Forested Cover Type Acreage

Cover Type	1977	1995	2005	2020	Future
Aspen	60,241	62,236	69,001	77,798	76,194
Red Pine	8,255	11,018	14,130	18,272	19,217
Northern Hardwoods	19,099	22,544	21,795	17,314	19,859
Red Oak	16,045	16,291	17,702	14,533	11,525
Jack Pine	21,644	16,923	13,994	11,637	12,259
Scrub Oak	10,049	9,004	6,602	5,918	4,916
Swamp Hardwood*	1,650	2,039	2,436	3,183	3,077
Red Maple	336	404	495	2,721	2,880
White Pine	2,158	2,307	2,376	2,639	3,357
Black Spruce	738	863	1,050	1,527	1,550
Fir-Spruce	2,218	1,907	1,933	1,389	2,185
Tamarack	396	473	645	997	976
White Birch	7,000	5,557	2,613	911	835
Cedar	299	296	406	377	372
Hemlock	112	137	237	229	229
Swamp Conifer	393	657	806	146	146
Miscellaneous Conifer	0	0	0	38	38
Miscellaneous Deciduous	0	0	0	20	20
Bottomland Hardwoods	0	0	0	3	3
Total	150,633	152,656	156,221	159,652	159,638

* Though not reflected in the Future estimate, inevitable EAB infestation will significantly impact future acreage.

Table 2000.2: Summary of Past, Present, and Future Non-Forested Cover Type Acreage

Cover Type	1977	1995	2005	2020	Future
Lowland Shrub/Alder	2,752	2,765	2,392	4,427	4,472
Marsh/Bog	702	661	711	2,873	2,880
Grasses	2,394	2,588	2,888	2,182	2,478
Right of Way	1,276	1,201	1,292	1,668	1,673
Water	890	838	902	911	907
Upland Shrub	3,047	3,855	2,208	558	347
Other*	31	29	31	133	9
Total	11,092	11,937	10,424	12,752	12,766

Over the past 40+ years, there have been numerous notable changes to the composition of the County Forest. Some of the more significant include:

1. Cover Type Acreage Increases:

- a. Aspen: an increase of nearly 30%. Aspen is effective at colonizing most even-aged management treatments, especially when a few trees were present prior to harvest. Even though the Future acres in Table 2000.1 indicates a slight decrease in acreage, the amount of aspen will likely increase marginally over the next 15 year period. This will generally occur when stands of poor quality northern hardwood are managed to increase diversity, as well as on higher ground swamp hardwood stands, where conversion to other species (prior to EAB infestation) is a priority.
- b. Red Pine: an increase of over two-fold. This is primarily a result of various reforestation efforts, including planting old fuel breaks, converting stands of jack pine that were significantly impacted by previous bud worm outbreaks, and converting stands of unproductive scrub oak. Also, over 2,000 acres of red pine was acquired since 2015 as part of larger Stewardship land acquisition projects.
- c. Red Maple: an increase of over eight-fold. This increase is primarily attributed to improved reconnaissance efforts. Previously, stands of red maple were commonly combined with the northern hardwood type. Current inventory efforts place a greater emphasis on classifying cover types based dominant tree species. Red maple is expected to increase in acreage over the next 15 year period, especially as other species replace stands of swamp hardwoods (see below) and as some red oak reforestation efforts yield variable results.
- d. Black Spruce and Tamarack: increases of over two-fold per each type. Similar to red maple, these types were commonly combined and classified as swamp conifer. Current inventory efforts emphasize the separation of each species into individual cover types.
- e. Swamp Hardwood: an increase of nearly two-fold. Again, similar to red maple, many stands are relatively small in size and were commonly combined

with the northern hardwood type. While the total acreage has increased over time, swamp hardwood (dominated by black ash) will soon be impacted by the Emerald Ash Borer. Unfortunately, nearly all of the ash on the County Forest is expected to die as a result of inevitable EAB infestations. The total acreage of swamp hardwood is expected to decrease significantly and rapidly over the next 15 year period.

