



NSF-ISR, LTD
SURVEILLANCE AUDIT REPORT
November 19, 2007

A. Program Participant's Name: Minnesota DNR **FRS #: 6Y921**

B. Scope:

Forest management on Minnesota DNR's forestry lands, wildlife lands except for the Prairie Province, Lake County fisheries lands, and Land Utilization Project (LUP) lands, and related sustainable forestry activities covered by the 2005-2009 Sustainable Forestry Initiative Standard®.

- No Change
 Changed (see Section H, revised scope statement noted on FRS)

C. NSF Audit Team:

Mike Ferrucci, Lead; Dave Wager, JoAnn Hanowski

D. Audit Date(s): September 12-14, 2007

E. Reference Documentation:

2005-2009 SFI Standard®; documents provide by Minnesota DNR

F. Audit Results: Based on the results at this visit, the auditor concluded

- Acceptable with no nonconformances; or
 Acceptable with minor nonconformances that should be corrected before the next regularly scheduled surveillance visit;
 Not acceptable with one or two major nonconformances - corrective action required;
 Several major nonconformances - the certification may be canceled unless immediate action is taken

G. Changes to Operations or to the SFI Standard:

Are there any significant changes in operations, procedures, specifications, FRS, etc. from the previous visit? Yes No

If yes, provide brief description of the changes:

Changes since the last audit:

- Commissioner Mark Holsten started January, 2007; he is very supportive of certification;
- Staff stable: same division directors; working to finalize "coordination policy" among divisions;
- Internal Audit Team up and running in 2007, reports still due;
- Governor's task force on primary forest industry competitiveness (OSB shutdowns triggered this); had some legislative recommendations including logger relief package, forest management budget increases;
- Additional funding was provided by Minnesota legislature to reduce the inventory cycle from 15 years to 10 years; 15 new positions (5 hired previously, 11 starting this week, some replacements);
- Conservation easement program with Forest Capital Partners; 51,000 acres, primarily a non-development easement;

- The Minnesota Forest Resource Council approved biomass guidelines for timber harvest areas; these will become part of the voluntary site level guidelines; and
- MNDNR is now tracking progress in SFRMP and OHV/ORV issues at regional meetings.

H. Other Issues Reviewed:

- Yes No Public report from previous audit(s) is posted on SFB web site.
- Yes No N.A. SFI and other relevant logos or labels are utilized correctly.
Confirmed appropriate logo use on the web: <http://www.dnr.state.mn.us/forestry/certification/index.html> .

I. Corrective Action Requests: (see also Appendix IV)

Corrective Action Requests issued this visit:

SFI-2007-01 Progress in moving the forests towards landscape goals of the plans.

- Corrective Action Plan is not required.
- Corrective Action Plan is required within sixty days of this visit (for Minor Nonconformances). CARs will be verified during the next Surveillance Audit.
- Corrective Action Plan is required within thirty days of this visit (for Major Nonconformances).

Corrective Action Plans should be mailed to:

Mike Ferrucci
26 Commerce Drive
North Branford, CT 06471

At the conclusion of this Surveillance Audit visit the remaining open CARs are: MAJOR(S): 0
MINOR(S): 1

In addition, seven Opportunities for Improvement (OFIs) were identified.

Appendices:

- Appendix I: Surveillance Notification Letter and Audit Schedule
Appendix II: Corrective Action Requests
Appendix III: Public Surveillance Audit Report
Appendix IV: Audit Matrix

APPENDIX I



Surveillance Notification Letter and Audit Schedule



August 9, 2007

Andrew Arends
 Forest Certification Program Leader
 Minnesota DNR Division of Forestry
 500 Lafayette Road, St. Paul, MN 55155-4044
 Re: Confirmation of SFI and FSC Surveillance Audits, Minnesota DNR

Dear Mr. Arends:

We are scheduled to conduct the Annual Surveillance Audits of the Minnesota DNR on Wednesday September 12 to Friday September 14 as follows:

Area	Date	Times	Focus Areas
Bemidji- NW Region	Sept. 12	8 am to Noon	Programmatic, CARs, changes
Bemidji- Area	Sept. 12	Noon to 5 pm	Field operations, Reforestation focus
Bemidji	Sept. 12	7 pm to 8:30 pm	Public Meeting (Audit team only)
Thief Lake WMA	Sept. 13	8 am to 5	Field operations, WMA focus
Warroad Area	Sept. 14	8 am to 2 pm	Field operations, State forest focus
Auditors meet privately	Sept. 14	2 pm to 3 pm	Wrap-up discussions
Exit Briefing	Sept. 14	3 pm to 4:45 pm	Report results

This is a partial review of your SFI and FSC Programs to confirm that they continue to be in conformance with the requirements and that progress is being made in closing your CARs. The audit team will consist of Mike Ferrucci, NSF-ISR Lead Auditor, Dave Wager, SCS Lead auditor, and Joann Hanowski, Team Auditor. During the audit we will focus on the following:

SFI Program:

- Review progress on achieving SFI objectives and performance measures and the results of the management review of your SFI Program;
- Review selected components of your SFI program;
- Verify effective implementation of the corrective action plans from the previous NSF audit; and
- Evaluate the effectiveness of planned activities aimed at continual improvement of your SFI Program.

FSC Program:

- A focused assessment of the status of outstanding corrective action requests. Assess selected forests against a portion of the FSC Lake States Standard. Operations will be assessed against Criteria and Indicators of the standard where non-conformances were observed in the original assessment, as well as other Criteria and Indicators, as determined by the SCS auditor (expected to focus on Principles 4 & 5).
- Review of any changes within DNR (e.g., staffing, land acquisitions, planning documents) that are pertinent to the certification.
- Accreditation Services International (FSC's Accreditation Unit) will be auditing SCS during this year's surveillance audit. Achim Droste (ASI Lead Auditor) and Bill Wilkinson (U.S. specialist) will conduct the audit for ASI. The participation of ASI does not significantly change the audit approach. However, as Bill and Achim have very little familiarity with MN DNR additional background information may be necessary at times.

Joint FSC/SFI Topics

- DNR's Comprehensive Wildlife Plan

Due to the number of open CARs, it is unlikely that there will be additional time to discuss any other topics.

Logistics

- As during the certification audit we should plan to have lunch on site to expedite the visit.
- We will travel in your vehicle(s) each day during the audit, but have our own transportation to Bemidji at the start and end of the audit.
- We ask that you provide hardhats.

Field Site Selections

As discussed, you will provide maps showing activities in these locations over the past two years. We will select an initial subset of about 15 sites per area and will ask for additional information on these sites, including their accessibility and the likelihood of being actively harvested during the visit. Once we receive this information we will select a smaller number of sites that we hope to visit. On the day of the audit we would ask you to tell us about any sales that are being worked at that time, and we would add one or two of these if possible

Documentation Requested

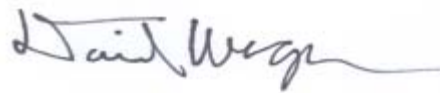
When we arrive each day please provide documentation for the selected sites similar to that provided for the certification audit (maps, project descriptions, and contracts). We would also need copies of the draft or recently completed management plans and any other information that would help us determine conformance to the certification requirements.

The enclosed tentative schedule should be reviewed by all participants. This schedule can be adapted either in advance or on-site to accommodate any special circumstances. If you have any questions regarding this planned audit, please contact either of us.

Sincerely yours,



Mike Ferrucci
SFI Program Manager, NSF-ISR
26 Commerce Drive
North Branford, CT 06471
mferrucci@iforest.com
Office and Mobile: 203-887-9248



Dave Wager
Director -Forest Management Certification SCS
6107 Skyview Drive
Missoula, Montana 59803
dwager@scscertified.com
Phone: 406-251-7049 Cell: 510-708-0397

Enclosure: Draft Agenda for Minnesota DNR 2007 Surveillance Audit

DRAFT Agenda for Minnesota DNR 2007 Surveillance Audit

Wednesday, September 12 8 am to 5 pm

<i>Time</i>	<i>Activity</i>
7:45 am	Arrive at the Minnesota Department of Transportation office in Bemidji*
8:00 am	Opening Meeting and Office Discussions FSC CARs SFI CARs
Noon	Working Lunch: Review Selected Sales and Finalize Field Visit
12:30 – 4:30 pm	Field Site Visits
4:30 -5 pm	Daily Briefing (office)
7:00-8:30 pm	Public Meeting (audit team only) Beltrami Electric Cooperative**

*Minnesota Department of Transportation is located at 3920 Hwy 2 West, Bemidji, MN. Phone 218-755-6500.

** Electric Cooperative Inc, 4111 Technology DR NW, Bemidji, MN 56601

Thief Lake WMA Thursday, September 13 8 am to 5 pm

<i>Time</i>	<i>Activity</i>
7:45 am	Arrive at Thief Lake_WMA Office
8:00 am	Opening Meeting and Office Discussions
(9:15) 10:00 am	Review Selected Sales and Finalize Field Visit
(9:30) 10:30 – 4:30 pm	Field Site Visits
(3 pm) 4:30 -5 pm	Daily Briefing (office)

Warroad Area Friday, September 14 8 am to 2 pm

<i>Time</i>	<i>Activity</i>
7:45 am	Arrive at Warroad Forestry Offices
8:00 am	Opening Meeting and Office Discussions
8:15 am	Overview of area Forest Management Program
8:45 am	Review Selected Sales and Finalize Field Visit
8:45 – 2 pm	Field Site Visits

Exit Meeting at Area office Friday, September 14 2 pm to 3:45 pm

<i>Time</i>	<i>Activity</i>
2- 3 pm	Auditor private discussion (meeting space needed)
3 – 4 pm	Final SFI Exit Briefing
4-4:45 pm	Final FSC Exit Briefing

Opening Meeting Agenda
Wednesday, September 12, 2007

8-9 am Opening Session

- Introductions (DW,AA)
- Agenda Review (MF)
- Annual Audit Process/Tasks
- Overview of Minnesota DNR Changes

10-11 am CARs for Budgets, Planning, and Monitoring

- FSC 2006.4: Budgets – Dave Wager
- FSC 2005.9 and SFI 2006.1: Planning – Mike Ferrucci
- FSC 2005.12: Monitoring - Joann Hanowski

10 – 10:15 Break

10:15 – 11 Ecological/Wildlife

- Kurt Rusterholz, Minnesota Wildlife Conservation Strategy
- FSC 2006.5: Invasives - Joann Hanowski
- FSC 2005.6: Representative Samples - Dave Wager

11- Noon OHV/ATV

- FSC 2006.3: Communicate OHV - Dave Wager
- FSC 2006.7: Representative Samples - Dave Wager
- To continue during working lunch as time allows

Separate concurrent session (meet outside main meeting room)

11:30-Noon Ferrucci and Bemidji area staff --- finalize field visit locations

Noon Working lunch

- Logistics for afternoon tours (MF, AA, Harvey Tjader)
- Continue OHV/ATV discussions

Wager and DNR as needed - remain in meeting room to complete CAR review:

- FSC 2006.8: Employee rights and relations - Dave Wager
- FSC 2006.9: Policy Implementation - Dave Wager
- FSC Recommendations

Ferrucci, Hanowski and DNR Field personnel

- Rally vehicles in parking lot; loaded into vehicles and ready to drive out by 12:40

Schedule Change – Return to office at 5 pm; daily briefing at dinner

- Daily briefing in field

APPENDIX II



Corrective Action Requests

Company/Location: <u>Minnesota DNR</u>	Date: <u>Oct 8, 2007</u> FRS # <u>6Y921</u>
Auditor: <u>Mike Ferrucci</u>	CAR Number: <u>SFI-2007-01</u>
Location of Finding: <u>General</u>	Previous CAR Number/Date: <u>NA</u>
Discussed with: <u>Andrew Arends</u>	Nonconformance Type: Major <u>Minor</u>

AUDITOR FINDING: Standard Number and Clause:

2005-2009 Sustainable Forestry Initiative Standard ® Indicator 1.1.1: “A long-term resource analysis to guide forest management planning at a level appropriate to the size and scale of the operation, including: a. periodic or ongoing forest inventory; b. a land classification system; c. soils inventory and maps, where available; d. access to growth-and-yield modeling capabilities; e. up-to-date maps or a geographic information system (GIS); f. recommended sustainable harvest levels; and g. a review of nontimber issues (e.g., pilot projects and economic incentive programs to promote water protection, carbon storage, or biological diversity conservation).”

Description: MnDNR has made significant progress towards understanding progress in meeting Subsection Forest Resource Plan (SFRMP) goals for desired future conditions of vegetation, particularly goals for proportions of various cover types over space and time. However it remains difficult to determine whether forest management activities are moving the forests towards landscape goals of the plans. Protocols for interdisciplinary cooperation are not fully implemented (“Interdisciplinary Forest Management Coordination Policy”), despite the need to work across disciplinary boundaries to ensure that complex ecological goals are addressed effectively.

If necessary, please attach a separate report addressing the following three items:

- 1) ROOT CAUSE ANALYSIS BY COMPANY—Include potential causes & assurance problem does not exist in other areas.
- 2) CORRECTIVE ACTION BY COMPANY – Based on the Root Cause Analysis, the following action has been planned/taken to correct the problem. Please include expected completion date.
- 3) PREVENTIVE ACTION BY COMPANY – Based on the Root Cause Analysis, the following action has been planned/taken to correct the problem. Please include expected completion date.

See following pages for the Minnesota DNR corrective plan.

AUDITOR REVIEW OF COMPANY’S PLAN:

STATUS: Open. The plan is comprehensive and contains many action steps. Progress will be reviewed during the next surveillance audit. a status report 2 weeks prior to the next surveillance audit. The status report will break the corrective and preventive portions of the plan into sub-tasks, and for each sub-task report on: Overall Status (concise summary); Completed Actions; Actions in Process; Actions Revised and Reasons; and -Direction to Evidence AUDITOR/DATE: Mike Ferrucci

AUDITOR REVIEW OF COMPANY’S COMPLETED ACTION:

STATUS: _____ AUDITOR/DATE: _____

STATUS LEGEND: OPEN=CA Plan Accepted **CLOSED**=CA implemented, verified & accepted **REJECTED** = C/A Plan or Implementation rejected

DNR Response to SFI CAR 2007-01

Auditor Finding

MnDNR has made significant progress towards understanding progress in meeting Subsection Forest Resource Plan (SFRMP) goals for desired future conditions of vegetation, particularly goals for proportions of various cover types over space and time. However it remains difficult to determine whether forest management activities are moving the forests towards landscape goals of the plans. Protocols for interdisciplinary cooperation are not fully implemented (“Interdisciplinary Forest Management Coordination Policy”), despite the need to work across disciplinary boundaries to ensure that complex ecological goals are addressed effectively.

1) Root Cause Analysis by DNR

A. Measuring progress towards landscape goals.

There are a number of factors currently affecting DNR’s ability to comprehensively measure progress towards landscape goals established in SFRMPs.

- i. The ultimate results of forest management activities occurring under the auspices of completed SFRMPs can take many years and even decades before becoming measurable (e.g., a successful cover type change involves forest stands that offered for sale and sold during the SFRMP plan period, the timber sold may not be cut for 5-years due to timber permit length, followed by some kind of regeneration/forest develop project(s), ensuing regeneration surveys to determine success of regeneration, then eventually showing up as a new stand in FIM). Common SFRMP goals that are particularly subject to this time lag are cover type change, within stand species composition change, and stand structure change.
- ii. Implementation of a number of SFRMP plans has come at a time when DNR Forestry is transitioning to new information systems, including those necessary for future monitoring of various forest management activities and /progress towards SFRMP goals. For a number of SFRMP plans, this means that implementation data are stored in different information systems (i.e., the old and the new), in different formats, with different types of information, and with varying capabilities to generate reports useful for SFRMP plan monitoring (e.g., reporting by ECS subsections). In addition, as with any new system, roll-out to full implementation (e.g., full and consistent use by staff) takes time as staff receive training, gain experience, provide feedback leading to adjustments and further targeted direction and training, and finally leading to organization wide acceptance and use. As such, initial years in the new system will likely provide incomplete and inconsistent data across the state.
- iii. The older data systems were developed and organized to report information by Administrative Areas, and because most do not function in a GIS environment, reporting information by subsections has been a challenging task. DNR may be able to generate some subsection-based reports, but the results will be somewhat approximate since some surrogate to the actual subsection boundaries must be used (e.g., crosswalk of legal descriptions to ECS subsections)

- iv. For a number of SFRMP plan goals (desired future forest conditions) for which the actual changes in the forest won't become evident for years (see first bullet above), the DNR has developed a surrogate measure to monitoring progress. This involves the use of management objectives (i.e., recording the intended outcome of forest management activities) for sites that are field visited and some sequence of actions prescribed. However, the use of management objectives by field staff was just beginning in FY2007, and thus this type of information will not be available for some SFRMP plans for several years.
- v. The new FORIST modules (i.e., SRM and TSM) were not designed with SFRMP plan monitoring needs in mind. As such, there have been some limitations within the systems that have made it difficult to report desired information for SFRMP monitoring purposes. DNR FIS staff have worked with SFRMP staff to adjust system capabilities where possible without significant redesign. However, FIS staff availability (i.e., due to system development and implementation workloads) has limited the extent to which these system adjustments have been able to occur.

