

# Baseline Analysis of Indicators of Progress for the Blandin Foundation's Vital Forests/Vital Communities Initiative

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Prepared for the Blandin Foundation by

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## Background

The Blandin Foundation's *Vital Forests / Vital Communities* Initiative is intended to strengthen and diversify Minnesota's forest-based economy and promote the long-term ecological health of the forest resource that supports it. The multi-year initiative represents a major public policy project and investment by the Foundation.

An essential aspect of any Foundation undertaking is evaluating the effectiveness of the investment made in the project. Such evaluation seeks to establish accountability and inform future decision-making. The approach taken in determining how the Initiative would be evaluated was based upon the following: Utility – while the primary user of the evaluation is the Blandin Foundation, the evaluation also is intended to be useful to other actors who share the commitment to accomplishing the Initiative's goals; Objective Oriented – evaluation results and indicators are directly linked to the Initiative's vision and objectives; and, Efficiency – in general, to the greatest extent possible, evaluation indicators use existing, readily obtainable data, reduce the need for primary research, and balance the level of effort (cost) required to obtain the data with its validity.

The Blandin Foundation has stated that the *Vital Forests / Vital Communities* Initiative is intended to:

*Develop and implement strategies that promote the connection between a healthy forest-based economy, a healthy forest ecosystem, and healthy communities.*

In undertaking this Initiative the Blandin Foundation realized both the broad scope of the topic and the limited potential impact of Foundation resources. Minnesota's forest resource covers millions of acres and is owned by literally thousands of entities and the economic activity it supports is diverse and spread over the entire state. The factors affecting the resource and its associated economic activity are literally global in scale. Nonetheless, the Foundation needs to have some basis by which to measure its effectiveness. Thus, a **set of objectives** was established to define the desired *direction* of change to be influenced by the Initiative.<sup>1</sup>

This report provides **baseline information** that defines the starting condition for the Initiative. Periodic updates will be used to identify the direction of change from the baseline conditions. Then two levels of evaluation will be used to define the role, if any, played by Initiative efforts in effecting that change.

### **Overall Initiative Measures**

This is a *qualitative* measure of the perceived impact and value of the Vital Forests / Vital Communities Initiative. It is measured by periodically gathering the opinions of Initiative stakeholders and by periodic reviews done with the Initiative's Advisory Board.

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<sup>1</sup> *Project Objectives and Indicators for the Blandin Foundation's Vital Forests / Vital Communities Initiative*, Applied Insights<sup>north</sup>, September 2004.

## Project Measures

Each Initiative project funded by the Blandin Foundation has its own specific measures of success. These measures, most usually *quantitative* in nature, indicate the degree to which the project advances progress in meeting Initiative objectives.

In addition to the above measures, a set of indicators was devised for the Initiative's monitoring and evaluation system itself.

## Initiative Objectives

The Vital Forests / Vital Communities Initiative Advisory Board formalized the following objectives or desired directions for change.

<b>Vital Forests / Vital Communities Initiative Objectives</b>	
<b>1. Forested Land Base and Resource</b>	<p>1.1 Maintain Minnesota's forest resource base and reduce losses caused by conversion, parcelization, and fragmentation of private lands and disposal of public lands.</p> <p>1.2 Capture and enhance the productivity of Minnesota's forests for forest products and consumption.</p>
<b>2. Forest Management</b>	<p>2.1 Establish ecologically-based forest management as the norm in Minnesota</p> <p>2.2 Increase the number of acres of private, non-industrial woodland being actively and sustainably managed.</p> <p>2.3 Increase public understanding of forest management and practices and the role they play in ensuring resource health, quality, and productivity for vital communities</p>
<b>3. Economic Development</b>	<p>3.1 Create new products and markets for Minnesota's wood products industry.</p> <p>3.2 Enhance the operating efficiency and economic viability of Minnesota's wood products industry.</p> <p>3.3 Increase the number of acres of private and public woodland and number of forest products companies under third-party certification</p> <p>3.4 Increase the capacity of the forest management services sector (ex: logging operators, professional foresters).</p>

## Baseline Conditions

This baseline analysis defines the starting conditions of the resources and economic activity relevant to the Initiative. Follow up analyses will be conducted 3-5 years out to measure the amount of change.

### 1. FORESTED LAND BASE & RESOURCE

#### ***1.1 Maintain Minnesota's forest resource base and reduce losses caused by conversion, parcelization, and fragmentation of private lands and disposal of public lands.***

##### 1.1.1: Acres of forest land by ownership type.

The following table identifies ownership of Minnesota timberland in 2002. "Timberland" is defined as forest land productive enough to produce a commercial crop of trees and is not reserved from harvesting by policy or law. There is approximately another 1.39 million acres of forested land that is either reserved from harvesting and/or is classified as having low productivity.

<b>Minnesota Timberland Acres by Ownership 2002 FIA Inventory</b>		
<b>Ownership</b>	<b>Acres</b>	<b>Percent</b>
Non-industrial private	5,292,971	35.2%
Forest industry	680,722	4.5%
Corporate	520,189	3.5%
County & Local government	2,002,170	13.3%
State government	4,092,484	27.2%
Native American tribal	399,234	2.7%
Federal government	2,044,952	13.6%
<b>Total</b>	<b>15,032,722</b>	<b>100.0%</b>

Source: Forest Inventory & Analysis (FIA) 2002 data as compiled by the Minnesota DNR.

