

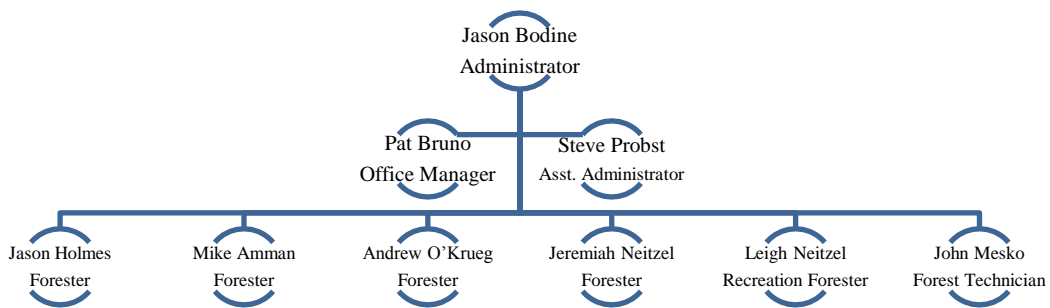
**BAYFIELD COUNTY FORESTRY AND PARKS DEPARTMENT  
ANNUAL ACCOMPLISHMENT REPORT  
FOR THE CALENDAR YEAR  
2013**

**FORESTRY AND PARKS COMMITTEE**

Shawn Miller, Chair  
Marco Bichanich, Vice-Chair  
Harold Maki

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 3,300 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 and Parks Department will monitor these parcels for land and/or timber sales, monitor for potential trespass issues, and negotiate road/utility 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.

Revisions to Chapter 700 (Access Management) were approved by the County Board in 2013. No other revisions 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 (primarily 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 Timber 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 2008.

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

Species	2008		2009		2010		2011		2012		2013		Average	
	Goal	Accomp.	Goal	Accomp.	Goal	Accomp.	Goal	Accomp.	Goal	Accomp.	Goal	Accomp.	Goal	Accomp.
Aspen <sup>1</sup>	620	716	850	928	870	853	1,189	1,191	1,005	1,230	1,170	1,151	951	1,012
Nor. Hdwd	800	803	900	721	900	418	914	973	1,321	1,349	970	1,069	968	889
Red Oak	550	533	670	554	670	607	808	798	763	577	795	680	709	625
Paper Birch	200	60	200	16	200	156	200	38	100	132	50	15	158	70
Scrub Oak	85	89	85	15	85	167	85	188	140	142	215	254	116	143
Red Pine	752	731	749	572	870	743	978	987	991	917	900	952	873	817
Jack Pine	354	353	405	413	540	518	516	480	504	493	275	274	432	422
White Pine	50	6	50	76	50	15	50	35	100	93	120	169	70	66
Fir/Spruce	100	0	100	33	100	180	100	140	60	25	130	119	98	83
Swamp Conifer <sup>2</sup>	0	0	0	0	0	0	142	160	130	138	140	141	69	73
Swamp Hdwd. <sup>2</sup>	0	0	0	0	0	0	126	0	120	87	50	41	49	21
Total	3,511	3,291	4,009	3,328	4,285	3,657	5,108	4,990	5,234	5,183	4,815	4,865	4,494	4,219

<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

A total of 4,865 acres were managed in 2013. This represents an increase of roughly 42% when compared to the average accomplishments prior to 2011. The significant increase in accomplishment is a direct result of adding a new forester position in 2011.

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. On average, approximately 90% of total accomplishments are in the form of a timber sale.

Table 2 displays a summary of how the accomplishments for the sustainable timber harvest program are allocated.

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

Year	Management Goal	Timber Sale Establishment	Stand Update <sup>1</sup>	Total Accomplishments
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
2012	5,234	4,588	595	5,183
2013	4,815	4,348	517	4,865
Average	4,494	3,775	459	4,234

<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 2008, including the total number of sales sold per year, 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.

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

Calendar Year	Sales Offered	Acres Offered	Sales Sold	Acres Sold	Acres Not Sold	Timber Sale Bid Values	Bid Value per Acre	Timber Revenues
2008	58	3,546	55	3,507	39	\$2,381,513	\$679	\$2,621,308
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
2012	53	4,782	53	4,782	0	\$4,900,194	\$1,025	\$2,696,756
2013	54	4,277	53	4,179	98	\$3,616,758	\$865	\$3,904,104
Average	51	3,879	50	3,824	56	\$3,240,429	\$833	\$2,675,359

Timber revenues were at an all-time high in 2013. The total revenue from harvested timber was \$3,904,104, which was an increase of nearly 50% when compared to 2012 and nearly 70% from the average stumpage revenues received prior to 2011.