B. Implementation of protocols for interdisciplinary cooperation.

DNR has a long-history of interdisciplinary cooperation in forest management activities dating back at least to the 1980 Wildlife-Forestry Coordination Policy (subsequently revised in 1982) and the corresponding 1985 Forestry-Wildlife Guidelines to Habitat Management. The old policy and guidelines provided protocols for cooperation between the two divisions, some of which has become outdated due to changes in technology, procedures, organizational structure, and emergence of new issues. However, the basic tenets still remain valid. In addition, over the past 10-15 years, direction for interdisciplinary cooperation on various DNR activities has been developed and communicated at various times through various approaches. As such, this direction is scattered in different locations and formats and is difficult to pull together for reference. This is especially important given the changeover in DNR staff that is occurring. Recognizing the need to update the policy to reflect current department activities, consolidate direction, and broadening the need for cooperation (e.g., to include the Division of Ecological Resources), the DNR (via direction from the Forest Resources Issues Team or FRIT) initiated a process in 2004 to update the coordination policy. This framework has not yet been officially completed and distributed to staff. This portion of the CAR appears to be focused on the need to complete the new coordination framework and communicate it to staff. However, even without the new coordination framework in place, interdisciplinary coordination is occurring under the principles of the old coordination policy and the separate coordination direction that has been provided over recent years for various specific activities.

2) Corrective Action by the DNR

A. Measuring progress towards landscape goals

i. Status and Action Plan

In our response to SFI-2006-01, we indicated that by July 1, 2007 initial SFRMP implementation monitoring reports would be developed for each of the subsections for which SFRMP direction has been implemented. Appendix B of the SFRMP Monitoring Plan (see attached) includes a description of the reports that will be

developed to report information captured in SRM. In Appendix B, there are three sets of reports identified, 1a-d, 2a-c, and 3a-c. The initial SFRMP implementation monitoring reports referenced in our previous response to SFI-2006-01 were going to involve only reports 1a-d and 2a-c. Reports 3a-c were not going to be generated at this time since field staff have just begun understanding and entry of information that would be captured in these reports.

DNR Forestry Information Systems (FIS) and Management Information Systems (MIS) staff has been working, as other equally high priorities have allowed, to develop the standard reporting framework to be applied to SRM to generate reports 1a-d and 2a-c. To date, they have been able to successfully generate initial report 1a for FY07 for the six subsections encompassing the Border Lakes, Mille Lacs Uplands, Agassiz Lowlands and North Shore SFRMPs (see attached). Report 1b for FY07 will be available by the end of November. Reports 1c for 2007, and 1a-c for FY06 should be available by the end of December, assuming there is good data available in SRM. Unfortunately, the data entered into SRM with the FY07 and FY06 annual stand exam lists did not include information necessary for generating reports 1d and 2a-c.

ii. Subsequent plan of action for addressing the question of where we are with implementation of SFRMPs

a. Analyzing SRM Reports 1a-c for FY06 and FY07.

This process will begin with a review by central office staff to identify extraneous data in the reports, identify the most useful data items in the report and any glaring data gaps or errors. This should be completed by January 31, 2008. If substantial data problems are found, additional time may be needed to address them.

The refined 1a-c report results for FY07 and FY06 will be forwarded to SFRMP teams in February (again, unless data problems are discovered), with report interpretations and caveats as needed.

b. Generating SFRMP Implementation Information for Years Prior to FY06

For years prior to FY06, SRM will not be able to generate any of the reports identified in Appendix B of the SFRMP Monitoring plan since data related to annual stand exam list was not being entered at that time in a comprehensive fashion. Some annual stand exam information and resulting accomplishments have been captured in Access database format. However, this information is identified by Forestry administrative Areas and legal description (i.e., section-township-range), not by ECS subsections. A crosswalk between ECS subsections by legal descriptions was done for FY05 stand exam list data in Access that can provide a rough approximation of subsection activity. Staff will explore the option of applying this legal description crosswalk to annual stand exam information for FY03-05 for subsections implemented in those years (i.e., Agassiz Lowlands in FY03 and Border Lakes and North Shore in FY05) to generate useful reports.

c. FIM Comparison

Both the Agassiz Lowlands subsection and Blufflands/ Rochester Plateau subsections at near or at the end of their 7-year stand list period. Both will likely be considering three-year list extensions (i.e., to make them 10-year plans similar to other current SFRMP plans). However, prior to extending the lists, current FIM data will be compared with CSA data from the initial plans, with a target date for completion of March 2008.

d. Forest Regeneration Information

Staff will explore the possibility of using information from SRM and other sources to identify trends in forest regeneration (e.g., species and amounts) and whether or not this information can be provided by ECS subsection. DNR will determine the utility of this information in gauging implementation of SFRMP direction by mid-December 2007.

e. Implementation of Blufflands/Rochester Plateau SFRMP Stand List

Given the interest in extending the stand selection list another three years for this SFRMP, staff have been working to assess the degree to which stands identified in the SFRMP to be field visited have actually been field visited. Given the year this list was developed and the changes in data systems since then, this assessment has been a highly manual process. But since there are far fewer stands in these subsections compared to elsewhere in the state, it was doable. Summary spreadsheet information is being developed and should be available by the end of the year (2007).

B. Implementation of protocols for interdisciplinary cooperation.

- i. DNR will complete final editing, and director/commissioner's office review of the new coordination framework by the end of November 2007.
- ii. A rollout plan for communicating the new framework to field staff will be developed in November 2007. Implementation of the rollout plan will begin in early 2008 and will include presentation of the framework by the three division directors at regional interdisciplinary meetings.

3) Preventive Action by the DNR

A. Measuring progress towards landscape goals

i. Staff training in SRM Management Objectives

Recognizing the importance of consistent understanding, application, and recording of SRM management objectives to measuring progress towards SFRMP goals, the DNR has included an SRM management objectives component in SFRMP training sessions and also in a series of silviculture prescription writing training sessions that were delivered to all Forestry Areas his past fall. SRM management objectives will continue

to be included in future SFRMP training sessions and provided as needed in specific Areas where recording of SRM objectives is not consistently occurring.

ii. Monitoring Use of SRM Management Objectives

DNR produced a statewide report indicating the degree to which SRM management objectives are being assigned to SRM sites for which a site visit – stand examination has been completed in FY2007. FY2007 was the first year that Forestry Areas were directed to record at least one management objective on every site for which a stand exam action was completed. DNR will continue to produce this report at least twice a year and distribute it to Areas and Regions to encourage and communicate progress. Follow-up (e.g., discussions, training) will occur with Areas that continue to show a lack of SRM management objective use.

iii. Developing Additional SFRMP Monitoring Reports from SRM

Beginning with the FY08 annual stand exam list, additional fields from SFRMP databases have been added to the stands being imported into SRM to allow additional reports to be run in the future (i.e., reports 1c-d, 2a-c). After the close of FY08, the first run of reports 3a-c should also be possible.

B. Implementation of protocols for interdisciplinary cooperation.

i. Improving development and communication of department forest management policy.

The department has developed (via FRIT) new procedures to help assure that future policy development and communication occurs in a more timely and effective manner. (See attached FRIT Policy Process).

ii. Reviewing the effectiveness of interdisciplinary coordination.

The new DNR Interdisciplinary Forest Management Coordination Framework includes the following direction:

“FRIT shall meet on an annual basis to review how well forest management directions in this coordination framework are working and recommend necessary changes.”

Company/Location: <u>Minnesota DNR</u>	Date: <u>Oct 21, 2005</u> FRS # <u>6Y921</u>
Auditor: <u>Mike Ferrucci</u>	CAR Number: <u>SFI-2006-01</u>
Location of Finding: <u>General</u>	Previous CAR Number/Date: <u>NA</u>
Discussed with: <u>Andrew Arends, others</u>	Nonconformance Type: Major <u>Minor</u>

AUDITOR FINDING: Standard Number and Clause:

2005-2009 Sustainable Forestry Initiative Standard ® Indicator 1.1.1: “A long-term resource analysis to guide forest management planning at a level appropriate to the size and scale of the operation, including: a. periodic or ongoing forest inventory; b. a land classification system; c. soils inventory and maps, where available; d. access to growth-and-yield modeling capabilities; e. up-to-date maps or a geographic information system (GIS); f. recommended sustainable harvest levels; and g. a review of nontimber issues (e.g., pilot projects and economic incentive programs to promote water protection, carbon storage, or biological diversity conservation).”

Description: Subsection Forest Resource Plan (SFRMP) goals for desired future conditions of vegetation, particularly goals for proportions of various cover types over space and time, are not clearly assigned among administrative areas. This results in confusing or incomplete direction to field foresters. This is exacerbated by delays in finalizing plans and in providing training in plan implementation. Absent these goals the plans are not in conformance with the standard.

If necessary, please attach a separate report addressing the following three items:

- 1) **ROOT CAUSE ANALYSIS BY COMPANY**—Include potential causes & assurance problem does not exist in other areas.
- 2) **CORRECTIVE ACTION BY COMPANY** – Based on the Root Cause Analysis, the following action has been planned/taken to correct the problem. Please include expected completion date.
- 3) **PREVENTIVE ACTION BY COMPANY** – Based on the Root Cause Analysis, the following action has been planned/taken to correct the problem. Please include expected completion date.

AUDITOR REVIEW OF COMPANY’S PLAN:

The lead auditor generally accepts the explanation of the nature and intent of subsection planning and its relationship to administrative areas outlined in the root cause analysis. Further, the corrective and preventive actions outlined in parts 2 and three are responsive to the CAR, particularly in light of the more nuanced understanding of the role of subsection goals in planning. The implementation of these actions will be reviewed during the 2007 surveillance audit, with a strong focus on understanding how this collection of actions has and will be expected to address the overall concern about the effective implementation of landscape-derived goals.

STATUS: Open AUDITOR/DATE: Mike Ferrucci January 8, 2007

AUDITOR REVIEW OF COMPANY’S COMPLETED ACTION:

As of 9-14-07: Partially completed; By 10-5-07 the remaining information was provided and progress was confirmed sufficient to close the CAR. A CAR was issued covering related issues.

STATUS: CLOSED; see comments within plan below. AUDITOR/DATE: Sept. 14, Oct. 8, 2007

STATUS LEGEND: OPEN=CA Plan Accepted **CLOSED**=CA implemented, verified & accepted **REJECTED** = C/A Plan or Implementation rejected

(Note: Auditor’s review comments are interspersed within text of the Minnesota DNR’s Corrective Action Plan below.)

1) ROOT CAUSE ANALYSIS BY COMPANY–Include potential causes & assurance problem does not exist in other areas.

DNR SFRMPs establish numerous desired future conditions, some of which are quantifiable at the subsection level, some that are purely directional (i.e., more or less of some condition compared to current conditions) and intended to be broadly applied across the subsection, and some that can be roughly allocated to various administrative areas the boundaries of which cross into a subsection. It is difficult and frequently undesirable to assign many of the stated desired future conditions by administrative area because not enough site-level information is available during planning to do so (e.g., since cover type conversion decisions are necessarily based on on-site evaluations and conditions, it is difficult to allocate cover type conversion goals by administrative area as in a meaningful way), the future conditions are intended to be applied/achieved broadly across the entire subsection, and allocating landscape level goals back to administrative areas is considered as being counter to the original purpose and decision to plan by landscape. The decision to plan by landscape required a major conceptual shift from the administrative area-based approach used by the DNR prior to SFRMP. As such, the DNR is hesitant to incorporate efforts that might cause confusion or interfere with staff embracing a landscape approach. In addition, DNR believes that periodic implementation monitoring will be an effect tool in holding staff accountable to plan goals and direction and has directed additional staff time towards getting the monitoring process and reports operational. Communication of SFRMP desire future condition goals and strategies has been primarily through participation in the planning process and training sessions for all field staff. However, this SFRMP training has not occurred for all subsections where SFRMP direction is being implemented. Some of this is due to a desire to hold off on training until each plan is officially completed, which has taken longer than anticipated for most SFRMPs.

2) CORRECTIVE ACTION BY COMPANY – Based on the Root Cause Analysis, the following action has been planned/taken to correct the problem. Please include expected completion date.:

“Completing SFRMPs – The Mille Lacs Uplands (done), Agassiz Lowlands completed and in use, although formal sign-off was delayed till late 2007 and North Shore (done) SFRMPs will be completed by July 1, 2007.”

Auditor Review of MnDNR’S Completed Action:

The plans are completed and in use.

“SFRMP training - SFRMP training has been completed for Border Lakes and North Shore SFRMPs. By July 1, 2007, training will be held for Mille Lacs Uplands and Agassiz Lowlands SFRMPs.”

Auditor Review of MnDNR’S Completed Action:

Training has been completed.

PARTIAL SFRMP “Implementation monitoring:
By July 1, 2007, initial SFRMP implementation monitoring reports will be developed for each subsection for which SFRMP direction has been implemented. This implementation monitoring information will help determine progress towards desired future conditions and implementing key strategies by subsection. Contributions by administrative area towards some subsection goals/strategies will also be monitored, recognizing that resources (i.e., opportunities) are not necessarily equally distributed among administrative

areas. Thereafter, SFRMP implementation reports will be generated periodically following completion of the plan. SFRMP teams will reconvene as necessary to address areas of concern identified by the monitoring process. Corrective measures (e.g., additional training, resources, guidance) will be applied as needed to address identified concerns with implementation progress. See Attachment 1 for the Department's response."

Auditor Review of MnDNR'S Completed Action:

These tasks have proven to be far more difficult than anticipated. The data needed to complete all of the monitoring tasks is either not available or exists in incompatible formats. Significant progress has been made: "(MnDNR has completed) initial report 1a ('Planned and Actual Actions') for FY07 for the six subsections encompassing the Border Lakes, Mille Lacs Uplands, Agassiz Lowlands and North Shore SFRMPs (see attached). Report 1b ('Planned and Actual Actions by Cover Type') for FY07 will be available by mid-November. Reports 1a and 1b for FY06 would be available shortly thereafter, assuming there is good data available in SRM."

MnDNR now realizes that it will be quite challenging to "determine progress towards desired future conditions and implementing key strategies by subsection" for years prior to 2006. Three additional approaches are described:

"FIM Comparison

Both the Agassiz Lowlands subsection and Blufflands/Rochester Plateau subsections at near or at the end of their 7-year stand list period. Both will likely be considering three-year list extensions (i.e. to make them 10-year lists/plans similar to other current SFRMPs). However, prior to extending the lists, a comparison of current FIM data with CSA data from when the plans were developed will be done. Target date for this would be by March 2008.

Forest Development Information

Staff will explore the possibility of using information from SRM and other sources to identify trends in forest regeneration (e.g., species and amounts) and whether or not this information can be provided by ECS subsection. Determine utility of this information in gauging implementation of SFRMP direction by end of November.