##### 1.1.2: Acres by cover type.

The following table indicates the acres of forest cover type on forestlands within Minnesota. "Forestlands" are defined as all lands with forest cover (as compared with "timberlands", forestlands include acres that can be harvested and those reserved from harvest).

<b>Minnesota Forestland Cover Type Acres by Ownership</b>						
<b>2002 FIA Inventory</b>						
<b>Cover Type</b>	<b>Federal</b>	<b>State</b>	<b>County &amp; Other Public</b>	<b>Private</b>	<b>Total</b>	<b>Percent</b>
Aspen	891,494	1,195,767	824,474	2,374,379	5,286,114	32.3%
Balm of Gilead	58,705	160,087	39,505	225,979	484,276	3.0%
Birch	410,493	242,547	195,186	364,178	1,212,404	7.4%
Ash / Lowland Hardwoods	109,046	304,489	137,422	723,946	1,274,903	7.8%
Oak	35,266	168,997	75,859	893,088	1,173,210	7.2%
Northern Hardwoods	227,562	274,732	202,715	1,155,193	1,860,202	11.4%
White Pine	75,458	5,213	5,541	49,793	136,005	0.8%
Red Pine	138,920	103,421	40,154	185,406	467,901	2.9%
Jack Pine	178,483	120,068	47,854	151,059	497,464	3.0%
White Spruce	36,770	44,011	5,220	40,348	126,349	0.8%
Balsam Fir	123,536	124,937	52,596	187,400	488,469	3.0%
Black Spruce	383,162	814,154	247,554	256,960	1,701,830	10.4%
Cedar	146,285	309,817	63,479	140,060	659,641	4.0%
Tamarack	82,605	459,184	122,385	154,633	818,807	5.0%
Other	12,290	54,918	9,645	90,855	167,708	1.0%
<b>Total</b>	<b>2,910,075</b>	<b>4,382,342</b>	<b>2,069,589</b>	<b>6,993,277</b>	<b>16,353,283</b>	<b>100.0%</b>

Source: Forest Inventory & Analysis (FIA) 2002 data as compiled by the Minnesota DNR.

### 1.1.3: Number and size of forest land sales.

The following table and figures present information regarding the sale of forested land across all of Minnesota since 1989. The data are based on certificates of real estate value for sales determined by the Minnesota Department of Revenue to be arm's length transactions.

<b>Sale of Forested Land in Minnesota, 1989 - 2003</b>															
	<b>1989</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Size	72	69	84	83	82	68	68	62	62	64	68	67	64	57	59
MnP/A	\$222	\$238	\$215	\$255	\$270	\$309	\$306	\$397	\$433	\$492	\$628	\$772	\$897	\$1,008	\$1,269
MdP/A	\$175	\$172	\$172	\$200	\$200	\$225	\$213	\$250	\$300	\$350	\$425	\$500	\$659	\$788	\$981
No.	360	417	271	465	572	610	758	554	535	539	594	642	519	559	559

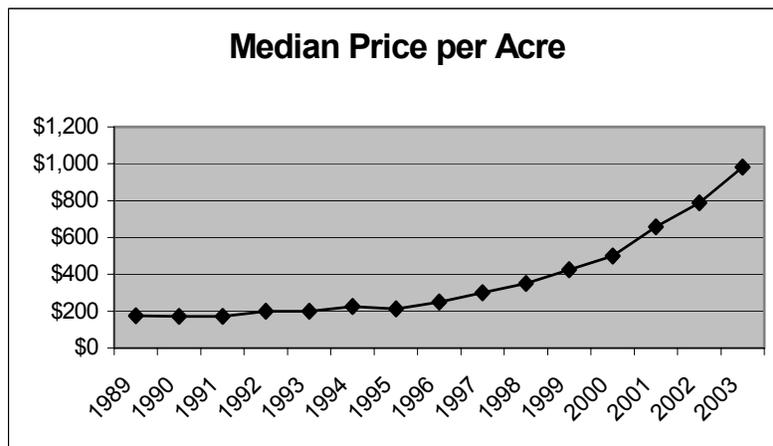
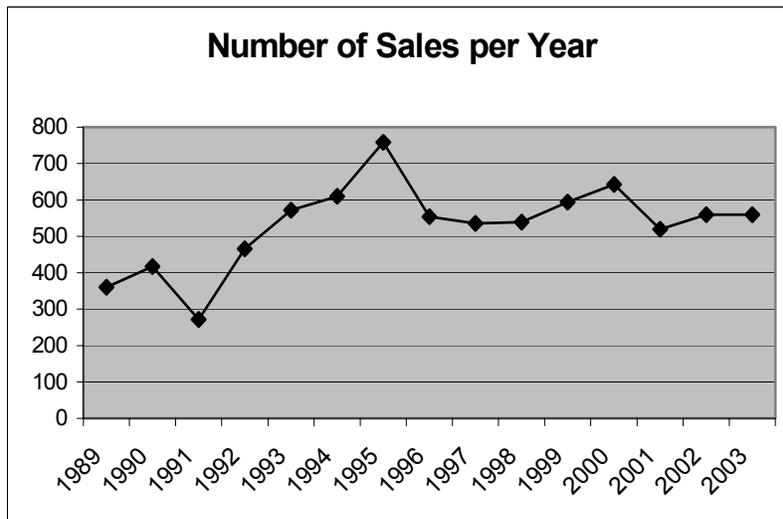
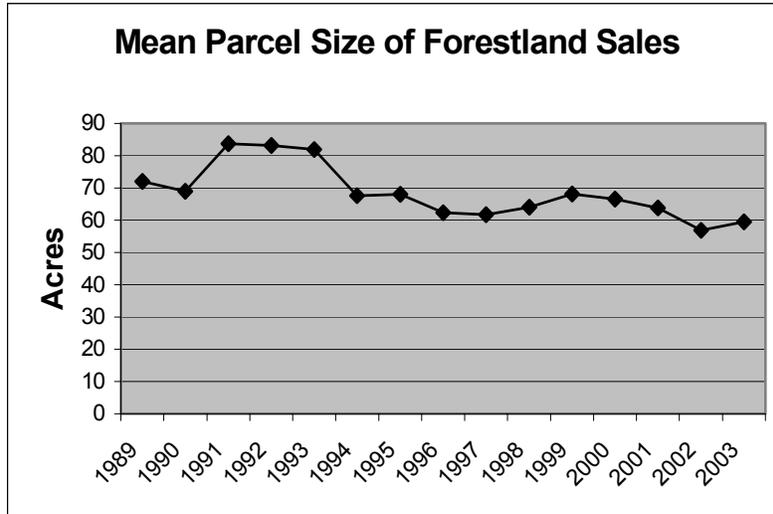
Size = mean parcel size in acres.

