



## **BAYFIELD COUNTY FORESTRY AND PARKS DEPT.**

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### **BAYFIELD COUNTY FOREST ANNUAL WORK PLAN**

January 1 through December 31, 2012

The Bayfield County Forest Work Plan for the 2012 calendar year gives direction and meaning to the Forestry and Parks budget, further defines and supplements the Comprehensive Fifteen Year Land Use Plan, and emphasizes current needs of the County Forest. **This plan complies with Chapter NR47 Wisconsin Administrative Rules for the administration of the County Forest Administrator Grant Program.**

#### **SUSTAINABLE TIMBER HARVEST**

The primary mission of the Bayfield County Forestry and Parks Department is to manage, conserve, and protect the natural resources of the County Forest. Multiple use and sustainable forest management practices will be utilized to provide a wide variety of forest products and amenities for current and future generations.

Timber harvests are important for the economic well being of Bayfield County, as well as for the health and vigor of the forest. One of the objectives of timber management is to produce a perpetual sustained yield of forest products. In part, this is realized through the analysis and scheduling of forest stands and, ultimately, the development of sustainable annual harvest goals. Professional implementation of proper forest management and harvesting techniques is essential. Existing reconnaissance data, along with thorough field inspections conducted by department and DNR foresters, will be used to determine which stands are ready for treatment. In addition, the long term monitoring of stands that have received treatment is crucial in determining the success of past management practices, as well as the development and implementation of future prescriptions.

The sustainable allowable harvest goal for the Bayfield County Forest in the calendar year 2012 is 5,328 acres. This represents a 220 acre increase (roughly 4.5%) over the harvest goal for 2011 and a 1,043 acre increase (roughly 24%) over the goal set for 2010. Table 1 displays the sustainable harvest goal (acres) per primary timber type for 2012. The goal for 2011 is also included for comparison:

**Table 1: 2012 Sustainable Harvest Goal (acres)**

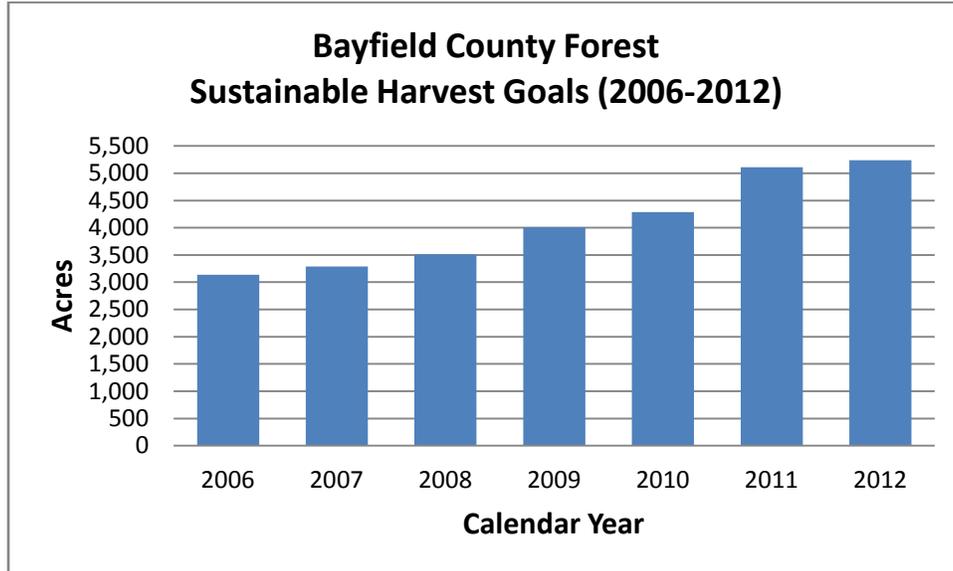
<b>Timber Type</b>	<b>2011</b>	<b>2012</b>
Aspen	1,189	1,235
Northern Hardwood	914	1,185
Red Oak	808	763
Paper Birch	200	100
Scrub Oak	85	140
Red Pine	978	991
Jack Pine	516	504
White Pine	50	100
Swamp Conifer	142	130
Swamp Hardwood	126	120
Fir/Spruce	100	60
Total	5,108	5,328