2. Cover Type Acreage Decreases:

- a. Northern Hardwoods: a decrease of about 25% since 1995. As noted above, this decrease is primarily attributed to improved reconnaissance efforts. In the past, stands of red maple and swamp hardwoods were commonly combined with surrounding stands of northern hardwood. Most of these stands have since been separated and typed accordingly, resulting in a decrease in northern hardwood acreage. However, northern hardwood acreage is expected to increase slightly over the next 15 year period. Primarily as some early successional stands begin to succeed to more shade tolerant species, and as some stands of red oak (developing on high quality sites, where competition from sugar maple is a limiting factor) are managed to naturally convert to maple dominated cover types.
- b. Red Oak: a decrease of about 10%. The many challenges of regenerating red oak have been outlined throughout this Plan (see Chapter 800). As mature and overmature stands approach rotation age, the general goal is to regenerate new stands of red oak. Regenerating new stands of red oak will arguably be the biggest reforestation challenge on the County Forest, as well as throughout its entire northern range, over the next 15 year period. While the goal is to maintain as much of the red oak type as possible, red maple, aspen and northern hardwood will most likely increase in acreage if red oak regeneration activities prove unsuccessful.
- c. Jack Pine: a decrease of nearly 50%. Significant jack pine budworm defoliation and subsequent replanting to red pine is the primary reason for the decrease over the past 40+ years. However, efforts are underway to increase jack pine acreage within the BBMA. As a result, the total amount of jack pine

is expected to increase over the next 15 year period (see Chapter 4000 for more information on barrens management).

- d. Scrub Oak: a decrease of over 40%. Numerous stands of unproductive or marginally productive stands of scrub oak were previously converted to red pine or jack pine. However, the current management objective for the scrub oak type is to maintain as many acres as feasible. As a result, scrub oak acreage is expected to remain relatively constant over the next 15 year period.
- e. White Birch: a decrease of nearly 90%. No other cover type has decreased in the past 40+ years more than white birch. The reasons for the decrease are numerous, some of which include: lack of intense fires and similarly effective site preparation activities; excessive herbivory, i.e. deer browse; heavy competition from other early successional species, like aspen; natural progression to more late successional species, like sugar maple; improve reconnaissance (some stands were previously incorrectly typed as birch); excessive and rapid mortality (some mature stands declined rapidly, prior to management, and, as a result, were not able to re-establish as a dominant stand). While white birch remains a significant component in many stands, it will most likely never dominate as in the past.

2040.2 TIMBER HARVESTING

Timber harvest goals, accomplishments, summaries and associated analysis are addressed in the Annual Accomplishment Report and Workplan. Please refer to the Accomplishment Report for current and historical timber harvest acreage, including timber sale establishments, sales sold, active and closed and volumes harvested. The Accomplishment Report can be found on the Department's website.

Table 2000.3 illustrates projected long-term (15-year) sustainable harvest goals on the County Forest (CY 2021 through 2035). The average annual sustainable harvest goals are also included. It's important to note that this table is included as a reference. Sustainable harvest goals, both long and short-term, are generated based on existing stand information

and management strategies/direction for the County Forest. Actual annual sustainable harvest goals will be addressed in the Workplan.

Table 2000.3: Total Sustainable Timber Harvest Goals (2021-2035)

Cover Type	Harvest Total (acres)	Harvest Average (acres/yr)
Aspen	23,550	1,570
Red Pine	14,775	985
Northern Hardwood	11,400	760
Red Oak	7,500	500
Scrub Oak	2,850	190
Jack Pine	2,400	160
Swamp Hardwood	1,350	90
Swamp Conifer	1,200	80
White Pine	1,125	75
Red Maple	750	50
Fir/Spruce	450	30
White Birch	155	10
Total	67,505	4,500

2040.3 ACCESS MANAGEMENT (RECREATION AND ROADS)

Access related issues, including road and recreational use, are also summarized in the various supplemental documents i.e. Annual Accomplishment Report and Workplan. Access use summaries can include: trail use data (the Department has installed numerous infrared trail counters at the more popular rec locations to better understand use rates and patterns); road and/or trail maintenance projects; road and/or trail development and/or improvement projects; approved events; access and similar use permits; and use agreements. The Accomplishment Report and Workplan can be found on the Department’s website.

2040.4 OTHER

In addition to the items related to cover types, timber harvesting and access management, many other programs and/or projects are monitored by the Department, both short and long term, and summarized in the Annual Accomplishment Report and/or Workplan. Such monitoring efforts include, but are not limited to: continuous forest inventory (CFI); natural regeneration (FRM); artificial reforestation; other reforestation projects (i.e. site preparation,

deer abatements, prescribed fire, etc.); compartment and stand level reconnaissance; various recreational uses; invasive species control; and wildlife monitoring projects (i.e. breeding bird surveys, barrens surveys, etc).