Implementation of Blufflands/Rochester Plateau SFRMP Stand List

Given the interest in extending the stand selection list another three years for this SFRMP, staff have been working to assess the degree to which stands identified in the SFRMP to be field visited have actually been field visited. Given the year this was developed and the changes in data systems since, this has been a highly manual process. But since there are far fewer stands in these subsections compared to elsewhere in the state, it was doable. Summary spreadsheet information is being developed and should be available by the end of the year (2007)."

Given the lack of completion of the tasks some gaps remain. The team will issue a new Corrective Action Request due in 2008: MnDNR has made significant steps towards quantifying progress in meeting Subsection Forest Resource Plan (SFRMP) goals for desired future conditions of vegetation, particularly goals for proportions of various cover types over space and time. However it remains difficult to determine whether forest management activities are moving the forests towards landscape goals of the plans. Protocols for interdisciplinary cooperation are not fully implemented ("Interdisciplinary Forest Management Coordination Policy".

"Allocation of SFRMP Goals by Administrative Area – By May 1, 2007 DNR will identify the SFRMP desire future condition goals that will be allocated in some manner by Division of Forestry administrative area

versus those where staff will be held accountable primarily via SFRMP implementation monitoring (e.g., to gauge relative contributions by administrative area). In most cases where “goals” are allocated by administrative areas, they will be provided as rough proportionate estimates for gauging relative progress during implementation monitoring. Allocation of subsection goals by administrative area, as determined above, will be done as part of or upon completion of the each SFRMP plan. For SFRMPs already completed, this will be done to the extent possible.

Auditor Review of MnDNR’S Completed Action:

The MnDNR has agreed to, and made significant progress towards, allocation of cover type change goals by Division of Forestry Administrative Areas (AA). “DNR will allocate 10-year cover type change goals by Division of Forestry Administrative Areas (AA). After discussing within the statewide SFRMP Process Work Group and upon review of SFRMP plans completed or underway, DNR agreed that allocating cover type change goals by AA was feasible and desirable. A number of SFRMPs have or are in the process of allocating cover type change goals by AA. In addition, DNR will complete an allocation by AA in SFRMPs for which this has not yet been done.”

3) PREVENTIVE ACTION BY COMPANY – Based on the Root Cause Analysis, the following action has been planned/taken to correct the problem. Please include expected completion date.

Completing SFRMPs –

“Additional process revisions were identified this past summer. These will be put into place with start of the next SFRMPs (e.g., final four NE subsections).”

Auditor Review of MnDNR’S Completed Action:

Confirmed and reviewed “*SFRMP Process Changes – Approved by FRIT 5/31/06*”.

“An external (i.e., conducted by an outside consultant) SFRMP process review and recommendations will be completed by the end of May 2007.”

Auditor Review of MnDNR’S Completed Action:

Confirmed the report regarding the review of the SFRMP process to identify opportunities for improving the organizational capacity of the DNR to produce SFRMP plans.

“Additional planning and administrative support will be in place by March 1, 2007 for the Chippewa Plains –Pine Moraines SFRMP, completing the Mille Lacs Uplands and North Shore SFRMPs, and preparing for and starting the final four NE subsections process (likely to begin in May 2007).”

Auditor Review of MnDNR’S Completed Action:

An interview with the newly-hired modeler confirmed that the additional support and resources are in place and helping increase capacity. For one plan, MDNR outsourced GIS and clerical work.

“SFRMP Training: Training will be provided to field staff once the decision is made to begin implementing the strategic direction (i.e., desired future condition, strategies) from an SFRMP.”

Auditor Review of MnDNR’S Completed Action:

Staff at Warroad have received the training (interviews).

PARTIAL “Beginning in 2007, area annual stand exam list review meetings (involving Forestry, Fish &

Wildlife and Eco-Resources staff) will include a review of direction from applicable SFRMPs, with emphasis on any areas of concern arising from the initial monitoring reports.”

Source: SFI-2006-01.V9.14.07 DNR_response

“Appendix V: SFI-2006-01 – Preventive Actions

The following table provides a summary of the responses received from Forestry Areas when posed the following two questions in relation to the request for “objective evidence” related to annual stand exam list review meetings and review of SFRMP direction:

- 1) In the past year, did you conduct an Annual Stand Exam List (a.k.a. Annual Harvest List) review **meeting** with Wildlife &/or Eco staff??
- 2) If yes to Q1, was there any discussion of direction (i.e., goals, strategies) from any applicable SFRMPs (i.e., SFRMPs that cover all/part of your Area)??

Recognize that the requirement to hold annual stand exam meetings is embedded in the new Interdisciplinary Forest Management Coordination Policy, which has not yet been approved for distribution to the field. As such, there are a number of Areas that have not held formal meetings with Wildlife and Eco Resources counterparts to review annual stand exam lists. However, Areas do at a minimum provide the annual stand exam list to Wildlife and Eco Resources staff for their review and comment. Concerns about stands on the list are then discussed informally between staff of the various divisions, including in person, over the phone, or through joint field visits. Areas for which there have not been formal meetings, but this more informal interdisciplinary discussion is occurring are indicated in the “Informal” column in the table below. These informal discussions frequently include discussions about SFRMP goals and strategies as they relate to the specific stands in question. As the table indicates, there was only one Area that indicated there was no discussion of SFRMP direction, either within formal review meetings or via informal discussions. In the past year some Areas, particularly in the Northwest Region, certainly benefited from the fact that annual stand exam lists were developed as part of developing multi-year stand exam lists for an SFRMP or interim plan, where all three divisions were present and SFRMP direction (where available) was prominent.

Auditor Review of MnDNR’S Completed Action:

Partially completed; Interdisciplinary Forest Management Coordination Policy has not yet been approved for distribution to the field.

“Brief SFRMP field guides will be provided to field staff as a day-to-day reference for important SFRMP desired conditions, strategies and associated site-level considerations.”

Auditor Review of MnDNR’S Completed Action:

Confirmed SFRMP field guides have been prepared and are in use by interviews for Agassiz Lowlands and by reviewing the guide for Border Lakes Subsection.

“SFRMP Implementation Monitoring – SFRMP implementation reports will be generated periodically following completion of the plan. SFRMP teams will reconvene as necessary to address areas of concern identified by the monitoring process. Corrective measures (e.g., additional training, resources, guidance) will be applied as needed to address identified concerns with implementation progress.”

Auditor Review of MnDNR’S Completed Action:

The protocol for such monitoring reports was reviewed by the audit team.

APPENDIX III



Public SFI Surveillance Audit Report

The Sustainable Forestry Initiative (SFI) Program of the Minnesota DNR has achieved continuing conformance with the SFI Standard®, 2005-2009 Edition, according to the NSF-International Strategic Registration SFIS Certification Audit Process.

NSF-ISR initially certified Minnesota DNR to the SFIS on December 2, 2005. This report describes the second annual follow-up Surveillance Audit designed to focus on changes in the standard, changes in operations, the management review system, and efforts at continuous improvement. In addition, a subset of SFI requirements were selected for detailed review.

Minnesota DNR manages 4.9 million acres of state lands throughout Minnesota, following an interdisciplinary approach designed to integrate the harvesting of forest products, the provision of wildlife habitat, the protection of special sites, and the provision of extensive recreational opportunities. These lands encompass a variety of forest types, including aspen, white, red, and jack pine, mixed lowland conifers, oak-hickory, and northern hardwoods. A variety of forest products are produced, including timber, pulpwood, firewood, cabin logs, poles, and other specialty products.

The surveillance audit was performed by NSF-ISR on September 12-14 by an audit team including Dave Wager and JoAnn Hanowski and headed by Mike Ferrucci, Lead Auditor. Audit team members fulfill the qualification criteria for conducting SFIS Certification Audits contained in the Sustainable Forestry Initiative® Audit Procedures and Qualifications (SFI APQ). The objective of the audit was to assess continuing conformance of the department's SFI Program to the requirements of the Sustainable Forestry Initiative® Standard, 2005-2009 Edition.

The scope of the SFIS Audit included "Forest management on Minnesota DNR's lands throughout Minnesota, including forestry lands, wildlife lands except for the Prairie Province, Lake County fisheries lands, and Land Utilization Project (LUP) Lands, and related sustainable forestry activities covered under the 2005-2009 Sustainable Forestry Initiative Standard". A sample of operations in the Bemidji Area, at the Thief Lake Wildlife Management Area, and in the Warroad Area was reviewed to ensure that SFI requirements for forest management were met. Forest practices that were the focus of field inspections included those that have been conducted over the past several years, with emphasis on activities since the previous field audit conducted in October of 2006. In addition, a subset of SFI obligations to ensure appropriate training for staff and contractors, to promote public involvement, and to incorporate continual improvement systems were reexamined during the audit. Use of the SFI logo and the requirement to provide a public audit report were also reviewed.

The published indicators of the 2005-2009 Sustainable Forestry Initiative Standard were the basis for the certification review. All of the SFI Performance Measures within Objective 8

involving procurement of wood were outside of the scope of the Minnesota DNR's SFI program and were excluded from the scope of the SFI Certification Audit. Indicator 3.2.5 was also not applicable because Minnesota has published Best Management Practices (BMPs). No indicators were modified.

SFIS Surveillance Audit Process

The review was governed by a detailed audit protocol designed to enable the audit team determine conformance with the applicable SFI requirements. The process included the assembly and review of audit evidence consisting of documents, interviews, and on-site inspections of ongoing or completed forest practices. Documents describing these activities were provided to the auditor in advance, and a sample of the available audit evidence was designated by the auditor for review.

The possible findings for specific SFI requirements included Full Conformance, Major Non-conformance, Minor Non-conformance, Opportunities for Improvement, and Practices that exceeded the Basic Requirements of the SFIS. Surveillance Audits generally focus on conformance issues and do not generally address exceptional practices.

Overview of Audit Findings

Minnesota DNR's SFI Program was found to be in conformance with the SFIS Standard. The NSF-ISR Audit team reviewed the previous minor non-conformance and corrective action plan implemented by Minnesota DNR and closed it. During the 2006 audit it was found that Subsection Forest Resource Plan (SFRMP) goals for desired future conditions of vegetation, particularly goals for proportions of various cover types over space and time, were not clearly assigned among administrative areas. This resulted in confusing or incomplete direction to field foresters, exacerbated by delays in finalizing plans and in providing training in plan implementation.

Substantial evidence was provided by the Minnesota DNR to help determine that this issue has been addressed by:

- Completing the Mille Lacs Uplands, Border Lakes, and North Shore SFRMPs
- Completing training for Border Lakes, North Shore, Mille Lacs Uplands and Agassiz Lowlands SFRMPs;
- Implementing SFRMP process changes approved by FRIT 5/31/06 and starting to implement changes recommended by external SFRMP process review;
- Securing additional planning expertise and administrative support for plan development;
- Developing protocols for the allocation of SFRMP Goals by Administrative Area;
- Compiling initial SFRMP implementation monitoring reports, although only for 2007 and only for a limited set of issues; and
- Starting to conduct area annual stand exam list review meetings (involving Forestry, Fish & Wildlife and Eco-Resources staff) that include a review of direction from applicable SFRMPs, with emphasis on any areas of concern arising from the initial monitoring reports.

The NSF-ISR SFI Certification Audit Process determined that there was one new minor non-conformance under 2005-2009 Sustainable Forestry Initiative Standard® Indicator 1.1.1 for long-term analysis and planning:

- MnDNR has made significant steps towards quantifying progress in meeting Subsection Forest Resource Plan (SFRMP) goals for desired future conditions of vegetation, particularly goals for proportions of various cover types over space and time. However it remains difficult to determine whether forest management activities are moving the forests towards the landscape goals set by the plans. Protocols for interdisciplinary cooperation are not fully implemented (“Interdisciplinary Forest Management Coordination Policy”), despite the need to work across disciplinary boundaries to ensure that complex ecological goals are addressed effectively.

Minnesota DNR has developed a corrective action plan to address this issue. Progress in implementing this plan will be reviewed in subsequent surveillance audits.

Seven opportunities for improvement were also identified. These findings do not indicate a current deficiency, but served to alert the Minnesota DNR to areas that could be strengthened or which could merit future attention.

- Indicator 1.1.2 requires documentation of harvest trends in relation to the management plan. There is an opportunity to improve the completion of monitoring reports.
- Indicator 2.1.4 requires “Protection of desirable or planned advanced natural regeneration during harvest.” There is an opportunity to improve understanding of, and mitigation tools for, the loss of desirable understory elements (softwood regeneration) in final harvests.
- Indicator 4.1.3 requires protection of critically imperiled and imperiled species and communities. There is an opportunity to improve by using the SNA program to identify and protect rare native communities.
- Indicator 4.1.4 requires criteria for the retention of stand-level wildlife habitat elements. There is an opportunity to improve record-keeping for small no-cut reserve areas within stands to ensure that they are retained over time as planned.
- Indicator 4.1.8 requires a “Program to incorporate the role of prescribed or natural fire where appropriate.” There is an opportunity to improve in the use of prescribed fire on special forested sites.
- Indicator 4.2.2 requires “A methodology to incorporate research results and field applications of biodiversity and ecosystem research into forest management decisions.” : There is an opportunity to improve by completing updates to the forest/wildlife guidelines.
- Indicator 9.1.1 requires “Current financial or in-kind support of research to address questions of relevance in the region of operations.” There is an opportunity to improve the documentation and distribution of field trial results.

The Minnesota DNR has also improved its program for the management of certified lands as follows:

- The Internal Audit Team is operational;
- 10 of 50 silvicultural interpretations documents are available covering 50% of the forested area of MNDNR administered lands;
- Progress in SFRMP and OHV/ORV planning is tracked and reported at regional MnDNR meetings;
- Significant training has been conducted for SFRMP implementation;
- Additional funding was provided by Minnesota legislature to reduce the inventory cycle from 15 years to 10 years; 15 new positions (5 hired previously, 11 starting this week, some replacements);
- BMP implementation rates continue to improve;
- The Minnesota Forest Resource Council approved biomass guidelines for timber harvest areas; these will become part of the voluntary site level guidelines; and
- The Woodstock/Stanley growth model is being used to guide stand selections of the subsection plans, although more work remains to take full advantage of the model's capabilities.

NSF-ISR also confirmed that forestry practices on Minnesota DNR's lands continue to exceed the basic requirements of the SFI Standard in the following areas:

- Minnesota DNR's programs in forest health and protection are exemplary examples of Integrated Pest Management.
- A significant array of measures to protect rare, threatened, or endangered species was demonstrated.
- Efforts to contain the spread of invasive, exotic plants have increased significantly and exceed the SFI requirements.
- Clearcut size is far lower than the 120-acre maximum average.
- The management and protection of special sites is a program strength relative to the SFI Standard.
- Minnesota DNR promotes recreational use of the forests and regularly modifies timber management to better accommodate such use. As such the SFI Standard is exceeded.

This program is being audited under the standard surveillance audit option provided in the SFI program. The next surveillance audit is scheduled for fall 2008.

Relevance of Forestry Certification

Third-party certification provides assurance that forests are being managed under the principles of sustainable forestry, which are described in the Sustainable Forestry Initiative Standard as:

1. Sustainable Forestry

To practice sustainable forestry to meet the needs of the present without compromising the ability of future generations to meet their own needs by practicing a land stewardship ethic that integrates reforestation and the managing, growing, nurturing, and harvesting of trees for useful products with the conservation of soil, air and water quality, biological diversity, wildlife and aquatic habitat, recreation, and aesthetics.

2. Responsible Practices

To use and to promote among other forest landowners sustainable forestry practices that are both scientifically credible and economically, environmentally, and socially responsible.

3. Reforestation and Productive Capacity

To provide for regeneration after harvest and maintain the productive capacity of the forestland base.

4. Forest Health and Productivity

To protect forests from uncharacteristic and economically or environmentally undesirable wildfire, pests, diseases, and other damaging agents and thus maintain and improve long-term forest health and productivity.

5. Long-Term Forest and Soil Productivity

To protect and maintain long-term forest and soil productivity.

6. Protection of Water Resources

To protect water bodies and riparian zones.

7. Protection of Special Sites and Biological Diversity

To manage forests and lands of special significance (biologically, geologically, historically or culturally important) in a manner that takes into account their unique qualities and to promote a diversity of wildlife habitats, forest types, and ecological or natural community types.