One of the goals in managing the forest is to strive for a regulated, even flow of treatments, equally distributed over the landscape. However, sustainable harvest goals typically fluctuate slightly from year to year. Most fluctuations are explained by the irregular distribution of age classes over the entire forest and, subsequently, when they are ready for management. Among other things, fluctuations are also a result of a change in management direction for individual timber types, responses to natural disturbances or other unforeseen natural events, a relatively poor response in growth from previous management, or modifications in response to accomplishments from the previous year(s).

On the Bayfield County Forest, the primary annual differences in sustainable harvest goals are a result of a variety of factors, some of which include: improved reconnaissance information, a significant increase in the number of stands reaching management age (particularly in the aspen and red pine types), the inclusion of harvest goals for the swamp hardwood and swamp conifer timber types, adjustments in the management approaches of the aspen, red oak and northern hardwood timber types, and modifications as a result of accomplishments from 2009 through 2011.

Figure 1 displays the sustainable harvest goals over the past seven years. Since 2006, the sustainable harvest goal has increased approximately 70%; from 3,134 acres in 2006 to 5,328 acres in 2012. Note: in 2011, one full time forester position was added to the staff, in part, to assist in the management of the increase in the sustainable harvest acres, thus better maximizing the full potential of the forest.

**Figure 1:**



## **FOREST INVENTORY**

Correct, up-to-date stand information is imperative in the development of accurate short and long term sustainable harvest goals. There is a direct correlation between the quality and accuracy of the reconnaissance data and the ability for forest managers to confidently develop precise short and long term sustainable harvest goals. The accuracy of any sustainable harvest goal is only as good as the data from which it was derived. Therefore, it is important to update a certain level of stand information on an annual basis.

In 2012, approximately 10,000 acres of County Forest will be re-inventoried. Most will be in the form of entire compartment updates, but priority stands will also be identified. Prior to 2010, the direction was to re-inventoried approximately 10% of the forest each year, or roughly 17,000 acres. The new direction will to establish a 15 year re-inventoried cycle. Since 2001, 141 of 202 compartments, totaling over 113,000 acres have been updated. The goal is to re-inventoried the remaining 61 compartments over the next 5 to 6 years. Once completed, it will put the department on pace to achieve the 15 year re-inventoried goal. At which time, a 15 year, modified re-inventoried cycle will be put in place. In the meantime, inventory priorities will be placed on forest compartments that contain a larger percentage of old data ( $\geq 20$  years old), as well as compartments that contain a larger percentage of stands prescribed for management in the near future.

Individual timber types or stands of certain priority types may take precedence over the inventory of an entire compartment. In timber types such as red oak, where a significant portion of the type occurs within the 80 to 90 year age class, it will become increasingly important to determine which stands are in greater need of management. Obtaining good reconnaissance

information and the development of a priority management system on all mature red oak will be a priority in 2012.

## REFORESTATION

Reforestation, be it natural or artificial, is a core building block of forest sustainability and a fundamental component of any forest management program. A successful reforestation program provides numerous benefits, some of which include: the restoration of forest productivity, fertility and environmental function; the assurance of a perpetual, sustainable supply of forest resources and amenities for future generations; the protection of soil and water quality; and the establishment and development of quality wildlife habitat. Table 2 displays the reforestation efforts that are planned for 2012:

**Table 2: Bayfield County Forest 2012 Reforestation Program (acres)**

Year	Planting			Seeding	Site Preparation				Maintenance		Monitoring
	Red Pine	Jack Pine	White Pine	Jack Pine	Trench	Fire Plow	Scarify	Spray	Rx Fire	Spray	Survival Counts
2012	279	107	274	0	0	120	69	728	113	100	3,000
5 yr. avg	368	226	34	0	588	79	28	385	36	269	2,111

Spring Planting: Tree species planted during the 2012 season will be as follows: approximately 215,000 Red Pine, 107,000 Jack Pine, and 274,000 White Pine on 660 acres. All seedlings are containerized stock and will be hand planted by contract planters.