In 2013, the department awarded 53 new timber sale contracts, covering 4,179 acres with an estimated value of \$3,616,758. The total acres sold decreased by nearly 12%, but were an increase of nearly 28% when compared to sales prior to 2011. The total winning bid values were approximately 49% higher than average winning bid values prior to 2011.

Table 4 displays the total volume of timber harvested from Bayfield County Forest timber sales from 2008 through 2013. 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.

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

Species	2008		2009		2010		2011		2012		2013		Average	
	Pulp	Logs	Pulp	Logs	Pulp	Logs	Pulp	Logs	Pulp	Logs	Pulp	Logs	Pulp	Logs
Aspen	19,441	0	15,048	0	15,041	3	14,570	0	14,647	1	20,288	0	16,506	1
Mx. Hardwood <sup>1</sup>	21,609	181	17,470	182	16,735	261	17,549	212	12,539	129	16,812	377	17,119	224
Oak	14,886	643	6,678	516	9,807	782	11,334	1,221	7,916	1,127	10,796	1,293	10,236	930
Paper Birch	2,231	26	901	7	736	43	766	13	1,083	22	1,169	17	1,148	21
Basswood	1,161	159	1,204	525	1,439	116	1,197	135	1,022	62	1,801	252	1,304	208
Red Pine	13,052	0	6,692	0	4,554	0	8,873	16	10,694	0	14,637	0	9,750	3
Jack Pine	9,218	0	8,410	0	6,572	0	4,533	0	5,352	0	11,211	0	7,549	0
White Pine	1,247	0	715	0	651	0	137	0	48	0	2,083	0	814	0
Other Conifer <sup>2</sup>	521	0	500	0	302	0	669	0	465	0	1,079	0	589	0
Fuelwood <sup>3</sup>	771	0	2,017	0	1,730	0	1,512	0	777	0	1,148	0	1,326	0
Total	84,138	1,009	59,633	1,230	57,566	1,205	61,139	1,597	54,543	1,341	81,024	1,939	66,341	1,387
Revenue	\$2,706,360		\$2,305,259		\$2,047,663		\$2,477,066		\$2,696,756		\$3,904,104		\$2,689,535	

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

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

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

In summary, there was approximately 48% more total volume harvested in 2013 when compared to 2012 and about 30% more than the previous five year average. Cordwood volumes for aspen, red pine and jack pine were at all-time highs, as were total log volumes, driven primarily by red oak.

- 3) Reforestation Program: 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. Newly regenerating stands are monitored 3 to 4 times over a 10 year period to determine success.

Table 5 displays the summary of the reforestation program.

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

Year	Planting				Seeding	Site Preparation				Maintenance				Monitoring
	Red Pine	Jack Pine	White Pine	Other <sup>1</sup>	Jack Pine	Trench	Fire Plow	Scarify	Spray	Fire	Spray	TSI <sup>2</sup>	Bud Cap	Regen
2008	378	207	24	0	0	796	88	0	442	0	0	0	0	1,683
2009	487	415	0	0	0	726	72	0	348	40	0	0	0	2,652
2010	367	196	0	0	0	363	118	0	420	42	305	0	0	2,183
2011	319	153	35	68	0	900	88	0	186	21	324	0	0	1,424
2012	295	107	274	0	0	0	177	120	727	32	609	0	0	2,736
2013	281	174	92	0	558	264	0	175	0	0	449	2	239	2,522
Avg	355	209	71	11	93	508	91	49	354	23	281	0	40	2,136

<sup>1</sup> In 2011, tamarack and white spruce.

<sup>2</sup> Timber Stand Improvement - Hand release of established regeneration.

- a) Planting and Seeding: in the spring of 2013, 547 acres were planted with containerized stock. Overall, nearly 188,000 red pine, 133,000 jack pine and 41,000

white pine seedlings were planted. Also, 558 acres were aerially seeded with jack pine seed. All of the seed sites were located within the Barnes Barrens Management Area.