MnP/A = mean price / acre (prices are nominal, unadjusted for inflation).

MdP/A = median price / acre (prices are nominal, unadjusted for inflation).

No. = number of sales in year.

Source: Kilgore, Michael A. 2005. Unpublished data on Minnesota forest land values. Department of Forest Resources, University of Minnesota. St. Paul, Mn.



#### 1.1.4: Forested land patch size analysis.

Forest patches have not been analyzed across the entire of Minnesota's forested landscape. However, there has been an extensive analysis of patches within the north central and northeastern regions. Since this area covers a major portion of the state's actively managed forestlands, the analysis provides a useful measure of pre- and post-settlement forests.

Patch analysis includes many aspects including cause, average size, range of size, and proportion within each size range. This report only addresses the first three attributes.

Source for all data: "Changes in Disturbance Frequency, Age and Patch Structure from Pre-Euro-American Settlement to Present in North-Central and Northeastern Minnesota", Mark A. White and George E. Host, Natural Resources Research Institute, for the Minnesota Forest Resources Council (MFRC Report LT-1203a).

<b>Mean Size for Windthrow Disturbances pre-European Settlement by Subsection</b>		
<b>Subsection</b>	<b>Mean Size (acres)</b>	<b>Size Range</b>
Border Lakes (NSU)	74	2,852
North Shore Highlands (NSU)	32	217
Nashwauk Uplands (NSU)	511	10,249
Toimi-Laurentian Uplands (NSU)	42	360
Chippewa Plains (DLP)	294	5,580
St. Louis Moraines (DLP)	91	496
Pine Moraines (DLP)	74	5,914
Tamarack Lowlands (DLP)	54	985

\* NSU = North Shore Uplands section; DLP = Drift and Lake Plains section.

Mean Size for Subsection Level Fire Patch Size for Four Dates								
Subsection	1850		1930		1970		1990	
	Mean	Range	Mean	Range	Mean	Range	Mean	Range
Border Lakes	580	20,119	67	1,323	99	1,820	679	1,973
North Shore Uplands	133	6,595	116	1,583	91	830	252	378
Nashwauk Uplands	1,025	6,978	86	509	84	844	47	101
Toimi-Laurentian Uplands	215	1,564	84	980	49	430	81	437
Chippewa Plains	543	15,570	160	812	62	220	47	249
St. Louis Moraines	57	800	131	1,479	79	763	74	279
Pine Moraines	220	10,622	62	728	128	375	104	323
Tamarack Lowlands	558	9,886	148	738	49	294	40	151

Mean Size for Subsection Level Timber Harvest Patch Size for Three Dates						
Subsection	1930		1970		1990	
	Mean	Range	Mean	Range	Mean	Range
Border Lakes	37	160	37	232	57	494
North Shore Uplands	141	1,746	49	272	44	375
Nashwauk Uplands	47	309	44	301	30	183
Toimi-Laurentian Uplands	42	153	40	570	47	501
Chippewa Plains	49	291	25	195	25	200
St. Louis Moraines	42	195	35	247	35	479
Pine Moraines	42	237	20	94	25	272
Tamarack Lowlands	35	109	37	168	27	237

**1.2 Capture and enhance the productivity of Minnesota's forests for forest products and consumption.**

**1.2.1: Net annual growth of growing stock on timberland (total growth minus mortality).**

This is an imperfect measure but one that experts feel is as good as one that can be calculated fairly easily. The following table identifies the net annual growth by forest cover type.