Site Preparation and Release: Site preparation will take a slightly different direction in 2012 when compared to the 5 year average. In 2012, a majority of the emphasis will be on aerial spraying and fire plowing, with 0 acres scheduled for disc trenching. The primary reasons for the changes are as follows: In 2011, disc trenching was increased by almost 100%, in part, to incorporate the economy of scale (the larger the contract, the cheaper the cost per acre); also, the department is starting to move towards the seeding of Jack Pine, instead of planting. Essentially, there are three primary steps to seeding jack pine: site preparation, spraying and the aerial distribution of seed. All three of these steps are typically contracted.

Approximately 120 acres will be fire-plowed for eventual planting to Red Pine and 69 acres will be Bracke scarified for planting to Jack Pine. Approximately 560 acres will be aerial sprayed for eventual aerial Jack Pine seeding (most will occur in the Barnes Barrens Management Area). Approximately 168 acres will be aerial sprayed for future planting to Red Pine, while approximately 100 acres will be aerial sprayed for red pine release.

Natural Regeneration: Thousands of acres of natural regeneration will occur on a variety of forest types. The exact amount is solely dependent on the total number of acres harvested in previous years. Forest types such as northern hardwoods and aspen regenerate naturally via seed, stump sprouting and/or coppicing (vegetative sprouting from existing root system) and require very little additional input from the department. However, the natural regeneration of

hardwood forest types such as red oak and paper birch do require additional departmental maintenance efforts. Examples of additional inputs include: pre or post sale site scarification to prepare a favorable seed bed and reduce competition, pre or post sale burning to reduce competition from undesirable tree seedlings and prepare favorable seedbeds, and deer browse protection i.e. fencing, repellents, etc. to improve the tree seedlings chance of survival. These additional inputs occur when opportunities arise and are treated on a case by case basis.

Seedling Counts: All planting sites and many areas that were regenerated naturally require survival counts. Data collected from the counts are used to determine stocking levels of desired tree species and, ultimately, to evaluate the success rate of the reforestation attempt. Seedling counts are administered at one, two, three and five years after the regeneration attempt on most planted sites. Seedling counts on naturally regenerating hardwood stands are administered beginning at years two or three and may include an additional count at year seven. In 2012, seedling counts will be administered on roughly 3,000 acres of planted and naturally regenerated sites.

#### Prescribed Fire

Prescribed fires will be used to maintain portions of the Pine Barrens in the Township of Barnes. Approximately 240 acres will be treated, half in the spring and half in the fall. Prescribed fires will also be used to facilitate oak regeneration on approximately 113 acres. Seedling counts are administered prior to burning and will provide important baseline information used to determine the effectiveness of the treatment.

## **WILDLIFE**

A number of wildlife projects will again be undertaken in 2012. The majority of wildlife habitat improvement work conducted on County Forest land will be accomplished utilizing funding from Wisconsin DNR grant programs, specifically, the County Conservation Aids and Nickel-an-Acre programs. The Nickel-an-Acre program reflects a change from the previous Dime-an-Acre funding. As indicated in the name, the program funding was cut in half starting in 2010 and will continue to be funded at a nickel an acre into the foreseeable future. The County Conservation Aid grant requires a 50% County match on eligible projects.

The Conservation Aids project for 2012 have yet to be determined. There is approximately \$4,218 available for eligible projects. Additional monies may also be available, as determined by the total amount of unallocated funds.

The Nickel-an-Acre grant totals \$8,467. This grant has been used to fund a variety of County Forest wildlife projects in the past. Potential projects for 2012 could include, but are not limited to:

- Hunter walking trail repair, clearing, and mowing.
- Site prep and seeding for jack pine in the Barnes Barrens Management Area.
- Herbicide for wildlife opening maintenance.
- Wildlife habitat development/improvement.
- Mechanical site prep for white birch regeneration.
- Prescribed burning of wildlife openings and oak regeneration areas.