8. Legal Compliance

To comply with applicable federal, provincial, state, and local forestry and related environmental laws, statutes, and regulations.

9. Continual Improvement

To continually improve the practice of forest management and also to monitor, measure and report performance in achieving the commitment to sustainable forestry.

Source: Sustainable Forestry Initiative® (SFI) Standard, 2005–2009 Edition

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APPENDIX IV



Audit Matrix

NSF-ISR auditors use this document to record their findings for each SFIS Performance Measure and Indicator. If a non-conformance is found the auditor shall fully document the reasons on the Corrective Action Request (CAR) form. N/A in the Auditor column indicates that the associated Performance Measure or Indicator does not apply. Findings are indicated by a date or date code: October 2006 Code 6; September 2007 Code 7;

Objective 1: To broaden the implementation of sustainable forestry by ensuring long-term harvest levels based on the use of the best scientific information available.

Performance Measure/ Indicator		<u>Audit -or</u>	- - - Indicate Only One - - -				<u>OFI</u>
			<u>FC</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	
1.1	<i>Program Participants shall ensure that long-term harvest levels are sustainable and consistent with appropriate growth and-yield models and written plans.</i>						
1.1.1	A long-term resource analysis to guide forest management planning at a level appropriate to the size and scale of the operation, including: a. a periodic or ongoing forest inventory; b. a land classification system; c. soils inventory and maps, where available; d. access to growth-and-yield modeling capabilities; e. up-to-date maps or a geographic information system (GIS); f. recommended sustainable harvest levels; and g. a review of nontimber issues (e.g., pilot projects and economic incentive programs to promote water protection, carbon storage, or biological diversity conservation).	MF				6, 7	
1.1.2	Documentation of annual harvest trends in relation to the sustainable forest management plan.						7
1.1.3	A forest inventory system and a method to calculate growth.	MF	6, 7				
1.1.4	Periodic updates of inventory and recalculation of planned harvests.	MF	6, 7				
1.1.5	Documentation of forest practices (e.g., planting, fertilization, and thinning) consistent with assumptions in harvest plans.	MF	6, 7				

Objective 2: To ensure long-term forest productivity and conservation of forest resources through prompt reforestation, soil conservation, afforestation and other measures.

Performance Measure/ Indicator		<u>Audit</u> <u>-or-</u>	- - - Indicate Only One - - -				<u>OFI</u>
			<u>FC</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	
2.1	<i>Program Participants shall reforest after final harvest, unless delayed for site-specific environmental or forest health considerations, through artificial regeneration within two years or two planting seasons, or by planned natural regeneration methods within five years.</i>	MF	6, 7				
2.1.1	Designation of all management units for either natural or artificial regeneration.	MF	6, 7				
2.1.2	Clear Requirements to judge adequate regeneration and appropriate actions to correct under-stocked areas and achieve desired species composition and stocking rates for both artificial and natural regeneration	MF	6, 7				
2.1.3	Minimized plantings of exotic tree species and research documentation that exotic tree species, planted operationally, pose minimal risk.	MF	6, 7				
2.1.4	Protection of desirable or planned advanced natural regeneration during harvest.	MF	6, 7				7
2.1.5	Artificial reforestation programs that consider potential ecological impacts of a different species or species mix from that which was harvested.	MF	6, 7				
2.2	<i>Program Participants shall minimize chemical use required to achieve management objectives while protecting employees, neighbors, the public and the forest environment.</i>						
2.2.1	Minimized chemical use required to achieve management objectives.	MF	6, 7				
2.2.2	Use of least toxic and narrowest spectrum pesticide narrowest spectrum and least toxic pesticides necessary to achieve management objective.	MF	6				
2.2.3	Use of pesticides registered for the intended use and applied in accordance with the label requirements.	MF	6, 7				
2.2.4	Use of Integrated Pest Management where feasible.	MF	7	6			
2.2.5	Supervision of forest chemical applications by state-trained or certified applicators.	MF	6, 7				
2.2.6	Use of best management practices appropriate to the situation; for example: adjoining landowners or nearby residents notified of applications and chemicals used; appropriate multi-lingual signs or oral warnings used; public road access controlled during and after applications; streamside and other needed buffer strips appropriately designated; positive shut-off and minimal drift spray valves used; drift minimized by aerially applying forest chemicals parallel to buffer zones; water quality monitored or other methods used to assure proper ...	MF	6				

Performance Measure/ Indicator		<u>Audit -or</u>	- - - Indicate Only One - - -				<u>OFI</u>
			<u>FC</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	
2.2.6	...equipment use and stream protection of streams, lakes and other waterbodies; chemicals stored at appropriate locations; state reports filed as required; or methods used to ensure protection of federally listed threatened & endangered species						
2.3	<i>Program Participants shall implement management practices to protect and maintain forest and soil productivity.</i>	MF	6, 7				
2.3.1	Use of soils maps where available.	MF	6, 7				
2.3.2	Process to identify soils vulnerable to compaction and use of appropriate methods to avoid excessive soil disturbance.	MF	6, 7				
2.3.3	Use of erosion control measures to minimize the loss of soil and site productivity.	MF	7				6
2.3.4	Post-harvest conditions conducive to maintaining site productivity (e.g., limited rutting, retained down woody debris, minimized skid trails).	MF	6, 7				
2.3.5	Retention of vigorous trees during partial harvesting, consistent with silvicultural norms for the area.	MF	6, 7				
2.3.6	Criteria that address harvesting and site preparation to protect soil productivity.	MF	6, 7				
2.3.7	Minimized road construction to meet management objectives efficiently.	MF	6, 7				
2.4	<i>Program Participants shall manage so as to protect forests from damaging agents such as environmentally or economically undesirable wildfire, pests and diseases to maintain and improve long-term forest health, productivity and economic viability.</i>	MF	6, 7				
2.4.1	Program to protect forests from damaging agents.	MF		6, 7			
2.4.2	Management to promote healthy and productive forest conditions to minimize susceptibility to damaging agents.	MF	6, 7				
2.4.3	Participation in, and support of, fire and pest prevention and control programs.	MF	6, 7				
2.5	<i>Program Participants that utilize genetically improved planting stock including those derived through biotechnology shall use sound scientific methods and follow all applicable laws and other internationally applicable protocols.</i>						
2.5.1	Program for appropriate research, testing, evaluation and deployment of genetically improved planting stock including trees derived through biotechnology.						

Objective 3: To protect water quality in streams, lakes and other water bodies.

Performance Measure/ Indicator		<u>Audit</u> <u>-or</u>	- - - Indicate Only One - - -				<u>OFI</u>
			<u>FC</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	
3.1	<i>Program Participants shall meet or exceed all applicable federal, provincial, state and local water quality laws and meet or exceed Best Management Practices developed under Environmental Protection Agency (EPA)-approved state water quality programs other applicable federal, provincial, state or local programs.</i>	MF	6, 7				
3.1.1	Program to implement state or provincial equivalent BMPs during all phases of management activities.	MF	6, 7				6
3.1.2	Contract provisions that specify BMP compliance.	MF	6, 7				
3.1.3	Plans that address wet weather events (e.g., inventory systems, wet weather tracts, defining acceptable operational conditions, etc.).	MF	6, 7				
3.1.4	Monitoring of overall BMP implementation.	MF	6, 7				
3.2	<i>Program Participant shall have or develop, implement, and document, riparian protection measures based on soil type, terrain, vegetation and other applicable factors.</i>	MF	6, 7				
3.2.1	Program addressing management and protection of streams, lakes and other water bodies and riparian zones.	MF	6, 7				
3.2.2	Mapping of streams, lakes and other water bodies and riparian zones, and where appropriate, identification on the ground.	MF	6, 7				
3.2.3	Implementation of plans to manage or protect streams, lakes and other water bodies.	MF	6, 7				
3.2.4	Identification and protection of nonforested wetlands, including bogs, fens, vernal pools and marshes of significant size.	MF	6, 7				
3.2.5	Where regulations or BMPs do not currently exist to protect riparian areas, use of experts to identify appropriate protection measures.	N.A.					

Objective 4: Manage the quality and distribution of wildlife habitats and contribute to the conservation of biological diversity by developing and implementing stand- and landscape- level measures that promote habitat diversity and the conservation of forest plants and animals including aquatic fauna.

Performance Measure/ Indicator		<u>Audit</u> <u>-or</u>	--- Indicate Only One ---				<u>O</u> <u>F</u> <u>I</u>
			<u>F</u> <u>C</u>	<u>E</u> <u>X</u> <u>R</u>	<u>M</u> <u>a</u> <u>j</u>	<u>M</u> <u>i</u> <u>n</u>	
4.1	<i>Program participants shall have programs to promote biological diversity at stand- and landscape- scales.</i>						
4.1.1	Program to promote the conservation of native biological diversity, including species, wildlife habitats, and ecological or natural community types, at stand and landscape levels.	JH	6, 7				
4.1.2	Program to protect threatened and endangered species.	MF		6, 7			
4.1.3	Plans to locate and protect known sites associated with viable occurrences of critically imperiled and imperiled species and communities. Plans for protection may be developed independently or collaboratively and may include Program Participant management, cooperation with other stakeholders, or use of easements, conservation land sales, exchanges, or other conservation strategies	JH, MF	7				7
4.1.4	Development and implementation of criteria, as guided by regionally appropriate science, for retention of stand-level wildlife habitat elements (e.g., snags, mast trees, down woody debris, den trees, nest trees).	JH	6, 7				7
4.1.5	Assessment, conducted individually or collaboratively, of forest cover types and habitats at the individual ownership level and, where credible data are available, across the landscape, and incorporation of findings into planning and management activities, where practical and when consistent with management objectives.	MF	7				
4.1.6	Support of and participation in plans or programs for the conservation of old-growth forests in the region of ownership.	JH	6, 7				6
4.1.7	Participation in programs and demonstration of activities as appropriate to limit the introduction, impact, and spread of invasive exotic plants and animals that directly threaten or are likely to threaten native plant and animal communities.	JH	6	7			6
4.1.8	Program to incorporate the role of prescribed or natural fire where appropriate.	MF	6, 7				6, 7
4.2	<i>Program Participants shall apply knowledge gained through research, science, technology, and field experience to manage wildlife habitat and contribute to the conservation of biological diversity.</i>						

Performance Measure/ Indicator		Audit -or-	--- Indicate Only One ---				OFI
			FC	EXR	Maj	Min	
4.2.1	Collection of information on critically imperiled and imperiled species and communities and other biodiversity-related data through forest inventory processes, mapping, or participation in external programs, such as NatureServe, state or provincial heritage programs, or other credible systems. Such participation may include providing nonproprietary scientific information, time, and assistance by staff, or in-kind or direct financial support.		7				
4.2.2	A methodology to incorporate research results and field applications of biodiversity and ecosystem research into forest management decisions.	JH	6, 7				6, 7

Objective 5: To manage the visual impact of harvesting and other forest operations.

Performance Measure/ Indicator		Audit -or-	--- Indicate Only One ---				OFI
			FC	EXR	Maj	Min	
5.1	<i>Program Participants shall manage the impact of harvesting on visual quality.</i>	MF	7				
5.1.1	Program to address visual quality management.	MF	6, 7				
5.1.2	Incorporation of aesthetic considerations in harvesting, road, landing design and management, and other management activities where visual impacts are a concern.	MF	6, 7				
5.2	<i>Program Participants shall manage the size, shape, and placement of clearcut harvests.</i>	MF	7				
5.2.1	Average size of clearcut harvest areas does not exceed 120 acres, except when necessary to respond to forest health emergencies or other natural catastrophes.	MF		6, 7			
5.2.2	Documentation through internal records of clearcut size and the process for calculating average size.						
5.3	<i>Program Participants shall adopt a green-up requirement or alternative methods that provide for visual quality.</i>						
5.3.1	Program implementing the green-up requirement or alternative methods.						
5.3.2	Harvest area tracking system to demonstrate compliance with the green-up requirement or alternative methods.						
5.3.3	Trees in clearcut harvest areas are at least 3 years old or 5 feet high at the desired level of stocking before adjacent areas are clearcut, or as appropriate to address operational and economic considerations, alternative methods to reach the performance measure are utilized by the Program Participant.	MF	7				

Objective 6: To manage Program Participant lands that are ecologically, geologically, historically, or culturally important in a manner that recognizes their special qualities.

Performance Measure/ Indicator		<u>Audit</u> <u>-or-</u>	- - - Indicate Only One - - -				<u>OFI</u>
			<u>FC</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	
6.1.	<i>Program Participants shall identify special sites and manage them in a manner appropriate for their unique features.</i>	MF	7	6			
6.1.1	Use of existing natural heritage data and expert advice in identifying or selecting sites for protection because of their ecologically, geologically, historically, or culturally important qualities.	MF	7	6			
6.1.2	Appropriate mapping, cataloging, and management of identified special sites.	MF	7	6			

Objective 7: To promote the efficient use of forest resources.

Performance Measure/ Indicator		<u>Audit</u> <u>-or-</u>	- - - Indicate Only One - - -				<u>OFI</u>
			<u>FC</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	
7.1	<i>Program Participants shall employ appropriate forest harvesting technology and “in-woods” manufacturing processes and practices to minimize waste and ensure efficient utilization of harvested trees, where consistent with other SFI Standard objectives.</i>	MF	7				
7.1.1	Program or monitoring system to ensure efficient utilization, which may include provisions to ensure a. landings left clean with little waste; b. residues distributed to add organic and nutrient value to future forests; c. training or incentives to encourage loggers to enhance utilization; d. cooperation with mill managers for better utilization of species and low-grade material; e. merchandizing of harvested material to ensure use for its most beneficial purpose; f. development of markets for underutilized species and low-grade wood; g. periodic inspections and reports noting utilization and product separation; or h. exploration of alternative markets (e.g., energy markets).	MF	6, 7				

N.A. Objective 8: To broaden the practice of sustainable forestry through procurement programs.

Objective 9: To improve forestry research, science, and technology, upon which sound forest management decisions are based.

Performance Measure/ Indicator		<u>Audit</u> <u>-or-</u>	- - - Indicate Only One - - -				<u>O</u> <u>F</u> <u>I</u>
			<u>FC</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	
9.1	<i>Program Participants shall individually, through cooperative efforts, or through associations provide in-kind support or funding, in addition to that generated through taxes, for forest research to improve the health, productivity, and management of forest resources.</i>						
9.1.1	Current financial or in-kind support of research to address questions of relevance in the region of operations. The research will include some or all of the following issues: a. forest health, productivity, and ecosystem functions; b. chemical efficiency, use rate, and integrated pest management; c. water quality; d. wildlife management at stand or landscape levels; e. conservation of biological diversity; and f. effectiveness of BMPs.	MF	7	6			7
9.2	<i>Program Participants shall individually, through cooperative efforts, or through associations develop or use state, provincial, or regional analyses in support of their sustainable forestry programs.</i>						
9.2.1	Participation, individually or through cooperative efforts or associations at the state, provincial, or regional level, in the development or use of a. regeneration assessments; b. growth-and-drain assessments; c. BMP implementation and compliance; and d. biodiversity conservation information for family forest owners.	MF		6			

Objective 10: To improve the practice of sustainable forest management by resource professionals, logging professionals, and contractors through appropriate training and education programs.

Performance Measure/ Indicator		<u>Audit</u> <u>-or-</u>	- - - Indicate Only One - - -				<u>OFI</u>
			<u>FC</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	
10.1	<i>Program Participants shall require appropriate training of personnel and contractors so that they are competent to fulfill their responsibilities under the SFI Standard.</i>	MF	6, 7				
10.1.1	Written statement of commitment to the SFI Standard communicated throughout the organization, particularly to mill and woodland managers, wood procurement staff, and field foresters.	MF	6, 7				
10.1.2	Assignment and understanding of roles and responsibilities for achieving SFI Standard objectives.	MF	6, 7				
10.1.3	Staff education and training sufficient to their roles and responsibilities.	MF	7				6
10.1.4	Contractor education and training sufficient to their roles and responsibilities.	MF	6, 7				
10.2	<i>Program Participants shall work closely with state logging or forestry associations, or appropriate agencies or others in the forestry community, to foster improvement in the professionalism of wood producers.</i>	MF	6, 7				
10.2.1	Participation in or support of SFI Implementation Committees to establish criteria and identify delivery mechanisms for wood producers' training courses that address a. awareness of sustainable forestry principles and the SFI Program; b. BMPs, including streamside management and road construction, maintenance, & retirement; c. regeneration, forest resource conservation, and aesthetics; d. awareness of responsibilities under the U.S. Endangered Species Act, the Canadian Species at Risk Act, and other measures to protect wildlife habitat; e. logging safety; f. U.S. Occupational Safety and Health Administration regulations, wage and hour rules, and other employment laws; g. transportation issues; h. business management; and i. public policy and outreach.	MF	6, 7				

Objective 11: Commitment to comply with applicable federal, provincial, state, or local laws and regulations.