<b>Minnesota Timberland Net Annual Growth of Growing Stock by Cover Type</b>			
<b>2002 FIA Inventory Analysis</b>			
<b>Cover Type</b>	<b>Annual Growth (cords)</b>	<b>Acres*</b>	<b>Annual Growth Cords / Acre</b>
Aspen	1,659,639	5,053,441	0.33
Birch	137,242	1,034,331	0.13
Balm of Gilead	121,917	459,119	0.27
Lowland Hardwoods	481,969	1,183,935	0.41
Oak	640,715	1,139,586	0.56
Northern Hardwoods	989,264	1,805,249	0.55
White Pine	70,873	97,167	0.73
Red Pine	389,466	398,026	0.98
Jack Pine	160,314	400,950	0.40
White Spruce	24,611	107,640	0.23
Balsam Fir	86,839	444,638	0.20
Black Spruce	213,147	1,373,781	0.16
Northern White Cedar	188,704	581,761	0.32
Tamarack	135,608	714,862	0.19

\*This includes all acres including young regenerating stands.

Source: Forest Inventory & Analysis (FIA) 2002 data as compiled by the Minnesota DNR.

## 2. FOREST MANAGEMENT

### ***2.1 Establish ecologically-based forest management as the norm in Minnesota.***

#### 2.1.1 Acres of certified non-industrial privately owned forest.

<b>Forestlands Certified by Forest Stewardship Council (FSC)</b>	
<b>Landowner / Manager</b>	<b>Acres</b>
Aitkin County Land Department	223,000
Cass County Land Department	253,908
Community Forest Resource Center	2,669
Minnesota DNR – Aitkin County	378,431
Mosconomo Forestry	1,390
<b>Total</b>	<b>859,398</b>

Source: Forest Stewardship Council ([www.fscus.org](http://www.fscus.org)); 7/14/04

<b>Forestlands Certified by Sustainable Forestry Initiative (SFI) and Non-Certified Program Participants</b>	
<b>Landowner / Manager</b>	<b>Acres</b>
Beltrami County Land Department	
Forest Capital Partners (formerly Boise)	326,000
Carlton County Land Department	
Koochiching County Land Department	
Lake County Land Department	
Minnesota DNR	
Potlatch Corporation	325,000
St. Louis County Land Department	
University of Minnesota College of Natural Resources	
UPM – Blandin Paper Company	157,905
<b>Total</b>	<b>808,905</b>

Source: American Forest & Paper Association, Jason Metnick, personal communication, 8/27/04; www.afandpa.org, 8/27/04.

#### **American Tree Farm System**

420,000 acres on approximately 2,000 farms. All are private non-industrial landowners.

Source: Jimmy O'Connor, Manager of Program Operations, American Tree Farm System, personal communication, 9/2/04.

#### 2.1.2 Acres under adopted management plans based on an ecological classification system.

Rather than undertake the expense of a survey, which in good part would duplicate recent efforts within the state, to obtain information on essentially a single question, it was decided to analyze surrogate questions in a recent survey.

The responses noted in the following tables strongly suggest that concern for sustaining ecological values on their land is a primary motivation for owning and managing forested land among these owners. Although it cannot be shown that formal ecological classification systems (including the very recently devised native plant community system) were an integral part of these plans, the reasons given for doing the plans indicate general philosophical concurrence with these systems. Once the ECS and NPC systems have had more time to be understood by landowners and plan preparers alike, subsequent surveys can expressly inquire about their application in stewardship plans.

<b>Reasons for Owning Forest Land Among Minnesota Forest Stewardship Plan Holders</b> (Baughman and Updegraff 2001)	
<b>Mean Rating (1-7)</b>	<b>Reason</b>
6.4	Recreation, scenic enjoyment
5.8	Other
5.2	Part of home/cabin site
4.4	Land investment
3.4	Income from timber or other forest products
3.4	Growing wood or other forest products for farm or personal use
3.3	Part of farm

<b>Most Important Reason for Owning Forest Land Among Minnesota Forest Stewardship Plan Holders (open-ended response)</b> (Baughman and Updegraff 2001)	
<b>% Responding</b>	<b>Reason</b>
40.6%	Aesthetics / general recreation
23.4%	Hunting / fishing / other consumptive recreation
15.2%	Wildlife habitat
13.2%	Environmental values, forest preservation and restoration
12.5%	Family tradition, legacy, inheritance, or part of farmstead/home
11.5%	Income production and personal use of forest products
7.9%	Privacy, quiet, buffer from development

<b>Percent of Responses by Reason for Getting a Forest Stewardship Plan</b> (Baughman and Updegraff 2001)	
<b>% Responding</b>	<b>Reason</b>
57%	General interest in better stewardship, forest management or information about their land.
23%	Would like to improve wildlife habitat or hunting value.
10%	Would like assistance with specific activities.
8%	Required as part of an incentive or cost share program.
5%	Interest in improving or optimizing timber value for sale, or planning a timber sale.
1%	Inherited the plan from a previous owner.
1%	Generational or family concerns; interested in long-term values.

Source: Baughman, M.J. and K. Updegraff. 2001 Landowner survey of forest stewardship plan implementation: Minnesota edition. St. Paul, Minnesota: University of Minnesota, Department of Forest Resources. 101 p.