- b) Site Preparation: to get sites ready for planting or seeding, 264 acres were power trenched and 175 acres were scarified with a dozer and straight blade. Most of the scarification was accomplished with assistance from the DNR.
  - c) Maintenance: approximately 449 acres of existing young red pine plantations were released from undesirable completion via herbicide applied with a helicopter. Also, approximately 239 acres of young jack pine plantations were treated with terminal bud caps to deter browsing from white tailed deer. Assuming browse pressure remains high in these stands, bud capping may be necessary every year for the next three or four years (or until trees have developed beyond the reach of white tailed deer). Approximately two acres of timber stand improvement (TSI) occurred in red oak shelterwoods. The goal is to release the red oak seedlings by severing all undesirable vegetation growing within close proximity of each desirable sapling. The TSI was done with a chainsaw. We may increase the amount of TSI acres in the future.
  - d) Monitoring: over 2,500 acres of previous regeneration attempts were monitored in 2013. This includes both artificial (planted or seeded) and natural regeneration. Two deer exclusions fences are also maintained to monitor the effects of deer browsing on regenerating red oak, paper birch and white pine.
- 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.

Table 6 displays the summary of compartment/stand updates from 2008 through 2013.

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

<b>Year</b>	<b>Goal</b>	<b>Accomplishment</b>
2008	17,000	9,807
2009	10,000	2,872
2010	10,000	4,079
2011	10,000	9,728
2012	10,000	8,135
2013	10,000	9,316
Average	11,167	7,323

Through 2013, approximately 81% of the forest (nearly 135,000 acres) has been updated. In addition to compartment updates, 517 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).

**ROADS AND TRAILS**

The Forestry and Parks 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. The Department also performs annual routine maintenance on the rights of way for each primary road. Maintenance usually is in the form of mowing, but can also include herbicide if encroaching vegetation is unable to be mowed.

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.

Table 7 displays the number of recreational use permits per recreation type that were approved in 2013. All approved permits were for events that utilized a portion of the Bayfield County Forest.

**Table 7: Summary of Approved Events**

Type of Event	Number of Events
Mountain Biking	7
Cross Country Skiing*	6
Running	6
Dog Sledding	1
Sledding	1
Orienteering	1
Total	22

*\*some events host numerous different races*

Table 8 displays the approximate number of miles per designated trail type that are currently located on county forest land.

**Table 8: 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 9 displays a summary of permits issued on the forest from 2008 through 2013 (a summary of recreational permits can be found in Table 7).

**Table 9: Bayfield County Forest Summary of Issued Permits and Approvals**

Year	Fire Wood	Balsam Boughs	Cones*	Christmas Trees	Birch Stems	Access	Events	Disabled Hunting	Storage
2008	360	8	0	1	0	2	9	3	1
2009	423	5	1	1	0	0	10	3	1
2010	436	5	1	1	0	3	10	3	2
2011	503	7	1	6	0	9	10	10	2
2012	441	6	1	7	0	8	12	7	2
2013	406	16	13	3	2	6	17	6	2
Avg.	428	8	3	3	0	5	11	5	2

\* specifically advertised for jack pine cones in 2013

Firewood permits comprise the vast majority of the total permits issued on an annual basis. In 2013, 406 firewood permits were issued, which was roughly 9% less than 2012.

There were significant increases in the amount of balsam bough and cone permits issued in 2013. Jack pine cones have been in short supply and a concerted effort was made to increase the quantity of seed at the Hayward nursery. As a way to recruit additional cone pickers, the DNR increased the total compensation for a delivered bushel of un-opened jack pine cones from \$20.00 to \$30.00. Flyers were distributed locally to advertise the increase in compensation. The result, Bayfield County went from an average of 1 cone permit per year to 13.

Sand and gravel is extracted and sold from county managed pits, to be used on approved municipal projects. Table 10 displays the total amount of sand and gravel and revenues received from 2008 through 2013.

**Table 10: Sand and Gravel Summary**

Year	Yards	Value
2008	6,120	\$3,060.00
2009	300	\$150.00
2010	12,589	\$9,441.75
2011	751	\$563.25
2012*	13,029	\$19,544.00
2013	0	\$0.00
Avg.	5,465	\$5,459.83

\* Highway 13 Re-Paving Project

Revenues received from the sale of sand and gravel are deposited in a non-lapsing account for eventual site reclamation. There were no sales of sand or gravel in 2013.

## **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.

Table 11 displays a summary of the wildlife opening maintenance program from 2008 through 2013.