Performance Measure/ Indicator		<u>Audit</u> <u>-or</u>	- - - Indicate Only One - - -				<u>OFI</u>
			<u>FC</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	
11.1	<i>Program Participants shall take appropriate steps to comply with applicable federal, provincial, state, and local forestry and related environmental laws and regulations.</i>						
11.1.1	Access to relevant laws and regulations in appropriate locations.	MF	6				
11.1.2	System to achieve compliance with applicable federal, provincial, state, or local laws and regulations.	MF	6, 7				
11.1.3	Demonstration of commitment to legal compliance through available regulatory action information.	MF	7				
11.1.4	Adherence to all applicable federal, state, & provincial regulations and international protocols for research & deployment of trees derived from improved planting stock & biotechnology.						
11.2	<i>Program Participants shall take appropriate steps to comply with all applicable social laws at the federal, provincial, state, and local levels in the country in which the Program Participant operates.</i>	MF	6				
11.2.1	Written policy demonstrating commitment to comply with social laws, such as those covering civil rights, equal employment opportunities, antidiscrimination and anti-harassment measures, workers' compensation, indigenous peoples' rights, workers' and communities' right to know, prevailing wages, workers' right to organize, and occupational health and safety.	MF	6				

Objective 12: To broaden the practice of sustainable forestry by encouraging the public and forestry community to participate in the commitment to sustainable forestry and publicly report progress.

Performance Measure/ Indicator		<u>Audit</u> <u>-or</u>	--- Indicate Only One ---				<u>O</u> <u>F</u> <u>I</u>
			<u>FC</u>	<u>EXR</u>	<u>Maj</u>	<u>Min</u>	
12.1	<i>Program Participants shall support and promote efforts by consulting foresters, state and federal agencies, state or local groups, professional societies, and the American Tree Farm System® and other landowner cooperative programs to apply principles of sustainable forest management.</i>	MF	6				
12.1.1	Support for efforts of SFI Implementation Committees.	MF	6, 7				
12.1.2	Support for the development and distribution of educational materials, including information packets for use with forest landowners.	MF	6				
12.1.3	Support for the development and distribution of regional or statewide information materials that provide landowners with practical approaches for addressing biological diversity issues, such as specific wildlife habitat, critically imperiled or imperiled species, and threatened and endangered species.	MF	6				
12.1.4	Participation in efforts to support or promote conservation of working forests through voluntary market-based incentive programs (e.g., current-use taxation programs, Forest Legacy, or conservation easements).	MF	6, 7				
12.1.5	Program Participants are knowledgeable about credible regional conservation planning and priority-setting efforts that include a broad range of stakeholders. Consider the results of these efforts in planning where practical and consistent with management objectives.	MF	6				
12.2	<i>Program Participants shall support and promote, at the state, provincial or other appropriate levels, mechanisms for public outreach, education, and involvement related to forest management.</i>	Mf	7				
12.2.1	Support for the SFI Implementation Committee program to address outreach, education, and technical assistance (e.g., toll-free numbers, public sector technical assistance programs).	MF	6, 7				
12.2.2	Periodic educational opportunities promoting sustainable forestry, such as a. field tours, seminars, or workshops; b. educational trips; c. self-guided forest management trails; or d. publication of articles, educational pamphlets, or newsletters; or e. support for state, provincial, and local forestry organizations and soil and water conservation districts.	MF	7				
12.2.3	Recreation opportunities for the public, where consistent with forest management objectives.	MF	6	7			

Performance Measure/ Indicator		Audit -or-	- - - Indicate Only One - - -				OFI
			FC	EXR	Maj	Min	
12.3	<i>Program Participants with forest management responsibilities on public lands shall participate in the development of public land planning and management processes.</i>	MF	6				
12.3.1	Involvement in public land planning and management activities with appropriate governmental entities and the public.	MF	6				
12.3.2	Appropriate contact with local stakeholders over forest management issues through state, provincial, federal, or independent collaboration.	MF	6, 7				
12.4	<i>Program Participants with forest management responsibilities on public lands shall confer with affected indigenous peoples.</i>	MF, DW	6, 7				
12.4.1	Program that includes communicating with affected indigenous peoples to enable Program Participants to a. understand and respect traditional forest related knowledge; b. identify and protect spiritually, historically, or culturally important sites; and c. address the sustainable use of nontimber forest products of value to indigenous peoples in areas where Program Participants have management responsibilities on public lands.	MF	6, 7				
12.5	<i>Program Participants shall establish, at the state, provincial, or other appropriate levels, procedures to address concerns raised by loggers, consulting foresters, employees, the public, or Program Participants regarding practices that appear inconsistent with the SFI Standard principles and objectives.</i>	MF	6				
12.5.1	Support for SFI Implementation Committee efforts (toll-free numbers and other efforts) to address concerns about apparent nonconforming practices.	MF	6				
12.5.2	Process to receive and respond to public inquiries.	MF	6				
12.6	<i>Program Participants shall report annually to the SFI Program on their compliance with the SFI Standard.</i>	MF	6				
12.6.1*	Prompt response to the SFI annual progress report. (*Note: This indicator will be reviewed in all audits.)	MF	6, 7				
12.6.2	Recordkeeping for all the categories of information needed for SFI annual progress reports.	MF	6				
12.6.3	Maintenance of copies of past reports to document progress and improvements to demonstrate conformance to the SFI Standard	MF	6				

Objective 13: To promote continual improvement in the practice of sustainable forestry and monitor, measure, and report performance in achieving the commitment to sustainable forestry.

Performance Measure/ Indicator		Audit -or	- - - Indicate Only One - - -				OFI
			FC	EXR	Maj	Min	
13.1*	<i>Program Participants shall establish a management review system to examine findings and progress in implementing the SFI Standard, to make appropriate improvements in programs, and to inform their employees of changes.</i> (*This Performance Measure will be reviewed in all audits.)	MF	6, 7				
13.1.1	System to review commitments, programs, and procedures to evaluate effectiveness.	MF	6, 7				
13.1.2	System for collecting, reviewing, and reporting information to management regarding progress in achieving SFI Standard objectives and performance measures.	MF	7				6
13.1.3	Annual review of progress by management and determination of changes and improvements necessary to continually improve SFI conformance.	MF	6, 7				

2007 Notes:

Requirement	Auditor	Notes
1.1		<i>“Program Participants shall ensure that long-term harvest levels are sustainable and consistent with appropriate growth and-yield models and written plans.”</i>
1.1.1	Minor	<p>“A long-term resource analysis to guide forest management planning at a level appropriate to the size and scale of the operation, including: a periodic or ongoing forest inventory; b. a land classification system; c. soils inventory and maps, where available; d. access to growth-and-yield modeling capabilities; e. up-to-date maps or a geographic information system (GIS); f. recommended sustainable harvest levels; and g. a review of nontimber issues (e.g., pilot projects and economic incentive programs to promote water protection, carbon storage, or biological diversity conservation).”</p> <ul style="list-style-type: none"> • Progress has been made towards the development of more sophisticated harvest schedule model using the Woodstock harvest scheduling model for spatially-explicit harvest planning. Interviewed Christopher Schwalm Minnesota DNR’s modeler and confirmed that the program is being implemented for one pilot plan with some success. • For two plans, MDNR outsourced GIS and planner work.
1.1.2	OFI	<p>“Documentation of annual harvest trends in relation to the sustainable forest management plan.”</p> <p><u>There is an opportunity to improve the completion of monitoring reports.</u></p> <ul style="list-style-type: none"> • Reviewed “FY2005 Harvest Plan Accomplishments by Cover Type and Prescription”, a report generated from the database. Acres of

		<p>various silvicultural treatments are listed, organized by cover type. The categories of prescriptions are quite descriptive, with fine-grained distinctions (e.g. Two-Aged Clearcut with Reserves - Natural Seeding vs. Two-Aged Clearcut w Reserves - Artificial Regeneration). This allows managers to understand accomplishments vs. plan very easily at the scale of areas or state-wide; challenge exists at the SFRMP scale.</p> <ul style="list-style-type: none"> Monitoring of the implementation of Subsection Forest Resource Plans is partially in place. For 2007 reports have been compiled comparing “Planned and Actual Actions”, with reports on “Planned and Actual Actions by Cover Type” being compiled next.
1.1.3	C	<p>“A forest inventory system and a method to calculate growth.”</p> <ul style="list-style-type: none"> The Minnesota DNR budget for forest inventory has been increased with the goal of shortening the inventory interval from 15 to 10 years. Basal-area growth is calculated within the FRM module using growth rates from FIA data
1.1.4	C	<p>“Periodic updates of inventory and recalculation of planned harvests.”</p> <ul style="list-style-type: none"> The Minnesota DNR has set targets for acres to be re-inventoried annually. Confirmed recent increased efforts to keep stand inventory current, updates to CSA inventory on an ongoing basis when stands are regenerated or when they are expected to reach conditions suited to silvicultural treatment. Harvest levels are then determined annually based on the acres appraised (set up for sale), which is a subset of the stands selected for review during either SFRMP or Interim Planning. Confirmed that each area visited participated in inventory updates. FY05 completed 128,000 acres of re-inventory FY06 completed 116,000 acres of re-inventory (111% of target) FY07 completed 128,000 acres of inventory The MDNR annual statewide goal is 104,000 per year.
1.1.5	C	<p>“Documentation of forest practices (e.g., planting, fertilization, and thinning) consistent with assumptions in harvest plans.”</p> <ul style="list-style-type: none"> Reviewed “FY2005 Harvest Plan Accomplishments by Cover Type and Prescription”, a report generated from the database. Acres of various silvicultural treatments are listed, organized by cover type. There is a category for thinning.
2.1	C	<p><i>“Program Participants shall reforest after final harvest, unless delayed for site-specific environmental or forest health considerations, through artificial regeneration within two years or two planting seasons, or by planned natural regeneration methods within five years.”</i></p>

2.1.1	C	<p>“Designation of all management units for either natural or artificial regeneration.”</p> <ul style="list-style-type: none"> • This designation is found in the records.
2.1.2	C	<p>“Clear Requirements to judge adequate regeneration and appropriate actions to correct under-stocked areas and achieve desired species composition and stocking rates for both artificial and natural regeneration.”</p> <ul style="list-style-type: none"> • Confirmed by field observations at sites visited that considerable efforts are made to regenerate all sites. Difficult to regenerate Jack Pine sites have been receiving extensive efforts, including multiple planting efforts where needed. Area foresters interviewed (several in each of the three areas visited) all clearly understand the MDNR requirements for regeneration surveys (1, 3, and 10 years post-planting or 5 years after harvests where natural regeneration is planned). • Confirmed that planting survival surveys are implemented at year 1, 3, and 10 post-planting, and natural regeneration surveys are done five years following harvest.
2.1.3	C	<p>“Minimized plantings of exotic tree species and research documentation that exotic tree species, planted operationally, pose minimal risk.”</p> <ul style="list-style-type: none"> • Field observations confirmed that exotics are not planted.
2.1.4	OFI	<p>“Protection of desirable or planned advanced natural regeneration during harvest.”</p> <p><u>There is an opportunity to improve understanding of, and mitigation tools for, the loss of desirable understory elements (softwood regeneration) in final harvests.</u></p> <ul style="list-style-type: none"> • Foresters described efforts to work with loggers to ensure the protection of important understory species, particularly young spruce and fir on mesic hardwood sites in the Agassiz Lowlands subsection. (Note that an increase in the extent of the mixed conifer type is called for in the Agassiz Lowlands SFRMP.) • Field inspections at completed harvest sites showed that some pockets of desirable advance regeneration exist, although these were less than might be hoped for following aspen harvests. • The extensive use of tree-length skidding, de-limbing in the landing area, and redistribution of slash throughout the site with grapple-skidders results in considerable impact on understory vegetation.
2.1.5	C,	<p>“Artificial reforestation programs that consider potential ecological impacts of a different species or species mix from that which was harvested.”</p> <ul style="list-style-type: none"> • ECS training and development of silvicultural interpretations continue to be broadened, although the implementation of ECS tools such as silvicultural interpretations is just beginning. • 10 of 50 silvicultural interpretations documents are available; these

		cover 50% of the forested area of Minnesota DNR-administered lands. In 2008 10 additional types will be completed, covering another 27%.
2.2		<i>“Program Participants shall minimize chemical use required to achieve management objectives while protecting employees, neighbors, the public and the forest environment.”</i>
2.2.1	C	<p>“Minimized chemical use required to achieve management objectives.”</p> <ul style="list-style-type: none"> • Compared to other landowners in the region Minnesota DNR uses small amounts of chemicals. For example in the Warroad area it has been three years since the last treatment. • The approach taken to increase mesic hardwoods may not lead to minimized chemical use (because of the need to meet volume targets aspen stands that might have some softwood understory are clearcut, then on some sites they are doing trials of under planting softwoods and will implement chemical release).
2.2.3 2.2.4	C	<p>“Use of pesticides registered for the intended use and applied in accordance with the label requirements.”</p> <p>“Use of Integrated Pest Management where feasible.”</p> <ul style="list-style-type: none"> • Discussed the use of “DIVISION OF FORESTRY HERBICIDE USE PROPOSAL/APPROVAL” form used for chemical site preparation and/or release. Reviewed the current versions of the form; it provides a method for analysis, review, and record-keeping. Silviculture specialists at the regional level, and state level as needed, review all proposals against label requirements and to determine whether the use is justified. • Also reviewed a completed form from an older project.
2.2.5	C	<p>“Supervision of forest chemical applications by state-trained or certified applicators.”</p> <ul style="list-style-type: none"> • Confirmed the use of certified applicators by review of documentation and interview with an applicator (Bemidji area). • Confirmed that silviculture forester in Warroad has an up-to-date Minnesota Non-commercial pesticide applicator license • Reviewed contract terms for MDNR’s Specification To 2007 Forest Site Preparation/Release Contract - Scarification And Ground Herbicide Application: <ul style="list-style-type: none"> “A. Contractor must have a minimum of 3 years experience in broadcast forest herbicide application, using ground equipment. B. Contractor’s on-site herbicide applicator must have minimum of 3 years experience in broadcast forest herbicide application, using ground equipment. The Contractor's on-site representative(s) must be licensed by the Minnesota Department of Agriculture to commercially apply herbicides (categories A and G), and must have

		<p>in possession a current card or license. Proof of licensure must be submitted with the bid.</p> <p>C. Contractor must provide a minimum of three references ...”</p>
2.2.6		<p>“Use of best management practices appropriate to the situation; for example ...”</p> <ul style="list-style-type: none"> • Confirmed the use of chemical BMPs by review of contracts between DNR and chemical applicators, and by interview with one applicator (Bemidji area).
2.3	C	<p><i>“Program Participants shall implement management practices to protect and maintain forest and soil productivity.”</i></p>
2.3.1 2.3.2	C	<p>“Use of soils maps where available.”</p> <p>“Process to identify soils vulnerable to compaction and use of appropriate methods to avoid excessive soil disturbance.”</p> <ul style="list-style-type: none"> • Confirmed by field observations, review of documentation, and interviews with foresters that planning includes review of maps and site conditions, increasing use of ECS as a site classification tool, and multidisciplinary reviews.
2.3.3	C	<p>“Use of erosion control measures to minimize the loss of soil and site productivity.”</p> <ul style="list-style-type: none"> • Site Level Guidelines have a major focus on erosion control measures; a trained logger is present at all times; many operations have multiple trained loggers; some have all loggers trained. • Confirmed by field observations at all sites visited that erosion control measures are used (planning, avoidance, waterbars, slash distribution). • FY07 internal monitoring showed 88% Compliance (Item 1.c: if needed structures were appropriately place). FY06 showed 78%; FY05 65%. There is a clear trend in improving compliance.
2.3.4	C	<p>“Post-harvest conditions conducive to maintaining site productivity (e.g., limited rutting, retained down woody debris, minimized skid trails).”</p> <ul style="list-style-type: none"> • Confirmed by field observations at all sites visited.
2.3.5	C	<p>“Retention of vigorous trees during partial harvesting, consistent with silvicultural norms for the area.”</p> <ul style="list-style-type: none"> • Confirmed by field observations that Site Level Guidelines were respected at sites visited. • 10 of 50 silvicultural interpretations documents are available; these cover 50% of the forested area of MnDNR administered lands. In 2008 10 additional types will be completed, covering another 27%.