**2.2 Increase the number of acres of private, non-industrial woodland being actively and sustainably managed.**

2.2.1 Acres of NIPF lands with stewardship / management plans.

State-wide there are 11,815 Forest Stewardship Plans covering 1,202,214 acres. (Minnesota DNR, Larry Himanga, personal communication, September 7, 2004.)

13.6% of Minnesota's NIPF landowners claim to have a written management plan for their forested land. (Cervantes, J.C. 2003. Characteristics of Minnesota's nonindustrial private forest landowners. Ph.D. Dissertation. University of Minnesota.)

<b>Forest Stewardship Plans in Minnesota by Size, 2004</b>		
<b>(Registered plans only)</b>		
<b>Size of Plan Parcel</b>	<b>Number of Plans</b>	<b>Total Acres</b>
1 – 20 acres	490	7,223
21 – 40 acres	1,313	45,897
41 – 100 acres	2,055	146,082
101 – 160 acres	1,215	162,226
161+ acres	1,101	345,810
<b>Total</b>	<b>6,174</b>	<b>707,238</b>

<b>Forest Stewardship Plans in Minnesota by County, 2004</b>			
<b>(Registered plans only)</b>			
<b>County</b>	<b>No. of Plans</b>	<b>Total Acres</b>	<b>Average Acres/Plan</b>
Aitkin	244	30,144	123
Anoka	21	1,055	50
Becker	261	33,944	130
Beltrami	187	20,843	111
Benton	73	6,363	87
Blue Earth	20	1,053	53
Brown	1	73	73
Carlton	192	23,981	125
Carver	16	931	58
Cass	221	25,202	114
Chippewa	3	323	108
Chisago	35	2,854	82
Clay	12	855	71
Clearwater	128	16,108	126
Cook	79	9,406	119
Crow Wing	284	38,198	135
Dakota	7	174	25
Dodge	15	794	53

<b>Forest Stewardship Plans in Minnesota by County, 2004</b>			
<b>(Registered plans only)</b>			
<b>County</b>	<b>No. of Plans</b>	<b>Total Acres</b>	<b>Average Acres/Plan</b>
Douglas	96	7,779	81
Faribault	4	155	39
Fillmore	202	17,833	88
Freeborn	8	571	71
Goodhue	205	16,236	79
Grant	2	151	75
Hennepin	30	1,564	52
Houston	266	32,610	123
Hubbard	255	27,199	107
Isanti	77	6,488	84
Itasca	312	36,103	116
Jackson	3	356	119
Kanabec	118	13,829	117
Kandiyohi	10	776	78
Kittson	8	3,470	434
Koochiching	106	15,174	143
Lake	82	7,691	94
Lake of the Woods	93	16,482	177
Le Sueur	13	819	63
McLeod	1	135	135
Mahnomen	24	3,086	129
Marshall	28	5,628	201
Martin	1	65	65
Meeker	6	405	68
Mille Lacs	76	10,265	135
Morrison	156	26,459	170
Mower	13	832	64
Murray	1	160	160
Nicollet	3	146	49
Norman	2	84	42
Olmsted	67	4,474	67
Otter Tail	413	41,669	101
Pennington	4	1,054	264
Pine	227	34,714	153
Polk	12	1,590	133
Pope	34	4,037	119

<b>Forest Stewardship Plans in Minnesota by County, 2004</b>			
<b>(Registered plans only)</b>			
<b>County</b>	<b>No. of Plans</b>	<b>Total Acres</b>	<b>Average Acres/Plan</b>
Redwood	1	225	225
Rice	99	7,953	80
Roseau	64	11,603	181
St. Louis	539	57,946	108
Scott	14	814	58
Sherburne	33	2,651	80
Sibley	5	160	32
Stearns	65	5,152	79
Steele	8	579	72
Stevens	1	14	14
Todd	132	17,530	133
Wabasha	134	14,033	105
Wadena	139	17,597	127
Waseca	8	580	73
Washington	37	1,789	48
Winona	114	14,936	131
Wright	24	1,316	55
<b>Total</b>	<b>6,174</b>	<b>707,238</b>	<b>115</b>

The following table indicates the degree to which forest stewardship plans are being actively implemented. This table suggests that in nearly every category of activity, except tree planting, landowners undertake (or have plans to undertake) more management actions after having a plan prepared for their property.

<b>Quantities of Forest Management Projects Accomplished and Planned, Before and After Receiving a Forest Stewardship Plan, by Minnesota Landowners</b>						
<b>Activity (units)</b>	<b>Units of Activity Accomplished</b>					
	<b>Before</b>		<b>After</b>		<b>Plan to Do</b>	
	<b>Median</b>	<b>Mean</b>	<b>Median</b>	<b>Mean</b>	<b>Median</b>	<b>Mean</b>
Planted trees (ac)	10	84.1	10	22.6	10	22.8
Improved stand (ac)	10	18.4	13	24.3	15	26.1
Fenced livestock (ac)	35	47.9	40	53.6	30	43.4
Harvested (ac)	16	38.6	20	27.4	20	27.7
Planted habitat (ac)	5	12.9	5	13.8	10	19.7
Improved habitat (ac)	4	8.4	5	8.7	5	12.2
Endangered species (ac)	5	11.8	8	16.6	10	33.4
Wetland/pond (#)	2	3.3	1	2.3	1	3.4
Planted windbreak (ac)	2	7.2	5	6.6	5	7.3
Planted groundcover (ac)	8	17.1	9	14.5	5	20.8
Riparian buffer (ac)	5	8.8	2	5.5	3	9.6
Riparian fencing (ac)	45	105.3	21	157.8	12	175.0
Build road / trail (yd)	550	1,870.0	500	1,459.0	500	1,161.0

Source: Baughman, M.J. and K. Updegraff. 2001 Landowner survey of forest stewardship plan implementation: Minnesota edition. St. Paul, Minnesota: University of Minnesota, Department of Forest Resources. 101 p.