**Table 11: 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>
2008	44	50	77	60	121	110
2009	62	70	53	24	115	94
2010	45	44	50	57	95	102
2011	46	53	52	24	98	77
2012	0	0	76	68	76	68
2013	59	52	63	53	122	105
Average	43	45	62	48	105	92

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

In 2013, 63 wildlife openings, totaling 53 acres were maintained by hand, using a mix of herbicide and cutting. Openings are also scheduled for mowing four out of every five years. There were 59 openings mowed in 2013 for a total of 52 acres. In total, 122 openings, covering 105 acres were treated in 2013.

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.

## **FINANCIAL ASSISTANCE – GRANTS AND AIDS**

Financial assistance plays a major role in helping to achieve annual and long term objectives. Table 12 outlines some of the major grants and aids awarded to the Department from 2008 through 2013. Every award listed in the table, with the exception of the Arbor Day grant, has come from the State of Wisconsin.



**Table 12: Bayfield County Forestry and Parks Department Summary of Major Grants and Aids**

Year	County Forest Administrator	Wildlife Habitat Improvement	County Forest Road Aid	Sustainable Forestry	County Conservation	Arbor Day	Total
2008	\$31,933	\$16,929	\$10,440	\$39,720	\$4,125	\$0	\$103,146
2009	\$35,762	\$16,945	\$12,126	\$33,000	\$2,289	\$0	\$100,122
2010	\$44,039	\$8,472	\$11,390	\$6,205	\$3,807	\$20,400	\$94,313
2011	\$44,039	\$8,472	\$11,347	\$0	\$0	\$46,202	\$110,060
2012	\$46,877	\$8,472	\$11,330	\$0	\$6,500	\$18,450	\$91,629
2013	\$47,814	\$8,416	\$11,896	\$46,329	\$0	\$12,450	\$126,904
Average	\$41,744	\$11,284	\$11,421	\$20,876	\$2,787	\$16,250	\$104,362

## **PARKS & CAMPGROUNDS**

In September 2010, the management of all county owned parks and campgrounds was assigned to the Forestry and Parks Department. This includes the management of three campgrounds (Twin Bear Lake, Delta Lake and Big Rock) and one day use park (Atkins Lake). Below is a summary of all major accomplishments since the transition.

1. Twin Bear Campground
  - a. Complete electrical rebuild and upgrade throughout the entire campground.
  - b. Repair of all major outbuildings and store.
  - c. Reconstruction of the beach area.
  - d. New fishing pier near the beach area.
  - e. New ADA access ramp to the beach area.
  - f. Creation of new tent camping site.
  - g. Re-grade of the parking area to control runoff and improve drainage.
  - h. Numerous other minor improvements throughout the campground.
2. Delta Lake Campground
  - a. Complete camping pad re-grade on nearly all campsites.
  - b. New playground equipment near beach area.
  - c. New fishing pier.
  - d. Repair of all major outbuildings.
  - e. New electric added to last four remaining powerless campsites.
  - f. Numerous other minor improvements throughout the campground.

## **TRAILS AND RECREATION**

In July 2013, the management of the Bayfield County Trails program was assigned to the Forestry and Parks Department. The primary responsibilities revolve around the oversight, coordination and grant/aid management of the state funded snowmobile and ATV trails located on County and private lands.

Table 13 lists the total miles per motorized trails type, as well as the amount of state maintenance aids received.

**Table 13: Mileage and Funding For Trails Managed by Bayfield County**

<b>Trail Type</b>	<b>Miles</b>	<b>Rate/Mile</b>	<b>Total</b>
Snowmobile	437	\$250	\$109,250
ATV Summer	86.75	\$600	\$52,050
ATV Winter	168.15	\$100	\$16,815
UTV Summer	86.75	\$100	\$8,675
<b>Total</b>	<b>778.65</b>		<b>\$186,790</b>

The State of Wisconsin provides annual aids for the maintenance of existing motorized trails (see Table 13) and also offers some additional funding opportunities for individual trail rehabilitation or new trail development projects.

Bayfield County works with local clubs and Alliances to ensure that all trails are in a safe and enjoyable riding condition. All routine or minor maintenance activities are typically accomplished by the clubs, while most major rehabilitation projects are administered by the Department.

Routine maintenance can include the posting/maintenance of signs, brushing, removal of debris, mowing, grooming, minor washout or rutting repair, etc. Major rehabilitation can include significant culvert washouts, bridge repair, significant damage occurring as a result of flooding or other major storm event, etc.