2.3.6	C	<p>“Criteria that address harvesting and site preparation to protect soil productivity.”</p> <ul style="list-style-type: none"> • The Minnesota Forest Resource Council’s (MFRC) Site Level Guidelines provide these criteria; foresters are trained in the SLG. • The Site Level Guidelines are being updated to include the provisions of a recent report commissioned for this purpose <ul style="list-style-type: none"> ○ “Woody Biomass Harvesting Guidelines on Forest Lands, Brushlands and Open Lands in Minnesota ○ The team explored the differences between the Biomass Technical Committee Report’s recommendations and the version approved by the MFRC’s Site-level Committee. The protections for High Conservation Diversity Areas, SNAs, and/or certain native plant communities (listed in an Appendix J that we did not have access to) were somewhat reduced in the final version. Forestry Division Director Dave Epperly committed to following the more restrictive standard. The three division directors reviewed the issue and agreed to the following language: ○ “DNR application of Brushland and Open Land Biomass Harvest Guidelines: As a general rule, the DNR shall meet or exceed the MFRC biomass guidelines on state lands. Greater consideration should be given to exceeding these guidelines specifically in salvage operations and in MCBS sites of high or outstanding biodiversity significance and other ecologically sensitive sites. Training programs and demonstration sites will be used to communicate when, how, and where the guidelines will be applied, and DNR will continually evaluate the science on the impacts of biomass harvesting and will adapt management as necessary.”
2.3.7	C	<p>“Minimized road construction to meet management objectives efficiently.”</p> <ul style="list-style-type: none"> • Harvesting infrastructure (roads, landings) appears to be well-designed and appropriate. • Considerable resources have and continue to be devoted to a systematic and rational approach to managing and providing for Off-Road Vehicles and ATVs where appropriate. This includes a gradual reduction in the extent of roads for these vehicles while committing additional resources to building, rebuilding, and maintaining these trails. • Stakeholders assert and staff interviewed confirmed that enforcement challenges exist. The audit team did not observe widespread damage to resources, but isolated site damage is occurring. Monitoring efforts by the MnDNR will be a focus area in future audits.

2.4	C	<i>“Program Participants shall manage so as to protect forests from damaging agents such as environmentally or economically undesirable wildfire, pests and diseases to maintain and improve long-term forest health, productivity and economic viability.”</i>
2.4.1	C	<p>“Program to protect forests from damaging agents.”</p> <p><u>Exceeds the Requirement: Minnesota DNR’s programs in forest health and protection are exemplary examples of Integrated Pest Management.</u></p> <ul style="list-style-type: none"> • Many examples of Jack Pine regeneration harvests to salvage and/or suppress Jack Pine budworm outbreaks.
2.4.2	C	<p>“Management to promote healthy and productive forest conditions to minimize susceptibility to damaging agents.”</p> <ul style="list-style-type: none"> • Most stands observed were properly stocked.
2.4.3	C	<p>“Participation in, and support of, fire and pest prevention and control programs.”</p> <ul style="list-style-type: none"> • Observed well-provisioned fire-control vehicles at all locations visited.
2.5		<i>“Program Participants that utilize genetically improved planting stock including those derived through biotechnology shall use sound scientific methods and follow all applicable laws and other internationally applicable protocols.”</i>
3.1	C	<i>“Program Participants shall meet or exceed all applicable federal, provincial, state and local water quality laws and meet or exceed Best Management Practices developed under Environmental Protection Agency (EPA)-approved state water quality programs other applicable federal, provincial, state or local programs.”</i>
3.1.1	C	<p>“Program to implement state or provincial equivalent BMPs during all phases of management activities.”</p> <ul style="list-style-type: none"> • Traditional forest management activities are covering BMPs comprehensively through training, planning, supervision, and monitoring. • Concerns were expressed by many public stakeholders regarding damage from uncontrolled ATV use. However the audit team did not observe such damage.
3.1.2	C	<p>“Contract provisions that specify BMP compliance.”</p> <ul style="list-style-type: none"> • Confirmed in sample of contracts reviewed.
3.1.3	C	<p>“Plans that address wet weather events (e.g., inventory systems, wet weather tracts, defining acceptable operational conditions, etc).”</p> <ul style="list-style-type: none"> • Confirmed that several sites visited, and many others not visited, had been harvested during dry or frozen conditions

		<ul style="list-style-type: none"> Confirmed that foresters are trained in and use ECS to help set “time of year for harvest”
3.1.4	C	<p>“Monitoring of overall BMP implementation.”</p> <ul style="list-style-type: none"> MFRC and the MDNR both monitor BMPs and report results. Confirmed by review of DNR documentation that two types of review occur: formal surveys and the internal audit teams. FY05 internal monitoring showed 65% Compliance, and FY06 showed 78% compliance and FY07 showed 88% compliance with the use of Water diversion structures as needed on skid trails and access roads.
3.2	C	<p><i>“Program Participant shall have or develop, implement, and document, riparian protection measures based on soil type, terrain, vegetation and other applicable factors.”</i></p>
3.2.1	C	<p>“Program addressing management and protection of streams, lakes and other water bodies and riparian zones.”</p> <ul style="list-style-type: none"> Minnesota DNR has a comprehensive program for the protection of wetlands and watercourses. Foresters are trained to follow Minnesota’s Site Level Guidelines; specialists are available as needed; all activities are subject to interdisciplinary review.
3.2.2	C	<p>“Mapping of streams, lakes and other water bodies and riparian zones, and where appropriate, identification on the ground.”</p> <ul style="list-style-type: none"> Confirmed that riparian zones, streams, water bodies and lakes are mapped; confirmed that they were marked on the ground where needed
3.2.3	C	<p>“Implementation of plans to manage or protect streams, lakes and other water bodies.”</p> <ul style="list-style-type: none"> Confirmed by field observations at all sites visited.
3.2.4	C	<p>“Identification and protection of nonforested wetlands, including bogs, fens, vernal pools and marshes of significant size.”</p> <ul style="list-style-type: none"> Confirmed that nonforested wetlands were protected by sale design and layout, by contract clauses, and by logging practices.
3.2.5	N.A.	<p>“Where regulations or BMPs do not currently exist to protect riparian areas, use of experts to identify appropriate protection measures.”</p> <ul style="list-style-type: none">
4.1		<p><i>“Program participants shall have programs to promote biological diversity at stand- and landscape- scales.”</i></p>
4.1.1	C	<p>“Program to promote the conservation of native biological diversity, including species, wildlife habitats, and ecological or natural community types, at stand and landscape levels.”</p> <ul style="list-style-type: none"> Extensive measures and programs exist to promote diversity. The most important of these are the involvement of biologists and ecologists from Wildlife and Endangered Resources in planning at

		<p>multiple spatial scales.</p> <ul style="list-style-type: none"> • Endangered Resources staff are limited in numbers and hence in influence on decision-making. There is potential that this unbalance may be exacerbated in the future with the hiring of more field foresters. • There is an issue of excessive Deer Browse; efforts are being made to assess statewide populations and consider vegetation effects: It will take time to determine whether these efforts will reduce populations. • The DNR has completed and published its comprehensive wildlife conservation assessment titled “Tomorrow’s Habitat for the Wild and Rare, An Action Plan for Minnesota Wildlife”
4.1.2	EXR	<p>“Program to protect threatened and endangered species.”</p> <p><u>Minnesota DNR exceeds the SFI requirements for protection of threatened and endangered species.</u></p> <ul style="list-style-type: none"> • The Natural Heritage and Nongame Research Program administers Minnesota's endangered species laws, rules, and permits pertaining to species designated by rule as endangered or threatened. Confirmed by interviews and review of documents provided that the Minnesota DNR Division of Forestry, Division of Fish and Wildlife, and Division of Ecological Resources all collaborate to protect threatened and endangered species. • Presence and locations of rare resources are available in a data layer that is accessible by field personnel when planning resource management actions. • Staff that work on endangered species issues are limited in numbers and hence in influence on decision-making. There is potential that this unbalance may be exacerbated in the future with the hiring of more field foresters. • There was evidence from several employees that collaboration and cooperation among DNR divisions has greatly improved.
4.1.3	OFI	<p>“Plans to locate and protect known sites associated with viable occurrences of critically imperiled and imperiled species and communities. Plans for protection may be developed independently or collaboratively and may include Program Participant management, cooperation with other stakeholders, or use of easements, conservation land sales, exchanges, or other conservation strategies.”</p> <p><u>There is an opportunity to improve by using the SNA program to identify and protect rare native communities.</u></p> <ul style="list-style-type: none"> • The Minnesota County Biological Survey identifies occurrences of imperiled species and communities. This information is made public to inform stakeholder opportunities for conservation. • The DNR has completed and published its comprehensive wildlife

		<p>conservation assessment which identifies critical habitat for species and communities. There is an opportunity to link this assessment with forest inventory data and with the NPC used in forest management strategies.</p> <ul style="list-style-type: none"> • There is an opportunity to identify and protect rare native communities through the SNA program.
4.1.4	OFI	<p>“Development and implementation of criteria, as guided by regionally appropriate science, for retention of stand-level wildlife habitat elements (e.g., snags, mast trees, down woody debris, den trees, nest trees).” <u>There is an opportunity to improve record-keeping for small no-cut reserve areas within stands to ensure that they are retained over time as planned.</u></p> <ul style="list-style-type: none"> • Confirmed by field observations at sites visited that reserves were apparent at appropriate levels at all field sites visited by the team. • In some cases reserve areas excluded from clearcut harvest retain the pre-harvest coding, causing them to remain candidates for harvest in the automated part of the stand selection process. Staff knowledge of history and intent prevents their harvest; but records could be clearer; DNR staff described possible ways to more accurately re-code these sites to minimize errors. • DNR has taken a pro-active approach in providing site-level guidelines for biomass removal from timber harvest sites. It will be important to monitor the effectiveness of these new guidelines on sites where biomass removal has occurred.
4.1.5	C	<p>“Assessment, conducted individually or collaboratively, of forest cover types and habitats at the individual ownership level and, where credible data are available, across the landscape, and incorporation of findings into planning and management activities, where practical and when consistent with management objectives.”</p> <ul style="list-style-type: none"> • DNR uses FIA data to assess forest cover types and habitats across ownerships. • DNR has participated in MN Forest Resource Council landscape planning round tables that determined landscape forest cover goals by ecological sections of the State. These data were used to shape subsection planning.
4.1.6	C	<p>“Support of and participation in plans or programs for the conservation of old-growth forests in the region of ownership.”</p> <ul style="list-style-type: none"> • DNR has developed and will implement a strategy to identify and protect forests of high conservation value.
4.1.7	EXR	<p>“Participation in programs and demonstration of activities as appropriate to limit the introduction, impact, and spread of invasive exotic plants and animals that directly threaten or are likely to threaten native plant and animal communities.” <u>The activities of the Minnesota DNR in the control of invasive exotic</u></p>

	<p><u>plants exceed the standard.</u></p> <ul style="list-style-type: none"> • Developed and approved “Invasive Species Operational Handbook – A Resource for Operational Order #113” dated May 31, 2007 which provides an example or template for the “Discipline Guides”. The next step will be the development of comprehensive BMPs for invasive prevention and control, organized by agency or activity. • “The Operations Order requires that each Division and Bureau within the DNR develop divisional guidelines outlining how the Division or Bureau will meet the requirements of the Operations Order. The Operations Order requires that all activities carried out, permitted, or granted by the DNR comply with the following goals: <ul style="list-style-type: none"> ○ Prevent or limit the introduction, establishment and spread of invasive species. ○ Implement site-level management to limit the spread and impact of invasive species. • Each Division or Bureau’s guidelines will outline policy and procedures for prevention and management of invasive species including: <ul style="list-style-type: none"> ○ Intentional movement of equipment ○ Intentional movement of organisms, organic and inorganic materials ○ Identifying invasive species and implementation management strategies to reduce impact at the site level ○ Monitoring and reporting new invasive species infestations. • The Operations Handbook was designed as a guide to help the individual Divisions and Bureaus develop their divisional guidelines. The outline of the divisional guideline in the handbook will be used as an example of how an individual division can develop their guidelines. They may change the outline structure but it must include elements describing how staff will meet the requirements of the Operations Order (Intentional movement of equipment, organisms, and organic and inorganic materials, etc.) during their day-to-day activities. The tables describe exactly what staff may be required to do based on activity and equipment used during the course of the activity (one for aquatics and one for terrestrial). There are also some suggested ideas such as purchasing separate equipment to work on infested areas. Since this is not feasible in all circumstances we have developed ways to mitigate the risk of activities. The mitigation techniques include generalities that apply to many different activities. An example would be, cleaning equipment before entering and leaving a site. • The examples outlined are intended to guide current activities and spur divisions to develop mitigating strategies that will fit their needs. So for example, one group developed a procedure to clean out the grill, undercarriage, and tires of ATV’s using a compressed
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		<p>air sprayer mounted on the back of the vehicle. This group needs a way to clean equipment on site when water was not available.” Source: Ann Pierce, Ph.D., Ecologist, Invasive Species Unit</p> <ul style="list-style-type: none"> • The funding for the invasive control grants program was increased from \$400,000 for Fiscal Year 2007 (about 60% on certified lands) to \$850,000 for Fiscal Year 2008. • “Division of Forestry Invasive Species Program Funding The Division of Forestry received \$350,000 per year for the 2008-09 biennium from the Forest Management Investment Account “for the prevention of invasive species on state forest lands”. The plan is to hire an invasive species program coordinator that has a strong botany background to develop an invasive species program within the Division of Forestry to address the threat of terrestrial invasive plants. The program will be integrated with the on-going efforts of the Forest Health program to address the threats from invasive forest insects and pathogens. The funding will also develop and institute both a targeted and a systematic invasive species inventory of state forestry administered lands. It is hoped that the invasive species program coordinator can be hired by the fall of 2007. • Division of Ecological Resources The Division of Ecological Resources makes available funding for mapping and control of terrestrial invasive species on state lands (see attachment 4). Attachment 5 provides the number and types of projects funded during fiscal 07. For example, there were 7 Division of Forestry projects funded for a total of \$70,500. • Invasive Species Training A series of 6 workshop offered in August will introduce invasive species to an audience made up of a wide range of personnel working in a wide range of natural resources professions, but aimed in particular aimed department personnel. The workshop is entitled, “Invasive Species of Minnesota Forests - Information and Tools for Professionals.” (Attachment 6) and see the workshop announcement in Attachment 7. The Area Supervisors and/or Assistant Area Supervisors in the Division of Forestry are being directed by Forestry Director, Dave Epperly to attend a workshop. Others in the Division are being encouraged to attend. Epperly says in his memo to the Division: “Because invasive species are an emerging issue that can adversely impact the resources that we manage and protect, it is important that we become better informed about invasive species. This workshop is a good introduction and will help to increase our awareness of invasive species. Therefore, I'm directing that at least one person per Area, preferably the Supervisor or Assistant, attend one of the workshops, and I encourage others to attend as time permits. St. Paul will pick up the registration and meal costs.”
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4.1.8	OFI	<p>“Program to incorporate the role of prescribed or natural fire where appropriate.” <u>There is an opportunity to improve in the use of prescribed fire on special forested sites.</u></p> <ul style="list-style-type: none"> • Staff throughout the DNR are trained and experienced in the use of prescribed fire as well as in fire control. • Confirmed through field observations, interviews, and review of documentation that the use of prescribed fire is an important part of the timber management program and is also extensively used to maintain open landscapes. In the Thief Lake Work Area, for example, the audit team confirmed extensive use of fire to maintain and/or create open landscape conditions. • Interviews confirmed that the prescribed fire program continues to operate, but at a modest level. Use of prescribed fire for management in forested stands, for example for stand maintenance in red and white pine is almost completely absent from DNR lands.
4.2		<p><i>“Program Participants shall apply knowledge gained through research, science, technology, and field experience to manage wildlife habitat and contribute to the conservation of biological diversity.”</i></p>
4.2.1	C	<p>“Collection of information on critically imperiled and imperiled species and communities and other biodiversity-related data through forest inventory processes, mapping, or participation in external programs, such as NatureServe, state or provincial heritage programs, or other credible systems. Such participation may include providing nonproprietary scientific information, time, and assistance by staff, or in-kind or direct financial support.”</p> <ul style="list-style-type: none"> • DNR non-game program has provided small grants for research related to endangered, threatened or species of special concern. • DNR participates in state wide amphibian monitoring programs. • DNR formerly participated in a state wide bird monitoring program. Monitoring on State land was discontinued due to funding limitations.
4.2.2	OFI	<p>“A methodology to incorporate research results and field applications of biodiversity and ecosystem research into forest management decisions.” <u>OFI: There is an opportunity to improve by completing updates to the forest/wildlife guidelines.</u></p> <ul style="list-style-type: none"> • Division of Fish & Wildlife biologists and ecologists from Ecological Resources are involved with field foresters to make decisions on forest management activities. • Field foresters have formal training programs in application of site level guidelines.

