

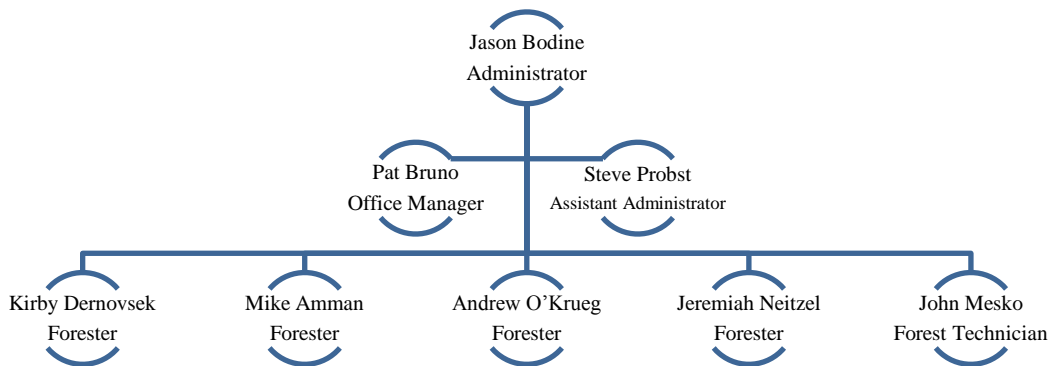
**BAYFIELD COUNTY FORESTRY AND PARKS DEPARTMENT  
ANNUAL ACCOMPLISHMENT REPORT  
FOR THE CALENDAR YEAR  
2011**

**FORESTRY COMMITTEE**

Shawn Miller, Chair  
Marco Bichanich, Vice-Chair  
William Kacvinsky

Kenneth Jardine  
John Bennett

**DEPARTMENT STAFF**



**LAND AREA**

The present County Forest acreage is as follows:

Barnes	39,357.36	Cable	5,556.33	Oriente	4,720.00
Bayfield	32,792.56	Clover	5,386.57	Port Wing	8,876.18
Bayview	12,951.56	Hughes	24,056.56	Russell	8,570.82
Bell	14,585.03	Iron River	6,042.22	Tripp	6,543.77

Official County Forest Acreage: 169,438.96

There are approximately 3,600 acres of County tax title lands, not including lots and small parcels, in addition to the above listed County Forests Lands. On occasion, the Forestry Department will monitor these parcels for land sales and timber sales, checks for trespass, and negotiate road easements and sand and gravel permits.

**COMPREHENSIVE LAND USE PLAN**

A comprehensive land use plan that will guide the management of the County Forest for the next 15 years was developed in 2005 and approved by the County Board in January 2006. This plan will be periodically reviewed and amended as the need arises. Amendments must be approved by the

County Board of Supervisors. The Barnes Barrens Management Plan and Green Tree Retention Guidelines were approved in 2011, though no amendments were made to the plan.

## FOREST MANAGEMENT

The forest management program is one of the most significant responsibilities of the department. There are three major facets of the program: 1) forest management (timber sale establishment), 2) reforestation, and 3) forest reconnaissance. The quality and quantity of goal accomplishments, as well as the sold value of timber sales, are some of the best indicators used to evaluate performance. Below are summaries of the major forest management priorities.

- 1) Sustainable Harvest Goals: sustainable timber harvest goals for every major forest type are calculated based upon sound silvicultural guidelines and principles. Table 1 displays the sustainable harvest goals and accomplishments of the timber sale program by major forest type since 2007. In summary, a total of 4,990 acres were managed in 2011 (an increase of over 36% from 2010). The significant increase in accomplishment is a direct result of adding a new forester position in 2011.

**Table 1: Bayfield County Forest Sustainable Harvest Goals and Accomplishments (acres)**

Species	2007		2008		2009		2010		2011		Average	
	Goal	Accomp.	Goal	Accomp.	Goal	Accomp.	Goal	Accomp.	Goal	Accomp.	Goal	Accomp.
Aspen <sup>1</sup>	620	729	620	716	850	928	870	853	1,189	1,191	830	883
Nor. Hdwd	700	720	800	803	900	721	900	418	914	973	843	727
Red Oak	550	592	550	533	670	554	670	607	808	798	650	617
Paper Birch	200	79	200	60	200	16	200	156	200	38	200	70
Scrub Oak	85	90	85	89	85	15	85	167	85	188	85	110
Red Pine	584	599	752	731	749	572	870	743	978	987	787	726
Jack Pine	350	286	354	353	405	413	540	518	516	480	433	410
White Pine	100	38	50	6	50	76	50	15	50	35	60	34
Fir/Spruce	100	6	100	0	100	33	100	180	100	140	100	72
Swamp Conifer <sup>2</sup>	0	0	0	0	0	0	0	0	142	160	28	32
Swamp Hdwd. <sup>2</sup>	0	0	0	0	0	0	0	0	126	0	25	0
Total	3,289	3,139	3,511	3,291	4,009	3,328	4,285	3,657	5,108	4,990	4,040	3,681