**2.3 Increase public understanding of forest management and practices and the role they play in ensuring resource health, quality, and productivity for vital communities.**

2.3.1 [Indicator is being developed as part of overall Blandin Foundation survey effort. If that proves infeasible, then the objective will be deleted.]

[To be determined.]

**3. ECONOMIC DEVELOPMENT**

**3.1 Create new products and markets for Minnesota’s wood products.**

3.1.1 Secondary industry indicator(s): subjective individual assessment of impact of capacity conference.

On October 14-15, 2004 over one hundred people participated in the Blandin Foundation sponsored conference “Building the Capacity of Minnesota’s Wood Products Industry: Creating the Edge for Global Competition and Future Investment.” The conference was directly intended to assist the state’s wood products industry to become more competitive in the global economy. Measuring the impact of such a conference is difficult but the Foundation desired to gain some perspective on the conference’s real world impact on the participants who were from industry. Given the limited number of possible respondents the review was not intended to be a statistically valid analysis but rather it was seen as the opportunity to use essentially anecdotal input to gain some understanding of the conference’s impact on the individual businesses represented at the event.

The following presents the results of the survey of selected conference participants (representatives of industry or related presenters):

- Six respondents represented secondary wood products manufacturers; one was both a primary and secondary manufacturer; one was a wood products consultant; and the other was a state / federal government official.
- Impact of conference on production and marketing:
  - One respondent indicated that his firm developed a new product using Minnesota forest resources as a direct outcome of the conference.
  - One respondent indicated that his firm's decision to change production processes and apply technology was substantially influenced by the conference.
  - Another indicated that the conference had somewhat influenced decisions regarding production processes and application of technology.
  - Another indicated they had taken actions on product lines and marketing but the conference had no influence on those decisions.
  - One manufacturer indicated that decisions to alter production processes and apply technology were somewhat influenced by the conference.
- Impact of conference on collaborative actions:
  - Two respondents indicated they had undertaken networking actions as a direct outcome of the conference; one said the substantially influenced activity in this area and another said their action was somewhat influenced by the conference.
  - Two respondents indicated that the conference directly influenced their collaborative efforts regarding use of Minnesota forest resources.
  - One respondent noted the conference somewhat influenced his firm's actions regarding manufacturing efficiency and use of Minnesota forest resources.
  - Three respondents indicated their firms had taken no actions in the identified categories since the conference.
  - One respondent said his firm had taken some action in all the listed categories and that this was somewhat influenced by the conference (he indicated that the actions had already been in the planning stage at the time of the conference).
- Written descriptions of actions that were caused or influenced by the respondents' participation in the conference included:
  - "We have initiated a product line using basswood as a substrate based on reports at the conference that it is available as an underutilized resource locally."
  - "Hiring outside resources for business strategy, product strategy help."
  - "So far the information and ideas are interesting and [have been] filed away for some future application."
  - "Began steps to receive 'Lean Manufacturing' program."
  - "My goal in participation was to assist others in recognizing the assets and strengths of Minnesota forest resources."
  - "Ideas generated by the conference will help me in work with other forest products companies in the search for energy efficiency, reducing our dependence on fossil fuels."

### 3.1.2 Non-traditional forest products indicator(s): subjective individual assessment of impact of GFTW.

Vendors at the second annual Goods from the Woods event in Grand Rapids (September 2004) were surveyed regarding their participation in the event, event logistics, and impact of the event on their business. A total of 74 vendors responded to the questionnaire.

On a scale of 1-5 (poor to very good) the average rating was 3.9 ("good"). 17% had sales over \$1,000 for the two-day show. Comments included: "sales were what I had hoped for but not up there with well established shows"; "I think the present economy in the area is influencing sales – I would do your show again next year and hope for improved economy and sales."

28% said they secured great leads for future business and 16% took orders for future sales.

Source: Goods from the Woods Vendor Survey, Goods from the Woods, November 2004.

### **3.2 Enhance the operating efficiency and economic viability of Minnesota's wood products industry.**

#### **3.2.1 Secondary industry indicator(s) [Various – total sales, total sales / employee, total sales/capital investment, gross margin, raw material turn time, inventory turn rate, etc.]**

[Survey of private industry participants in the capacity conference may offer some insight into this. No in-depth analysis will be conducted until VF/VC investments are made in the wood products industry; following the example of 3.2.2 below the measures will be focused on the specific activity funded with VF/VC investments.]