		<ul style="list-style-type: none"> • MN FRC has recently completed an update to the applicable science that will be used to update the riparian site level guidelines. The riparian science technical committee presented their report to the FRC in September 2007. • DNR has completed site level guidelines for management and removal of brush from upland and lowland sites. • Updates to other portions of the forest/wildlife guidelines have not been completed.
5.1	C	<i>“Program Participants shall manage the impact of harvesting on visual quality.”</i>
5.1.1	C	<p>“Program to address visual quality management.”</p> <ul style="list-style-type: none"> • The use of trained foresters (who have training in visual management) and the department review process (which considers visual issues) constitute a program.
5.1.2	C	<p>“Incorporation of aesthetic considerations in harvesting, road, landing design and management, and other management activities where visual impacts are a concern.”</p> <ul style="list-style-type: none"> • Confirmed attention to aesthetics at all harvest sites visited during audit.
5.2		<i>“Program Participants shall manage the size, shape, and placement of clearcut harvests.”</i>
5.2.1		<p>“Average size of clearcut harvest areas does not exceed 120 acres, except when necessary to respond to forest health emergencies or other natural catastrophes.”</p> <ul style="list-style-type: none"> • <u>Exceeds the Requirement: Few very large clearcuts were observed; the average cut unit is less than 40 acres.</u>
5.3		<i>“Program Participants shall adopt a green-up requirement or alternative methods that provide for visual quality.”</i>
5.3.3	C	<p>“Trees in clearcut harvest areas are at least 3 years old or 5 feet high at the desired level of stocking before adjacent areas are clearcut, or as appropriate to address operational and economic considerations, alternative methods to reach the performance measure are utilized by the Program Participant.”</p> <ul style="list-style-type: none"> • Confirmed by field observations at all sites visited.
6.1.	C	<p><i>“Program Participants shall identify special sites and manage them in a manner appropriate for their unique features.”</i></p> <p><u>Exceeds the Requirement: The management and protection of special sites is a clear program strength relative to the SFI Standard.</u></p>

6.1.1	C	<p>“Use of existing natural heritage data and expert advice in identifying or selecting sites for protection because of their ecologically, geologically, historically, or culturally important qualities.”</p> <ul style="list-style-type: none"> • Confirmed use of heritage data by field foresters, who consult data base • Confirmed that ecologists in the Division of Ecological Resources review and comment on draft management prescriptions for stands or other management activities (e.g. OHV trail designation) that contain rare species records. • Confirmed by interviews and review of documents, the Minnesota DNR Division of Forestry, Division of Fish & Wildlife, and Division of Ecological Resources all collaborate to protect threatened and endangered species.
6.1.2	C	<p>“Appropriate mapping, cataloging, and management of identified special sites.”</p> <ul style="list-style-type: none"> • Confirmed that new locations of T&E species continue to be recorded by MCBS. MCBS survey work continues, and this represents a comprehensive effort to substantially strengthen the States natural heritage inventory database; • There continues to be no mandate for DNR forestry staff to report data to the NHNRP for inclusion in the NHIS. A form exists; however, reporting is variable.
7.1		<p><i>“Program Participants shall employ appropriate forest harvesting technology and “in-woods” manufacturing processes and practices to minimize waste and ensure efficient utilization of harvested trees, where consistent with other SFI Standard objectives.”</i></p>
7.1.1	C	<p>“Program or monitoring system to ensure efficient utilization, which may include...”</p> <ul style="list-style-type: none"> • Confirmed by field observations at all sites visited.
9.1		<p><i>“Program Participants shall individually, through cooperative efforts, or through associations provide in-kind support or funding, in addition to that generated through taxes, for forest research to improve the health, productivity, & management of forest resources.”</i></p>
9.1.1	OFI	<p>“Current financial or in-kind support of research to address questions of relevance in the region of operations. The research will include ...” <u>There is an opportunity to improve the documentation and distribution of field trial results.</u></p> <ul style="list-style-type: none"> • In Bemidji the silviculture forester is trying (and previous foresters have tried) various approaches to solving the Jack Pine regeneration dilemma. In Warroad field foresters, working with the program forester, have a trial of under planting conifers beneath dense, young aspen sprouts. Next they will implement a trial area of hand release and then chemical release. Staff told us that this type of

		experimentation is important and becoming increasingly common.
9.2		<i>“Program Participants shall individually, through cooperative efforts, or through associations develop or use state, provincial, or regional analyses in support of their sustainable forestry programs.”</i>
10.1	C	<i>“Program Participants shall require appropriate training of personnel and contractors so that they are competent to fulfill their responsibilities under the SFI Standard.”</i>
10.1.1	C	“Written statement of commitment to the SFI Standard communicated throughout the organization, particularly to mill and woodland managers, wood procurement staff, and field foresters.” <ul style="list-style-type: none"> • Andrew Arends routinely meets with DNR staff to discuss, describe, and promote SFI certification.
10.1.2	C	“Assignment and understanding of roles and responsibilities for achieving SFI Standard objectives.” <ul style="list-style-type: none"> • Key roles include Andrew Arends, Minnesota DNR Certification Coordinator and members of the Forest Certification Implementation Team (see 13.1.2 below).
10.1.3	C	“Staff education and training sufficient to their roles and responsibilities.” <ul style="list-style-type: none"> • Interviews confirmed strong educational background and ample access to training updates among all staff.
10.1.4	C	“Contractor education and training sufficient to their roles and responsibilities.” <ul style="list-style-type: none"> • All contractors interviewed were trained to some degree; each crew had at least one, and commonly several, loggers with the Minnesota SIC-approved logger training.
10.2		<i>“Program Participants shall work closely with state logging or forestry associations, or appropriate agencies or others in the forestry community, to foster improvement in the professionalism of wood producers.”</i>
10.2.1 12.1.1, 12.2.1, and 12.5.1	C	“Participation in or support of SFI Implementation Committees to establish criteria and identify delivery mechanisms for wood producers’ training courses...” Note: Indicators 10.2.1, 12.1.1, 12.2.1, and 12.5.1 all relate to SFI Implementation Committee activities. Description of evidence may be included here for all of these indicators <ul style="list-style-type: none"> • Interview with the Minnesota SIC leader Tim O’Hara, Vice President of Forest Policy, Minnesota Forest Industries confirmed that Minnesota DNR actively participates on the SIC.
11.1		<i>“Program Participants shall take appropriate steps to comply with applicable federal, provincial, state, and local forestry and related environmental laws and regulations.”</i>

11.1.2	C	<p>“System to achieve compliance with applicable federal, provincial, state, or local laws and regulations.”</p> <ul style="list-style-type: none"> • Minnesota DNR employs an array of approaches to ensure that federal, state, and local laws and regulations are followed, including access to legal advice, training, and review of all projects by specialists, generally at multiple levels (area, region, , and St. Paul as appropriate). Confirmed that these policies are still in place and operating in the three FM Areas visited.
11.1.3	C	<p>“Demonstration of commitment to legal compliance through available regulatory action information.”</p> <ul style="list-style-type: none"> • There was no evidence of regulatory problems.
11.2		<p><i>“Program Participants shall take appropriate steps to comply with all applicable social laws at the federal, provincial, state, and local levels in the country in which the Program Participant operates.”</i></p>
11.2.1		<p>“Written policy demonstrating commitment to comply with social laws, such as those covering civil rights, equal employment opportunities, antidiscrimination and anti-harassment measures, workers’ compensation, indigenous peoples’ rights, workers’ and communities’ right to know, prevailing wages, workers’ right to organize, and occupational health and safety.”</p> <ul style="list-style-type: none"> •
12.1		<p><i>“Program Participants shall support and promote efforts by consulting foresters, state and federal agencies, state or local groups, professional societies, and the American Tree Farm System® and other landowner cooperative programs to apply principles of sustainable forest management.”</i></p>
12.1.1	C	<p>“Support for efforts of SFI Implementation Committees.”</p> <ul style="list-style-type: none"> • See 10.2.1 above.
12.1.4	C	<p>“Participation in efforts to support or promote conservation of working forests through voluntary market-based incentive programs (e.g., current-use taxation programs, Forest “Legacy, or conservation easements).”</p> <ul style="list-style-type: none"> • Minnesota DNR announced the day before the audit a conservation easement program with Forest Capital Partners; 51,000 acres, primarily a non-development easement
12.2	C	<p><i>“Program Participants shall support and promote, at the state, provincial or other appropriate levels, mechanisms for public outreach, education, and involvement related to forest management.”</i></p>
12.2.1	C	<p>“Support for the SFI Implementation Committee program to address outreach, education, and technical assistance (e.g., toll-free numbers, public sector technical assistance programs).”</p> <ul style="list-style-type: none"> • See 10.2.1 above.

12.2.2	C	<p>“Periodic educational opportunities promoting sustainable forestry ...”</p> <ul style="list-style-type: none"> • Minnesota DNR publishes monthly the newsletter “On Track - A Monthly Update on Forest Road & Trail Designation in Minnesota State Forests”. Issues reviewed were clear and informative, considering the complexity of the legislatively-mandated approach to ATV trail designation and forest classifications (closed, limited, managed). • Presentations by Andrew Arends, Forest Certification Coordinator were confirmed (reviewed PowerPoint “Forest Certification of State- Administered Forest Lands”)
12.2.3	EXR	<p>“Recreation opportunities for the public, where consistent with forest management objectives.”</p> <p><u>Minnesota DNR promotes recreational use of the forests and regularly modifies timber management to better accommodate such use. As such the SFI Standard is exceeded.</u></p> <ul style="list-style-type: none"> • Minnesota DNR has an extensive recreation programs and a range of excellent facilities. • Since at least 2005 the Minnesota DNR has placed a high priority on accommodating the dramatic increase in demand for OHV trails. It committed to assessing and mapping all trails throughout its vast ownership and developing comprehensive trail plans and systems. This formidable task is on schedule for completion in 2008. The audit team reviewed many examples of draft and/or completed plans, maps, informational materials, etc. • The Beltrami Islands State Forest (Warroad area) is designated as a “Managed forest” requiring posting any trails to be closed and necessitating all roads and trails have their names posted. Road signs were on all road intersections; these have been up for two weeks without any known vandalism.
12.3		<p><i>“Program Participants with forest management responsibilities on public lands shall participate in the development of public land planning and management processes.”</i></p>
12.3.2	C	<p>“Appropriate contact with local stakeholders over forest management issues through state, provincial, federal, or independent collaboration.”</p> <ul style="list-style-type: none"> • Minnesota DNR has many avenues for stakeholder communication, and generally manages the input well, responding appropriately and taking care to balance competing interests.
12.4	C	<p><i>“Program Participants with forest management responsibilities on public lands shall confer with affected indigenous peoples.”</i></p>
12.4.1	C	<p>“Program that includes communicating with affected indigenous peoples to enable Program Participants to a. understand and respect traditional forest related knowledge; b. identify and protect spiritually, historically, or culturally important sites; and c. address the sustainable use of nontimber forest products of value to indigenous peoples in areas where Program</p>

		<p>Participants have management responsibilities on public lands.”</p> <ul style="list-style-type: none"> • In 2007, Jim Jones from the Indian Affairs Council conducted an archeological sited identification training for DNR foresters. DNR is expecting to make this an annual event. • DNR has made substantial efforts to reach out to tribes to get their input and involvement in OHV and subsection planning.
12.5		<p><i>“Program Participants shall establish, at the state, provincial, or other appropriate levels, procedures to address concerns raised by loggers, consulting foresters, employees, the public, or Program Participants regarding practices that appear inconsistent with the SFI Standard principles and objectives.”</i></p>
12.5.1	C	<p>“Support for SFI Implementation Committee efforts (toll-free numbers and other efforts) to address concerns about apparent nonconforming practices.”</p> <ul style="list-style-type: none"> • See 10.2.1 above
12.6		<p><i>“Program Participants shall report annually to the SFI Program on their compliance with the SFI Standard.”</i></p>
12.6.1*	C	<p>“Prompt response to the SFI annual progress report.” (*Note: This indicator will be reviewed in all audits.)</p> <ul style="list-style-type: none"> • Confirmed with SFI, Inc.
13.1*	C	<p><i>“Program Participants shall establish a management review system to examine findings and progress in implementing the SFI Standard, to make appropriate improvements in programs, and to inform their employees of changes.”</i></p>
13.1.1	C	<p>“System to review commitments, programs, and procedures to evaluate effectiveness.”</p> <ul style="list-style-type: none"> • Monitoring protocol for ATV/OHV damage reporting is just being rolled out in Warroad. As of September 2007, foresters had not yet been trained in the dispersed impact monitoring. Where there is a completed “Forest Road and Trail Designation” (Beltrami Island State Forest, not official until 1-1-08) the trail signage, numbering, and mapping system makes it easier to communicate. • Minnesota DNR has established an internal auditing process and trained “Internal Audit Teams” (IAT) to review past and open non-conformances. For 2007 the audits are complete but the reports are not complete; the auditors were provided three draft reports. • There is a goal to proactively identify and address possible additional CARS. Evidence was mixed on the status of this goal; one report reviewed did not report any new issues in the report section for "Identified Issue(s)"; another team identified several issues as well as some “Positive Findings”.
13.1.2	C	<p>“System for collecting, reviewing, and reporting information to management regarding progress in achieving SFI Standard objectives and performance measures.”</p>

		<ul style="list-style-type: none"> • FRIT meets on average of six times a year, and Andrew Arends, Tom Bauman or Kurt Rusterholz (Tom and Kurt are members of FRIT) provide to all FRIT members frequent updates on the status of audits feedback reports, CAR responses, lingering issues, and FRIT's role in dealing with some of the CARs. • The Minnesota DNR has instituted a formal “Timber Sales Inspection” program at area, regional, and statewide level. These inspections are documented on standardized forms. Categories include: <ul style="list-style-type: none"> ○ Water quality concerns and general site conditions ○ Sale boundaries ○ Condition and placement of access roads and landings ○ Leave trees and reserve areas ○ Slash management ○ Utilization ○ Forest development plans ○ Scaling ○ Sale documentation ○ Visual quality and ○ Overall timber sale rating • The results of the timber sales process are discussed at FRIT, but in fairly general terms. The results are provided to all DNR-Forestry staff. Follow-up includes agenda items at regional and area meetings to address trends and areas for improvement.
13.1.3	C	<p>“Annual review of progress by management and determination of changes and improvements necessary to continually improve SFI conformance.”</p> <ul style="list-style-type: none"> • Minnesota DNR has established a Forest Certification Implementation Team (FCIT) to ensure the effective implementation of its certification programs and timely responses to Corrective Action Requests (CARs). • Source: Andrew Arends, Minnesota DNR Certification Coordinator: <i>“FCIT meets several times a year to prepare the Department for upcoming audits, draft CAR responses, ensure past CAR responses are implemented, monitor the IAT, and be an information outlet for all things certification. FCIT does not have a team charter or other documentation noting how it works.</i> <p><i>Most CAR responses are prepared by and carried out by FCIT team members. However, those CARs that have a higher degree of complexity or may prove to be more contentious are addressed first by FCIT and reviewed by the Commissioner's office. HCVF is an example where FCIT prepared the initial CAR response and then went to the Commissioner's office for review, and ultimately for</i></p>