<sup>1</sup> Greater accomplishments are a result of managing some of the backlog

<sup>2</sup> Timber types included in goals starting in 2011

Table 2 displays a summary of how the accomplishments for the sustainable timber harvest program are allocated. In general, most of the harvest goal is in the form of a timber sale, however, there are occasions when a stand is updated and managed at a later date. Updates typically occur when a stand has not attained the predicted amount of growth in between harvests, when the data describing the stand is incorrect, or when the stand is removed from management due to a restrictive feature i.e. riparian buffers or inoperable slopes. The differences in total accomplishments displayed in Tables 1 and 2 are a result of managing non-forested stands i.e. grass or upland brush. These stands show up in the total accomplishments, but not in the goals developed for forested stands.

**Table 2: Bayfield County Forest Sustainable Harvest Summary (acres)**

<b>Year</b>	<b>Management Goal</b>	<b>Timber Sale Establishment</b>	<b>Stand Update<sup>1</sup></b>	<b>Total Accomplishments</b>
2007	3,289	2,950	221	3,171
2008	3,511	2,736	573	3,309
2009	4,009	3,157	243	3,400
2010	4,285	3,331	326	3,657
2011	5,108	4,491	499	4,990
Average	4,040	3,333	372	3,705

<sup>1</sup> Stands are updated, in part, due to inaccuracies in the data or insufficient growth for management.

- 2) **Timber Sale Program:** Bayfield County offers two timber sale lettings per year, one in the spring and one in the fall. Table 3 displays the summary of timber sale offerings since 2007. This table describes the total number of sales sold per year, as well as total acres, the total value of the winning high bids, the average bid value per acre and total revenues received from the sale of timber during each calendar year.

In summary, the total receipts from timber harvested during calendar year 2011 amounted to \$2,477,066. During this period, the department awarded 54 new timber sale contracts, covering 4,156 acres with an estimated value of \$3,629,330. The total acres sold increased by over 28% when compared to the 5 years average, while the total winning bid values increased by nearly 39% (over 50% from 2010)! On average, bid prices were up by approximately 17% from 2010.

**Table 3: Bayfield County Forest Timber Sale Summary**

<b>Calendar Year</b>	<b>Sales Offered</b>	<b>Acres Offered</b>	<b>Sales Sold</b>	<b>Acres Sold</b>	<b>Acres Not Sold</b>	<b>Timber Sale Bid Values</b>	<b>Bid Value per Acre</b>	<b>Timber Revenues</b>
2007	59	3,771	45	3,157	614	\$2,140,897	\$678	\$2,167,156
2008	58	3,546	55	3,507	39	\$2,381,513	\$679	\$2,706,360
2009	45	3,297	42	3,100	197	\$2,510,601	\$810	\$2,305,259
2010	40	3,218	40	3,218	0	\$2,404,178	\$747	\$2,047,663
2011	54	4,156	54	4,156	0	\$3,629,330	\$873	\$2,477,066
Average	51	3,458	46	3,246	213	\$2,613,304	\$757	\$2,306,610

Table 4 displays the total volume of timber harvested from Bayfield County Forest timber sales from 2007 through 2011. Pulp (cords) and logs (Mbf – thousand board feet) are displayed for each primary timber type. For the sake of comparison, all tonnage sales (chips) were converted to cords (approximately 20% off all timber sales are sold by the ton). The table also displays the total amount of timber sale revenue received each year. In summary, there was approximately 6% more total volume harvested in 2011 when compared to 2010.