#### **3.2.2 Primary industry indicator: cost of pigment and clay as component of making paper.**

This will be measured if and when the proposed pigmented clay facility is constructed in Duluth.

### **3.3 Increase the number of acres of private woodland and number of forest products companies under third-party certification.**

#### **3.3.1 Acres of certified non-industrial privately owned forest.**

##### **Forest Stewardship Council (FSC)**

<b>Non-Industrial Private Forestlands Certified by Forest Stewardship Council (FSC)</b>	
<b>Landowner / Manager</b>	<b>Acres</b>
Community Forest Resource Center	2,669
Mosconomo Forestry	1,390
Total	4,059

Source: Forest Stewardship Council ([www.fscus.org](http://www.fscus.org)); 7/14/04

##### **Sustainable Forestry Initiative (SFI)**

There are currently no non-industrial private forestlands certified by the Sustainable Forestry Initiative (SFI) program in Minnesota.

##### **American Tree Farm System**

420,000 acres on approximately 2,000 farms. All are private non-industrial landowners.

Source: Jimmy O'Connor, Manager of Program Operations, American Tree Farm System, personal communication, 9/2/04.

#### **3.3.2 Number of forest product firms under third-party certification.**

##### **Forest Stewardship Council (FSC)**

The following forest products firms have received FSC chain-of-custody certification:

Wholesaler/distributor -	2
Primary manufacturer -	2
Secondary manufacturer -	3

Source: Certification Research Center (www.certifiedwood.org); 7/26/04

**Other**

One secondary manufacturer has received ISO 14001 certification (International Standards Organization). Source: American Forest & Paper Association; www.afandpa.org, 8/27/04.

**3.4 Increase the capacity of the forest management services sector (ex: logging operators, professional foresters).**

3.4.1 Number of logging operators (with associated information).

The following tables present information generated by a survey of Minnesota logging operators in 2004 (regarding harvest activity in 2003). The tables provide insight into the size, level of activity, capacity, and future plans of the firms. In several instances the current results are compared to findings from two earlier surveys of Minnesota loggers.

Sources: *Survey of Minnesota Logging Operators in 2004*, A Vital Forests / Vital Communities Initiative Report, Applied Insights<sup>north</sup>, December 2004; Jaakko Pöyry Consulting, Inc. *Harvesting systems. A background paper for a Generic Environmental Impact Statement on timber harvesting and forest management in Minnesota*. Tarrytown, NY, 1992 (for 1991 information); *Status of Minnesota Timber Harvesting and Silvicultural Practice in 1996*. MFRC Report # MP0698. Submitted by Klaus J. Puettmann, Charles R. Blinn, Helen W. McIver, and Alan R. Ek. 1998 (for 1996 information).

<b>Number of Employees in Business (full-time equivalents including owner)</b>		
<b>Employees</b>	<b>Number</b>	<b>Percent</b>
1	37	31.1%
2	19	16.0%
3	26	21.8%
4-6	25	21.0%
7+	12	10.1%
Total	119	100.0%

<b>Estimated Value of In-woods Equipment</b>		
<b>Amount</b>	<b>Number</b>	<b>Percent</b>
< \$100,000	43	36.1%
\$101,000 – 500,000	51	42.9%
\$501,000 – 1,000,000	19	16.0%
> \$1,000,000	6	5.0%
Total	119	100.0%

<b>Comparison of Production Levels Reported by Respondents, 1996 and 2003: Percent Loggers and Percent of Total Reported Volume by Volume Level</b>				
<b>Volume Harvested (cords)</b>	<b>2003</b>		<b>1996 (1)</b>	
	<b>% of Volume</b>	<b>% of Loggers</b>	<b>% of Volume</b>	<b>% of Loggers</b>
< 1,000	1.3%	15.8%	4.6%	44.3%
1,001 – 5,000	14.7%	38.6%	18.0%	30.5%
5,001 – 10,000	23.4%	20.8%	24.6%	13.6%
10,001 – 15,000	29.3%	15.9%	23.4%	7.8%
> 15,000	31.3%	8.9%	29.4%	3.8%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

(1) Source: MFRC, 1998; volume percentages are estimated by AI<sup>n</sup>.

<b>Percentage of Total Wood Harvested by Felling and Transport Methods, 2003 / 1996 / 1991</b>			
<b>Method</b>	<b>2003</b>	<b>1996</b>	<b>1991</b>
<b>Harvest</b>			
Chainsaw	1.0%	16%	27%
Feller-buncher move to tree	62.4%	46%	73%
Cut-to-length move to tree	12.3%	1%	--
Feller-buncher stationary	22.3%	33%	--
Cut-to-length stationary	2.0%	4%	--
<b>Transport</b>			
Cable skidder	0.7%	15%	30%
Grapple skidder	87.3%	79%	69%
Forwarder	12.0%	5%	1%
Other	<0.1%	<2%	--

<b>General Plans for Logging Business over the next 5 Years</b>		
<b>Action</b>	<b>Number</b>	<b>Percent</b>
Increase annual volume harvested	32	26.9%
Maintain annual volume harvested	57	47.9%
Decrease annual volume harvested	8	6.7%
Retire / Sell business / Quit	22	18.5%
<b>Total</b>	<b>119</b>	<b>100.0%</b>

### 3.4.2 Number of private professional foresters (not employed by wood products industries or a public agency).

The Minnesota DNR authorized contracts to write forest stewardship plans to 35 individuals for FY2005 (source: Doug Anderson, MDNR, personal correspondence, September 22, 2004).