		<p><i>approval. OHV issues have also been joint FCIT and Commissioner's office projects.</i></p> <p><i>A few CAR responses have required action by one or more of the Division Directors. The Division Directors work with FCIT staff to confirm the new policies or procedures address the issue in the CAR. Once the new policy/procedure is approved, they instruct staff to carry out the new policy/procedure.”</i></p>
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Attendees

(Note: * denotes attendees at all sessions)

September 12 Wednesday Bemidji

Opening meeting, staff interviews, review of CARs; then field visits

Audit team: Dave Wager, Mike Ferrucci, JoAnn Hanowski

DNR Participants

Mark Holsten, Commissioner of the Minnesota Department of Natural Resources

Dave Epperly, Director of Forestry Division

Dave Schad, Director of Fish and Wildlife Division

Tom Baumann, Assistant to Director, Forest Management

Andrew Arends, Forest Certification Program Leader*

Michael Lee, Plant Ecologist, Internal Audit Team*

Keith Jacobson, Forest Products Utilization Program Leader

Alan Jones, Forestry

Jim Manolis, OMBS/ Forest Ecologist

Les Ollila, Trails/Waterways NE Region Manager

Keith Simar, Forest Recreation Coordinator

Kurt Rusterholz, DNR Ecological Services

Keith Wendt, OMBS/Science Policy Manager

Ann Peirce, Invasive Species Ecologist

Jeff Edmonds, Regional Forester

Jim Gubbels, Forestry- Bemidji

Nick Severson, Forestry- Bemidji

Bob Pulford, Forest Planner

Jon Nelson, Forest Planning Coordinator

Shelly Gorham, Wildlife- Bemidji

Greg Nelson, Forestry- Bemidji

Jeff Staub, Forestry- Bemidji

Achim Droste, FSC/ASI Accreditation

Tim Browning, Trails and Waterways Regional Manager

David Schotzko, Trails and Waterways- Bemidji

Bill Wilkinson, FSC/ASI Accreditation auditor

Brian Kuphal, DNR Enforcement District Supervisor

Harvey Tjader, Forestry- Bemidji

Jana Albers, Forest Health Specialist

John Colford, Forestry- Bemidji

Mike Carroll, NW Regional Director

Marty Vadis, Lands and Minerals Director

Paul Telander, Regional Wildlife Manager

Erik Thorson, Acting Forest Wildlife Coordinator

Mary Broten, DNR Trails and Waterways Area Supervisor

Blane Klemek, Fish and Wildlife Assist Area Manager

Corey Wilsen, Forestry- Bemidji

September 13 Thursday Thief River Falls Wildlife Management Area

Audit Team: Dave Wager (DW), Mike Ferrucci (MF), JoAnn Hanowski (JH).

DNR Participants

Andrew Arends, Forest Certification Program Leader*

Michael Lee, Plant Ecologist, Internal Audit Team*

Les Ollila, Trails/Waterways NE Region Manager

Keith Simar, Forest Recreation Coordinator
Ann Peirce, Invasive Species Ecologist
Achim Droste, FSC/ASI Accreditation
Bill Wilkinson, FSC/ASI Accreditation auditor
Adam Munstenteiger, Forestry- Warroad
Dennis Cameron, Forestry- Warroad
Jim Dunn, NW Regional Enforcement Manager
Rick Horton, Forest Wildlife Coordinator
Erik Thorson, Acting Forest Wildlife Coordinator
Steve Johnson, Forestry- Warroad
Josh Will, Forestry- Warroad
Shawn Olsen, Forestry- Warroad
Mary Broten, DNR Trails and Waterways Area Supervisor
Jeff Edmonds, Regional Forester
Warren Thompson, Forestry- Warroad
Wade Miller, Trails Specialist- Trails and Waterways
Joel Huener, Thief Lake WMA

September 14 Friday Warroad Area

Audit Team: Dave Wager (DW), Mike Ferrucci (MF), JoAnn Hanowski (JH).

DNR Participants

Andrew Arends, Forest Certification Program Leader
Michael Lee, Plant Ecologist, Internal Audit Team
Les Ollila, Trails/Waterways NE Region Manager
Keith Simar, Forest Recreation Coordinator
Achim Droste, FSC/ASI Accreditation
Bill Wilkinson, FSC/ASI Accreditation auditor
Adam Munstenteiger, Forestry- Warroad
Dennis Cameron, Forestry- Warroad
Dave Thomas, NW Regional Forest Manager
Jeff Edmonds, Regional Forester
Adam Fisher, Forestry- Warroad
Josh Donatell, Forestry- Warroad
Gary Johnson, Forestry- Warroad
Warren Thompson, Forestry- Warroad
Erik Thorson, Forest Wildlife Coordinator
Gretchen Mehmel, Red Lake Wildlife Manager
Jeff Dittrich, Wildlife- Baudette
Scott Laudenslager, Red Lake WMA
Doug Monshaugen, Warroad Forestry
Erik Stoddard, Warroad Forestry
Steve Bantz, Warroad Forestry
Steve Johnson, Forestry Wannaska
Ted Dick, Assistant Area Wildlife Manager- Baudette
Jon Nelson, Forest Planning Coordinator

2007 Audit Notes:

Mark Holsten, DNR Commissioner: Minnesota DNR is the best DNR in the country, and we need to share this and continue to be the best; many pressures on the agency including difficult economic conditions, many retirees soon, so recruiting and training the “next MnDNR”; pressures for more fiber, etc.

Stakeholder Issues:

- Monitor ALL OHV impacts, not just pilot areas
- Fear of reprisal when staff criticize decisions
- Unauthorized river crossings at Cloquet State Forest

Tom Baumann: Changes since the last audit.

- New commissioner since January, 2007; very supportive of certification
- Structurally stable; same division directors
- Internal Audit Team up and running in 2007
- Governor’s task force on primary forest industry competitiveness (OSB shutdowns triggered this); had some legislative recommendations including logger relief package, additional funding, forest management budget increases
- Announced yesterday conservation easement program with Forest Capital Partners, 51,000 acres; primarily a non-development easement
- Biomass issue; Minnesota Forest Resource Council biomass guidelines on timber harvest areas; will become part of the voluntary site level guidelines;
- Additional funding was provided by Minnesota legislature to reduce the inventory cycle from 15 years to 10 years;
- MnDNR is now tracking progress in SFRMP and OHV/ORV issues at regional meetings;

Public Stakeholder Meeting, Beltrami Cooperative Public Meeting Room, 7-8:30 PM

- Most participants expressed concerns about ATV policies of “open unless posted closed”, with a strong preference for the opposite approach that ATV use should only be allowed on posted trails.
- Impacts to wildlife, soils, vegetation, waters, and solitude were expressed. Key challenges expressed involve general environmental damage, wildlife impacts, invasive plants, and lack of ability to enforce rules, especially managed. Most attendees prefer closed or limited, but do not think managed classification is viable.
- “Quiet recreation” or “quiet users” were strongly in attendance, but two public servants and one representative of 4wd club were present looking for balanced solutions.
- Input process questioned for the Paul Bunyan State Forest. Too much influence by big business, particularly ATV manufacturers and their employees. Despite overwhelming local (Hubbard County) opposition to “mudder truck” trails it took legislative action to prevent mudder truck trails in this forest. This position seems to be advocated by the self-identified “lake people”.
- Representative of trail users: ATVs don’t belong everywhere, need to have some motorized use, needs to be on designated trails that can be viably managed; must be mapped, signed, and maintained; don’t need a wide, open-door policy.
- Most speakers identified with particular named state forests, generally one or two specific ones. Paul Bunyan State Forest was most often mentioned.
- Deer management problems were mentioned by one county forest commissioner.
- Forest management was mentioned two times; one thought that the cut was too high; concerned about “monoculture of aspen” and herbicide use; one speaker concerned about too many clearcuts and loss of mixed-species forests.

2007 Audit Field Sites

2007 Minnesota DNR Audit Field Sites

Wednesday, September 12, 2007 – Bemidji Area

Site 1: Sale F2544

2005 clearcut Aspen (much blowdown) and Jack Pine (salvage of budworm damage); mechanical site preparation, no chemicals; planted spring 2007; will bud cap seedlings later this fall after herbaceous foliage dies back

Site 2: Sale X01023

Active Jack Pine and aspen clearcut with scattered Red Pine residuals; Dan Lundberg, Lundberg Forest Products, Solway, MN MLEP trained; confirmed spill kits, first aid kits, and well-maintained equipment. Tree length, limbing out in woods; clean, well run logging job with good utilization

Site 3: Sale B2305

(Directly adjacent to Site 2 above) Completed 2005 salvage of Jack Pine and aspen with scattered large Red Pine Residuals; Part of large jack pine budworm salvage area; plan for natural regeneration; extensive discussion of Jack Pine ecology, management, and “swat team” findings: diplodia-infected stock, deer browse, and extended drought are responsible for extensive challenges in regeneration Jack Pine

Site 4: Planting Site 071 (T145,R39, Section 11)

Multiple efforts at site preparation and planting since 1998; in 2005 fire, fenced, planted 2006, failed, planted again 2007 with Red Pine, many showing signs of drought (nearly half are dead already); will install bud caps this fall and then conduct the year 1 seedling survival count in the spring, with infill planting likely to follow. Discussed deer damage prevention approaches (bud capping, wildlife division deer management approach to reducing deer herd.

Site 5: Planting Site 306

Planted twice, failed, 2004 chemical site preparation; scalped spots and replanted 2007, will be bud capped, etc. (see Site 4). Confirmed by review of chemical application contract and by interview of licensed pesticide applicator Ed Francis that provisions exist for appropriate chemical application (full range of chemical BMPs), disposal of chemical containers, and record-keeping.

Site 6: Planting Site 125

A July 4, 2006 wildfire killed the planted seedlings. Replanted spring 2007 with Norway Pine; will be bud-capped, etc. (see Site 4).

Site 7: Sale 4388

Completed clearcut with reserves, primarily Aspen with decadent Jack Pine section (27 acres). Scattered reserves as well as a mapped and designated uncut reserve of an aspen portion. Jack pine area received spot-scalping site preparation and then was planted spring 2007. Discussed the current guidelines for Coarse Woody Debris and the soon-to-be-published Woody Biomass Harvesting Guidelines.

Site 8: Active Sale 010080

Stand 1: Aspen/birch clearcut with reserves. Retention very good and exceeding 5% requirement mostly through patches with some scattered trees. Buffer along road left for aesthetics. This sale was area's first biomass harvest, however not conducted under current guidelines. Woody debris retained was low, especially coarse size, but the site was not super clean. NPC typing had not been completed prior to harvest. OHV use in this area is high, and it appears this sale area has high potential for unauthorized use.
Stand 2: Red pine thinning active harvest, observed from far off.

Site 9: Sale B2107

Completed jack pine salvage clearcut (70 acres) with scattered reserves, and site-prep and planting of jack and red pine. Successful regeneration of jack and red pine continues to be a major challenge; however, DNR is actively trying to understand and correct the situation (e.g., analysis of Jack Pine swat team, huge financial investment in site prep, repeated plantings, bud capping, etc). DNR believes failures are due to a combination of 9-11 year drought, diplodia, deer, and perhaps lack of fire. Regeneration surveys are occurring on 1,3, and 5 year intervals. Discussion about reducing threshold of trees per acre for successful stocking in jack pine.

Site 10: Fern Lake Road Management Activities

600 acre non-motorized area with intact gate. Stand A: Budworm salvage clearcut; Site prep and jack pine planting. Effective herbicide of hazel and aspen. Stand B: Red pine thinning 2nd entry row thinning; Stand C: White spruce plantation that had been thinned twice.

Thursday, September 13, 2007 – Thief Lake Wildlife Management Area

Wager, Hanowski, Ferrucci

Site 1: Manmun's Landing and Observation Mound

Picnic site, observation area, interpretive signs, parking, mowed trails, water level manipulation for water fowl habitat.

Site 2: Prescribed burn south of Thief Lake

Rx burn site spring 2007, mixture of meadow, brush, marsh.

Site 3: Sale X3117

Aspen clearcut completed Jan 2006, large area for habitat reasons, reserved Burr Oak and birch, excellent retention both coarse down woody and green tree.

Site 4: Also Sale X3117

Slightly wetter, looked at slight depressional wetland, site-level guidelines followed (no slash accumulation); also saw small patch of invasive sweet clover

Site 5: Sale X2442

Winter sale Aspen with reserves, NW corner of 780-acre burn unit; goal managing for more open landscape for sharptail grouse and elk

Site 6: Sale 3551

Aspen harvest with reserves, partially completed last winter; good reserves, utilization, site protection

Site 7: Sale B1057

Clearcut with reserves completed 2 years ago; harvest surrounds marsh, confirmed that Mn BMPs (site level guidelines) were followed regarding riparian areas

Site 8: Randen Ridge Road

A major blowdown event in 2001 was followed by much salvage, not excessive

Site 9: Chemical storage area of maintenance shop

MSDS sheets available, spill containment adequate, chemicals are sent off-site for permanent storage during off season

Site 10: Prairie restoration (3 miles east of tract 52)

Invasives had been treated with glyphosate fall 06. Native grassland establishment appeared successful.

Site 11: Willow shearing (2 miles east of Thief Lake) site

Objective is to shear willow down to a level that can be browsed and to provide sharp trail grouse winter cover.

Site 12: Sale 2450

60 acre clearcut of mature (70+) aspen. Islands of ash reserved. Large amounts of woody debris with good diversity of size classes.

Site 13: State Wildlife Elk Food Plots (Grygla):

Cooperative project with Rocky Mountain Elk Foundation on elk reintroduction. Elk are hunted once population reaches 30 (with legislatively mandated herd limit of 60), thus there are concerns regarding gene pool size. Very good signage at the site and throughout WMA.

Friday, September 14, 2007 – Warroad Area

Site 1: Sale X3322

Aspen type with Jack Pine and Spruce, winter logger 2005-06

Site 2: Bednar State Road 0048

Good quality gravel road crowned, mowed

Site 3: Misc. Jack Pine Management

Planted and natural stands reviewed

Site 4: Sale B1984

Mature 78 acre Jack Pine clearcut with reserves 3 pine reserve clumps, one aspen; complete, replanted following “Lenoing site preparation”

Site 5: Root State Forest Road

Well-maintained, good signs.

Site 6: Sale B1686

Aspen clearcut completed in 2005; reviewed 2 patches; discussed forgone opportunity to create a larger patch; intervening stands are different type.

Site 7: X3554

Aspen clearcut with some softwoods (spruce and fir) cut winter 2006; good aspen sprouting, then spruce under-planting spring 2007.

Site 8: Sale B1685

314-acre aspen clearcut with conifer reserves; this sale was in the “salvage pool” meaning it was under-stocked; Hadrava Logging

Site 9: Red pine thinnings on Bednar State Road (viewed from road)

Site 10: Sale 1758

16 acre clearcut of mature jack pine using lop and scatter; site prepared using scarification; planted 2005; good natural and artificial regeneration jack pine and red pine. Great closed signage on main roads, may need more signs on secondary entry points into closed areas.

Site 11: Bemis Hill

Meeting with motorized recreation stakeholders

Review of damaged areas on slopes of Bemis Hill