**Table 4: Bayfield County Forest Timber Harvest Volume Summary (pulp in cords and logs in thousand board feet)**

Species	2007		2008		2009		2010		2011		Average	
	Pulp	Logs	Pulp	Logs	Pulp	Logs	Pulp	Logs	Pulp	Logs	Pulp	Logs
Aspen	15,598	0	19,441	0	15,048	0	15,041	3	14,570	0	15,940	1
Mx. Hardwood <sup>1</sup>	18,062	182	21,609	181	17,470	182	16,735	261	17,549	212	18,285	204
Oak	9,489	333	14,886	643	6,678	516	9,807	782	11,334	1,221	10,439	699
Paper Birch	2,477	18	2,231	26	901	7	736	43	766	13	1,422	22
Basswood	1,126	119	1,161	159	1,204	525	1,439	116	1,197	135	1,225	211
Red Pine	8,253	0	13,052	0	6,692	0	4,554	0	8,873	16	8,285	3
Jack Pine	10,945	0	9,218	0	8,410	0	6,572	0	4,533	0	7,936	0
White Pine	445	0	1,247	0	715	0	651	0	137	0	639	0
Other Conifer <sup>2</sup>	239	0	521	0	500	0	302	0	669	0	446	0
Fuelwood <sup>3</sup>	495	0	771	0	2,017	0	1,730	0	1,512	0	1,305	0
<b>Total</b>	<b>67,129</b>	<b>652</b>	<b>84,138</b>	<b>1,009</b>	<b>59,633</b>	<b>1,230</b>	<b>57,566</b>	<b>1,205</b>	<b>61,139</b>	<b>1,597</b>	<b>65,921</b>	<b>1,139</b>
<b>Revenue</b>	<b>\$2,167,156</b>		<b>\$2,706,360</b>		<b>\$2,305,259</b>		<b>\$2,047,663</b>		<b>\$2,477,066</b>		<b>\$2,306,610</b>	

<sup>1</sup> Maple, yellow birch, ash

<sup>2</sup> Spruce, Fir, Tamarack

<sup>3</sup> Mixed species used in wood boilers

3) **Reforestation Program:** reforestation is a fundamental component of any sustainable forest management program. In the spring of 2011, 575 acres were planted with containerized stock. Overall, nearly 240,000 red pine, 112,000 jack pine, 51,000 tamarack and white spruce and 16,000 white pine seedlings were planted. Also, nearly 1,200 acres were prepared for planting or seeding. The DNR fire plowed 88 acres, 900 acres were disc trenched and 186 acres were treated with herbicide. In addition, 324 acres of plantations were released from competition with herbicide. A 21 acre prescribed burn was implemented to promote red oak regeneration and over 1,400 acres of previous reforestation attempts were monitored. Two deer exclusions fences are also maintained to monitor the effects of deer browsing on regenerating red oak, paper birch and white pine. Table 5 displays the summary of the reforestation program from 2007 through 2011.

**Table 5: Bayfield County Forest Reforestation Program Summary 2007 - 2011 (acres)**

Year	Planting				Site Preparation				Maintenance		Monitoring
	Red Pine	Jack Pine	White Pine	Other*	Trench	Fire Plow	Scarify	Spray	Rx Fire	Spray	Survival Counts
2007	406	23	144	0	535	93	19	308	97	0	2,121
2008	378	207	24	0	796	88	0	442	0	0	1,683
2009	487	415	0	0	726	72	0	348	40	0	2,652
2010	367	196	0	0	363	118	0	420	42	305	2,183
2011	319	153	35	68	900	88	0	186	21	324	1,424
Avg	391	199	41	14	664	92	4	341	40	126	2,013

\* In 2011, tamarack and white spruce.

- 4) Forest Reconnaissance Program: forest reconnaissance, or updating stand information, is also a vital component of the forest management program. Accurate, up-to-date stand information is essential in the development of viable 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.

From 2003 through 2008, the direction of the department was to update approximately 10% of the acreage base (17,000 acres), primarily through entire compartments, on an annual basis. Starting 2009, the direction was changed to 10,000 acres per year. Through 2011, approximately 70% of the forest (over 117,000 acres) has been updated.

In addition to compartment updates, 429 acres of individual stands were also updated during the timber sale establishment process. Most updates were needed to correct inaccurate data or to remove a stand from the harvest schedule (i.e. riparian buffer or sensitive site).

Table 6 displays the summary of compartment/stand updates from 2007 through 2011.

**Table 6: Bayfield County Forest Stand Updates (acres)**

<b>Year</b>	<b>Goal</b>	<b>Accomplishment</b>
2007	17,000	11,002
2008	17,000	9,807
2009	10,000	2,872
2010	10,000	4,079
2011	10,000	9,728
Average	12,800	7,498

## **ROADS AND TRAILS**

The forestry department maintains over 36 miles of primary gas tax roads on the forest. These roads serve as primary access routes into portions of the county forest. A few of the roads located in the Towns of Barnes and Hughes also play an integral role in the wildfire protection plan that was developed in 2006. The department performs routine annual inspections on every mile of primary road to monitor for both road quality and invasive species.