The Minnesota Association of Consulting Foresters had 26 individual members in 2004. (Source: MACF web site, updated May 28, 2004).

Five of the MACF members do not prepare stewardship plans and 13 of the people on the DNR list were MACF members. The result is a total of 43 individuals identified as actively preparing forest stewardship plans in Minnesota.

## **4. EVALUATION & MONITORING**

### **4.0.1 Paper describing goals, results and associated indicators.**

*Project Objectives and Indicators for the Blandin Foundation's Vital Forests / Vital Communities Initiative*, Applied Insights<sup>north</sup>, September 2004.

### **4.0.2 Paper presenting 2004 baseline indicator information.**

This document provides that information.

## **Overall Initiative Evaluation**

The previous information presented a quantified approach to determining the baseline condition at the time of the start of the Vital Forests / Vital Communities Initiative. Two *qualitative* approaches are used to determine the overall success and value of the Vital Forests / Vital Communities Initiative, especially as related to changes in the quantitative conditions.

The first is based on the opinions of the stakeholders in the process. Prior to the second call to action conference in December 2003, a group of stakeholders were interviewed. The results of that survey provided key insights into the direction of the second conference and subsequent efforts.<sup>2</sup> The results also provided valuable commentary on the Blandin Foundation's role and perceived qualities.

As part of the initiative's evaluation process, participants will be periodically surveyed to further understanding and insight into the perceptions of the key issues, the Initiative, and the Blandin Foundation. The second of such surveys was conducted in the fall of 2004 following another major initiative conference. The results of that survey follow.

### **Conclusions: Phase 2 VF/VC Survey<sup>3</sup>**

Regarding the Blandin Foundation's credibility and capacity for carrying out the Vital Forests / Vital Communities Initiative, the following conclusions can be drawn [note: the first three are identical from last year's assessment]:

- The Initiative is seen as crucial to Minnesota, its forested landscape, and to the economic vitality of the industries and communities that rely on the forests.
- The Blandin Foundation is widely perceived as being a credible, if not *the* credible, entity for undertaking such an effort given the rancor and political dynamics that have accompanied debate around this subject within the state.
- The keys to the Foundation's credibility lie with its neutrality, effectiveness in process, location in rural Minnesota, and willingness to support results.
- After more than a year into the Initiative it is clear that everyone feels the initiative is worth undertaking and that is generally progressing on the right track. As much as anything, people

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<sup>2</sup> *Blandin Foundation Credibility: Phase 1*, Applied Insights<sup>north</sup>, December 4, 2003.

<sup>3</sup> *Blandin Foundation Credibility: Phase 2*, Applied Insights<sup>north</sup>, November 18, 2004.

genuinely appreciate the fact that the Foundation is tackling a subject that is critical to the state and rural communities regardless of outcome – it's the attention to the subject and the dedication of personnel and money to it that is most important.

- People remain committed to participating in the initiative. They see the process as being critical to the future of Minnesota's forests and forest products industry – furthering education of the general public, informing policy makers about the issues involved, introducing and fostering the application of new concepts in management and manufacturing, bringing people together on a regular basis, and exploring ways to unify the various interests behind a common cause.
- The process of making hard decisions, especially to fund projects, creates “winners and losers” and provides fodder for discussions as to the true direction of the initiative. There is little in-depth awareness of the projects supported by the initiative although most of the general topics funded (e.g., certification, NIPF stewardship plans, increasing capacity of loggers and plan preparers) were seen as high priorities.
- The decision to fund the pigmented clay facility analysis serves as a flashpoint for people concerned about the decision making process. Respondents who are “in the loop” and several that were not raised this concern. It was unambiguously asserted that certain members of the Advisory Board had their own agendas that came from outside of the conference/action team process, and, that the Board as a whole was not adequately balanced or representative of the interests involved. While some of this might be attributed to “sour grapes” over not getting desired projects considered for funding, the mere existence of such negative thinking should be a concern for the initiative.
- There is a subtle undercurrent intimating that the initiative is maybe not quite focused on the topics or projects having the most impact on the resource and the industry. Some of this can be attributed to the core difference of opinion between champions of primary versus secondary wood products industry (note: the Foundation is broadly is recognized as having done much to bridge this chasm, which, although bridged still remains). One example is Goods from the Woods. No one directly criticized the event and many found it laudable and successful. However, several respondents suggested that the event, even if fully successful, will not have measurable impact on either the regional economy or the forest resource. A more fundamental example begins with the assertion that appropriate forest management is financially underwritten by industries willing to buy the resource. By this line of thinking, the initiative should focus on strengthening these industries and their use of Minnesota's resources. Of course, the debate then shifts to which is more important, primary industry which by far and away uses the most local resource, or, secondary which currently doesn't use much of the resource but could/should/might. The debate over which is more vital – primary or secondary industry – is deep, profound, and at the heart of the entire initiative's success. The key is to persist, as the initiative has attempted to this point, to establish common ground between them and not pit one against the other.