- Fish habitat projects.
- Habitat projects on old homesteads.
- Wildlife monitoring.
- Breeding bird surveys.
- Land acquisition.
- Invasive species eradication.
- Deer exclosures for red oak regeneration (fencing).

## **ACCESS MANAGEMENT**

The Access Management Plan will continue to be implemented in accordance with the Bayfield County Forest Comprehensive Land Use Plan. Criteria for classification of roads will be clarified and then applied when designating existing and planned transportation networks. The access management plans for the Cable and South Barnes blocks are complete. Access management for the remainder of the County Forest will begin in 2012, for eventual incorporation into the plan.

The Forestry Department will continue to maintain 36.09 miles of Primary Forest roads, for which we receive DOT County Forest Road Aids. The Department will also continue identify, plan and/or develop additional forest roads and trails, as the need arises, for later entry into the County Forest Road program.

## **BAYFIELD COUNTY FOREST PLAN**

The existing County Forest Comprehensive Land Use Plan for the period 2006 – 2020 will be amended to reflect changes and/or updates. Some items that may require updating in 2012 include, but are not limited to:

- Access management.
- Integrated Resource Management Unit (IRMU) summaries.
- IRMU boundaries.
- Barnes Barrens Management Plan summary.
- Timber sale contract language.
- Firewood permit language.
- Timber sale rutting policy.
- Forest certification (addition of FSC).
- Camping permit.

## **OTHER ACTIVITIES**

### Recreation:

The department will continue to work with the County Tourism and Recreation Department and interested user groups regarding recreational activities occurring on the County Forest. The demand for recreational use on County Forest land continues to increase. In 2011, the Committee approved numerous re-routes of snowmobile and ATV trails, the construction of a

new mountain bike trail network and improvements to existing cross country ski trails. Requests for new, or improvements to existing, motorized and non-motorized trail systems are expected to increase in 2012 and beyond. Requests for additional trails will be treated on a case by case basis, as per the Access Management Plan.

Trail counters and a voluntary donation tube were placed on the Jerry J. Jolly/Pike's Creek trail. The counters were strategically placed in an attempt to acquire information on how often the trail is being used. The data received from these counters will provide the County with valuable information needed to determine future direction. Counters will also be used to monitor other recreational locations in 2012.

The lost creek falls trail will need some minor attention. The trail needs to be better defined and signed, including some brush work and the removal of a few hazard trees, and possibly re-routed in areas to avoid sensitive soils.

#### Insects and Disease:

The reforestation of areas killed by the Two-lined Chestnut Borer and Jack Pine Budworm were completed in 2011. The Department is continuing to monitor the effects of forest insects such as the Jack Pine Budworm, Two-Lined Chestnut borer, Emerald Ash borer, and Gypsy Moth. If any additional sites containing a significant amount of damage are discovered, they will be promptly managed. Also, as new threats are encountered, the Department may need to alter management plans accordingly.

The most notable "new" potential future threat regarding the overall health of the forest is the discovery of the Gypsy Moth. Gypsy Moth numbers have been observed in very high numbers in the Bayfield Peninsula. The greatest numbers have been found along higher elevations located in the general vicinity of Jammer Hill and Echo Valley Roads. Red Oak and Aspen are their preferred primary food sources and are the most susceptible to potential mortality, especially the suppressed and over mature individuals. The high egg mass numbers indicate that a severe defoliation event is expected to occur in 2012, and, potentially, into the next few years (unless Mother Nature intervenes). As a result, all Red Oak management may be suspended in this area (IRMU 8), until the defoliation event has been reduced to a manageable level (most likely a 3 year furlough). In response to reducing oak management in IRMU 8, the sustainable goal in all other units may be adjusted accordingly.

The Department is currently working with the DNR to determine the best course of action regarding general forest management practices in the face of a threatening Gypsy Moth defoliation event, in particular, the management of the red oak type.

#### Land Acquisition:

The department will continue efforts to acquire private properties on a willing seller, willing buyer basis when advantageous to the long term goals of Bayfield County.

*Submitted by Jason Bodine, Bayfield County Forest Administrator, December 14, 2011.*