Trails on the county forest are used for a variety of recreational purposes. Cross country skiing, mountain biking, hiking and dog sledding, as well as snowmobile and ATV use are some of the activities permitted on designated county forest trails. In addition to daily general recreational use, trails on the county forest also play an integral role in numerous popular organized events. Such events include, but are not limited to, the American Birkebeiner, Apostle Islands Sled Dog Race, Chequamegon Fat Tire Festival and the Cable Area Off-Road Classic mountain bike race. In 2011, there were a total of 10 organized events that utilized portions of trails located on the Bayfield County Forest.

A new single track mountain bike trail was approved for development near Mt. Ashwabay in the Town of Bayfield and Bayview. Once completed, the network will consist of approximately 20-30 miles of beginner to advanced level trails.

Table 7 displays the approximate number of miles per designated trail type that are currently located on county forest land.

**Table 7: Summary of Designated Recreational Trails on Bayfield County Forest land (miles)**

Snowmobile	Walking	Dog Sled	ATV	Cross-Country Ski	Mountain Bike	Total
89	79	44	38	31	21	302

The Department staff works closely with all recreational user groups on the establishment and/or maintenance of trail systems. Recreational use agreements with organized clubs continue to be pursued at every opportunity.

### **PERMITTED USES**

Permits are issued by the Forestry and Parks Department for sand and gravel, right-of-ways, timber storage, private property access, firewood, miscellaneous forest products, and recreational activities.

Table 8 displays a summary of permits issued on the forest from 2007 through 2011. Firewood permits comprise the vast majority of the total permits issued on an annual basis. In 2011, a record 503 firewood permits were issued, an increase of nearly 95% since 2007. Firewood permits are now available online.

**Table 8: Bayfield County Forest Summary of Issued Permits**

Year	Fire Wood	Balsam Boughs	Cones	Christmas Trees	Access	Disabled Hunting	Storage
2007	259	12	3	2	2	3	1
2008	360	8	0	1	2	3	1
2009	423	5	1	1	0	3	1
2010	436	5	1	1	3	3	2
2011	503	7	1	6	9	10	2
Avg.	370	8	1	2	3	4	1

Sand and gravel is extracted and sold from county managed pits, to be used on approved municipal projects. All revenues received from the sale of sand and gravel is deposited in a non-lapsing account for eventual site reclamation.

Table 9 displays the total amount of sand and gravel and revenues received from 2007 through 2011.

**Table 9: Bayfield County Forest Sand and Gravel Summary**

<b>Year</b>	<b>Yards</b>	<b>Value</b>
2007	10,335	\$5,167.50
2008	6,120	\$3,060.00
2009	300	\$150.00
2010	12,589	\$9,441.75
2011	751	\$563.25
Avg.	6,019	\$3,676.50

## **WILDLIFE HABITAT IMPROVEMENT/MONITORING**

Forest openings, dominated by forbs and grasses, are important habitat for a great diversity of wildlife species. Since the mid 1970's, numerous, small forest openings have been maintained on the forest to encourage this diversity of habitat. The openings are relatively small in size (average about 1 acre) and are spread throughout the county forest (although they are more numerous in the Bayfield peninsula). Each opening is treated about every five years to discourage encroaching woody vegetation. In 2011, 46 wildlife openings, totaling 53 acres were maintained by tractor mowing. An additional 52 openings, totaling 24 acres, were treated by hand, using a mix of herbicide and cutting. Table 10 displays a summary of the wildlife opening maintenance program from 2007 through 2011.

**Table 10: Bayfield County Forest Summary of Maintained Wildlife Openings by Treatment**

<b>Year</b>	<b>Mowed Number</b>	<b>Mowed Acres</b>	<b>Hand Treated<sup>1</sup> Number</b>	<b>Hand Treated<sup>1</sup> Acres</b>	<b>Total Number</b>	<b>Total Acres</b>
2007	39	36.9	81	85.2	120	122.1
2008	44	50.0	77	59.6	121	109.6
2009	62	69.5	53	24.2	115	93.8
2010	45	44.3	50	57.2	95	101.5
2011	46	53.2	52	24.2	98	77.4
Average	47	50.8	63	50.1	110	100.9

<sup>1</sup> using a mix of herbicide and hand cutting

In 2008, a breeding bird monitoring project was developed for the county forest. In 2008 and again in 2009, 350 permanent diurnal and 40 nightjar points were completed. An additional 297 diurnal and 17 nightjar points were taken in 2010. The remaining portion of the forest was completed in the spring of 2011. In total, 1,200 diurnal and 200 nightjar points have been taken. The collection of field data is now complete. We will be working with the DNR and other resource professionals to analyze the data. The results will be used to measure bird/habitat associations, anticipate how forest management may influence these relationships and predict general species occurrence.